

Africa's Demographic Trailblazers

How falling fertility rates are
accelerating development



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WHEN LESS MEANS MORE

The question of how many children people have, how large their families are and how quickly an entire population multiplies, touches on sensitive issues. No country or individual appreciates external interference in such issues or in the decisions they make about them. The right to reproductive self-determination is one of the universal basic rights identified by the United Nations and a goal of human rights-based policy.

Nevertheless, the question of whether and how strongly a population grows is not only a private matter but also a social concern. A high fertility rate and strong population growth become a national issue when the number of people increases much more rapidly than the number of jobs and exceeds the capacity of the country to provide necessary infrastructure such as health services, schools and housing. Sustained population growth does not work in any case on a planet with limited space and resources any more than a way of life that threatens the foundations of human existence does. It is precisely for these reasons that the declaration of the UN Conference on Environment and Development in Rio de Janeiro in 1992 stated the following in Principle 8: “States should reduce and eliminate unsustainable patterns of production and consumption and promote appropriate demographic policies.”

While the highly developed states of the northern hemisphere have some catching up to do in changing their production and consumption patterns, the African states are increasingly concerned with the question of their own population growth. For a long time, the region was regarded as sparsely populated and a larger population was thought to be an advantage, because more people means more productive forces, more consumers and therefore economic growth. In the meantime, however, it has become clear that for many countries the increasing number of inhabitants is hampering development to an ever greater degree. Wherever the provision of essentials becomes difficult to guarantee, the danger of social conflict grows.

Falling fertility rates are the prerequisite for and a consequence of development

The experiences of other countries that have managed to escape poverty, such as in Asia or Latin America, show that falling fertility rates offer the chance to boost development, opening up new prospects for the many young people and setting a dynamic in motion that eventually helps broad swathes of the population to achieve a higher standard of living. Countries that succeed in doing this go on to reap a “demographic dividend”, but only if falling fertility rates have first slowed down population growth.

Many countries in Asia that once had little hope of experiencing positive development were able to benefit from the demographic dividend and rise to become threshold and industrialised countries. Some African countries have now started embarking on this path, too. It is worth examining the political, social and economic framework conditions for this development more closely, for much can be learned from the countries that serve as examples here. In addition, they can provide models for other countries on the continent.

This study describes how some of the governments of Africa are tackling the issue, which instruments they are using to influence population growth directly or indirectly and how successful they have been. Others should be encouraged to follow their example.

Berlin, June 2019

Reiner Klingholz
Director
Berlin Institute for Population and
Development

THE KEY POINTS

Nowhere else in the world is the population growing as fast as it is in Africa. By mid-century, 2.5 billion people could be living on the African continent – almost twice as many as today. This rapid increase in the number of inhabitants poses enormous challenges for the African states, because it means that in the future not only will even more people need to be provided with food, health services and education but they will also need the opportunity to find jobs that enable them to make a decent living. These are tasks that many states in Africa are unable to cope with even today.

The reason for this high population growth is above all the continuing high fertility rates, which, moreover, are preventing a change in the age structure of the population that could bring about a development boost of the kind that Asian states, for instance, have already experienced. The age structure of the “demographic bonus” is still a distant prospect for most countries in Africa. To achieve the progress required for the bonus to be converted into a “demographic dividend”, the decline in fertility rates¹ in Africa urgently needs to accelerate.

Learn from regional trailblazers

Owing to the continent’s huge diversity, it is difficult to speak about “Africa’s demographic development”. The range of fertility rates is a broad one and the various countries are at very different stages of the demographic transition. This raises the question of why these differences exist and which local factors are responsible.

The present study takes a closer look at seven regional trailblazers – countries that either already have a comparatively low fertility rate or are moving in that direction. In East Africa this applies to Kenya and Ethiopia, in Southern Africa to Botswana, in West Africa to Ghana and Senegal and in North Africa to Tunisia and Morocco. The countries were selected according to important socio-economic parameters that have proved to contribute to falling fertility rates either directly or indirectly. They include child mortality, the level of education, especially among women, and income relative to the poverty threshold. We also used indicators of gender equality and urbanisation and took into account social norms and the political commitment of governments to family planning.

The country chapters show that Africa already offers some positive examples of a successful demographic policy in states with very different historical and cultural backgrounds. Those countries that are less advanced in their demographic development have a decisive advantage: they can draw on the knowledge now available about the key factors influencing a decline in fertility rates and draw up population policy measures based on them. A collection of practical examples provides an overview of where this has already been successful and which measures were used.

1 | WHY AFRICA'S POPULATION IS GROWING SO FAST AND WHAT THE INFLUENCING FACTORS ARE

Since 1950, Africa's population has more than quintupled. Unlike in the rest of the world, there is no sign of an end to such growth. By mid-century, the number of Africans is likely to have almost doubled, from the present level of 1.3 billion to 2.5 billion people. This means that Africa will account for half of global population growth in the next 30 years. While just under a fifth of the world's population lives on the African continent today, this share is likely to be more than a quarter by 2050.¹

For a long time, Africa's population growth was not considered particularly significant, since the region was regarded as sparsely populated. In 1950, with a total of 230 million people, the continent's average population density was just eight people per square kilometre.² As the colonial era drew to a close, few foreign investors saw Africa as a worthwhile location, since both the amount of cheap labour and the size of local markets were limited. Asia, which by 1970 was already home to 2.1 billion people and hence well over half of the world's population, offered more lucrative opportunities and was of far greater interest.³

What is more, strong population growth is not a problem per se. As long as the increasing number of people can be provided with the services they need and, above all, with jobs, a large population can contribute to economic growth and wealth creation. And, in such a case, more people mean more producers, more consumers and more innovators.

More people, finite resources

In Africa, however, this effect cannot be observed. On the contrary, high population growth has exacerbated many of the problems that Africans are already facing. Even today, the majority of states – especially those south of the Sahara – are scarcely able to provide their populations with the health and education infrastructure they need, let alone sufficient jobs to give them a decent standard of living. This is unlikely to change in the foreseeable future: 37 million children of primary-school age in Africa are still unable to go to school and every year, the group of children that should start school grows roughly by an additional 5 million.^{4,5} Even if they are able to enjoy their right to education and complete school successfully, the next critical situation awaits them: currently, the group of young workers between the ages of 15 and 35 is growing by ten to twelve million people annually. Yet on the entire continent only about three million jobs are being created annually in the formal employment sector.^{6,7}

A deficit of education and a lack of income opportunities are inhibiting economic development and thus making it difficult for people to escape the poverty trap. Since what economic growth there is has to be shared among ever more people, the prosperity gains are either modest or entirely absent. As a result, 40 percent of people in sub-Saharan Africa have to live on less than the equivalent of two US dollars a day and hence below the poverty threshold as defined by the World Bank.⁸ All over the developing world, poor prospects also mean a high fertility rate and therefore continuing population growth. A spiralling vicious circle, in other words.

Since essential resources, such as water or arable land, do not increase with the growth in population, tensions and distribution conflicts are becoming more frequent. Climate change is likely to exacerbate this situation still further in the future and force ever more people to leave their homeland. At the same time, a lack of prospects is increasingly likely to motivate Africa's youth to look for better opportunities elsewhere – in the overflowing mega-cities, in other African countries and, to a lesser extent, in Europe.

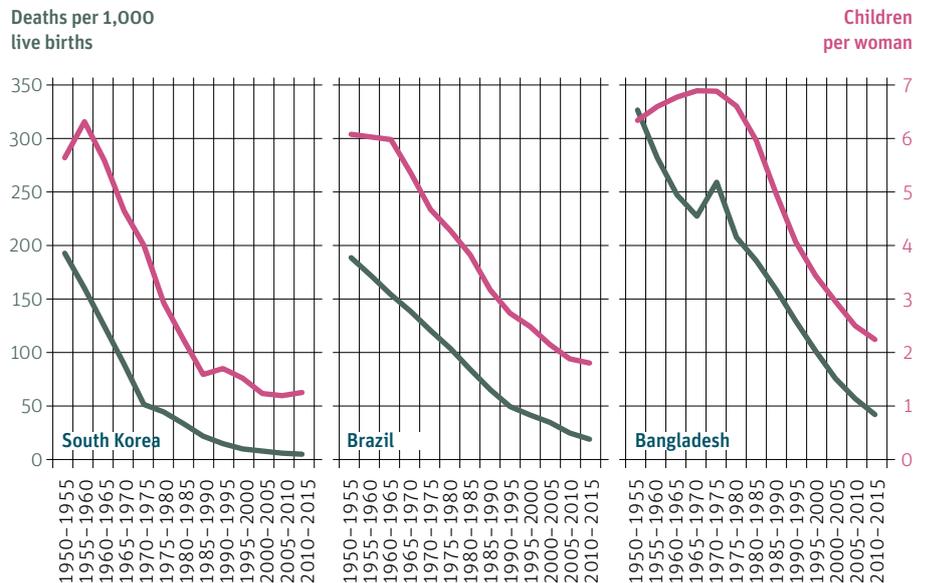
If fewer children die, fewer will be born

Whether the living conditions of people in Africa will improve in the future is closely linked with how quickly Africa's states undergo the demographic transition. This model reflects the only economic theory capable of charting the path of development of all nations from a pre-industrial way of life to a modern society. The transition begins in a phase when people have a large number of children, but because of poor living conditions many people from all age groups die. As long as the birth and death rates are roughly balanced, the population will grow slightly or not at all. Only when the food supply improves and the first hygiene and medical advances improve living conditions does mortality – especially infant and maternal mortality – fall and average life expectancy rise (phase 2). But because the fertility rate initially remains at its former high level or declines only slightly, the population continues to grow strongly under these conditions.

After mortality rates have fallen, fertility rates follow suit in phase 3, so the theory goes, albeit somewhat later – and always in this order. Or at least that is what has happened in every country that is ahead of Africa in its demographic development. A decline in child mortality is, after all, a prerequisite (albeit an insufficient one) for people to decide to have fewer children. Because it takes them a while to realise that more children are surviving than they expected, people do not start planning the size of their families and limiting them using suitable means and methods until one or two generations later.⁹

From high to low mortality and fertility rates

Wherever children have better chances of survival, it is the case that one or two generations later parents decide to have fewer children. This link between falling child mortality and a decline in the fertility rate can be observed in every country in the world as it undergoes its demographic transformation.



Development of child mortality (deaths of under-fives per 1,000 live births) and fertility rates (average number of children per woman), 1950 to 2015

(Data source: UN DESA¹⁰)

As mortality falls, the socio-economic development that has led to longer life expectancy continues to forge ahead: healthcare improves further, schools and universities offer new educational opportunities, jobs are created in formal employment and women gain more rights. These processes open up new prospects for people and allow more individual life planning. Wherever this has happened, fertility rates have declined. Accordingly, in this third phase of the demographic transition, population growth slows down. In Phase 4, when the fertility rate has fallen to the level of the mortality rate, it tails off. That, in any case, is the theory and also the experience of the more developed states.

A slow decline in fertility

With the exception of the comparatively advanced states in North and Southern Africa, most countries on the African continent are still in Phase 2 or at the beginning of Phase 3 of the demographic transition process. Food imports, emergency aid and better healthcare have significantly reduced child mortality – even in under-developed countries like Chad, the Central African Republic and Sierra Leone.¹¹ But the socio-economic progress that needs to follow is scarcely gaining ground in Africa. In many places, people still have no prospect of leading a self-determined life. For this reason,

African states are entering and moving through the third phase of the demographic transition at a very sluggish pace, as a result of which fertility stubbornly remains at a correspondingly high level. Although in Africa, too, fertility rates have fallen in the past two decades, African women still have an average of 4.4 children – almost twice as many as women in other parts of the world.¹²

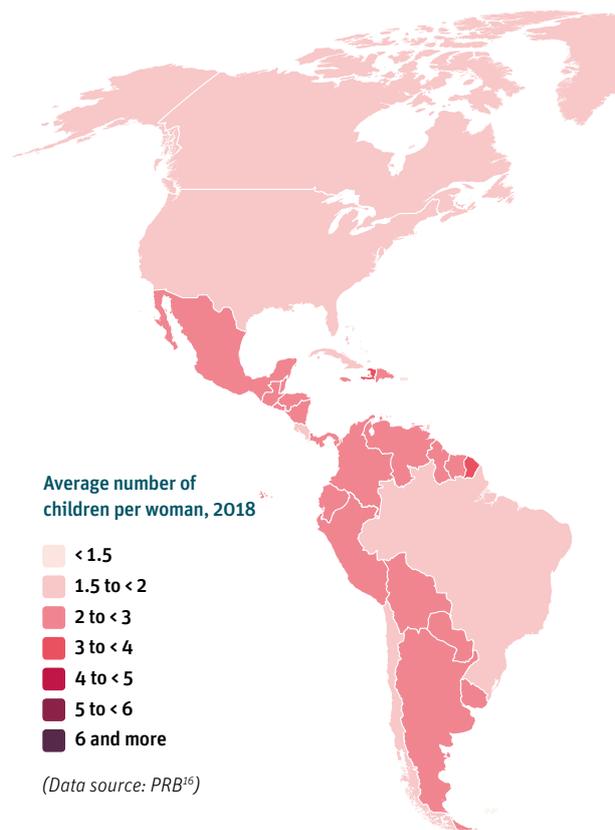
All in all, fertility rates in Africa have so far declined much more slowly than they did previously in other regions of the world.¹³ Whereas in Asia the number of children per woman fell from 5.7 to 3.5 between 1965 and 1985 – a decline of 40 percent – the fall in the fertility rate in Africa not only came 20 or 30 years later but also amounted to just 17 percent.¹⁴ Even the United Nations has been repeatedly surprised by this slow development and accordingly has had to adjust its population growth prognoses for Africa upwards several times recently.¹⁵

Still large numbers of children

Nowhere else in the world do average fertility rates exceed those in Africa. In more than 25 percent of African states, women have more than five children on average. In Niger, the figure is even higher than seven children per woman. The large numbers of children being born are causing rapid population growth on the continent. By 2050, Nigeria, Ethiopia and the Democratic Republic of Congo will probably have joined the top ten most populous countries in the world.¹⁷

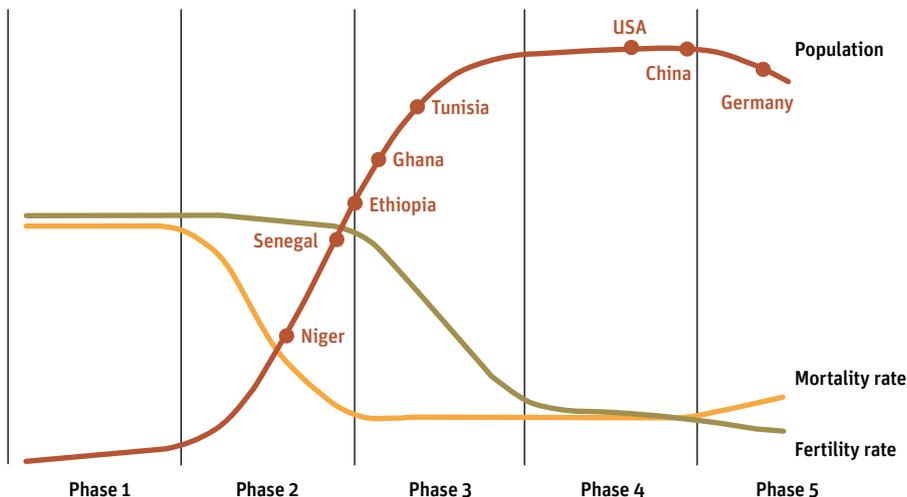
Large regional differences

This overview of the average values for Africa conceals, however, the very broad spectrum of demographic development on the continent. At one end of the spectrum are the highly developed island states of Mauritius and the Seychelles, together with the more developed countries in the north and south of the continent, such as South Africa and Tunisia. Here the fertility rates have already fallen below three children per women – and to just 1.4 children in

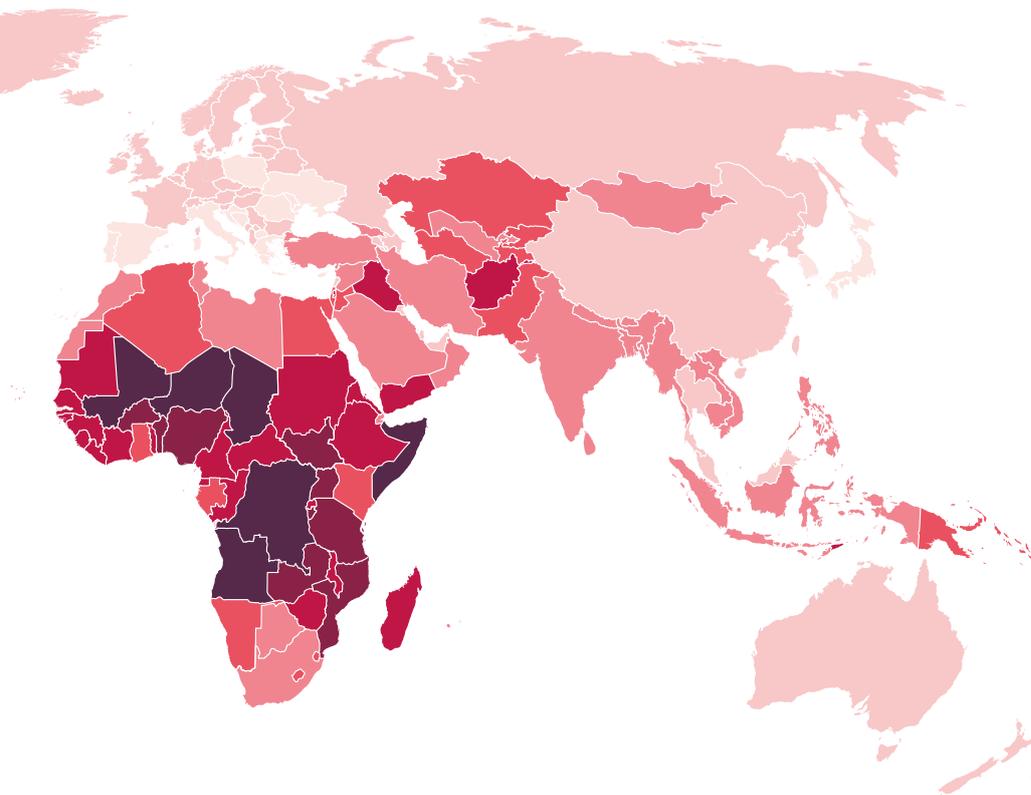


The path through the demographic transition

In the course of their socio-economic development, all countries throughout the world have undergone a demographic transition – albeit with a time lag and at different speeds. Through the improvement in living standards, the mortality rate falls initially and then, with a time lag, the fertility rate. In the meantime, the population continues to grow strongly. In Phase 4, fertility and mortality rates finally tail off at a lower level and population growth stops. Apart from a few states in North and Southern Africa, most countries on the African continent are still at the beginning of this development: child mortality has already fallen considerably, but fertility rates remain persistently high. Africa is hence continuing to experience rapid population growth.



Schematic diagram of the development of fertility and mortality rates as well as of the total population in the absence of migration (own diagram)



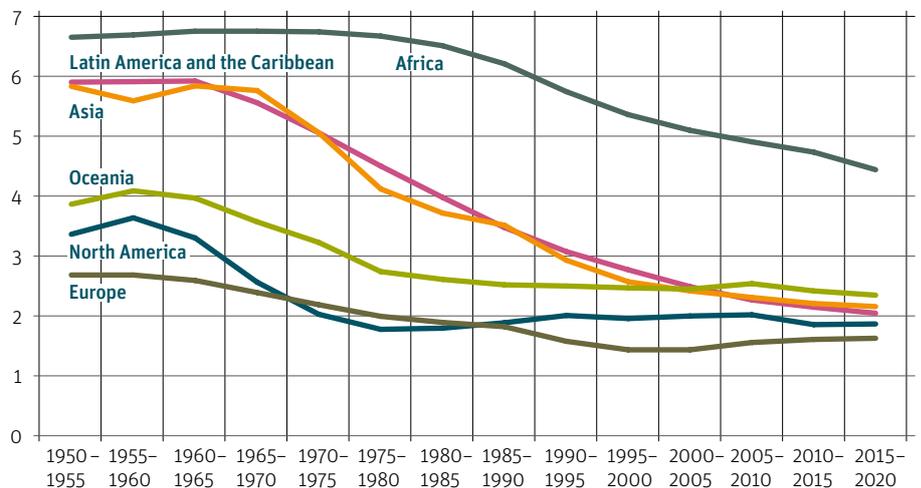
Mauritius; according to UN prognoses, they are likely to fall further by 2020.¹⁸ In other words, these states are relatively advanced in their demographic development and, accordingly, their populations are now growing very modestly.

Some countries – especially in East Africa – are currently experiencing a rapid decline in their fertility rates. In Rwanda, for example, the number of children per woman has fallen since 1990 from 6.5 to around 4. In Ethiopia the fertility rate has fallen from more than seven children per woman to a similar level over the same period. By contrast, in most West and Central African states there has been negligible or even zero progress and average fertility rates are still at 5.2 and 5.5 children per woman, respectively.¹⁹ In some countries – including Angola, Mali and Chad – the changes in the fertility rate have so far been so slight that experts doubt whether socio-economic and demographic change has, in fact, begun there at all.²⁰

Late and slow

The decline in the fertility rate in Africa is clearly lagging behind that in other regions of the world. Whereas Latin America and Asia experienced a rapid decline in the fertility rate between 1960 and 1980, this trend did not begin in Africa until 20 or 30 years later and then at a much slower pace. Currently at four children per woman, the average fertility rate in Africa is today at the same level as that in Asia and Latin America in the 1970s.

