Low-income Africa
Sectoral Scenarios for Low-income Africa

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Sectoral Scenarios for Low-income Africa

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Stability scenario

Chart 13: Governance security in CP and Stability scenario, 2019–2043
IFs index 0–1
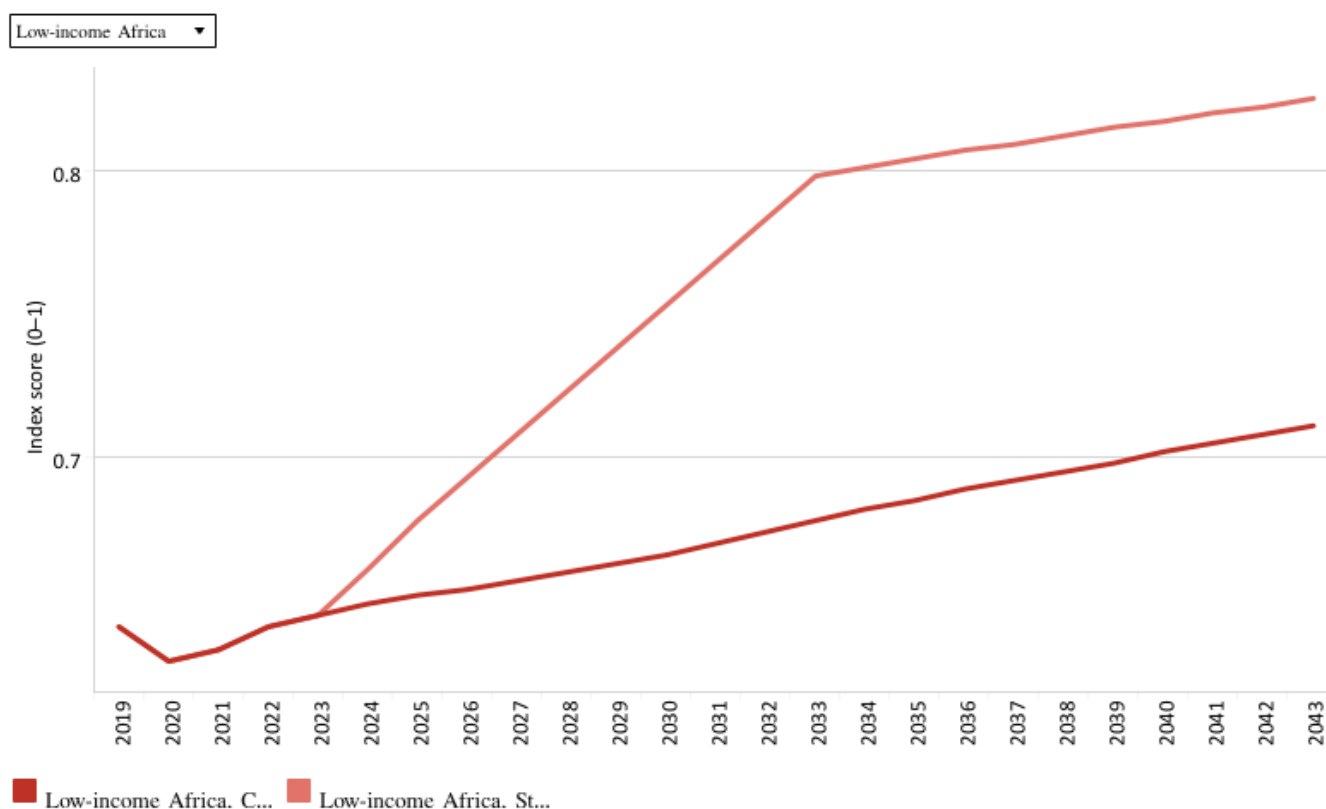
Source: IFs 7.63 goverance security index using internal war and government risk
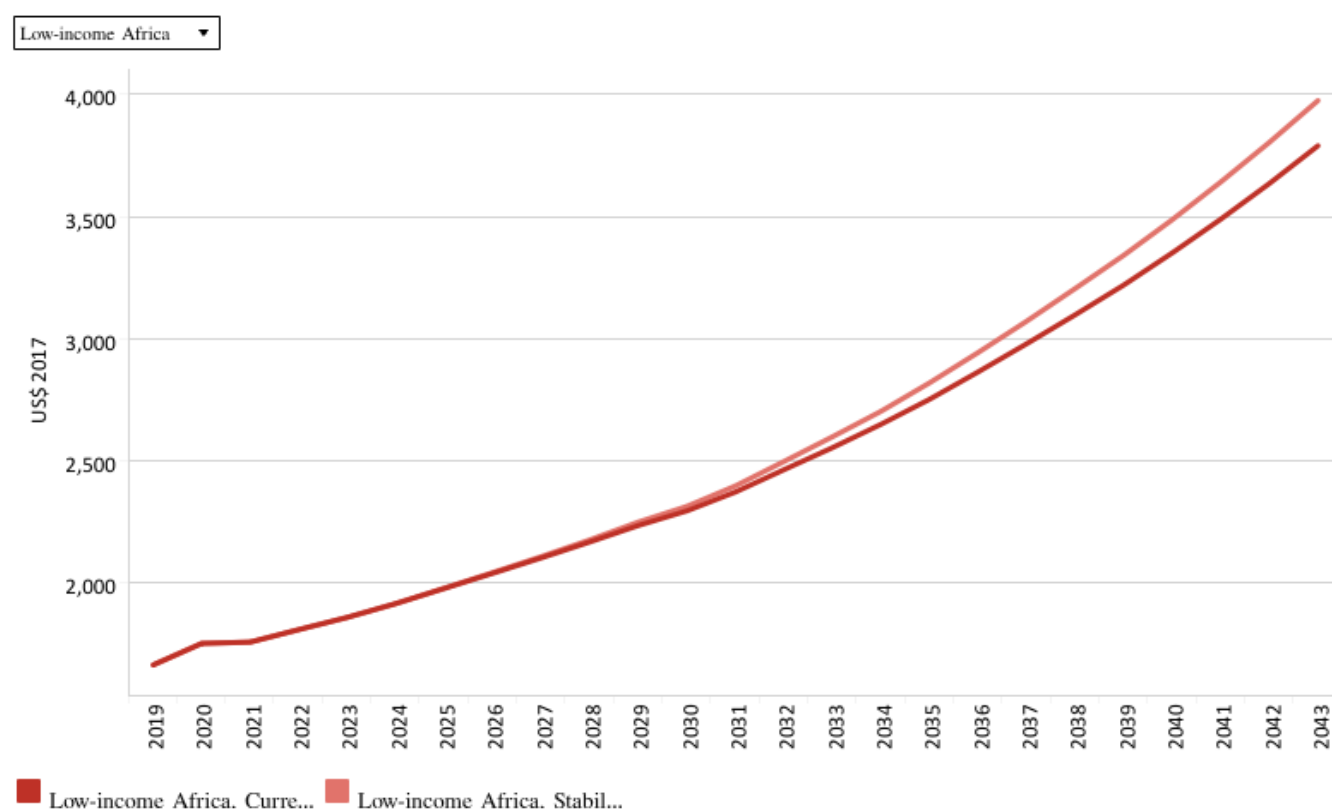
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The Stability scenario represents reasonable but ambitious reductions in risk of regime instability and lower levels of

internal conflict. Stability is generally a prerequisite for other aspects of development and this would encourage inflows of foreign direct investment (FDI) and improve business confidence. Better governance through the accountability that follows substantive democracy is modelled separately.

The intervention is explained here in the thematic part of the website.

Poor countries are, almost inevitably, less stable. Using the governance security index within IFs, low-income Africa at 0.64 was below the average for Africa which was 0.74 in 2019. The low-income Africa Current Path forecast will see a modest improvement in governance security between 2019 and 2043. In 2019, Rwanda and The Gambia scored the highest in the governance security index in the group of 0.73 and 0.72, respectively, while Somalia had the lowest at 0.50. Rwanda has enjoyed a long period of stability after the genocide ended in 1994, while The Gambia's newfound democracy has brought with it some level of governance security. In the Stability scenario, group members will improve the 2043 Current Path forecast by an amount ranging from 0.32 in Somalia — a large increase due to its low base — to 0.19. Coming from their turbulent history, the DR Congo, South Sudan and Sudan will each see at least 0.29 improvement in their 2043 Current Path forecast of governance security in the Stability scenario.

Chart 14: GDP per capita in CP and Stability scenario, 2019–2043
Purchasing power parity

Source: IFs 7.63 initialising from UN Population Division World Population Prospects and World Development Indicators data

Stability is a general catalyst for other aspects of development. The Stability scenario increases GDP per capita by US$504 in 2043 compared to the Current Path forecast. The increase ranges from US$568 in Guinea (the most improvement), US$529 in Sudan and US$510 in Malawi, to US$108 in Burundi (least improvement).

Chart 15: Poverty in CP and Stability scenario, 2019–2043
Millions of people and % of total population

ISS|AFI

Low-income Africa ▼ $1.90 ▼

■ Low-income Africa. Current P...   ■ Low-income Africa. Stability

Source: IFs 7.63 initialising from UN Population Division Population Prospects estimate, World Development Indicators population data and PovcalNet World Bank data

⠿ View on Tableau Public   ↶ ↷ ↺ ⤵ ▼ | ⬇▼ ⬚ ⦵ Share

By 2030, the Stability scenario will reduce the number of extremely poor people in low-income Africa by 19.3 million people in 2043, compared to the Current Path forecast (using US$1.90). The largest gains are made in the DR Congo which will see a reduction of 7.4 million extremely poor people (5.5 percentage points) in 2043, while The Gambia will see the smallest reduction of 22 000 people, at which point it will effectively have eliminated extreme poverty

Instead of an extreme poverty rate (using US$1.90) of 25.2% in 2043, the 2043 extreme poverty rate for low-income Africa will be 23.2% in the Stability scenario.
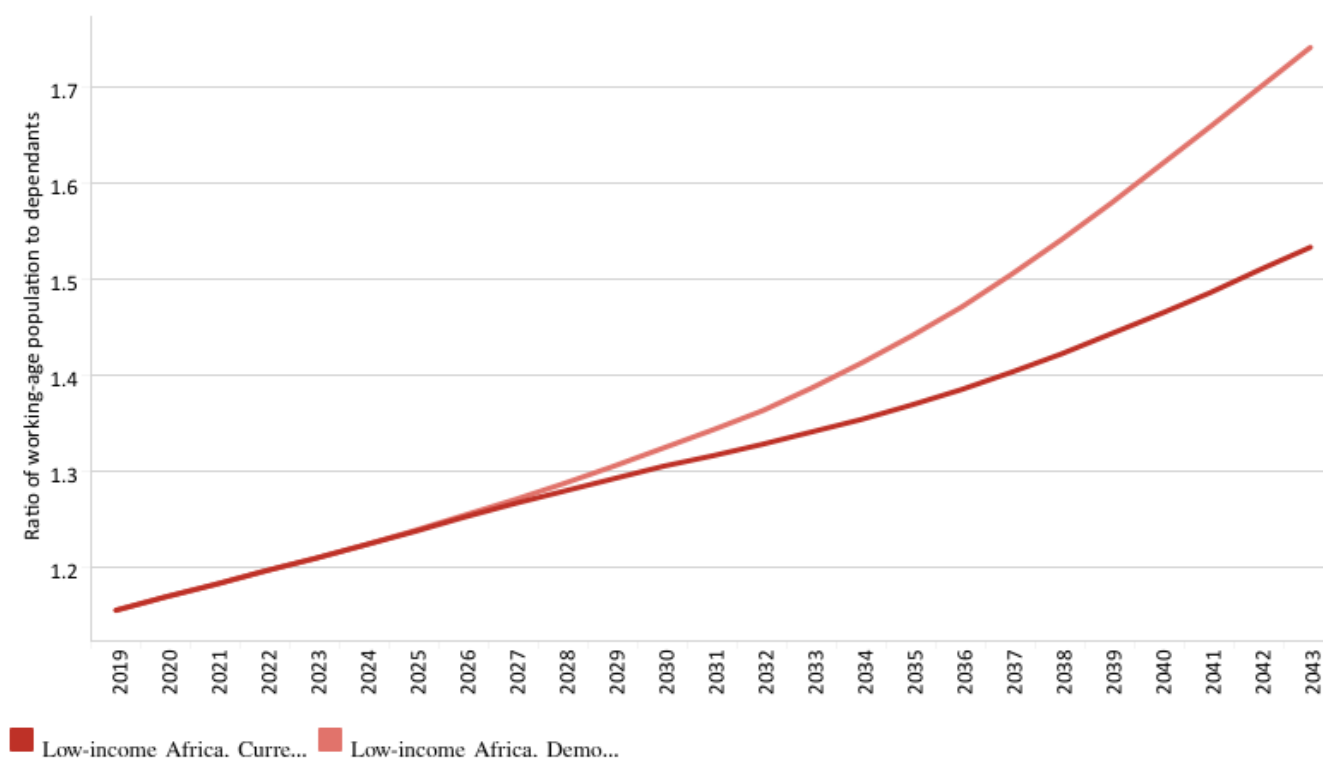
Demographic scenario

Chart 16: Demographic dividend in CP and Demog scenario, 2019–2043
Ratio of working-age population to dependants

Low-income Africa ▼

■ Low-income Africa. Curre...   ■ Low-income Africa. Demo...

Source: IFs 7.63 initialising from UN Population Division Population Prospects

⋮⋮⋮ View on Tableau Public   ↶ ↷ ↺ ↻ ▾ | ⤓ ▾ ⧉ ⅋ Share

This section presents the impact of a Demographic scenario that aims to hasten and increase the demographic dividend through reasonable but ambitious reductions in the communicable-disease burden for children under five, the maternal mortality ratio and increased access to modern contraception.

