



Education

The impact of the Education scenario

Enoch Randy Aikins and Jakkie Cilliers

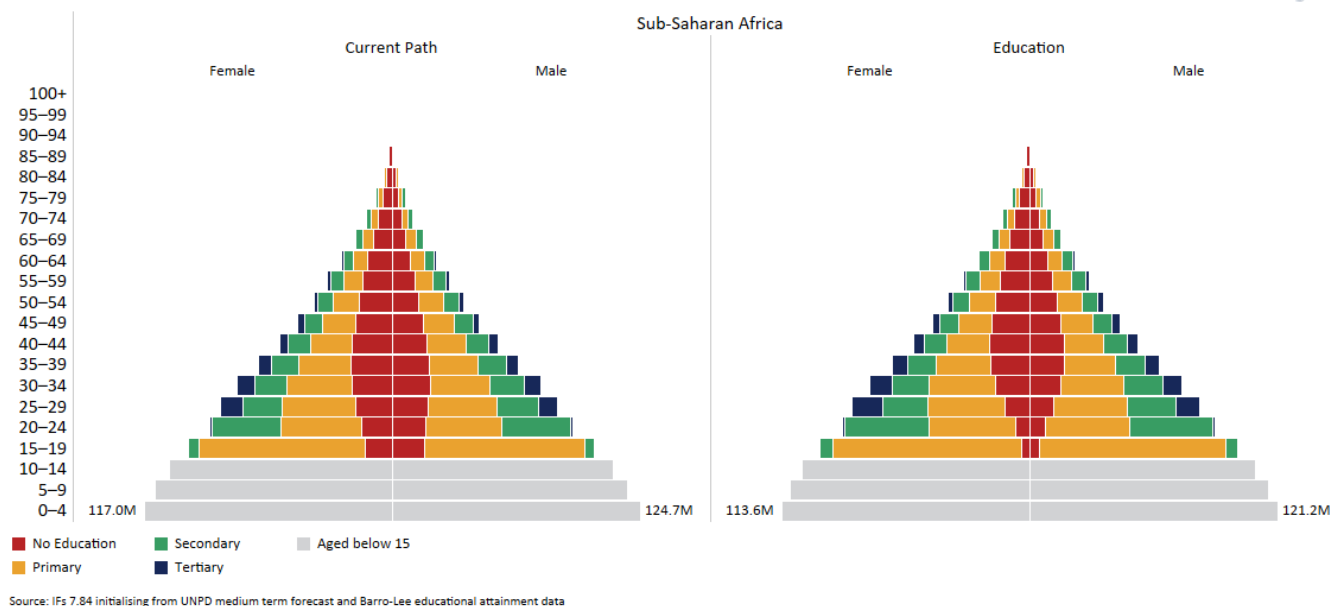
Last updated 27 October 2023 using IFs 7.84

The impact of the Education scenario

The impact of the Education scenario can be measured in different ways, outlined below.

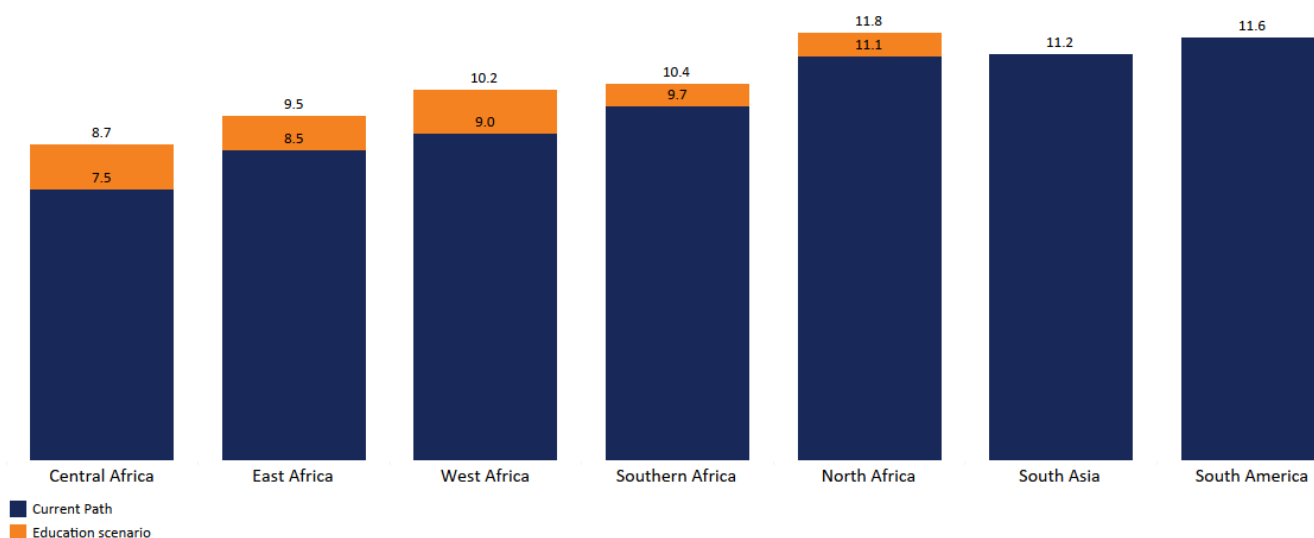
Chart 13 presents education by age, sex and level for sub-Saharan Africa and North Africa in 2043 in the Current Path forecast and Education scenario.

