



Potential impact of later childbearing on future population

The ages at which women bear children have important implications for the future size and age structure of the world’s population. In regions and countries where fertility is still high, an upward shift in the ages at which women bear their children would accelerate progress toward the achievement of the Sustainable Development Goals (SDGs), in particular for targets related to reproductive health, education and women’s empowerment. Such a shift would also reduce the future size of the population and shape its age structure in a way that can spur economic development.

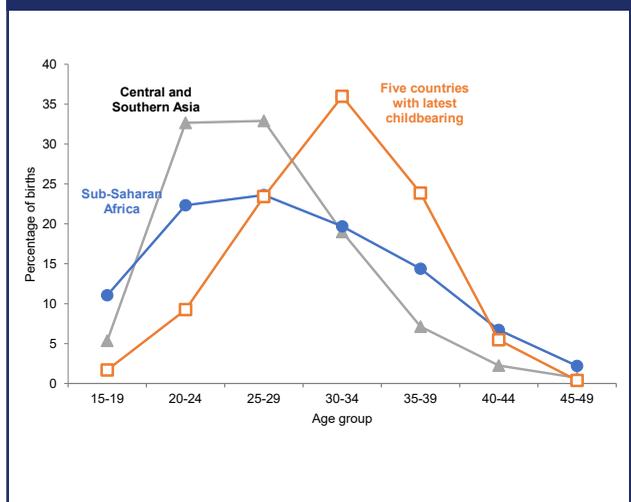
Levels of fertility are the most important determinant of future population size and structure, especially in countries where the average number of live births per woman is three or more. A small change in the projected average number of births per woman will have important repercussions on both the size and structure of the population. For example, assuming that the average number of births per woman will continue to decline and follow a trajectory that has been observed in other countries at a similar level of fertility, as assumed by the medium variant of *World Population Prospects 2019 (WPP)*, the population of Niger—the country with the highest average number of live births per woman today—is expected to grow from 23.3 million in 2019 to 165 million in 2100. If the projected average number of births per woman will be higher by 0.5 children compared to the medium variant, as assumed in the high variant, the population of Niger is projected to reach 216 million in 2100. However, should fertility be lower by 0.5 children than in the medium variant, the future population of Niger would reach 124 million in 2100.

Projected changes in the age pattern of fertility, that is, how childbearing is distributed across the age range for women, will also have important repercussions for the future population. This fact sheet examines the effect that later childbearing can have on the future size and structure of the population in high-fertility countries, an effect that is rarely illustrated in the context of demographic projections.

1. The mean age of childbearing varies greatly around the world

Figure 1 shows three distinct patterns of the distribution of births by age of the mother. In sub-Saharan Africa, where women had, on average, 4.7 live births in 2018, the distribution of births is spread across the reproductive ages. In Central and Southern Asia, where fertility had declined to an average of 2.4 births per woman in 2018, births are concentrated in age groups 20 to 29. The third pattern illustrates the distribution of births in the five countries¹ where the average number of births per woman is below two and where the mean age of childbearing is the highest. In these countries, women have their children at later ages, mainly due to the pursuit of higher education and a professional career.

Figure 1. Distribution of births by age of mother in 2018: Comparison of sub-Saharan Africa, Central and Southern Asia and the five countries with the highest mean age of childbearing



The mean age of childbearing indicates whether an earlier or later pattern of childbearing prevails. At the regional level, the mean age of childbearing in 2018 was lowest in Latin America and the Caribbean (27.3 years) and in Central and Southern Asia (27.5 years). In these two regions, although the total number of births has fallen, most women continue to have their children while still relatively young. The highest mean age of childbearing was found in Australia and New Zealand (30.8 years) and in Europe and Northern America (29.8 years). In these two regions the average number of births is below two children per woman, and women tend to give birth at older ages. The mean age of childbearing in sub-Saharan Africa was relatively high (29.1 years). Here, fertility levels are still elevated and although childbearing starts early, a large proportion of women bear children of higher birth order at older ages.

2. Later age patterns of childbearing influence the future size of population by slowing the pace of population growth

The mean age of childbearing affects the population growth rate and therefore has important implications for the size of future populations. The time between one generation and the next is directly affected by the ages at which women bear their children, or the distribution of births across the reproductive age span. Holding constant the number of births per woman, if those births occur at younger ages, the average interval between generations will be shorter. A lower mean age of childbearing will increase the size of the future population, given that the time between generations is shorter and therefore more people are being added from year to year. By contrast, a later childbearing pattern, as reflected in a higher mean age of childbearing, slows the pace of growth and reduces the size of the future population, because the time between generations is longer and fewer people are being added per year.