The intervention is explained here in the thematic part of the website.
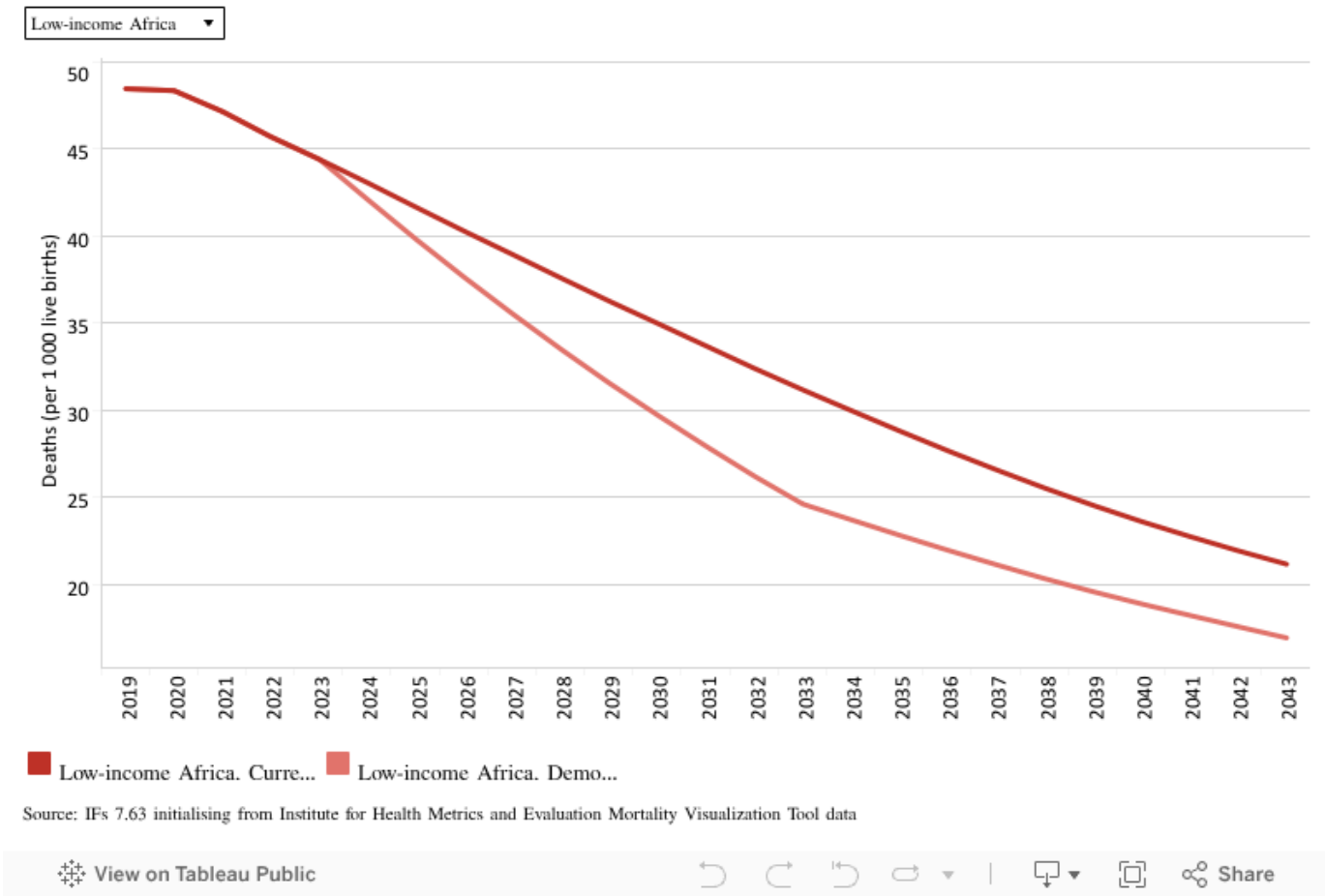
Demographers typically differentiate between a first, second and even a third demographic dividend. We focus here on the contribution of the size of the labour force (between 15 and 64 years of age) relative to dependants (children and the elderly) as part of the first dividend. A window of opportunity opens when the ratio of the working-age population to dependants is equal to or surpasses 1.7.

In 2019, the ratio of working-age persons to dependants for low-income Africa was 1.15:1, and in the Current Path forecast, low-income Africa enters the demographic dividend in 2050, halfway into the century, given its large population momentum and its high fertility rates. In the Demographic scenario, low-income Africa gets to a ratio of 1.7 working-age persons to every dependant in 2042.

Rwanda (in 2037) and Malawi (in 2042) are the only countries set to enjoy a demographic dividend in the Current Path before 2043. Compared to the Current Path forecast, Rwanda (an improvement of 0.49 in the ratio of working-age persons

to dependants) and Ethiopia (an improvement of 0.39) will see the largest improvement in unlocking a potential dividend within the group, while Chad will see the least improvement in demographic dividend in 2043.

Chart 17: Infant mortality in CP and Demog scenario, 2019–2043
Deaths per 1 000 live births

Low-income Africa ▼

Low-income Africa. Curre... ■ Low-income Africa. Demo... ■

Source: IFs 7.63 initialising from Institute for Health Metrics and Evaluation Mortality Visualization Tool data

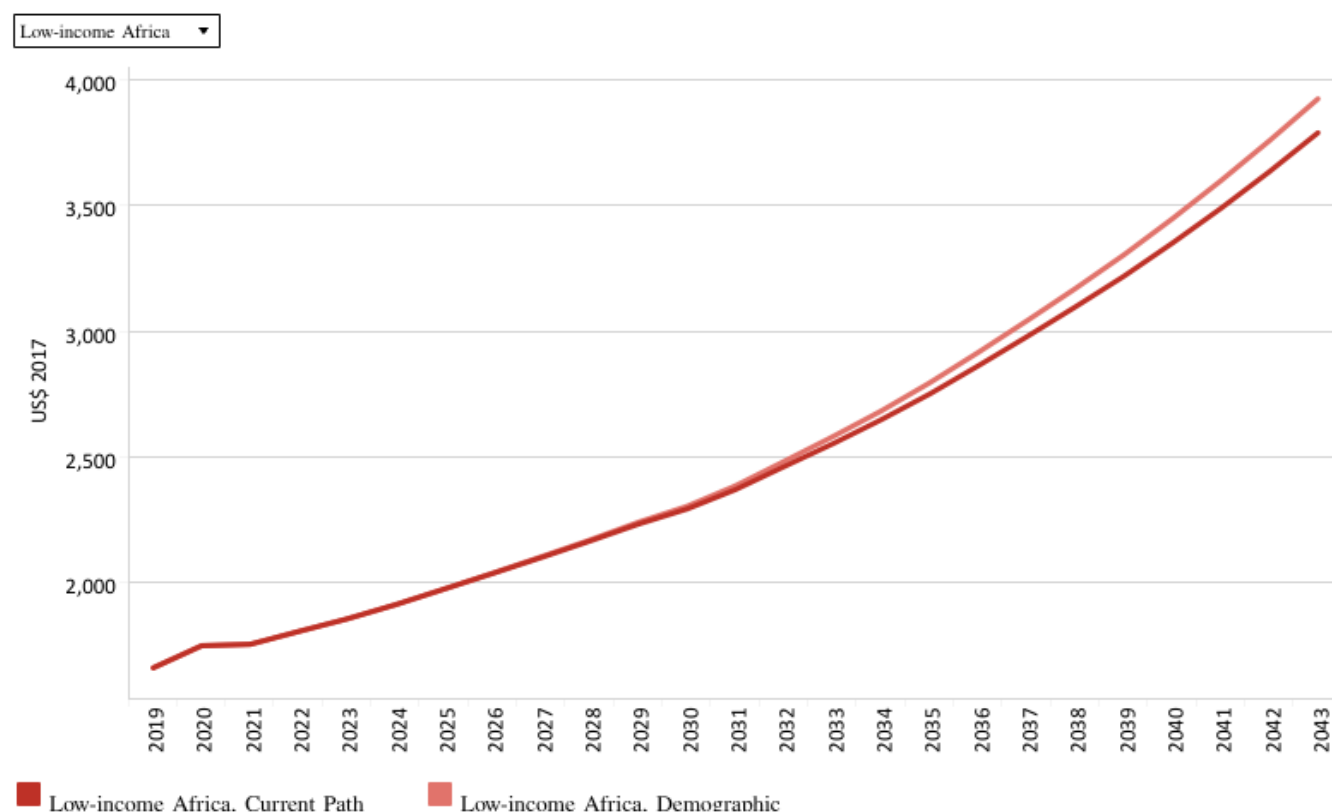⊹ View on Tableau Public   ↺ ↻ ↺ ↻ ▾ | ⬇▾ ⬜ ⤬ Share

The infant mortality rate is the number of infant deaths per 1 000 live births and is an important marker of the overall quality of the health system in a country.

The average infant mortality rate for the group in 2019 was 48.5 deaths per 1 000 live births, set to decline to 21.2 in 2043. The average for Africa in 2043 will be 25.6. In 2019, infant mortality ranged from 81 deaths per 1 000 live births in CAR to 30 in The Gambia.

In the Demographic scenario, the infant mortality rate in low-income Africa rate declines to 16.9 in 2043, with South Sudan experiencing the largest decrease, with 10.1 fewer deaths per 1 000 live births in 2043 compared to the Current Path forecast.

Chart 18: GDP per capita in CP and Demog scenario, 2019–2043
Purchasing power parity

Source: IFs 7.63 initialising from UN Population Division World Population Prospects and World Development Indicators data

By 2043, the Demographic scenario will increase average GDP per capita by US$155 compared to the Current Path forecast. Malawi and Ethiopia will benefit the most from the Demographic scenario by 2043 (at US$290 and US$305, respectively, compared to the Current Path forecast) with Rwanda following with an improvement of US$280. Chad and South Sudan will see the least improvements in GDP per capita of US$38 and US$36 by 2043, compared to the Current Path forecast.

Chart 19: Poverty in CP and Demog scenario, 2019–2043
Millions of people and % of total population
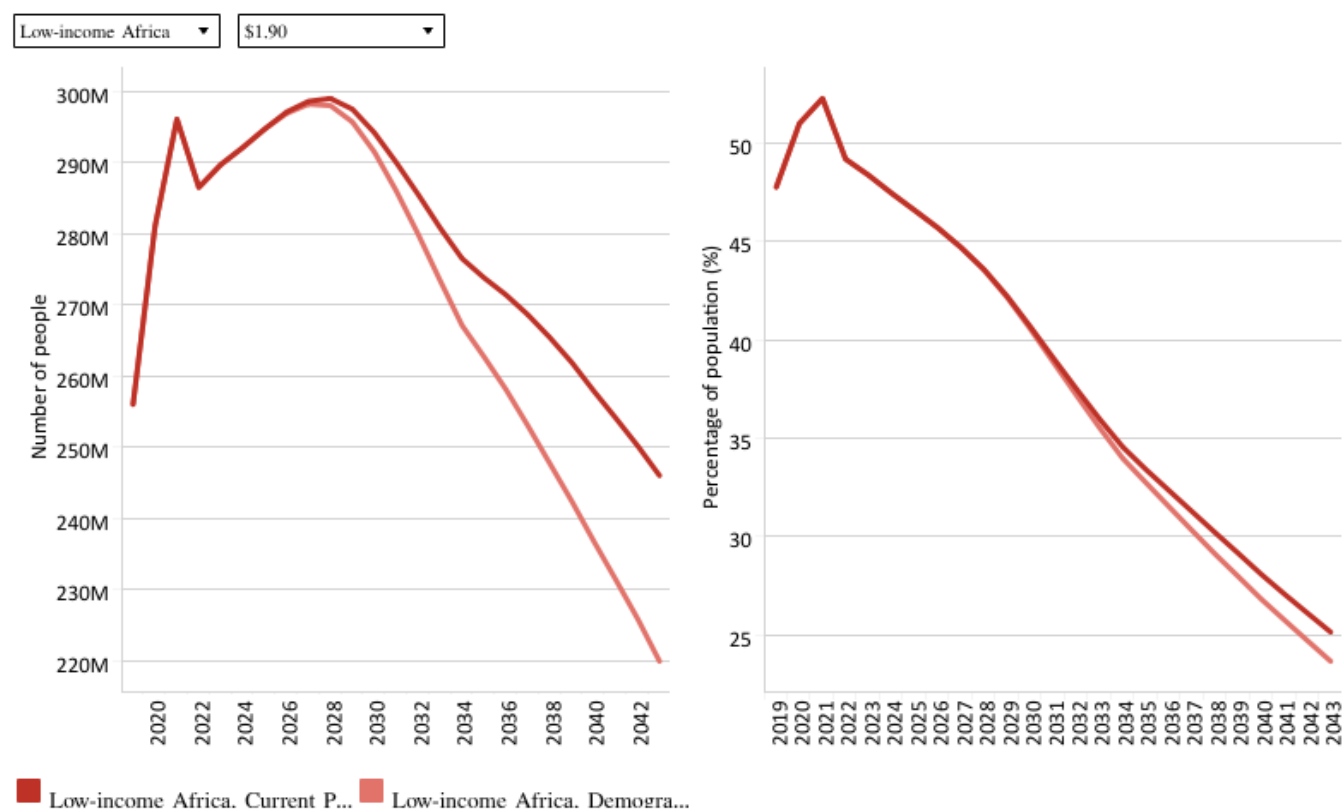
| Low-income Africa ▼ | $1.90 ▼ |

■ Low-income Africa. Current P...   ■ Low-income Africa. Demogra...

