

# GENERATION 2030 AFRICA 2.0

Prioritizing investments in children  
to reap the demographic dividend

This report follows up the first *Generation 2030 Africa* report, published in August 2014, which outlined pivotal changes in Africa's child demographics.

The report presents modelling indicating that if African nations invest in their growing population of children and young people, in particular in their education, and adopt economic policies that foster new jobs, the continent as a whole could see per capita incomes increase up to four-fold. The first, crucial step to achieving this demographic dividend will be to close the gaps that exist within Africa's health and education systems.

Cover photo:  
Children from  
Jumbe village, in  
Amudat district  
of Karamoja,  
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## ACKNOWLEDGEMENTS

### Core report team

David Anthony, Danzhen You, Lucia Hug, Jan Beise, Yoonie Choi, Sinae Lee and Anastasia Mshvidobadze  
*Production management and editing:*  
Anna Mukerjee

### Design and layout

*Design and content strategy:*  
Upasana Young and Cecilia Beatriz Silva  
*Data visualization:* Upasana Young, Cecilia Beatriz Silva, Sinae Lee, Lucia Hug, Anastasia Mshvidobadze and Jan Beise  
*Copy editing:* Alison Raphael

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*From Regional and Country Offices:* Anna Baldursdottir, Dina Craissati, Thierry DelvigneJean, Arthur van Diesen, Jean Dupraz, James Elder, Gilles Fagninou, Roumiana Gantcheva, Louise Holly, Inoussa Kabore, Ted Maly, Yumi Matsuda, Suzanne Moody, Maharajan Muthu, Patsy Nakell, Gustave Nebie, Bo Viktor Nylund, Nicolas Reuge, Tomoko Shibuya, Siddhartha Shrestha, Tsitsi Singizi and Iyorklumun Uhaa.

*From Headquarters:* Justin Forsyth, Laurence Christian Chandy, Paloma Escudero, Hongwei Gao, Mark Hereward, Priscilla Idele, Attila Hancioglu, Rada Noeva, Robert Bain, Claudia Cappa, Liliana Carvajal, Yadigar Coskun, Martin C Evans, Mamadou Salioou Diallo, Chika Hayashi, Julia Krasevec, Padraic Murphy, Colleen Murray, Vrinda R. Mehra, Suguru Mizunoya, Nicole Petrowski, Olga Oleszczuk, Tom Slaymaker, Xinxin Yu, Yacouba Djibo Abdou, Matt Brossard, Daniel Kelly, Gemma Wilson-Clark, Aichatou Diawara-Flambert, Mame Selbee Diouf, Nicola DellArciprete and Henrik Hartmann.

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# GENERATION 2030 AFRICA 2.0

## Prioritizing investments in children to reap the demographic dividend

### Key policy actions for Generation 2030 Africa



#### 1. Essential Services

Scale up Africa's essential services and strengthen health, social welfare and protection systems, bringing them up to international standards, or beyond for countries already close to meeting them.



#### 2. Skills enhancement

Transform Africa's educational, skills and vocational learning systems through systems-strengthening, curriculum reform and access to technology, to enhance learning outcomes and connectivity and to match the skills of Africa's children and youth to current and future labour market needs.



#### 3. Protection

Protect Africa's children and women from violence, exploitation and abuse, especially child marriage and harmful practices; empower children and women to participate fully in community, workplace and political life; and enhance access to culturally sensitive reproductive health services.



### Upscaling investments in children and youth

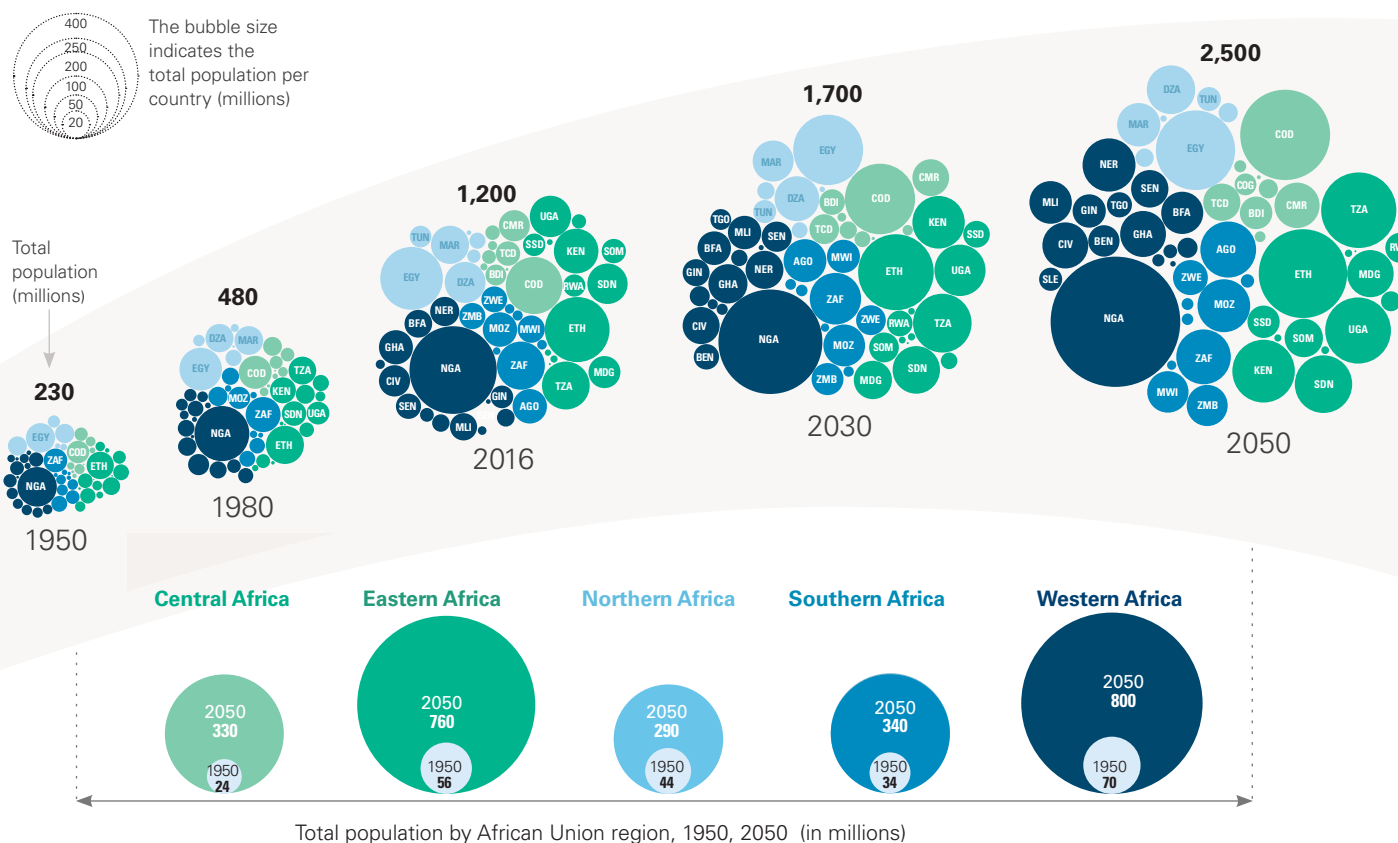


#### 4. Invest in children

Maximize the use of available resources (domestic and international) to increase investments in Africa's children and youth, targeting the most effective programmes and population groups with the greatest need.

## Across Africa countries are experiencing varying degrees of rapid population growth

Fig. A.1 Population in Africa, by African Union region and by country, 1950–2050 (in millions)



Currently close to **50%** of Africa's population are children under 18



By 2030 Africa's under-18 population will increase by nearly **170 million**



By 2050 **40%** of the world's children under 18 will live in Africa

By 2100 **50%** of the world's children under 18 will live in Africa



### African Union Regions

#### Central Africa

- BDI Burundi
- CMR Cameroon
- CAF Central African Republic
- TCD Chad
- COD Democratic Republic of the Congo
- GNQ Equatorial Guinea
- GAB Gabon
- COG Congo
- STP Sao Tome and Principe

#### Eastern Africa

- COM Comoros
- DJI Djibouti
- ERI Eritrea
- ETH Ethiopia
- KEN Kenya
- MDG Madagascar
- MUS Mauritius
- RWA Rwanda
- SYC Seychelles
- SOM Somalia
- SSD South Sudan
- SDN Sudan
- UGA Uganda
- TZA United Republic of Tanzania

#### Northern Africa

- DZA Algeria
- EGY Egypt
- LYB Libya
- MRT Mauritania
- MAR Morocco
- TUN Tunisia

#### Southern Africa

- AGO Angola
- BWA Botswana
- LSO Lesotho
- MWI Malawi
- MOZ Mozambique
- NAM Namibia
- ZAF South Africa
- SWZ Swaziland
- ZMB Zambia
- ZWE Zimbabwe

#### Western Africa

- BEN Benin
- BFA Burkina Faso
- CPV Cabo Verde
- CIV Côte d'Ivoire
- GMB Gambia
- GHA Ghana
- GIN Guinea
- GNB Guinea-Bissau
- LBR Liberia
- MLI Mali
- NER Niger
- NGA Nigeria
- SEN Senegal
- SLE Sierra Leone
- TGO Togo

Note: ISO 3166 is used for country codes as determined by the International Organization for Standardization.

Source: United Nations, Department of Economic and Social Affairs, Population Division, *World Population Prospects: The 2017 Revision (UN WPP)*, United Nations, New York, 2017.

## THE DEMOGRAPHIC WINDOW OF OPPORTUNITY

The term 'demographic dividend' refers to the economic growth that can be achieved by having proportionally more working age people as a share of the population.<sup>1</sup> It is driven by the demographic transition of a country's population. As mortality and fertility decline, the population's age structure changes. With fewer births each year, a country's young, dependent population grows smaller in relation to the working age population. This is the period when the dividend can materialize: the increasing share of working age population compared to other age groups leaves each working age person with fewer dependents to support, and thus more disposable income that can spur greater consumption, production and investment and, in turn, accelerate growth.

The window of opportunity for a demographic dividend is closely linked with such demographic transitions. There are no distinct criteria that defines the beginning and end of the window, but it begins to open when the share of working age population is increasing and fertility reduction has progressed far enough to reduce the dependent child population. The window begins to close when the share of the working age population starts to shrink again due to continued low fertility and the increasing share of the elderly in the population.

This report uses a typology developed by the World Bank<sup>2</sup> that classifies countries according to their potential for reaping a demographic dividend based on two demographic indicators: the share of the working age population and fertility levels.

**Pre-dividend countries:** Countries whose share of working age population will increase between 2015 and 2030 have an opportunity to reap a demographic dividend. Among them, those that had comparatively high total fertility (four or more births per woman) in 2015, are

classified as 'pre-dividend' countries, since the window of the opportunity for accelerated economic growth has not yet opened due to ongoing rapid population growth, resulting in a high child dependency ratio. Two thirds of countries in Africa (36 countries) are in this phase.

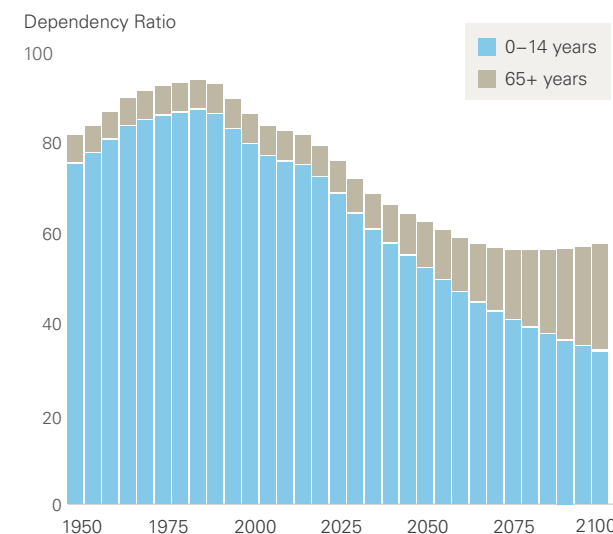
**Early-dividend countries:** Countries showing a relative increase in the working age population and a total fertility of less than four births per woman in 2015 are further along the path toward reduced fertility and thus experiencing lower child dependency ratios and a higher proportion of working age population. These countries are classified as 'early-dividend' countries, one fourth (14) of African countries fall into this category.

**Late-dividend countries:** Countries with a declining share of working age population between 2015 and 2030 face a closing window for their first demographic dividend. Countries that in 1985 – roughly one generation ago – had a total fertility rate above replacement level are classified as 'late-dividend' countries. Most late-dividend countries have a large share of working age population and are in a position to continue 'harvesting' the benefits of the first demographic dividend, but will face fundamental changes in coming years. Only four African countries – Mauritius, Morocco, Seychelles and Tunisia – are at this stage.

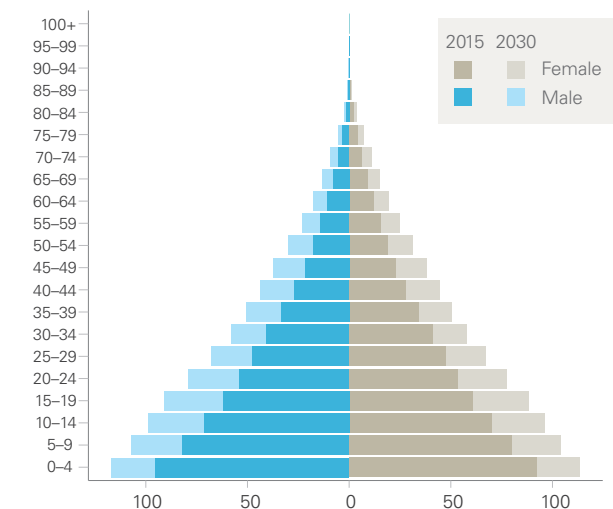
**Post-dividend countries:** 'Post-dividend' countries have experienced below-replacement level fertility since 1985, and will face a rapidly increasing elderly population, further decreasing the already diminishing share of working age population. No African countries have such characteristics, yet. In Asia, five countries or territories have already reached this stage: the Chinese Special Administrative Regions of Hong Kong and Macau, Japan, the Republic of Korea and Singapore.

## Africa's demographic transition is underway

**FIG. A.2** Composition of total dependency ratio (child and old-age) in Africa, 1950–2100 (Number of persons aged 0–14 and 65 and over per 100 persons 15–64 years)



**FIG. A.3** Population by age and sex in Africa, 2015 and 2030 (in millions)



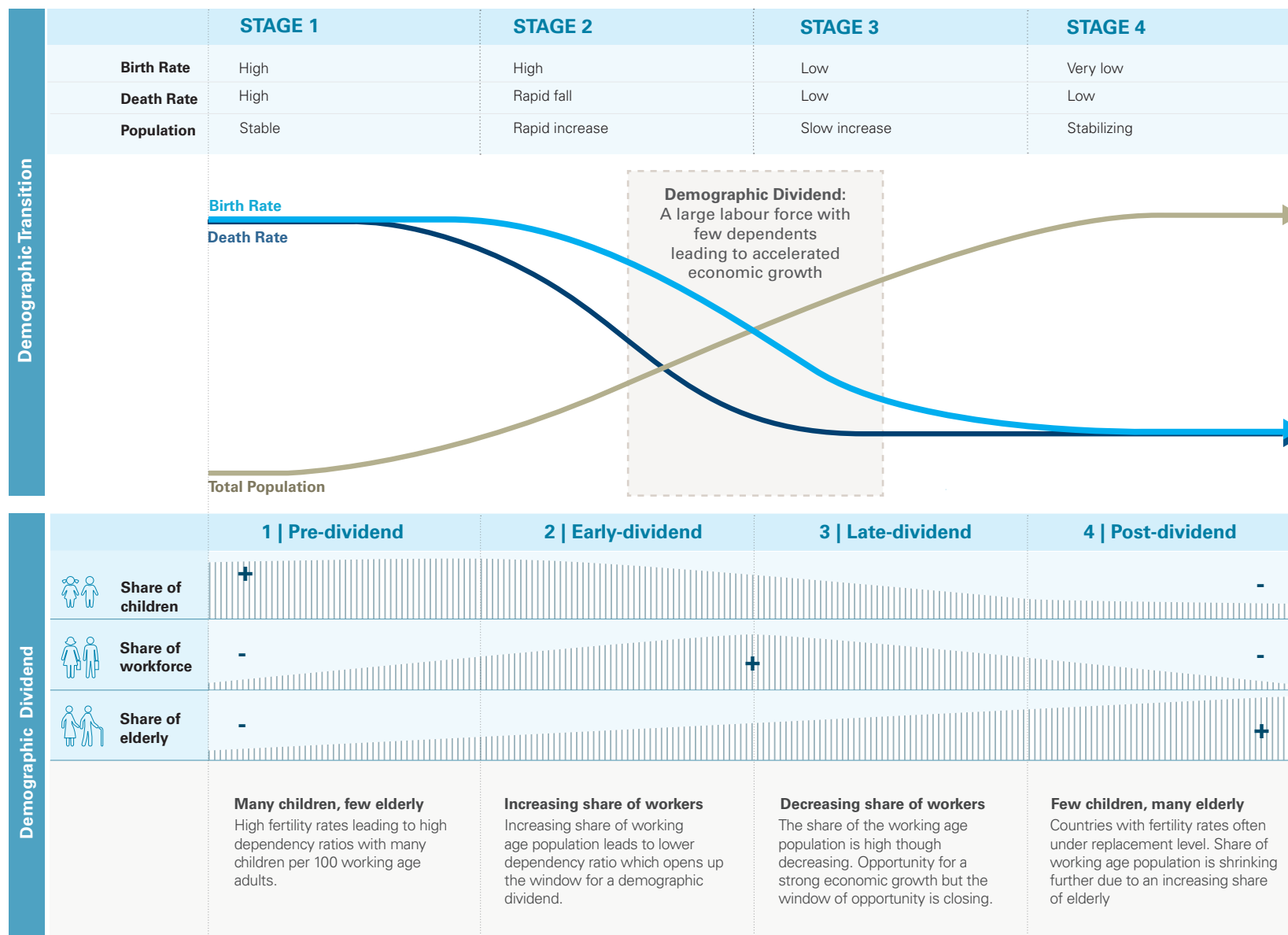
**Source:** United Nations, Department of Economic and Social Affairs, Population Division, *World Population Prospects: The 2017 Revision* (UN WPP), United Nations, New York, 2017.

Criteria for classification of demographic dividend type	
Share working-age population is projected to INCREASE from 2015 to 2030:	Share working-age population is projected to DECREASE or stay unchanged 2015 to 2030:
Total fertility rate 2015 $\geq$ 4: pre-dividend	Total fertility rate 1985 $>$ 2.1: late-dividend
Total fertility rate 2015 $<$ 4: early-dividend	Total fertility rate 1985 $\leq$ 2.1: post-dividend

**Source:** UNICEF evaluation based on criteria for demographic typology as developed in World Bank Group, *Global Monitoring Report 2015/2016: Development Goals in an Era of Demographic Change*. World Bank, Washington, D.C., 2016, and population and fertility data from United Nations, Department of Economic and Social Affairs, Population Division, *World Population Prospects: The 2017 Revision*, United Nations, New York, 2017.

## Stages of Demographic Transition

FIG. A.4 Stages of the demographic transition and demographic dividend



# Executive Summary

## EDITORIAL

### Africa's children stand at a pivotal moment in their continent's demographic transition

Nowhere in the world are children more central to a continent's future than in Africa, where they account for almost half (47 per cent) of all inhabitants. The expansion occurring in recent decades has been extraordinary. In 1950, Africa's child population stood at 110 million and represented just above 10 per cent of the world's child population. It has grown more than fivefold since, and currently stands at an estimated 580 million: four times larger than Europe's child population, and accounting for about 25 per cent of the world's children. Between 2016 and 2030, Africa's child population is projected to expand by about 170 million, elevating the continent's total to 750 million. And by 2055 Africa will be home to 1 billion children, almost 40 per cent of the global total. By the end of the century, it is projected that Africa will be home to nearly half of the world's children.

The large increase in Africa's child population mirrors the rise in the continent's overall population, set to more than double between now and mid-century, adding a further 1.3 billion people and reaching 2.5 billion by 2050. These projections are based on median variants of fertility projected by the UN Population Division in its 2017 edition of *World Population Prospects*. They take into account the prospect of declining fertility rates in Africa in the coming years, as well as continuing fertility trends in other regions.<sup>3</sup>

These data projections have limitations, and actual demographic trends may differ from projections, due to policy interventions and others changes in economic, social, political, or environmental factors. For example, policies could alter fertility rates, mortality and migration patterns. Nevertheless, the key points highlighted in this report are considered to have implications for global, regional and national actions. The sheer number of Africa's children and its growing share of the world's child population means that dividends for the continent will be dividends for the world and for humanity, including the most disadvantaged and vulnerable.

Demographic transitions of this magnitude present both immense opportunities and immense challenges. The opportunity for Africa lies in the vast potential of its current and future generations of children and youth. Today, two thirds of African Union (AU) Member States are still in the pre-dividend phase of demographic transition, characterized by high fertility rates and high dependency ratios. It is imperative to recognize that today's rapidly increasing child and youth populations will soon constitute Africa's working age population. Investing in their health, protection and education holds the promise for reaping a demographic dividend in the 21st century that could lift hundreds of millions out of extreme poverty and contribute to enhanced prosperity, stability and peace on the continent.

However, failure to prioritize these investments will lead to a far bleaker scenario, because the opportunity to reap a demographic dividend is time-sensitive and influenced by policies. With more than half of African countries unlikely to reach their demographic window of opportunity – the period when a country's population structure is the most favourable for accelerated economic growth – until 2030 or beyond, it becomes all the more urgent to adequately prepare so that when the window of opportunity opens, African nations can best harness and capitalize on the dividend.<sup>4</sup>

Numerous studies have shown the transformative power of investment in essential services for children and youth, their societies and economies.<sup>5</sup> The modelling exercise of Africa's demographic dividend potential presented in this report shows that the continent's per capita income could quadruple by 2050 if such investments in human capital were complemented by policies that foster job creation, empower and protect women and girls, and expand access to culturally sensitive reproductive health education and services.

The challenge lies in making these investments. Closing the gaps that presently exist between minimum international standards and actual health care and education services is a critical first step toward building the human capital required



for a demographic dividend. This must become a key priority, especially for those countries in Central, Eastern and Western Africa where the gaps are widest. Africa as a whole faces the challenge of employing an additional 5.6 million frontline health professionals – three times current numbers – to meet the minimum threshold set by the World Health Organization (WHO)<sup>6</sup> by 2030. More than 5.8 million additional teachers are required to attain a pupil-teacher ratio in every country equivalent to the best-performing country in each of Africa's five sub-regions. Although Northern Africa and Southern Africa fare much better in this respect, they still face challenges that other African sub-regions also share: reaching international standards, enhancing the quality of health care and education and ensuring that education is relevant to the 21st century labour market.

If these key investments are not made now, the continent will not be able to reap the benefits of the demographic dividend. Poor health and insufficient education will prevent children from developing to their full potential, and will sustain high poverty rates, elevated unemployment and underemployment, leading to stagnant economic growth and resulting in a missed opportunity for the continent.

The years between now and 2030 are critical for building Africa's human capital. Investing in youth, selected as the AU's main focus in 2017, is imperative and needs to be complemented by an equally strong emphasis on investing in children to establish the strongest foundation for Africa's future.

#### **Policy actions for Generation 2030 Africa:**

- **Scale-up Africa's essential services and strengthen health, social welfare and protection systems** bringing them up to international standards, or beyond minimum standards for those countries already close to meeting them.
- **Transform Africa's educational, skills and vocational learning systems through systems-strengthening, curriculum reform and access to technology**, to enhance learning outcomes and match the skills of Africa's children and youth to current and future labour market needs.
- **Protect Africa's children and women from violence, exploitation and abuse, especially child marriage and harmful practices, and empower women and girls** to participate fully in community, workplace and political life, as well as enhancing their access to culturally sensitive reproductive health services.

#### **Undertaking these policy actions will require scaling up investments in children and youth:**

- **Maximize the use of available resources (domestic and international) to increase investment in Africa's children and youth**, targeting the most effective programmes and population groups with the greatest need.