In addition to slowing population growth by increasing the average time between generations, a later childbearing pattern reduces the number of births per year due to premature deaths among women of reproductive age, even if fertility rates by age remain the same: some births that previously would have occurred earlier in life among women who die before menopause may never occur. This effect would be negligible in many low-mortality countries today, but it remains important in countries where female mortality in the reproductive ages is still relatively high.

3. A “late childbearing” scenario to illustrate the impact of a change in the age patterns of childbearing

To illustrate the effect of a change in the age distribution of births, or childbearing pattern, on the future size of the population, a “late childbearing” scenario was developed using data from *World Population Prospects 2019*. In this “what-if” scenario, the total fertility, or the average number of births per woman, will continue to decline as in the medium variant of *World Population Prospects 2019*.² It is further assumed that all countries and areas of the world will (a) reach, by 2030, a childbearing pattern similar to what was observed in 2018 in the five countries where the mean age at childbearing was the highest and where the average number of children per woman was below two, and (b) keep the same childbearing pattern from 2030 until 2100. In other words, the distribution of births in all countries or areas by 2030 would be identical to the one experienced by the five countries with the highest age of childbearing in 2018 (see figure 1) and remain stable until 2100.

For some populations, the changes implied under the late childbearing scenario would require profound transformations of current reproductive behaviours, such as marriage at much later ages or a significant reduction (or elimination) of adolescent pregnancies.

The transition towards later childbearing aligns well with the United Nations Global Strategy for Women’s, Children’s, and Adolescents’ Health and with the 2030 Agenda for Sustainable Development, in particular for Goals and targets related to reproductive health, education and empowerment of women and girls. Ensuring healthy lives and promoting well-being for all at all ages (SDG 3), including through universal access to sexual and reproductive health-care services (SDG target 3.7), ensuring access to quality education for all (SDG 4), and achieving gender equality and empowering all women and girls (SDG 5), including through elimination of child, early and forced marriage (SDG target 5.3), are likely to increase the mean age of childbearing. At the same time, achievement of these ambitious Goals and targets may be facilitated by a later childbearing pattern.

4. Later childbearing yields smaller future populations

Assuming that women in all countries and areas of the world will achieve the same level of lifetime fertility assumed for the median variant, while shifting by 2030 to the later childbearing pattern observed in 2018 in the five countries with the highest age of childbearing, and

maintaining the later pattern throughout the century, the future size of the world's population would reach 10.5 billion in 2100, a figure that is 384 million (3.5 per cent) lower than the 10.9 billion of the medium-variant projection.

The difference in the projected size of the world's population between the medium variant and the late-childbearing scenario is due almost entirely to a change in the future size of the population in sub-Saharan Africa. Under the late-childbearing scenario, the population of sub-Saharan Africa would reach 3.4 billion in 2100, 372 million (9.9 per cent) fewer persons

than the 3.8 billion projected under the medium variant (figure 2).

In sub-Saharan Africa, where fertility remains high in most countries, the future size of the total population would be at least 10 per cent lower in 15 countries in 2100 if women bore the same number of children but at later ages on average (figure 3). The largest reductions would be found in Niger and Somalia, where a later childbearing pattern implies a total population size that is almost 16 per cent lower.

5. Later childbearing yields a future population structure that could spur economic development

Later childbearing brings not only a reduction in the future size of the population, it also affects the distribution of population by age. In sub-Saharan Africa, the late-childbearing scenario would result in fewer people across most age groups in 2100 (figure 4). The number of children under the age of 15 years would be 12 per cent smaller in 2100 if women bore their children later, and the working-age population—those aged 20 to 59 years—would be 9.7 per cent smaller. At ages 60 and above, the difference in population size would be more limited, because some persons in this age range in 2100 would have already been present in the population in 2020. Therefore, the number of older persons would be less affected by a change in the timing of future childbearing.