Source: IFs 7.63 initialising from UN Population Division Population Prospects estimate, World Development Indicators population data and PovcalNet World Bank data
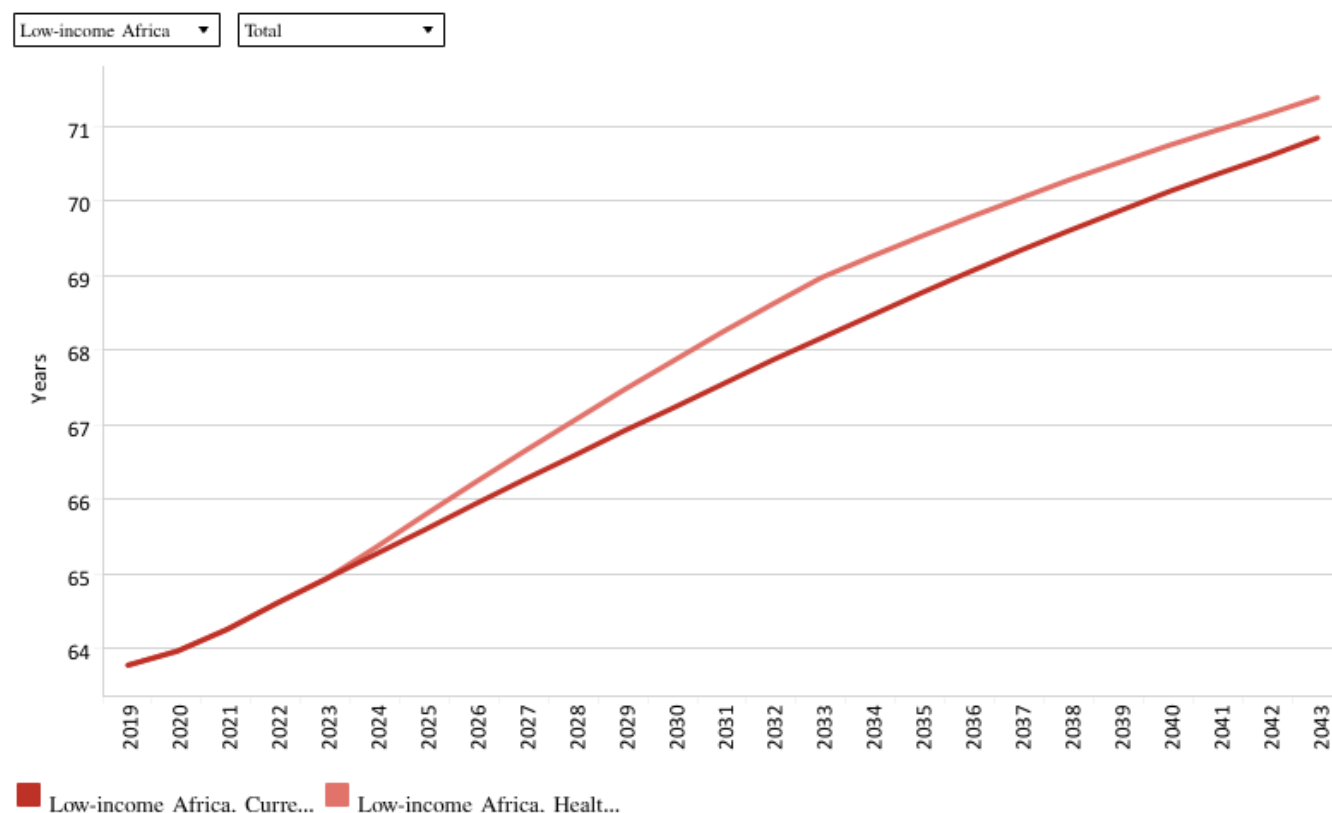
⊹ View on Tableau Public   ↶ ↷ ↺ ↻ ▼ | 🖵▼ 🔲 ⅗ Share

Compared to the Current Path forecast, the Demographic scenario would reduce extreme poverty in low-income Africa by 26 million people (1.5 percentage points) in using US$1.90. In 2043, Madagascar will see the largest percentage point decrease in extreme poverty rate of 5.4 points, followed by Liberia of 2.9 when compared to the Current Path forecast. Compared to the Current Path forecast, the Demographic scenario will lift 8.2 and 4.5 million more people out of extreme poverty in 2043 in the DR Congo and Madagascar.

Health/WaSH scenario

Chart 20: Life expectancy in CP and Health/WaSH scenario, 2019–2043

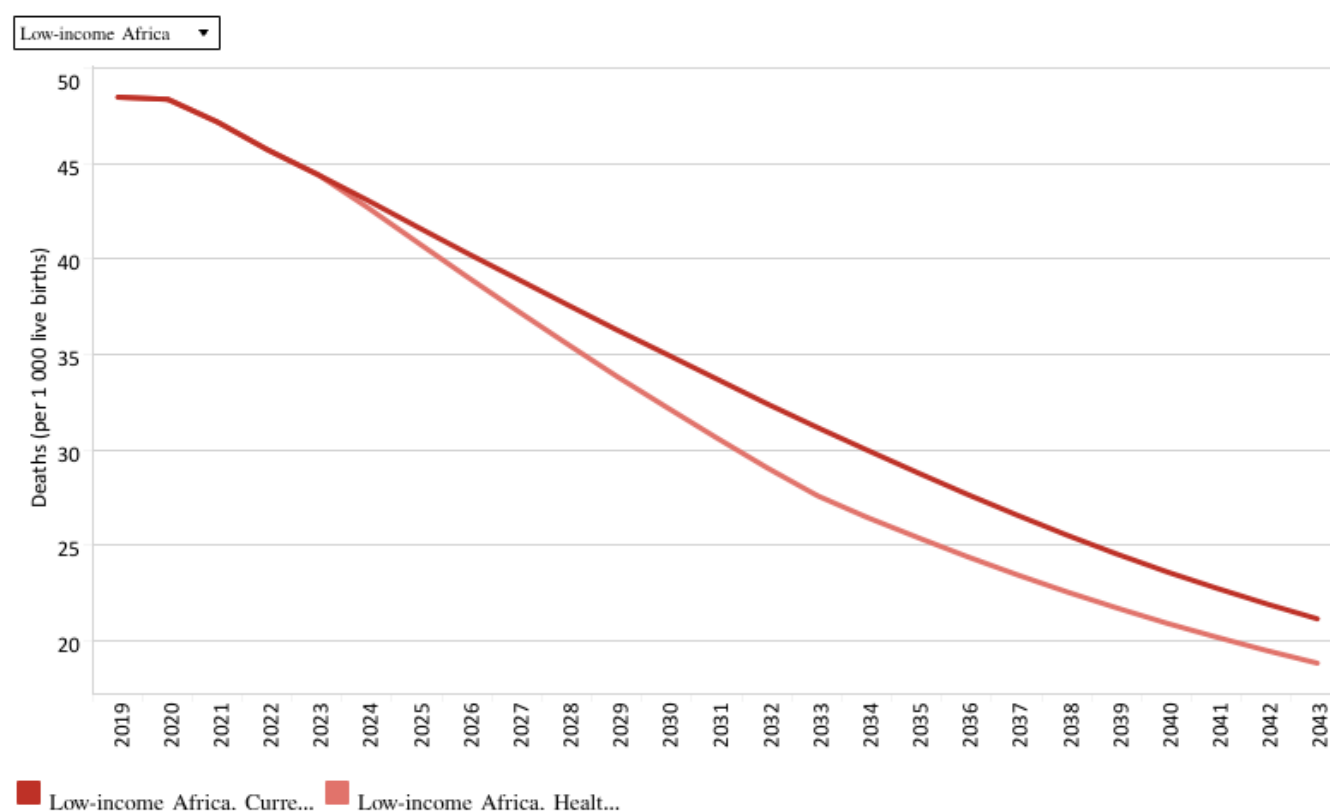Source: IFs 7.63 initialising from Institute for Health Metrics Evaluation GBD Foresight Tool data

This section presents reasonable but ambitious improvements in the Health/WaSH scenario, which include reductions in the mortality rate associated with both communicable diseases (e.g. AIDS, diarrhoea, malaria and respiratory infections) and non-communicable diseases (NCDs) (e.g. diabetes), as well as improvements in access to safe water and better sanitation. The acronym WaSH stands for water, sanitation and hygiene.

The intervention is explained here in the thematic part of the website.

Life expectancy among low-income Africa member states ranged from 69.1 years in Rwanda in 2019 to 51.2 years in CAR. In 2019, average life expectancy was 63.8 years and in the Current Path forecast it will increase to 70.9 years in 2043. The Health/WaSH scenario results in a marginal life expectancy increase above the Current Path forecast of less than one year. South Sudan, with life expectancy of 58.8 years in 2019, experiences the largest increase of 1.3 years and The Gambia the least (0.06 years). Average life expectancy in low-income Africa remains below the average for Africa by less than one year in 2043 in the Health/WaSH scenario.

Chart 21: Infant mortality in CP and Health/WaSH scenario, 2019–2043
Deaths per 1 000 live births

ISS|AF

Low-income Africa ▼

Low-income Africa. Curre... Low-income Africa. Healt...

Source: IFs 7.63 initialising from Institute for Health Metrics and Evaluation Mortality Visualization Tool data
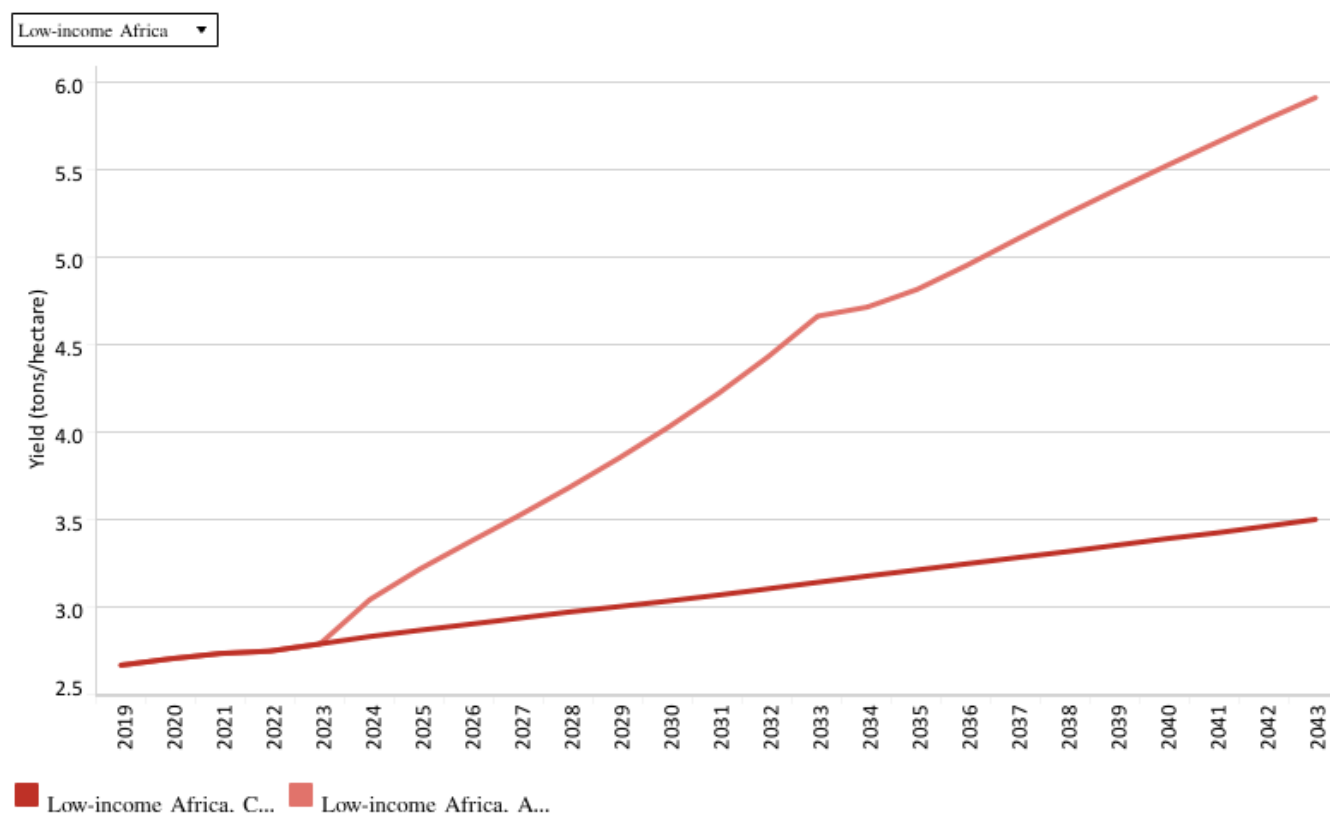
⁜ View on Tableau Public   ↺ ↻ ↺ ↻ ▼ | 🖵▼ ⛶ ⧏ Share

Rates of infant mortality in low-income Africa in 2019 were at 48.5 deaths per 1 000 live births and would reduce to 21.2 in the Current Path forecast by 2043. In the Health/WaSH scenario, the average by 2043 is 18.9, 2.3 deaths fewer compared to the Current Path forecast. South Sudan experiences the largest decline in infant mortality in the Health/WaSH scenario with 7.2 fewer deaths per 1 000 live births followed by Chad with 5.3.

Agriculture scenario

Chart 22: Yield/hectare in CP and Agric scenario, 2019–2043
Pre-loss levels

Source: IFs 7.63 initialising from FAOSTAT on-line statistical service data

The Agriculture scenario represents reasonable but ambitious increases in yields per hectare (reflecting better management and seed and fertiliser technology), increased land under irrigation and reduced loss and waste. Where appropriate, it includes an increase in calorie consumption, reflecting the prioritisation of food self-sufficiency above food exports as a desirable policy objective.

The intervention is explained here in the thematic part of the website.

The data on yield per hectare (in metric tons) is for crops but does not distinguish between different categories of crops.

In 2019, the average crop yield in low-income Africa was 2.7 metric tons, below the average for Africa of 3.9 tons and low middle-income Africa at 5.1 tons. In the Current Path forecast, low-income Africa will modestly improve yields to 3.5 metric tons by 2043 and to 5.9 tons in the Agriculture scenario — a difference of almost 61%.