Children per woman



Average number of children per woman in various regions of the world, 1950 to 2015
(Data source: UN DESA²¹)

No demographic bonus in sight

The slow decline in fertility rates means not just a continuing high rate of population growth but also a worsening of the supply situation. At the same time, the high fertility rates are preventing a shift in the age structure that could usher in an economic boom, such as the one in the Asian tiger states like South Korea, Thailand and Singapore. After all, as the number of children being born continues to fall, subsequent cohorts become smaller and the population bulge shifts to young people of working age. This means there are a disproportionately large number of people able to work and be productive. By the same token, the number of children and teenagers who need to be provided with food, schooling and healthcare by the working population declines.

This favourable age structure is known as the demographic bonus, which, given favourable political and economic conditions, can be transformed into an economic upturn, the so-called demographic dividend. For this to happen, the young generation must be well qualified and must find jobs to match their qualifications. Economists agree that the economic rise of the Asian tiger states was attributable mainly to those countries making use of the demographic bonus.²²

Together with some of the African island states, the more developed countries in North and Southern Africa have already reached this favourable age structure. They have a large number of young, increasingly well-qualified people of working age. What has so far been missing are the corresponding jobs.^{23,24} For the majority of African states, however, an age structure that offers an opportunity for a demographically determined boost to development is still a

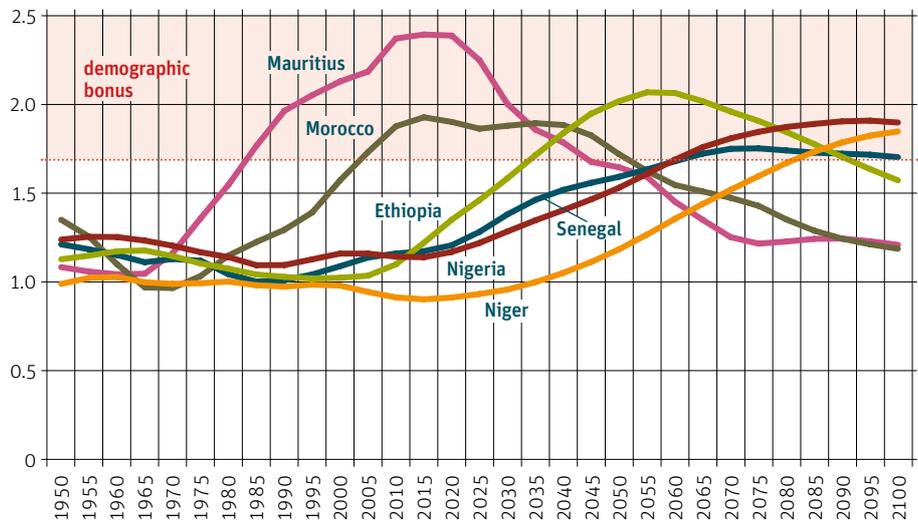
distant prospect. According to the United Nations, the demographic bonus does not emerge until the share of young people under the age of 15 who need to be provided for has fallen below 30 percent of the total population while the share of over-64-year-olds has not yet reached 15 percent.²⁵ Or to put it another way: only when for every dependent person there are at least 1.7 employable people aged between 15 and 64 will states reach that favourable situation in which an economic upswing is facilitated.²⁶ According to UN estimates, this is unlikely to happen in most sub-Saharan countries and in most countries north of Namibia, South Africa and Botswana until 2035 at the earliest. Central and West African countries

such as Mali, Chad and Angola cannot hope to attain a demographic bonus before 2060.²⁷

Even this dangerously slow-sounding shift in the age structure will happen only if the fertility rates fall as rapidly in these countries as they have done in other regions of the world. But given the rather slow fall in fertility rates to date, even this development is questionable. Whether and how quickly Africa will be able to make up its developmental lag and offer its people better prospects thus depends largely on how rapid the demographic transition is. A decline in the number of children born per woman is essential for this to happen.

Bonus sooner – or later

A demographic bonus emerges when there are more people of working age than there are young and old people to be provided for. Thanks to a rapid decline in fertility in the 1960s and 1970s, Mauritius was already able to benefit from an economically favourable age structure in the 1980s. Whereas the island state has already been able to convert this into a dividend – a demographically determined boost to development – the demographic bonus is still a long way off for other African countries. Niger, for example – the country with the world's highest population growth at present – can hope for a bonus around 2080 at the earliest.



Ratio of the working age population aged between 15 and 64 to dependents (people aged 0 to 14 and over 64), 1950 to 2100

(Data source: UN DESA²⁸)

What causes fertility to fall

But how can this process be accelerated without compulsory measures of the kind that have been seen in China, for instance? Which factors lead to falling fertility rates has been well documented by scientists. There are also a number of interventions that are known to accelerate socio-economic progress and that lead – directly or indirectly – to a decline in the number of children born. The following socio-economic parameters are central:

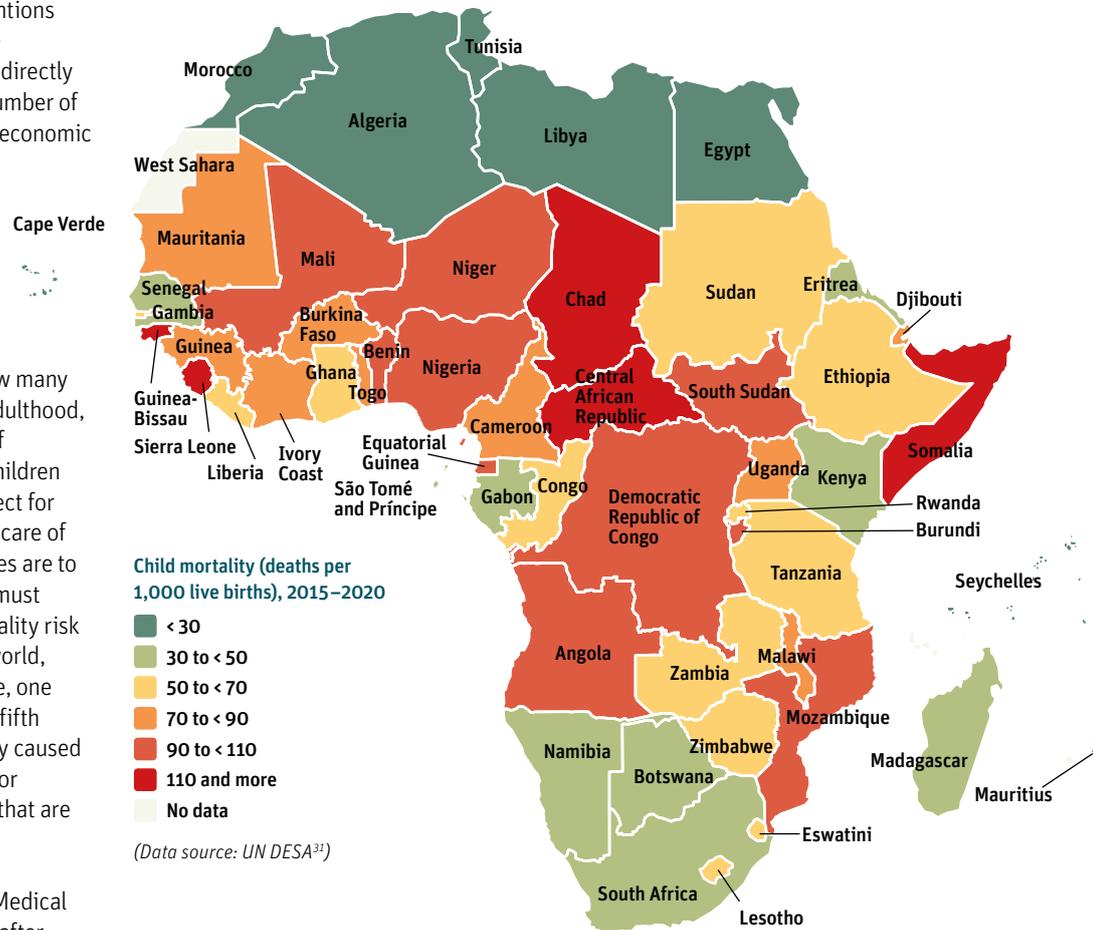
Health

As long as parents do not know how many of their children will survive into adulthood, they tend to have a large number of children. In traditional societies, children mean extra workers and the prospect for parents of having someone to take care of them in their old age. If fertility rates are to fall, children's chances of survival must improve. The infant and child mortality risk in Africa is still the highest in the world, despite major progress. On average, one child in 14 dies before reaching its fifth birthday.²⁹ These deaths are usually caused by respiratory diseases, diarrhoea or malaria, in others words, diseases that are easily preventable.

Maternal health is important, too. Medical supervision during pregnancy and after birth can by no means be taken for granted throughout Africa. In some African countries only half of all births are medically supervised, in Chad and Burkina Faso only one in four.³⁰ If the health of children and mothers is to improve further, it is essential to expand the health infrastructure and ensure that medical personnel are well trained.

Where children die early

A child's chances of reaching his or her fifth birthday vary depending on where on the African continent he or she is born. New-borns have the best prospects in the highly developed island states of Seychelles and Mauritius, followed by the North African countries. The picture is rather less rosy in Chad and the Central African Republic, where one child in eight dies before reaching the age of five.³²



Education

Many experts believe that education is the best method of birth control since it has an impact on people's living situation via various channels and hence on the number of children born. People with more education tend to lead healthier lives and find it easier to earn a decent living. They are thus less dependent on their children to provide for them in their old age.³³ Parents who have been to school themselves attach more value to their children having good education too. And because this entails higher costs, parents tend to decide to have fewer children.³⁴

Women's education has an especially important role to play in falling fertility rates – for several reasons. *First*, the likelihood of small children surviving increases with the mother's level of education, since educated mothers are better informed about hygiene, healthy food and vaccinations.³⁵ *Second*, the longer they have attended school, the later women marry and have children. *Third*, education means more individual life prospects for them that go beyond their role as mothers.³⁶ All this contributes to the fact that women with secondary education in Africa on average wish to have around two children fewer than women with no education and are better able to realise this wish.³⁷ The fertility rate therefore tends to fall as the level of women's education rises. This effect is greatest if women have attended secondary school after completing primary school. Women with a secondary education in Kenya and Ethiopia, for instance, have less than half the number of children than those who have never been to school.³⁸

Population (aged 20 to 64) with secondary education or higher, in percent, 2015



(Data source: Wittgenstein Centre³⁹)

Where secondary education remains a privilege

In many African countries a good school education cannot be taken for granted. Although today around 80 percent of children start school, many fail to finish primary school and only a few attend secondary school. In 26 of the 54 states, less than a quarter of the population has a secondary education. But it is precisely this that has been proved to have a major influence on the decline in fertility rates.

Income opportunities and growing prosperity

The number of children born always falls in places where people's living conditions improve. Alongside better healthcare and a higher level of education, income opportunities are paramount. Only when people no longer have to live from hand to mouth and are able to escape the subsistence trap can they begin to plan their own lives and to think differently about the size of their families.⁴⁰ In order to achieve a reduction in fertility rates in Africa, it is essential to create formal and productive jobs in industry and services. Currently, around half – in the less developed countries even around 70 percent – of the African population works in an agricultural sector characterised by small-holdings, which is generally not very productive and does not offer attractive future prospects for the younger generation.⁴¹

If more people are able to earn a secure income and to work productively, this will not only lead to improved living standards of the individual but will also give the state more latitude. A growing economy will bring money into the state coffers, which can be invested in expanding the health and education infrastructure and developing a pension system. Social security systems can then assume the role previously played by children in taking care of people in their old age. Economists have investigated the influence of state social security systems such as pensions on fertility rates in Europe and the United States: a rise in state social benefits amounting to 10 percent of GDP was accompanied there by a reduction in fertility rates of between 0.7 and 1.6 children per woman.⁴²

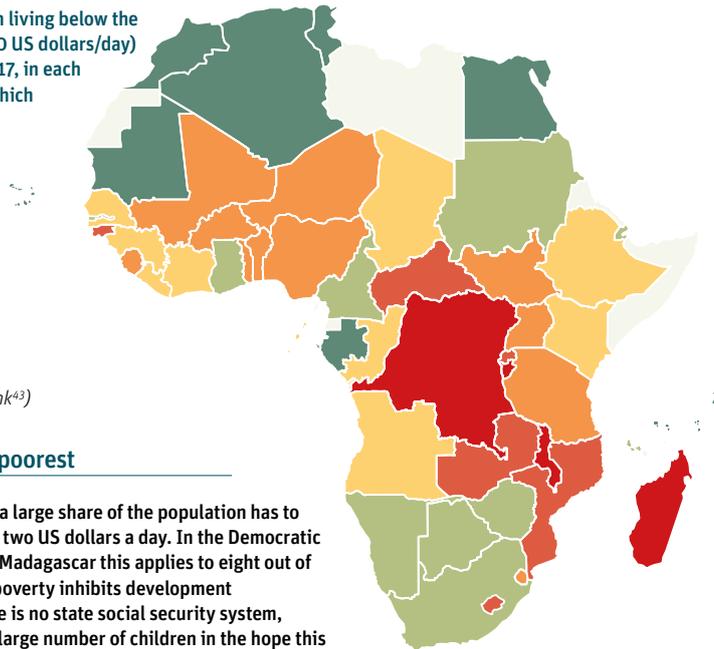
Share of the population living below the poverty threshold (1.90 US dollars/day) in percent, 2007 to 2017, in each case the last year for which figures are available



(Data source: World Bank⁴³)

Where people are poorest

In many African states a large share of the population has to make do with less than two US dollars a day. In the Democratic Republic of Congo and Madagascar this applies to eight out of ten people. Wherever poverty inhibits development opportunities and there is no state social security system, parents tend to have a large number of children in the hope this will give them security in their old age.



Gender equality

Almost everywhere in Africa women want fewer children than men do. The difference is greatest in the countries of the Sahel region. Here women want one or two children fewer than men do; in Chad the difference is as great as three.⁴⁴ The fertility rates in these countries are so high because, apart from the low level of education, women have little say in family affairs.⁴⁵

Where women are lacking in equality, they tend to have more children. If, on the other hand, they are able to assert themselves against their husbands and the family – for instance, because they are better educated and can contribute to the family income – the number of children born decreases, as has

been shown empirically.⁴⁶ Thus, the status of women in society, namely whether they have equal access to education and to the labour market and thereby serve as role models for the next generation of young girls, has an impact on how quickly fertility rates fall.

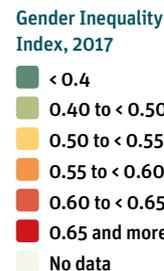
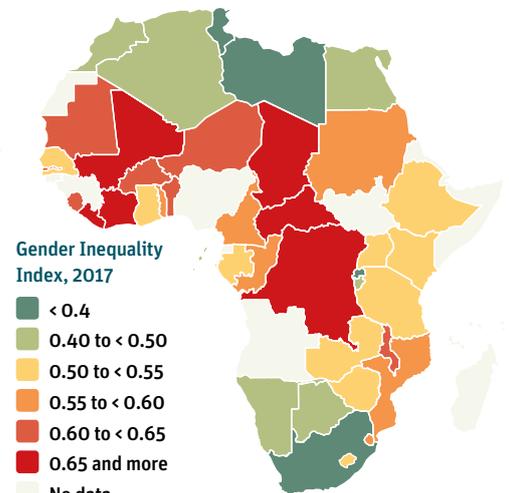
Where women are at a disadvantage

Almost everywhere in Africa women want fewer children than their partners do, but often the decision about the number of children they have is taken by men. With respect to gender equality there are major differences on the continent, as the UN's Gender Inequality Index shows. This evaluates the discrimination of women in the areas of health, education, participation in the labour market and political co-determination. Here "0" represents absolute gender equality and "1" the highest level of gender inequality.

Social norms and traditions

Most African societies are very traditional, especially in the countryside, where on average more than half of the African population lives.⁴⁸ Here the (extended) family and the village community have an important role to play as a social security net – not least because state social security programmes are lacking. Marrying young and having children at as early an age as possible is often a necessary form of social security, particularly for girls from poor families. Their social role is then reduced to motherhood and producing a male heir.⁴⁹

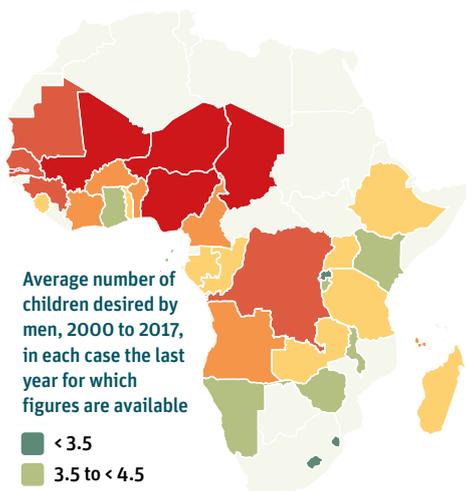
What is more, for all their diversity African societies are almost uniformly very religious, and an abundance of children is often regarded as worth striving for. Even the younger generation are still keen to have a relatively large number of children. On average African women wish to have two children more than women in other developing countries; among African men, the desire is for three children more than men elsewhere. Even women with secondary education on average wish to have one child more than women elsewhere.⁵⁰



(Data source: UNDP⁴⁷)

Where people want many children

In many places in Africa an abundance of children is regarded not as a burden and a cost factor but rather as a blessing. African men, in particular, are keen to have a large number of children, on average almost twice as many as men in other developing countries.



(Data source: DHS⁵¹)

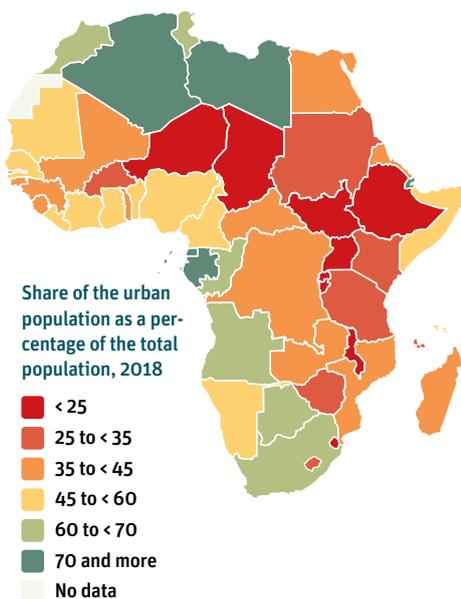
Urbanisation

African cities are growing by around 3.5 percent a year on average.⁵² This presents a challenge for urban planners, but at the same time it may provide an opportunity for demographic change. In cities people have easier access to health services, education, jobs and, not least, contraceptives. Since women living in cities go out to work more often and new role and family models become more quickly established as the norm, there tends to be more gender equality here than in rural regions.⁵³

All of this helps to explain the fact that both women and men in cities want far fewer children. The higher cost of living in cities, however, often make this wish a necessity. In cities, where living space and food are more expensive, each additional child means higher costs, whereas in the countryside children represent economic value added as workers. Fertility rates are therefore much lower in cities than in rural regions. In Ethiopia, Angola and Zambia, women living in cities have almost three children fewer than those living in the countryside.⁵⁴

Where people live in cities

Everywhere in Africa fertility rates are lower in the cities than in the countryside, since in the city it is much easier to gain access to health services, education, jobs and, not least, contraceptives. However, in more than 30 African states more than half of the population lives in the countryside. To achieve a rapid decline in fertility, it is necessary, above all, to improve basic provision.



(Data source: UN DESA⁵⁵)

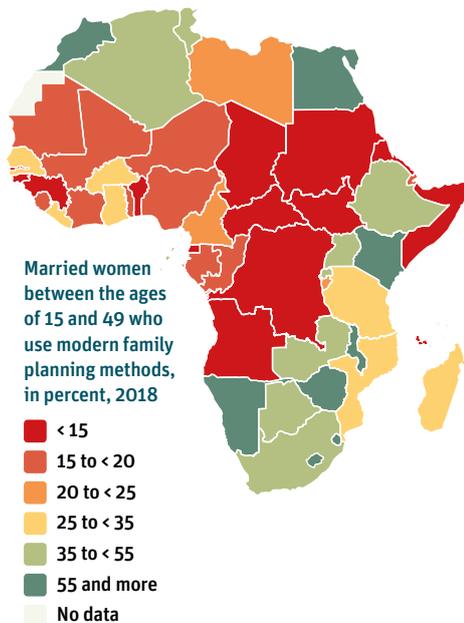
Family planning

The factors described above influence how many children women and men want to have and thus indirectly the fertility rates. Whether people are in practice able to limit the size of their families should they wish to do so ultimately depends on their knowledge about and access to contraceptives. Only if people are informed about the purpose of contraceptives and how to use them and only if they have free access to them can they decide how many children they would like and at what intervals they would like to have them.