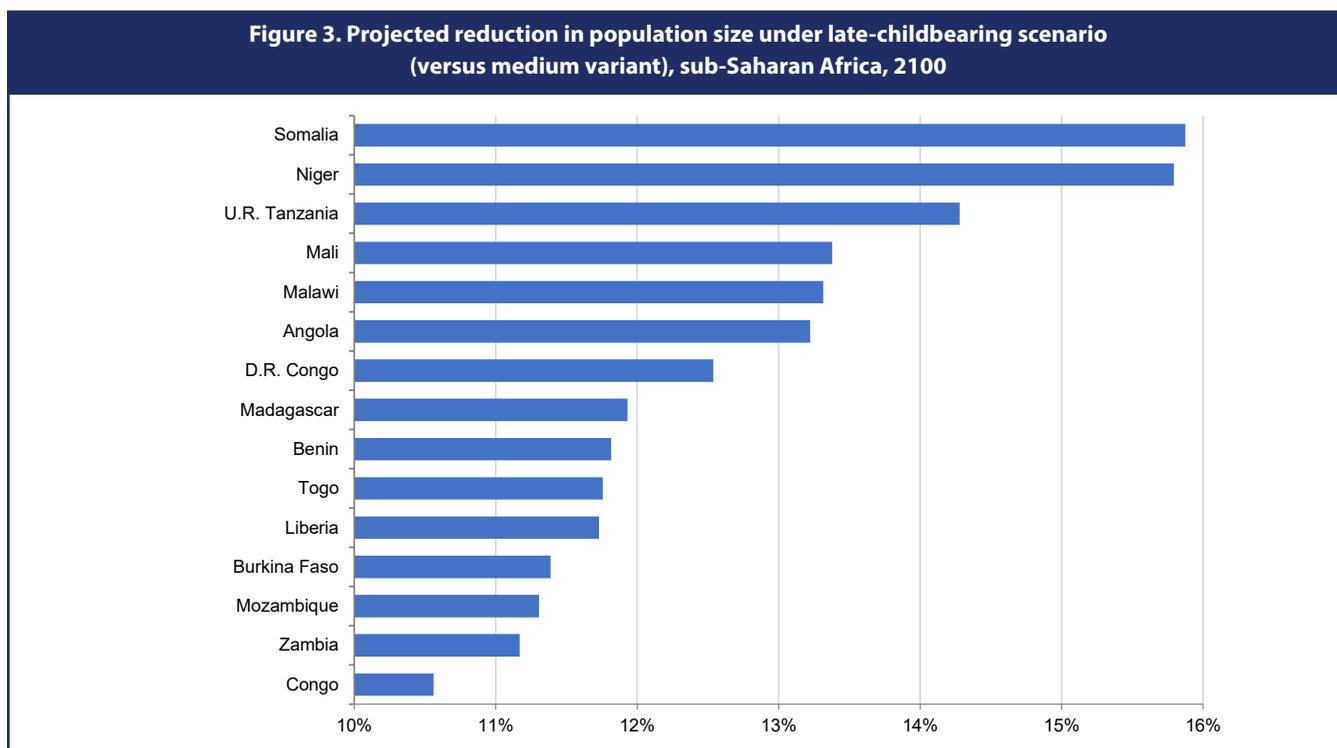
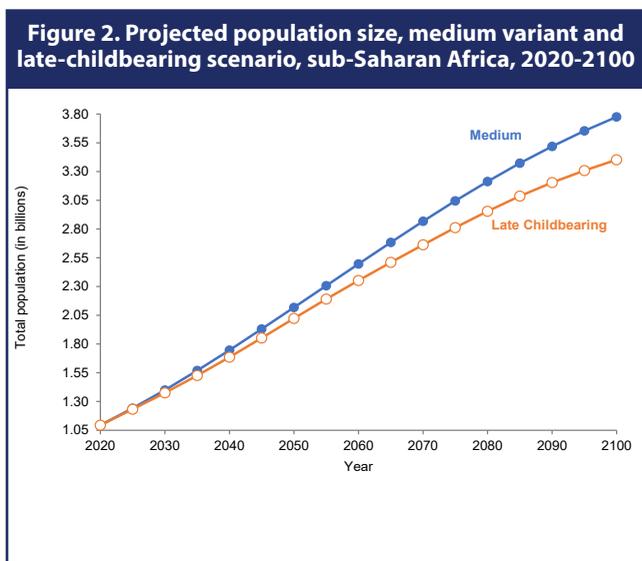
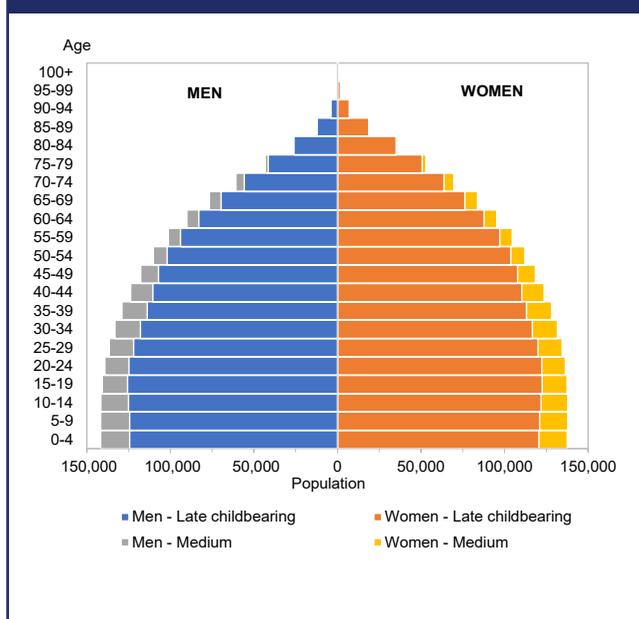


