

African demography

The young continent

With fertility rates falling more slowly than anywhere else, Africa faces a population explosion

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ON A trolley in a government clinic in rural Ethiopia lies Debalke Jemberu. As a medic and a nurse winkle the sperm-carrying tubes out of his testicles, he explains why he decided to have a vasectomy. He is a farmer, growing wheat, sorghum and a local staple grain called teff. But his plot is barely a quarter of a hectare. He already has four children, and has often struggled to provide for them. “I couldn’t feed more children,” he says.

The medic, who has six more vasectomies to perform that day, interrupts to say he is finished. Mr Jemberu pulls up his trousers, pops on his woolly hat and continues. His parents had seven children, but they had eight hectares to farm. That plot has been shared among his siblings, and diminished by sales and land reforms. At the same time, he complains, the cost of living has gone up. Seven children would be far too big a family these days.

Mr Jemberu’s daughter, who is 25, is still single (he married at 19). He is happy for her to concentrate on her studies for a few more years before starting a family. And when she does, he thinks two children would be plenty. In the meantime, he says, he will tell his fellow villagers how quick and painless the vasectomy has been.

In the minds of many Westerners, Ethiopia is a teeming place with an ever-increasing number of mouths to feed. That is indeed the case in some parts of the country: in the arid south and east, for instance, communities of pastoralists, some of them nomadic, still tend to have big families. Six or seven children remains the norm. But in Addis Ababa, the capital, the average is slightly less than two children per woman, just as it is in most rich countries.

In other words, Ethiopia spans the world's demographic spectrum. Some parts have populations growing as fast as anywhere on the planet; others have already been through a "demographic transition", in which the population stabilises or even shrinks as people grow richer and have fewer children. Most of the country, however, is like the highland region where Mr Jemberu lives, in which the typical woman has more than two children, but the downward trend is clear.

The shift has been rapid and dramatic. In the early 1990s the average Ethiopian woman had seven children and the country's population was growing by 3.5% a year. Women now have 4.1 children on average and population growth has slowed to 2.5%. By 2050, the UN reckons, growth will have slowed further, to 1.3%; by 2100 the population will actually be contracting slightly. By then, however, there will be 243m Ethiopians, up from 100m now and 18m in 1950.

Most other countries' demographic transitions have gone much further. Globally, the average woman now has 2.5 children, half as many as in 1960-65 and not much above the 2.1 at which the world population will stabilise. (This "replacement rate" is a little higher than two because some girls die before their childbearing years and fewer girls are born than boys.) The fertility rate is below replacement in most rich countries, and in plenty of developing ones. In Colombia it is 1.9, just as it is in America and Britain. In Iran it is 1.8 and in China 1.6. The UN calculates that 46% of the world's population lives in countries where the fertility rate is below the replacement rate.

How quickly Ethiopia and other African countries follow this example has implications not just for those countries but for the whole world. It is the most pressing question for demographers, since it will determine how fast the global population grows in the coming decades and how soon it might stabilise. That, in turn, has repercussions for efforts to eliminate poverty, curb global warming and manage international migration.

Alarmingly, population growth in Africa is not slowing as quickly as demographers had expected. In 2004 the UN predicted that the continent's population would grow from a little over 900m at the time, to about 2.3 billion in 2100. At the same time it put the world's total population in 2100 at 9.1 billion, up from 7.3 billion today. But the UN's latest estimates, published earlier this year, have global population in 2100 at 11.2 billion—and Africa is where almost all the newly added people will be. The UN now thinks that by 2100 the continent will be home to 4.4 billion people, an increase of more than 2 billion compared with its previous estimate.

If the new projections are right, geopolitics will be turned upside-down. By the end of this century, Africa will be home to 39% of the world's population, almost as much as Asia, and four times the share of North America and Europe put together. At present only one of the world's ten most populous countries is in Africa: Nigeria. In 2100, the UN believes, five will be: Nigeria, Congo, Tanzania, Ethiopia and Niger.

Although much could change in the next 85 years, none of those countries is a byword for stability or prosperity. A quadrupling of their population is unlikely to improve matters. If nothing else, the number of Africans seeking a better life in Europe and other richer places is likely to increase several times over.

What is more, Africa's unexpected fecundity will change the shape of the world's population. The declining birth rate elsewhere has brought the world to the verge of what Hans Rosling, a Swedish demographer, calls "peak child". In 1950 the world had some 850m people aged 14 or under. By 1975 that number had almost doubled, to 1.5 billion. This year it was a little over 1.9 billion—but it has almost stopped growing. It is expected to continue to climb only very slightly in the coming years, reaching 2 billion in 2024, but never exceeding 2.1 billion.