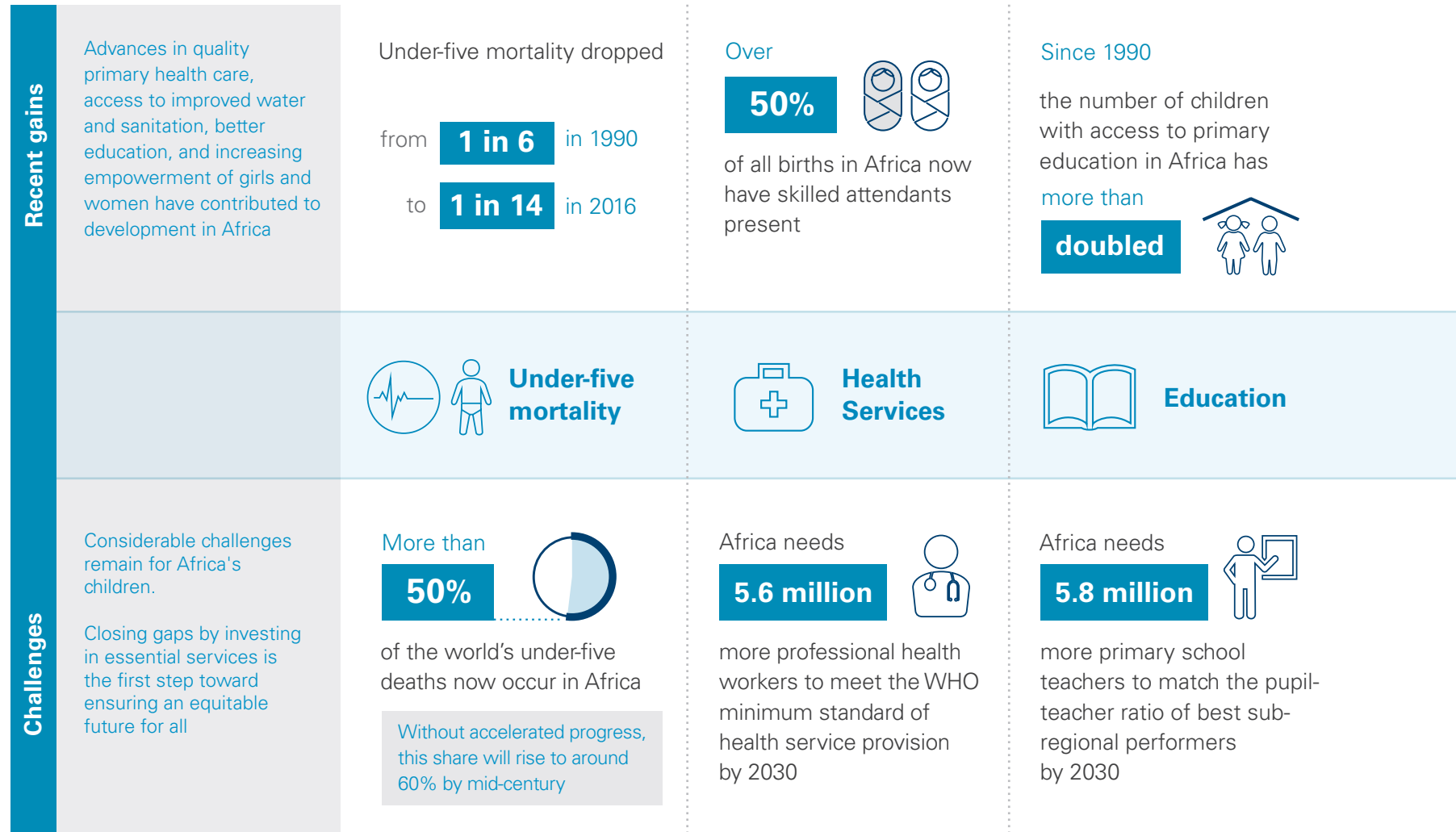
As 2017 begins to wind down, African Union Member States and other stakeholders are faced with the challenge of stepping up investments in children and youth to ensure that African countries are well positioned to reap the benefits of a demographic dividend. Although this report focuses on government actions required to reap the demographic dividend, involvement by a wide range of stakeholders, including non-government organizations, religious groups, the private sector and children and youth themselves is also vital.

By strengthening future human capital through investment that benefits children and youth, Africa will be able to reap a faster, deeper and longer dividend. If Africa misses this opportunity, population growth could lead to rising poverty, marginalization and instability. Inaction will result in an unprecedented burden, as the continent will need to cope with the exponentially rising demand on natural resources while attempting to meet the needs of billions of inhabitants.

To reap a demographic dividend, Africa will need a blend of political will, sound strategies, enhanced implementation capacity and adequate financing. Employment opportunities will have to address the global rise of artificial intelligence and automation. Despite these challenges, attaining a demographic dividend is possible. A number of Asian countries have already benefited enormously, and their starting points were similar to those currently experienced by the majority of African countries.<sup>7</sup> The challenges across Africa can and must be met to secure its future, and make the continent safe, secure, prosperous and equitable for its most precious asset: its children and youth. ■

## Considerable gains have been achieved for Africa's children in recent years but extensive challenges remain

### KEY FACTS AND FIGURES



From 2000 to 2015

the number of Africans with access to basic drinking water services increased



### Water, sanitation and hygiene

Over **60%** 

of Africans do not have access to basic sanitation

with large gaps between rural and urban communities

The percentage of working women in sub-Saharan Africa has slowly risen



### Women's empowerment

In 2016 **26%** 

of all women of childbearing age have an unmet need for family planning

This is 9 percentage points higher than the global average

Child marriages in Africa are decreasing



### Child protection

In sub-Saharan Africa, birth registration rates are

below

**50%** 

Among the poorest households it is less than 30 per cent

Recent gains

Challenges

## KEY FINDINGS

**Half of the world's children will be African by the end of the 21st century**

→ Africa's child population is set to expand steadily for the remainder of the century, in contrast to declines or stagnation in the child population of other continents. The demographic transition continues a trend that has seen Africa gaining an increasing share of the world's child population. In 1950, Africa had just above 10 per cent of the world's children. By 2100, if current trends persist, around 50 per cent of all the world's children will be African.

→ By 2030, the end year for achieving the 2030 Agenda for Development, Africa's under-18 population is projected to increase by around 170 million, reaching a total of 750 million. By mid-century, around 42 per cent of the world's births, 41 per cent of all under-fives, 38 per cent of all under-18s, and 36 per cent of all adolescents will be African – all slightly higher than foreseen in the first edition of *Generation 2030 Africa* released in August 2014 (all population projections are based on *World Population Prospects*, by the United Nations Population Division, which is updated every two years).

**Almost 1 billion children will live in Africa by mid-century**

→ Africa's child population will increase by two thirds between 2016 and 2050 and reach 1 billion by 2055, representing around 40 per cent of all children globally. By 2100, almost 1.2 billion children will live in Africa.

**In one third of Africa's countries, children already represent more than half of the total population**

→ Globally, Africa is the continent richest in children: 47 per cent of Africans are currently under the age of 18. Children are the defining age group of the continent's population: among AU Member States, one third (17 countries) have populations in which children under 18 years of age comprise the majority of citizens.

**One quarter of the world's population will be African by 2050**

→ The increase in Africa's child population, together with declining child mortality and increased longevity, will bring a marked increase in the continent's population this century, which is projected to double, from 1.2 billion in 2016 to 2.5 billion in 2050, and rise further to 4.5 billion by 2100, according to current projections by the UN Population Division.

→ This expansion stands in sharp contrast to demographic trends elsewhere in the world, where populations are often shrinking and aging. Based on current trends, within approximately 35 years one of every four people in the world will be African; the figure will rise to 4 of every 10 by the end of the century.

**Births will drive Africa's population expansion, with almost 2 billion babies projected to be born on the continent between 2016 and 2050**

→ Fertility rates in Africa remain far above the global average. In 2016, each African woman of reproductive age (15-49 years) had, on average, 4.5 children – compared to the global average of 2.5. Niger continues to have the highest total fertility rate of any country in the world, with a national average of 7.2 children per woman. And while fertility rates are falling across the continent – in some countries sharply – they are projected to remain much higher than the rest of the world in the coming decades.

→ High fertility rates are one of the drivers of the large increase in the number of babies being born in Africa. Others include the rising number of women of reproductive age and improved child survival rates. Elevated fertility rates in Africa in recent decades have rapidly increased the number of women of reproductive age – from 54 million in 1950 to 290 million in 2016. This figure is projected to more than double, to 640 million, by 2050.

→ In 2016 around 42 million babies were born in Africa, 31 million more than in 1950. The cumulative impact of high fertility rates and increased numbers of women of reproductive age will expand births sharply in coming decades, even as fertility rates decline. It is estimated that by mid-century 42 per cent of the world's births will take place in Africa. Between 2016 and 2050, 1.8 billion births are projected to take place on the continent.

### Considerable progress has been made in child survival, but child mortality rates remain high

- Survival rates for children have improved dramatically in Africa: the continent has more than halved its under-five mortality rate since 1990. Progress has been particularly rapid since 2000, although some countries made significant advances while others made less progress.
- In Africa, 1 in every 14 children still dies before the age of five. Progress on under-five mortality has been faster elsewhere, so the continent now accounts for more than 50 per cent of the world's annual under-five deaths. This share has risen steadily in recent years, and is projected to rise to around 60 per cent by the middle of the century if current trends continue.

### Within a decade, Africa's newborns will have an average life expectancy of 65 years

- By 2026, Africa will have its first generation of newborns with an average life expectancy of the pensionable age of 65 years.<sup>8</sup> This will represent a remarkable feat, given that in 1950 life expectancy at birth in Africa was below 40 years – about 30 years less than in the more developed regions of the world at that time.
- Today, average life expectancy at birth in Africa is 62 years, four years higher than that cited in the first *Generation 2030 Africa* report in 2014, but still 10 years below the global average.<sup>9</sup>
- The implications of longer life expectancy are important. Given that people in Africa are living much longer than before, the continent will have to begin to

find institutional mechanisms to look after its growing elderly population, at the same time as the numbers of its young dependents continues to expand. This dynamic reinforces the continental imperative to reap a dividend from its demographic transition.

### Africa will become an urban continent within the next 20 years

- Africa is rapidly becoming an urban continent: 41 per cent of its population currently lives in cities, compared to just 14 per cent in 1950. By the late 2030s, the majority of Africa's population will live in urban areas and by 2050, almost 60 per cent of Africa's population will be urbanized.
- Africa will have a diverse range of urban dwellings, from small cities and settlements to vast megacities. The growth in the continent's megacities will rival that of Asia, with the largest city in Africa, Al-Qahira (Cairo), seeing its population swell from 19 million in 2016 to 25 million by 2030. Lagos, currently the second largest city on the continent, will see its population rise 1.8 times by 2030, from 13 million in 2016 to 24 million.
- Urbanization in Africa poses opportunities as well as risks for children. Africa is urbanizing at an aggregate lower per capita income than China and India did, leaving its urban inhabitants with far lower purchasing power. There is also increasing evidence that Africa's urbanization is occurring in a more fragmented way. Spatial fragmentation often leads to higher living costs for workers and households, resulting in indirect costs and other constraints for employers. A 2017 study found that African cities are 20 per cent more fragmented than is the case in Asia and Latin America.<sup>10</sup>

### Conflict and fragility continue in almost half of Africa's nations

- Conflict and fragility continue to undermine human rights and social and economic progress in a number of African countries. Of the 36 countries classified in 2017 by the World Bank as affected by fragility, conflict and violence, 21 are African.<sup>11</sup> These 21 countries are home to around 24 per cent of the continent's population.
- Almost 3 of every 10 African children live in these 21 countries, a total of 153 million children. These countries also account for one third of all under-five deaths in Africa.
- Africa represents 43 per cent of out-of-school children from primary and lower secondary education in countries affected by conflict.<sup>12</sup>

### Notable gains have been made in fighting poverty in Africa, but almost half of the continent's children still live in extreme poverty

- About 40 per cent of the African population survives on less than US\$ 1.90/day, the World Bank's threshold for extreme poverty.<sup>13</sup>
- Fertility is highest among the poorest African communities. In the Democratic Republic of the Congo, for example, women in the lowest wealth quintile had an average of 7.6 children, 2.7 more than in the wealthiest quintile in 2014.<sup>14</sup> Similar trends are prevalent in other African countries.<sup>15</sup>

**Special attention is required for Nigeria, given the projected increase in births and child population: by 2050, 1 in every 13 births globally will take place in Nigeria**

- Nigeria currently accounts for nearly 20 per cent of all of Africa's births and 5 per cent of the global total. Between 2016 and 2030, 120 million births will take place in Nigeria alone – more than all the births in Europe – accounting for 6 per cent of the global total for that period. Based on current projections, by 2050, 1 of every 13 births globally will occur in Nigeria.

**Smaller African nations with the highest fertility rates will also require particular attention and investment**

- Niger has the world's highest fertility rate, at 7.2 children per woman, followed by Somalia, with 6.3 children per woman. Even after taking into account the expected decline in fertility rates, these two countries will have among the highest birth rates in Africa in 2050: 4.6 children per woman in Niger and 3.7 in Somalia.
- High fertility rates in Niger will result in the world's largest percentage increase in number of births. Niger currently has 1 million births per year, which is expected to more than double, to 2.4 million births, by 2050. As this report highlights in Chapter 2, the gaps in international benchmarks for maternal, newborn and child care need to be addressed in order to

accommodate the projected increase in births and prevent African countries with high fertility rates from falling further below these benchmarks.

- Increased fertility rates and improved child survival rates in Niger and other African countries with high fertility rates will swell these countries' populations. Niger's population is projected to triple, from 21 million in 2016 to 68 million by mid-century and soar to 190 million people by 2100.

**Continuing population growth will pose a challenge to Africa's health and educational infrastructure**

- Today, Africa requires over 3 million additional professional health workers to meet the WHO minimum benchmark of 4.45 doctors, nurses and midwives per 1,000 population.<sup>16</sup> Only five of Africa's countries currently meet this threshold.<sup>17</sup> By 2030, Africa will require around 5.6 million more health workers than it currently has to meet WHO standards. But if current trends in the numbers of skilled health personnel continue, the continent will add only 1.4 million health workers by 2030, leaving a gap of around 4.2 million.
- Similar trends are prevalent for other social welfare infrastructures, such as the number of hospital beds, social workers, community health workers and school teachers. The number of primary school teachers, for

example, will need to more than double by 2030 just to maintain the current primary school enrolment rate. Attaining the pupil-teacher ratio of the best-performing country in each sub-region will require more than 5.8 million additional primary school teachers by 2030.<sup>18</sup>

**Opportunities exist for Africa to reap a demographic dividend: with appropriate investments in human capital and policies to stimulate job creation, per capita incomes in Africa could quadruple by mid-century**

- The DemDiv model,<sup>19</sup> a simulation tool devised for policy makers, was used to simulate the benefits of Africa's potential demographic dividend. It becomes clear that AU regions could expect to see per capita incomes increase by up to four-fold if they invest in human capital and social and economic infrastructure. This, in turn, could lift millions out of poverty and create the conditions for lasting prosperity and increased stability.
- Considerable work must be done to attain the dividend. Major investments in access to quality health care and education, culturally sensitive reproductive health services, technology, budget transparency and good governance are all urgently required to set the foundation for the demographic dividend and keep pace with the continent's demographic transition

Opportunities exist for Africa to reap a demographic dividend during the 21st century. Analysis shows that the continent as a whole could quadruple its per capita income by 2050

## Investments

in children and youth



are imperative if Africa is to have the opportunity to reap the benefits of a demographic dividend

- Africa will need to massively and rapidly scale up its investment in children and youth if it is to have a chance to seize the demographic window of opportunity – and time is running out. By 2030 the demographic window will close for a number of African countries, and by 2050 only those countries which are in the pre- or early dividend stage will still have an opportunity to reap a demographic dividend.<sup>20</sup>
- The first step to securing a demographic dividend is for countries to establish robust social systems to withstand shocks and stresses and which enable them to advance toward a demographic dividend. Africa faces the challenge of adding some 5.6 million health workers and 5.8 million teachers by 2030 to meet international standards in health care and regional best performance in education, laying the groundwork for a demographic dividend in the remainder of the century.
- The demographic dividend also relies heavily on the extent to which policies and relevant actions are geared toward strengthening the human capital base. If Africa continues past trends in investment in education and the economy, the DemDiv model projects that the continent as a whole will experience annual gross domestic product (GDP) growth of 1.9 per cent over the next 35 years. Africa can increase this rate to 2.4 per cent annually by strengthening educational policies and increasing school attendance and mean years of schooling. Furthermore, if Africa combines investment in education with economic policies related to labour market flexibility, information and communications technology, and financial and trade openness, average per capita growth rate could reach as high as 5.2 per cent for the entire region by 2050 (with variations between 4.5 to 5.8 per cent across sub-regions).

# Chapter 1

CHILD DEMOGRAPHICS IN AFRICA

A crowd of youths' in the village of Mathulini in the province of KwaZulu-Natal, South Africa

© UNICEF/UNI36692/Pirozzi



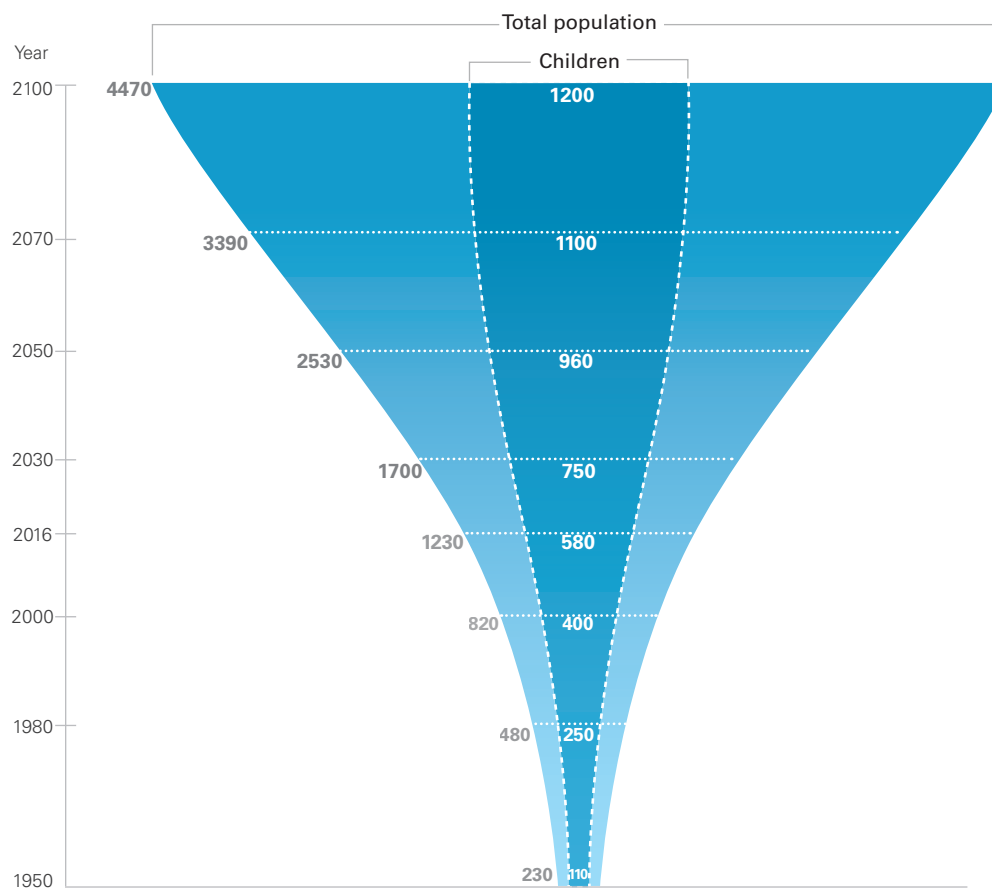




CHAPTER 1  
CHILD  
DEMOGRAPHICS  
IN AFRICA

**Africa's child population will reach 1 billion by 2055 and will become the largest of all continents in the latter part of the 21st century**

**Fig. 1.1** Children under 18 and total population in Africa, 1950–2100 (in millions)



Africa's children make up almost half its population and their numbers will reach 1 billion by 2055

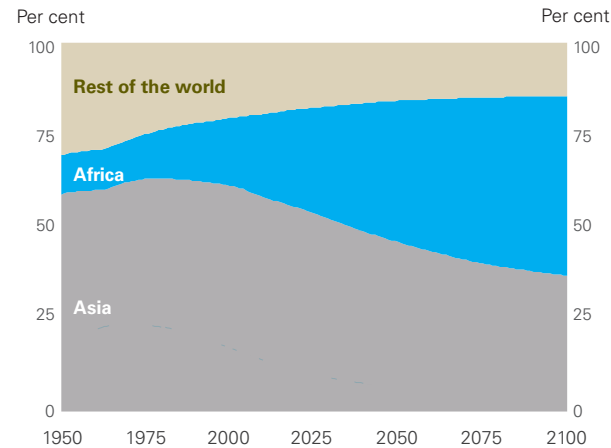
Children lie at the heart of Africa's present and future. Children under 18 currently comprise 47 per cent of Africa's overall population. In 17 countries – almost one third of the African Union's 55 Member States – more than half of the population is under 18 years of age. These figures contrast sharply with the share of children in the total population of Europe (19 per cent), North America (22 per cent) and Asia (29 per cent). However, despite the large increase in Africa's child population, Asia's overall child population remains the most sizeable of any continent.

**Note:** The horizontal lines for each are proportional to the number of inhabitants.

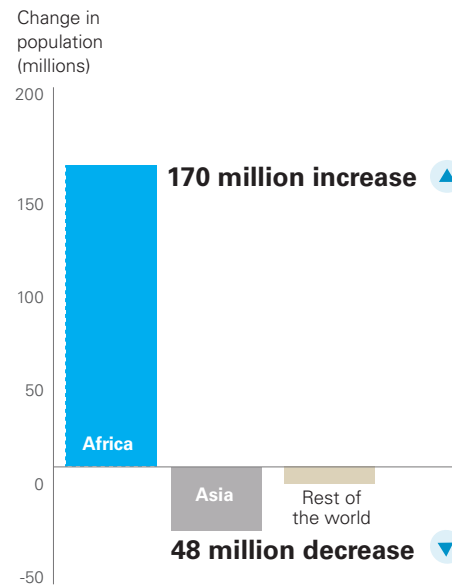
**Source:** United Nations, Department of Economic and Social Affairs, Population Division, *World Population Prospects: The 2017 Revision* (UN WPP), United Nations, New York, 2017.

## Africa can expect to witness a surge of around 170 million in its child population by 2030

**FIG. 1.2 A** Share of children under 18 by major region, 1950–2100 (per cent)



**FIG. 1.2 B** Change in the number of children under 18 from 2016–2030 by major region (in millions)

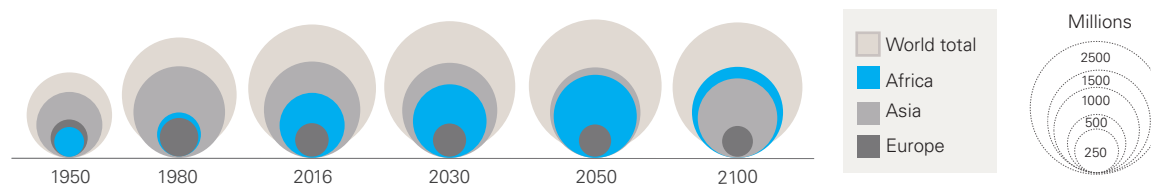


## The scale of Africa's projected child population growth is unprecedented

Historical comparison puts the scale of Africa's child population growth in perspective (see Figure 1.2 C). In 1950, Africa's child population, at 110 million, was around two thirds the size of Europe's, one fifth the size of Asia's and one ninth of the world's total. By 2016, Africa's child population was already four times larger than Europe's and approximately a quarter of the total world child population. By 2030, it will be five times larger than Europe's, rising to seven times greater by 2050, when the continent's child population is set to reach almost 1 billion and account for nearly 40 per cent of the world's children. Five years later, in 2055, Africa's child population will reach 1 billion, and will surpass Asia's child population before the end of the 21st century.

The child population in Africa is rapidly rising at a time when other continents are seeing steady and significant declines in their child populations. Over the course of the 2030 Agenda for Development, also known as the Sustainable Development Goals, the world's child population is set to see a net increase of around 122 million. Africa's child population alone will increase by about 170 million between 2016 and 2030. This increase will fully offset a 48 million net reduction in the child population in the rest of the world, mainly Asia, Europe and Latin America (see Figure 1.2 B).

