



# Gender Education

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## Education

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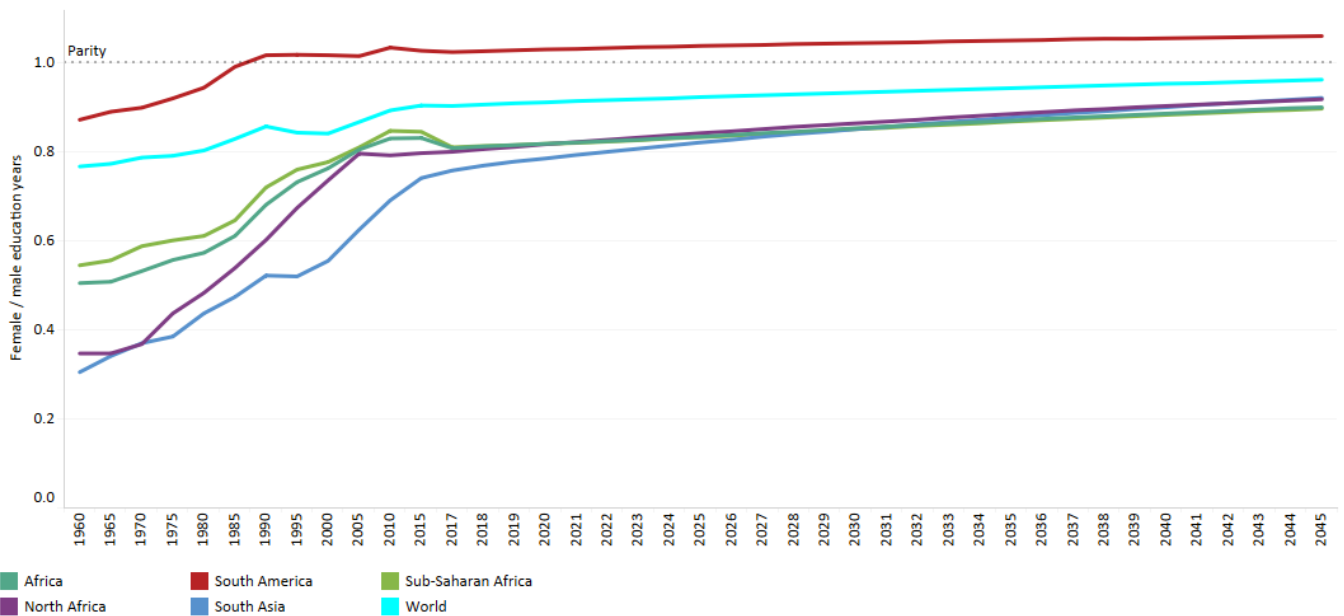
### Briefly

A separate theme on education models the impact of an ambitious scenario on improving the quality, quantity and job relevance of education. Here we primarily focus on quantity.

### Overview

Globally, the dimension of gender inequality, where progress has been most pronounced and widespread, has been in the quantity of education provided to females compared to males. Chart 2 shows the trends in the ratio of females' mean years of education to males' in African countries and other important regions. The ratio improved from 0.5 in 1960 to 0.8 in 2019 (where 1 is full parity), on par with South Asia. This represents significant progress, given that improving educational outcomes takes time. However, this ratio is below the world average of 0.9 and the parity levels obtained in South America. Indeed, South America achieved gender parity in terms of mean years of education in the 1990s. On the Current Path, Africa will not achieve full parity over the forecast horizon, as the ratio will only improve to 0.9 in 2043.

Chart 2: Gender parity, mean years of education (aged 15+), Africa and other regions, 1960-2043



Source: IFS 7.96 initialising from Barro-Lee data

Examining gender parity trends across different levels of education reveals disparities. Trends are more favourable when considering primary and secondary school enrolments, as there has been a significant improvement in the share of African girls receiving primary education.

Subsequent subsections present gender parity at primary, secondary and tertiary levels, starting with enrolment rates

followed by completion rates.

## Primary, secondary and tertiary enrolment

Chart 4 shows the female/male ratio of net primary school enrolment in Africa, as well as a selection of global groups in 2019 (pre-pandemic level) and the Current Path forecast for 2043. In 2019, 94 girls were enrolled in primary school for every 100 boys in Africa, which is below the averages for other developing regions but an improvement from the level of 90 girls for every 100 boys in 2000. This is due to the relatively low gender parity ratio in sub-Saharan Africa, with 93 girls enrolled in primary school for every 100 boys in 2019. North Africa has achieved gender parity in net primary school enrolment.

**Enrolment rates:** The composite effect of specific intake rates and grade-to-grade survival rates. Breaking down enrolment rates into entry, progression and survival components provides information about flow patterns, such as whether a country is successful at providing access (high entry rates) but is less successful with respect to progression (low survival rates).