Rwanda has the highest pre-loss crop yields per hectare among the low-income Africa members as a result of its rich soils, higher rainfall, the intensity of farming and better utilisation of technology. Yield per hectare for Rwanda increases from 8.2 tons in 2019 to 10.6 tons in 2043 in the Current Path forecast and to 14 tons in the Agriculture scenario. Chad and Niger have the lowest pre-loss crop yields per hectare at 1.2 and 0.8 tons, respectively, in 2019.

Compared to the Current Path forecast, Mozambique will experience the largest improvement (5.5 tons by 2043) in the Agriculture scenario, followed by South Sudan (4.6 tons), Burundi (4.5 tons) and Guinea Bissau (4.1 tons). Somalia and Niger will experience the least improvements of 1.2 tons and 0.87 tons, respectively, in the Agriculture scenario.

Chart 23: Agriculture imports in CP and Agric scenario, 2019–2043
Net imports for meat, crops and fish, % of demand
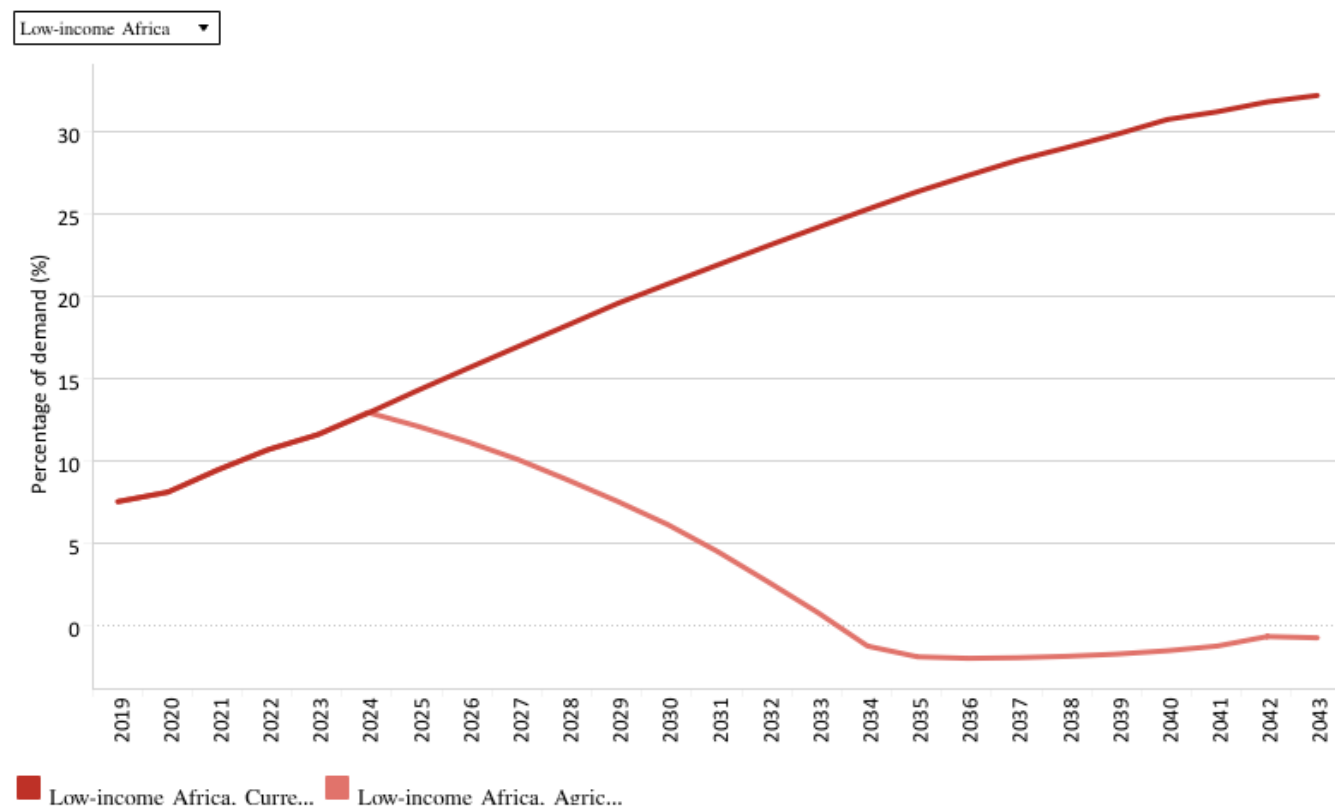
Source: IFs 7.63 initialising from Food and Agriculture Organization Food Balance Sheets data

In the Current Path forecast, the contribution of agriculture to the GDP of low-income Africa would decline from 28% in 2019 to 9% in 2043. In the Agriculture scenario, agriculture would still contribute 13.4% to GDP by 2043, and low-income Africa group will produce 325.8 million metric tons more crops by 2043, compared to the Current Path forecast.

In the Agriculture scenario, import dependence in low-income Africa is set to decrease to 0.8% instead of 32.2% in the Current Path forecast, resulting in US$122 million fewer imports than in the Current Path in 2043. Total agricultural export will sky rocket in 2043 in the Agriculture scenario to 84 million metric tons from 6 million metric tons in 2019. Compared to the Current Path forecast, Ethiopia (at 54.7 million metric tons) followed by Mozambique (at 8.1 million metric tons) will see the greatest increments in agricultural exports. CAR, South Sudan and Chad will not experience an increase in exports.

Chart 24: GDP per capita in the CP and Agric scenario, 2019–2043
Purchasing power parity
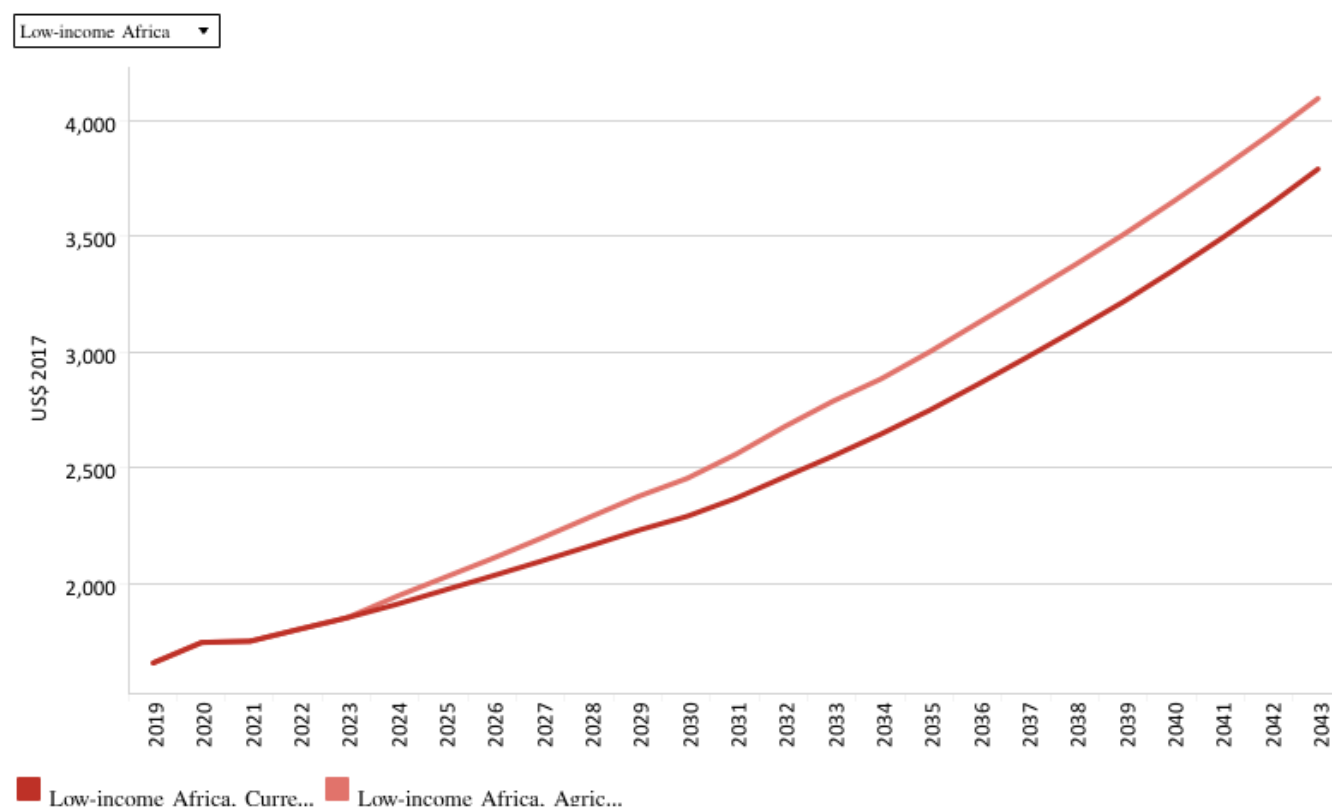
Source: IFs 7.63 initialising from UN Population Division World Population Prospects and World Development Indicators data

The average improvement in GDP per capita in the Agriculture scenario is US$334 in 2043, compared to the Current Path forecast for that year. Guinea Bissau will benefit the most: its GDP per capita in 2043 will be US$889 larger than in the Current Path forecast for that year, followed by Sudan, Chad and Malawi, while Ethiopia and Somalia will benefit the least.

Chart 25: Poverty in CP and Agric scenario, 2019–2043
Millions of people and % of total population
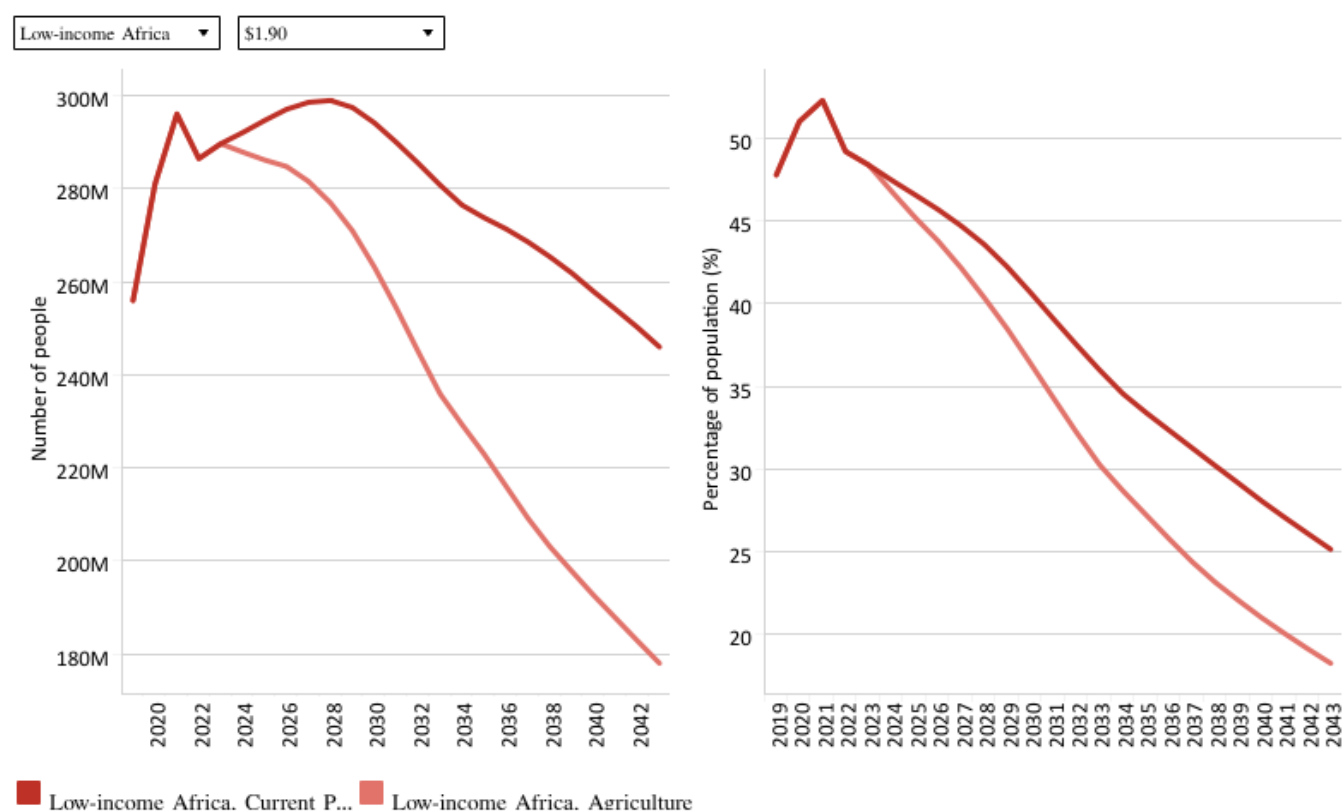
Low-income Africa ▾ $1.90 ▾

■ Low-income Africa. Current P...   ■ Low-income Africa. Agriculture

Source: IFs 7.63 initialising from UN Population Division Population Prospects estimate, World Development Indicators population data and PovcalNet World Bank data

⊹ View on Tableau Public   ↶ ↷ ↩ ↪ ▾ | ⬇▾ ⧉ ⊰ Share

Agriculture traditionally has a significant effect on extreme poverty. While low-income Africa would still have 246 million people living below US$1.90 in the Current Path in 2043, in the Agriculture scenario the number comes down to 178 million, mainly from the DR Congo and Madagascar. The number of extremely poor people in the DR Congo and Madagascar will decline by 25.9 million and 7.6 million people, respectively, in 2043 Agriculture scenario compared to the Current Path forecast for that year.

Whereas, in 2019, the percentage of people living below US$1.90 per day in low-income Africa was 47.8%, there would be a decline to 25.2% by 2043 in the Current Path forecast and 18.3% in the Agriculture scenario. The impact of the Agriculture scenario is such that it reduces the extreme poverty rate by 16.7 and 14.8 percentage points in Madagascar and the DR Congo, respectively, compared to the Current Path forecast. The least impact of agriculture on poverty will be in Ethiopia and The Gambia.