**FIG. 1.2 C** Children under 18 by major region and by world, 1950–2100 (in millions)



### Births in Africa have almost quadrupled since 1950, and are set to rise by one quarter by 2030 and one half by 2050

FIG. 1.3 A Cumulative number of births in Africa, selected periods (in billions)

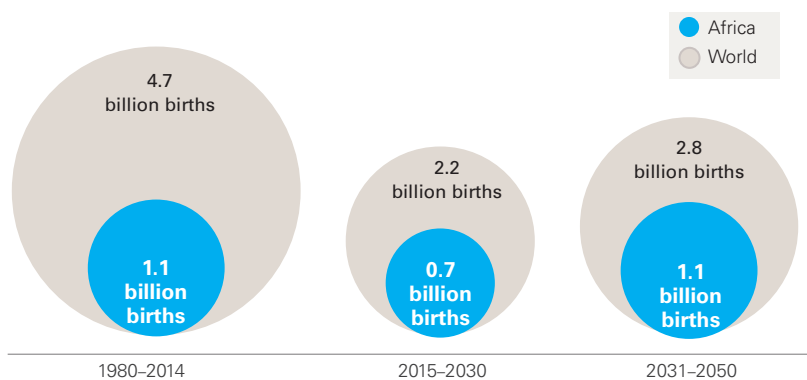
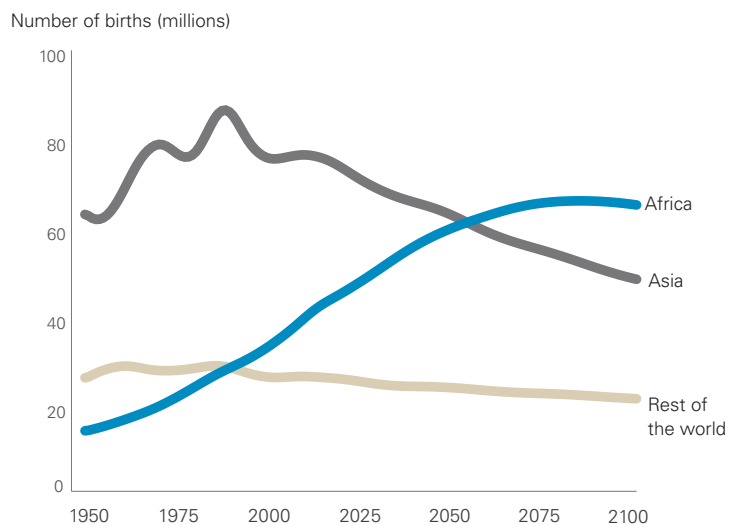


FIG. 1.3 B Number of births by region, 1950–2100 (in millions)

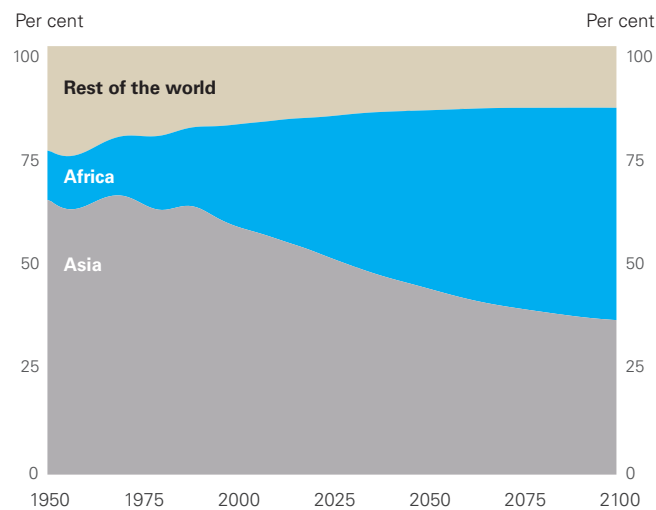


### Increasing numbers of women of reproductive age and high fertility are driving Africa's burgeoning child population

Child population growth depends on two key factors: the number of women of reproductive age and births per woman. Owing to still high, though steadily declining, fertility rates and a high share of women of reproductive age in the population, Africa's births continue to increase. Africa will see 730 million births between 2015 and 2030 and around 1.8 billion births between 2015 and 2050. By the middle of the century, Africa will account for 42 per cent of all global births, almost the same share as Asia (43 per cent), although the latter's share of the world's total is on a sharp downward trajectory.

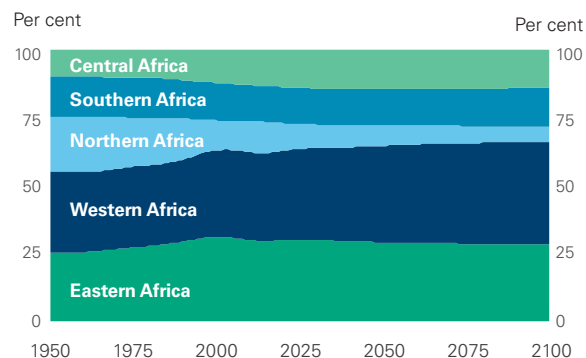
Between 2010 and 2015, adolescent girls aged 15–19 gave birth to 14 per cent of all babies in Africa, two times more than adolescent girls in Asia. Adolescent girls in Africa also have the highest rates of fertility for their age cohort in the world, with 99 births per 1,000 adolescent girls, compared to the average of 46 at the global level. Seventeen countries in Africa had 120 or more live births per 1,000 adolescent girls aged 15–19. Among Africa's sub-regions, adolescent fertility rates were highest in Central and Western Africa and lowest in Northern Africa.

FIG. 1.3 C Share of births by region, 1950–2100 (per cent)



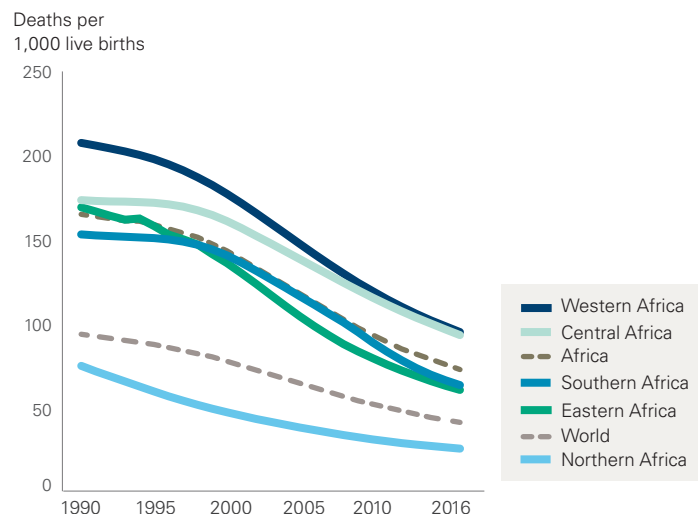
## Fifty per cent of births in Africa occur in Western and Eastern Africa

**FIG. 1.4** Share of births in Africa by African Union region, 1950–2100 (per cent)



## Child survival in Africa as a whole has improved markedly since 2000

**FIG. 1.5** Under-five mortality rate (deaths per 1,000 live births) by African Union region, 1990–2016



## Within Africa, there has been a major shift in the demographic composition of the sub-regions

Between 1950 and 2016, Southern Africa has maintained its share of Africa's births, and this status is expected to carry through to the end of the century. The share of births for Northern Africa has shrunk since 1950 and this sub-region's share of the continent's total births is projected to continue to decrease. Western Africa's share has increased since 1950 and is projected to continue to do so through to the end of the century. Together with Eastern Africa, these two sub-regions currently constitute over 50 per cent of the continent's births, and by the end of the century will be responsible for around two thirds of all births on the continent.

Globally, almost two thirds of women of childbearing age who are in a union now use contraception.<sup>21</sup> In Africa, this proportion drops to a third of such women and to around 20 per cent for those in Western Africa. Globally, in 2016, 17 per cent of all women of childbearing age are estimated to have an unmet need for family planning; for the African continent, this proportion rises to 26 per cent.

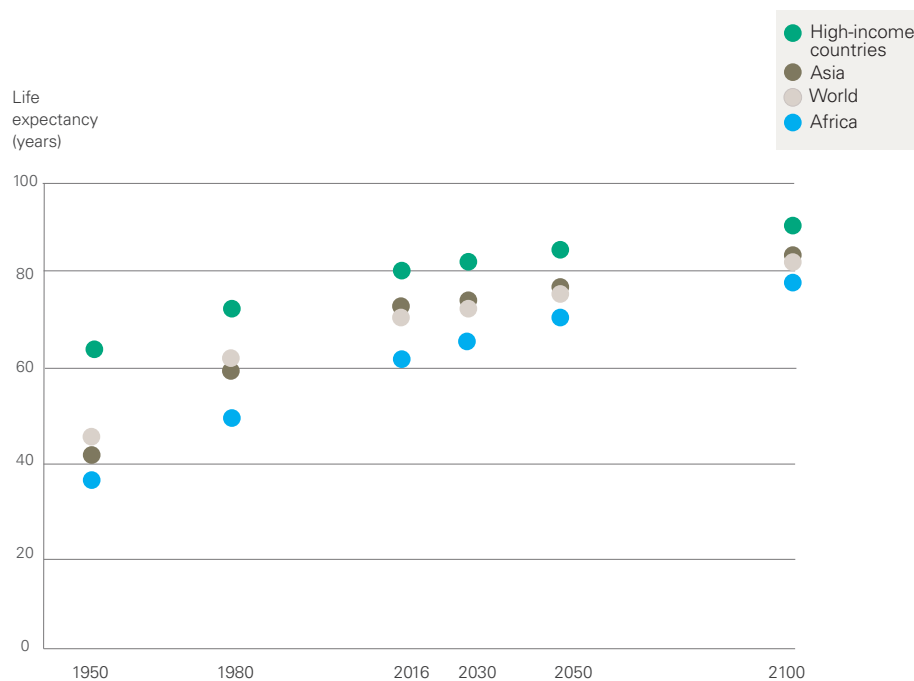
## Despite stark improvements in child survival, child mortality remains high

Africa's children have a better chance to survive and thrive than ever before. The 1980s and 1990s saw a large increase in births and a decline in mortality rates. But mortality rates were unable to outpace increased population growth, resulting in a rise in the numbers of under-five deaths. The late 1990s and subsequent decades have seen steady reductions in under-five mortality across the continent. In 1990, more than one in every six African children died before their fifth birthday. By 2016 this ratio had fallen to 1 in every 14 children.

The average under-five mortality rate for sub-Saharan Africa has fallen sharply since 1990, from 181 deaths per 1,000 live births to around 78 per 1,000 in 2016 – a 57 per cent decline. Progress has been particularly marked since 2000. Although under-five mortality rates in the region are still high, and far higher than for other continents, this shows that notable advances can be attained within a generation.

**Africa has seen almost a doubling in life expectancy since the 1950s, and within a decade will have its first children born that, on average, can expect to live at least to the pensionable age of 65**

**FIG. 1.6** Life expectancy by region, 1950–2100



Today, a child born in Africa can expect to live for 62 years: by 2030, life expectancy will have increased to 65

As child survival rates have increased in Africa, so too has life expectancy for the continent's newborns. In the 1950s life expectancy in Africa was 36 years, 28 years less than for high-income countries and 10 years less than the world average. Since then, Africa has seen a steady increase in life expectancy. A newborn in Africa today can expect to live until almost 62 years of age. Based on current trends, within a decade Africa will have its first generation of newborns who can expect to reach pensionable age, as life expectancy at birth will reach 65 years of age for the first time.

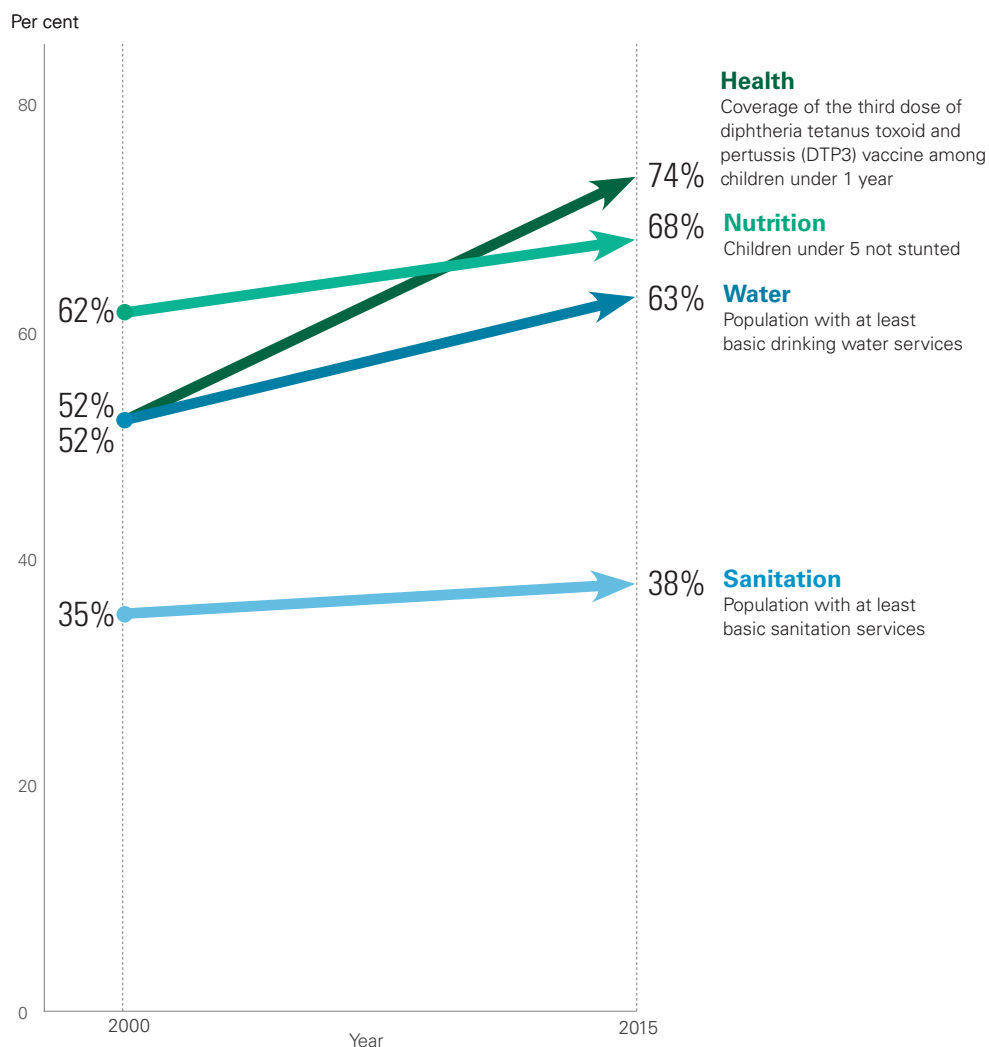
Life expectancy in Africa still lags behind that of other regions – by around 10 years compared to the world average, and almost 20 years compared to that of high-income countries. But the gap is closing rapidly, and will narrow to six years compared to the world average and 14 years compared to high-income nations by 2050.

**Note:** The national income classifications follow the World Bank income classification, 2017.

**Source:** United Nations, Department of Economic and Social Affairs, Population Division, *World Population Prospects: The 2017 Revision* (UN WPP), United Nations, New York, 2017.

## Positive trends in access to and utilization of health care, nutrition and water, sanitation and hygiene are driving Africa's child survival enhancements

FIG. 1.7 Trends in selected indicators for health care, nutrition, water and sanitation in Africa, 2000 and 2015



Source: WHO/UNICEF estimates of national immunization coverage, 2016; UNICEF, WHO, World Bank Group Joint Malnutrition Estimates, May 2017 Edition; WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene (JMP), 2017

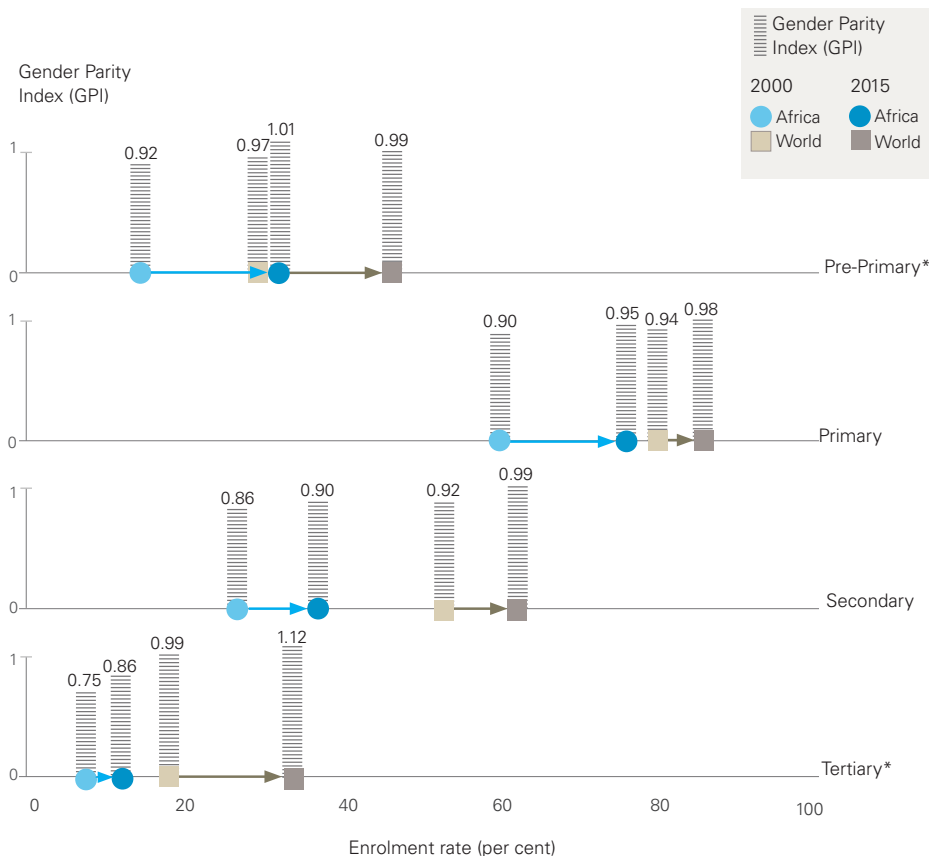
## Better access to health care, water and sanitation, education and protection and the empowerment of girls and women have together fuelled gains in child survival and development

The marked advances in child survival since the late 1990s are the product of concerted efforts by national and international partners to prioritize child survival interventions, especially in sub-Saharan Africa.<sup>22</sup> The following factors have played a key role in improving gains in Africa's child survival: better access to quality health care, nutrition and environmental health services; enhanced access to education; and increased empowerment of girls and women.<sup>23</sup>

Recent decades have seen marked successes in expanding coverage of essential services.<sup>24</sup> The majority (80 per cent) of pregnant women in Africa now receive at least one antenatal care visit.<sup>25</sup> More than half (58 per cent) of all births in Africa in 2015 were assisted by skilled health personnel.<sup>26</sup> Almost three out of every four infants on the continent receive their third dose of diphtheria-tetanus toxoid-pertussis (DTP3) vaccine.<sup>27</sup> The population in Africa with access to basic drinking water services more than doubled, from 427 million (52 per cent of the population) in 2000 to 756 million (63 per cent of the population) in 2015.<sup>28</sup>

**Primary school net enrolment rates have increased from 64 per cent in 2000 to 80 per cent in 2015, and gender gaps have narrowed, but half of the world's out-of-school children live in Africa, and secondary and tertiary enrolment is low**

**FIG. 1.8 A** Net enrolment rate by level of education and Gender Parity Index (GPI) in Africa, 2000 and 2015



\*Gross enrolment ratio

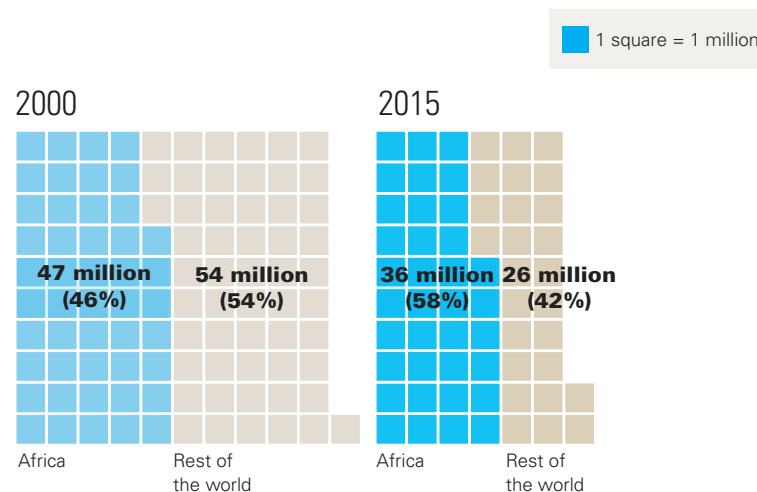
**Note:** Unlike in primary and secondary education, where the target age groups consist of the official school age populations, the notion of a target population does not readily apply to tertiary education as there are usually no official ages for attendance. Most tertiary education systems offer a wide range of programmes and pathways, allowing students to achieve a degree in just two years or to complete an advanced research degree in seven or eight years. In light of this variation, the gross enrolment ratio (GER) for tertiary education is calculated on the basis of a standard age range of five years that begins at the end of secondary education. The tertiary GER is computed as the total enrolment in tertiary education, regardless of age, expressed as a percentage of the target population of five-year age group following secondary school leaving. The tertiary GER is useful to compare the volume of participation in tertiary programmes. However, it is important to note that there are limitations when comparing the actual population coverage across countries due to the diversity in the duration of tertiary programmes, the enrolment of large numbers of women and men outside the target age group and the high levels of drop-outs and frequent re-enrolments. UNESCO Institute for Statistics, Global Education Digest 2009 (2009)

**Source:** UNESCO Institute for Statistics global database, 2016

In the education sector, Africa has also seen pronounced progress. Gross enrolment rates in pre-primary education have more than doubled, from 16 per cent in 2000 to 33 per cent in 2015.<sup>29</sup> The percentage of primary school-age children with access to primary education increased from 64 in 2000 to 80 in 2015.<sup>30</sup> And the gender parity index for primary education enrolment has improved in all of Africa's sub-regions, from 0.90 in 2000 to 0.95 in 2015.<sup>31</sup> Relative improvements in secondary net enrolment rates have been even greater, increasing by 11 percentage points, from 28 per cent in 2000 to 39 per cent in 2015.<sup>32</sup> In 2050, a recent study<sup>33</sup> estimated that one in three children in Africa may not be able to complete secondary education, and higher educational opportunities might be available to only 5 per cent of the school graduates in some African countries while it is estimated to be as high as 80 per cent in some countries in East Asia.

It is a similar story at the tertiary level, where access has increased from 8 per cent in 2000 to 13 per cent in 2015, with a considerable improvement in the gender gap, from 0.75 to 0.86.<sup>34</sup> However, access to tertiary level education remains extremely low by global standards and a significant gender gap still persists.

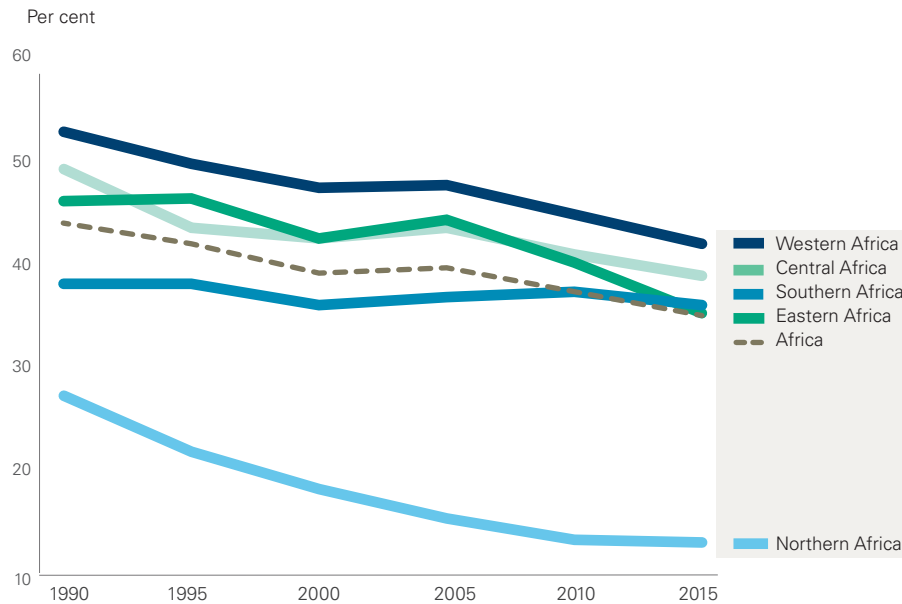
**FIG. 1.8 B** Out-of-school children of primary school age in Africa, 2000 and 2015





## Child marriage is edging downwards, but more than one third of young African women were married while they were still children

**FIG. 1.9** Percentage of women aged 20 to 24 years who were first married or in union before age 18, by African Union region, 1990–2015



## Progress can also be seen in the protection and empowerment of girls and women

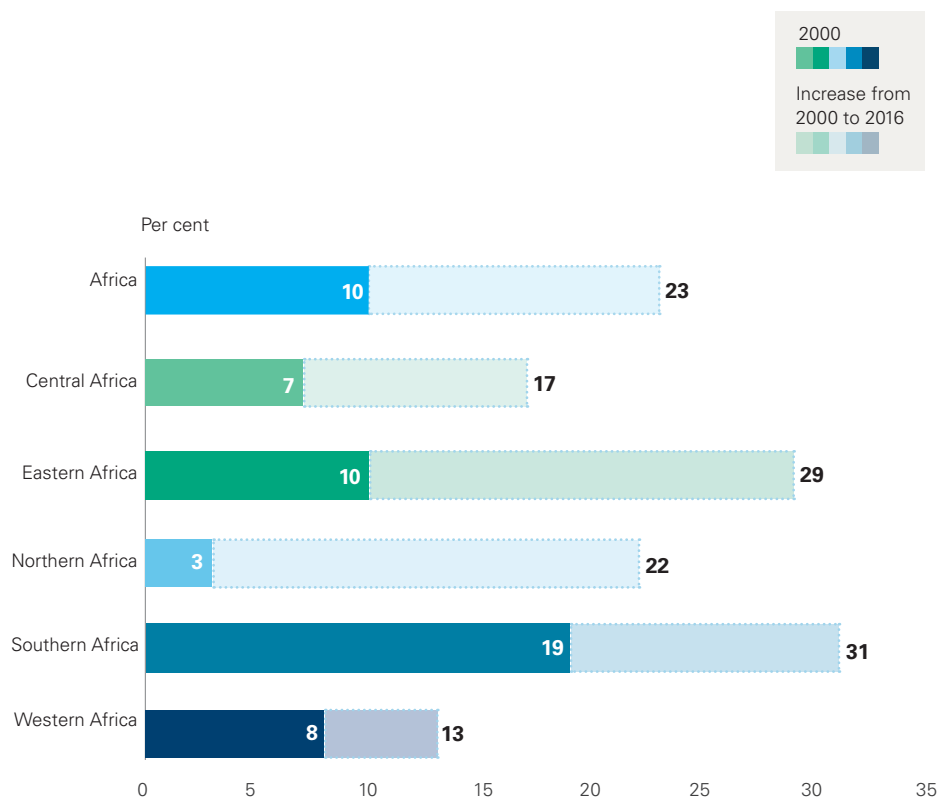
Africa's rates of child marriage have edged downwards from 1990 when approximately 44 per cent of women aged 20–24 reported having been married before age 18, to around 35 per cent in 2015.<sup>35</sup> Northern Africa has a low prevalence of child marriage, with under 15 per cent of women aged 20–24 reported to having been married before age 18 in 2015, while all other sub-regions have prevalence rates of 35 per cent and above; the highest, over 40 per cent, occurs in Western Africa.