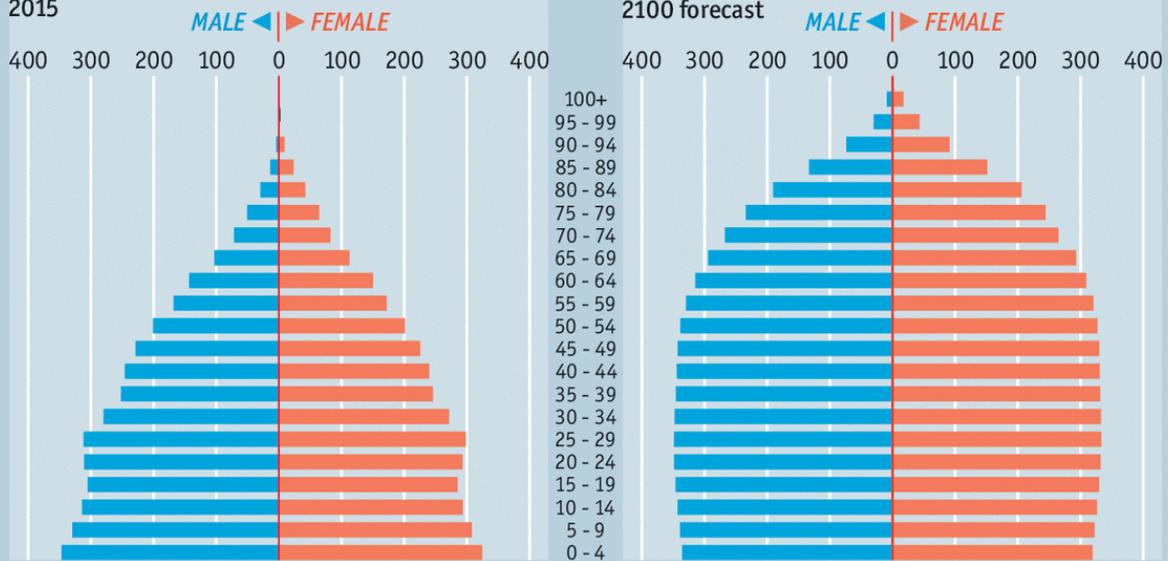
Thanks to the continued growth of Africa's population, however, the peak will be more of a plateau. High birth rates in Africa and low ones elsewhere will more or less balance out. Africans will make up a bigger and bigger share of the world's young people: by 2100, they will account for 48% of those aged 14 and under.

Moreover, the world's population will continue to grow despite the levelling off in the number of children. Up until now population has resembled a pyramid in structure, with children outnumbering young adults, young adults outnumbering the middle-aged and the middle-aged outnumbering the elderly. People now in their 60s, for instance, come from a generation that was less than half as big as the current cohort of children. As today's children age, they will make the upper echelons of the pyramid wider. But the lower ones will remain the same size, thanks to peak child, so the pyramid will come to look more like a dome (see chart). Were it not for continued growth in Africa, the pyramid might even have inverted, leaving more old people in the world than young ones.

Middle-age spread

Global population by age and sex, m

2015



Source: UN Population Division

Economist.com

African exceptionalism

The revision of population predictions for Africa partly reflects the fact that HIV/AIDS has not proved quite as catastrophic for the continent as seemed likely ten years ago. Mainly, however, it stems from the startling persistence in Africa of very big families. Women in the region still have more babies, on average, than those in Asia and Latin America did in the 1980s.

The human population only began to grow quickly and steadily in the 19th century. Before then women had lots of children—perhaps about seven each on average—but most died before adulthood. As health care improved over the past 200 years or so, far more of these children survived and went on to have children of their own; hence the explosion in the world's population. As people have become richer, however, they have also begun to have fewer children; hence the recent decline in the growth rate.

The tendency for societies to have fewer children as they become richer appears to be universal. It holds good across races, religions and ethnicities. Thus the fertility rate is the same (2.3) in Azerbaijan (which is largely Muslim), Mexico (largely Christian), Myanmar (largely Buddhist) and Nepal (largely Hindu). By the same token, many countries that remain relatively rural—Bangladesh, India and Vietnam, for example—have nonetheless seen sharp falls in fertility, albeit not quite to the levels of heavily urbanised ones, such as Brazil.

There seems to be just a handful of prerequisites for a falling fertility rate: a modicum of stability and physical security, some education (especially for women) and wide access to contraception. The faster these conditions are met, the faster birth rates come down.

The only places where women continue to churn out babies are dirt-poor and unstable countries such as Afghanistan, Congo, East Timor and Niger (see map). Counter-intuitively, war, famine and other disasters tend to boost population in the long run, by keeping fertility rates high. It is only when parents are confident that their children will survive that they risk having fewer of them.

Total fertility rate*

2010-15
Estimate

Global average
2.51



2095-2100
Forecast

Global average
1.99



Source: United Nations

*Number of children per woman

Sub-Saharan Africa, sadly, is very poor and unstable, which helps explain why its demographic transition seems to be proceeding more slowly than that of other parts of the world and to have stalled or not yet started in several

countries. But even relative to their levels of income, health and education, the countries of sub-Saharan Africa have high fertility rates. That has prompted some scholars to posit cultural explanations.