**Gross enrolment rate:** The number of students enrolled in a given level of education, regardless of age, expressed as a percentage of the official school-age population corresponding to the same level of education. Rates can therefore be above 100%.

**Net enrolment rate:** The percentage of an entering cohort persisting to the beginning of the final year of a given level of education.

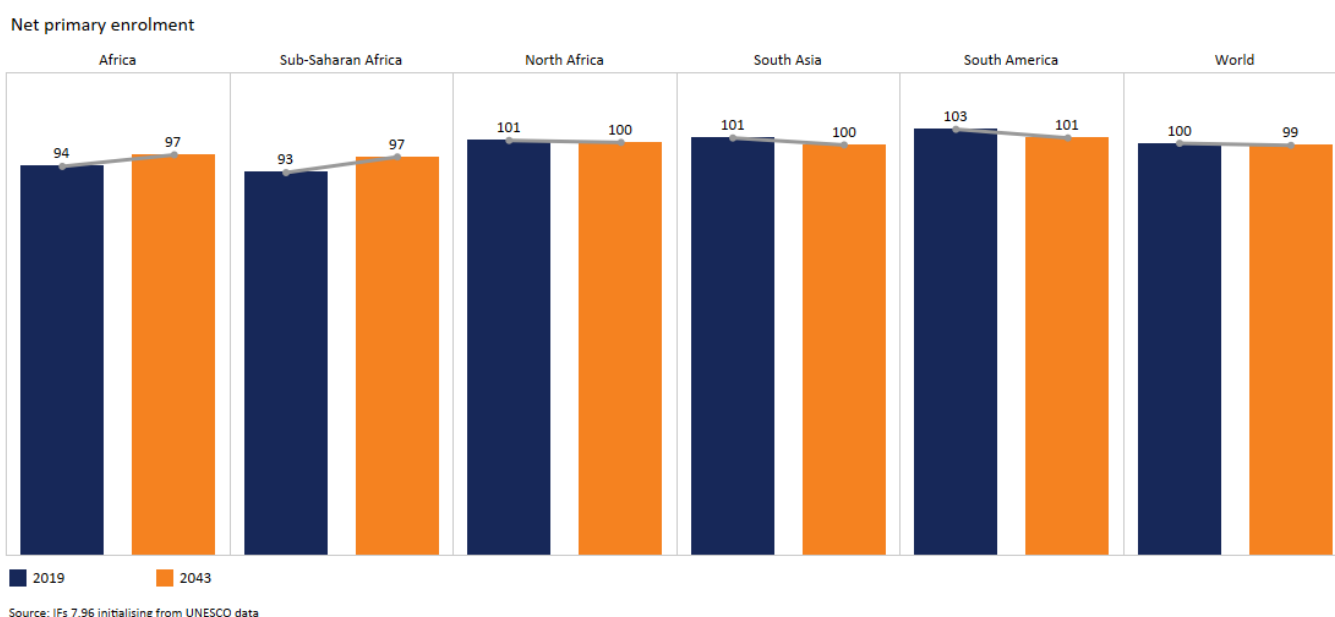
**Survival rate:** The percentage of an entering cohort persisting to the beginning of the final year of a given level of education.

**Transition rate:** Transition rates to the new levels are calculated by dividing the number of new entrants to each new level by the number of students who were in the final grade of the prior level the previous year. For example, transition rate to secondary schools refers to new entrants to the first grade of secondary education in a given year, expressed as a percentage of the number of pupils enrolled in the final grade of primary education in the previous year.

**Completion rate:** The number of students in the relevant age group who have completed the last grade of the given level of education as a percentage of the population at the theoretical graduation age for the given level of education. In other words, the ratio between the number of students completing an education level and the number of children or youth in the population at large who are the expected age to do so. At primary level, for example, the completion rate is calculated as the number of children completing the final grade as a percentage of the population of the age a child would be who began first grade at the system-defined entry age and progressed without repetition or interruption through the final grade.

**Source:** JR Dickson, BB Hughes and MT Irfan, *Advancing global education: Patterns of potential human progress*, vol. 2, Boulder: Paradigm, 2010, 17.

Chart 4: Gender parity (net primary enrolment) in Africa and other regions, 2019 and Current Path forecast in 2043



In 32 African countries, the female-to-male ratio of net primary school enrolment is above 1, meaning that for every 100 boys, there were more than 100 girls enrolled in primary school in 2019. In other words, gender inequality in net primary school enrolment in these countries is skewed in favour of girls. Countries such as Egypt, Gabon and Lesotho have achieved full parity, while Nigeria and Angola have the lowest ratios at 0.74 and 0.68, respectively.