Education scenario

Chart 26: Mean years of education in CP and Educ scenario, 2019–2043
Mean years of adult (+15) education

| Low-income Africa ▾ | Total ▾ |

Low-income Africa. C...   Low-income Africa. E...
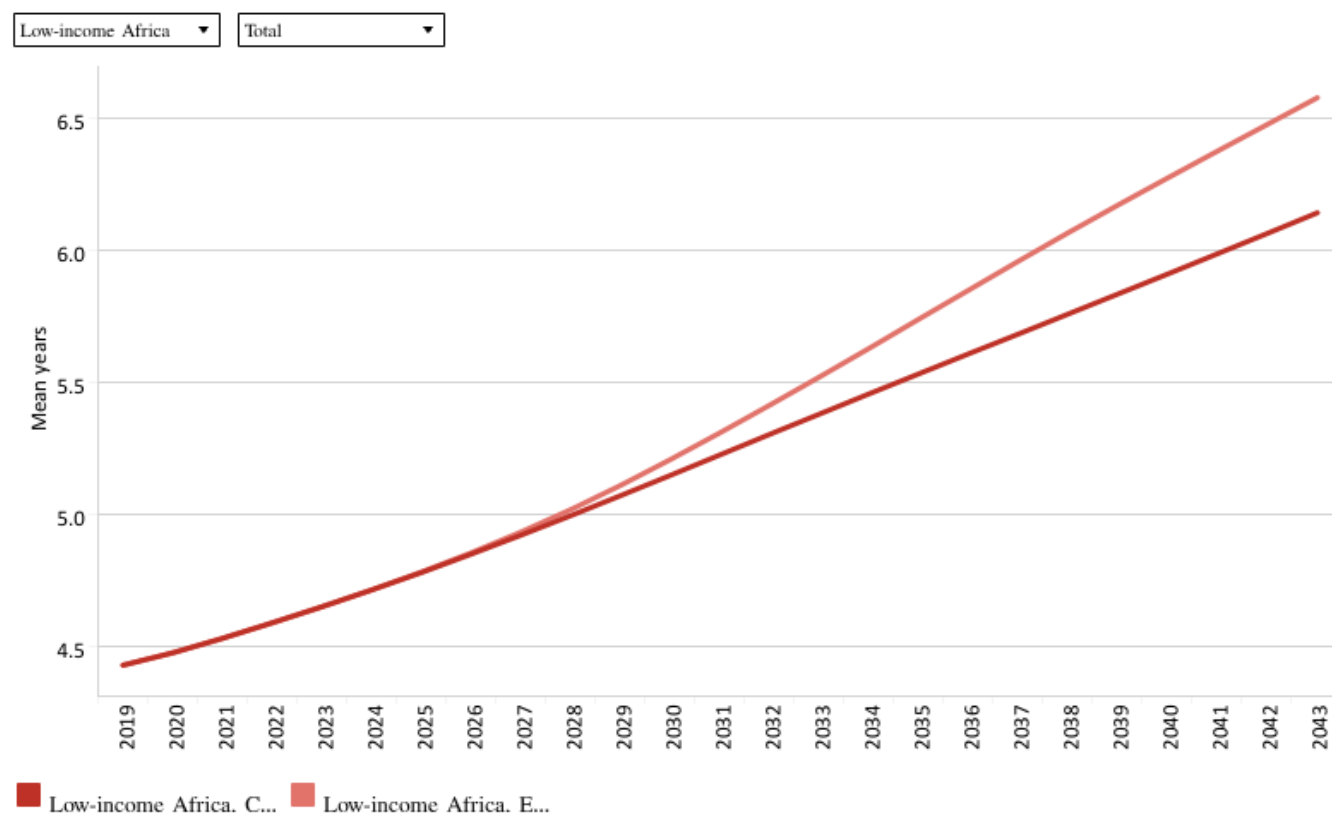
Source: IFs 7.63 initialising from Barro-Lee data

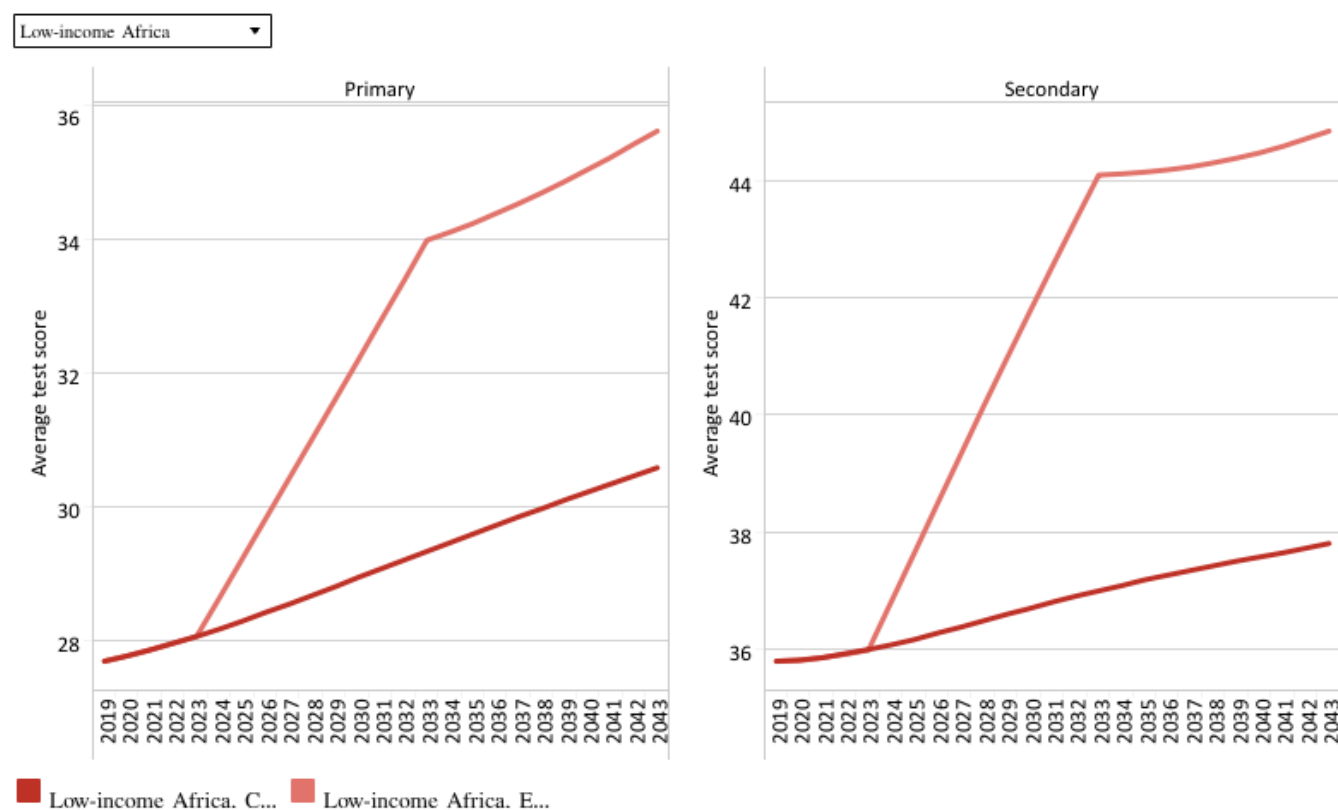⊹ View on Tableau Public   ↺ ↻ ↺ ↻ ▾ | ⤓▾ ⬚ ⋇ Share

The Education scenario represents reasonable but ambitious improved intake, transition and graduation rates from primary to tertiary levels and better quality of education. It also models substantive progress towards gender parity at all levels, additional vocational training at secondary school level and increases in the share of science and engineering graduates.

The intervention is explained here in the thematic part of the website.

Education is a key development booster but comes with long lags in impact. In 2019, the adult population of low-income Africa had, on average, 4.4 years of education, set to increase to 6.1 years in 2043. In the Education scenario, the mean years of education of low-income Africa would increase to 6.5 years. While the mean years of male education was 5.1 years in 2019, for females it was 3.8 years — a gap of 1.3 years. In the Education scenario, the gap in mean years of male and female education is forecast to modestly decline to 0.8 years by 2043, as gender inequality improves. Niger will experience the largest increase in education years of 0.7 years and Guinea of 0.6 years.

Chart 27: Education quality in CP and Educ scenario, 2019–2043
Average test scores for primary and secondary learners

Low-income Africa

Legend: Low-income Africa. C... | Low-income Africa. E...
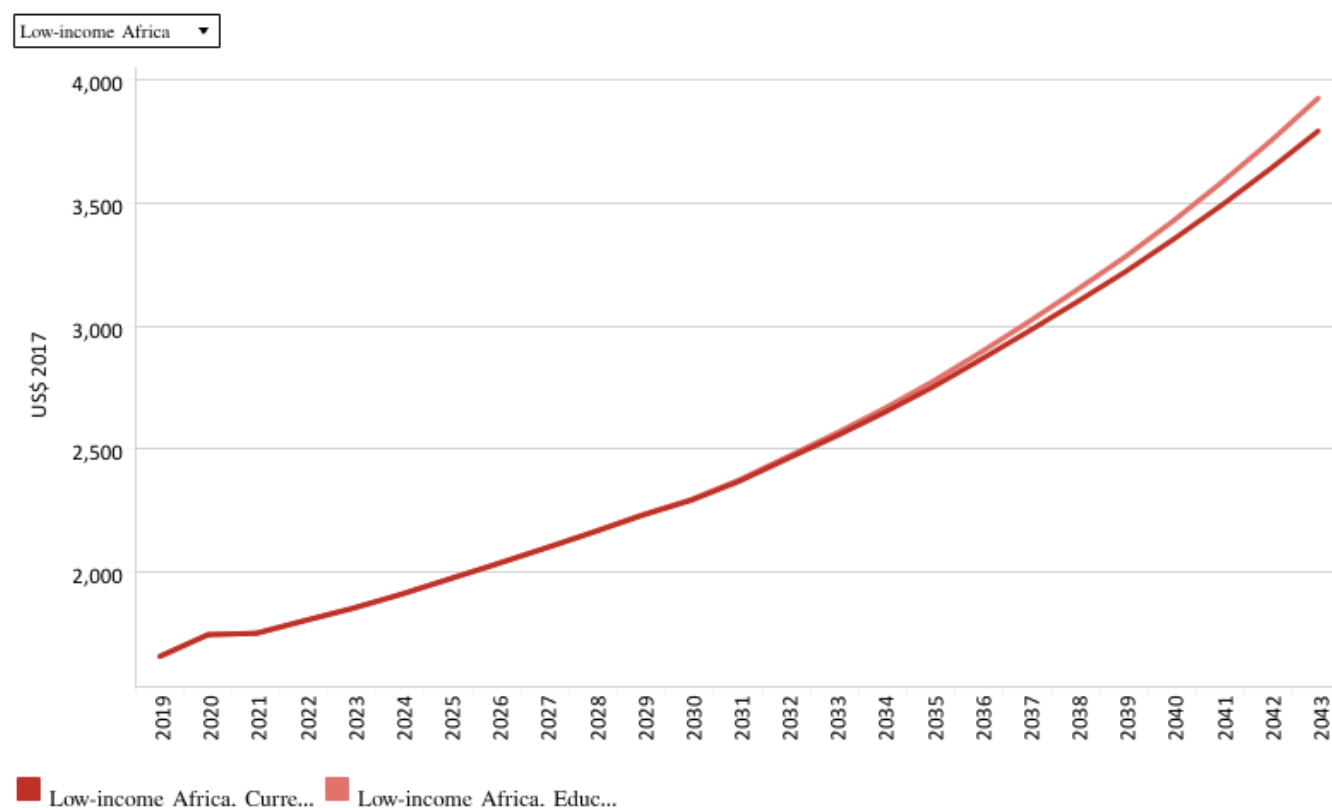
Source: IFs 7.63 initialising from World Bank EDSTATS

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Education quality is as important, if not more important, than access to education. In 2019, the average test score for primary learners was 27.7, set to increase to 30.6 in 2043. The Education scenario will increase average primary test scores to 35.6.

Secondary education quality in the Current Path forecast ranges from 35.8 years in 2019 to 37.8 in the 2043 Current Path forecast, which increases to 44.8 in the Education scenario.