However, many African countries are lagging behind when it comes to informing people about and providing contraceptives: in Chad, the Central African Republic and Mauritania roughly one woman in three does not know of a single modern method of contraception.⁵⁶ Concerns about possible side-effects remain widespread, even among young people.⁵⁷ The rate of use of modern contraceptives is hence low compared with other regions of the world: on average, only one woman in five between the ages of 15 and 49 in Southern and East Africa uses a modern method of contraception and only one in ten in West and Central Africa.⁵⁸ One reason for this is the lack of access to contraceptives: according to a study by the US Guttmacher Institute, around half of women in Africa who would like to avoid pregnancy have no access to modern methods of contraception.⁵⁹

Where the size of families can be planned

By no means every woman who would like to have fewer children is able to realise this wish in practice, since in many places access to contraceptives is difficult. Whereas in Kenya, Morocco and some other countries more than half of women use modern contraceptives, in countries like South Sudan or Eritrea the figure is not even one in ten – mostly because they are simply unavailable.⁶¹



(Data source: PRB⁶⁰)

The political will for change

When and how quickly the number of children born in a given country decreases also depends on what governments do to achieve such a decline. This includes indirect measures, such as efforts to expand the health and education systems and to create jobs. But projects that have a direct effect, such as family planning information campaigns and national programmes designed to increase the population's awareness and understanding of the advantages of smaller families, play a central role too.

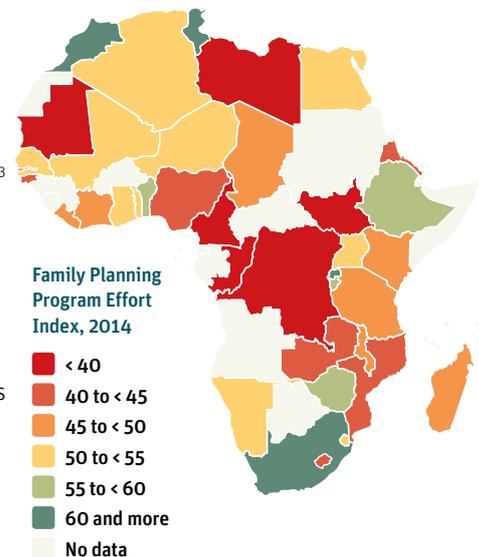
Formally at least, more than 80 percent of African states have a population policy that aims to reduce the number of children per woman and to put a brake on population growth.⁶² But in many places these policies are not being properly implemented. Population growth and family planning programmes have to date rarely been the main focus of political thinking in Africa – other issues have usually been given priority. At the international level, too, diplomacy has tended for decades to handle the subject with kid gloves. Reservations about interfering in sensitive issues like sexuality and reproduction are simply too strong. In addition, the views of African politicians are often marked by cultural norms according to which a large family is a goal worth striving for. Many of those in power see a large and growing population as an economic and geopolitical advantage, an attitude that used to be widespread almost everywhere in the world.⁶³

These kinds of attitude mean that those in positions of responsibility often misinterpret the theory of the demographic dividend, which Africa needs so urgently and whose great benefits the World Bank portrayed in a 2015 study.⁶⁴ In many places the idea prevails that a large, young population is in itself a guarantee of economic progress.⁶⁵ The fact that a decline both in fertility rates and in the size of future cohorts is a fundamental prerequisite for a demographically determined economic upswing is often ignored.

In order to change such views of population dynamics, a sober analysis and the recognition of scientifically proven linkages are required. In addition, African politicians and those engaged in international cooperation with these countries need to rethink their strategy.

Where governments promote family planning

How much governments are doing to promote family planning and thus decrease fertility cannot be determined from a single figure. The Family Planning Program Effort Index thus evaluates the efficacy of national programmes using 30 different indicators, including: What is the political framework of the programme and how is it being implemented? Will the access to and the usage rate of contraceptives be improved and how are they to be made available? How the African countries score in the Index varies widely: whereas Rwanda, Tunisia and Morocco are on a par with Asian states, which have already made major progress in this field, other African countries are lagging far behind.



(Data source: Avenir Health⁶⁶)

2 | AFRICA'S TRAILBLAZERS IN DEMOGRAPHIC CHANGE

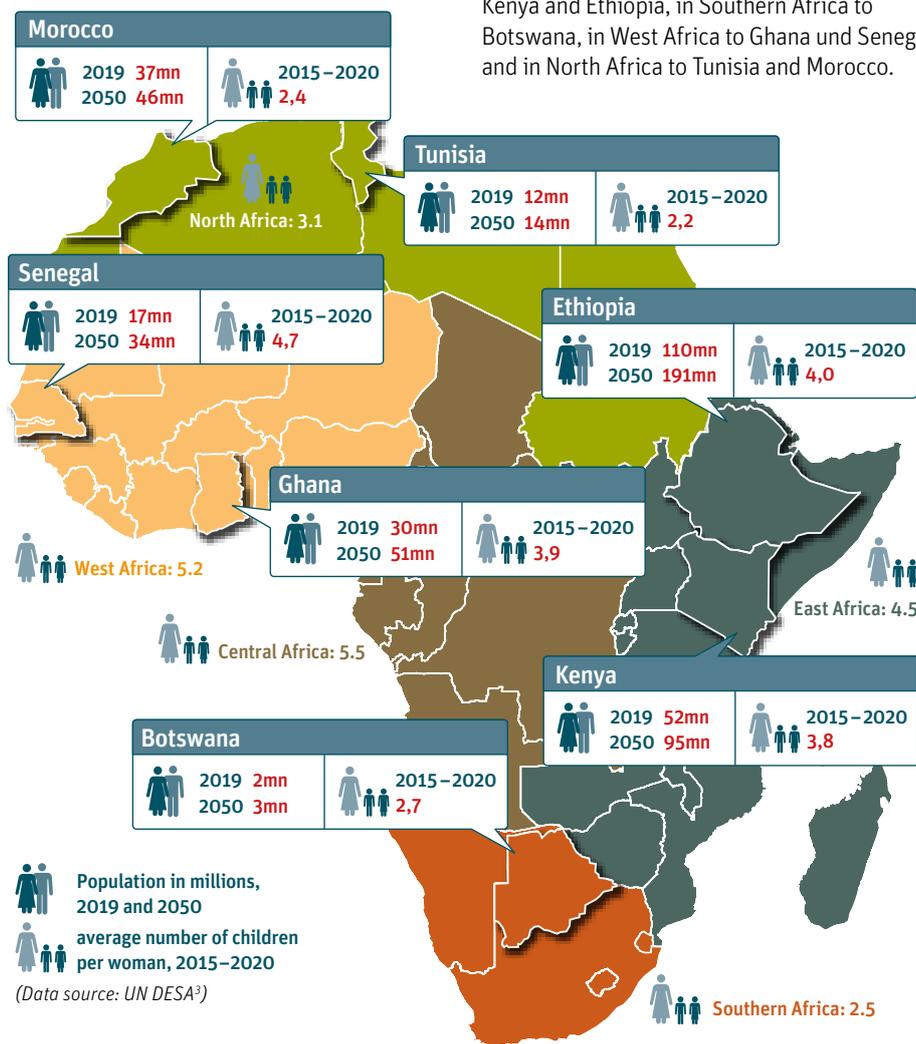
In terms of geography, culture and language the African continent is enormously diverse. Occupying a fifth of the earth's total land mass, it comprises 54 states, whose inhabitants cultivate widely varying traditions and religions and speak a total of 2,000 different languages. In Europe, by contrast, there are only 300 languages.¹ This degree of diversity alone makes it difficult to talk about *Africa's demographic development*. After all, the countries that make up the African continent are at very different stages of the demographic transition.

The countries in North and Southern Africa, in particular, are much more advanced in this respect than those in the other regions of the continent, although in the meantime certain countries, especially in East Africa, have started to experience a rapid decline in their fertility rate. This raises the question of why these differences in demographic development exist and what the influencing factors are.

This chapter takes a closer look at some of the regional trailblazers – in other words, countries that either already have a comparatively low fertility rate or are moving in that direction. The countries were selected on the basis of how the important socio-economic parameters outlined in Chapter 1 have changed – in other words, child mortality, level of education and poverty rates. In addition,

we have taken into account indicators of gender equality and urbanisation as well as social norms and the political commitment of governments to promoting family planning.

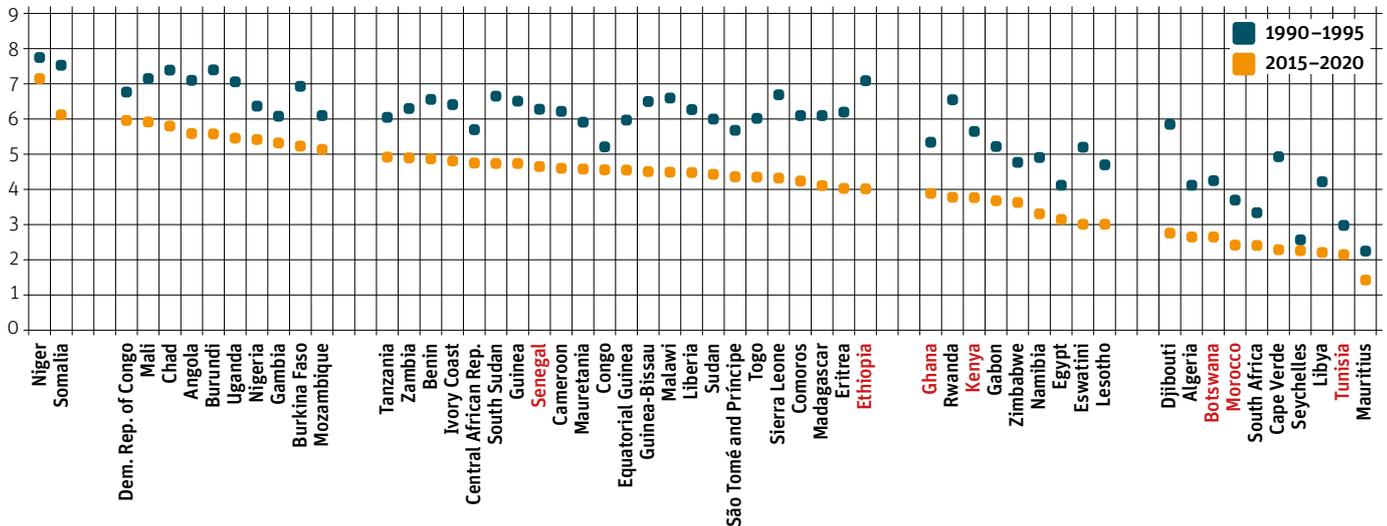
Altogether we have chosen seven countries that either on the continent as a whole or at least within their respective region can be considered trailblazers in demographic development. In East Africa this applies to Kenya and Ethiopia, in Southern Africa to Botswana, in West Africa to Ghana and Senegal and in North Africa to Tunisia and Morocco.



A broad spectrum

Africa's diversity is also evident in the number of children women have. Whereas women in Mauritius now have only 1.4 children on average, women in Niger still have more than seven children and those in Somalia more than six. Fertility is declining at different rates, too: in Ethiopia and Rwanda the figure has fallen significantly since the mid-1990s, but there has been much less progress in West and Central Africa.

Children per woman



Average number of children per woman, 1990–1995 and 2015–2020

(Data source: UN DESA²)

2.1 Ethiopia

Over the past year, Ethiopia has been a greater focus of international attention than has almost any other African country. First came the conflict-free transfer of political power, then the conclusion of peace with neighbouring Eritrea and finally the appointment of a woman as head of state – a first in the country's history. Ever since forty-two-year-old Abiy Ahmed became prime minister in April 2018, Africa's second-most populous country has been spurred on by the rapid pace of reform. Although it is still one of the continent's poorest states, its image has been transformed from that of a country of eternal hunger to that of a new beacon of hope.

From a demographic point of view, too, Ethiopia's recent development can be described as a success, although this process actually began back in the mid-1990s, long before the current prime minister came to office. Since then, the average number of children per woman has fallen from around seven to roughly four, a rate of decline that is without parallel in Africa.⁴ While the fertility rate remains high, the trend towards fewer children seems to be continuing. If Ethiopia manages to reduce its fertility rate further, then it could reach a favourable age structure from 2035 onwards, which, under the right conditions, could then be translated into a demographic dividend – i.e. into an accelerating economic upswing.⁵

But why is it that Ethiopia – which for such a long time was synonymous with hunger, conflict and underdevelopment – has managed to make such progress? Experts

agree that the government's comprehensive development strategy, which it began implementing in 1995, has contributed to this success. Alongside the promotion of agriculture, investment in the development of the health and education systems has been paramount.⁷ In both areas, the strategy was to expand provision in such a way that it would reach the population in rural and remote regions. After all, in the mid-1990s, more than 85 percent of Ethiopians lived in the countryside – and even today around 80 percent still do.⁸

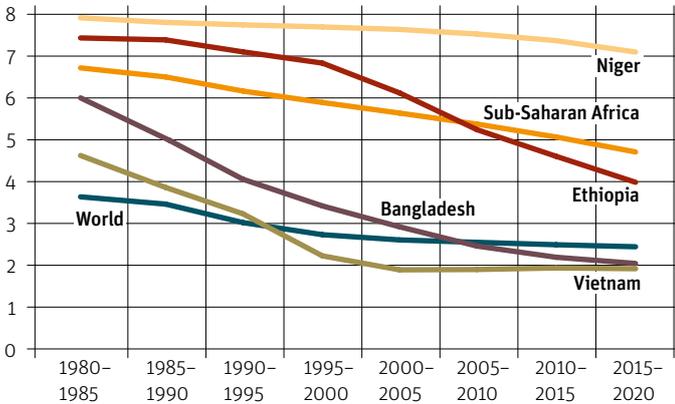
Helpers for better health

With respect to healthcare the Ethiopians had to start from scratch. After years of war and tyranny under the communist regime, many hospitals were left destroyed or plundered

Rapid decline in fertility

All over the world, better access to health services and a rising level of education have meant a decline in fertility rates. This link has already been shown clearly in Asian countries like Vietnam and Bangladesh, which used to be poor. Now it is becoming visible in Ethiopia as well: in no other sub-Saharan country did the fertility rate fall more sharply between 1995 and 2015.

Children per woman



Development of fertility, 1980 to 2020
(Data source: UN DESA⁶)

and medical personnel were scarce. In the framework of the so-called *Health Extension Program* (HEP), launched by the Ministry of Health in 2003, 16,500 health centres were established with the help of international partners – one in every community. In order to overcome the shortage of personnel, the government trained more than 40,000 community women as so-called *health extension workers* within a year.⁹ The idea was, on the one hand, to give women with secondary education an opportunity to earn an income and, on the other, to boost local acceptance of the new health services within the communities.¹⁰

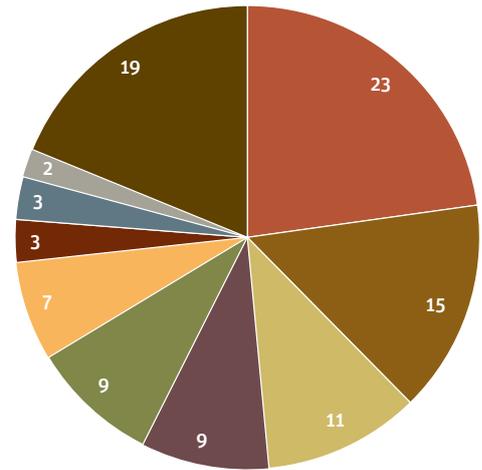
Right from the start, the health extension workers concentrated, in particular, on improving the health of children and mothers. Their work includes looking after women during pregnancy and after birth and ensuring that small children receive the necessary aftercare check-ups and

vaccinations. At the same time, they teach local families about basic health so that they are able to prevent avoidable diseases – from diarrhoea to malaria and HIV/Aids.¹¹

Even then, the health extension workers are by no means able to reach all of the more than 100 million Ethiopians. On average, each of them has 2,500 people to take care of.¹² In order to extend the reach of health services and health education, the Ethiopian government launched a second programme in 2011: the so-called *Health Development Army*. Under this programme employees of the health centres train voluntary female helpers from the communities, who then give advice and information on health issues in their neighbourhoods. Each of the volunteers takes care of five households and receives support from a team leader, who is in constant contact with the health extension workers. This creates a network structure designed to ensure an exchange on health issues within the communities and to get people to take better care of their own health.¹³

Why children in Ethiopia die

Thanks to the development of the health system, child mortality in Ethiopia has fallen sharply. Nevertheless, about one child in fifteen still dies before reaching the age of five. In most cases, the cause of death is diarrhoea, pneumonia or malaria – diseases that can be prevented through hygiene and other prophylactic measures or that can be cured with antibiotics. Further improvements in child health will require more medical personnel, since, despite efforts to date, there are still only seven medical professionals for every 10,000 inhabitants.¹⁵



Distribution of the causes of death in children under the age of five in Ethiopia, in percent, 2014

- Diarrhoea
- Pneumonia
- Lack of oxygen at birth
- Premature birth
- Neonatal sepsis
- Malaria
- Injuries
- HIV/AIDS
- Birth defects
- Other illnesses

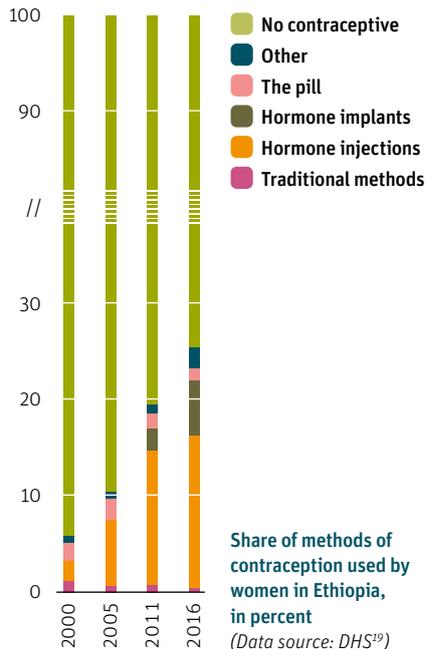
(Data source: African Health Observatory¹⁴)

From falling child mortality to fewer children

The positive effects of the *HEP* and the *Health Army* are already clearly evident: since the turn of the millennium female mortality associated with pregnancy has halved, and the same applies to infant mortality. Today, children in Ethiopia have much better chances of surviving beyond their fifth birthday than they did in 2000. Avoiding drinking contaminated water – the most frequent cause of diarrhoea – combatting hunger and vaccinating children against childhood diseases such as polio or measles have helped child mortality to fall between 2000 and 2016 from 166 per 1,000 live births to 67.¹⁶

The fact that children now have a better chance of surviving has changed attitudes in Ethiopia towards family size. Since the turn of the millennium, the number of children that Ethiopian women wish to have has fallen from 5.3 to 4.5; among men the decline is even larger, from 6.1 to 4.6. The changes are especially apparent in rural areas, where the number of children born is much higher than in the city: in the countryside, women on average still wish to have 4.6 children; nonetheless that is one child fewer than in 2000.¹⁷

A decline in the desired number of children does not in itself, however, bring about the rate of fertility decline that Ethiopia is currently experiencing. After all, women and men need to be able to put their wish to limit the size of their families into practice – using suitable family planning methods. Here, too, quite a lot has been accomplished in the past two decades. When Ethiopia adopted a national strategy for population policy in



1993, not a single service centre existed at any public health facility in the country where women and men could inform themselves about contraceptives and obtain them at the same time, the only exception being a clinic in the capital, Addis Ababa. Today, these services are offered at every health centre in the country. What is more, the number of national and international NGOs tackling this issue has increased significantly.¹⁸

Through the educational efforts of the health extension workers, the network of volunteers and the NGOs, information about modern methods of contraception has now reached almost all regions of the country. The demand for modern contraceptives has accordingly risen, particularly in rural areas. Whereas in 2000, 30 percent of women in the countryside were eager to use contraceptives to prevent pregnancy, 16 years later the figure had risen to 42 percent.²⁰ To meet the rising demand, the Ethiopian government implemented further measures to facilitate

Hormonal contraceptives on the rise

The increase in the prevalence rate of modern contraceptives is attributable, above all, to hormone injections and hormone implants having become more widely available. These are easy to use and do not require women to visit a health centre, which particularly in rural areas of Ethiopia is often far away, more than once every few months or even years. The distance to a health centre is one of the reasons why seven out of ten Ethiopian women have not used contraceptives to date: often they simply do not have access to them.

access to contraceptives. In 2007, it waived the import tax on contraceptives and allowed *health extension workers* to offer hormone injections. Two years later the government began to train them to insert hormone implants.²¹

Women have more say

All this has contributed to a quintupling of the prevalence rate of contraceptives in Ethiopia since the turn of the millennium. Today, one Ethiopian woman of reproductive age in four uses a modern method of contraception. Among the 44 African states for which data on prevalence rates are available, Ethiopia comes 19th.²² Nevertheless, the Ethiopian government failed to meet its own target of increasing the rate to 44 percent by 2015, and unmet demand remains high: in 2016, one woman in five on average who wanted to use contraceptives did not have the opportunity to do so.²³ But the progress made to date is certainly in the right direction. It has already improved the living conditions of millions of women in rural areas, who are now freer to decide how many children they want and at which intervals they want to have them.²⁴

Health care and access to contraceptives are not the only reasons why the lives of Ethiopian women are changing. The Ethiopian government recognised at an early stage that women are key to positive demographic and socio-economic development and took account of this in its development strategies. The *National Population Policy Strategy*, for instance, had already set a target as long ago as 1993 for improving education for girls and female access to the labour market.²⁵ Here, too, Ethiopia, can boast some successes: since 1995, the number of girls starting school has almost quintupled and they are now at much less of a disadvantage vis-à-vis boys – at least at primary school level.²⁶ In addition, women in Ethiopia are more often engaged in paid work, for example, in cut flower plantations, in grain mills, as teachers and health extension workers, in the civil service and as self-employed owners of small businesses.²⁷

At the political level, too, a clear signal was given in the direction of more gender equality in autumn 2018. Half of the members of the new cabinet are women, and the diplomat Sahle-Work Zewde has been elected the new head of state. This should not, however, disguise the fact that in many areas of daily life women are still at a disadvantage – whether it is secondary school attendance, formal employment or decision-making within the family.²⁸ To ensure that fertility rates continue to fall in the future, the country will need to realise further measures under its new government to bring about more gender equality, to improve healthcare and education and to create more jobs in the formal labour market. It will also need to defuse the ethnic tensions that have driven thousands of people from their homes and made it impossible to conduct a new census. Only if Ethiopia can consolidate its progress to date will it have the chance to transform its favourable age structure into a demographic dividend.