Chart 13: Educational attainment by age, sex and level in the Current Path vs Education scenario, 2043



A simple way to measure impact is to look at mean years of education. Chart 14 compares the mean years of education for adults aged 20–29 years with the 2043 forecast for South America and South Asia. By using a youthful age cohort (20–29 years), the findings reflect the improvements modelled in the Education scenario.

Chart 14: Mean years of education for 20–29 age cohort in 2043 Current Path vs Education scenario for African regions, South America and South Asia

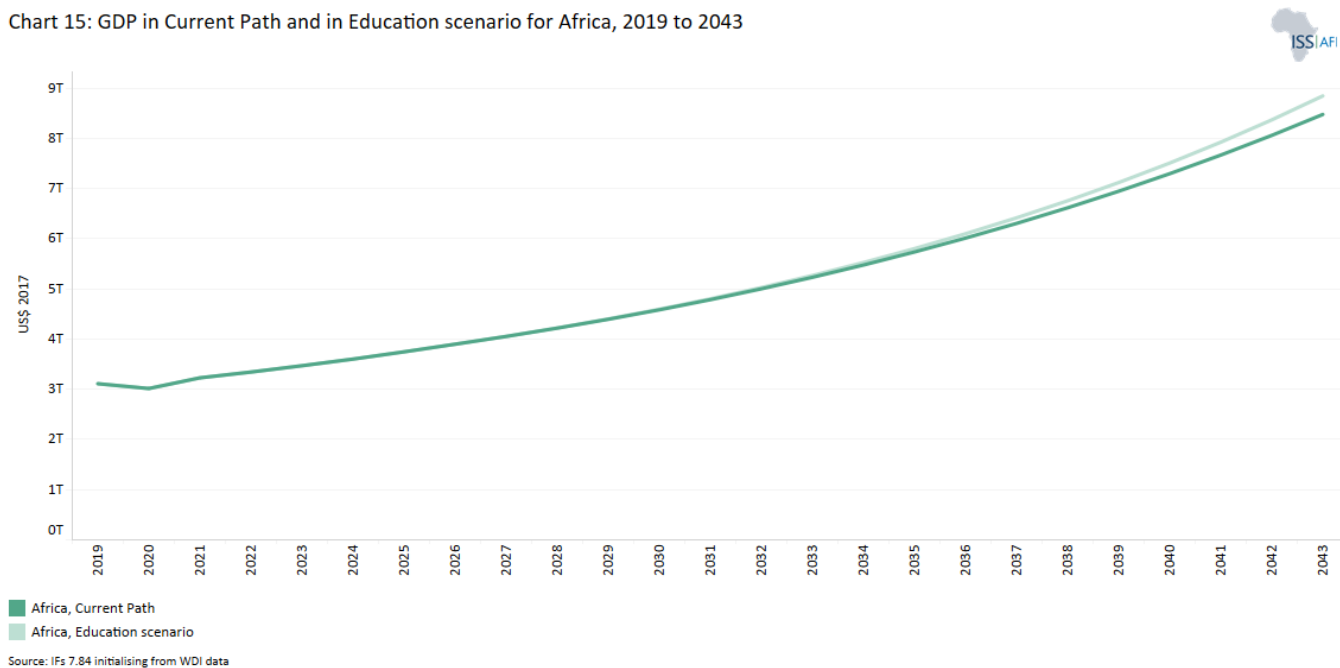


In the Education scenario and when using this age cohort as a lens to measure progress, all five regions start closing the