**Note:** Aggregates are based on data from 45 countries representing 90 per cent of the female population in Africa. Aggregates by sub-region represent at least 50 per cent of the regional female population.

**Source:** UNICEF global databases, 2017, based on Demographic and Health Surveys (DHS), Multiple Indicator Cluster Surveys (MICS), and other nationally representative surveys, 2010–2016.

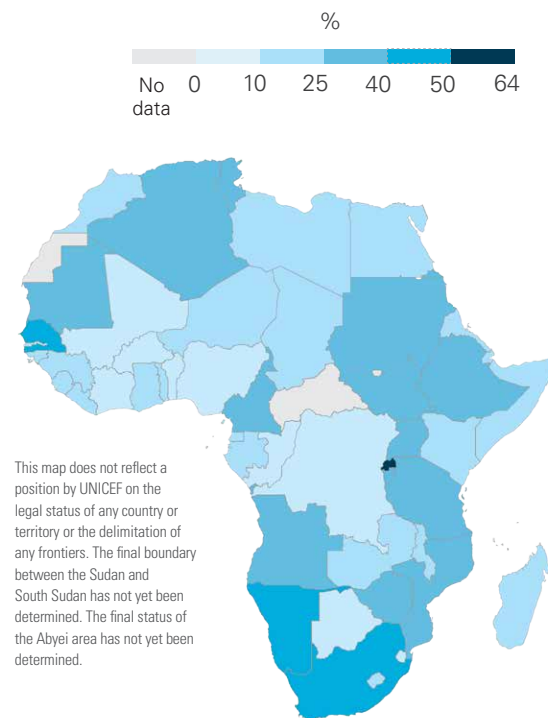
## Women now account for almost a quarter of Africa's parliamentarians, up from one tenth in 2000

**FIG. 1.10 A** Proportion of seats held by women in national parliaments by Africa in total and by African Union region, 2000 and 2016 (per cent)



Women's participation in the labour force in Africa has also continued to rise, from 51 per cent in 1990 to 55 per cent in 2016. While still well below rates in other regions, in sub-Saharan Africa 65 per cent of women of the working age population were engaged actively in the labour market in 2016, up from 60 per cent in 1990.<sup>36</sup> Furthermore, the representation of women in parliament has climbed from 10 per cent of Africa's parliamentarians to around 23 per cent between 2000 and 2016, although there is considerable variation among the sub-regions.<sup>37</sup>

**FIG. 1.10 B** Proportion of seats held by women in national parliaments in Africa, 2016 (per cent)



## Large gains in access to water and sanitation in Africa are outweighed by population growth, leaving an increased number of people without access in 2015

FIG. 1.11 A Population with and without at least basic sanitation services by African Union region (in millions)

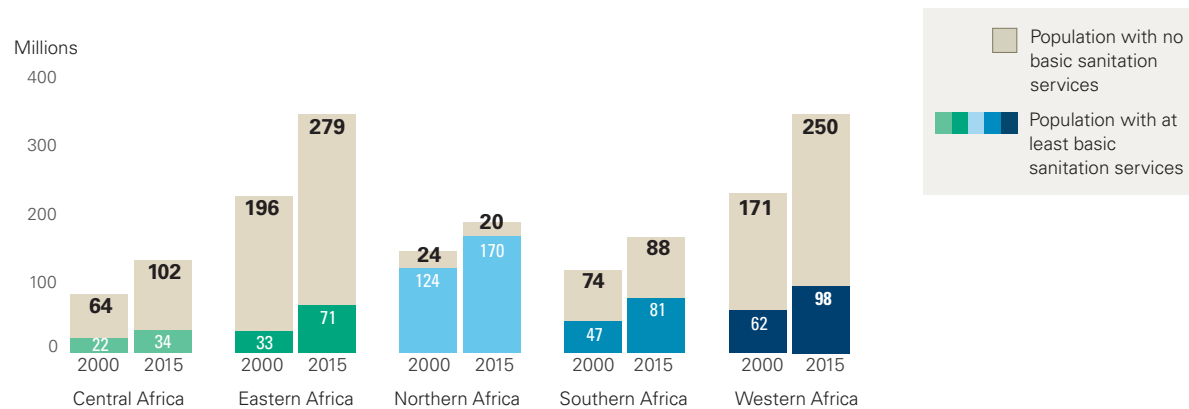
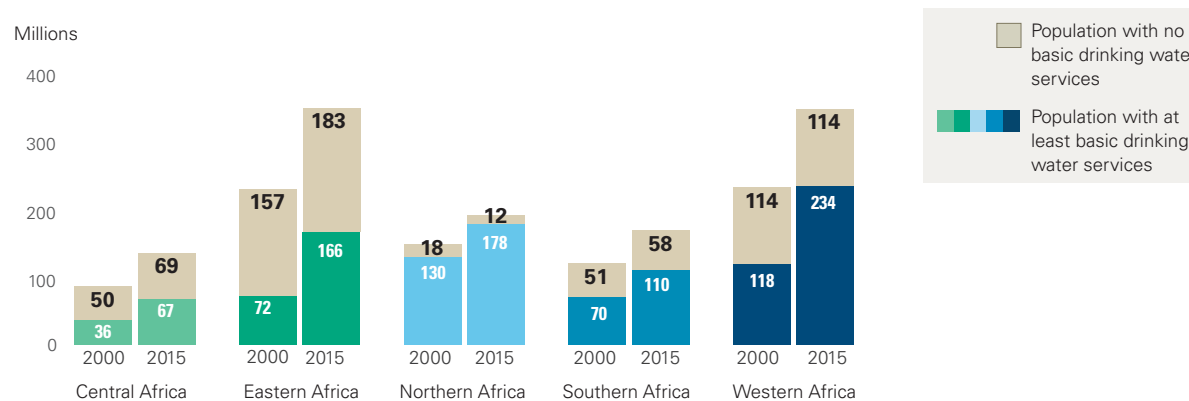


FIG. 1.11 B Population with and without at least basic drinking water services by African Union region (in millions)



Source: WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene (JMP), 2017

## Extensive challenges remain for every aspect of child survival and development

Despite these gains, extensive challenges persist in each of these areas. Faster progress in other continents has left Africa with more than half of the world's under-five deaths, and projections suggest that its share will continue to increase in the coming years as mortality levels remain comparably high and births fall, or remain at current levels, in the rest of the world and continue to rise in Africa. The continent is also home to over half of the world's children of primary school age who are out-of-school.<sup>38</sup>

While most pregnant women in Africa have one antenatal visit, only 53 per cent have the four visits recommended by the World Health Organization.<sup>39</sup> Although Africa experienced a 16 per cent reduction in stunting prevalence among children under five since 2000 – from 38 per cent in 2000 to 32 per cent in 2015 – there was a net increase of 16 per cent – or just over 8 million – in the number of stunted children on the continent, as a result of the rapidly increasing child population.<sup>40,41</sup>



Gaps in environmental health remain stark: four out of 10 of Africans lack access to basic water services and six out of 10 to basic sanitation, with large gaps between rural and urban communities, and within urban areas.<sup>42</sup> And while significant numbers have gained access to basic drinking water since 2000, population growth has resulted in a rise in the numbers of Africa's population that do not have access to this vital resource: from 391 million in 2000 to 438 million in 2015.<sup>43</sup> In Africa, only 38 per cent of the population uses an improved sanitation facility that is not shared with other households, while the population with limited or no access grew by 212 million, despite 165 million people gaining access since 2000.<sup>44</sup>

In education, despite significant progress much remains to be done. Only one out of five countries in Africa have achieved, or are near the achievement of, universal primary education (over 90 per cent primary completion rates).<sup>45</sup> And many African children who enrol in and attend school

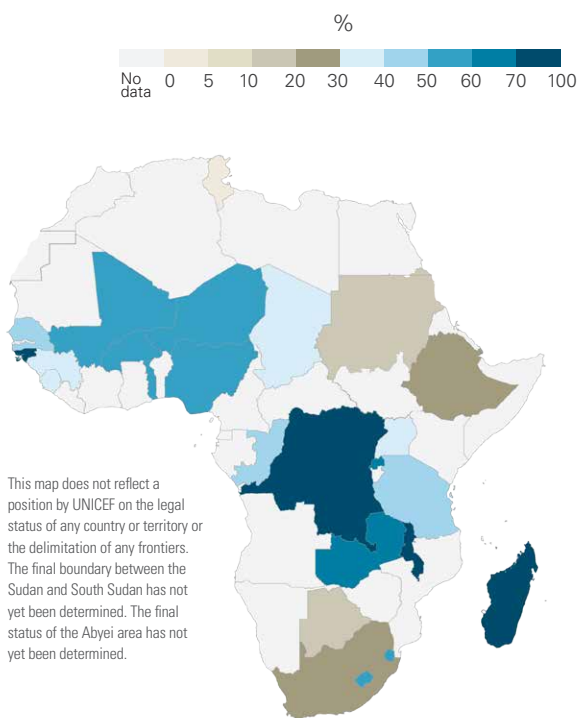
fail to complete a full primary education and to master basic literacy and numeracy skills.<sup>46</sup> Rates of enrolment in secondary and tertiary education remain among the lowest in the world: only 39 per cent of Africa's secondary school age children attend secondary school, and just 13 per cent of Africa's adolescents and young adults advance to tertiary education.<sup>47</sup>

Harmful traditional practices, such as child marriage, remain prevalent. Estimates from 2010-2016 indicate that more than one third of young women in Africa were married before the age of 18.<sup>48</sup> Countries with high levels of early marriage tend to have high levels of early childbearing and high fertility levels, perpetuating the cycles of poverty and inequality.<sup>49</sup> In sub-Saharan Africa, the average level of birth registration remains below 50 per cent, and is well below that in a number of countries.<sup>50</sup> Despite some progress, most women have only a marginal role in the formal labour force and local and national decision making processes.<sup>51</sup>

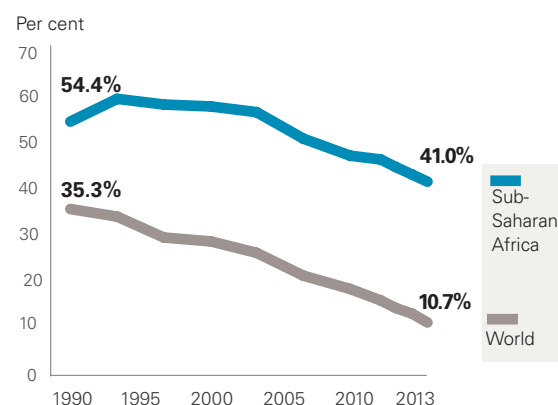
A young Ghanaian mother indefinitely postpones her education in order to care for her newborn

## Rates of extreme poverty are dropping in Africa, but still affect more than half of its children

**FIG. 1.12 A** Extreme poverty headcount ratio among children, 2013 (percentage of the child population living on less than \$1.90 a day at 2011 international prices)



**FIG. 1.12 B** Extreme poverty headcount ratio among total population, 1990–2013 (percentage of the population living on less \$1.90 a day at 2011 international prices)



Children are more affected by extreme poverty than adults in sub-Saharan Africa. While 38 per cent of adults in sub-Saharan Africa live in extreme poverty, the share increases to 49 per cent among children

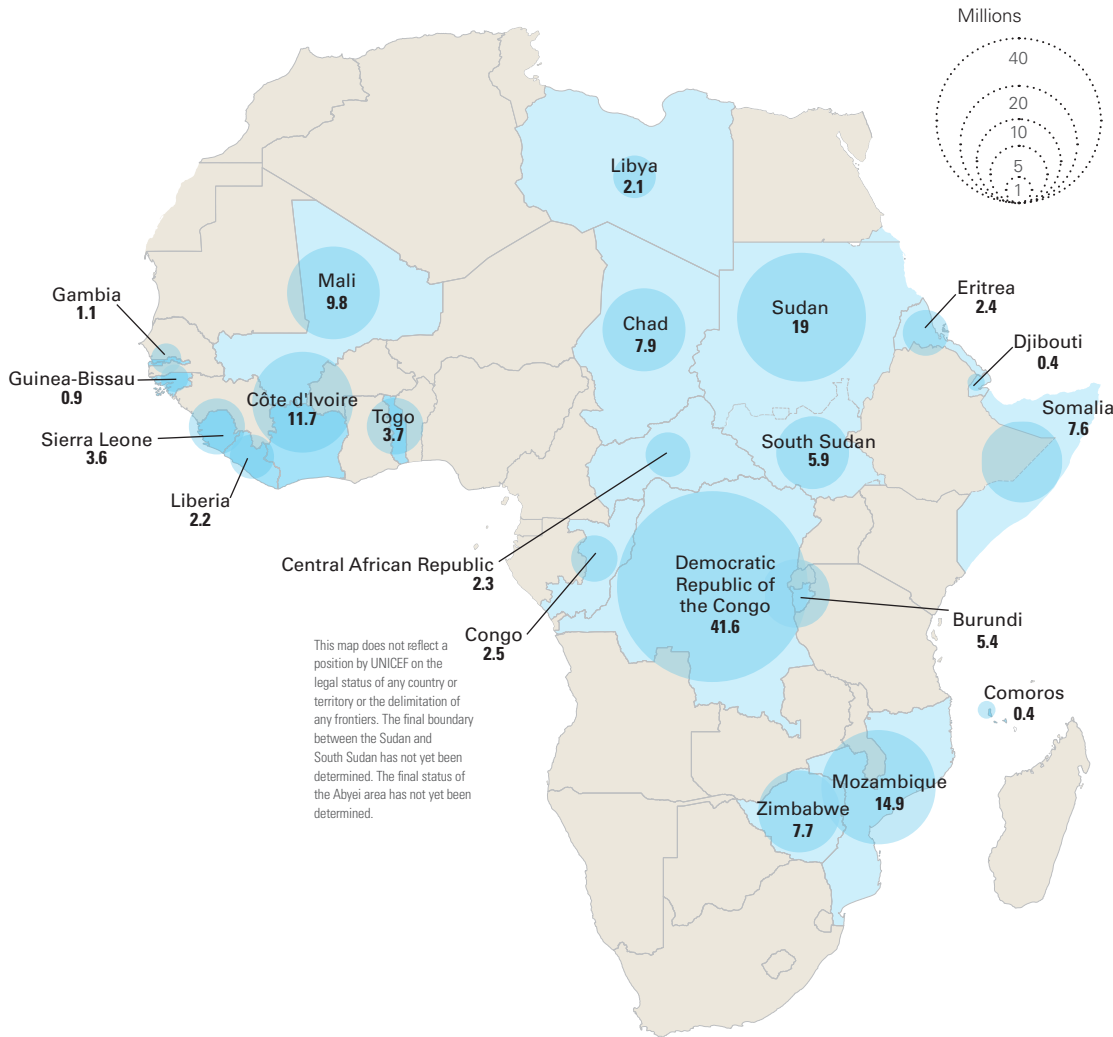
Many of the indicators discussed above are related to multi-dimensional development. Taken together, it is clear that many African countries – and particularly the poorest communities – are experiencing multiple dimensions of poverty.<sup>52</sup> In addition, monetary poverty rates are also elevated (see *Figure 1.12A and B*). According to a recent study by the World Bank and UNICEF, sub-Saharan Africa has both the highest rate of children living in extreme poverty (defined by the World Bank as those living on less than US\$1.90/day) – at just under 49 per cent – and the largest share of the world’s extremely poor children, at just over 51 per cent.<sup>53</sup> Since 22 countries without data were not represented in the analysis, the real share could be even higher.

**Notes:** Fig. 1.12 A) Extreme poverty child headcount ratio is defined as share of children with household per capita income or consumption less than \$1.90. 26 Sub-Saharan countries are covered. Fig. 1.12 B) Poverty headcount ratio at \$1.90 a day (2011 PPP) (% of population). Data from World Development Indicators database, updated on 18 October, 2017. Data are based on primary household survey data obtained from government statistical agencies and World Bank country departments. Data for high-income economies are from the Luxembourg Income Study database. For more information and methodology, please see PovcalNet (<http://research.worldbank.org/PovcalNet/index.htm>).

**Sources:** Fig. 1.12 A) Newhouse, David et al., *New Estimates of Poverty for Children*, Policy Research Working Paper 7845, World Bank Group, 2016. Fig 1.12 B) World Development Indicators. World Bank Group, ‘Poverty headcount ratio at \$1.90 a day (2011 PPP) (% of population)’, World Bank Development Research Group. Data are based on primary household survey data obtained from government statistical agencies and World Bank country departments. Data for high-income economies are from the Luxembourg Income Study database. For more information and methodology, please see PovcalNet (<http://research.worldbank.org/PovcalNet/index.htm>).

### Over a quarter of Africa's children live in fragile situations

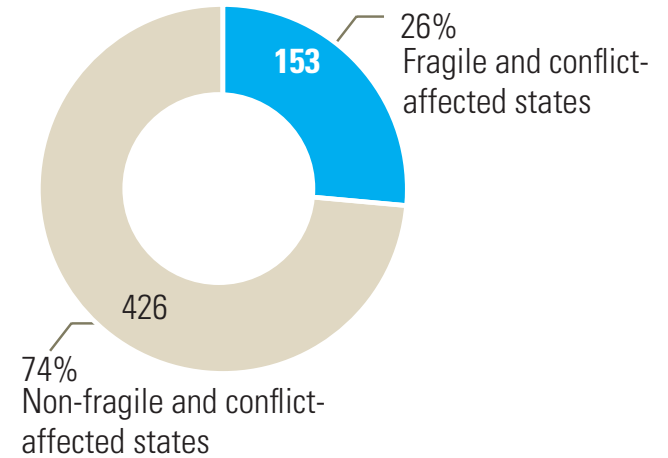
FIG. 1.13 A Number of children under 18 in fragile and conflict-affected states in Africa, 2016 (in millions)



### The risk of an African child living in poverty and extreme deprivation deepens markedly in situations of fragility

Around one quarter of Africa's children – 153 million – are currently living in situations of fragility or conflict.<sup>54</sup> Of the countries included in UNICEF's 2017 Humanitarian Action for Children appeal, 85 per cent are in Africa.<sup>55</sup>

FIG. 1.13 B Children under 18 in fragile and conflict-affected states in Africa, 2016 (in millions, in per cent)



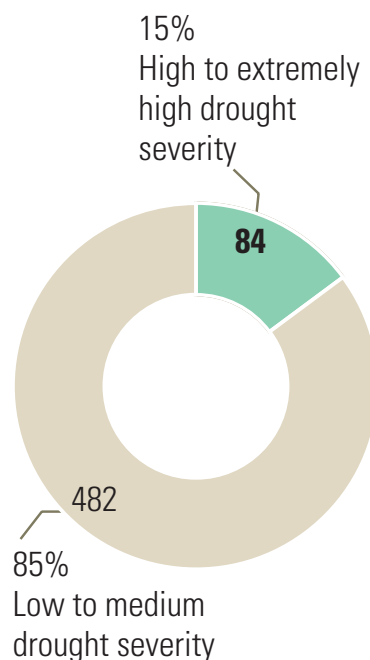
**Note:** "Fragile Situations" refer to the World Bank 'Harmonized List of Fragile Situations FY 18'. Fragile Situations have: either (a) a harmonized average Country Policy and Institutional Assessment (CPIA) country rating of 3.2 or less, or (b) the presence of a UN and/or regional peace-keeping or peace-building mission during the past three years. For further details of this classification please refer to <http://pubdocs.worldbank.org/en/189701503418416651/FY18FCSLIST-Final-July-2017.pdf>.

**Source:** United Nations, Department of Economic and Social Affairs, Population Division, *World Population Prospects: The 2017 Revision (UN WPP)*, United Nations, New York, 2017.



### Millions of children in Africa are affected by climatic conditions such as drought

**FIG. 1.14** Children in Africa by drought severity, 2015 (in millions and percentages)



**Source:** *Unless we act now: The impact of climate change on children*, United Nations Children's Fund (UNICEF), 2015.

The inhabitants of the drought affected areas in East Gojjam, Ethiopia gather every morning to do some environmental protection activities

© UNICEF Ethiopia/ 2016/Tesfaye

It is increasingly recognized that the natural and physical environment in which a child lives strongly influences his or her wellbeing. Recent reports by UNICEF indicate the extent of these linkages. Among continents, Africa currently has the highest number of children living in areas prone to high or extremely high drought severity: 84 million, or 15 per cent of the continent's child population.<sup>56</sup> More than 350 million African children live in homes where solid fuel is used, significantly increasing their health risks from indoor air pollution.<sup>57</sup> As Africa's cities rapidly expand, outdoor air pollution is also becoming a threat to children's health across the continent.<sup>58</sup>

### These challenges risk being amplified by population growth unless efforts for child survival and development and women's empowerment accelerate

All these challenges risk being exacerbated by rapid population growth. As explained in Chapter 3, massive investment is required to meet the deficits in health care

and education services required to strengthen the continent's human capital and prepare it for reaping a demographic dividend later in the century. Of equal importance is the need to plan for the spatial and infrastructural implications of a doubling of the continent's overall and child populations by mid-century. There is also an urgent imperative to plan for the needs of the almost 170 million children that will be added to the continent's population over the course of the 2030 Agenda for Development, and to prioritize the most disadvantaged and marginalized children, whose access to essential services and protection is often well below many of the aggregates cited here.

The 2030 Agenda for Development, the recently adopted Africa's Agenda for Children 2040 and the African Union Agenda 2063 present opportunities for intensifying the discourse around investments in children and youth and accelerate progress on social, economic and environmental development.<sup>59</sup> Given the continent's rapid demographic transition and the sheer scale of its projected population increase, failure to do so may leave Africa even further behind other regions, and lacking the conditions to reap a demographic dividend in the middle and second half of the century. ■

# Chapter 2

CLOSING GAPS IN AFRICA'S SOCIAL SYSTEMS  
TO REAP THE DEMOGRAPHIC DIVIDEND

Aisha Abdoulaye stands  
in the fish market where  
she works, in the conflict-  
affected city of Gao, Mali

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CHAPTER 2  
CLOSING GAPS  
IN AFRICA'S  
SOCIAL SYSTEMS  
TO REAP THE  
DEMOGRAPHIC  
DIVIDEND

## Planning is critical if Africa is to reap the benefits of a potential demographic dividend

Much has been written in recent years about Africa's potential to reap a demographic dividend. This important issue was chosen as the African Union's theme for 2017, with a major focus on investing in youth.<sup>60</sup> This chapter explores Africa's potential for investing in children to build a strong human capital base. The analysis presented suggests that Africa has the potential to reap such a dividend, particularly towards the middle of the century, as its demographic transition will result in a youthful working age population that – if healthy, educated, empowered and protected – can drive economic growth higher than ever before. But the dividend is far from guaranteed, and requires countries to make judicious investment now and in the future in social systems to strengthen their human capital bases.

The term 'demographic dividend' refers to potential economic growth resulting from the presence of a proportionally larger working age population.<sup>61</sup> It is driven by a country or region's demographic transition. As mortality and fertility decline, the age structure of the population changes. With fewer births each year, a country's young, dependent population grows smaller in relation to those of working age. During such periods the dividend can materialize: the increasing share of the working age population compared to other age groups leaves each working age person

with fewer dependents to support, and thus with more disposable income. This, in turn, can spur greater consumption, production and investment and accelerate growth. The window for demographic dividends eventually closes when the dependency ratio rises again as a consequence of population ageing: the increasing share of the elderly population and continuing low fertility feed declining numbers of new cohorts to the working-age population.

But even with optimal demographic conditions, a dividend is not guaranteed.<sup>62</sup> It requires a country to have educated and trained human resources and to pursue economic models capable of productively employing the surging workforce.

## Most countries in Africa are in the pre-dividend phase

Proximity to the demographic window of opportunity is defined in this report according to a typology devised by the World Bank, based on current and past fertility and changes in the share of the working age population.<sup>63</sup> Countries are either pre-dividend (yet to reach the window), early dividend, late dividend or post-dividend. For the latter, demographics can no longer play a part in spurring economic growth. And although much has been written about Africa approaching a demographic dividend, for more than half of its nations the demographic window of opportunity is relatively far away and may only emerge towards the middle of the century. This calculation is based on current trends in fertility and population growth, when the dependency ratio (defined

as the number of children aged 14 years and younger) and elderly (aged 65 years and older) per 100 working age population (15 to 64 years), is approaching its lowest value (see *Figure A.2*). Between now and 2030 Africa's population will grow from 1.2 billion to 1.7 billion, but its structure will not change substantially, remaining one with a young and growing population (see *Figure A.3*).