2.2 Kenya

“Panga uzazi”, Daniel arap Moi proclaimed soon after he had been appointed Kenyan president in 1978: “Plan your family!”²⁹ At the time, Kenya’s fertility rate was 7.6 children per woman, one of the highest in the world.^{30,31} Driven by neo-Malthusian arguments, according to which overly strong population growth drives a country into misery, and by pressure from international donors, the new Kenyan president decided to take family planning in hand.^{32,33}

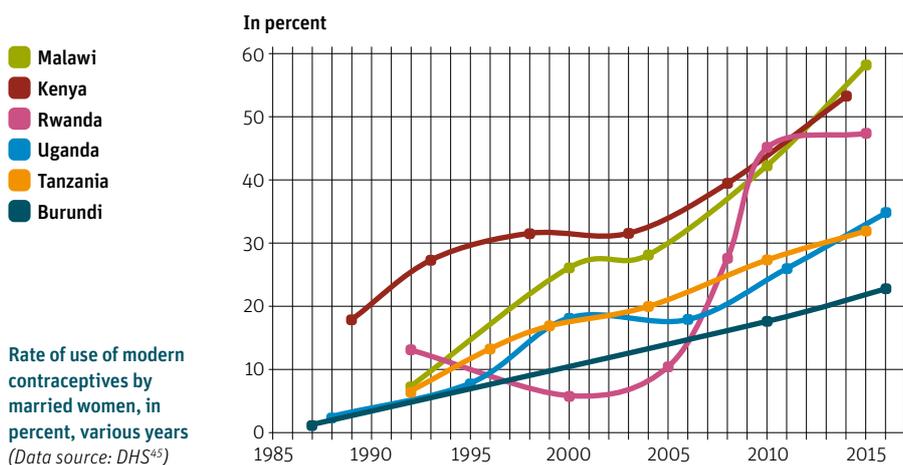
In fact, as early as 1967 Kenya had become one of the first countries in sub-Saharan Africa to formulate a national population policy.³⁴ Moi’s predecessor, Kenya’s first president, Jomo Kenyatta, had never been very resolute in implementing family planning policy, however.³⁵ Strong opposition from religious and pro-natalist camps, to which important decision-makers belonged, rejected family planning of any sort. For this reason, in the 1960s and 1970s, attempts to put the population policy into practice remained weak and ineffective.³⁶

Modern contraceptives quickly in vogue

The Kenyan government’s major commitment to family planning in the 1980s and 1990s meant that Kenya reached a high prevalence rate of modern contraceptives earlier than its East African neighbours. The population’s high level of education and the generally stable economic situation were other factors contributing to more people wanting to plan the size of their families with the help of modern methods.

Political pressure for family planning

It was only from the 1980s onwards, under President Moi, that the state family planning policy picked up momentum. The government expanded the initiative with financial support from the World Bank and created a new coordinating organ for population policy, the *National Council for Population and Development*.³⁷ As a result, the number of centres distributing contraceptives and the number of health workers trained in family planning rose significantly.³⁸ To publicise these services better, the government launched a media advertising campaign that via newspapers, radio and television sought to promote smaller families and modern methods of contraception.³⁹ NGOs and private initiatives likewise intensified their efforts, inspired by the government’s new motivation. The *Family Planning Association of Kenya*, for example, started a project to distribute contraceptives at the community level. In addition, a privately financed organisation providing voluntary sterilisation was established.⁴⁰



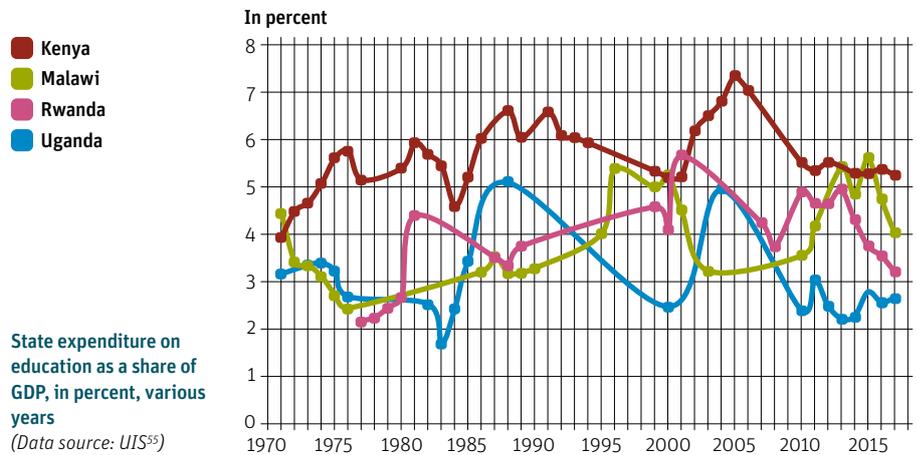
These new efforts were reflected in the results for Kenya in the *Family Planning Effort Index*. The indicator measuring the commitment of the government to family planning doubled between 1982 and 1989.⁴¹ The prevalence rate of contraceptives rose steeply, too: whereas in 1984, only 17 percent of married Kenyan women said they used contraceptives, the figure had risen to 27 percent five years later, an increase attributable almost entirely to the use of modern contraceptives.^{42,43} Currently, it is still mainly state centres that distribute contraceptives. In 1989, more than 70 percent of users obtained them via a state clinic or hospital pharmacy. In 2014, the share was still 60 percent.⁴⁴

Marrying later through education

One success of the government programme was that by 1990, Kenyan women were on average having 1.5 children fewer than ten years earlier. Today, Kenya's fertility rate is around 3.8 children per woman, one of the lowest in East Africa.⁴⁶ There was, however, another factor that contributed significantly to this development: the population's comparatively high level of education. In 1990, more than a third of Kenyans of working age between 20 and 64 had attended secondary school for at least some years. By 2015, this figure was 61 percent – an outstanding result by African standards: only in South Africa, Zimbabwe, Algeria, Seychelles, Egypt and Botswana are the values higher.⁴⁷ The high level of education of Kenyan women influences not only the number of children they want to have (women who have completed secondary school want to have four children fewer than women who have never been to school) but also the type of family planning they use. Four times as many women with secondary education use modern methods of contraception as those who have not completed any kind of school.⁴⁸

High expenditure on education

Kenya had begun investing more in education than other African countries at an early stage. Despite cuts in expenditure on education from 2005 onwards, spending was still among the 20 highest of all African countries, namely, at around 5.2 percent of GDP.⁵⁶



In order to make schooling available to larger numbers of children and young people, the government gradually reduced the cost of education, abolishing school fees for the first four years of primary school entirely in 1974 and introducing compulsory primary education in 1978. Because girls then went to school for longer and achieved a higher level of education, on average they married and became mothers later.⁴⁹ When an educational reform extended primary school by one year in 1985, the likelihood that girls would already be married at the age of 18 fell by more than 6 percent. At the same time, the number of children that young women under the age of 25 had decreased by 0.3.⁵⁰

Over the past fifteen years, Kenya has made more progress in the area of education. In 2004, school fees for the entire eight years of primary school were abolished and in 2008, the government waived fees for secondary school.^{51,52} A constitutional reform in 2010 defined an eight-year primary education as a basic right of all Kenyans. Parents who fail to send their children to school now incur a penalty. All in all, these measures have resulted in an improvement in school

attendance among girls.⁵³ This meant, in turn, that between 1989 and 2014, the average age at which women married for the first time rose by another two years, as did their average age when the first child was born.⁵⁴

HIV crisis causes setback

With respect to both education and family planning Kenya got off to a good start earlier than did other African countries. Nevertheless, the decline in fertility slowed down shortly before the turn of the millennium and was even briefly reversed according to data from the *Demographic Health Survey*: between 1998 and 2003 the number of children per woman rose again by 0.2 children.⁵⁷ Which factors led to this deceleration remains unclear.⁵⁸ Experts assume, however, that a decline in investment in the national family planning programme may have had something to do with it: at that time, the government reduced its commitment to family planning in order to concentrate on the catastrophic effects of the HIV epidemic.⁵⁹ Kenya was badly hit by this outbreak from the 1990s onwards.

At the peak of the epidemic in 2003, around 0.4 percent of the population died as a result of a weak immune system within a year.⁶⁰ Life expectancy at birth fell by seven years between 1985 and 2000.⁶¹ In order to check the spread of the virus, the government began investing in HIV information, prevention and treatment campaigns, taking some of the resources it required for this purpose from the family planning programmes. Moreover, important international donors had cut off funding to the programme in the belief that this would not endanger the progress already made.⁶² The result was different to what had been expected, however: the supply of modern contraceptives to the population and their rates of use fell between 1998 and 2003 for the first time after years of growth.⁶³

It might have been possible to make use of the synergies generated by the family planning programme and the campaign to combat HIV, for example, by increasing the use of condoms, which can be used to prevent both pregnancy and infection with HIV. But because the focus was on curbing the epidemic, the national family planning programme suffered a setback, although in 2001 there was a separate campaign encouraging people to use condoms. These campaigns had little effect on the behaviour of couples, however. Condoms remained unpopular and in 2003, only 1.2 percent of married Kenyan women said they and their partner used them regularly. Instead, hormone injections, the pill and hormone implants remained the most popular methods of contraception; but because of the reduced budget, they became less and less available at public distribution centres.⁶⁴ This reveals a weakness of Kenyan population policy: as in many African states, the success of state family planning programmes fluctuates in accordance with the flow of funds from international donors.⁶⁵

A new commitment to achieving the demographic bonus

In the years that followed, however, the government took steps to counter the downward trend in the use of modern methods of contraception. From 2006, it approved additional funding to avoid supply bottlenecks in the distribution of contraceptives. With comprehensive programmes like *APHIA* (Aids, Population and Health Integrated Assistance) and *APHIAplus*, international donors such as USAID supported Kenya in better linking HIV prevention and treatment to family planning services and in strengthening healthcare structures at community level. This involved not only improving health services but also, in some cases, providing education and employment opportunities for under-served sectors of the population.^{66,67}

As a result, the rate of use of modern contraceptives rose considerably again. In 2014, it reached 53 percent among married women – one of the 10 highest rates in Africa.⁶⁸ The decline in fertility accelerated once again from the mid-2000s onwards. Since then, it has fallen from around 5 to approximately 3.8 children per woman.⁶⁹ This means that Kenya is likely to reach the age structure of the demographic bonus by 2035 – assuming fertility continues to fall steadily.⁷⁰ But much will still have to happen if such a structure with a disproportionately large working population is to result in strong economic growth. Above all, jobs need to be generated for the large number of young people. Today, just under a fifth of 15 to 24 year olds are formally unemployed.⁷¹

2.3 Botswana

With around 600,000 square kilometres, Botswana is roughly the same size as France. But this land-locked country in Southern Africa has only 2.3 million inhabitants, whereas France has more than 65 million.⁷² By African standards, people in Botswana are doing relatively well: According to the *Human Development Index*, it is one of the few states on the continent with a high level of human development.⁷³ Today, only 16 percent of the population has to live on less than 1.90 US dollars a day and the average per capita income is among the highest in Africa.⁷⁴ Much of Botswana's prosperity is due to mining: huge reserves of natural resources, especially diamonds, which are exploited in the world's largest mine in Orapa, brought about enormous economic growth between 1970 and 1990.⁷⁵ The remarkable thing about this wealth is that the government of Botswana, which is the oldest multi-party democracy in Africa, understood how to use the income generated from mining for the good of the population.

Exemplary governance

Unlike many other countries with natural resources, Botswana did not succumb to the so-called resource curse, whereby rising state revenues from oil or valuable minerals tend to favour corruption and state mismanagement instead of poverty reduction. The government of Botswana invested its high revenues in the population and hence in the long-term future of the country.⁷⁶ This policy of investing for the common good focused on expenditure on education, social security and health as well as on economic diversification aimed at reducing the country's dependence on raw materials.⁷⁷

The government puts budget surpluses in the “Pula Fund” – a play on the name of the currency, Pula, and the word for rain in the national language, Setswana – in order to be able to balance the state budget when revenues from natural resources fluctuate and to save part of the money for future generations. A key to the success of the fund is the strict regulation of what the parliament

A democratic model

Botswana has for a long time been regarded as a model African country – especially when it comes to political leadership. From the seat of government in the capital, Gaborone, Africa’s oldest multi-party democracy has ruled the country since 1966. From the year when the index was first compiled, in 2006, this state with 2.4 million inhabitants has always scored top marks in the categories “civil liberties” and “electoral process and pluralism”.

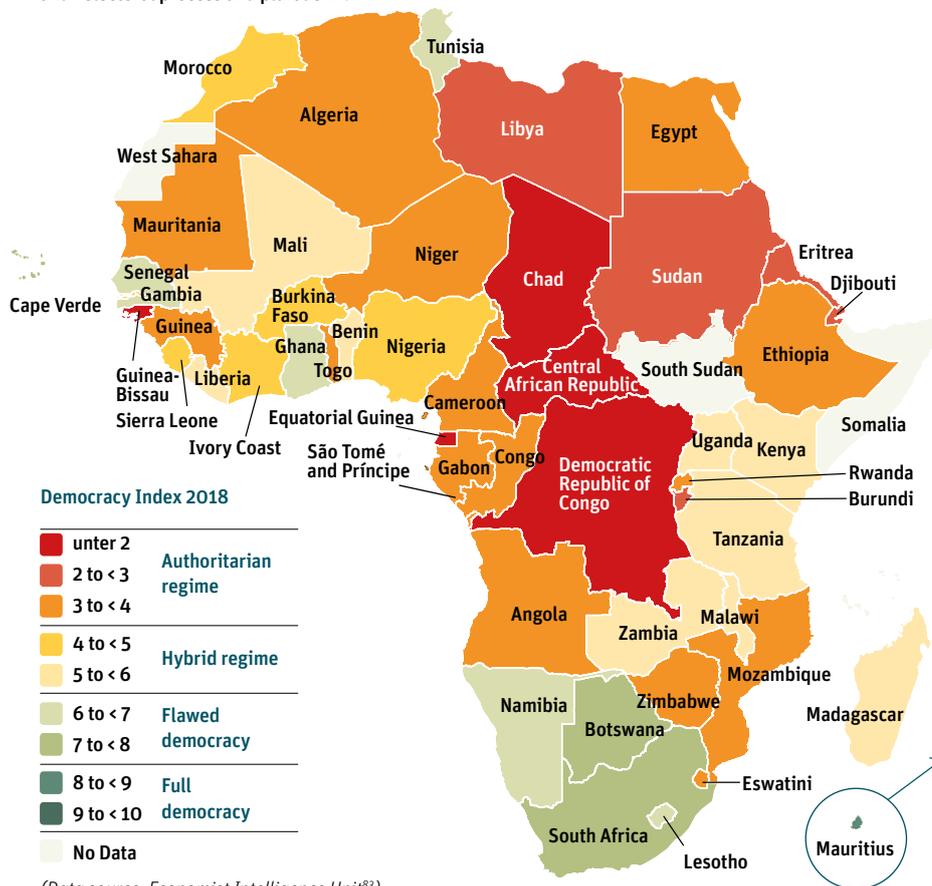
uses it for.⁷⁸ Not least for this reason, Botswana is one of Africa’s examples of good governance. In the *Democracy Index* of the Economist Intelligence Unit, Botswana is ranked in the second best category and has the third-best rating in Africa after the island states of Mauritius and the Seychelles.⁷⁹ A number of factors account for Botswana’s positive development. First of all, its very homogenous society has given less ground for internal conflicts over resource distribution.⁸⁰ Botswana’s colonial history was much less repressive than that of other parts of Africa, which led to stable institutions following independence.⁸¹ In addition, ownership rights and a transparent administration were values already anchored in the Botswanian tribal tradition and were preserved after independence.⁸²

Early progress in the health system

At an early stage Botswana invested part of its revenues from exploiting raw materials in a comprehensive health system. By the end of the 1970s, the country was already trying to reduce child mortality and had introduced a vaccination programme for small children to this end.⁸⁴ Nevertheless, it remains a challenge to reach people in remote regions of this large and sparsely populated country. The Ministry of Health has therefore set up more than 800 mobile health teams alongside health centres and hospitals. These teams consist of a nurse and a “family health trainer” chosen by the community itself. In this way, even people who live beyond a radius of eight kilometres from the nearest health facility receive medical care.^{85, 86}

This improved access to health services has proved to be effective: the vaccination rate of the children’s immunisation programme recommended by the WHO had risen to 90 percent by 2007.⁸⁷ Not least for this reason the number of children dying before their fifth birthday has fallen by two thirds since the late 1970s. With 34 deaths per 1,000 live births, Botswana currently has one of the lowest child mortality rates in Africa and life expectancy, at 68, is six years above the African average.⁸⁸

The relatively high level of government expenditure on health is partly responsible for this success. Between 1995 and 2012, an average of 5 percent of GDP flowed into the health sector, one of the highest rates in sub-Saharan Africa.⁸⁹ Botswana is also one of the few countries in the region that is able to finance its healthcare almost entirely itself. Funding from donors is used only for combatting HIV/Aids – which continues to be the biggest challenge for the Botswanian health system.⁹⁰



(Data source: Economist Intelligence Unit⁸³)

Successful advertising for condoms

The HIV/Aids epidemic, which raged in the 1990s, has had a lasting impact on Botswanian society and eliminated health successes that had been achieved previously: by 2000, average life expectancy had sunk again to the pre-1955 level of only 49 years.⁹¹ The government responded with HIV prevention and treatment measures. As part of the state education and therapy programme *Masa*, thousands of people continue to receive antiretroviral drugs free of charge.⁹²

Unlike, say, in Kenya, the Botswanian government succeeded right from the start in linking its HIV prevention and treatment programme with family planning. Midwives and nurses were trained in both areas.⁹³

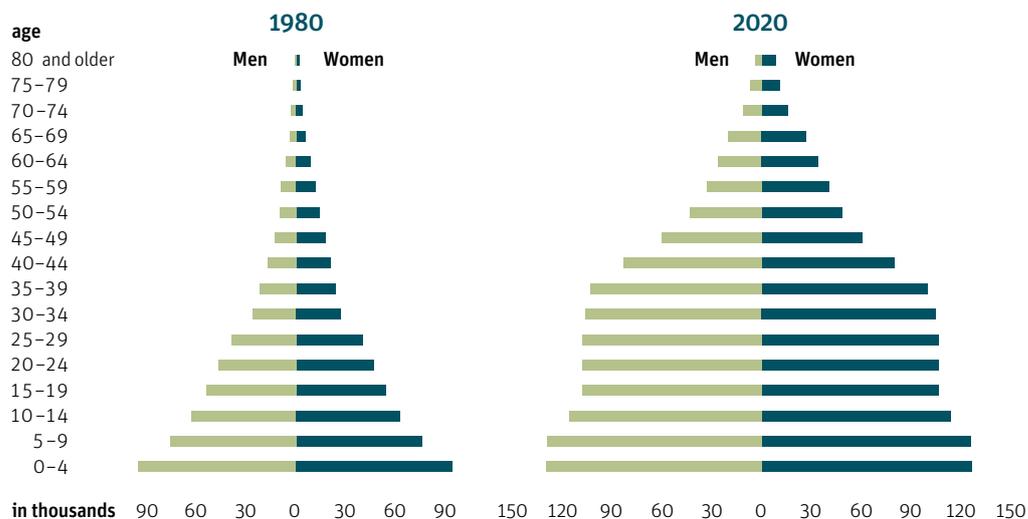
A joint programme of the US development organisation USAID and the Botswanian government targeted men and young people, because these groups came into too little contact with the existing services offered by health facilities. The programme sought to promote condoms as contraceptives and as protection against HIV. One NGO, for example, distributed condoms free of charge or at low prices in bars and hotels as well as at petrol stations and markets. A television and radio campaign drew additional attention to the issue and thereby increased demand. Councillors trained by the Ministry of Health visited companies in order to educate men about family planning and HIV at the workplace and to distribute condoms there.⁹⁴ As a result the rate of infection declined, and in 2011 condoms were the most popular method of contraception in Botswana.⁹⁵ Nevertheless, the prevalence of HIV is still the second-highest in the world.⁹⁶

Poverty reduction via lower fertility

Despite the setbacks caused by the HIV/Aids epidemic, Botswana is on a positive development path – including in demographic terms. Since its independence from the United Kingdom in the mid-1960s, the fertility rate has fallen from around 7 to 2.6 children per woman. This places Botswana in the ranks of the ten African states with the lowest fertility rates.⁹⁷ As a result, the age structure of the Botswanian population is changing. Whereas in the mid-1970s every person of working age had on average one child or young person to provide for, today the figure is 1.8 people of the working age. It is predicted that the country will be able to benefit from its favourable age structure by 2055, assuming that it manages to diversify the economy and to create sufficient jobs for the large share of young people of working age.^{98, 99}

Changing age structure

Thanks to the rapid decline in fertility, the growing working-age population of Botswana is required to provide for ever fewer children and young people. The population structure is changing from a typical pyramid to a drop shape. According to a study by the World Bank, Botswana is already benefiting from this change in its age structure: according to this, around 20 percent of the poverty reduction that took place between 2002 and 2009 was attributable to the fall in the dependency ratio. The only factor that had a greater impact over this period was the programme of subsidies for smallholders designed to raise productivity in agriculture.¹⁰¹



Composition of the population according to age group in Botswana, 1980 and 2020

(Data source: UN DESA¹⁰⁰)

2.4 Ghana

In certain respects Ghana is an exception among West African countries. With almost 30 million inhabitants it has been a stable democracy for more than two decades and can boast some economic successes. In demographic terms, too, Ghana is a trailblazer in the region. In no other country in West Africa – the exception being the island nation of Cap Verde – do women have so few children on average as in Ghana. At 3.9 children per woman the fertility rate is way below the regional average of 5.2.¹⁰² Ghana is therefore further advanced in the demographic transition than its West African neighbours and will be the first to achieve a favourable age structure. From 2035, there will be 1.7 people of working age to every dependent under the age of 15, which has the potential to generate an economic upswing.