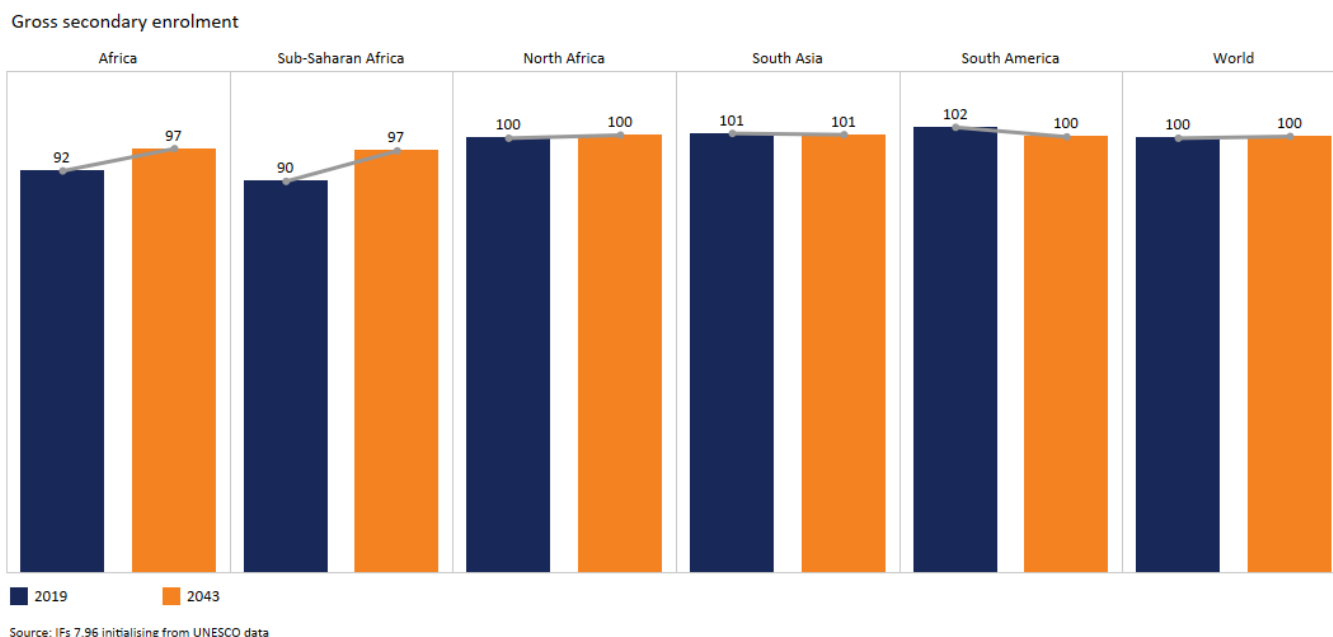
Also, looking at the gross primary enrolment (not shown on the chart), 99 girls were enrolled in primary school for every 100 boys in Africa in 2019. This is on par with the world average and an improvement from a ratio of 0.86 in 2000 (i.e. 86 girls for every 100 boys). In some African countries, such as Mauritius, Seychelles and Senegal, the female-to-male ratio of gross primary school enrolment is above 1, meaning that gender inequality in gross primary school enrolment affects boys in these countries. Some countries, such as Egypt, Kenya and Libya, have achieved full parity, while Chad and South Sudan had the lowest ratio at 0.78 and 0.71, respectively, in 2019.

On the current development trajectory, the female-to-male ratio of net primary school enrolment in Africa is forecast to be at 0.97 in 2043—a relatively moderate improvement compared to its pre-pandemic level of 0.94 in 2019 (Chart 4). This is partly due to the COVID-19 pandemic that slowed progress, as many girls did not return to school after the pandemic. A study by the World Bank suggests that girls were 1.2 times more likely to drop out of school than boys due to the impact of the COVID-19 pandemic.[1] A similar study in Kenya found that the proportion of girls (16%) who did not return to school in 2021 after nearly a year of school closure was twice the rate for boys (8%).[2] This may be attributed to the likelihood of girls becoming pregnant during the lockdowns and school closures, as witnessed with other diseases like the 2014–2016 Ebola outbreak in West Africa.[3]

Africa has also progressed at the secondary level, although it still trails other developing regions. Chart 5 shows the female-to-male ratio of gross secondary school enrolment for Africa and other global groups of countries. In 2019, 92 girls enrolled in secondary school for every 100 boys in Africa, which is below the world average and the averages for other developing regions. However, it is an improvement from a ratio of 0.89 in 2000 (89 girls for every 100 boys). North Africa has achieved full parity, whereas sub-Saharan Africa has the lowest ratio at 0.9 (90 girls enrolled in secondary school for

every 100 boys) among all the world regions. Despite North Africa's poor reputation regarding the rights of girls and women, the region has achieved gender parity in primary and secondary school enrolment. Therefore, achieving full parity in primary and secondary school enrolment in Africa hinges on progress in sub-Saharan Africa.