One theory is that African men want big families to enhance their status; another that communal land-holding makes them economically beneficial, since resources are shared according to family size. Without dismissing these arguments, John Bongaarts of the Population Council, an international non-profit group, suggests a third: relatively low use of modern contraception. In many places, after all, vigorous campaigns to disseminate contraceptives and discourage big families have contributed to sudden and deep falls in fertility. Such a drive in the 1970s in Matlab, a district in Bangladesh, saw the share of women using contraceptives increase six-fold in 18 months.

The African countries that have seen big falls in fertility are those, such as Burundi, Ethiopia and Senegal, with similar campaigns. In Ethiopia the fertility rate has fallen by about 0.15 a year for the past decade—blisteringly fast by demographic standards. That is probably thanks in large part to the nationwide network of 38,000 “health-extension workers”—one for every 2,500 people. Their job is to pay regular visits to each household within their locality and provide coaching on public health, from immunisations to hygiene. One of the 16 subjects in which they drill every Ethiopian is family planning.

It is through a health-extension worker that Mr Jemberu learned that he could receive a vasectomy free of charge, courtesy of Marie Stopes International, a British charity. Around 100 metres from where he is having the snip, five health-extension workers have gathered 50 women for a traditional coffee morning. As one of the workers grinds coffee beans using an improvised pestle and mortar, two doctors explain the different methods of contraception that the government can provide to local women.

One holds up a display board with a condom, an intrauterine device, a dose of an injectable contraceptive, a packet of pills and a contraceptive implant. The other removes these displays one by one and passes them around, along with big chunks of bread and small cups of strong black coffee. Embarrassed women in the audience mutter questions into their shawls, while shushing fussy babies. The discussion is not limited to technicalities: there is much talk about the desirability of small families and how expensive big ones can be. The same message is echoed in public-service announcements on Ethiopian radio and television.

Though the government is the main force behind this family-planning drive, it welcomes help from Western donors and charities. Marie Stopes, for instance, pays for ten mobile teams that travel between rural clinics performing vasectomies and tubal ligations, the female equivalent. It also runs 31 facilities in cities, where in addition to contraceptives and obstetric care, women can obtain abortions. Then there is its Blue Star scheme, whereby it has accredited 207 private clinics, to signal that they provide reliable and affordable maternal health-care.

Yohannes Abate, who runs one such clinic in Bahir Dar, a lakeside city in the centre of the country, says that when he first set up shop in 2003, people hardly knew what contraception was and almost never asked for it. Now providing it accounts for 10% of his business. The patients in the waiting area speak freely of the expense of raising children; most say two or three is plenty. "I want to be able to afford to look after them," says Zewdo Yetimwork, a university lecturer who has come for a postnatal check-up for his month-old daughter. Behind him a cardboard cut-out of a sleek and smiling urban couple advertises Sensations, a local brand of condom ("Make your life Sensational").



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next generation

The UN reckons that the share of Ethiopian women aged 15-49 who use some form of contraception has risen from 6% in 2000 to 40% last year. The government hopes to get the "prevalence rate" to 66%. It is pushing longer-lasting and permanent forms of contraception in particular. Since 2007 it has allowed health-extension workers to administer injectable contraceptives, which typically last for three months. Since 2009 it has allowed them to insert contraceptive implants, which last for several years. Women prefer these methods, say the health-extension workers in Mertule Mariam, not only because they involve less hassle, but also because they are more discreet. There are no pills or condoms for nosy relatives or neighbours to discover.

For the prevalence rate to keep rising, however, contraceptives must be omnipresent and cheap. Western donors have offered support here, too. At a conference in London in 2012, a group of them agreed to devote \$2.6 billion to it. The Gates Foundation, the world's biggest philanthropic organisation, promised to spend \$140m a year. Since

then, it claims, 24m women have gained access to contraceptives in the countries the group is targeting. It has also helped several African governments to build strong supply chains so that clinics in remote areas never run out and brought together a consortium of aid agencies that has promised to buy contraceptives in large quantities if their manufacturers lower the price. That has helped reduce the cost of contraceptive implants from about \$24 a dose to about \$8, says Lester Coutinho, who runs the charity's family-planning efforts.

Alas, there is lots more to do. The UN estimates that there are still 216m married women in the world who would like access to modern methods of contraception, but do not have it. The Copenhagen Consensus, a group of academics which rates development policies, reckons it would cost \$3.6 billion a year to provide what they need. The benefits, in terms of the diminished need for infrastructure and social spending, reduced pollution and so on, would be \$432 billion a year—120 times more. That is the second-most productive investment the project has identified, after liberalising trade, out of a welter of different development goals. Better yet, it helps with all the others.

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