Chart 28: GDP per capita in CP and Educ scenario, 2019–2043
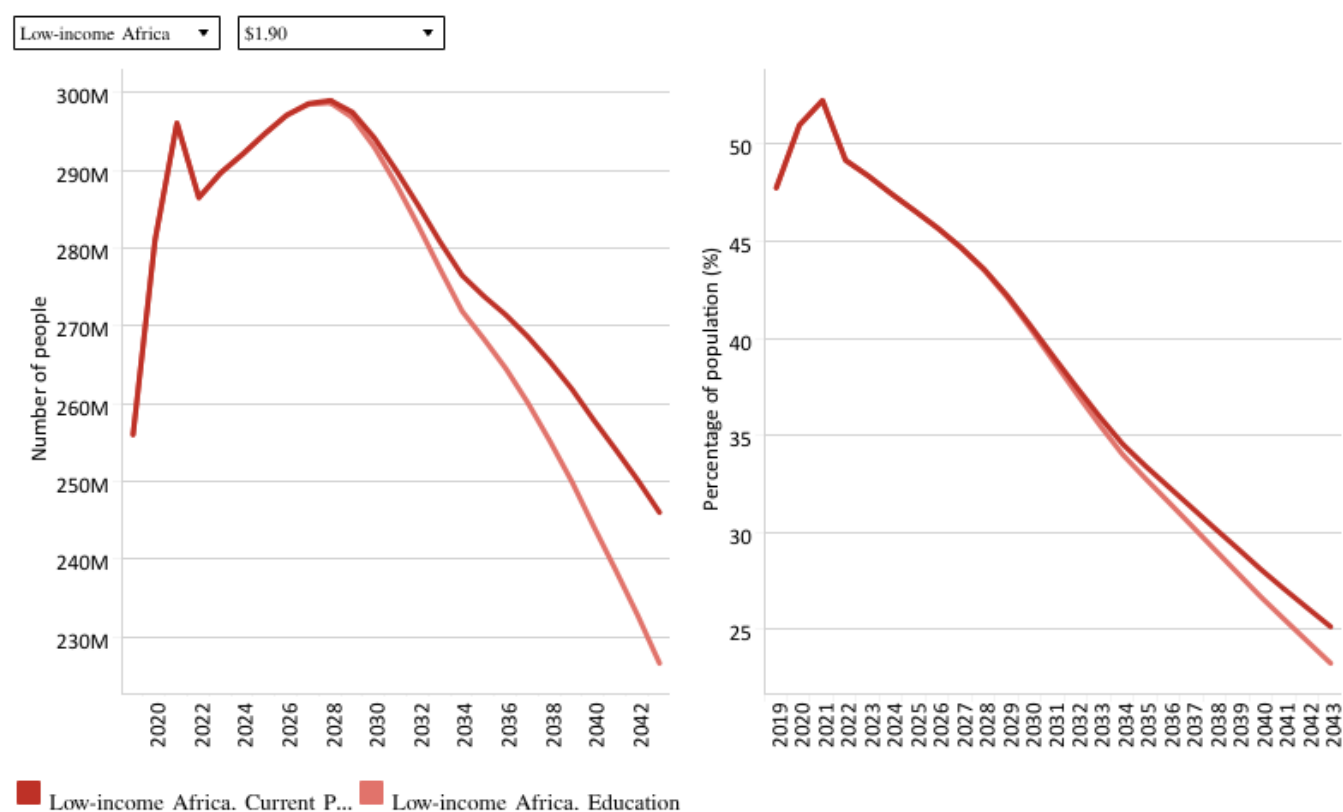Purchasing power parity

Source: IFs 7.63 initialising from UN Population Division World Population Prospects and World Development Indicators data

The impact of the Education scenario on GDP per capita is an average improvement for low-income Africa of US$138 in the Current Path forecast to US$3 923 in 2043. The impact is the largest in Malawi of US$214 and Guinea of US$210 compared to the Current Path forecast for that year. The impact is lowest in Burundi — only US$37 above the Current Path forecast for 2043.

Chart 29: Poverty in CP and Educ scenario, 2019–2043
Millions of people and % of total population

| Low-income Africa ▼ | $1.90 ▼ |

■ Low-income Africa. Current P... ■ Low-income Africa. Education

Source: IFs 7.63 initialising from UN Population Division Population Prospects estimate, World Development Indicators population data and PovcalNet World Bank data

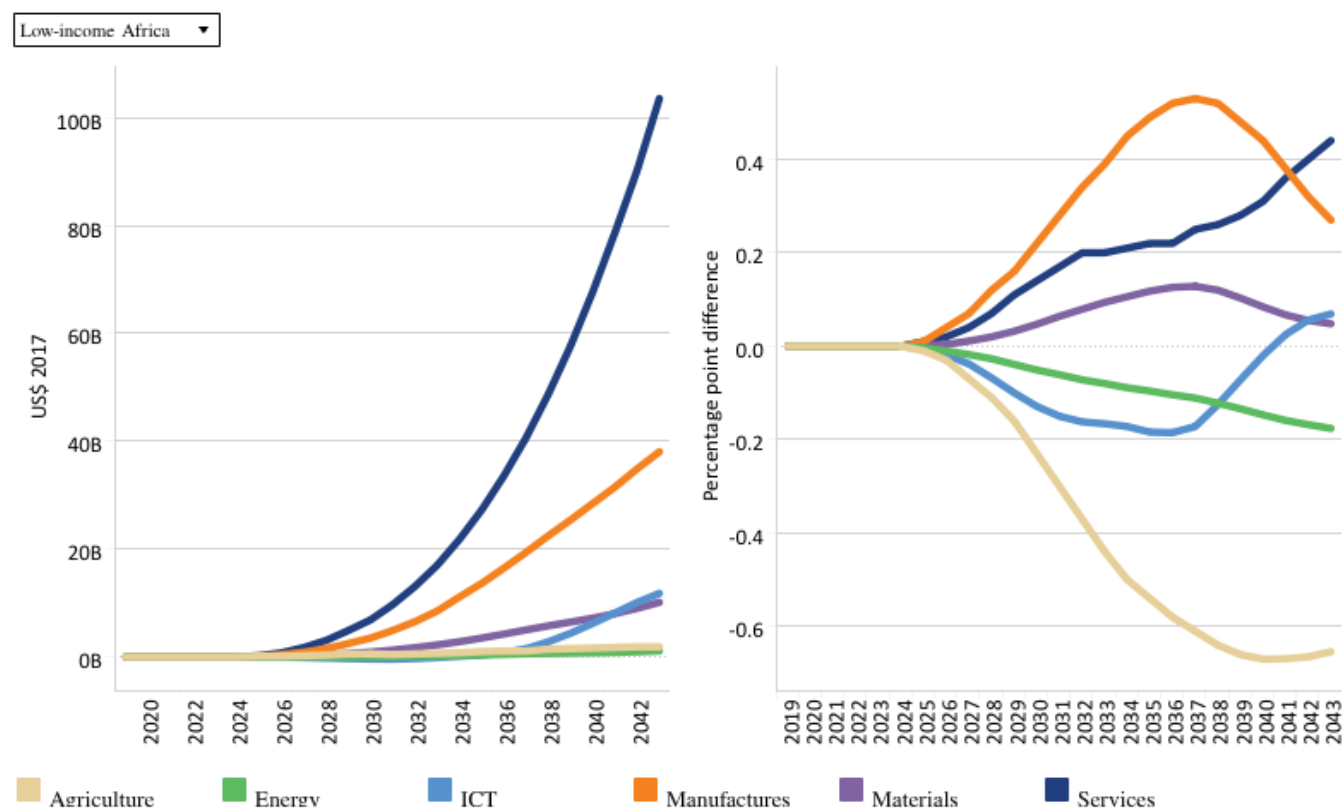⁜ View on Tableau Public   ↺ ↻ ⅁ ⇨ ▾ | ⊡▾   ▣   ⚭ Share

The Education scenario will lift 19.4 million more people from extreme poverty in 2043 compared to the Current Path forecast, with most coming from the DR Congo (5.6 million people) and Uganda (1.5 million people). With much lower levels of extreme poverty, the impact of the Education scenario is lowest in The Gambia.

In the Education scenario, extreme poverty would be 1.9 percentage points lower by 2043 compared to the Current Path forecast for that year. Viewed as a percentage point reduction in rates of extreme poverty from the Current Path forecast, the DR Congo will experience the largest decline of 3 percentage points, whereas Ethiopia and The Gambia will see the smallest decline in extreme poverty due to the Education scenario in 2043. In the case of Ethiopia, this is the result of a rapid decline in extreme poverty in the Current Path forecast.

Chart 30: Value added by sector in CP and Manufac/Transfers scenario, 2019–2043
Absolute and % point difference GDP

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Low-income Africa ▾

Source: IFs 7.63 initialising from International Monetary Fund World Economic Outlook database

⚙ View on Tableau Public   ↶ ↷ ↺ ↻ ▾ | 🖳▾ ⛶ ⁰ₒ Share

The Manufacturing/Transfers scenario represents reasonable but ambitious manufacturing growth through greater investment in the economy, investments in research and development, and promotion of the export of manufactured goods. It is accompanied by an increase in welfare transfers (social grants) to moderate the initial increases in inequality that are typically associated with a manufacturing transition. To this end, the scenario improves tax administration and increases government revenues.

The intervention is explained here in the thematic part of the website.

Chart 30 should be read with Chart 8 that presents a stacked area graph on the contribution to GDP and size, in billion US$, of the Current Path economy for each of the sectors.

Because of its forward and backward linkages to other sectors, the manufacturing sector is unique in its contribution to productivity improvements in most economies. In 2019, the service sector represented 47% of GDP in low-income Africa, agriculture 28%, manufacturing 13%, energy 4.2%, ICT 4% and materials 3.4%. By 2043, the percentage contributions to GDP in the Current Path forecast are agriculture 9.4%, manufacturing 19.5%, energy 2.9%, ICT 6.2% and materials 5.5%.

The increased contribution from manufacturing peaks by 0.53 percentage points above the Current Path forecast by 2037 before modestly declining to 0.27 in 2043. Increases in services' contribution is set to reach 0.44 in 2043. The relative

contribution of agriculture generally declines, reaching 0.65 in 2043, ICT's contribution declines to a low of 0.19 in 2036 before improving to 0.07 in 2043. Energy and materials largely remain stable. The dynamics differ across countries. In the DR Congo, services' relative contribution increases consistently across the 2043 forecast horizon, while agriculture's contribution fell continuously. In Madagascar, the contribution of manufacturing peaks in 2036 at 0.52 before falling to 0.10 in 2043 in the Manufacturing/Transfers scenario compared to the Current Path forecast.

All sectors increase in absolute size in the Manufacturing/Transfers scenario compared to the Current Path forecast. The service sector is, by 2043, US$103.6 billion larger than the Current Path forecast for that year, followed by the manufacturing sector which is US$38 billion larger; ICT is US$11.8 larger. Materials increases by US$10.1 billion. The increases in size for the agriculture and energy sectors are marginal.

Chart 31: Gov welfare transfers in CP and Manufac/Transfers scenario, 2019–2043
Billions US$ 2017
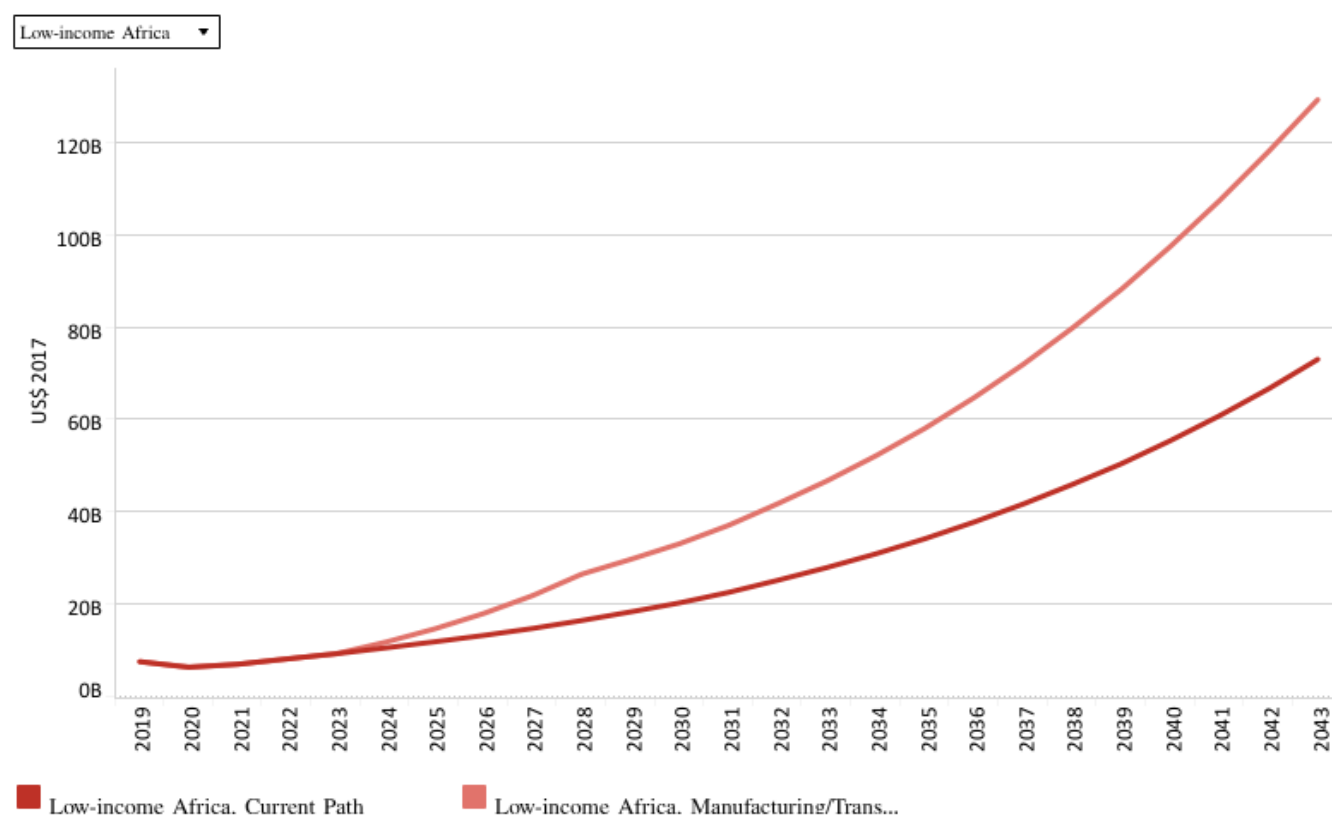
Source: IFs 7.63 initialising from World Development Indicators data

Efforts to use welfare transfers to unskilled workers offset the increase in poverty/inequality that is often associated with investments in manufacturing. Whereas low-income Africa countries transferred US$7.4 billion in welfare transfers in 2019, the 2043 amount in the Manufacturing/Transfers scenario, at US$129.4 billion, is US$56.4 billion more than in the Current Path forecast. Without these transfers, extreme poverty would be significantly higher. Because of the size of their economies, Uganda, Ethiopia and the DR Congo have the largest transfers in the Manufacturing/Transfers scenario compared to the Current Path forecast. Uganda will add US$17.1 billion more to transfers, Ethiopia US$11.7 billion more, and the DR Congo will add US$6.9 billion.