Chart 5: Gender parity (gross secondary enrolment) in Africa and other regions, 2019 and Current Path forecast in 2043



The situation also varies between African countries. In 2019, 20 African countries enrolled more girls in secondary school than boys (female-to-male ratio above 1). Fourteen countries have a ratio above 0.9 and eight are above 0.8. South Sudan and Chad have the lowest ratios at 0.64 and 0.52, respectively, mainly due to cultural traditions, conflict and security issues as well as early marriage and forced marriage.[4]

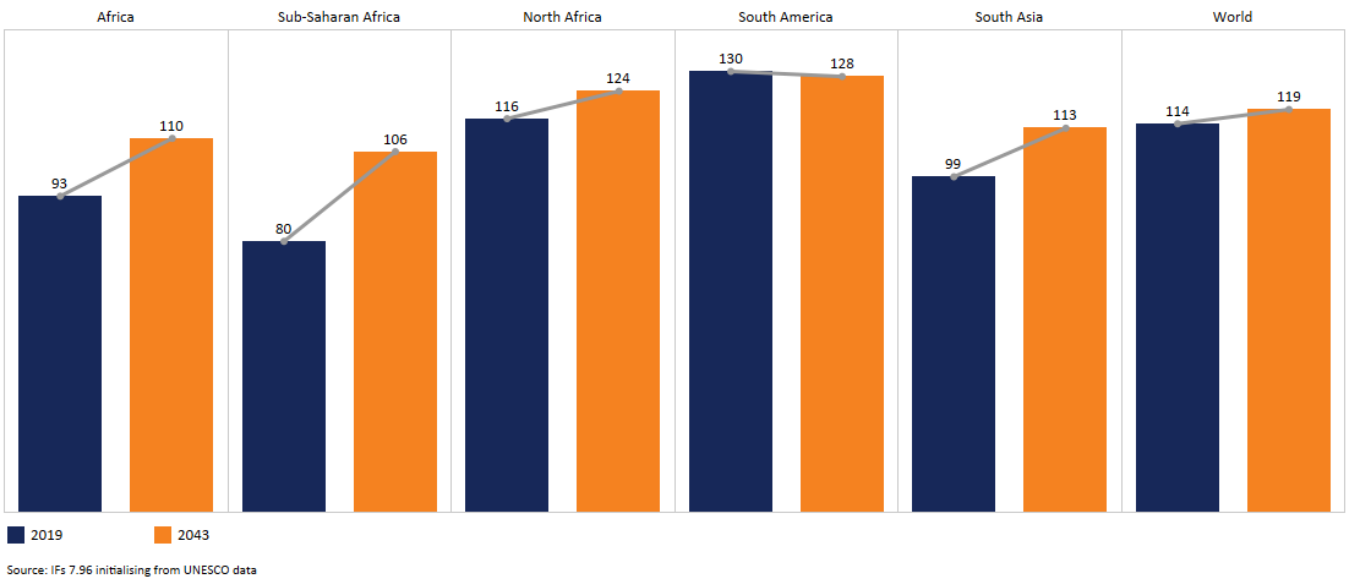
On the Current Path, girls' and boys' access to secondary education will continue to improve in Africa, but full parity will likely not be achieved as the female-to-male ratio of gross secondary school enrolment is forecast to be 0.98 in 2043 (where 1 would be full parity). This is due to relatively slow progress in sub-Saharan Africa, as the region reaches a ratio of 0.97 in 2043 compared to a ratio of 1 (full parity) for North Africa in the same year.

Chart 6 shows the female-to-male ratio of gross tertiary enrolment for Africa and other developing regions. Except for sub-Saharan Africa and South Asia, all the other developing regions have more women enrolled in tertiary institutions than men. In 2019, 93 women enrolled in tertiary educational institutions for every 100 men in Africa, which is far below the world average and the averages for other regions. Sub-Saharan Africa has the lowest ratio globally, with only 80 women enrolled for every 100 men at tertiary level. Some countries, such as Burundi, Chad, Central African Republic and Somalia, have even lower levels, with fewer than 50 women per 100 men in tertiary educational institutions. On average, in North Africa, more women are enrolled in tertiary educational institutions than men, implying that gender inequality at this level of education affects males in the region; this trend is forecast to continue until at least 2043. On the Current Path, sub-Saharan Africa is projected to achieve full parity in 2036, although by 2043, there will likely be slightly more females at the tertiary level than males (Chart 6).