gap relative to the rest of the world, yet only North Africa surpasses the 2019 mean for the world, and South Asia and South America by 2043. Central Africa, which generally lags in improvements, performs best with regard to increasing mean years of education, seeing an improvement of 56.4% between 2019 and 2043 (from 5.9 years to 9.2 years). However, coming from a much lower base, it remains the worst-performing region. East Africa also sees an aggressive increase of 49%. Because it already does much better than sub-Saharan Africa, the least improvement occurs in North Africa with an increase of about 20%, though it is still the best performing region.

The Education scenario increases expenditure on education in Africa from US\$143.7 billion in 2019 (representing 4.5% of GDP) to US\$490.5 billion (5.6% of GDP) by 2043. This is equivalent to US\$67.9 billion (0.56% of GDP) of additional funds in that year, i.e. on top of the US\$423.1 billion that Africa is forecast to spend on education on the Current Path in 2043. Although this is a substantial amount, these additional costs produce an African economy that is US\$368 billion larger. Cumulatively, Africa will have invested an additional US\$461 billion in education from 2024 to 2043. The result is, however, a cumulative addition to the African economy equivalent to US\$1 872 billion. This is a huge return on investment, and it reflects that education is essentially a multiplier on the contribution that labour makes to growth. As the level of skills improves, Africa's economies start to grow, slowly at first and then accelerating over time, and improvements to GDP snowball beyond the 2043 time horizon. It is this return on investment that results in the mantra about better education lifting all boats as improved education reduces fertility, improves productivity and raises the quality of democracy and governance to make countries more stable.

Chart 15: GDP in Current Path and in Education scenario for Africa, 2019 to 2043



By 2043, the difference in the GDP growth rate between the Education scenario and the Current Path forecast is 0.5 percentage points and, as a result, the African economy will be US\$368.4 billion (equivalent to 4.3%) larger in 2043 in the Education scenario than in the Current Path forecast.

Using the purchasing power parity (PPP) measure, Africa's average GDP per capita in the Education scenario will rise to US\$7 302 by 2043 from US\$5 194 recorded in 2019. This translates into additional gains of about US\$240 per person over the Current Path forecast by 2043. The benefits inevitably accrue disproportionately to more developed countries, which already have higher productivity levels and, thus, benefit most from this multiplicative effect. By 2043, average levels of GDP per capita (in PPP) will increase by:

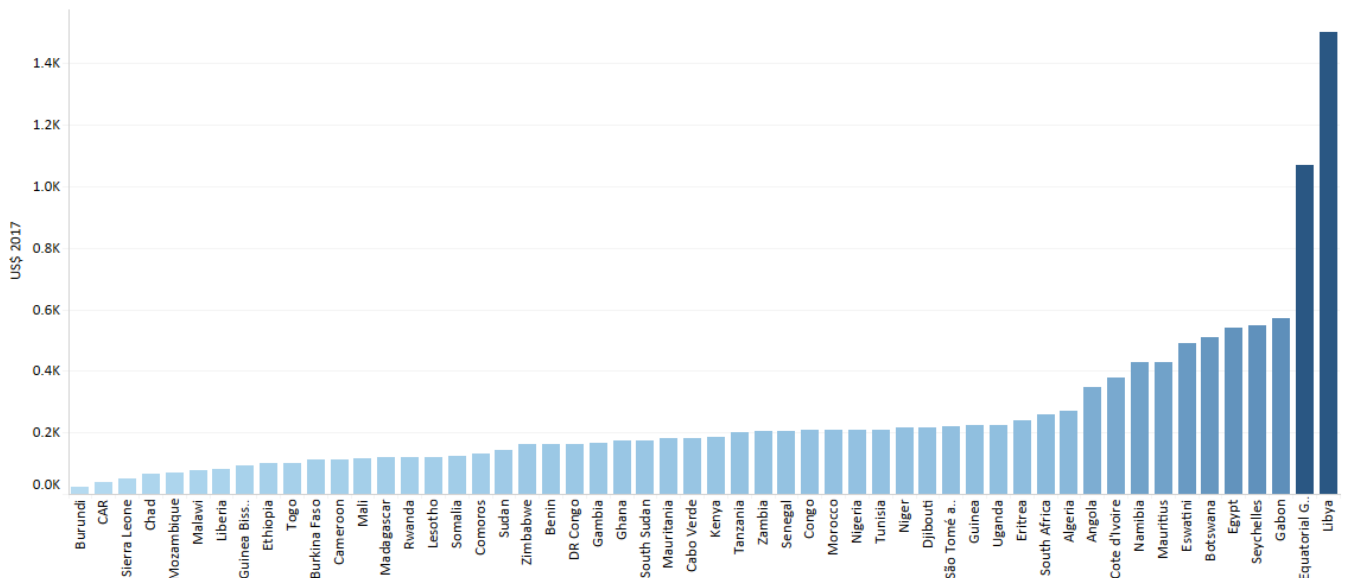
- US\$149 per person in low-income Africa,