Only four of Africa's countries are classified as 'late dividend' according to the World Bank demographic typology (Mauritius, Morocco, Seychelles and Tunisia), while 14 are identified as 'early dividend' (Algeria, Botswana, Cape Verde, Djibouti, Egypt, Gabon, Ghana, Lesotho, Libya, Namibia, Rwanda, South Africa, Swaziland and Zimbabwe).<sup>64</sup> The other 36 are all at the pre-dividend stage, and will not reach their demographic window of opportunity until 2030 or beyond.<sup>65</sup>

Given that all but four African states are at the pre- or early-dividend stages, investing in Africa's children to reap the dividend becomes all the more imperative. While the current generation of African youth will have much to contribute to a potential demographic dividend, for many of the continent's countries the children of today and tomorrow will be key to its fulfilment – for it will be after 2030 when the demographic window of opportunity is open to most countries. Development forums in Africa and globally therefore have to intensify the discourse around investments for Africa's children, to ensure that the continent is in a position to seize the demographic window of opportunity that is approaching for the majority of its countries.



Hawa Kargbo, 64, with her son's children outside her home in the village of Mateneh, Bombali district, Sierra Leone

## Enhancing Africa's human capital will require closing gaps in the continent's social systems

Reaping a demographic dividend in Africa will necessitate constructing a firm foundation through investment in building the continent's human capital. This will give African countries great flexibility when choosing appropriate economic models to employ its burgeoning workforce in coming years. But many countries on the continent still lack adequate investment in fundamental institutional structures to build this human capital, particularly given the projected growth of their child and youth populations.

### GAP ANALYSIS

A gap analysis of Africa's social systems can be used to identify the potential investment required for individual countries to build a strong human capital base. Data on social systems remain somewhat sparse and incomplete, owing in part to the difficulty of standardizing indicators across countries.<sup>66</sup> Available data, however, provides some insights into the strength of social systems in health and education, particularly in relation to international standards.

The World Health Organization (WHO) has set out minimum standards for key interventions in health, such as the requisite ratio of skilled health personnel per 1,000 inhabitants.<sup>67</sup> These standards represent a concrete milestone for assessing whether a health system is sufficiently robust to deliver results and withstand shocks. The Ebola crisis in 2014-2015 illustrated the utility of such measures. The three countries most affected – Guinea, Liberia and Sierra Leone – had health system indicators well below minimum WHO standards.<sup>68</sup> Ensuring that all African countries achieve minimum standards for health care is a key first step towards establishing the foundation for the continent to reap a demographic dividend later in the century.

Considerable divergence can be seen among Africa's sub-regions and countries in relation to the strength of their health systems. None of the five sub-regions has met most of the WHO's minimum

standards for healthcare, and although Northern and Southern Africa are the closest, they still fall short of the standards by around 80 per cent.<sup>69</sup> Most countries in the other three sub-regions – Central, Eastern and Western Africa – have an even longer way to go to meet these thresholds.<sup>70</sup>

Minimum standards are less developed or agreed upon for education. One way of undertaking a regional-level gap analysis is therefore to see how countries measure up to the leading regional performer, and assess the extent of gap reduction required to boost all countries to that level. The education gap analysis presented here is based on this methodology.

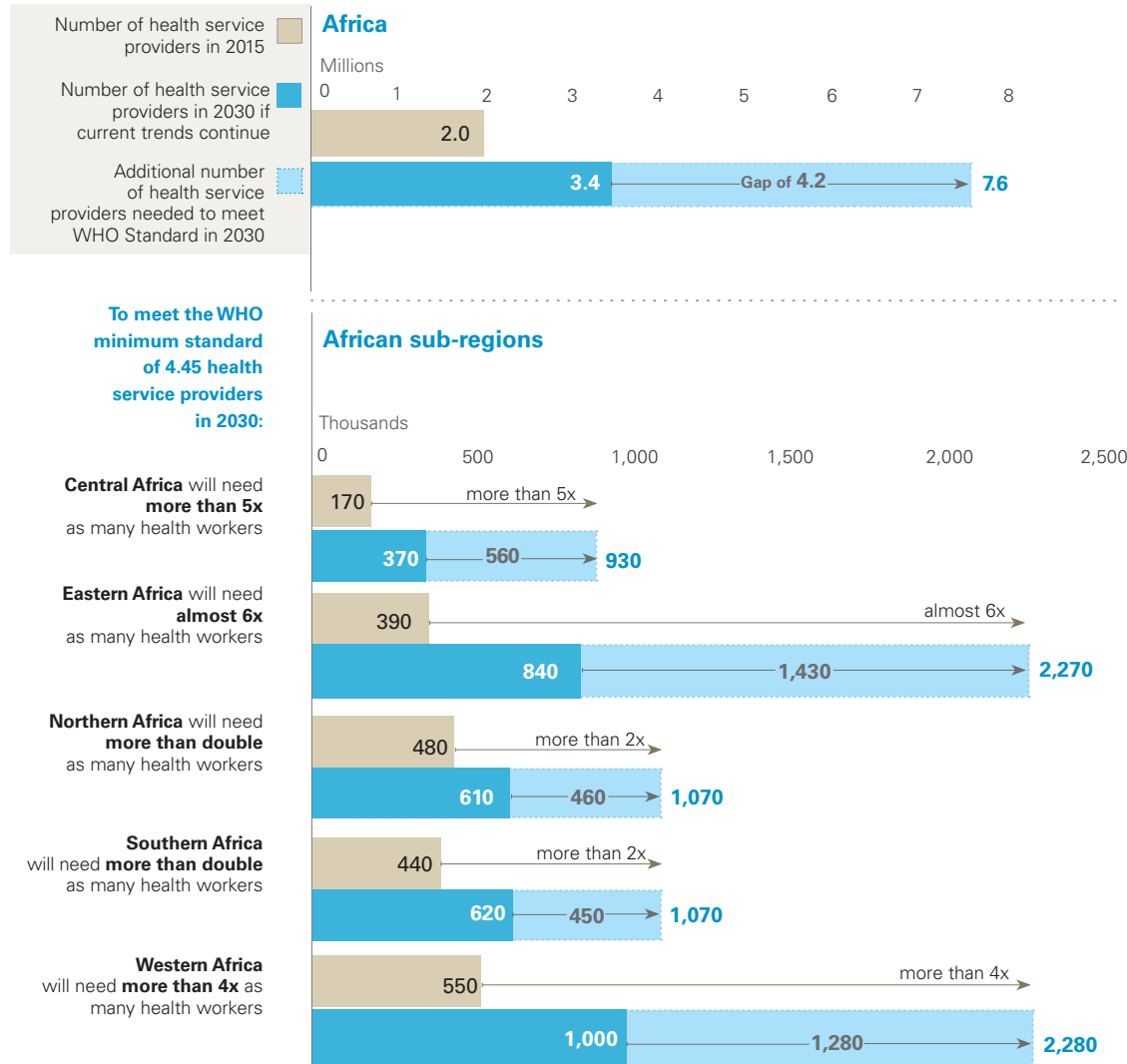
## Bringing Africa's health care and education to international standards will go a long way toward laying the groundwork for a demographic dividend

The next section examines the gaps in key indicators for health services and education. This limited set of indicators represents those that are available for the broadest group of African countries. As such, the findings paint only a partial picture of the continent's health and education systems – and critically, do not address the quality of service provision, for which there is not yet an agreed set of indicators. But, even given these limitations, the figures underscore the urgent need for more and better investment in Africa's social systems.

A key reason for undertaking a gap analysis in health care and education is to form a baseline for the extent of investment required to catalyse a demographic dividend for all of Africa, taking demographic changes into account. Much has been said about the possibility of achieving this dividend, and some useful studies undertaken.<sup>71</sup> Most agree that a dividend is possible, but advocate for considerable investment in the human capital required and the application of appropriate economic models to absorb and productively employ the surging workforce.

### Africa will need an additional 4.2 million health workers above its current rate of growth to meet the WHO minimum standards for frontline skilled health personnel by 2030

FIG. 2.1 Number of health service providers (doctors, nurses and midwives) for each scenario by Africa in total (in millions) and by African Union region (in thousands)



Africa is on course to add 1.4 million more health workers by 2030, but will need to employ an additional 4.2 million skilled health professionals to meet minimum WHO standards, due to the growing population

Doctors, nurses and midwives provide the core frontline skilled personnel for health systems. WHO standards call for a minimum of 4.45 doctors, nurses and midwives per 1,000 inhabitants.<sup>72</sup> In 2013, the world's richest countries<sup>73</sup> had a density more than double this threshold (10.4);<sup>74</sup> the highest was Denmark, with 20 skilled health personnel per 1,000 inhabitants.<sup>75</sup> The global average in 2013 was 5.9 per 1,000 inhabitants. For Africa as a whole, this ratio in 2015 was 1.7 per 1,000 inhabitants.<sup>76, 77</sup>

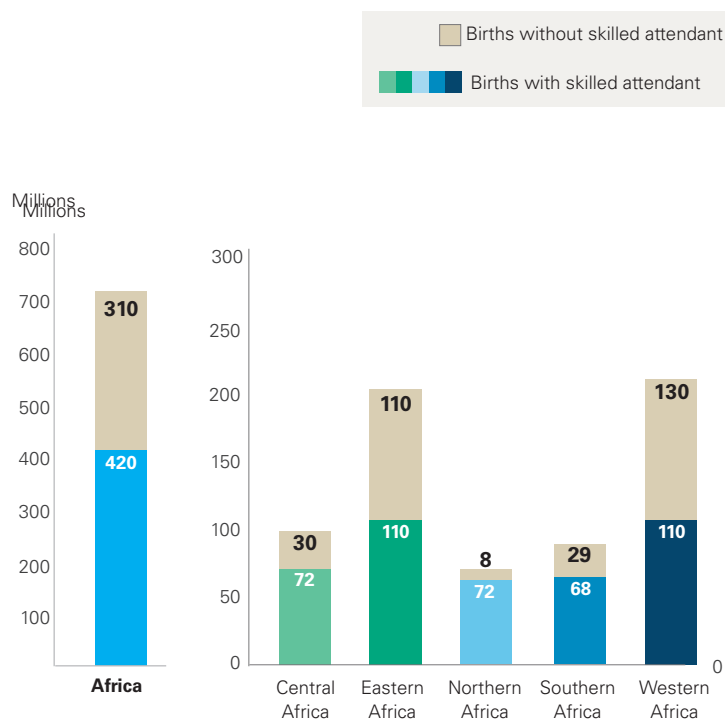
If trends for health personnel during the period 2000-2015 continue, the continent will add 1.4 million personnel to its frontline skilled health professionals by 2030, for a total of 3.4 million. Given Africa's demographic outlook, an additional 4.2 million professionals will be needed for the continent to reach the WHO minimum standard of 4.45 skilled health professionals per 1,000 population, requiring a total of 7.6 million professionals by 2030.

**Note:** For countries who already have a density of 4.45 the current value is maintained. Data from 2000 to 2015 was used for estimation. No health workforce data were available for South Sudan, hence the subregion's average density was assumed.

**Source:** UNICEF analysis based on World Health Organization, The 2016 update, Global Health Workforce Statistics, WHO, Geneva, 2016 and United Nations, Department of Economic and Social Affairs, Population Division (2017), *World Population Prospects: The 2017 Revision*.

**With 730 million births projected for the continent through to 2030, based on the continuation of current coverage, more than 300 million of those births will not be attended by skilled health personnel between 2016 and 2030**

**FIG. 2.2** Cumulative births from 2015 to 2030 by skilled birth attendants by Africa in total and by African Union region (in millions)



**Note:** Most recent skilled birth attendance country values available for the period 2010–2016.

**Source:** UNICEF analysis based on UNICEF global databases 2016 based on DHS, MICS and other nationally representative surveys; United Nations, Department of Economic and Social Affairs, *Population Division, World Population Prospects: The 2017 Revision*, United Nations, New York, 2017.

## Skilled health personnel need to increase six-fold in Eastern Africa, five-fold in Central Africa and four-fold in Western Africa to meet WHO minimum standards for health service provision by 2030

Variation among Africa's sub-regions and countries is significant. Examining sub-regional averages for density of skilled health personnel, both Northern and Southern Africa have densities about twice as large as the other three African sub-regions. Nevertheless, the gap in relation to the WHO minimum standard is still around 80 per cent of the actual numbers. Assuming a continuation of current trends, both sub-regions will fall short of WHO standards by around 450,000 medical staff.

In the other sub-regions, large populations and the low current density of health personnel will present even greater challenges for strengthening health systems. Meeting the WHO standards by 2030 will require increasing the current number of health workers in Eastern Africa by six-fold, five-fold in Central Africa and four-fold in Western Africa. Meeting the WHO standards by 2030 for these three sub-regions will require adding 4.4 million skilled health personnel to the existing 1.1 million health force.

Investment in health sector personnel is essential, given the 730 million babies due to be born in Africa during the 16 years from 2015-2030. At present, only 58 per cent of pregnant women in

Africa have their births attended by skilled health personnel – leaving around 17 million births unattended each year. Sub-regional variation is again significant, with 88 per cent and 71 per cent of births attended by skilled health personnel in Northern Africa and Southern Africa, respectively, but only 46 per cent in Western Africa.

Based on current trends of both births and rates of skilled birth attendants in Africa, 21 million births will still not be attended in 2030. When viewed in cumulative terms, the figures are significantly greater: if current rates of coverage persist, then about 310 million births will not be attended by skilled health personnel between 2015 and 2030. Around 80 per cent of these non-attended births will take place in the Eastern and Western Africa sub-regions.

Data and projections related to skilled health personnel and skilled attendance at delivery illustrate the challenges and opportunities for investing in Africa's children and mothers. They are also based on some key assumption that could modify the projected figures. For example, they do not take into account potential future breakthroughs in technology that could alter the minimum standards required for health systems to be considered as resilient. In addition, many other factors go into making a robust health system, including community health workers, facilities, medicines, administrative capacity, financing and more. The purpose of this section is not to be exhaustive in describing and projecting health system indicators but to illustrate important gaps that must be filled in connection with population growth and to serve as a foundation for the policy recommendations and potential strategies for success outlined in Chapter 3.

## BOX 2.1 HOW AFRICAN COUNTRIES MADE PROGRESS IN HEALTH<sup>81</sup>

**Rwanda** made dramatic progress in improving both child and maternal survival over the since 1990. Between 1990 and 2016 the under-five mortality rate fell from 151 to 39 deaths per 1,000 live births.

Much of this success is the result of a sharp focus on the poorest. Against the backdrop of weak health systems, government and community efforts, supported by UNICEF, started from the margins. This included expanding integrated community health services, reinforcing the rural health workforce with skills training and performance incentives, widening the scale of efforts to encourage women to give birth in health facilities and launching a community-based health insurance plan to protect the most vulnerable from the financial hardship of paying for health services. As a result, since 2005 Rwanda's under-five mortality has declined twice as rapidly among poor groups as among the non-poor.

In parallel with these initiatives, Rwanda also expanded coverage of lifesaving health interventions. Thanks to rapid progress, a much higher percentage of births are now supported by a skilled birth attendant, more newborns are breastfed within an hour of birth and more than 68 per cent of children now sleep under an insecticide treated bednet.

## In education, Africa faces the challenge of reducing pupil-teacher ratios to improve learning outcomes

Africa has made important strides in increasing access to primary and secondary education in recent decades.<sup>78</sup> But many African countries face challenges in this area, and all need to improve the quality of education services and learning outcomes for all children. The 2017 World Economic Forum report revealed that only five of 25 African countries assessed exceeded the global average for education system quality.<sup>79</sup>

The continent's demographic dynamics will sharpen these challenges. The period between 2015 and 2030 will see a 33 per cent increase in the primary-school-age population: from 189 million to 251 million. The largest increases will take place in Western and Eastern Africa, with increases of 22 million and 18 million, respectively. Countries in Northern Africa have the highest levels of primary school enrolment and the lowest projected increase in the primary school age population for 2015-2030.

The projected increase in the number of children will necessitate a sharp expansion in both the number of schools and of education personnel to maintain status quo. If the increase in school age population and pupil/teacher ratios in each country are taken into account, by 2030 the primary school teacher pool will have to increase by 1.3 million from its current 5.4 million,<sup>80</sup> based on current enrolment rates. If the objective is to improve the pupil/teacher ratio to equalize it to the best-performing country in each of the five sub-regions (depending on sub-

region, between 17 and 23 students/teacher), then the number of teachers would need to increase by 5.8 million, more than doubling the original number.

Like the health gap analysis, findings for education are limited by the lack of data for several African countries. Many other factors also go into building a robust education system, including facilities, supplies, curricula, administrative support, capacity building and financing. And it is difficult to find accurate, reliable data for both primary and secondary education quality. The number of overage children in school further complicates estimates of the actual gap in education. But the findings nevertheless point to the tremendous challenge facing Africa (particularly Central, Eastern and Western Africa), for creating the foundation required to build a strong human capital base.

Meeting minimum standards for health care and rapidly improving education standards will be key to establishing the foundation for a potential demographic dividend. Education and health indicators are also important components of the demographic dividend analysis undertaken in this report, the findings of which are summarized in the next section. ■

### BOX 2.2 HOW AFRICAN COUNTRIES MADE PROGRESS IN EDUCATION

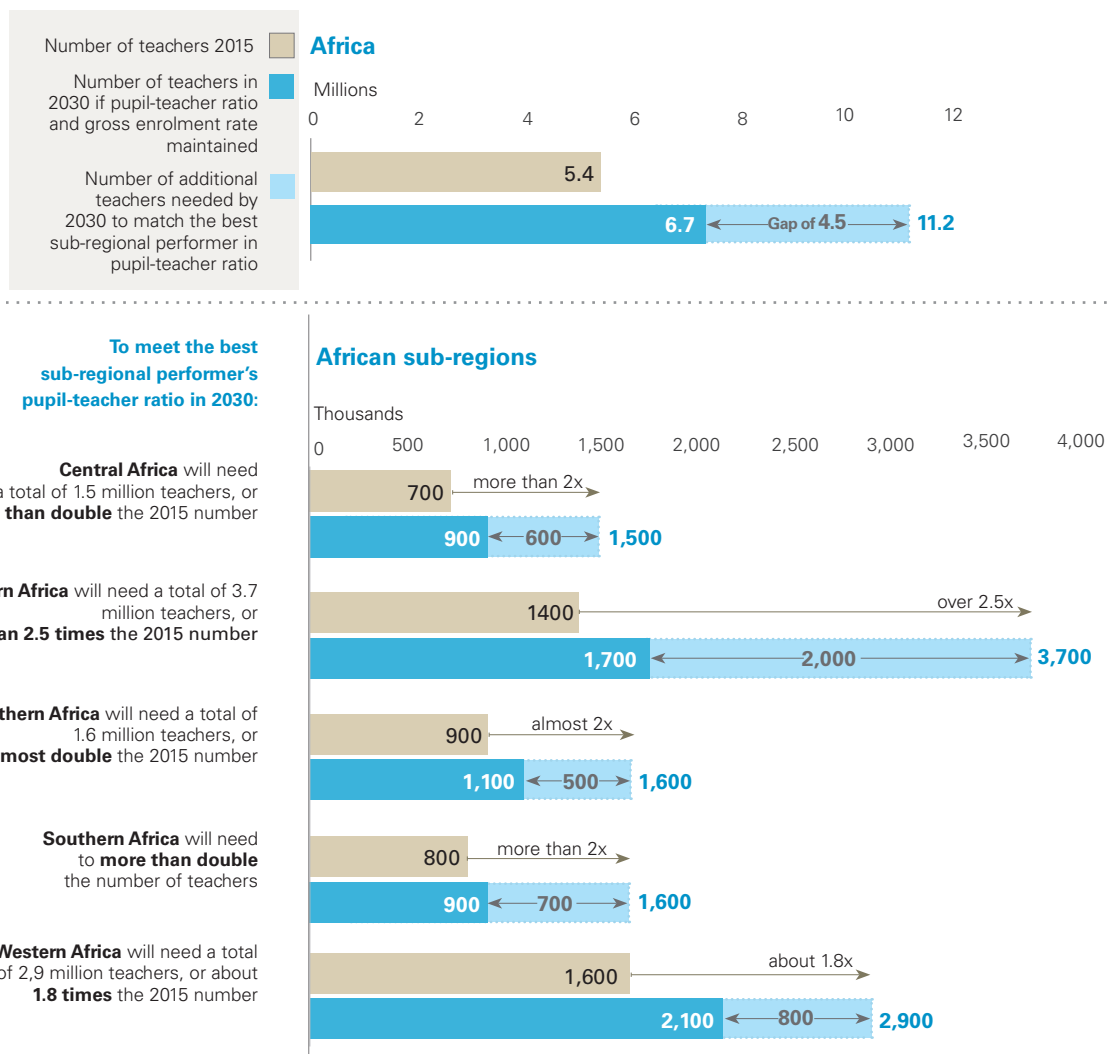
Over the period 1999-2015, **Niger** achieved the most progress in Africa in improving completion rates for primary education (*proxied by gross intake ratio to the last grade*). The country's primary completion rate rose from 20 per cent in 1999 to 69 per cent in 2015, with the greatest progress taking place between 2013 and 2015.<sup>82</sup>

Many factors have contributed to the rapid improvement in Niger's primary completion rate, especially the expansion of school infrastructures and expenditures on recruitment of teachers. This, in turn, has enabled the accommodation of increased numbers of children in schools and provided the support to enable them to complete primary education. In the last 10 years, the number of primary schools in Niger has doubled, the number of classrooms is 2.5 times greater than in 2005, and the number of primary school teachers has almost tripled from 24,091 in 2005 to 66,750 in 2015.<sup>83</sup> These developments are the result of increased investments in education by the Government and its partners to address the challenges of a rapidly increasing child population and a large number of out-of-school children. The Government of Niger increased education spending from 17 per cent of total government expenditure in 1999 to 22 per cent in 2014, of which half was spent on primary education.<sup>84</sup>

Nonetheless, quality of education remains a challenge. The 2014 sub-regional learning assessment (PASEC) revealed that less than 7 per cent of the Nigerien sixth-graders were able to attain satisfactory levels in language and mathematics. A focus on improving the quality of education, as well as access and equity, especially for girls and out-of-school children, is a challenge of critical importance for Niger and many other African countries.

### More than 11 million primary school teachers will be needed in 2030 to meet the best sub-regional performers' pupil-teacher ratio

Fig. 2.3 Primary school teachers for each scenario by Africa in total (in millions) and by African Union region (in thousands)



Note: For missing values of pupil/teacher ratios in Libya, Sudan and Somalia the sub-regional average was used. Best sub-regional performers' pupil/teacher ratio: Central Africa-23; Eastern Africa -19; Northern Africa -17; Southern Africa - 23; Western Africa - 22.

Source: UNICEF analysis based on UNESCO Institute for Statistics global databases, 2016, based on administrative data for the most recent year available during the period 2009-2016. United Nations, Department of Economic and Social Affairs, Population Division, *World Population Prospects: The 2017 Revision*, United Nations, New York, 2017.



## BOX 2.3

### CONFLICT DELAYS, OR EVEN NARROWS, THE DEMOGRAPHIC WINDOW OF OPPORTUNITY

Conflicts and disasters can have considerable impacts on population dynamics. The impact of crises and emergencies on migration, mortality and fertility is often reflected in the population's age structure and size. For instance, the proportion of females was much larger in several European countries for cohorts born in the 1920s, following the death of many men during World War II.<sup>85</sup> In today's rapidly globalizing world with increasing risks and threats – such as complex conflicts and natural disasters – population dynamics are very likely to be affected.

The shortage of vital resources such as drinking water and fertile soil can heighten civil strife and may force people to leave their homes, within or across borders. In particular, as demographic shifts and growing economies and consumption levels are expected to occur in Africa over the coming decades, demand for water will increase substantially, which is likely to be a major driver of water crises in the region.<sup>86</sup> Although shortages in water availability due to growing demand are not directly linked to potential conflict, reducing tensions and improving planning to establish more resilient systems, as well as strengthening the management of scarce resources for growing populations, should be prioritized against the backdrop of changing climate.

If the demographic transition is not considered in development policies and planning, young people are denied opportunities and aspirations. Youth exclusion is a key factor in violent conflict, and studies suggest that countries with a large percentage of young people aged 15 to 24 are at higher risk of low-intensity conflicts such as non-violent protests and riots.<sup>87</sup> Demographic trends alone are not sufficient to explain fragility and violent conflict. Yet where young people face a wide array of development challenges and are victims of discrimination and exclusion, they are at greater risk of being mobilized for violence.<sup>88</sup>

Most importantly, the demographic dividend anticipated in Africa cannot be achieved if fragility and conflict persist at elevated levels. Reaping the demographic dividend depends on a variety of conditions, such as lower fertility rates, longer life expectancy, a healthier population and better education for women.<sup>89</sup> Building resilience through conflict prevention and peacebuilding, risk-informed planning and resilient social systems will be critical for the economic and social prospects of young people in Africa.

A boy hauls water from a generator-powered well in the remote, mountainous village of Dora in the drought-ravaged Tadjoura District, Djibouti.