Chart 6: Gender parity (gross tertiary enrolment) in Africa and other regions, 2019 and Current Path forecast in 2043



Gross tertiary enrolment



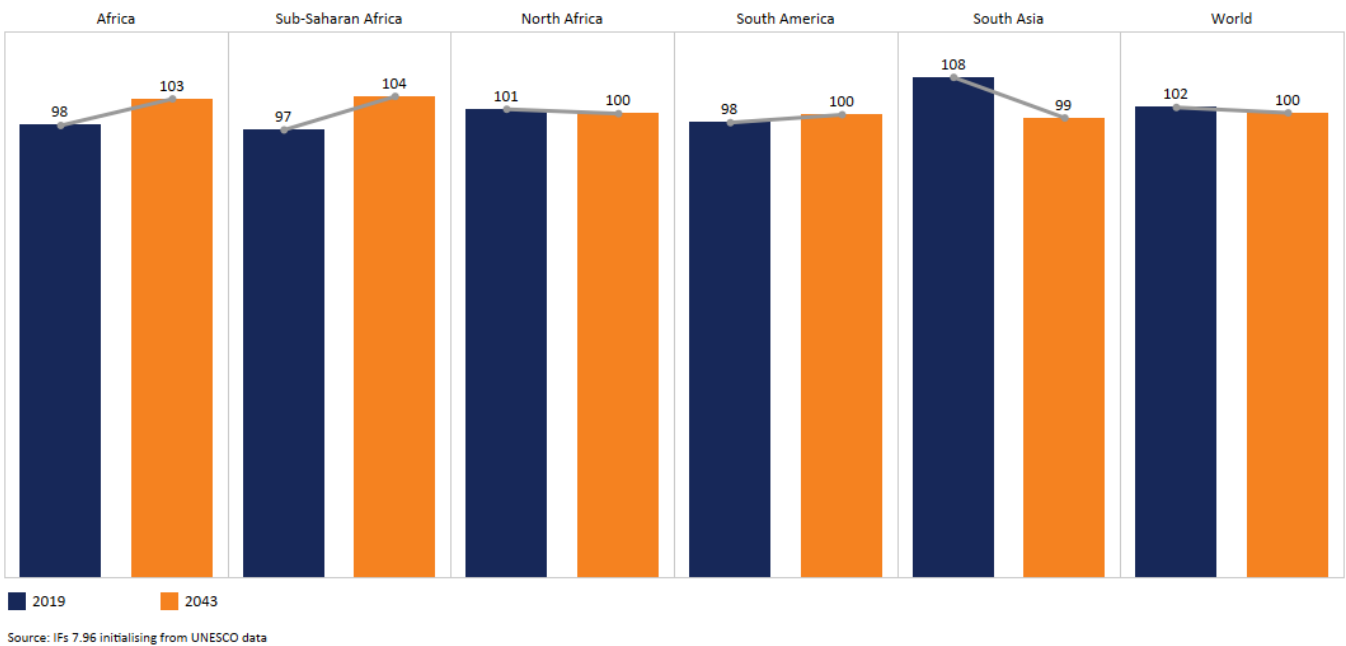
Overall, Africa has made significant progress in enrolling its girls and women in school, even though sub-Saharan Africa still trails the world's average and regions such as North Africa, South America and South Asia. Getting girls into school is important, but ensuring they stay and graduate is essential.

### Primary, secondary and tertiary completion/graduation

Chart 7 shows the female-to-male ratio of primary school completion rates in Africa and other regions. In 2019, on average, 98 girls completed primary education for every 100 boys in Africa. This is below the world average (102 girls for 100 boys) and the averages for other regions.



Chart 7: Gender parity (primary completion) in Africa and other regions, 2019 and Current Path forecast in 2043



Sub-Saharan Africa has the lowest ratio globally, with 97 girls for every 100 boys. About 80% of African countries have a female-to-male ratio of primary school completion rates above 0.90, with countries such as South Sudan, Central African Republic and Chad trailing far behind. However, the reverse is the case in North Africa. On average, more girls complete primary education than boys, which, on the Current Path, is expected to continue until at least 2043. On the Current Path, sub-Saharan Africa is projected to achieve full parity in 2028, although by 2043, there will likely be slightly more girls completing primary education than boys (Chart 7).

Chart 8: Gender parity (secondary completion) in Africa and other regions, 2019 and Current Path forecast in 2043