- US\$283 per person for lower-middle-income Africa,
- US\$458 per person in upper-middle-income countries, and
- US\$600 per person in the Seychelles, Africa's only high-income country.

By country (Chart 16), the impact of the Education scenario on the GDP per capita by 2043, i.e. above the Current Path forecast, differs for that year. Libya and Equatorial Guinea gain the most (US\$1 632 and US\$1 190, respectively) and Burundi, Central African Republic and Sierra Leone gain the least (US\$28, US\$44 and US\$57, respectively).

If Africa could simultaneously reduce the size of the annual influx of primary school children by means of appropriate family planning interventions as set out in the theme on demographics, the effect of improved education could be even greater. The result of having fewer children who enter primary school will soon cascade through the entire education system (on top of the decline in fertility associated with better education), meaning more funds could be spent on the smaller cohort of children as they progress from primary to secondary and, eventually, tertiary levels. In this manner, the Demographics and the Education scenarios reinforce each other in a powerful way.

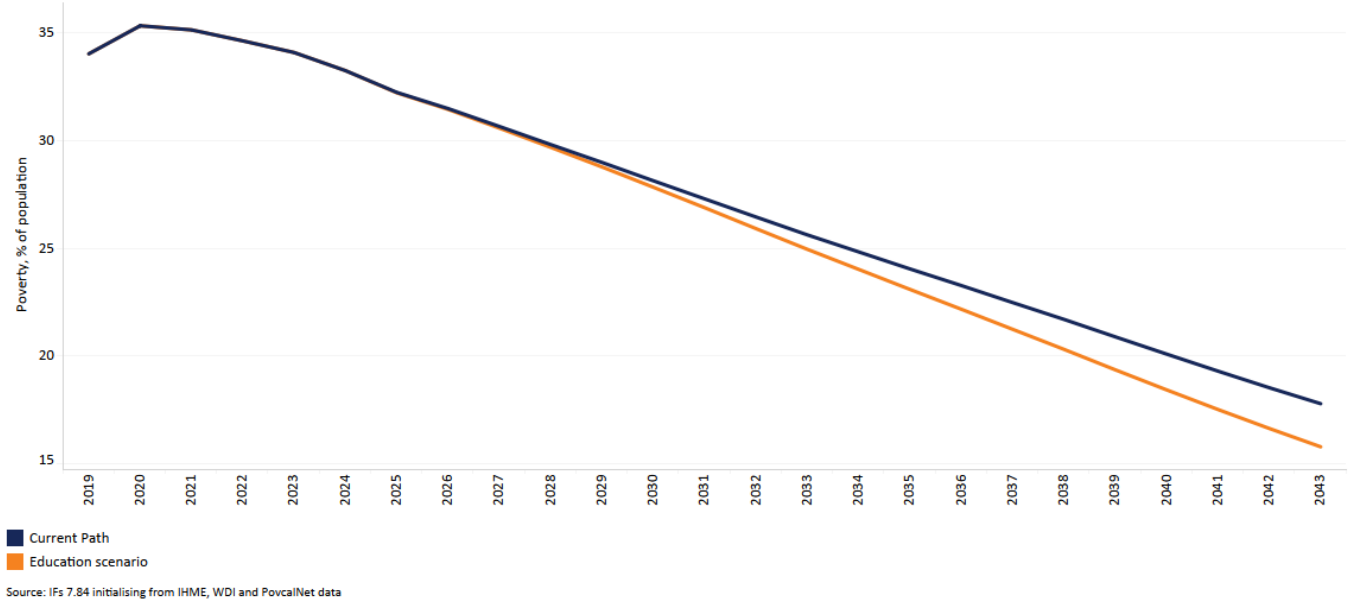
Chart 16: Increase in GDP per capita in African countries by 2043 due to Education scenario