Chart 32: GDP per capita in CP and Manufac/Transfers scenario, 2019–2043
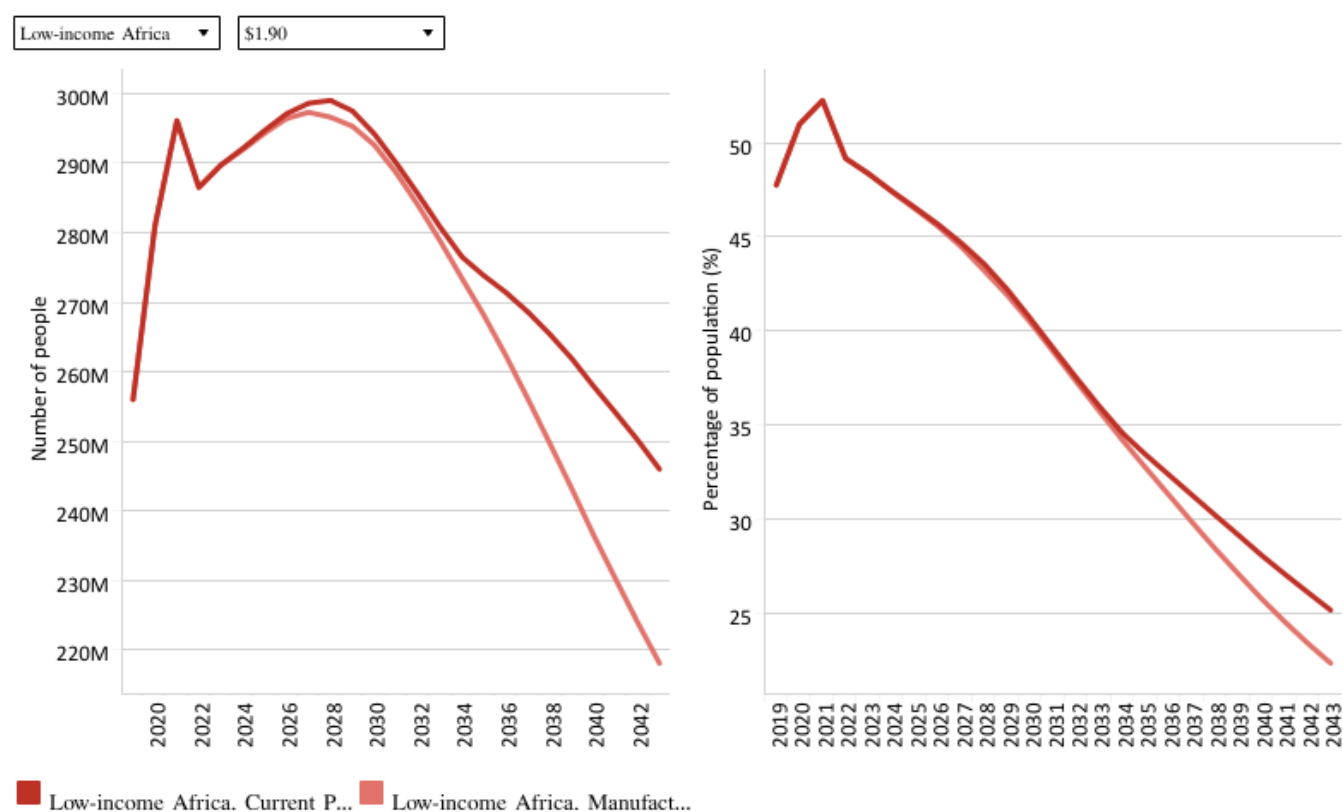Purchasing power parity
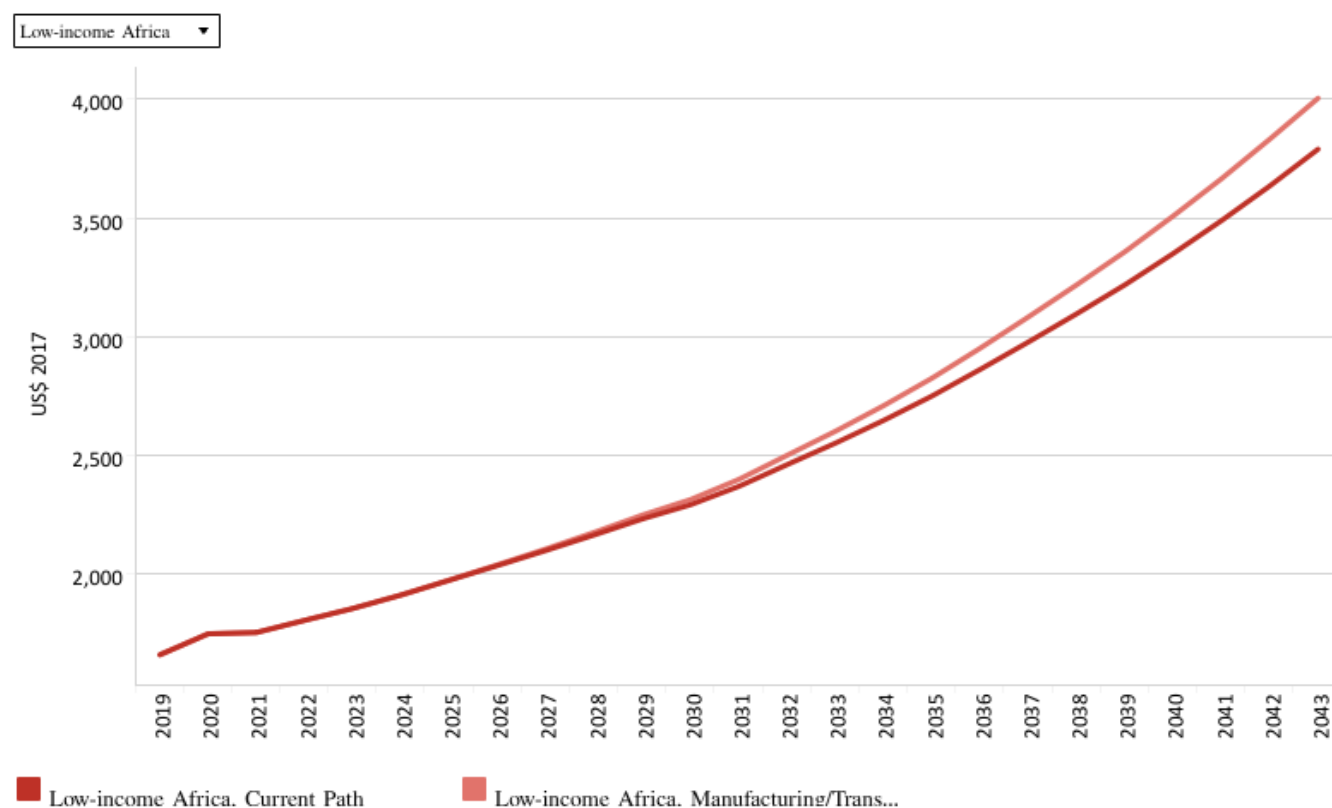
Low-income Africa ▼

Low-income Africa. Current Path   Low-income Africa. Manufacturing/Trans...

Source: IFs 7.63 initialising from UN Population Division World Population Prospects and World Development Indicators data

⁜ View on Tableau Public   ↺ ↻ ↶ ↷ ▾ | ⬇▾   ⛶   ⠀⚯ Share

Instead of a 2043 GDP per capita of US$3 790 in 2043, low-income Africa could have a GDP per capita of US$4 005 in the Manufacturing/Transfers scenario. In dollar values, the scenario has the most positive impact on Uganda where GDP per capita in 2043 is US$475 higher than the Current Path forecast for that year, followed by Malawi (US$418) and Mali (US$302). Burundi (US$71) and South Sudan (US$44) benefit the least.

Chart 33: Poverty in CP and Manufac/Transfers scenario, 2019–2043
Millions of people and % of total population

| Low-income Africa ▼ | $1.90 ▼ |

Low-income Africa. Current P...   **Low-income Africa. Manufact...**

Source: IFs 7.63 initialising from UN Population Division Population Prospects estimate, World Development Indicators population data and PovcalNet World Bank data

⊹ View on Tableau Public   ↶ ↷ ↺ ↻ ▼ | ⛶ ▼ ⟺ ⋘ Share

In the Manufacturing/Transfers scenario, low-income Africa would have 218.1 million extremely poor people in 2043 (using US$1.90) instead of 246 million, a difference of 27.8 million people. Given its large population, most of that decline (9 million people in 2043) is in the DR Congo, followed by Uganda (2.9 million less in 2043).

In the Manufacturing/Transfers scenario, low-income Africa would have 22.3% extremely poor people (using US$1.90) in 2043 instead of 25.2% in the Current Path forecast. Much of the decline is in Malawi (6.1 percentage point decline) and Somalia (5.9 percentage points).

Leapfrogging scenario

Chart 34: Fixed broadband access in CP and Leapfrogging scenario, 2019–2043
Subscriptions per 100 people
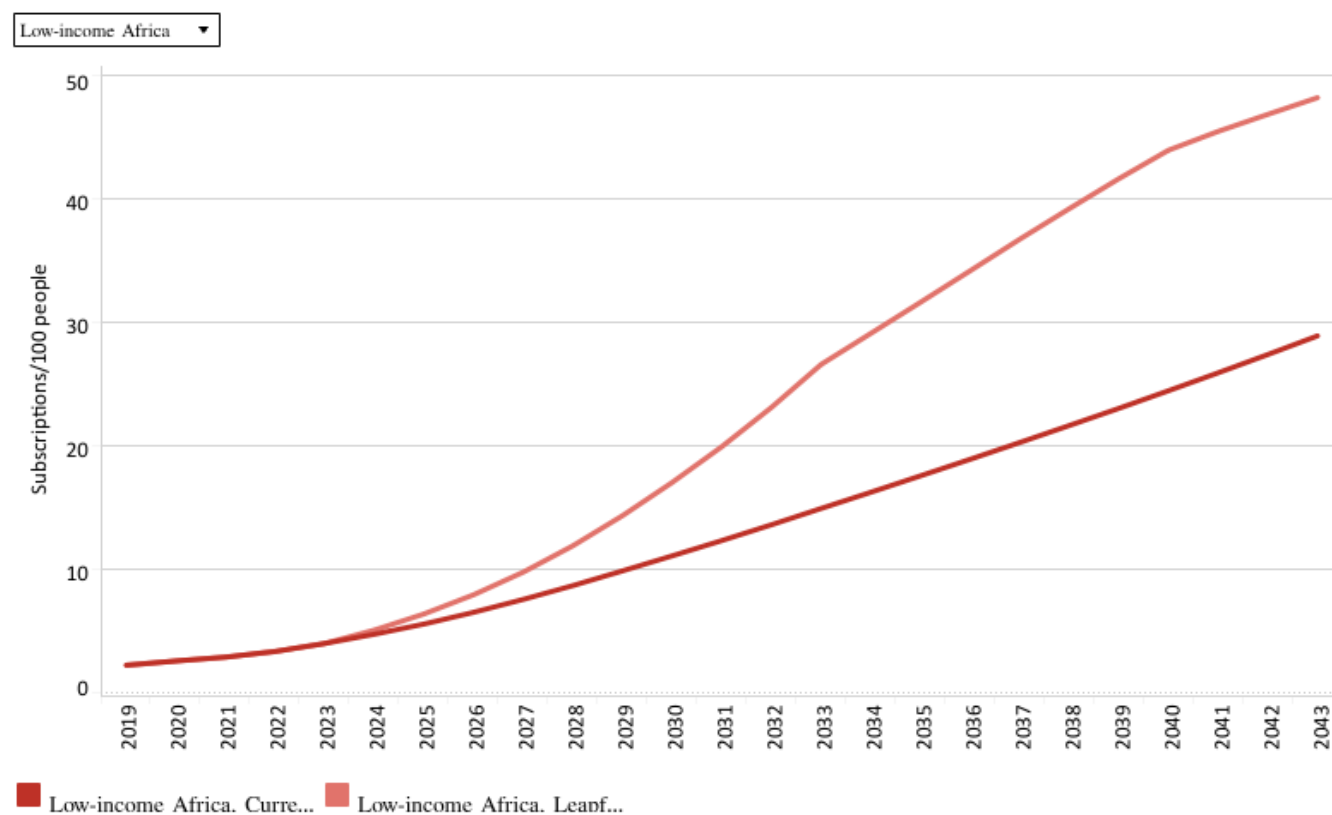
Source: IFs 7.63 initialising from International Telecommunication Union data

The Leapfrogging scenario represents a reasonable but ambitious adoption of and investment in renewable energy technologies, resulting in better access to electricity in urban and rural areas. The scenario includes accelerated access to mobile and fixed broadband and the adoption of modern technology that improves government efficiency and allows for the more rapid formalisation of the informal sector.

The intervention is explained here in the thematic part of the website.

Fixed broadband includes cable modem Internet connections, DSL Internet connections of at least 256 KB/s, fibre and other fixed broadband technology connections (such as satellite broadband Internet, ethernet local area networks, fixed-wireless access, wireless local area networks, WiMAX, etc.).

In 2019, fixed broadband access per 100 people in low-income Africa was at 2.3 and is set to increase to 28.4 in the Current Path forecast by 2043. In the Leapfrogging scenario, that rate almost doubles to 48.3 with large country to country variations.

Subscriptions per 100 people will increase by more than 20 in eleven countries ranging from Chad and Uganda to Sudan and South Sudan in the 2043 Leapfrogging scenario compared to the Current Path forecast, with the least growth in The Gambia (4) and CAR (0.9).