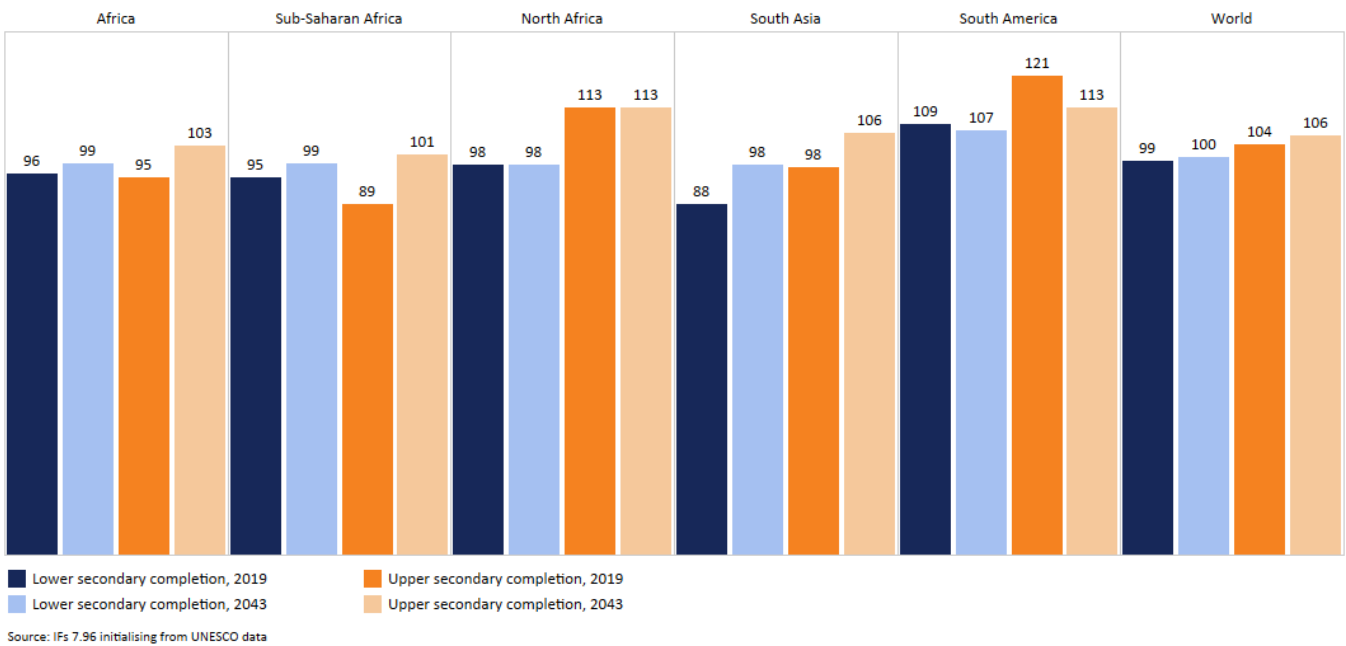


Chart 8 shows the female-to-male ratio of lower and upper secondary completion rates for Africa and other regions in

2019 and includes a forecast for 2043. In 2019, 96 girls completed lower secondary education for every 100 boys in Africa, which is below the world average but above the average for South Asia. In the same year, 95 girls completed upper secondary school for every 100 boys in Africa; this is below the world average and the averages for South Asia and South America.

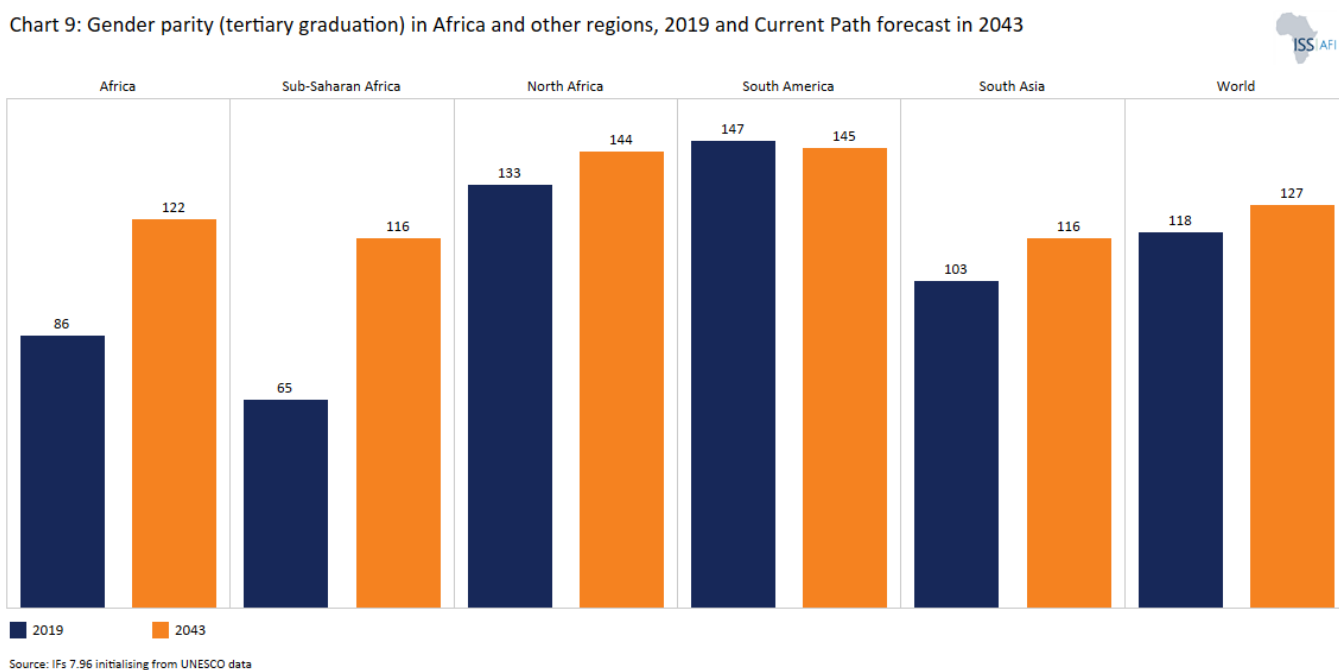
In 2019, sub-Saharan Africa had the lowest female-to-male ratio of upper secondary completion rates among all the regions. The completion rates in North Africa for the same period were much higher at 98 girls for every 100 boys and more than 100 girls for every 100 boys for upper secondary education.