Agriculture as a starting point

One reason why Ghana has the edge over neighbouring countries is its positive economic development. Between 1990 and 2015, annual GDP growth averaged 5.5 percent, one of the highest growth rates on the continent. Ghana's economy depends not only on natural resources like gold and crude oil, its most important exports, but also on agriculture. The agricultural reforms of the 1980s focused mainly on cocoa production. The government created incentives for cocoa farmers to improve productivity – they subsidised fertilisers, supplied pesticides free of charge and introduced varieties with higher yields.¹⁰³ The measures proved effective. Since the early 1980s, the volume per hectare of cocoa farmers' production has more than doubled.¹⁰⁴

At the same time, the yields of staples like maize and manioc have doubled through the use of fertiliser and better-quality seeds.¹⁰⁵ This has transformed the living conditions of Ghanaian smallholders. Better harvests brought higher incomes and enabled many families to escape poverty. Measured in national standards, the poverty rate of the rural population fell from 64 to 39 percent between 1991 and 2005.¹⁰⁶ Meanwhile, food security rose, one factor contributing to an improvement in the health indicators of the Ghanaians – especially those for small children. Since the 1990s the share of underweight children has more than halved.¹⁰⁷ These successes have led to a considerable reduction in child mortality. Whereas in 1980 around 160 children per 1,000 live births died before reaching their fifth birthday, today the figure is 60.¹⁰⁸ Children's better chances of survival were a key prerequisite for the decline in fertility.

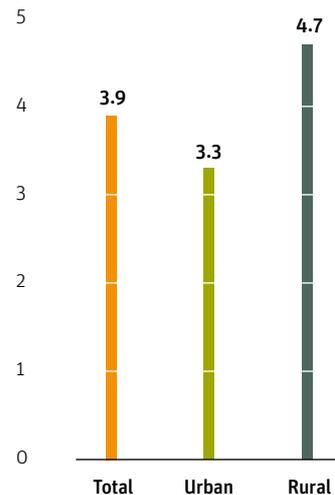
Urbanisation as a motor of social change

The productivity gains in agriculture also meant that fewer hands were needed to produce sufficient food. A growing number of people therefore migrated to the cities, especially to the capital, Accra. There they increasingly began working in sectors that were more productive in terms of gross value added than smallholder agriculture – not only in (informal) retail and catering, for example, but also in public service, communications and finance.¹⁰⁹ This structural change fuelled the growth of the Ghanaian economy, reducing poverty still further.¹¹⁰ Rising incomes and more consumption also generated more tax revenue for the government, which it used to invest in health and education.¹¹¹

Fewer children born in the cities

Today, 56 percent of Ghana's population lives in cities, compared with an African average of 42 percent.¹¹³ The comparatively high rate of urbanisation has had an impact on the overall fertility rate, since in the cities new role and family models tend to become the norm more quickly and women have far fewer children than in the more traditional rural societies.

Children per woman



Average number of children per woman in the cities and the countryside in Ghana, 2017
(Data source: DHS¹¹²)

Urbanisation makes its own contribution to falling fertility rates. Studies have shown that migrants from the countryside in Ghana quickly adapt to the urban environment and adopt the prevailing norms regarding family size. On average they have fewer children than women of the same age in rural regions.¹¹⁴ Apart from different attitudes to family size, costs play a role. Whereas in the countryside more children mean additional

labourers and thus represent an economic benefit, in the cities, where food is more expensive, they tend to be a burden on the family purse. Thus the change of the place of residence is usually accompanied by the wish to have a smaller family. This wish is easier to realise in the city, since information about family planning and contraceptives is more readily available.¹¹⁵ Access to education is easier, too, in urban centres. Children in the cities generally receive more education and thus have fewer children than their parents did.¹¹⁶

Free education

Education is an important factor influencing Ghana's positive demographic development. In terms of educational indicators, too, Ghana stands out among the countries of West Africa: in 2015, on average half of all Ghanaians between the ages of 20 and 64 had received a secondary school education. In neighbouring countries like Togo and Ivory Coast this is the case for only about a fifth of the adult population.¹¹⁸ Women, in particular, have a significantly higher level of education than those in many other West African states. In household surveys conducted by the *Demographic Health Survey* in 2014, more

than 63 percent of the 9,400 female respondents between the ages of 15 and 49 said they had completed at least secondary education. Among all the African countries for which current data are available, Ghana occupies seventh place with respect to the level of education among women.¹¹⁹

The fact that, at least formally, the Ghanaians now have a high level of education is linked to the large volume of investment in education. Since the mid-2000s, the Ghanaian government has spent between 20 and 38 percent of the national budget on education. The only other country in West Africa to spend a similarly high amount on education during this period was Senegal.¹²⁰ The Ministry of Education used part of these resources to finally abolish school fees. Although access to basic education was supposed to have been free nationwide since 1992, many schools continued to charge fees in order to cover their expenses.¹²¹ Since this prevented many families – especially poorer ones – from sending their children to school, from 2005 onwards the government began paying a flat rate per pupil to all public education institutions, which they could use to cover the costs of school materials, repairs to the school building or sports and cultural events. Since then, education from kindergarten to lower secondary school has been free for all children in Ghana.¹²² Starting in the 2017–18 school year, the Ghanaian government abolished fees for higher secondary school and for vocational schools as well. This was designed to do away with the still unequal access to education.¹²³

Regional differences

How much education young women in Ghana receive varies considerably from one region to another. Whereas in the capital, Accra, eight out of ten women can read and write, the figure in the rural regions in the north of the country is only around three to four women. This is also reflected in fertility rates: in the capital, Accra, where the level of education is the highest in the country, women have an average of 2.8 children, whereas those in the Northern Region have more than twice as many.

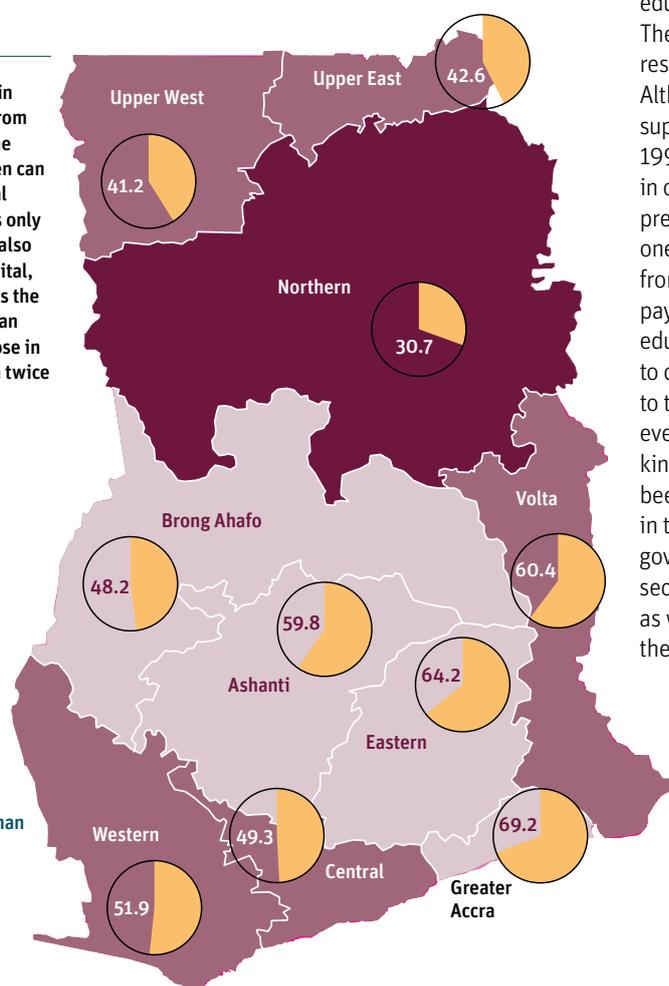
Children per woman

- ≤ 4
- > 4 to 5
- > 5

Literacy rate



Average number of children per woman (2017) and literacy rate of women in percent (2016), by region in Ghana
(Data source: DHS¹¹⁷)



How important education is, particularly secondary education, is evident from a glance at fertility rates in Ghana according to level of education. Women who have never been to school have six children on average. If, on the other hand, they have completed secondary school, the average number of children is 3.6, while women who have completed university have only 2.5 children.¹²⁴ One reason for this is that educated women are better informed about family planning methods and use them. Like everywhere else in Africa, women in Ghana who have been to school generally use contraceptives more than those who have never been to school.¹²⁵ In addition, these women have the opportunity to pursue a career and to earn an income independently of a male breadwinner.

More efforts needed in family planning

Despite all this, in 2014 only around one married Ghanaian woman in five used modern methods of contraception. Although this is twice as high as the 1993 figure and the second-highest level in West Africa, the prevalence rate is, in fact, much lower than the comparatively high level of education of Ghanaian women would lead one to expect. In Kenya, where women's level of education is somewhat lower but which, like Ghana, adopted its first population strategy in the 1960s, the prevalence rate among married women is – at 53 percent – more than twice as high.^{126, 127}

It is striking that women who have completed secondary or even tertiary education have fewer children but use modern contraceptives less than those with only primary education.¹²⁸ Indeed, the prevalence

rate among highly educated women fell from 35 percent in 2003 to around 27 percent in 2014. In the same period the total share of women who say in surveys that they do not wish to use contraceptives in the future rose from 42 to 58 percent. Often the reason given is fear of side-effects.¹²⁹

Where this rejection of modern contraceptives comes from is unclear. It would therefore be important to counter the scepticism of these educational groups by offering more non-hormonal methods of contraceptives such as IUDs and condoms, which are associated with fewer health risks or none at all. At the same time, the government needs to step up its efforts to improve access to contraceptives for those who wish to use them, since currently around 30 percent of women who want to avoid pregnancy are not able to use family planning methods.¹³⁰

The latest efforts of the Ministry of Health suggest that this situation will change. In the future, all family planning-related services are to be covered by the state health insurance and contraceptives made available free of charge in all health facilities.¹³¹ If it succeeds in reducing the unmet demand for contraceptives and consolidating the progress already made in education and the economy, Ghana will have a chance of converting its favourable age structure into a demographic dividend in the foreseeable future.

2.5 Senegal

In Francophone West Africa the average fertility rate is the highest in the world. It is therefore hardly surprising that women in Senegal have an average of 4.6 children – more than in all the other countries under scrutiny here. Nevertheless, this state with 17 million inhabitants has recently become a regional model with respect to population policy. The Senegalese government has taken measures above all in two areas that could contribute to a fall in the fertility rate in the future. It has improved access to education for the growing population and made it easier for people to obtain contraceptives.

Senegal stands out in Africa with respect to investment in education: in the last ten years the government has consistently spent between 20 and 25 percent of the state budget on the education sector. In 2017, expenditure on education was – at 22 percent – the highest among all African states for which figures are available.¹³² With 74 percent of children attending primary school and 37 percent secondary school, Senegal still lags behind the African average with respect to access to schooling, while the quality of education also leaves something to be desired.^{133, 134} But progress has been made, especially with respect to education for girls.

Positive impact of girls' education

Even as recently as 2000, there were still only 88 girls starting school for every 100 boys. By 2017, this ratio had been reversed: today, for every 100 boys attending primary school, there are 112 girls.¹³⁵ Thus educational opportunities for girls in Senegal are now better than they have ever

been – including at the secondary level. Whereas almost everywhere in Africa more boys attend secondary school than girls, in Senegal the opposite is the case. The targeted promotion of girls' education began with the *Scofi Programme*, which the Senegalese government launched together with the World Bank in 1995. Both this programme and its successors included information campaigns in communities emphasising the importance of education for girls. School materials were distributed and schools equipped with separate buildings housing toilets for girls. At the same time, the government awarded state grants and promoted a nationwide sponsorship system.¹³⁶

The obstacles that girls encounter in the Senegalese school system have yet to be completely removed, and the traditional role models that regard women primarily as mothers and housewives persist. In 2015, there were still more illiterate women than men, including among 15 to 24-year-olds.¹³⁷ However, the fact that girls and young women are now attending school for longer has already has a direct effect on the age at which they marry: whereas in 1992, young Senegalese women married on average at the age of 16, today they do not tend to marry until they are 20. This means they become mothers later. Over the same period the average age at which young women become pregnant for the first time has risen from 19 to around 22.¹³⁸ At the same time, the interval between births has grown. At 34.6 months in 2017, women on average had their next child 2.2 months later than they did in 1992.¹³⁹ All of this has a positive effect on both maternal health and children's chances of survival – and hence indirectly on the fertility rate. If women are over 20 when they bear their first child, the risk of premature birth is lower, as is that of underweight new-borns and other complications. If mothers wait at least two years after the birth of a child before they

More education – fewer children

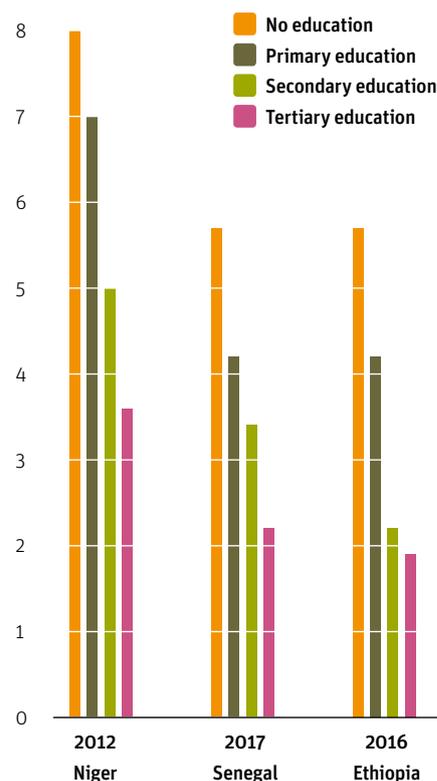
Everywhere in less developed countries educated women have fewer children than uneducated women do. This effect is greatest if they go to secondary school after attending primary school. Senegalese women with secondary education have on average two children fewer than those who have never been to school. One of the reasons for this is that because they spend longer at school they marry and have children later.

become pregnant again, they can breastfeed the first-born child for longer and recover from the first pregnancy.¹⁴⁰

Innovations for more family planning

For women to be able to decide when they want to have children and at what intervals, they need access to contraceptives and knowledge of how to use them. The Senegalese government has therefore been promoting family planning more rigorously for some years now with the declared aim of further improving child and maternal health and putting a brake on population growth. The means it is using to achieve this goal include a broad-ranging media campaign and more money for the family planning programme.¹⁴² Together with eight other Francophone countries in West Africa Senegal in 2011 initiated the *Ouagadougou Partnership*, a coalition of government representatives, donor institutions, religious leaders and actors from civil society. Together they plan to work towards improving the population strategies of the respective countries and increasing funding for family planning campaigns as well as reporting back to the others about their experiences. Their goal is to have an additional 2.2 million women using family planning methods in the region by 2020. The states will receive support for this programme from internal donors and partner organisations.¹⁴³

Children per woman



Average number of children per woman according to level of education (Data source: DHS¹⁴¹)

Encouraged by the *Ouagadougou Partnership* and agreements with the international initiative *Family Planning 2020* Senegal has set itself an ambitious goal: by 2020, it aims to have increased the rate of use of modern contraceptives among married women to 45 percent.¹⁴⁴ Taking 2016 as a base, this would mean a doubling of use in just four years.¹⁴⁵ An important step in achieving this ambitious goal was to improve the supply of contraceptives. At state health facilities, where 85 percent of Senegalese woman make use of family planning services, condoms, the pill and other types of contraceptives were generally in short supply.¹⁴⁶ In order to solve this problem, the Senegalese government

together with the Senegal Urban Reproductive Health Initiative in Dakar launched a pilot project in 2012 called the “Informed Push Model”. The novel aspect of this programme was that whereas previously medical personnel in health facilities had to order and collect the required contraceptives, now private logistics companies keep track of demand and deliver the required products directly to the health centres. Within just a year, the shortages at the 140 test facilities had been almost completely overcome.¹⁴⁷

With religious support

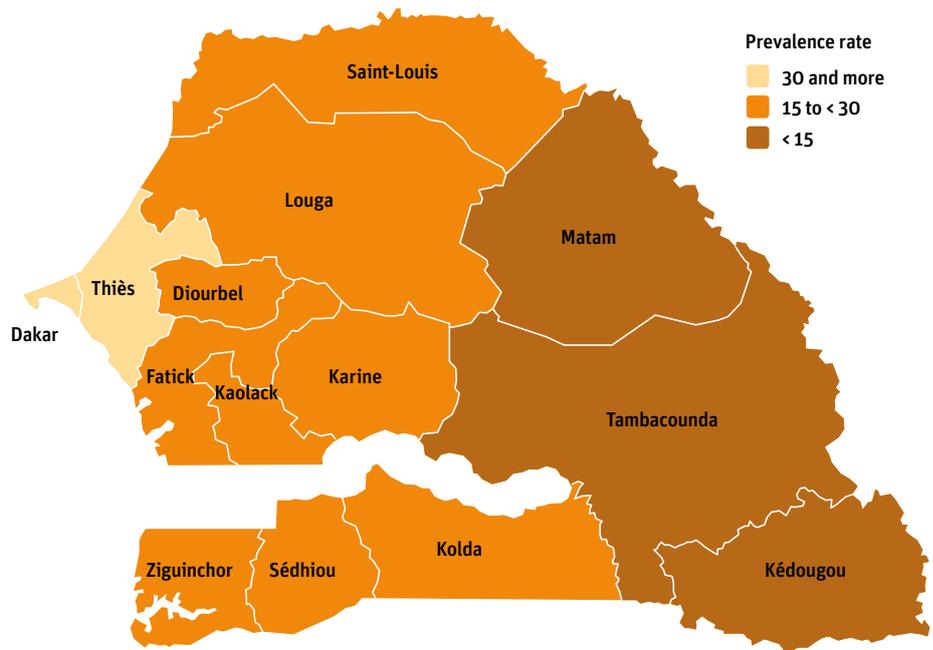
Following these first successes the “Informed Push Model” will now be gradually extended to the whole country. But improving the supply of contraceptives is not in itself sufficient to persuade more people to use them. This applies particularly to the rural regions of Senegal, where the level of education is lower and traditional norms play a bigger role than they do in the city. There women and men need to be informed about the benefits of family planning methods and encouraged to use them. In Senegal, where the majority of the population is Muslim, many people are afraid to use contraceptives for fear that it contravenes the Koran. In addition to television and radio information campaigns, the Senegalese Ministry of Health and its partner organisations are therefore working together with imams who advocate family planning. Together they want to put paid to the myth that the Koran forbids family planning per se. Instead, they emphasise the passages in the Koran that speak in favour of planning one’s family – for instance, the positive effects on both child and maternal health of longer intervals between births and of breastfeeding for longer.¹⁴⁸

The Senegalese government and its partners’ commitment to family planning is working. Whereas in 2011 only about 9 percent of Senegalese women were using a modern method of contraception, by 2017 this figure had increased to 19 percent. Over the same period, the prevalence rate among married women even rose from 12 to 26 percent, the highest level in West Africa.¹⁵¹ Senegal is still lagging behind other African countries with respect to family planning, and the unmet demand for contraceptives remains high:

more than 20 percent of married women who would like to avoid pregnancy have to date had no access to contraceptives.¹⁵² But recent progress and the Senegalese government’s engagement with respect to family planning, maternal and child health and education for girls are all reasons to hope that things will continue to improve. If it succeeds in consolidating these achievements and at the same creating jobs for the growing number of young people, Senegal will have a chance of a demographically determined development boost around 2060.¹⁵³

Three-fold division

Senegal has made major progress when it comes to using contraceptives: since 2011, the share of married women who use modern contraceptives has more than doubled – to a total of 26 percent. Nevertheless, there are still big regional differences. At 37 percent, the prevalence rate among married women living in cities is on average almost double that of married women living in rural areas. The biggest difference is between the capital, Dakar (42 percent), and Matam (10 percent), one of the poorest and most remote regions of the country.¹⁵⁰



Prevalence rate of modern contraceptives among married women aged 15 to 49 in Senegal, in percent, 2017
(Data source: DHS¹⁴⁹)

2.6 Morocco

Morocco was one of the few countries in the Mena region to emerge from the Arab Spring without a change of leadership. King Mohammed VI introduced constitutional reforms shortly after the wave of protests began and called new parliamentary elections. While this put an end to the protests, the distribution of power in the monarchy barely changed. The king continues to determine the political agenda.¹⁵⁴

Similarly, there has been little change in the conditions that caused the uprisings in the whole Arab region. As before, young, increasingly well-educated people of working age have few prospects or opportunities to earn their living.¹⁵⁵ In Morocco, unemployment has been high for many years. This applies particularly to the younger generation. In 2010, the year before the “Arabellion” began, unemployment was at 17.8 percent among 15 to 24-year-olds; since then it has, in fact risen, to 21.9 percent.¹⁵⁶

So far Morocco has been unable to make use of its favourable age structure – namely, a large group of young people of working age and a smaller share of children and older people. The window of opportunity in which the country could reap its demographic dividend opened up around 2005 and, according to UN prognoses, is likely to close again between 2040 and 2050, when a smaller number of people of working age will have to provide for a growing group of older people.¹⁵⁷ The government is trying to drive forward industrialisation in the country,¹⁵⁸ but it remains questionable whether this will yield sufficient jobs for Morocco to be able to utilise its favourable age structure.