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## SIMULATIONS USING THE DEMDIV MODEL FOR THE DEMOGRAPHIC DIVIDEND IN AFRICA

**Simulations with the DemDiv model show that strengthening its human capital through education and improving key economic variables, Africa has the potential to substantially increase per capita income in the coming decades.**

Simulation models can be used to demonstrate how investments in health, education and the economy can help countries to attain a demographic dividend. This report uses the DemDiv modelling tool<sup>90</sup> developed by the Health Policy Project at the Futures Group, with support from the U.S. Agency for International Development (USAID) to analyse the relationship between policy impacts and a potential demographic dividend. DemDiv is an open-source tool with a transparent methodology. The model was designed for high-fertility countries to demonstrate how increasing investment in multi-sectoral policies in education, health and the economy can result in social and economic benefits.

The model has been used by policy makers in several African countries to explore the potential impacts of social and economic investments. Countries including Kenya, Malawi, Uganda and Zambia have used the model to analyse how the combined power of policy investments in health, education, family planning and the economy could generate a demographic dividend capable of playing a key role in accelerating socio-economic development to achieve national goals.<sup>91</sup>

UNICEF conducted a meeting in mid-2017 with experts from the World Bank, USAID and various academics to discuss ways to populate and refine the DemDiv model to reveal potential impacts on children in Africa.

The DemDiv modelling tool consists of two parts. The

first projects demographic changes and simulates the impact of key variables such as girls' education and contraceptive prevalence on future population size and composition. The second part projects economic changes, with equations to estimate employment and investment, along with an estimate of GDP and GDP per capita. The Model uses indicators that reflect the general economic situation and the extent to which a country offers an enabling environment and infrastructure for promoting job creation, economic productivity and investments as well as education. These variables can be adjusted to simulate their impact on economic outcomes. A more detailed explanation of model equations and the data sources used in this report are described in the appendices (*see Explanatory Notes for the DemDiv Model, page 63*).<sup>92</sup>

Three different scenarios for future development were compared to show the varying benefits of different combinations of investments on GDP per capita. The first scenario, 'base trends', assumes modest growth in education and economic indicators – a business-as-usual scenario. The second scenario, 'education', doubles the mean years of schooling and school life expectancy over the the simulation period, with an increase of roughly 2 per cent per year. For the third scenario, 'education and economic', both education indicators and scores on economic indicators were doubled for the same period. These models place much of the weight of attaining the demographic dividend on economic factors. The scenarios used are considered realistic, given the starting point for many African countries, past trends in the region and the challenge of investing in the education system sufficiently to accomplish this change. Faster and more ambitious scenarios are also possible, but our aim was to be conservative, and examine the potential impact of these investments on the dividend. The next section presents the aggregate results of the simulation.

Under the base trend scenario, GDP per capita was projected to grow by an annual average of 1.9 per cent for the African continent. Under the education scenario, GDP growth rose at around 2.4 per cent annually. The third scenario resulted in annual average GDP growth per capita of 5.2 per cent for Africa as a whole, with values ranging between 4.5 and 5.8 per cent across the region, through 2050.

The analysis showed that even under these moderate scenarios, all of Africa's sub-regions could expect up to a four-fold increase in GDP per capita income by 2050 (*see charts in Figure 2.5 B*). Even after adjusting for changes in purchasing power parity, this could go a long way towards reducing poverty and stimulating prosperity on the continent. Setting targets for the education and economic sectors in national policy planning and taking into account population change will be key to gaining an economic and social dividend.

### Scenarios of the DemDiv Model

#### Base trends

Modest growth in the education and economic indicators are continued – as a business-as-usual scenario.

#### Education scenario

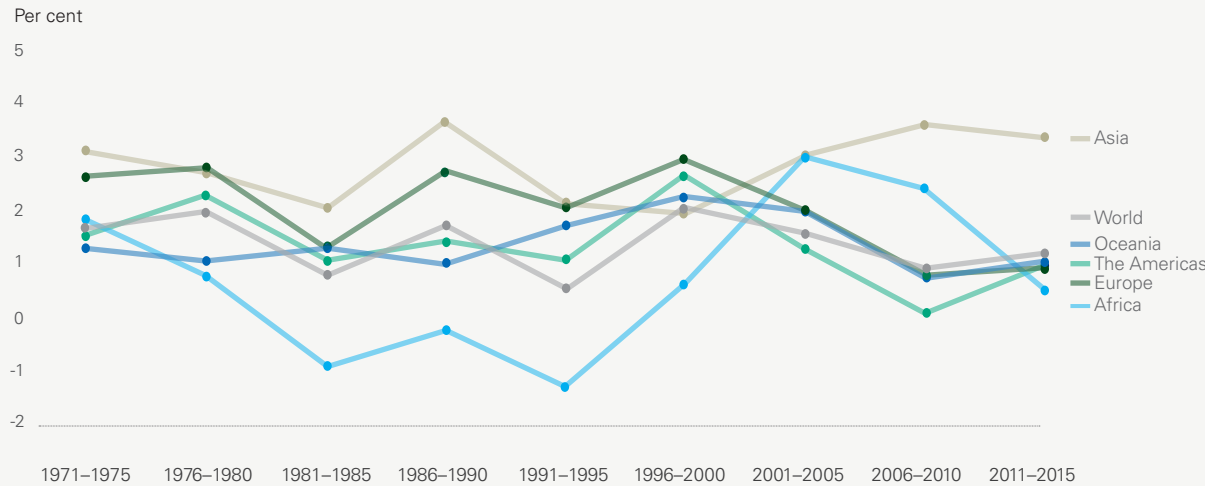
The mean years of schooling and the school life expectancy over the next 40 years are doubled or increased at approximately 2 per cent per year.

#### Education and economic scenario

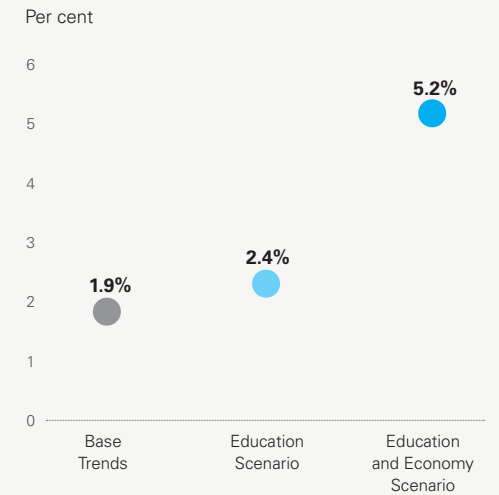
The education indicators and the scores on the economic indicators over the next 40 years are doubled.

**By keeping children in education for twice as long and by fostering strong, open economies and institutions, Africa's sub-regions and countries could experience demographic dividends that elevate per capita incomes by up to four-fold by 2050**

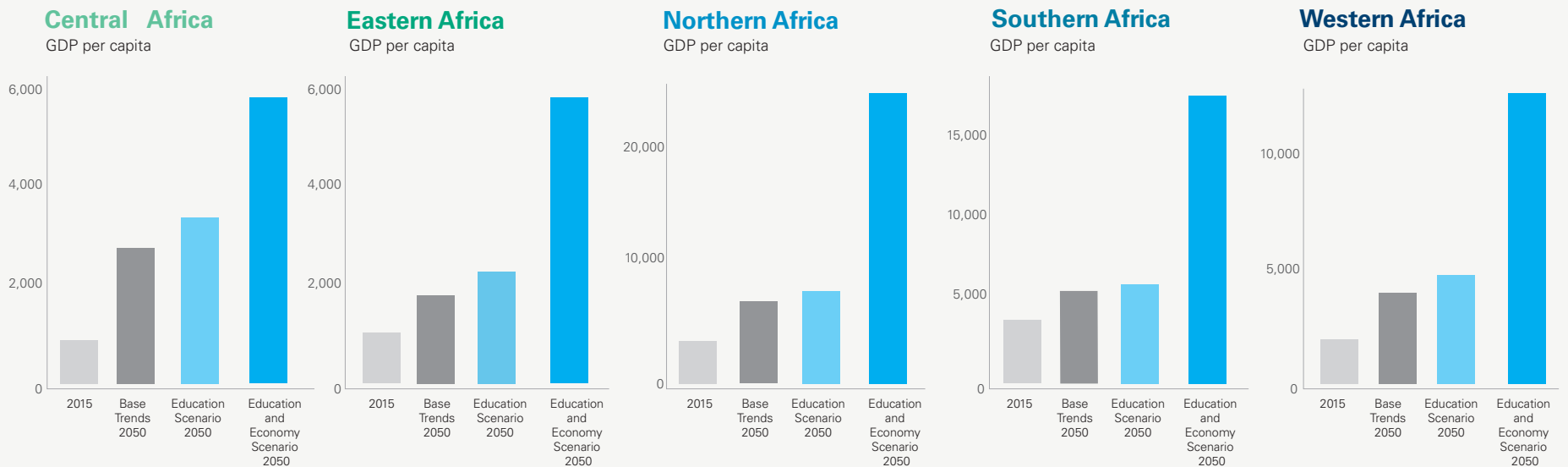
**FIG. 2.4** Average annual growth rate GDP per capita by region, 1971 to 2015



**FIG. 2.5 A** Average annual growth rate GDP per capita in Africa under different scenarios, 2015-2050



**FIG. 2.5 B** GDP per capita (PPP, constant 2011 international \$) by African Union region in 2015 and under different scenarios in 2050



Source: Fig.2.4) United Nations Conference on Trade and Development Statistics. Fig. 2.5 A) UNICEF analysis using the DemDiv model. Fig. 2.5 B) UNICEF analysis using the DemDiv model.

# Chapter 3

POLICY ACTIONS FOR INVESTING IN AFRICA'S CHILDREN

A girl stands in the conflict-affected city of Gao, Mali

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CHAPTER 3  
POLICY  
ACTIONS  
FOR INVESTING  
IN AFRICA'S  
CHILDREN

## Attaining Africa's demographic dividend in the 21st century begins now with investing in children

This is a pivotal moment for Africa's demographic transition. During the coming decades, Africa's working age population will continue to increase as a share of the overall population – opening the window for a demographic dividend with the potential to lift hundreds of millions out of extreme poverty and place the continent on the pathway to prosperity. Unlike other regions, almost all African countries have the opportunity to reap a demographic dividend during the 21st century, provided that the appropriate policies are in place: policies capable of strengthening the human capital base and attracting investments for job creation in infrastructure and business.

As UNICEF underscored in 2014 in its first demographic report, *Generation 2030 Africa*, the opposite scenario is also possible – and sobering. If Africa fails to make the appropriate policy choices and social, economic and environmental investments, the continent risks a social and economic disaster. The combination of massive population growth and the risks emanating from climate change, rapid urbanization and lack of social safety nets could lead to rising unemployment, under-employment and deprivation, forcing millions more to migrate.

The time to act is now. The African Union named 2017 as the year of 'Harnessing the Demographic Dividend through

Investments in Youth',<sup>93</sup> because if the continent begins to build its human capital by stepping up investments in children and youth, by the time the window of opportunity opens for the majority of AU Member States, a firm foundation will be in place for a dividend in many countries and the continent as a whole. Momentum within Africa should be acknowledged and supported by the broader international community, as investment – or the lack thereof – will have global consequences as Africa's share of the world population grows.

This third and final chapter of *Generation 2030 Africa 2.0* sets out the broad social and economic policy agenda required across the continent to win demographic dividends. The recommended actions are ambitious, practical and achievable, and will contribute significantly to achievement of the 2030 Agenda for Development, the recently adopted Africa's Agenda for Children 2040 and the African Union's own Agenda 2063.<sup>94</sup>

Discussions held with a broad array of African stakeholders, including policymakers, business leaders, civil society, academia and youth leaders, all influenced this report. Based on these discussions and an extensive literature review, UNICEF formulated several key policy actions.

## Africa has a robust normative policy and results frameworks for investing in its children in the 21st century

The normative policy and results frameworks for investing in Africa's children and youth has been well-established over the past 25 years or so. All African countries ratified the 1989 Convention on the Rights of the Child (CRC), the global human rights treaty defining the rights of all children and the responsibilities of States Parties to realize these rights.<sup>95</sup> Unique among the world's continents, Africa also chose to adopt its own bill of rights for children – the 1990 African Charter on the Rights and Welfare of the Child. This charter reinforces the provisions of the CRC, while also adding articles on such issues as protection from apartheid and discrimination, armed conflict and child refugees that are not specifically stated in the Convention.<sup>96</sup>

To truly and fully realize the rights of every African child, these normative principles must be matched with ambitious goals and targets, sound implementation strategies and robust accountability mechanisms designed to achieve meaningful and lasting change. Following the 2000 Millennium Declaration and Millennium Development

Goals and the subsequent adoption of the 2030 Agenda for Development by the United Nations General Assembly in 2015, Africa has benefited from being party to a strong set of international goals and targets. It is already clear that most of the global goals embodied in the 2030 Agenda for Development cannot be met without more robust efforts to accelerate progress in Africa.

In addition, the African Union has also outlined its own agenda – Agenda 2063 – that is shaping the social, economic and environmental goals for the continent for the coming decades.<sup>97</sup> Agenda 2030 and Agenda 2063 are closely aligned, with the latter focusing more on the key milestones that the continent has to achieve in the coming 46 years to realize its potential.

In recent months, a specific set of aspirations for children has emerged entitled Africa’s Agenda for Children 2040.<sup>98</sup> This Agenda is based on 10 specific aspirations for children that are well aligned with both the global 2030 Agenda for Development and the Agenda 2063 for all citizens. Africa’s Agenda for Children 2040 is aligned with Aspiration 6 of the Agenda 2063: *An Africa whose development is people-driven, relying on the potential of African people, especially its women and youth, and caring for children.*<sup>99</sup> The Agenda aims to put children at the centre of Africa’s economic and social renaissance.

Achieving the aspirations of Africa’s Agenda for Children 2040 can also be an important milestone along the way for the attainment of the broader AU Agenda 2063. If its aspirations are attained, and every African child is surviving, thriving, learning, protected, participating and

free from threats of disasters, conflict and violence, then the continent will have set the basis for decades of prosperity and stability that will make the achievement of Agenda 2063 a distinct possibility. For example, if every child is in pre-school and access to primary and secondary education is universal and learning is of a high quality, Africa will have gone a long way towards having the human capital base to grow and compete economically in the 21st century, and reduce its dependence on financial inflows of development assistance.

## Normative frameworks for investing in children must be complemented by practical action on the ground to achieve a demographic dividend

Normative frameworks, however, represent only one component of the drive toward a demographic dividend. Implementation of the policies and programmes required to meet goals and targets is critical to overall success. In this area, it is unclear whether Africa as a whole is on the pathway to success. Several countries are making great strides toward the goals embodied in these agendas. But almost universally, governments, academia and civil societies cite implementation bottlenecks such as capacity constraints, weak governance, low budget utilization and lack of transparency as important barriers to faster progress.<sup>100</sup>

Strengthening implementation capacity is imperative to reaping demographic dividends at both the continental and national levels.

Many countries continue to experience sizeable gaps in the area of essential service provision, when compared to recommended minimum international standards by agencies such as the World Health Organization, as outlined in Chapter 2. Although many countries have the potential to bridge these gaps and meet these standards, commitment and investment have not been yet prioritized.

If all African countries were to meet international minimum standards for essential services such as healthcare and education by 2030, it would represent a significant stepping-stone towards achieving each of the three agendas (2030, 2040 and 2063) and a demographic dividend for the continent. It would also support health, education and other social systems to withstand risks and stressors such as natural disasters, disease outbreaks, commodity price volatility and climate change. But the rate of progress must be accelerated: unless such investments are rapidly scaled up in the coming decade, Africa will not have the human capital base to make its economies sufficiently competitive to reap a significant demographic dividend. Worse still, given the projected population expansion, low or moderate economic growth could lead to stagnating per capita income in many countries, resulting in increased numbers of Africans living in poverty.

Country examples described in Box 3.1 demonstrate that several Asian countries starting with similar conditions to those currently being experienced in Africa have made great progress towards a demographic dividend. For Africa to reap a demographic dividend when the opportunity arrives, investments in children must be made now.

## AFRICA'S AGENDA FOR CHILDREN 2040

Africa's Agenda for Children presents measurable goals and priority areas to which the African Union and its Member States commit themselves for the coming 25 years. The Agenda is articulated around 10 Aspirations:

- Aspiration 1:** The African Children's Charter, as supervised by the African Children's Committee, provides an effective continental framework for advancing children's rights.
- Aspiration 2:** An effective child-friendly national legislative, policy and institutional framework is in place in all member States.
- Aspiration 3:** Every child's birth and other vital statistics are registered.
- Aspiration 4:** Every child is born alive and survives infancy.
- Aspiration 5:** Every child grows up well-nourished and with access to the basic necessities of life.
- Aspiration 6:** Every child benefits fully from quality education.
- Aspiration 7:** Every child is protected against violence, exploitation, neglect and abuse.
- Aspiration 8:** Children benefit from a child-sensitive criminal justice system.
- Aspiration 9:** Every child is free from the impact of armed conflicts and other disasters or emergency situations.
- Aspiration 10:** African children's views matter. Input on the draft Agenda and contribute to its adoption



**BOX 3.1****LESSONS LEARNED: KEY FACTORS FOR ACHIEVING THE DEMOGRAPHIC DIVIDEND**

Several countries, particularly in East and South East Asia, have reaped demographic dividends in recent decades. Below are some of the key factors that contributed to these successes.

**Tailored population policies and programmes**

A key to successful population policy is to improve both the quantity and quality of health centres and family planning programmes. When implementing family planning programmes, outcomes can be maximized by considering the local context and culture and designing services accordingly. For example, in the Republic of Korea direct social assistance by field workers proved to be more effective than clinic-based services for reducing fertility rates.<sup>101</sup> Likewise, assessing methods of delivery of culturally sensitive, voluntary reproductive services can contribute to national fertility transition.

**Child survival**

Historic patterns of demographic transition reveal that improvements in child survival typically precede sustained fertility decline.<sup>102</sup> Better child health and survival rates reduce demand for more children, which in turn improves maternal health by maintaining smaller family sizes. This eventually creates a virtuous cycle in which child health improves as a result of strengthened parental care, and quality childcare becomes more affordable for households.

**Education, especially girls**

Investing in female education is among the most effective means to attain a demographic dividend, because of the observed relationship between higher levels of women's education and lower fertility rates.<sup>103, 104</sup> While child marriage contributes to higher fertility, the provision of quality education results in lower fertility and increased productivity. In Africa, coupling education policies with culturally sensitive voluntary family planning programmes has the potential to accelerate progress toward the demographic dividend.

**Skills training for the real world**

As Africa is set to have a rapidly expanding adolescent and youth cohort, it is imperative to ensure that these future workers are well prepared and have skills that are readily transferable in the labour market. For example,

the Republic of Korea's shift toward a primary school curriculum fostering "production-oriented" education in the 1970s helped students to gain knowledge and skills relevant to the workplace, enabling the country to reap the demographic dividend through enhanced manufacturing.<sup>105</sup>

**Long-term economic plans**

In addition to investing in the health and education of its current and future citizens, it is also important that countries establish good governance and long-term economic policies to have the opportunity to reap a demographic dividend. When creating decent jobs, promoting trade openness or providing access to credit, economic policymaking must consider key demographic factors and long-term gains.

**Women's empowerment**

Women with fewer children are much more likely to enter the formal sector and earn higher incomes.<sup>106</sup> The Republic of Korea specifically targeted women's labour force participation as a key policy to boost growth, savings and consumption, encouraging young women workers to play a dominant role in the initial stage of the country's economic growth.<sup>107</sup> Empowering women and girls could have a similar economic impact in Africa.

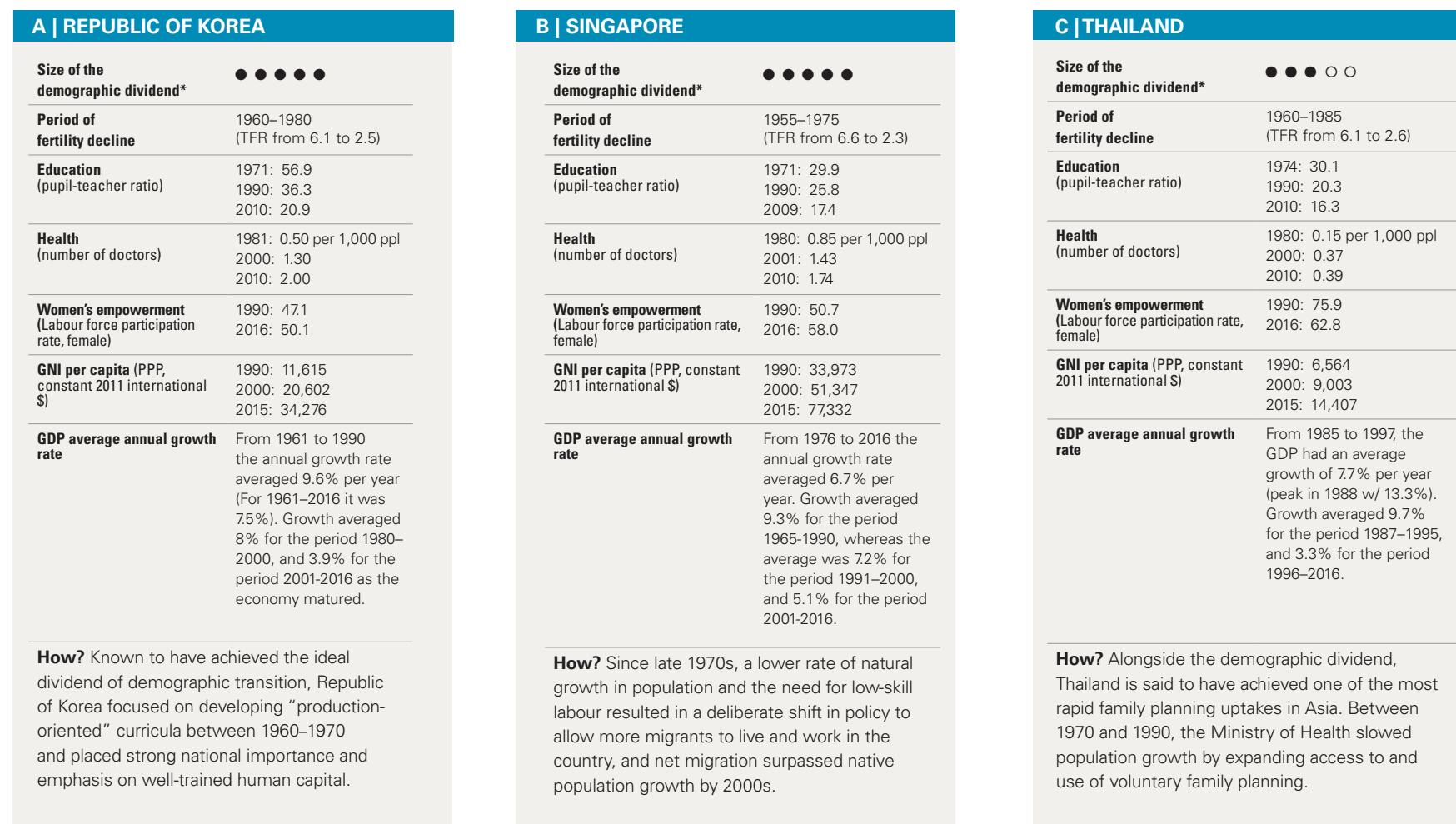
**Confluence of 3 E's (empowerment, economy and education)**

Historically, countries that reaped a demographic dividend – especially in East Asia – experienced a favourable convergence between global economic trends and national population dynamics.<sup>108</sup> While the degree of success varied by country, the most effective synergy of these key drivers was fuelled by efforts to empower children and youth, both socially and economically. Without empowering the younger generation through investing in their education skills and health, a dramatic economic transformation is probably unattainable – even with a favourable population structure. Africa has an opportunity to leverage the lessons learned from other regions, seeking to achieve confluence between the three streams critical to achieving a demographic dividend – economy, education and empowerment.

## How other countries took advantage of the window of opportunity

FIG. 3.1 Demographic transition and economic growth in three countries.

When these countries opened the demographic window of opportunity, their initial conditions were similar to those currently experienced in much of Africa. As highlighted in Chapter 2, these scenarios are also possible for Africa if adequate investments are made.



\*The Size of Demographic Dividend is assessed based on literature review and UNICEF analysis for comparability and illustration purposes.

**Note:** The tables are meant to be illustrative only. The extent of a demographic dividend vary considerably depending on the context and time in which they occur, and the specific characteristics of the economy. These tables do not imply strength of association nor causality.

**Source:** A) Andrew Mason, *Population and the Asian Economic Miracle, Asian-Pacific Population and Policy*, October 1997; B) Saw Swee-Hock, *The Population of Singapore* (3rd ed.). ISEAS, June 2012, pp. 11–18; C) Gribble, James and Jason Bremmer, *Policy Brief: The challenge of attaining the demographic dividend*, Population Reference Bureau, September 2012, p.3;

**Sources for Indicators:** *Period of fertility decline:* UN WPP 2017. *Pupil-teacher ratio:* UNESCO UIS Statistics. *Number of physicians:* WHO database. *Labour force participation rate:* ILO modeled estimates. *GNI per capita (ppp,2011 int'l \$):* World Bank. *GDP Average annual growth rate:* UNICEF analysis based on World Bank national accounts data and OECD National Accounts data files.