On the Current Path, Africa's female-to-male ratio of lower and upper secondary completion rates is forecast to improve to 0.99 and 1.03 in 2043, respectively.

At the country level, there are marked differences. The gender completion gap is even reversed in favour of females, with more girls than boys completing upper secondary school in some African countries such as Algeria, Mauritius, Morocco, South Africa, Tunisia, Egypt and Seychelles, among others.

In contrast to other levels, progress in reducing gender inequality in tertiary graduation has been slow in sub-Saharan Africa. In 2019, only 65 women graduated from tertiary institutions for every 100 men in sub-Saharan Africa, the lowest among all the world regions. In North Africa, however, there are more female tertiary graduates than male. Sub-Saharan Africa's low performance, driven by the poor performance in Central Africa, explains the low average ratio of Africa compared to other developing regions (Chart 9). On the Current Path, sub-Saharan Africa will likely achieve full parity in 2034, although the graduation rate for females at tertiary level will probably be higher than that of males afterwards, mimicking global trends.

Chart 9: Gender parity (tertiary graduation) in Africa and other regions, 2019 and Current Path forecast in 2043



In summary, Africa has significantly reduced gender inequality in education, especially at primary and secondary levels. Gross primary school enrolment is high or universal in most African countries, and gender gaps in secondary school enrolment have already disappeared in several countries. The situation is even reversed in some countries, mainly North African countries, with more females than males enrolled in secondary and tertiary schools.

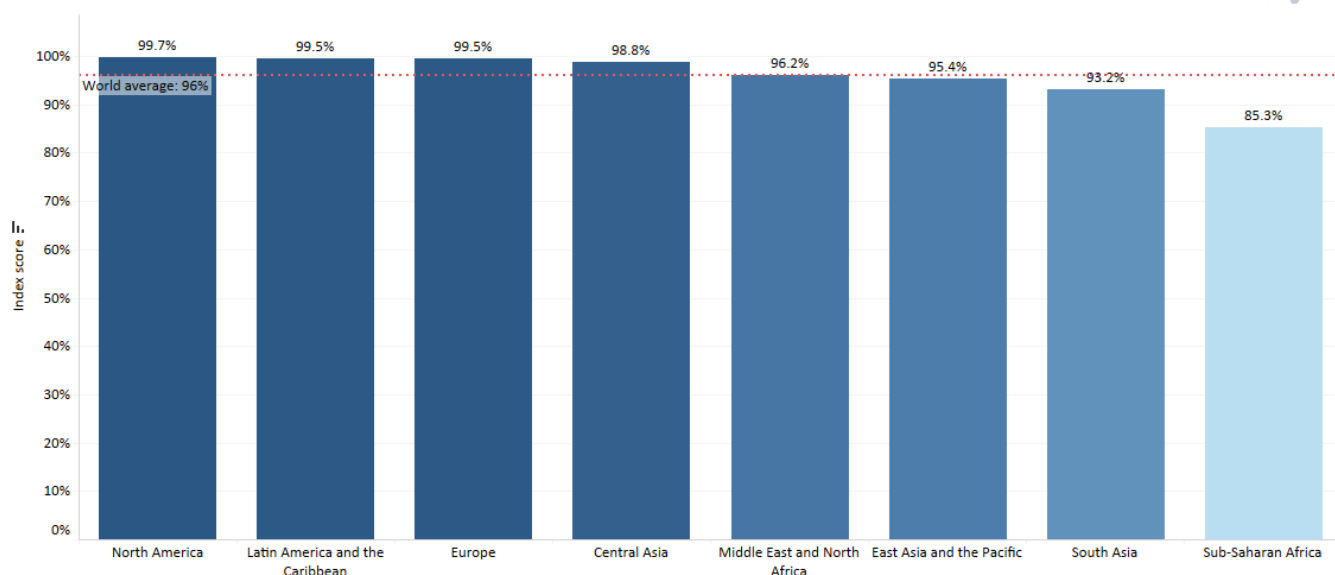
Despite this progress, females still face barriers to accessing education in many parts of Africa. Fewer girls than boys are