Early decline in fertility

With 2.4 children per woman Morocco has one of the lowest fertility rates in the whole of Africa, and its population is therefore likely to grow much more slowly than in other countries on the continent. While the population is predicted to increase by about ten million people by 2050, this is still only an annual growth rate of 1.26 percent, half the African average.¹⁵⁹ The reason for such sluggish growth is the sharp decline in the fertility rate – from an average of seven children per woman in the early 1960s to 2.4 children today.¹⁶⁰ By comparison, the figure for Africa as a whole is currently 4.4 children per woman.¹⁶¹

The decline in fertility began much earlier in Morocco than in most African states and during a period of economic difficulties to boot. After gaining independence from France in 1956, the Moroccan economy grew fast, mainly as a result of phosphate mining. When the world market price for phosphates collapsed in the mid-1970s amid global overproduction, Morocco slid into recession, and many jobs in this sector were eliminated. To balance the state budget the government abolished state social payments and raised taxes. Many families suffered financial hardship.^{162,163}

Why was it precisely this situation that induced a decline in fertility in Morocco and what other factors had a role to play is explained by **Youssef Courbage** from the **French National Institute for Demography** (Ined) in an interview with the Berlin Institute. He has been studying the demographic development of the Mena region for decades. In the interview he also appraises Morocco’s chances of reaping a demographic dividend.

Interview

Mr Courbage, why did the number of births begin to decline in Morocco precisely in a period of economic difficulty?

During the 1970s, the prosperity of the Moroccan population fell steadily. Families suddenly had to find ways of earning extra income. That shook up traditional family structures. Whereas before the crisis the man had been the sole breadwinner, this was no longer viable for many families in the 1970s. Moroccan women began to look for work and found it above all in the textiles industry, which at that time was flourishing owing to high demand from Europe. For the development of fertility in the country, this had clear consequences: the opportunity costs for an additional child rose considerably once women started going out to work. At a time when concepts such as maternity and parental leave were not known, absence from work as a result of pregnancy and birth often led to women losing their jobs. To ensure their financial security, many families were forced to limit the number of children they had and to use contraceptives.

What role did the state play in this development?

The Moroccan government’s positive attitude to family planning was important right from the start: the monarch at the time, King Hassan II, had already declared in official speeches in 1966 that the country’s socio-economic development depended on a decline in population growth. The

government therefore began to distribute contraceptives free of charge supported by USAID and by international organisations like the UN Population Fund.

Since King Mohammed VI came to the throne in 1999, the government has made significant progress in promoting education for women. The share of children starting primary school was 97 percent according to the last census in 2014 and there was scarcely any difference between girls and boys. However, the state promotion of education for girls began at a much later stage.

I believe, nonetheless, that education originally played only a negligible role in the decline in fertility – the level of education was very low at the time. Instead there was another factor that, in my opinion, had a key influence on developments: migration to Europe. Historically, Morocco had always been more engaged in exchange with Europe and this was enhanced by migration. In this respect the country is different from those in other Arab regions like the Middle East.

How did this exchange affect the decline in fertility?

Moroccan migration to Europe began in the late 1950s. The migrants initially went to France and Belgium and somewhat later to other European states. A growing number of migrants thereby came into contact with European values and ways of life. Having in some cases left their homeland without an education and even as illiterate, they discovered in Europe that both girls and boys went to school and that the average European family had far fewer children than families in Morocco. On account of the geographical proximity to Europe and regular visits home by the migrants, these

ideas soon spread to the Moroccan hinterland. Through field studies we were able to establish that rural regions with high rates of emigration experienced high rates of schooling and more educational equality between boys and girls sooner than did areas with less emigration. Moroccans who returned home from abroad encouraged their relatives and friends to send girls to school and to use contraceptives to plan the size of their families. Some migrants even brought back contraceptives from Europe and distributed them in their homeland.

With 2.4 children per woman Morocco is comparatively far advanced with respect to demographic change. What are Morocco's chances of reaping a demographic dividend?

Morocco's age structure is favourable today, but that alone is not sufficient to promote economic progress. The country is suffering from high unemployment, especially among young people, as well as a very low employment rate for women. The trend of the 1970s, when Moroccan women flooded the labour market, has unfortunately been reversed and today almost 75 percent of women of working age are without paid employment. There are many reasons for this, one cannot attribute it solely to the conservative culture. Morocco is in a difficult economic situation: for the economy to gather momentum, jobs need to be created, for which massive investment would be required. As long as the population of working age cannot find employment, the demographically favourable age structure will remain unused.

Can other African countries nevertheless learn something from Morocco?

The demographic transition in Morocco was not always perfect, but it can still serve as a positive example – say, for the Sahel countries. Morocco has a similar culture and the same religion as, for example, Mali, Niger, Chad and Burkina Faso, which have extremely high fertility rates. For many African countries Morocco sets an example that would be much more convincing and much easier to understand than examples of lower fertility in Europe. Morocco could say to those countries: “Look at us, in the 1970s we had similarly high fertility rates to yours today, but nowadays Moroccan families are deciding to have far fewer children. And we are nonetheless Muslims just like you!” That would show that it is not about religion or belief.

All in all, I think it's very difficult to convince a country that low fertility is necessary. The government representatives in those countries, who themselves are often polygamous and have many children, do perhaps not always set a good example. But I do believe very much in the power of contagion: what emigration to Europe did for the development of Morocco could be accomplished for countries with a high fertility rate through more exchange between North and sub-Saharan Africa. I think this is the only way to bring about such change. At the same time, we need to go on patiently investing in education. The basics of demography need to be taught at school: young people must understand what fertility and mortality are and why lower fertility rates are better both for maternal health and for the economic development of a country. When young people start to think differently about family planning, their parents' generation will be influenced, too, in the long term. Education stands at the beginning of such a development.

2.7 Tunisia

Addressing the assembly of the UN Council for Human Rights in Geneva in February 2018, Tunisia's head of state, Béji Caid Essebsi, advocated one thing in particular: more equality between men and women.¹⁶⁴ At 92, he was probably the oldest person attending the assembly, so it might seem surprising that he of all people should call for more rights for women. But his homeland, Tunisia, the country where the Arab Spring began nearly a decade ago and the only state in the region that managed the transition to a liberal democracy, is a pioneer of women's rights in both Africa and the Arab world. The new constitution, adopted in 2014, put men and women on an equal legal footing in nearly all spheres in this state with almost 12 million inhabitants.¹⁶⁵

Although gender equality has yet to make its mark on the everyday lives of many members of the population – especially in the remote regions of the country far away from the capital, Tunis – under the sprightly president the Tunisian government is pushing through ever more changes in the law in order to further strengthen women's rights: for example, a provision has been abolished that prohibited Tunisian women from marrying non-Muslim men, and new guidelines have been adopted to curb violence against women and to increase their participation in political decision-making processes.¹⁶⁶ On National Women's Day in August 2017, President Essebsi announced the reform of a discriminatory law of inheritance. If the parliament approves the draft law giving women the same rights to inherit as men, this would be a novelty in North Africa and the entire Arab world.¹⁶⁷

A pioneer of women's rights and education

Strengthening the role of women in society is a strong tradition in Tunisia. Right after the country gained independence from France in 1956, Tunisia's first president, Habib Bourguiba, advocated more gender equality. His reforms changed social structures and improved the social status of women, who from then on were allowed to vote and no longer had to wear the veil.¹⁶⁸ Another important step in female emancipation was the *Code du statut personnel*, a series of progressive laws that came into force in 1957. The legislation stipulated that both partners should consent to a marriage, banned

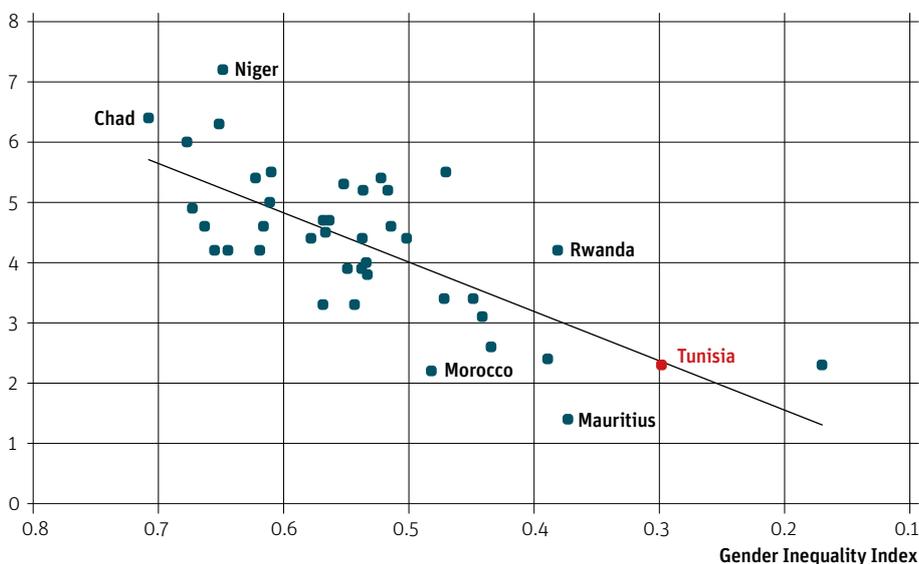
polygamy and raised the minimum age at which girls could marry, initially to 15 and subsequently to 17.¹⁶⁹

As well as improving the legal status of girls and young women, Tunisia's first president took measures to improve their access to education. After he had introduced free and obligatory primary school education, the government was forced to establish the necessary educational infrastructure. Through major investment in education of up to 34.5 percent of the national budget it was able to accomplish this in 1971 even in remote regions, whereupon the rates of school entry rose steeply. Despite initial reservations on the part of both parents and teachers, the number of girls attending school increased too.¹⁷⁰

Gender equality lowers the fertility rate

How gender equality influences fertility in Africa is abundantly clear: the more opportunities women have to participate in the labour market and in politics, the more their reproduction rights are guaranteed and the better educated they are, the fewer children they will have on average during the course of their lives. Tunisia has the second-lowest level of gender inequality on the African continent – and one of the lowest fertility rates.

Children per woman



Average number of children per woman (2018) according to gender inequality, according to the Gender Inequality Index (2017), whereby "0" represents absolute gender equality and "1" the highest level of gender inequality

(Data source: PRB¹⁷¹ and UNDP¹⁷²)

This contributed to a rapid improvement in the level of education: whereas in the 1970s only about 15 percent of adult Tunisian women could read and write, the share of literate women was more than twice as high by the mid-1980s.^{173, 174} Today, 72 percent of women over the age of 15 are literate, and among 15 to 24-year-olds, the figure is 96 percent. In higher education young Tunisian women are, in fact, doing better than men: in 2017 almost seven out of ten university graduates were women.¹⁷⁵

Political commitment to family planning

The Tunisian government recognised at an early stage that giving women equal social status and a good education were prerequisites for putting the brake on high population growth and at the same time ensuring the country's economic success. In order to lower the fertility rate, which in the 1960s was still almost seven children per woman, the Tunisian government looked to another area: a comprehensive family planning programme.^{176, 177} First it had to repeal the law passed by the former colonial power, France, which had made distributing and advertising contraceptives punishable offences.¹⁷⁸ Subsequently, government representatives turned to Asian countries, among others, for inspiration, since these had already put successful family planning programmes in place. In 1964, a first pilot project was launched in Tunisia and, after two years of tests, extended to the entire country.¹⁷⁹

With support from the US Ford Foundation and the Population Council, the Ministry of Health trained doctors and midwives. Municipal clinics included family planning services in their catalogue of healthcare. In the countryside mainly mobile family

planning teams visited smaller hospitals and schools according to a weekly rota to inform people about family planning methods and provided contraceptives free of charge. In addition, the government launched information campaigns on the radio and in newspapers and tried to win the support of religious leaders.^{180, 181} Since President Bourguiba had officially proclaimed his support for family planning and the issue was discussed relatively frequently in Tunisian society, the prevalence rates of modern contraceptives rose rapidly: from a baseline of 25 percent in 1978, 40 percent of women aged 15–49 were using modern contraceptives ten years later and 50 percent by 2012.¹⁸²

The commitment of the president – who has among other things awarded an annual prize to organisations and individuals who have campaigned for family planning – was an important component of the success of the programme.¹⁸⁵ How strong the political will has been with respect to this issue in comparison with other African countries is shown by the *Family Planning Effort Index*. Since the 1970s, Tunisia, together with Mauritius and Botswana, has always ranked near the top among African countries. In 2014, Tunisia even scored the second-highest number of points after Rwanda among the 90 countries evaluated worldwide.¹⁸⁶

Early start

With the *Code du statut personnel* Tunisia has the most modern personal statute law in Africa and at the same time probably the most successful family planning programme in the region – and has had for more than fifty years. The many different reforms and programmes under President Bourguiba were pioneering in their time, especially for a Muslim country.

(own diagram after Brown and Baliaoune-Lutz^{183, 184})

The success of the family planning programme, the rising standard of education and the emancipation of women, who increasingly have paid jobs, has brought Tunisia rapid socio-economic change. Child mortality fell from roughly 260 deaths per 1,000 live births in 1965 to around 60 in 1990 and by 2015, the figure had fallen further to 20.¹⁸⁷ Over the same period life expectancy rose from 44 to 76 today – the third-highest figure on the continent.¹⁸⁸ These development successes also led to a rapid fall in fertility rates. Whereas in the 1960s women still had around seven children, by the turn of the millennium the fertility rate had fallen below the reproduction level of 2.1 children per woman, at which a population stops growing in the medium term without migration.¹⁸⁹

No dividend without jobs

Tunisia is thus the first country on the African mainland to achieve the economically favourable age structure of the demographic bonus: while in 2000, there were 1.8 people of working age to provide for each dependent – i.e., children and old people – in 2015, the figure was already 2.2.¹⁹¹ Since the turn of the millennium Tunisia has had a disproportionately large number of workers at its disposal, which could bring about a demographically determined economic

1957

Tunisia's government strengthens women's rights by, among other things, raising the minimum age of marriage and prohibiting polygamy. In addition, it reforms divorce laws and legalises abortion for women who already have five children.

1959

The first woman is elected to the Tunisian parliament. In neighbouring Morocco this does not happen until 1993.

upswing based on the model of the Asian tiger states. But currently the country is far from being able to harness this potential; like almost everywhere in Africa, there are insufficient jobs for the large number of people of working age.¹⁹²

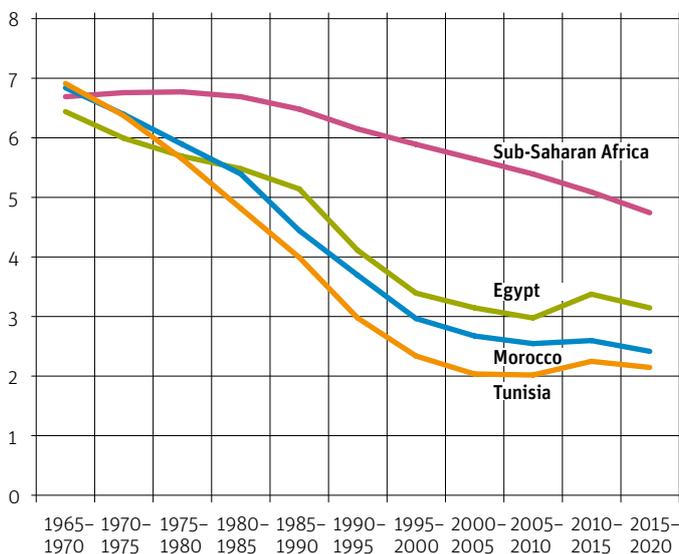
The Arab Spring in Tunisia showed what explosive power is harboured in a young and formally relatively well-educated population of working age that is lacking in prospects and income opportunities. Protests like those in January 2018 – triggered by a new finance law – have flared up time and again, showing that discontent has not dwindled even eight years later. At 15 percent, unemployment is still at a high level; among the 15 to 24 year olds it was estimated to be more than twice as high, at 35 percent, in 2018. Women, in particular, are affected, since unemployment among them is almost ten percentage points higher than among men. Despite all the gender equality laws they are much less likely to have a job than are men. In 2015, 70 percent of men were employed, but only 26 percent of women.¹⁹³

The difficult economic situation in Tunisia as well as the low rate of employment or high rate of unemployment among women may be one explanation why the country recently recorded an increase in the number of births. Past experience and UN forecasts,

Temporary deviation from the trend

Thanks to its early socio-economic transformation, Tunisia experienced a decline in fertility rates long before the sub-Saharan countries and a more rapid decline than its North African neighbours. By the turn of the millennium the fertility rate had fallen below 2.1 children per woman. Amid the upheavals following the Arab Spring, the number of children born has risen slightly again, albeit far less than for example in Egypt.

Children per woman



Development of fertility rates, 1960 to 2050
(Data source: UN DESA¹⁹⁰)

however, suggest that this deviation from the downward fertility trend is only temporary. Similarly, the government's current efforts are likely to further strengthen women's position in society. In order for fertility to continue to fall and for the chance of a demographic dividend to remain within

reach, economic reforms need to ensure that jobs are created – and soon. From around 2040, the window in which Tunisia's favourable age structure can be converted into a dividend will already start to close again.¹⁹⁴

1962

The national economic and social development plan names a reduction in population growth as one of the most important goals in order to achieve economic and social progress.

1963/64

Government representatives evaluate successful family planning programmes in Asia and the United States. Subsequently, the test phase of the Tunisian programme begins.

1966

The national family planning programme is launched.

1967

The pill becomes generally available.

1968

The Tunisian Association for Sexual and Reproductive Health is established with government support. President Bourguiba strongly advocates family planning.

1973

The National Bureau for Family Planning and Development opens. The government further liberalises the abortion law.

3 | LEARNING FROM EXPERIENCE AND USING NEW OPPORTUNITIES

The demographic transition has always been – and will continue to be – a result of development. If people’s living conditions improve, if they receive more education and if they achieve greater prosperity and have new opportunities to shape their own lives, then their views will change about reproduction and family size. In Europe and North America the demographic transition began during the Industrial Revolution. In Asia and Latin America it got under way after World War II, whereby it was, above all, the rapid spread of medical knowledge that led to a sharp decline in mortality rates.¹ As a result, more children survived beyond their first years of life and one to two generations later the fertility rates eventually sank, too – almost as a side effect of general development.

Many of the breakthroughs that accompanied this process were neither foreseeable nor planned – at least in the “pioneer countries” of the demographic transition in Europe and North America. After all, no one could have known that through inventions such as the steam engine, mineral fertiliser, vaccinations and antibiotics, fertility rates could be expected eventually to decrease and that this would have an enormous influence on demographic development. Such a realisation was possible only with hindsight through the scientific evaluation of the developmental process.

State interventions in the areas of healthcare and family planning designed to influence the mortality and fertility rates did not begin until

after World War II, as knowledge increased about the factors influencing demographic development – especially fertility.² In the meantime, the factors that contribute to declining fertility rates have been well researched. And for this reason, we know today which adjustments have this or that effect on the desire of women/families to opt for fewer children.

Harnessing the available knowledge

African states in which the demographic transition remains stuck in the early stages have a decisive advantage over those countries that are ahead of them: unlike the European countries two hundred years ago, they are able to tap the available knowledge about the major factors influencing declining fertility rates and decide which demographic policy measures to take. Here the biggest lesson to be learned to date is that fertility rates decrease significantly only if all the important influencing factors work together – in other words, if people’s living conditions improve, if access to healthcare services and educational institutions is made easier and if employment opportunities emerge. Access to family planning methods and greater gender equality are part of this overall package, too.