Source: IFs 7.84 initialising from WDI data

The Education scenario would also reduce extreme poverty (Chart 17) by more than two percentage points across the continent, about 47 million fewer extremely poor people compared to the Current Path forecast, in 2043.[1] In this case, low- and lower-middle-income countries in Africa benefit the most with projected 24.4 million and 22 million fewer extremely poor people, respectively, than the Current Path forecast by 2043. Improved levels and quality of education have a small but positive effect in reducing inequality[2] with low- and lower-middle-income countries benefiting the most.

Chart 17: Impact of education scenario on extreme poverty, 2019 to 2043



Better education reduces infant mortality by an average of 1.8 fewer deaths per 1 000 live births over the Current Path in 2043 for Africa, although the reduction is much larger for lower-middle-income countries (by five fewer deaths). Likewise, the Education scenario reduces total fertility (by 0.121 births per woman in 2043) and increases life expectancy by about five months by 2043. The result is an African population of 12 million people fewer by 2043 than it would have been on the Current Path forecast.

The power of education is such that some commentators argue that education and health, rather than age structure, bring about the demographic dividend . It is investments in these aspects of human capital, they argue, that serve as the trigger of both a demographic transition and economic growth; declining youth dependency ratios show negative impacts on income growth when combined with low education. Thus, ‘the true demographic dividend is a human capital dividend’ and policymakers are urged to focus on strengthening the human resource base for sustainable development.[3]

Endnotes

1. Using US\$1.90 per person per day as the threshold of extreme poverty.
2. Using the Gini coefficient measure of inequality.
3. W Lutz et al, *Education rather than age-structure brings demographic dividend*, *Proceedings of the National Academy of Sciences of the United States of America*, 116:26, 2019, 12798–803.

Donors and sponsors



Reuse our work

- All visualizations, data, and text produced by African Futures are completely open access under the [Creative Commons BY license](#). You have the permission to use, distribute, and reproduce these in any medium, provided the source and authors are credited.
- The data produced by third parties and made available by African Futures is subject to the license terms from the original third-party authors. We will always indicate the original source of the data in our documentation, so you should always check the license of any such third-party data before use and redistribution.
- All of our charts can be embedded in any site.

Cite this research

Enoch Randy Aikins and Jakkie Cilliers (2024) Education. Published online at futures.issafrica.org. Retrieved from <https://futures.issafrica.org/thematic/06-education/> [Online Resource] Updated 27 October 2023.

About the authors

Mr Enoch Randy Aikins joined the AFI in May 2021. Before that, Enoch was a research and programmes officer at the Institute for Democratic Governance in Accra. He also worked as a research assistant (economic division) with the Institute for Statistical Social and Economic Research at the University of Ghana. Enoch's interests include African politics and governance, economic development, public sector reform, poverty and inequality. He has an MPhil in economics from the University of Ghana, Legon.

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.

About African Futures & Innovation

Scenarios and forecasting can help Africa identify and respond to opportunities and threats. The work of the African Futures & Innovation (AFI) program at the Institute for Security Studies aims to understand and address a widening gap between indices of wellbeing in Africa and elsewhere in the world. The AFI helps stakeholders understand likely future developments. Research findings and their policy implications are widely disseminated, often in collaboration with in-country partners. Forecasting tools inspire debate and provide insights into possible trajectories that inform planning, prioritisation and effective resource allocation. Africa's future depends on today's choices and actions by governments and their non-governmental and international partners. The AFI provides empirical data that informs short- and medium-term decisions with long-term implications. The AFI enhances Africa's capacity to prepare for and respond to future challenges. The program is headed by Dr Jakkie Cilliers.