enrolled in technical and vocational education and training (TVET), and science, technology, engineering and mathematics (STEM) programmes. Furthermore, fewer girls in Africa are literate than boys. In the Africa Gender Index from the African Development Bank, the average score of Africa for youth literacy rate stands at 87 on a scale from 0 to 100 (where 100 is full parity). The situation is worse for STEM, with a score of 38.[5] However, the scores for different countries range widely, reflecting considerable variation in access to education for African women.

It is worth noting that the low enrolment of girls in STEM programmes is not necessarily the result of discrimination in admission. Even in countries that empower women, fewer females choose STEM programmes than males,[6] probably due to the narrative about how difficult it is to pursue a STEM career, psychosocial factors and limited role models.

Looking at the overall gender inequality in education (Chart 10), girls in sub-Saharan Africa are today the most disadvantaged regarding access to schooling compared to other regions. The United Nations Children’s Fund (UNICEF) reports that nine million girls in Africa between the ages of 6 and 11 never go to school, compared to six million boys in the same age category.[7] In Nigeria, for instance, about 60% of the 10 million out-of-school children are girls, according to UNICEF.

Chart 10: Gender Gap Index in education, 2022



Source: World Economic Forum, Global Gender Gap Index, 2022.

Many factors, such as early marriage, teenage pregnancy, gender-based violence, intra-household division of labour, poverty and insufficient or inadequate school infrastructure, limit opportunities for girls to access education in sub-Saharan Africa.[8] Even if opportunities are available, the social norm of valuing boys over girls means some parents place a lower premium on their daughters’ education.

High teenage pregnancy rates in many African countries serve to disrupt education. Every year, hundreds or thousands of school girls get pregnant in sub-Saharan Africa—a situation exacerbated during the COVID-19 pandemic lockdown. For example, over a period of three months in the lockdown due to COVID-19, 152 000 Kenyan teenage girls got pregnant—a 40% increase in the country’s monthly average.[9] Côte d’Ivoire also recorded 3 409 cases of pregnancies in schools from September 2021 to May 2022.[10] Girls get pregnant because they lack access to sex education and/or are coerced into sex due to poverty.[11]

Although most sub-Saharan African countries have committed to guaranteeing compulsory primary and lower secondary education for all children, many have policies and practices that effectively prevent pregnant school girls and young

mothers from returning to school.[12] Some countries, such as Cameroon, South Africa and Zambia, have adopted policies that allow adolescent mothers to return to school after giving birth. However, school officials often fail to effectively implement these policies.[13] As a result, millions of girls in Africa are denied their education.

Given the potential benefits of female education, promoting a culture of equality in education should be a top governmental priority everywhere in Africa. Education increases women's earning capacity and makes them healthier, and their children inherit these advantages. It is estimated that if all women completed primary school, the number who die in pregnancy and childbirth would fall by about two-thirds.[14] Girls who spend more time in school are also much less likely to become child brides or teenage mothers and are also less likely to suffer domestic violence.[15]

Moreover, education is an important contributor to economic growth through its effect on human capital stock and labour productivity. Therefore, unequal access, irrespective of gender, reduces the average stock of human capital in a society and thus undermines economic growth. However, in the case of women, access to education also reduces fertility and child mortality and enables the next generation's education. When girls are educated, the opportunity cost of childbearing becomes higher.[16] As a result, they tend to trade off the quantity of their children for their quality, reducing the fertility rate. As fertility falls, the working-age population grows much faster than the overall population, thus lowering dependency rates and leading to higher savings, investments and a higher capital per worker. This results in a positive effect on economic growth known as the demographic dividend, or a demographic gift, as we examine in a separate theme on demographics. In this regard, some studies have shown that about one-third of economic growth during the East Asia economic miracle was attributed to the large worker bulge and relatively small number of dependants.[17]

## Endnotes

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**Dr Jakkie Cilliers** is the ISS's founder and former executive director of the ISS. He currently serves as chair of the ISS Board of Trustees and head of the African Futures and Innovation (AFI) programme at the Pretoria office of the ISS. His 2017 best-seller *Fate of the Nation* addresses South Africa's futures from political, economic and social perspectives. His three most recent books, *Africa First! Igniting a Growth Revolution* (March 2020), *The Future of Africa: Challenges and Opportunities* (April 2021), and *Africa Tomorrow: Pathways to Prosperity* (June 2022) take a rigorous look at the continent as a whole.

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