The country examples included in this study show where there has already been positive change along these lines on the African continent and which influencing factors have thereby played a role. This could be

proximity to Europe, which brought the modern family profile to Morocco, or a detailed development strategy such as that in Ethiopia, where concrete improvements in healthcare, education and the labour market rapidly changed people’s living conditions. Each of these countries had to find its own way to trigger a decrease in the fertility rate and then consolidate that trend. This does not always happen in a straight line and without setbacks, as evidenced by the fertility rate having meanwhile halted its decline in Kenya and started to climb again in Tunisia. But once a significant downward trend in the fertility rate has been established, it has so far proved irreversible in every region of the world.³

Besides those countries already considered, there are other states on the African continent whose measures and programmes contribute to declining fertility rates or at least are likely to do so in the future. This chapter highlights the main spheres of action in healthcare (including family planning), education (including more gender equality) and employment as well as the role of the engagement of politicians and religious leaders. At the same time, practical examples provide an overview of the measures taken by various actors in African countries that are having a direct or indirect influence on fertility rates or are likely to do so in the future. We also showcase approaches that

Good practice: Mauritius – an African “tiger state”

Today, the small island state of Mauritius is one of Africa’s richest countries. In the Human Development Index, only the neighbouring island state of the Seychelles ranks higher among all the countries on the continent.⁴ This is no coincidence because in contrast with its neighbours on the mainland, Mauritius has almost concluded its demographic transition and used the accompanying change in the age structure of its population to its advantage. To put it succinctly: the microstate in the Indian Ocean has succeeded in reaping a demographic dividend. The starting point for this achievement was an early and rapid decline in the fertility rate. If the number of children per woman was more than 6 in 1960, this figure had fallen to around 3.5 within 10 years. Today the fertility rate in Mauritius is just 1.4 children per woman and thus already lower than that in Germany.⁵

The rapid decline in the fertility rate was urgently needed on the island, which is even smaller in size than the Saarland and in the 1960s was still desperately poor. The government therefore began to invest in education and family planning – despite the initial opposition of Catholic Church leaders as well as Muslim ethnic groups. Thanks to rapid progress in education, family planning methods were soon accepted among the population. By the early 1980s, 40 percent of woman of corresponding age were attending secondary school.⁶

As the level of education increased and the fertility rate declined, the island’s economy began to gain momentum: between 1985 and 1995, Mauritius recorded consistently high economic growth with an average annual growth rate of around 6 percent and thereby numbered among the five fastest-growing countries on the continent. Per capita gross domestic product grew during this period by more than 150 percent. Since then, it has more than doubled again. In 2017, adjusting GDP for purchasing power parity, the Mauritians had the third-highest per capita income – on average some 20,000 US dollars – on the continent, and they achieved that even without exporting valuable raw materials.⁷ In fact, the economic rise of the island state began, as is often the case, with the textiles industry. Today, Mauritius is not only a holiday paradise but also one of the most important IT and financial centres in Africa.⁸

use new technologies to solve old problems and can be relatively easily applied across the board. All these measures can be an inspiration to those states that, together with international donors, non-governmental organisations and other partners, want to expedite the decline in the fertility rate within their borders.

3.1 Healthcare

Throughout the world, the demographic transition began with an improvement in health indicators and a decline in child mortality rates. But for poor African states it is already a huge challenge even to maintain the existing healthcare services for the growing number of people. Especially in rural areas there is a lack of hospitals and appropriate equipment, as well as of medications and, above all, well-trained

staff.⁹ Together with an environment in which pathogens spread quickly – from a “malaria-friendly” climate to the lacking basic sanitation and contaminated drinking water – and an often precarious food situation, this results in overall poor health indicators. The mortality risk for infants, small children and mothers in Africa remains the highest in the world.¹⁰

Providing good nutrition and clean water
One of the main reasons for the persistently high mortality rates is the insufficient provision of clean water in many places. On average, only a quarter of the population of the sub-Saharan countries has access to drinking water sources that do not pose any health risk.¹¹ In those places where this is no clean water or sanitation facilities, pathogens and parasites can quickly spread and cause life-threatening diseases such as diarrhoea – one of the most common causes of death among small children. According to various studies, the child mortality rate could be reduced by 25 deaths per 1,000 live births if governments would invest more in the provision of drinking water and sanitation facilities.¹²

Some countries have already made considerable progress in this area: in **Senegal** and **Rwanda**, investments in water infrastructure and the training of specialists have enabled the goal of the Millennium Development Agenda – halving the share of the population without access to clean drinking water – to be achieved. Above all, the greater involvement of the population has contributed to this success.¹³ In **Botswana**, too, the government has expanded the water supply network and thereby significantly improved access to clean water. By 2006, two-thirds of the population were able to receive their drinking water via the water mains.¹⁴

In remote regions, access to drinking water is particularly difficult. There people have to draw their drinking water mainly from wells or waterholes and transport it in canisters over long distances. Germs and pathogens have an easy time in such places. In **Kenya**, **Malawi** and **Uganda**, development organisations and foundations have recently found a simple way of improving the quality of water: within the framework of the *Dispensers for Safe Water Programme*, almost 25,000 chlorine dispensers have been installed next to wells, waterholes and other sources of water in the three countries, allowing more than four million people to gain access to germ-free drinking water. A teaspoon of the disinfectant per water canister suffices to kill off the harmful bacteria.^{15,16}

Just as important as access to water is the battle against famine. It is above all children who are prone to infectious diseases if they are under- or malnourished. Famine can be sustainably fought only if the productivity of Africa's farmers significantly increases. Even ancillary measures are having an impact here: for example, in 2015, the government of **Ethiopia** launched, together with international donors, the *Productive Safety Net Programme*, which provides people affected by food shortages with support for up to six months of the year – either through the provision of food free of charge of through the so-called *Cash-for-Work Programme*. Since the introduction of the back-up programme – the largest on the African continent – the share of those affected by undernourishment has fallen from 40 to 29 percent.¹⁷

Bringing healthcare services to the people In developed states, it is usual for small children to be vaccinated, pregnant women to go regularly for ultrasound scans and other routine examinations and children to be born in hospitals under medical supervision. In most African states, the infrastructure and the personnel are simply lacking for such services – with the corresponding consequences: in the sub-Saharan countries the risk of women dying during pregnancy or while giving birth is still around 70 times higher on average than in the EU.¹⁸ Above all in rural regions, a day's journey is often required to reach the nearest hospital. Ensuring the provision of basic healthcare services for people living in remote areas is therefore a central factor in achieving better health indicators and, indirectly, declining fertility rates.

As the chapter on individual countries shows, **Ethiopia** has achieved this within the framework of its *Health Extension Program* with a relatively small amount of funding. While the network of health centres is by no means sufficiently dense to provide adequate care to the more than 100 million people living in the country, female health workers spread knowledge about fundamental health issues. And the successes to date in reducing child and maternal mortality show that Ethiopia is on the right track. The concept was successful in particular because women from communities were trained as healthcare workers. This not only promoted acceptance among the local population but also created a source of income for women.¹⁹

Malawi, too, has a network of healthcare workers, which essentially has existed since the 1950s, and the scope of its tasks has been constantly expanded. The medical personnel distribute modern contraceptives, treat children suffering from typical childhood illnesses such as pneumonia, malaria and diarrhoea and provide information about HIV/Aids. To prevent mothers infecting their children with HIV/

Aids, the healthcare system has also trained HIV-positive women as mentors who support and advise pregnant women and mothers who have contracted the same illness.^{20,21}

Since 2011, **Zambia** has followed suit in training female healthcare workers who are intended to form a bridge between the available hospitals and people living in remote regions. In order to make the work more attractive, the Ministry of Health guarantees not just a wage but other benefits, like those granted to civil servants, and provides the healthcare workers with bicycles, mobile phones and uniforms.²²

Developing the provision of medical services with the help of voluntary or employed healthcare workers is by no means a new approach. Many African countries have launched similar programmes in order to improve healthcare infrastructure and to integrate the state system into the communities through already existing initiatives. However, the programmes have not been successful everywhere. Important prerequisites for success include strong political engagement, well trained and highly motivated medical workers and the acceptance and trust of the population.²³

Telemedicine offers new opportunities

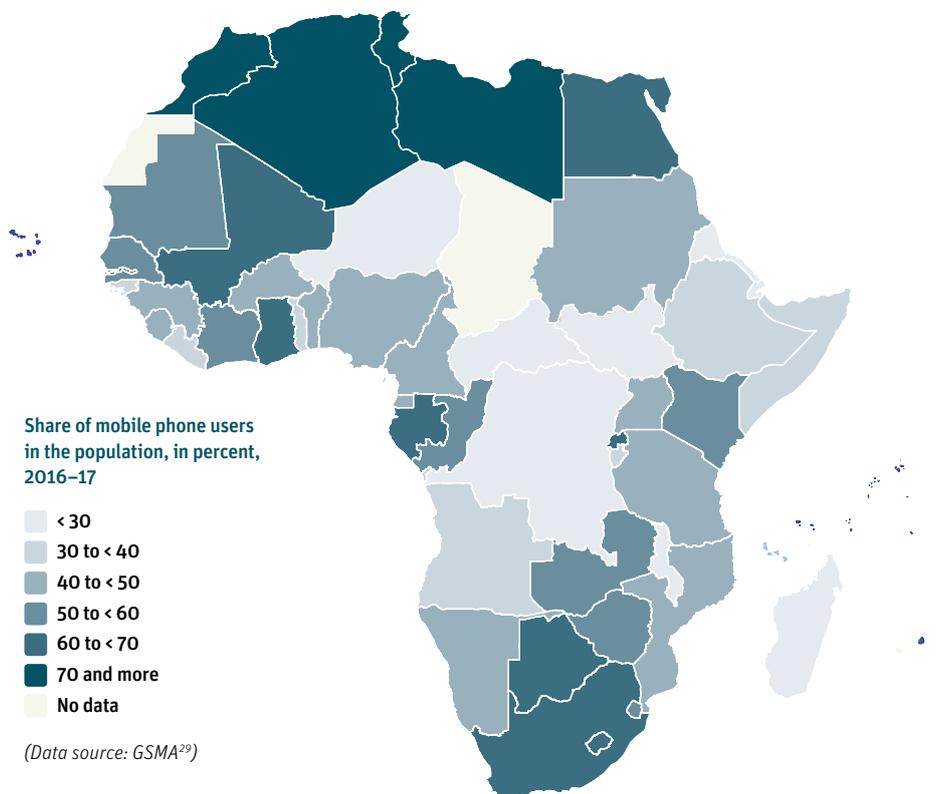
In those countries where attempts to provide sufficient health workers in all communities and villages have failed, other approaches have proved helpful – for example, mobile clinics such as those in **Botswana** and **Tunisia**. Health advice via mobile phone also offers completely new potential. *Omomi*, the healthcare app developed by Carles Akhimien, a Nigerian physician, provides pregnant women and mothers with information about children's health, among other things. Within a few minutes, medical

personnel answer questions on how common childhood illnesses can be avoided and treated. In addition, an online forum allows women to exchange information and give one another health tips. Some 32,000 women in **Nigeria, Kenya, Ghana and Tanzania** are already using the service. The plan is to expand it to the entire continent in the future.^{24, 25, 26}

In **South Africa** another app enables female healthcare workers to contact specialists from hospitals via video link and decide jointly how a patient should be treated. Moreover, healthcare workers in rural areas can use the app to undergo further training.^{27, 28} Because the use of mobile and smart phones has since become increasingly widespread, similar projects could be introduced in other countries.

More mobile phones, new opportunities

Mobile phones are spreading rapidly throughout Africa: today more than 440 million people use such devices in the sub-Saharan countries alone; by 2025, this figure is expected to reach 634 million. Smart phones are being used more frequently, too. While in 2017 a third of all mobile phone users owned a smart phone, it is likely that around twice as many will do so by 2025.³⁰ That will lead to new opportunities in many areas – for example, in access to health information, training programmes and knowledge about agriculture.



New approaches: Drones as healthcare helpers

In many countries on the African continent, health centres in rural areas have a major problem: owing to the lack of roads, they are often hard to reach and are frequently located a long way from the nearest hospital in which people who are seriously ill or injured can be treated. If, for example, women lose a lot of blood while giving birth, it is a question of life or death

whether they reach a hospital in time or whether donor blood arrives at the local clinic in time.

New technologies can lead to improvements in this area, too. In Rwanda they are already doing so: in 2016, the 12 million state in East Africa became the first country worldwide to develop – together with the US company *Zipline* – a supply network involving drones.³¹ To date, the aircraft supply 21 healthcare centres in the

country with donor blood and medication; the plan is to increase that number in the future. Now Ghana is following in Rwanda's footsteps. Since April 2019, 30 *Zipline* drones have been supplying vaccinations, medication and donor blood to a total of 2,000 healthcare centres throughout the country from four logistics centres. In the future, 12 million people – almost half the Ghanaian population – are to receive supplies through some 600 flights a day.³²

3.1.1 Family planning

If children's chances of surviving increase thanks to an improvement in healthcare provision, women/couples tend to think differently over time about the size of their family. But the desire to have a smaller family can be better realised if modern family planning methods are accessible. Therefore, it is imperative that improved access to family planning services always be taken into account in developing healthcare infrastructure. Most of the countries examined in Chapter 2 have been successful by African standards in stemming population growth, above all because they have family planning programmes that are relatively well funded and implemented – or, at least, had such programmes at some point. Moreover, as a rule their governments have developed services in hospitals or rural healthcare centres offering information about and the means of family planning. In some cases, mobile clinics have become a way here, too, of reaching remote or undersupplied areas.

Creating and meeting demand

Regardless of where and how contraceptives are distributed, it is important to have a broad range of means to hand in order to meet the various needs. The rapid rise in the use of modern contraceptives in **Ethiopia**, for example, would hardly have been possible if the government had not approved the use of hormone injections and implants. Such means are effective over a relatively long period and save women having to pay regular visits to a clinic, which particularly in rural areas could mean travelling a long distance.

Like in Ethiopia, the family planning programme in **Rwanda** relies on female healthcare workers in the communities making modern contraceptives widely available. In 2015, around 80 percent of women using modern contraceptives received them via a local health centre or from community workers. The usage rate of contraceptives among married women in Rwanda has risen sharply: while it stood at just 10 percent in 2005, it had increased to 48 percent 10 years later.³³ One of the factors contributing to this development was a broad-based information campaign that included monthly discussions with administrative personnel, action days providing information about maternal and child mortality, and radio advertising.³⁴

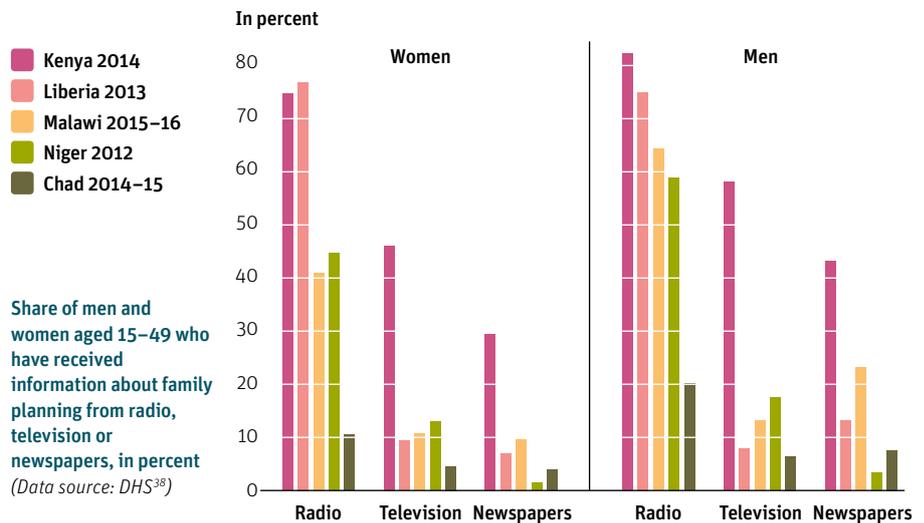
Bringing the private sector on board

Making contraceptives available to as large a part of the population as possible is no easy task. And in rural areas the provision of contraceptives is twice as difficult. On the one hand, family planning and contraception are often taboo subjects, which means women are reluctant to ask about them in healthcare centres or clinics.³⁵ Moreover, contraceptives are frequently difficult to obtain at state healthcare institutions because of unwieldy procedures for ordering them or because new supplies fail to reach remote regions.

Senegal's successful *Informed Push Model* shows that the private sector can help solve these problems. In this sector it is not healthcare personnel but private logistics companies that ensure that healthcare centres have regular supplies of family

Radio spots about family planning

Until now radio has been the most common means of disseminating information about family planning and contraception. However, there are large differences in this regard between the African countries: in Kenya and Liberia, around three-quarters of men and women aged 15–49 said in surveys that they had received information in this way. In Chad, the corresponding figure is just some 10 percent of women and 20 percent of men. Television and newspapers reach even fewer people.



Good practice: Longer lives and more family planning in Malawi

Malawi is one of the poorest countries in the world: 70 percent of the population lives below the poverty threshold of 1.90 US dollars a day, adjusted for purchasing power parity.⁴⁴ But the landlocked country in the southeast of the African continent has made astonishing progress in the area of healthcare over the past two decades: life expectancy, a good across-the-board indicator of the well-being of the population, rose by 17 years during the period 2000–16 from 47 years previously to 64 years.⁴⁵ This means that in recent years the Malawians have on average gained more than 12 months of additional lifespan annually. This rise is to be attributed, above all, to the huge decline in child mortality, which fell by half over the same period.⁴⁶ The reason for this success is the robust development of the network of rural healthcare centres and the training of community health workers, which the Malawian government has promoted together with international partners. In this way, the basic provision of healthcare was extended to remote regions – a key factor in a country in which 83 percent of the population live in the countryside. In 2011, there were already more than 10,000 health workers throughout the country, whose main tasks include providing preventive services such as vaccinations and malaria prophylaxis. According to one evaluation, more than 6,000 deaths among small children were prevented in 2013 alone.⁴⁷

As healthcare infrastructure is developed, people in Malawi are using modern contraceptives much more frequently: the usage rate doubled from 26 percent of married women in 2000 to almost 60 percent in 2016.⁴⁸ Thus, the use of contraceptives is now more prevalent in Malawi than in almost any other country on the continent – despite the government having begun to invest in family planning at a later stage than other African states. Indeed, during the thirty years of the autocratic regime of President Hastings Kamuzu Banda (1966–94), family planning was even officially prohibited. It was not until the introduction of a multiparty democratic system in 1994 that the country developed a demographic strategy and subsequently launched a family planning programme. Just a few years later, contraceptives were available free of charge at most healthcare facilities. A particularly important role here was the work of the rural health workers, who were involved in distributing and providing information about contraceptives right from the start. A 2002 evaluation of the programme showed that users valued especially this low-threshold access to information about contraception.⁴⁹

The government stepped up its activities in this area through a comprehensive radio campaign, which, alongside other health topics, offered extensive information about family planning, sexuality and contraceptives. The broadcasts were developed in cooperation with local communities and dealt mainly with the problems that are caused by too large families, such as the shortage of land.⁵⁰ In 2000, 69 percent of women and 82 percent of men taking part in household surveys said that they had heard about modern contraceptives from the radio.⁵¹ Since 2011, there has also been a nationwide health hotline that provides free information on all subjects related to health.

The initial impact on the fertility rate is already evident. Between 2000 and 2017, the average number of children per woman decreased from 6.3 to 4.2.⁵² Nonetheless, much remains to be done: compared with the sharp increase in the prevalence of modern contraceptives, the decline in the fertility rate has been slow. A possible explanation for this, according to a recent study, is the irregular use of hormonal contraceptives, mainly owing to insufficient supplies in rural areas. For example, in 2012 only half of the women using hormonal injections – the most widespread method of contraception – in the remote northern part of the country received their first follow-up injection on time.⁵³

planning means.³⁶ They include the start-up *Kasha* from **Rwanda**, whose goal is to improve access to contraceptives as well as other healthcare and sanitary products. Via app or text message, women can place their orders, which are then delivered by moped. In rural areas a total of 75 local female workers ensure that the goods reach the customers and that information about the service and products provided by *Kasha* is made broadly available. To date, some 20,000 people have used the delivery service, which recently expanded to Kenya.³⁷

Information a prerequisite

If there is to be any demand at all for family planning methods, the dissemination of information about contraceptives is of central importance. Often couples – and women in particular – are reluctant to use contraceptives because of concerns about side effects or out of fear of being stigmatised by relatives and members of the community. Alongside sex education in schools and youth clubs, information campaigns on the radio and television have proved useful means of breaking the taboos surrounding the subjects of sexuality and contraception. Almost every African country has conducted such media campaigns, but the results have been varied.³⁹

Whether such a campaign is successful depends – alongside funding and reach – on whether it enjoys the support of prominent individuals. In **Niger**, the country with the highest fertility rate in the world and one of the lowest usage rates of modern contraceptives, such important advocates have been found. Here a radio information campaign about contraceptives co-funded by

the German development bank KfW is supported by traditional dignitaries, nationally famous female singers and wrestlers. Subjects such as education for girls and child brides are addressed in the radio spots, too.⁴⁰ The fact that prominent figures such as wrestlers, who are celebrated as national heroes in Niger, campaign for the use of condoms has been a major contributor to the campaign's success. They demonstrate, above all to men, that talking about and using contraceptives in no way reflects badly on them.⁴¹

Mobile phones are also playing an increasingly important role in this effort to inform the public.⁴² For example, the initiative *m4RH – Mobile for Reproductive Health* uses them to spread information about contraceptives. Via text message, users receive information about the various means of protection and find out at which healthcare institution in their neighbourhood they can be obtained. In **Kenya, Tanzania** and **Rwanda** this project has been implemented by the US non-governmental organisation *FHI 360* together with the local health ministries. In Tanzania *m4RH* is already being used in 98 percent of districts.⁴³

3.2 Education

Today, the decisive role that education plays in achieving socio-economic progress and thus in reducing the fertility rate is known well beyond expert circles. Equally clear is that the poor level of education is one of the main causes – if not the main cause – of Africa lagging behind in its development and fertility rates remaining persistently high. Indeed, it is no coincidence that fertility rates are highest precisely in those countries in which the level of education is lowest. In Niger, where women have the most offspring in the world – on average 7.2 children – less than one third of adults can read and write.⁵⁴

Facilitating access to education, improving the quality of teaching and promoting vocational education and training are key to driving forward Africa's development. This is because, as explained in Chapter 1, education has a positive impact via many different channels on people's prospects and thus, indirectly, on how many children they want to have. The examples of **Kenya, Ghana** and **Senegal** cited in the previous chapter confirm the positive effects of education on declining fertility rates and show what can be achieved in this area with high levels of investment. Like in the healthcare sector, both proven methods and new technologies can help make education available to everyone.