Children attend Murush Al Kodor  
Secondary School in Tripoli, Libya



## 1. Essential services

# Key policy actions for Generation 2030 Africa

Scale up Africa's essential services and systems-strengthening in health, social welfare and protection to bring these up to international standards, and beyond these standards for those countries that are already close to attaining them

In recent decades Africa as a continent has made great strides in ensuring that its children survive and thrive. The under-five mortality rate has more than halved since 1990. Immunization rates among infants for the third dose of diphtheria-tetanus toxoid-pertussis (DTP3) containing vaccine (an often-used indicator of how well countries are providing routine immunization services) is 74 per cent for the continent. Rates of HIV prevalence, rampant in the late 1990s and early 2000s, have fallen, and in some countries sharply. Stunting in children under five has been reduced to 32 per cent and about 63 per cent of Africans, including children, now have access to basic drinking water – a greater number than ever before.

But amid the many successes in public health lie important challenges that need to be met if the continent is to reap a demographic dividend. Chief among them is to vastly expand systems and interventions for maternal, newborn and child health. The scale of this challenge should not be underestimated. From 2015 to 2050, some 1.8 billion babies are projected to be born in Africa – 700 million more than were born in the preceding 35-year period (1980-2014). Ensuring that these births are attended by skilled professionals and that new mothers have

adequate care and attention before, during and after childbirth represents an immense and unprecedented challenge.

Currently, around 2 million skilled health workers (doctors, nurses and midwives) are taking care of 1.2 billion people in Africa. The resulting density of 1.7 skilled health workers per 1,000 inhabitants in Africa is among the lowest in the world.<sup>109</sup> Although Africa is projected to add 1.4 million skilled health professionals (if the current trend continues), it will fall short by another 4.2 million to meet the WHO threshold of 4.45 doctors, nurse and midwives per 1,000 population by 2030. Population growth means that substantially more resources will be required just to maintain the current coverage of skilled birth attendants.

Given Africa's population dynamics, even maintaining current levels of health coverage will require increasing by 69 per cent the absolute number of health professionals by 2030. Reaching higher coverage rates, such as the WHO minimum threshold, will require far more intensive efforts, particularly given that those communities, countries and sub-regions with the highest rates of population growth also have among the lowest current rates of coverage.

These projections make it clear that business as usual will not suffice. To increase the supply of professional health workers, investing in the capacity of training institutions is critical. The 2014-2015 Ebola crisis underscored the urgent need to train a strong and professional African health workforce that is able to deal with rising morbidity risks and emerging health crises, as well as routine health care and child and maternal survival.<sup>110</sup> A well-resourced, continent-wide programme of expanded training, research and capacity development is urgently required to increase the supply of quality health workers and health facilities. Innovative thinking needs to be applied to the challenge of retaining professional health workers in Africa, given the incentives for working abroad.

Community health workers also have an important and ongoing role to undertake within Africa's health systems. Their growing participation has already led to great successes in expanding basic health care in Ethiopia, Rwanda and other countries in the region.<sup>111</sup> Given that Africa's population is expected to double from 1.2 billion in 2016 to 2.5 billion by 2050 and its child population will top 1 billion by mid-century, a major expansion will be required to increase the numbers

and skills of community health workers. Health administrations also face the challenge of better supporting both professional and community health workers through better working conditions and improved training, support, salaries and benefits.<sup>112</sup>

In addition to health system strengthening, considerable progress is also possible through scaling up integrated packages of health and health-related interventions. Many African countries still reach too few children with essential, cost-effective interventions such as lifesaving vaccines, basic medicines, nutritional supplements, access to clean water and basic sanitation, anti-retroviral drugs, improved hygiene and nutrition and increased care seeking.<sup>113</sup> Despite decades of efforts to advance multi-sectoral health care programmes, too often such interventions are being delivered in vertical silos, missing out on the benefits and economies of scale that integration can bring.<sup>114</sup>

Expanding health care services in Africa will require the scaling up of financing modalities on both the supply and demand sides. On the supply side, increased funding is needed to train and support larger numbers of both professional and community health workers and to augment facilities. On the demand side, the cost of health care is still prohibitive for the poorest African families, for whom even simple procedures have major financial implications.

Stepping up social protection for these families could clear this bottleneck. Social protection has proven to be a game-changer in many African contexts by enabling families to move out of poverty, send children to school, seek health services and adequately plan for and protect themselves against shocks and crises. Moreover, as stressed in Article 26 of the Convention on the Rights of the Child (CRC), it is the fundamental right of every child to benefit from social security, including social insurance. Yet coverage, quality and financing remain limited, leaving many African families and communities without access to this protection. Supporting governments to introduce and deliver on social protection floors could go a long way toward reducing poverty and inequality and improving the social outcomes required to support a demographic dividend. It will also be important to systematically link social protection to key contributors to child development (such as education, health and nutrition), while also fully recognizing the rights of all children, especially the most vulnerable.

Finally, a healthy workforce is a prerequisite for achieving the demographic dividend. With Africa's labour force set to double over the next 35 years, it is imperative that the continent invest more in health care, particularly during the earliest years of life, to create a solid foundation for a productive and healthy workforce later in the century.

A father watches as a health worker measures his son's heartbeat, at Petevo Health Centre in Bangui, Central African Republic.

© UNICEF/UNI137376/Nesbitt





## 2. Skills enhancement

# Transform Africa's educational, skills and vocational learning system through systems-strengthening, curricula reform and access to technology, to enhance learning outcomes and match the skills of Africa's children and youth to current and future labour market needs

Great strides have been made in improving education for Africa's children over the past two decades. Gross enrolment rates for pre-primary education have more than doubled,<sup>115</sup> and primary-level net enrolment increased from 64 per cent to 80 per cent between 2000 and 2015. Primary completion rates have climbed to 74 per cent and gender parity for completion has improved to 0.94.<sup>116</sup> Although increases in secondary enrolment have occurred at an even faster rate than those for primary school, it remains well below the global average.

These advances reflect a confluence of factors. In countries like Ghana, for example, making primary education compulsory compelled parents and guardians to send their children to school.<sup>117</sup> Abolishing school fees reduced the financial barriers to education.<sup>118</sup> Investment in school building and teacher training helped to support increased enrolment, and communities are increasingly engaged in school management.<sup>119</sup>

Despite these gains, providing quality education for all of Africa's children remains an important challenge. Evidence shows that relative to other continents, Africa still has high rates and numbers of out-of-school children, high rates of primary school dropout and weak transition from primary to secondary education, as well as low secondary completion rates.<sup>120</sup> In addition, many children start school at an older age, putting them at a disadvantage and increasing their risk of dropout.<sup>121</sup>

In addition, there is a severe shortage of accessible pre-primary facilities that can foster primary school readiness.<sup>122</sup> Despite large gains in many countries, enrolment rates in pre-primary education remain in single digits in several African countries. Additionally, formal pre-primary education is often an option limited to privileged children from the wealthiest households and those living in affluent urban areas.<sup>123</sup> For the others, lack of pre-primary opportunities can contribute to poor performance during the early years of primary education and can cause children to drop out at an early age.

Other constraints include structural issues, such as the lack of effective, transparent and accountable public budget management on education; high out-of-pocket costs for poor families in countries where basic education is not compulsory; high opportunity costs of schooling for families; and the quality of schooling (overcrowded classrooms, inadequately trained and poorly motivated teachers, safety in and around schools).<sup>124</sup> In several African countries, more than half of all youth are illiterate – despite having attended primary school – and many adolescent girls face child marriage and teenage pregnancy, which often leads them to discontinue their education.<sup>125</sup>

The demographic dividend model presented in Chapter 2 illustrates the potential impact on Africa's prosperity of raising educational investment. Doubling the aggregate years of schooling over the next 35 years could have a tremendous impact on lifting per capita incomes and pulling hundreds of millions of Africans out of poverty.

Given the scale of the challenges faced in education, an extensive transformation is urgently required. This must begin in the earliest years through investment in early childhood development and early childhood education. It must continue into primary school, with particular emphasis on getting all African boys and girls enrolled in and attending school at the appropriate age and ensuring that they complete primary education and make the transition to secondary school. Inclusive, equitable and quality education can change lives – it can support girls and boys, men and women to question, challenge and change negative gender norms and contribute to the creation of strong and equitable relationships, systems and institutions.

Education policies must also be designed to meet the needs of adolescents, preparing them to participate and compete in Africa's expanding and competitive labour market. Within this sphere, girls' education is particularly important, as in addition to fulfilling their right to learn, it is associated with delayed marriage and childbearing, increased birth spacing and enhanced nutrition and hygiene, all of which contribute to lower child and maternal mortality and a better start in life for children.<sup>126</sup>

Further, for all boys and girls, taking into account the educational and technological transition from the earliest stage of schooling will be all the more urgent. Through an adequate curricula reform, African schools can meet the needs of technological development, building a stronger and more resistant human capital and embuing children and youth with relevant skills for future needs.

### BOX 3.2 BEYOND ACCESS, CHILDREN NEED TO LEARN SKILLS THAT MATCH THEIR FUTURE NEEDS<sup>127</sup>

The Human Capital Index calculated by the World Economic Forum (WEF) finds that sub-Saharan Africa currently utilizes only just over half of its human capital potential, despite being the world's youngest region and facing phenomenal growth of its working age population which is set to rise from 370 million in 2010 to over 600 million in 2030. Inadequate training of young workers and employers across the region represents a major constraint to business.

A recent WEF report on the future of jobs and skills in Africa also revealed that only five countries among the 25 African countries assessed exceed the global average for education system quality. This result suggests that learners are not acquiring the knowledge and skills required for today's economies and societies and those of the future. The WEF report estimates that 15–20 million young people are expected to join the African workforce every year for the next three decades. This implies that the continent urgently needs to build a human capital base that can cope with the major disruptions to labour markets resulting from increasing automation, growth in unconventional occupations, new skills requirements for all jobs and new tools to augment workers' capabilities.

To prepare today's and tomorrow's workforce to fully unleash its potential against the changing trajectory of jobs, the report suggests a number of future-ready strategies. Among them, four particular areas provide key action points for all African countries:

→ **Provide robust and respected technical and vocational education and training**

Along with increasing the workplace relevance of formal secondary, and even post-secondary, education for adolescents and children across the region, increased support should also be given to Africa's widespread practice of offering informal apprenticeships, to ensure quality and relevance.

→ **Create a culture of lifelong learning**

This is particularly crucial given the pace of technological developments and Africa's generally uneven provision of formal education. Skills acquisition across all types of training will be increasingly essential, and the focus should be providing the youth and children a way to recognize opportunities and hone their capacities accordingly.

→ **Ensure the future-readiness of curricula**

In addition to offering quality education in science, technology, engineering and mathematics (STEM) from the early stages of school life, encouraging critical thinking, creativity, cognitive flexibility and emotional intelligence should be prioritized in Africa. Special attention should also be given to encouraging more girls to work in STEM.

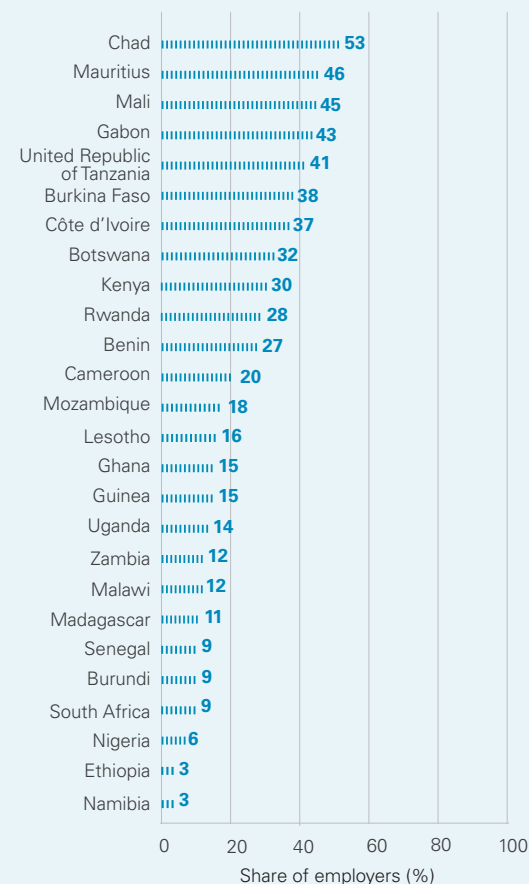
→ **Invest in digital fluency and ICT literacy skills**

As in many high-income countries, digital fluency and information, communications technology literacy skills will be the new default skillset required by Africa's future labour market. Possessing these skills can also contribute to ending the vicious cycle of poverty by equipping people with adequate tools to enter a larger labour market and design home-grown and entrepreneurial solutions that do not require high levels of capital investment.

Adapting learning in Africa to future job requirements must start now – beginning by investing in the education of children and youth.

### Skills deficits are a major constraint to business in Africa

FIG. 3.2 Share of African employers perceiving inadequate workforce as major constraint



Source: World Economic Forum, *The Future of Jobs and Skills in Africa*, 2017



### 3. Protection and empowerment

## Protect Africa's children and women from violence, exploitation and abuse, especially child marriage and harmful practices and empower women and girls to participate fully in community, workplace and political life and enhance access to reproductive health services

Africa has made considerable progress toward protecting its children from violence and abuse in recent decades. As stated earlier in this report, the incidence of women aged 20–24 years marrying before age 18 – the standard measure for child marriage – fell from 44 per cent in 1990 to 35 per cent in 2015, the latest year for which continental aggregates are available.<sup>128</sup> Moreover, in all of Africa's five sub-regions, child marriage rates have decreased over the past 20 years, as has the incidence of harmful traditional practices such as female genital mutilation/cutting (FGM/C).<sup>129, 130</sup>

Notwithstanding this considerable progress, Africa still presents among the world's foremost protection challenges for children and women. Almost one in every three women marry before reaching the age of 18. One of every six girls under 14 years of age in 18 African countries (with comparable data) is still subjected to FGM/C.<sup>131</sup> Moreover, permissive attitudes towards violence against women are still pervasive on the continent.<sup>132</sup>

These protection abuses not only violate the human rights of women and girls, but they also constrain social and economic progress in Africa and have the potential to undermine progress toward the

demographic dividend. Like the impact of poor nutrition or inadequate sanitation, protection violations undermine the productivity of women in the labour force. Empowering women has been a driving force behind demographic dividends in other parts of the world, along with a reduction in key protection violations such as child marriage and harmful traditional practices.<sup>133</sup>

There are many proven and promising solutions to reducing protection abuses against children and women in Africa. Countries such as Burkina Faso and Ethiopia have demonstrated that sound solutions, backed by judicious investments and political commitment, can generate rapid progress toward bolstering protection.<sup>134</sup> What is most needed now is concrete investment and support to transform continent-wide commitments to protection into reality.

Important steps have been taken towards empowering Africa's women and girls in recent decades. In addition to the decline in protection abuses and improvements in reducing gender inequality in education, women's participation in the labour force has also continued to rise: from 51 per cent in 1990 to 55 per cent in 2016, according to the latest estimates from the International Labour Organization.<sup>135</sup>

Women's participation in political life has also increased; women now hold 23 per cent of Africa's parliamentary seats, up from 10 per cent in 2000.<sup>136</sup>

Yet these successes cannot mask the enormity of remaining challenges in gender equality and female empowerment in Africa. The percentages of African women in both the formal workforce and political life remain low by international standards. Gender parity in primary education is not matched in secondary schools, where there is still a marked gap between girls and boys for enrolment and attendance, despite recent progress.<sup>137</sup> The work that African women and girls contribute to their households and communities – such as fuel and water collection, child care and household chores – is not adequately captured in national and international measures of output and productivity, nor rewarded financially, and continues to place girls at a marked disadvantage.<sup>138</sup>

A key aspect of women's empowerment is fostering their access to culturally sensitive reproductive health services. This is imperative for managing Africa's demographic transition. Demographic trends are not inevitable; most evolve in response to policies. As countries like Ethiopia, Ghana, Malawi and Rwanda



and can attest, expanding access to reproductive health services is feasible and have a strong role in managing demographic transitions.<sup>139</sup>

A continental discourse needs to emerge on how to expand access to culturally sensitive reproductive health education and services to reach Africa's poorest and most marginalized communities – where fertility rates are highest, particularly among adolescent females – and reduce the unmet need for family planning.

Evidence shows strong linkages between population growth, poverty and inequity, and women's empowerment.<sup>140</sup> A significant proportion of Africa's young women are disempowered – through lack of access to secondary education, premature entry into adult roles of marriage and parenthood, working outside the formal labour force and having little voice in community and political life.<sup>141</sup> Reversing this situation presents a major challenge. Yet as several countries in Asia can attest, doing so can be a game-changer.<sup>142</sup> With more, healthier and better-educated women working in the formal labour sector, contributing to taxation and consumption and to decision-making processes at the local, national and regional levels, countries' potential to reap their demographic dividend will soar.<sup>143</sup> But it is difficult to see how the continent can reap the dividend if half of its citizens continue to have low purchasing, political and social power.

Birth registration has long been seen as both a fundamental right of every child and a critical mechanism for holding governments accountable for realizing child rights. Sub-Saharan Africa has among the lowest birth registration rates in the

world. Just 46 per cent of its children under five were registered between 2010 and 2015, and 16 of the continent's countries with available data have birth registration rates below 50 per cent.<sup>144</sup> Among the poorest households, more than 70 per cent of children are not registered.

The bottlenecks in this area are in part attributable to lack of coordination and integration between maternal, newborn and child interventions within countries. For example, 74 per cent of all African infants receive a dose of vaccine to prevent diphtheria, pertussis and tetanus (DPT3) on three separate occasions within the first year of life.<sup>145</sup> Yet the continental birth registration rate is far lower than this figure – suggesting that the systems for administering these two vital early childhood interventions are not well-coordinated or integrated.<sup>146</sup>

Given the availability of manual and digital systems and the multiple known benefits of birth registration – for children, communities and the larger society – there is considerable potential for improvement. African governments need to step up to the challenge of registering children, at birth or later, in order to be fully accountable for protecting their rights and to propel the continent to near-universal birth registration by 2030.

Africa has demonstrated immense ability to adapt to new technologies and processes, notably in information and communication technology. Mobile phone operators, for example, have a vast amount of administrative information on Africa's youth that could be used to improve diagnostic capacity for understanding the state and conditions of their lives, and to plan better policies, interventions and systems for them.<sup>147</sup>

Harnessing the technology and connectivity also provides the potential to increase the rates of birth registration. Registering all of Africa's children and youth in the next 10–15 years will be a critical step towards enhancing the national, sub-regional and continental development planning essential for establishing the foundation for a 21st century demographic dividend for Africa.



#### 4. Invest in children

## Upscaling investments in children and youth

Maximize the use of available resources to increase investments in Africa's children and youth, targeting the most effective programmes and those with the greatest needs

The Convention on the Rights of the Child calls on governments to maximize the use of available resources to realize children's rights. Since Africa's demographic transition will increase its child population by about 170 million by 2030, investment in children is essential to the continent's future prosperity, security and stability. Maximizing budgetary resources and mobilizing new sources of development financing are critical steps toward helping Africa to bolster its human capital by investing in children and youth.

Africa is currently witnessing a rapid change in its development financing landscape. Like many things in transition on the continent, the old assumption that it is aid-dependent are fast disappearing. As UNICEF's recent report on Financing Development for Children in Africa attests, domestic resources mobilized through taxation policies account for the majority of funding of national budgets for most countries on the continent.<sup>148</sup> While international cooperation will remain important, particularly for the poorest countries and those in fragile contexts, financing the investment in children and youth required to harness Africa's demographic dividend will primarily rely on domestic financing, channelled through national budgets. As the

largest source of finance available to any country, government budgets hold the greatest potential for investing in children.

Options such as official development assistance and deficit management via international borrowing will remain critical – at least for the next few decades – as Africa finalizes the groundwork required to enable the next generation to take advantage of the window of opportunity. Support from the international community can explore new modalities of financing for development, with the understanding that Africa is now at the stage of building its capacity to undertake stronger domestic financing.

To make the best use of domestic resources, efficient and transparent management of government budgets will be imperative. Improving accountability will also help to enhance programme implementation, which often suffers from considerable capacity gaps. Transparency is a core component of accountable budgeting, as are public participation and formal oversight. However, notable gaps in budget transparency have been identified: of 31 African countries scored in the Open Budget Index, 18 failed to meet the standard of adequacy on any of

the pillars.<sup>149</sup> Nonetheless, the survey indicated evidence of progress among many African countries, particularly where there was political will and improved capacity.

Over the coming decade enhancing budget transparency will be critical for African nations. Key steps recommended include: (i) implementing General Comment no. 19 of the CRC, which provides an overall framework for governments to invest in children; (ii) strengthening public financial management systems for children, including the use of programme budgeting to enable the tracking of spending and results and disaggregation of budget data; (iii) publishing more budget-specific information, including on budgeting for children; (iv) institutionalizing transparency within laws, rules and procedures; (v) institutionalizing participation, including by child rights advocates and young people; and (vi) institutionalizing and empowering oversight institutions.

Domestic resource mobilization and reforms to the tax system will also be critical to increasing investments in children. Especially in Africa, where the share of informal sector is significant in many countries,<sup>150</sup> targeting sectors that are currently untaxed holds

great potential to increase revenue, as does strengthening overall revenue collection capacity and reducing evasion. However, it is important that reform measures are progressive, so that the most vulnerable families are not further burdened by higher tax obligations.

Political will dictates where resources are directed. For example, in all sub-Saharan African countries, salaries currently account for the largest share of current expenditure in primary education.<sup>151</sup> The situation is similar in the health sector. According to a recent case study on sub-Saharan Africa's access to health care, salary and personnel expenditures absorb between 60 and 70 per cent

of hospital resources.<sup>152</sup> If Africa is to train millions more teachers, doctors, nurses and midwives, maximizing resources for these investments will be imperative.

This will also require governments to explore new financing sources, such as levies on commodity exports, financial transaction taxes, local taxes and fees (such as on property taxes and parking fees) and debt instruments, such as municipal and social impact bonds. At the same time, decision makers will need to closely review current spending priorities and create fiscal space for investments that will catalyse the demographic dividend.

### BOX 3.3

#### SHARED RESPONSIBILITY: WORKING TOGETHER FOR A MORE EQUITABLE AND PROSPEROUS AFRICA FOR CHILDREN NOW AND IN THE FUTURE

Capturing the demographic window of opportunity will require collective action at global, national, sub-national and local levels. While many of the policy actions are geared towards government and inter-governmental policies to build the foundations, other stakeholders also play a key role in realizing Africa's demographic dividend. Among the many core stakeholders who can contribute are:

**The private sector** has an increasingly crucial role in building resilient human capital in Africa. Business people understand the skills and knowledge requirements for the ever-evolving market, and will be the ones employing millions of job market entrants in Africa every year. Together with other stakeholders, the private sector can help identify the required skills of today and tomorrow and help to provide children and youth with quality learning and training opportunities.

The role of **civil society and NGOs** is crucial to the attainment of a demographic dividend. In particular, civil society and NGOs will continue to play an essential role by supporting service delivery and fostering the empowerment of women, children and youth.

**Finally, Africa's children and youth** are the key stakeholders in building a future fit for their needs and wants. Children have unique perspectives on many of today's prominent issues and a great stake in the future impacts of the demographic transition. As Africa accelerates toward closing existing gaps and opening a new chapter of growth and prosperity, bringing these children and youth into the conversation and increasing their role in decision making is vital.

## CONCLUSION

Africa's challenges and opportunities are increasingly important to the world. Now is the time to step up the efforts to attain the much vaunted demographic dividend. Ten, fifteen years down the road will be too late. The demographic window of opportunity will soon be opening for a greater number of African countries, and the continent can vastly expand the likelihood of achieving a demographic dividend by building a strong human capital base in the next decade and a half.

The cost of inaction will be higher than ever experienced, given the unprecedented magnitude of Africa's demographic transition. Unless countries make the required investments to bring about the dividends, the projected demographic transition could easily turn into a burden. To avoid facing the demographic disaster, rather than the dividend, an extraordinary commitment of political will, sound strategies, enhanced implementation capacity and adequate financing are crucial, beginning now.

It will be challenging, like all things worthwhile. But it is a challenge that can and must be met to secure Africa's future, and make the continent safe, secure, prosperous and equitable for its most precious asset: its children and youth. ■



# Appendices

Immunization is free in Côte d'Ivoire for children below one year old. Yet, three children out of five do not get vaccinated before their first birthday.

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## DEM DIV MODEL

### EXPLANATORY NOTES FOR THE DEMDIV MODEL

#### Data sources

- The simulations were conducted with a country data from several sources, including: the United Nations Population Division World Population Prospects, UNICEF statistical databases, UNESCO Institute of Statistics databases, World Bank World Development Indicators, ILO labour force statistics, World Economic Forum's Global Competitiveness Index (GCI), and Penn World Tables 9.0, as well as nationally representative household surveys such as demographic and health surveys (DHS) and multiple indicator cluster surveys (MICs).
- When possible this analysis relied on country data, but in some cases missing values had to be estimated. Severe data gaps exist in several African countries, which either lack data on certain indicators or have only outdated data. Generally, this analysis was conducted using modelled estimates for several indicators, which may differ from national data.

#### Construction of scenarios

- Scenarios were analysed for the period 2015–2050 to determine the impact of improved education and economic indicators. Three scenarios were used: a basic trend scenario, and second scenario that first doubled education investments and a third that added economic indicators to the second scenario. Indicator values were doubled, whereby the

highest possible values were capped so as to avoid the excessive input values. (e.g., the expected years of schooling was limited up to 20 years and the economic GCI indicators were capped with a score of seven).