Figure 4. Projected population distribution by age and sex, medium variant and late childbearing scenario, sub-Saharan Africa, 2100



Future changes in the population age structure of sub-Saharan Africa, as foreseen under the late childbearing scenario, could have important implications for sustainable development. A reduction in the number of children in relation to the size of the working-age population can help to promote accelerated economic growth, a phenomenon referred to as the “demographic window of opportunity” or “demographic dividend”, while also allowing governments to better meet the needs of the population.

In summary, the age at which women have their children can have important impacts on the future size and structure of the population. Such effects are especially significant in regions and countries where fertility remains high and childbearing occurs relatively early. In sub-Saharan Africa, the size of the population would be close to 10 per cent smaller in 2100 if women were to bear the same number of children over the reproductive lifespan, but at significantly older ages than assumed under the medium-variant projection. The associated reduction in the number of births per year would result in fewer children relative to the size of the working-age population, providing more favourable conditions for economic development.

The degree to which women in high-fertility countries will adopt a later childbearing pattern remains unclear, and the assumption made under the late-childbearing scenario employed here may seem somewhat extreme.³ The scenario has the merit, however, of stressing the importance of the timing of childbearing for global health, population and development. As it has often been observed, when individuals and couples are able to exercise their basic right to decide freely and responsibly the number, spacing and timing of their children and to have access to education and health care, including reproductive health care and family planning, they tend to marry at later ages, the interval between births tends to lengthen, the number of births per woman tends to fall and population growth tends to slow down.

Notes

¹ These five countries or territories are China, Hong Kong Special Administrative Region (SAR), Italy, Luxembourg, Spain and Switzerland, with a mean age of childbearing of 31.9 years.

² For the late-childbearing scenario, the assumed level of total fertility is the same as in the medium-variant projection. Thus, for each future year, the sum of age-specific fertility rates is the same in the late-childbearing scenario as in the medium-variant projection. However, the magnitude of those rates increases gradually at older reproductive ages until 2030 in the late-childbearing scenario, with commensurate reductions at younger ages, resulting in an upward shift in ages of childbearing. While future total fertility by calendar year would be the same as in the medium-variant projection, for certain cohorts total fertility would be somewhat higher in the late-childbearing scenario compared to the medium variant, due to the gradual increase in ages of childbearing (often called a “tempo effect”).

³ For sub-Saharan Africa, it is assumed that the mean age of childbearing would increase by 2.8 years over 10 years between 2020 and 2030—a value that is more than twice the fastest increase estimated in *World Population Prospects 2019*.

Source

United Nations (2019) *World Population Prospects 2019*. Online edition. New York: United Nations, Department of Economic and Social Affairs, Population Division. Available online at: <https://population.un.org/wpp/Download/Standard/Fertility/>.



Prepared by the Population Division of the United Nations Department of Economic and Social Affairs. For more information, please see: www.unpopulation.org. Copyright © 2019 by United Nations, made available under a Creative Commons license (CC BY 3.0 IGO) <http://creativecommons.org/licenses/by/3.0/igo/>