Providing incentives to attend school

In order to increase the overall level of education in Africa, the existing obstacles to obtaining an education must be removed – from persistent poverty, which makes it impossible for parents to pay for school materials for their children, to inadequate infrastructure and too few teachers, who can hardly keep up with the demand from the constantly growing younger cohorts. What means can be used to overcome this deficit is

now sufficiently well known. For example, the so-called *cash transfer programmes* have proved they are able to help, in particular, children from poor families gain access to education. Under these programmes, parents receive cash payments if they send their children to school, which at the same time reduces poverty and famine.^{55,56}

Since the 1990s, many African countries have run *cash transfer* programmes. However, the results have been varied according to the funds available and local framework conditions. In 1998, **South Africa** became one of the first African countries to introduce a grant programme – the *South Africa Child Support Grant*. Under this programme, currently some 10 million children and young people under the age of 18 and from low-income families receive regular grants. An evaluation of this programme carried out by UNICEF and the South African Ministry for Social Development shows that on average, children participating in the programme remain at school longer, are absent less frequently and achieve better results in reading, writing and arithmetic.⁵⁷

In Ghana, Kenya, Zambia and several other African countries, similar social transfer programmes have contributed to the improvement of enrolment and attendance rates at primary and secondary schools – even without obligatory attendance being a condition for receiving financial support.⁵⁸ Evaluations of the *Zomba Cash Transfer Programme* in **Malawi** show the positive effects that such programmes can have on the educational opportunities and future prospects of girls: above all, conditional grants have a positive impact on their achievements at school. While unconditional transfer payments have a less marked effect

on the learning outcomes and participation in classes, they nonetheless ensure that girls who do not finish their schooling are less likely to marry or become pregnant at an early age. Overall, the likelihood of pregnancy among those girls who left school early decreased by 27 percent owing to the programme, while the risk of an early marriage fell by as much as 44 percent.⁵⁹

Often children have to break off their schooling because the parents need them as agricultural labour in order to produce sufficient food for their families. In many developing countries, the provision of lunch free of charge to schoolchildren has helped solve this problem. **Botswana** has been providing a warm lunch at all primary and secondary schools since the 1960s and has funded this programme without the support of international donors since 1998. Children who come from remote, mostly poor regions and board at school also receive an evening meal as well as food rations on days when there is no school.⁶⁰ In **Mali, Nigeria** and **Ivory Coast** such programmes have helped improve both attendance at school and the learning achievements of the children.⁶¹ According to the World Food Programme of the United Nations, they can also contribute to reducing the share of children and young people who do not finish school by 40 percent.⁶²

Using new technologies

Alongside tried and tested means, modern technologies can help to improve access to education and, moreover, the quality of teaching. In **Sudan**, for example, 600 children have been able to gain access to education through an e-learning programme. A computer game that runs on tablets allows them to learn arithmetic via a game.⁶³ In the pilot project *BridgeIT*, launched in **Tanzania**, teachers can download via their mobile phones support materials in the form of

New approaches: Mobile vocational training

Africa needs to create new jobs and train qualified specialists in order to improve its economic performance and thereby promote its economic and demographic development. An important step in this direction is to strengthen vocational training, which until now has remained in its infancy in almost every state on the continent and has a mostly poor image. In rural areas as well as in the poor municipal districts and slums, there is usually no opportunity whatsoever to undergo vocational training.⁶⁶

In **Zimbabwe**, mobile classrooms for vocational students are intended to facilitate access to training. The *Young Africa* organisation has launched a programme in which trainers equipped with the necessary technology and teaching materials offer twelve-week vocational training courses at different places in the countryside – including instruction in entrepreneurial skills. *Young Africa* is working together with local authorities, and pupils receive a certificate once they have completed the course. In addition, the organisation is striving to help those who complete their training to take out microloans with which to establish their own small companies. The aim is to improve the prospects of young people in rural areas.⁶⁷

teaching videos that correspond to the national curriculum and thereby improve the quality of their teaching.⁶⁴ In West Africa, too, apps and e-learning platforms are revolutionising the world of education. In **Togo**, for example, the app *OkpaBac* helps pupils in the last years at secondary school to prepare for the school-leaving examination. The app includes sample questions from the previous year's examination and quiz questions with which pupils can test their own knowledge.⁶⁵

Targeted promotion of girls

The impact of education on demographic development is especially large if girls have the same opportunities to attend school as boys do (see the explanations in Chapter 1). This impact is particularly evident in trailblazing states such as **Senegal** and **Ethiopia**, where the education of girls plays a central role. Other states, too, have been actively promoting girls and young women in the area of education: in **Kenya**, for example, the prospect of receiving a scholarship to attend secondary school has improved the performance of girls towards the end of their primary education and at the same time helped increase the secondary-school enrolment rate.⁶⁸

More female teachers could serve as a role model for girls and improve their attendance at school. To allow the teaching corps to become more female has an additional effect: correspondingly qualified women are thereby given the opportunity to earn an income and gain respect within society. Together with UNESCO, the educational arm of the United Nations, the government of **Mali** is working on the targeted promotion of women in teacher training and on finding jobs for them at schools. To encourage more women to choose this career path in the future, the project includes courses to prepare for the entrance examinations at teacher training colleges.⁶⁹

Gender-sensitive teaching timetables and materials can also help to improve the educational opportunities for girls and young women.⁷⁰ In **Zambia**, together with the Belgian non-governmental organisation *VVOB* and the *Forum for African Women Educationalists*, the government is investing in further training for teachers and school directors in the area of early, gender-sensitive education.⁷¹ With the help of special teaching materials developed with teachers of either sex in Zambia, Rwanda and South Africa, gender stereotypes are to be dismantled and teachers given support to encourage children to develop their own potential and talents regardless of their gender.⁷²

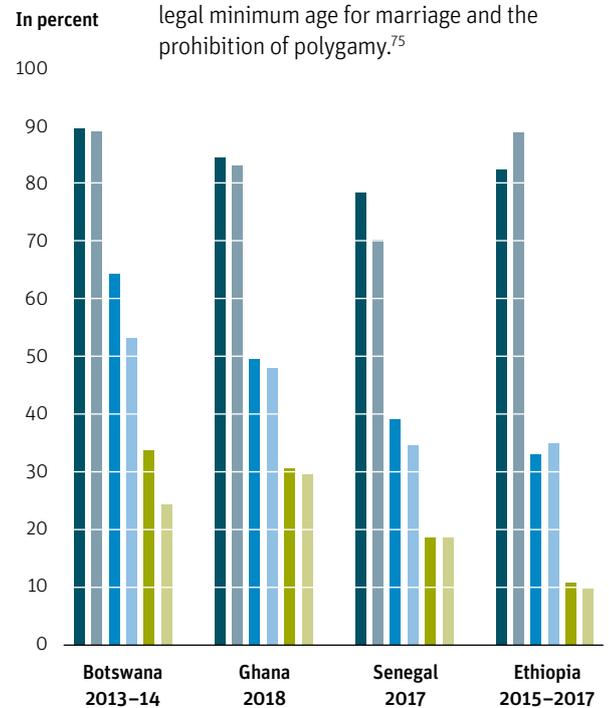
Opportunities for girls

In some African countries, the opportunities for girls to receive an education have already improved. In **Botswana**, **Ghana** and **Senegal**, the enrolment rate at the primary and secondary school level for girls is now even higher than for boys. In **Ethiopia**, the opportunities for boys to attend school are increasingly improving. But the girls have caught up significantly: while there were only 65 girls to 100 boys enrolled at schools in the 1990s, that figure today is 93.⁷⁴

- Girls at primary school
- Boys at primary school
- Girls at lower secondary school
- Boys at lower secondary school
- Girls at upper secondary school
- Boys at upper secondary school

3.2.1 More rights for women

If the goal is to promote demographic transformation and stem population growth, then it is essential to encourage girls to realise their potential and strengthen the position of women in society overall – not just in the area of education. The reasons for this are given in Chapter 1. The positive impact that more gender equality can have is to be seen in **Tunisia**. Here the government recognised at an early stage that the equality of women in society and a good education system are prerequisites for a demographic transformation. Accordingly, as early as 1956 Tunisia's first president, **Habib Bourguiba**, was the driving force behind a series of legislative amendments that granted women more rights – for example, the right to vote, a legal minimum age for marriage and the prohibition of polygamy.⁷⁵



Net enrolment rates at primary and secondary school according to gender, in percent

(Data source: UIS⁷³)

Other countries on the continent have laws providing for more equality enshrined in their constitutions. In **Malawi** the 1964 constitution prohibits discrimination of any kind, sexual harassment and violence against women. In 2004, **Botswana** made gender-based discrimination a punishable offence.⁷⁶ The constitution of **Zimbabwe**, approved in 2013, stipulates that marriage requires the consent of both partners and that men and women who are married have the same rights and obligations. Moreover, women are legally entitled to earn the same as men.⁷⁷ Such laws are important for paving the way for more gender equality, even if their implementation in daily life is frequently still problematic.

Some states are striving to ensure that there are more women in leadership positions and political office. This is important for the needs of the female members of the population to be taken into account by policymakers. For example, **Rwanda**, **Burundi** and **Eswatini** have written into their constitutions a fixed quota of women in political posts. Burundi's constitution stipulates that 30 percent of ministerial posts are to go to women.⁷⁸ In **Ethiopia**, there are no legal stipulations about the share of women in politics. Nonetheless, Abiy Ahmed, who has been prime minister since 2018, has filled half of his cabinet with women; and even the post of president of the country was recently held by a woman. In this way, the standing of women in society as well as the opportunities for them to take part in every area of daily life are likely to improve in the future.⁷⁹

At the same time, more gender equality means giving women the possibility to earn an adequate income. Until now, women in Africa – especially in the sub-Saharan countries – have worked mainly in agriculture and mostly only for their own needs. The work is hard and time-intensive and the majority of women earn almost nothing.⁸⁰ But being able to contribute to the household income or having money at their own disposal is an important step towards more autonomy for women. Widespread measures aimed at improving the opportunities for women to earn a living include microcredit and state employment programmes. In **South Africa** and **Madagascar**, such programmes have contributed to women not only pursuing paid work more frequently but also working as entrepreneurs and holding leadership positions.⁸¹

3.3 Income and jobs

One of the most urgent challenges for the African countries is creating jobs. There are two reasons for this. First, an adequate income is important for families to be able to escape poverty and no longer be dependent on their children as a labour force. Second, this is the only way to ensure economic growth that allows the state to invest more in healthcare and educational infrastructure and in the development of a pension system and thereby improve people's living conditions.

This can be seen from past experience: every country that is economically successful today has, during its demographic development, experienced a structural transformation that has created a large number of new jobs with higher value added. The starting point for this transformation was always productivity gains in agriculture, which enabled farmers to

produce surpluses and earn more money. In the course of this development, food security improved while poverty and child mortality rates fell. Through the productivity gains, labour was freed up and mostly migrated to the towns, where jobs were available in the factories being established there. Former agricultural countries transformed themselves in this way into ever more prosperous industrial and eventually service economies.

In Africa this transformation has barely started. The agricultural sector – which consists mainly of small-scale subsistence farming – remains the continent's main employer. However, productivity in this sector remains so low that Africa cannot feed its own populations and is dependent on food imports.⁸² But the example of **Ghana** shows that it does not need to be this way: agricultural reforms and subsidy programmes for fertilisers and pesticides as well as better-quality seeds have led to soaring yields not only of staple foods like manioc and maize but also of cocoa – the country's most important export. In this way, farmers' incomes have improved, as has food security and children's chances of survival – two important conditions for the fertility rate to decline.⁸³

In **Ethiopia**, too, state programmes have helped farmers to use modern techniques to increase their yields. To this end they receive assistance from agricultural advisers. As a result, the grain yields have more than doubled while coffee production has almost trebled. The goal is to further increase agricultural output in the future and to process the products in so-called agro-industrial parks. This will not only allow more money to be earned but will also create new jobs along the downstream value chain.⁸⁴

This kind of industrialisation for the processing of agricultural products is so far the exception in Africa. In the sub-Saharan countries, the share of processed goods in total agricultural production is just 20 percent. Only in **South Africa** and **Mauritius** can other exceptions be found: in these countries agricultural products such as fruit, vegetables, sugarcane and fish are mostly processed and marketed to create value added.⁸⁵

The potential to create jobs exists in other industrial sectors, too, not least because owing to wage growth in China, some 100 million jobs in the processing industry are to be relocated outside that country.⁸⁶ Many African states in which the transformation to an industrial economy has already begun have been promoting the development of a manufacturing industry through the establishment of special economic zones, which attempt to attract foreign companies with good infrastructure as well as tax and customs incentives. Often access to these zones is, as in the case of Nigeria, linked to a minimum investment. Alternatively, in some countries, like Zambia, companies have to prove that their activities will contribute sustainably to economic diversification.⁸⁷

Good practice: Morocco's path from an agricultural to industrial state

Morocco has long been represented on world markets only by agricultural goods, raw materials like phosphate and simple products such as textiles. But in the future the country would like to become an important industrial centre on the continent. Initial progress has already been made: today Morocco's car industry produces the largest share of the country's export goods – 24 percent – and thus more than agriculture.⁹⁰ The cutting of red tape, as for example in expedited court proceedings in trade disputes, and targeted incentives for high-profile foreign companies to open subsidiaries in the country have made Morocco an attractive location. In 2015, the North African state received the largest amount of investment in the manufacturing industry Africa-wide and the fourth-largest amount of foreign investment overall, while in 2006 it was still ranked 14th. All in all, the manufacturing industry accounts for some 16 percent of gross domestic product and 10 percent of formal employment in the country.^{91, 92, 93}

To attract foreign investment, the government is banking not just on low wage costs but also on the establishment of special economic zones, in which companies benefit from tax and customs incentives. The aim is for companies from one sector, such as the automobile industry, to open subsidiaries in the same location to take advantage of the cluster effect.⁹⁴ Such a special economic zone has already been established in the port city of Tangier, from where the transport route to Europe is short. The French car company Renault, which built its first factory in Casablanca back in 1959, opened a second one in that city in 2012 with an investment of 1.5 billion US dollars. Further investments by Peugeot, Nissan and Tata have made Morocco the second-largest African car manufacturer after South Africa.^{95, 96}

The government wants to push ahead further with industrialisation in the future. Since 2017, it has been building, together with the Chinese government, a one billion US dollar new industrial park in Tangier, which is intended to attract, above all, Chinese manufacturers and create another 100,000 jobs.⁹⁷ These are urgently needed if Morocco is to transform its currently favourable age structure into a demographic dividend (see Chapter 2.6).

3.4 The will to transform – among politicians and traditional leaders

Whether the demographic transformation can be expedited in the African states depends to a large extent on how much political engagement exists on the ground. After all, this is where the decisions will be made about how the healthcare and education systems can be improved or how easy it is to create jobs.

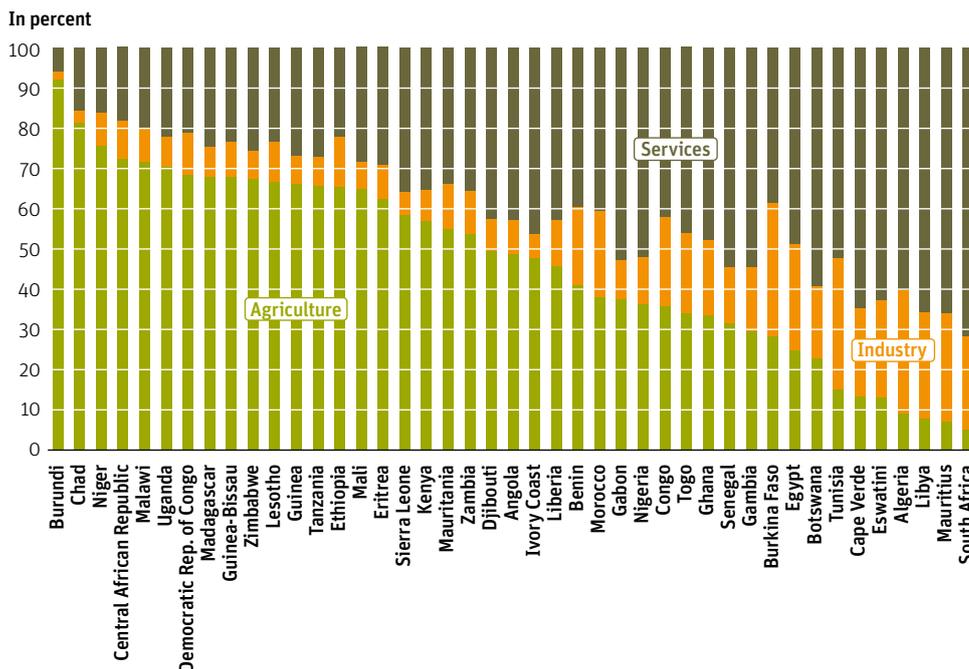
Moreover, politicians and other people in leadership positions have an influence on cultural norms and traditions. Developments in **Tunisia** and **Kenya** at the end of the 1970s have shown what impact can be made if presidents speak out publicly in favour of women's rights or family planning. Similarly, **Rwanda** has been able to make such enormous progress in spreading the use of contraceptives not least because the political leadership – including President Paul Kagame – has advocated family

Industry a future job generator?

Until now, agriculture has been the main employer in Africa, especially in the less developed states. An industrialisation process like the one in other parts of the world, which in the past created huge numbers of jobs for the growing population, has barely started to date. Today, two-thirds of the value creation in the manufacturing industry on the continent comes from just four countries: Nigeria, South Africa, Egypt and Morocco.⁸⁹ Good framework conditions for investors could create more formal jobs in the manufacturing sector in other countries in the future.

Estimated share of employment by economic sector, in percent, 2019

(Data source: ILO⁸⁸)



planning and stressed the importance of its role in the country's development progress.⁹⁸ For example, at the international family planning conference in the Rwandan capital, Kigali, in 2018, Prime Minister Édouard Ngirente stated that family planning was not simply a women's issue but rather one that affects the development of entire nations.⁹⁹

Another leader who has publicly campaigned for demographic development is the president of **Malawi**, Peter Mutharika. In 2015 he was named *Champion for Youth and Demographic Dividend* by the United Nations and in this capacity is striving to persuade other African heads of state to invest more in their young people.¹⁰⁰ If there were more such voices among African leaders, especially in those countries that have already made considerable progress, this could have a further positive influence on the debate about subjects like family planning, women's rights and demographic policy.

However, this requires not only the engagement of the political leadership but also that of influential people in the communities and villages. Above all, new role and family models must first gain a foothold in the mainly tradition-based societies of rural areas so that people will begin to plan the size of their families voluntarily. Village elders or priests and imams can have a significant influence on the prevailing norms and traditions. The advantages of having local advocates of family planning can be seen in **Senegal**. In other countries, too, religious leaders are promoting issues such as education for girls, family planning and reproductive health. In **Zambia**, for example, members of the *Churches Health Association*, the largest non-state provider of healthcare services in the country, are lobbying for improved access to family planning methods.¹⁰¹ In northwest **Nigeria**, the prevalence rate of modern contraceptives has doubled since a USAID campaign succeeded in convincing religious leaders of the advantages of bigger intervals between

children and smaller families. They began thereupon to speak on the radio and in their communities about the advantages of family planning and thereby broke the taboo that until then had prevented many people from considering using contraception.¹⁰²

These practical examples from different African countries show that there is much happening on the continent that is having a positive influence on declining fertility rates and thereby on the demographic transformation in the region. This process should be expedited – and as quickly as possible. The leaders of the African states have the responsibility to make the necessary adjustments highlighted in this study.

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1 Fertility rate means the number of children per woman (TFR).

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