#### Aggregation

- The simulation was undertaken for each of the African countries for the period 2015–2055, and aggregated to the regional level.
- Past trends were used to inform the base scenario. For example, over the past 50 years the average years of schooling in sub-Saharan Africa more than doubled (from 1960 to 2010, rising from 1.54 years to 5.23 years. For women aged 15 and above the average years of schooling increased from 1.12 years in 1960 to 4.65 years in 2010, while for males the increase was from 1.97 years to 5.82 years.<sup>153</sup> Since 2006 sub-Saharan Africa as a whole has seen rising scores for public institutional quality, labour market flexibility, financial market efficiency and infrastructure related to information and communication technology. Average scores rose by about 1.5 times.<sup>154</sup> Since 2006, all countries in the pre-dividend stage have increased the proportion of imports as a percentage of GDP, exceeding the percentages of countries in the early dividend stages.

#### Country applications

- Of note, the DemDiv model provides projections for an illustrative purpose and the actual application may considerably vary by countries. For example, in several African countries recent growth rates were higher than the overall regional or sub-regional growth rates predicted by the model. In particular, the annual average growth in Ethiopia, based on World Bank estimates from 2010 onwards, varied between 5 and 10 per cent.<sup>155</sup>
- This analysis in the report shows only sub-regional and regional results. Engagement with country stakeholders is recommended to reach a mutual understanding of how the model projects a country's future economic and population growth. This exercise requires involvement by multiple stakeholders to ensure that goals and targets are set to meet a country's needs and take into account its specific context. For example, as underscored in Chapter 2, countries such as Kenya, Malawi, Uganda and Zambia engaged at the ministerial level, with technical support from research institutes (Futures Group and African Institute for Development Policy), to better assess the economic benefits of the potential demographic dividend and provide an evidence-based outlook to policymakers.

For more information, visit: Technical Guide to the DemDiv model <<http://www.healthpolicyproject.com/index.cfm?ID=publications&get=pubID&pubID=343>>. To access the DemDiv model, visit: DemDiv Model, Health Policy Project <<http://www.healthpolicyproject.com/index.cfm?id=software&get=DemDiv>>.

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INDICATORS**

Countries or areas	Total population (thousands)				Child population under 5 (thousands)				Adolescents (thousands)				Child population under 18 (thousands)				Number of births (thousands)				% children under 18 in total population			
	1950	2016	2030	2050	1950	2016	2030	2050	1950	2016	2030	2050	1950	2016	2030	2050	1950	2016	2030	2050	1950	2016	2030	2050
Algeria	8,872	40,606	48,822	57,437	1,403	4,699	3,684	3,930	1,990	5,971	8,987	7,211	4,185	13,495	14,868	13,574	454	935	730	783	47	33	30	24
Angola	4,548	28,813	44,712	76,046	739	5,277	7,311	10,327	981	6,745	10,520	16,604	2,110	15,416	22,321	33,393	277	1,207	1,633	2,221	46	54	50	44
Benin	2,255	10,872	15,628	23,930	309	1,775	2,260	2,880	414	2,503	3,492	4,872	912	5,379	7,148	9,532	90	403	500	618	40	49	46	40
Botswana	413	2,250	2,800	3,421	62	259	246	240	97	432	510	487	197	840	908	871	20	53	50	48	48	37	32	25
Burkina Faso	4,284	18,646	27,382	43,207	692	3,221	4,147	5,289	933	4,442	6,389	9,098	2,015	9,724	13,101	17,694	202	727	905	1,108	47	52	48	41
Burundi	2,309	10,524	15,799	25,762	377	1,901	2,424	3,389	498	2,307	3,758	5,412	1,088	5,372	7,729	10,953	117	447	539	721	47	51	49	43
Cabo Verde	178	540	635	734	19	55	52	45	42	113	108	97	71	200	193	168	9	11	10	9	40	37	30	23
Cameroon	4,307	23,439	32,980	49,817	672	3,804	4,592	5,712	911	5,352	7,455	9,902	1,956	11,578	14,880	19,163	187	852	1,001	1,202	45	49	45	38
Central African Republic	1,327	4,595	6,124	8,851	190	730	879	959	263	1,132	1,370	1,796	557	2,326	2,768	3,337	55	166	196	203	42	51	45	38
Chad	2,502	14,453	21,460	33,636	376	2,666	3,436	4,225	506	3,541	5,128	7,218	1,093	7,854	10,702	14,052	118	627	773	907	44	54	50	42
Comoros	159	796	1,062	1,463	23	119	134	152	34	176	229	275	70	369	446	522	7	26	29	32	44	46	42	36
Congo	827	5,126	7,319	11,510	132	824	1,035	1,379	175	1,122	1,637	2,355	381	2,489	3,288	4,598	35	178	226	290	46	49	45	40
Côte d'Ivoire	2,630	23,696	33,337	51,375	453	3,861	4,961	6,548	594	5,520	7,516	10,757	1,303	11,689	15,604	21,375	151	874	1,084	1,393	50	49	47	42
Democratic Republic of the Congo	12,184	78,736	120,443	197,404	2,170	14,494	19,282	24,736	2,680	18,045	28,611	42,593	6,087	41,553	59,889	82,878	568	3,335	4,272	5,208	50	53	50	42
Djibouti	62	942	1,133	1,308	12	102	101	89	14	196	197	188	33	356	359	328	3	22	21	18	53	38	32	25
Egypt	20,713	95,689	119,746	153,434	3,670	12,876	11,686	12,994	4,226	17,203	24,196	25,125	9,292	36,997	42,812	46,463	1,095	2,524	2,422	2,598	45	39	36	30
Equatorial Guinea	226	1,221	1,871	2,845	30	182	242	291	43	231	374	522	90	521	765	990	10	42	53	61	40	43	41	35
Eritrea	1,142	4,955	6,718	9,607	213	744	842	966	258	1,123	1,490	1,815	590	2,397	2,839	3,391	54	160	177	196	52	48	42	35
Ethiopia	18,128	102,403	139,620	190,870	3,328	15,177	16,726	16,800	3,971	25,175	29,931	33,481	9,128	49,500	57,225	60,477	925	3,258	3,456	3,385	50	48	41	32
Gabon	473	1,980	2,594	3,516	53	274	286	325	80	386	538	597	161	822	1,002	1,123	14	58	60	67	34	42	39	32
Gambia	271	2,039	3,001	4,562	45	360	451	524	58	482	703	945	128	1,065	1,434	1,792	11	81	98	110	47	52	48	39
Ghana	4,981	28,207	37,294	51,270	925	4,085	4,489	5,233	1,120	6,110	7,971	9,441	2,567	12,689	15,214	17,928	222	876	952	1,077	52	45	41	35
Guinea	3,094	12,396	17,631	26,852	449	1,983	2,483	3,053	628	2,854	3,930	5,370	1,330	6,082	7,965	10,318	147	447	531	630	43	49	45	38
Guinea-Bissau	535	1,816	2,493	3,603	82	291	334	400	103	403	557	697	231	872	1,097	1,345	26	66	73	84	43	48	44	37
Kenya	6,077	48,462	66,960	95,467	1,056	7,023	8,315	9,294	1,277	11,368	14,171	17,471	2,799	23,094	27,591	32,470	315	1,520	1,757	1,912	46	48	41	34
Lesotho	734	2,204	2,608	3,203	119	286	285	283	155	492	555	562	343	932	1,021	1,017	31	61	59	57	47	42	39	32
Liberia	930	4,614	6,495	9,804	145	715	899	1,111	210	1,072	1,421	1,947	446	2,249	2,879	3,749	43	159	192	230	48	49	44	38
Libya	1,125	6,293	7,342	8,124	174	627	515	488	228	1,095	1,212	984	501	2,111	2,026	1,770	58	125	102	97	45	34	28	22
Madagascar	4,084	24,895	35,592	53,803	631	3,769	4,859	6,000	858	5,870	7,660	10,494	1,814	11,988	15,593	20,192	202	827	1,023	1,239	44	48	44	38
Malawi	2,954	18,092	26,578	41,705	569	2,908	3,820	4,698	654	4,395	6,008	8,294	1,535	9,265	12,223	15,898	148	666	833	996	52	51	46	38
Mali	4,708	17,995	27,057	44,020	741	3,332	4,433	5,643	949	4,294	6,545	9,714	2,107	9,806	13,702	18,989	248	770	983	1,188	45	54	51	43
Mauritania	660	4,301	6,077	8,965	116	655	802	1,004	151	940	1,304	1,728	333	1,996	2,603	3,352	32	147	176	215	50	46	43	37
Mauritius	493	1,262	1,287	1,221	89	68	67	54	112	187	135	125	255	295	239	208	22	13	13	11	52	23	19	17
Morocco	8,986	35,277	40,874	45,660	1,388	3,508	3,056	2,793	2,100	5,967	6,680	5,744	4,183	11,491	11,596	10,228	462	703	610	555	47	33	28	22
Mozambique	6,152	28,829	42,439	67,775	1,051	4,950	6,505	8,396	1,323	6,858	9,788	14,340	2,947	14,929	20,306	27,977	317	1,125	1,439	1,777	48	52	48	41
Namibia	485	2,480	3,246	4,339	76	344	367	391	98	541	679	749	216	1,076	1,278	1,380	21	72	76	79	45	43	39	32
Niger	2,560	20,673	34,994	68,454	515	4,218	6,709	11,030	611	4,927	8,537	16,252	1,438	11,752	19,371	34,221	149	999	1,528	2,382	56	57	55	50
Nigeria	37,860	185,990	264,068	410,638	6,330	31,802	40,032	51,605	8,196	42,291	61,029	86,917	18,147	93,965	125,757	170,810	1,758	7,240	8,834	10,875	48	51	48	42
Rwanda	2,186	11,918	16,024	21,886	421	1,740	1,868	1,957	492	2,685	3,440	3,904	1,094	5,593	6,433	7,096	117	371	395	396	50	47	40	32
Sao Tome and Principe	60	200	268	380	10	31	36	42	7	48	61	76	21	100	119	144	3	7	8	9	36	50	44	38
Senegal	2,487	15,412	22,123	34,031	428	2,544	3,061	3,955	535	3,474	5,083	6,784	1,194	7,616	10,038	13,222	130	549	650	817	48	49	45	39
Seychelles	36	94	98	97	4	8	6	6	6	12	15	12	13	24	24	21	2	2	1	1	37	26	25	22
Sierra Leone	2,041	7,396	9,720	12,972	327	1,141	1,261	1,290	425	1,747	2,171	2,472	928	3,638	4,209	4,549	97	259	273	269	45	49	43	35
Somalia	2,264	14,318	21,535	35,852	389	2,617	3,617	4,970	476	3,426	5,068	7,917	1,068	7,642	10,953	15,972	113	623	815	1,073	47	53	51	45
South Africa	13,628	56,015	64,466	72,755	2,024	5,705	5,426	5,108	2,821	10,347	11,241	10,579	6,031	19,428	19,970	18,757	584	1,173	1,103	1,027	44	35	31	26
South Sudan	2,583	12,231	17,254	25,366	462	1,925	2,398	2,851	570	2,838	3,818	5,030	1,292	5,944	7,719	9,636	121	440	522	599	50	49	45	38
Sudan	5,734	39,579	54,842	80,386	1,030	5,940	7,306	8,799	1,255	9,264	11,782	15,689	2,865	18,971	23,565	29,923	275	1,305	1,577	1,841	50	48	43	37
Swaziland	273	1,343	1,666	2,081	49	180	182	178	60	303	356	359	135	592	654	647	13	39	38	36	49	44	39	31
Togo	1,395	7,606	10,507	15,298	235	1,176	1,416	1,720	294	1,717	2,308	3,024	661	3,668	4,584	5,811	67	259	308	363	47	48	44	38
Tunisia	3,605	11,403	12,842	13,884	583	1,052	839	839	721	1,604	2,010	1,588	1,654	3,205	3,376	2,941	167	208	164	167	46	28	26	21
Uganda	5,158	41,488	63,842	105,698	945	7,699	10,357	13,517	1,114	10,257	15,296	22,851	2,561	22,807	32,132	44,802	273	1,753	2,275	2,855	50	55	50	42
United Republic of Tanzania	7,650	55,572	83,702	138,082	1,461	9,655	12,839	17,852	1,734	12,927	19,434	29,192	4,009	28,698	40,215	57,916	379	2,127	2,797	3,726	52	52	48	42
Zambia	2,310	16,591	24,859	41,001	423	2,820	3,847	5,333	518	4,069	5,692	8,662	1,182	8,647										

DEMOGRAPHIC  
INDICATORS

Continent or areas	Total population (thousands)				Child population under 5 (thousands)				Adolescents (thousands)				Child population under 18 (thousands)				Number of births (thousands)				% children under 18 in total population			
	1950	2016	2030	2050	1950	2016	2030	2050	1950	2016	2030	2050	1950	2016	2030	2050	1950	2016	2030	2050	1950	2016	2030	2050
<b>Africa</b>	228,670	1,225,081	1,703,538	2,527,557	38,705	190,898	229,974	284,467	49,228	270,491	374,317	496,060	108,798	579,381	746,331	957,734	11,204	42,117	49,765	59,501	48	47	44	38
<b>Asia</b>	1,404,062	4,462,677	4,946,586	5,256,927	200,480	367,288	338,113	309,698	290,133	704,697	720,625	645,682	596,545	1,296,818	1,261,406	1,140,276	62,448	75,110	68,134	61,895	42	29	26	22
<b>Rest of the world</b>	903,543	1,779,207	1,901,075	1,987,338	99,202	118,062	111,890	107,498	160,547	237,025	237,498	220,153	309,264	426,229	416,525	391,484	23,747	23,725	22,159	21,355	34	24	22	22
<b>Europe</b>	549,375	741,447	739,456	715,721	51,715	39,757	35,479	35,872	97,664	74,951	79,821	70,688	172,642	139,474	136,346	128,373	11,841	7,868	6,961	7,092	31	19	18	18
<b>Latin America and the Caribbean</b>	168,918	639,049	718,483	779,841	27,074	53,531	48,920	43,067	35,901	110,113	104,701	92,223	78,282	194,613	183,039	160,658	7,436	10,760	9,743	8,559	46	30	25	21
<b>Northern America</b>	172,603	358,594	395,453	434,655	18,882	21,542	23,990	24,720	25,007	46,028	46,001	49,675	54,000	80,954	84,527	88,742	4,122	4,429	4,754	4,938	31	23	21	20
<b>Oceania</b>	12,648	40,117	47,683	57,121	1,530	3,232	3,501	3,840	1,976	5,933	6,976	7,568	4,340	11,188	12,613	13,711	347	668	701	767	34	28	26	24
<b>World</b>	2,536,275	7,466,964	8,551,199	9,771,823	338,387	676,248	679,978	701,663	499,908	1,212,213	1,332,441	1,361,895	1,014,607	2,302,428	2,424,262	2,489,494	97,399	140,952	140,058	142,752	40	31	28	25
<b>UNECA regions</b>	<b>1950</b>	<b>2016</b>	<b>2030</b>	<b>2050</b>	<b>1950</b>	<b>2016</b>	<b>2030</b>	<b>2050</b>	<b>1950</b>	<b>2016</b>	<b>2030</b>	<b>2050</b>	<b>1950</b>	<b>2016</b>	<b>2030</b>	<b>2050</b>	<b>1950</b>	<b>2016</b>	<b>2030</b>	<b>2050</b>	<b>1950</b>	<b>2016</b>	<b>2030</b>	<b>2050</b>
<b>Central Africa</b>	9,722	51,013	72,615	110,554	1,462	8,512	10,507	12,932	1,985	11,812	16,561	22,465	4,258	25,689	33,523	43,407	421	1,929	2,315	2,738	44	50	46	39
<b>Eastern Africa</b>	64,022	407,333	589,782	902,663	11,492	66,974	83,767	102,379	13,982	96,406	133,117	180,635	31,647	205,339	269,146	346,654	3,193	14,909	18,079	21,359	49	50	46	38
<b>North Africa</b>	49,696	233,148	290,544	367,888	8,365	29,357	27,887	30,846	10,673	42,045	56,171	58,069	23,012	88,266	100,846	108,250	2,542	5,948	5,782	6,257	46	38	35	29
<b>Southern Africa</b>	34,738	174,031	236,188	343,207	5,643	25,337	30,660	37,818	7,419	37,989	50,387	66,164	16,274	79,145	99,939	127,416	1,682	5,580	6,634	7,961	47	45	42	37
<b>West Africa</b>	70,210	357,897	512,366	800,750	11,695	60,559	76,990	100,327	15,113	81,949	117,760	168,390	33,477	180,393	242,296	331,407	3,350	13,719	16,922	21,153	48	50	47	41
<b>African Union regions</b>	<b>1950</b>	<b>2016</b>	<b>2030</b>	<b>2050</b>	<b>1950</b>	<b>2016</b>	<b>2030</b>	<b>2050</b>	<b>1950</b>	<b>2016</b>	<b>2030</b>	<b>2050</b>	<b>1950</b>	<b>2016</b>	<b>2030</b>	<b>2050</b>	<b>1950</b>	<b>2016</b>	<b>2030</b>	<b>2050</b>	<b>1950</b>	<b>2016</b>	<b>2030</b>	<b>2050</b>
<b>Central Africa</b>	24,215	140,274	208,857	333,720	4,010	24,907	32,212	41,056	5,163	32,165	48,931	70,471	11,433	72,615	101,141	137,238	1,106	5,711	7,126	8,667	47	52	48	41
<b>Eastern Africa</b>	55,756	358,913	509,670	761,104	10,064	56,587	69,435	83,107	12,172	85,504	112,665	148,443	27,592	177,679	225,334	282,954	2,806	12,446	14,859	17,282	49	50	44	37
<b>North Africa</b>	43,962	193,569	235,702	287,503	7,335	23,417	20,581	22,047	9,417	32,781	44,389	42,381	20,147	69,295	77,280	78,328	2,267	4,643	4,204	4,416	46	36	33	27
<b>Southern Africa</b>	34,245	172,769	234,902	341,986	5,554	25,269	30,594	37,764	7,307	37,802	50,253	66,040	16,020	78,850	99,700	127,207	1,659	5,567	6,621	7,950	47	46	42	37
<b>West Africa</b>	70,210	357,897	512,366	800,750	11,695	60,559	76,990	100,327	15,113	81,949	117,760	168,390	33,477	180,393	242,296	331,407	3,350	13,719	16,922	21,153	48	50	47	41

Note: Adolescents refers to population 10-19 years old. UNECA-United Nations Economic Commission for Africa.

Source: United Nations, Department of Economic and Social Affairs, Population Division, World Population Prospects: The 2017 Revision (UN WPP), United Nations, New York, 2017.



## Only 6 countries have met the WHO minimum standard of 4.45 health service providers per 1,000 population

FIG. 4.1 Density of doctors, nurses and midwives in Africa per 1,000 population, by country.

COUNTRY  
TABLES

	Health service providers per 1,000 population			Health service providers per 1,000 population				
Libya		9.0	Congo		1.0	Madagascar		0.4
South Africa		5.9	Ghana		1.0	Togo		0.4
Seychelles		5.4	Gambia		1.0	Malawi		0.4
Gabon		5.3	Cabo Verde		0.9	Chad		0.4
Mauritius		4.9	Djibouti		0.8	Sierra Leone		0.3
Tunisia		4.8	Mauritania		0.8	Central African Republic		0.3
Sudan		4.2	Zambia		0.8	Liberia		0.3
Namibia		3.1	Benin		0.8	Ethiopia		0.3
Algeria		3.1	Rwanda		0.7	Burundi		0.2
Botswana		3.1	Guinea-Bissau		0.7	Niger		0.2
Sao Tome and Principe		2.6	Equatorial Guinea		0.7	Somalia		0.1
Egypt		2.2	Burkina Faso		0.7			
Nigeria		1.9	Eritrea		0.7			
Angola		1.6	Lesotho		0.6			
Swaziland		1.5	Côte d'Ivoire		0.6			
Morocco		1.5	Cameroon		0.6			
Uganda		1.5	Guinea		0.6			
Zimbabwe		1.3	Mali		0.5			
Comoros		1.2	Senegal		0.5			
Kenya		1.1	United Republic of Tanzania		0.5			
Democratic Republic of the Congo		1.1	Mozambique		0.5			

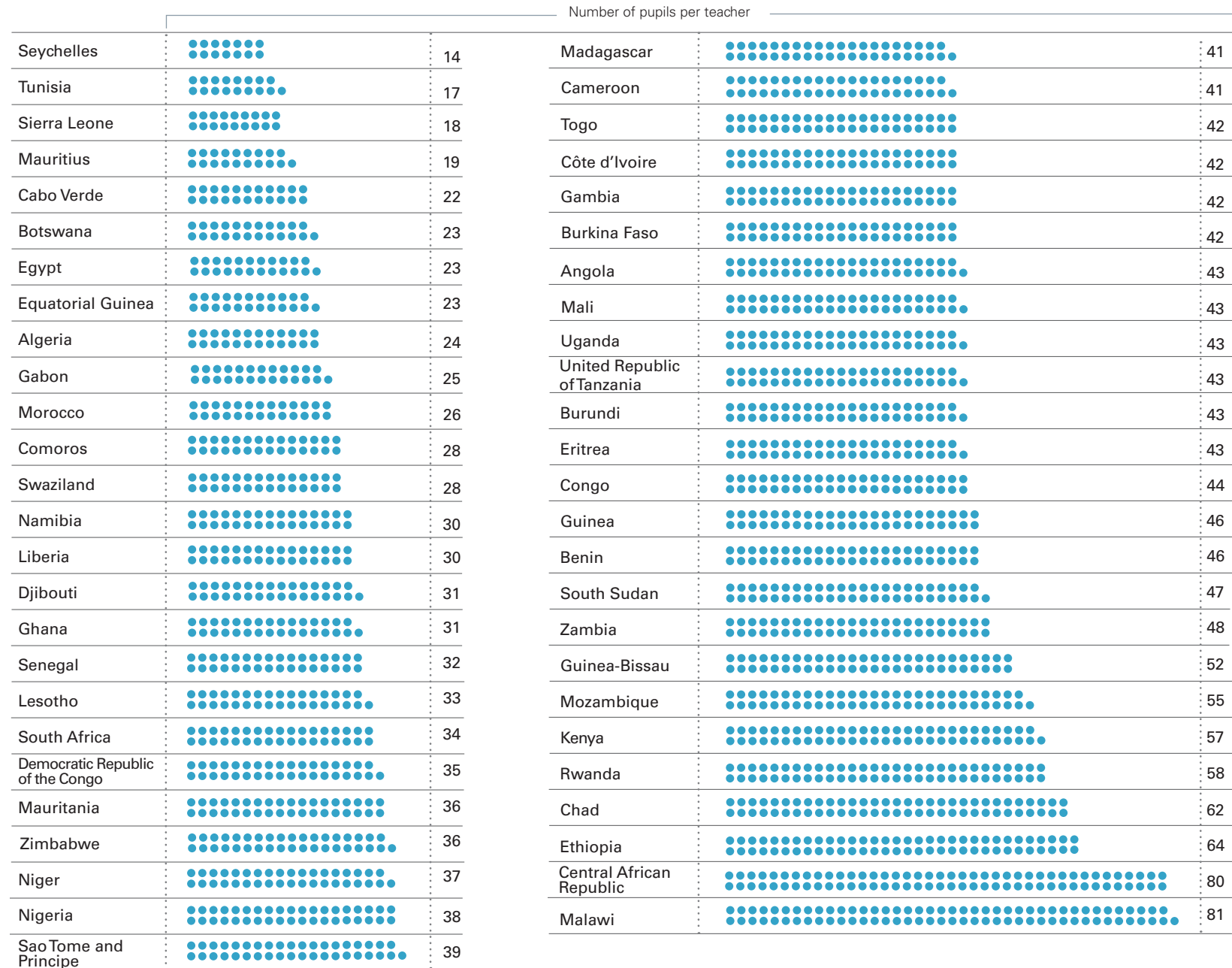
Note: Most recent available value, from 2003 to 2015.

Source: UNICEF analysis based on World Health Organization, The 2016 update, Global Health Workforce Statistics, WHO, Geneva, 2016 and United Nations, Department of Economic and Social Affairs, Population Division (2017), *World Population Prospects: The 2017 Revision*.



## The best sub-regional performers range between 17 and 23 students per teacher

FIG. 4.2 Pupil-teacher ratio in primary school in Africa, by country



Note: Most recent available value, from 2009 to 2016.

Source: UNESCO Institute for Statistics global databases, 2016, based on administrative data for the most recent year available during the period 2009–2016.

Children waiting to be vaccinated,  
Galkayo, Somalia

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GENERATION 2030  
AFRICA 2.0

This report follows up the first *Generation 2030 Africa* report, published in August 2014, which outlined pivotal changes in Africa's child demographics. The new report uses latest population projections showing that by 2050, the continent will account for 42 per cent of all global births and almost 40 per cent of all children under 18. The report presents modelling indicating that if African nations invest in their growing population of children and young people, in particular in their education, and adopt economic policies that foster new jobs, the continent as a whole could see per capita incomes increase up to four-fold. The first, crucial step to achieving this demographic dividend will be to close the gaps that exist within Africa's health and education systems.

Cover photo: Children from Jumbe village, in Amudat district of Karamoja, Uganda  
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