Chart 35: Mobile broadband access in CP and Leapfrogging scenario, 2019–2043
Subscriptions per 100 people
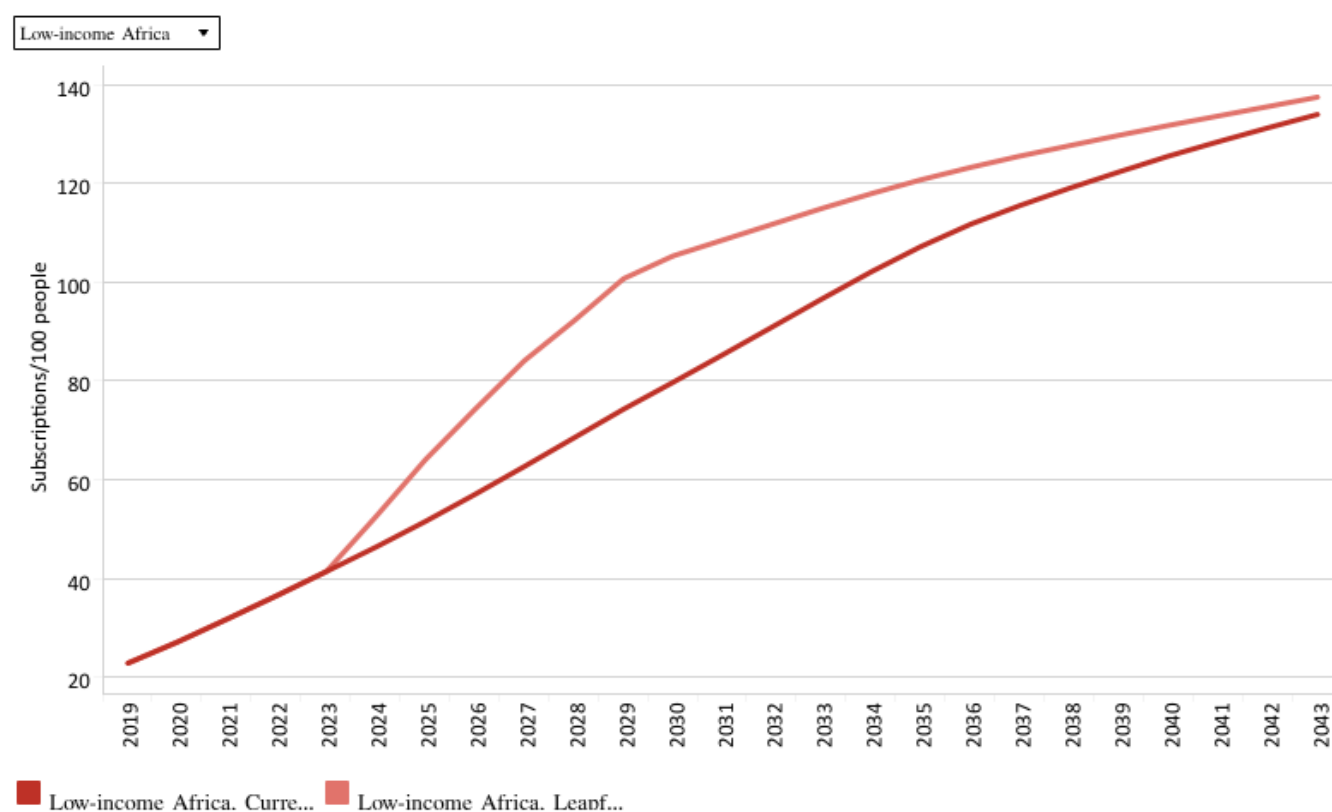
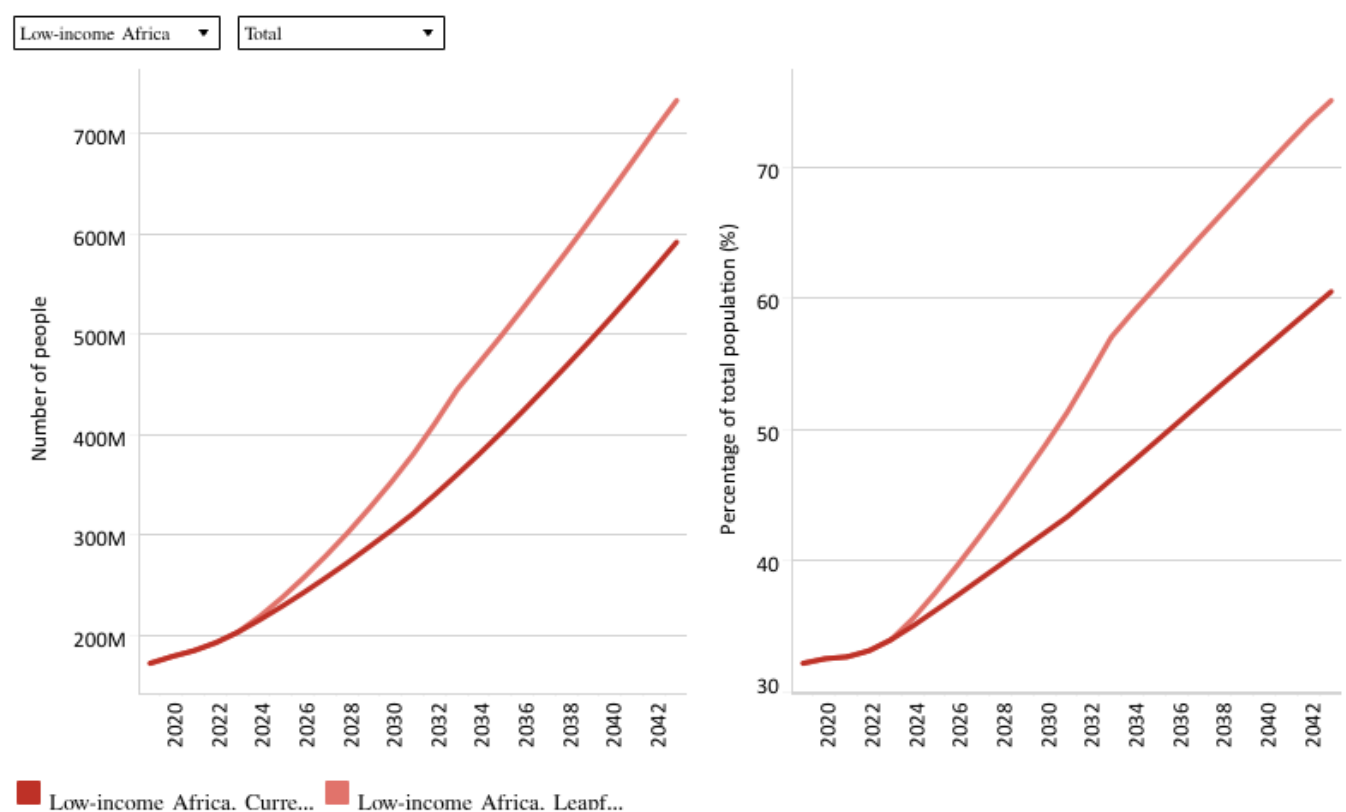
Source: IFs 7.63 initialising from International Telecommunication Union data

Mobile broadband refers to wireless Internet access delivered through cellular towers to computers and other digital devices.

Even more rapid than increased subscriptions to fixed broadband is the improved access to mobile broadband, which may be reaching saturation levels. In 2019, 23 out of every 100 persons in low-income Africa were connected to mobile broadband. In the Current Path forecast, that ratio quickly gets to more than 100 in 2034 and to 134 by 2043. In the Leapfrogging scenario, it will get 100 in 2029 and to 137.4 by 2043.

The Leapfrogging scenario accelerates the already aggressive forecasts on mobile broadband access within IFs. In 2043, the greatest growth will occur in Somalia (11.8) of additional subscriptions compared to the Current Path forecast, followed by Liberia (10.8). Due to its very high number of subscriptions in the Current Path, the least growth will occur in Burkina Faso of 0.075 subscriptions per 100 people.

Chart 36: Electricity access in CP and Leapfrogging scenario, 2019–2043
Millions of people and % of population

Low-income Africa | Total

Source: IFs 7.63 initialising from World Development Indicators data
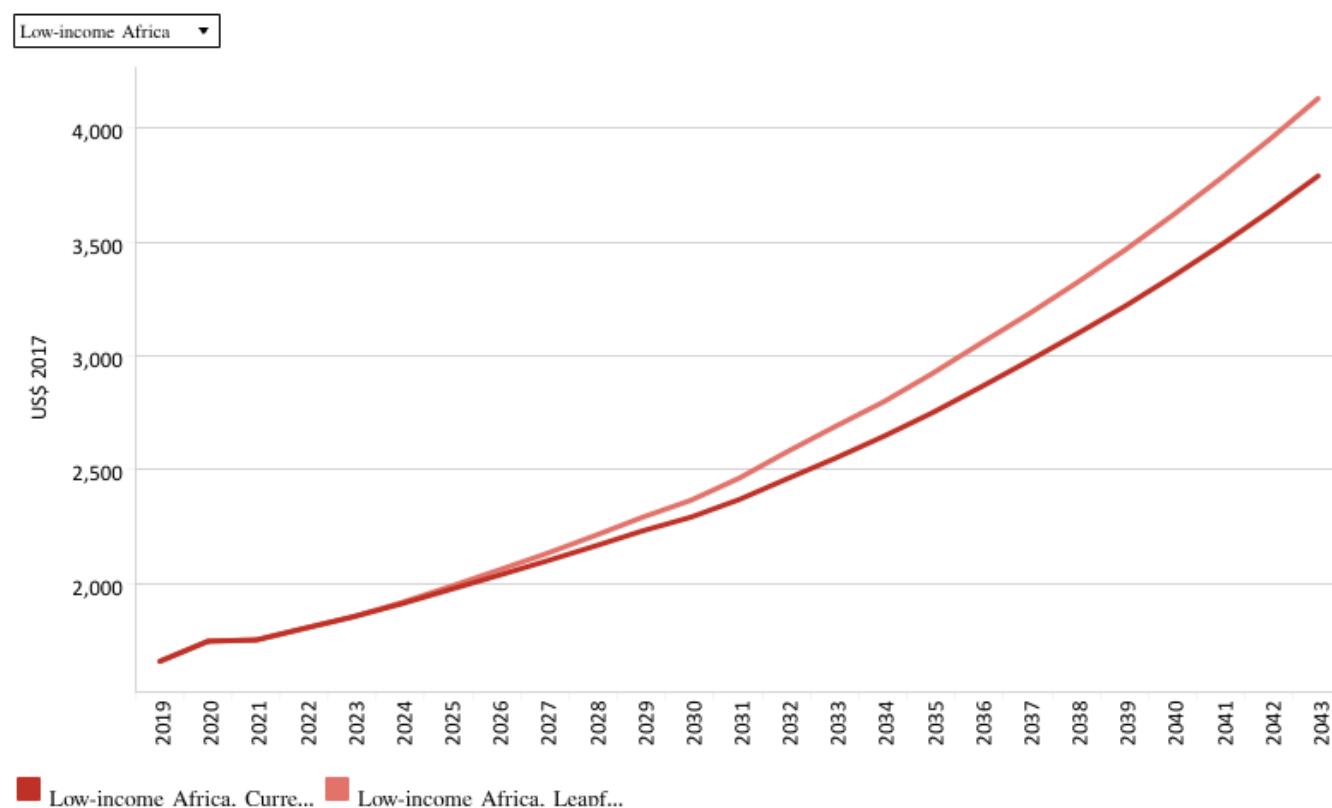
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The SDG target for 2030 (Indicator 7.1.1) is 98% electricity access. Due to their low development levels, none of low-income Africa countries have reached the 2030 SDG target of 98% electricity access. In 2019, the low-income Africa average was 32.2%, forecast to increase to 42% in 2030 and to 60.5% by 2043 in the Current Path forecast. In the Leapfrogging scenario, the average for the group improves to 48.7% in 2030 and to 75.2% by 2043. Uganda has the largest improvement at 21 percentage points above the Current Path forecast by 2043, followed by Rwanda (20) and Malawi (18). CAR will be the country that yields the least impact of the Leapfrogging scenario at 4.6 percentage points in 2043.

The average urban electrification rate in low-income Africa was 61.3% in 2019 and is forecast to improve to 68.7% in 2030 and to 80.8% in 2043 in the Current Path forecast. In the Leapfrogging scenario, urban electricity access improves to 86.7% in 2043. Madagascar is forecast to improve most at 9.8 percentage points in 2043, followed by Somalia at 9.8. Togo will see no improvement in urban access to electricity because of reaching 100% in 2038, while Ethiopia will only make 0.042 improvement to get it to 100%.

The rural–urban gap in electricity access is high in low-income Africa at more than 40 percentage points in 2019. Electricity access in rural low-income Africa is set to increase to 44.8% in 2043 (in the Current Path forecast) and 64.5% in Leapfrogging scenario. The impact of the Leapfrogging scenario on rural electrification is highest in Uganda at 29.4 percentage points above the Current Path forecast, followed by Eritrea at 27.1 percentage points. South Sudan and CAR, which will see the least benefit, will have 8.9 and 4.7 percentage points improvement in rural electricity access due to the Leapfrogging scenario in 2043.

Chart 37: GDP per capita in CP and Leapfrogging scenario, 2019–2043
Purchasing power parity

Source: IFs 7.63 initialising from UN Population Division World Population Prospects and World Development Indicators data

In 2019, GDP per capita was at US$1 660 and is forecast to increase to US$3 790 by 2043 in the Current Path. In the Leapfrogging scenario, GDP per capita will increase by US$340 to US$4 130 in 2043, compared to the Current Path forecast. The largest increase is forecast for Uganda at US$632, followed by Madagascar (US$602), Malawi (US$549) and Mali (US$484) compared to the Current Path forecast. The countries with the least improvement are Burundi, CAR and Liberia (all less than US$160).

Chart 38: Poverty in CP and Leapfrogging scenario, 2019–2043
Millions of people and % of total population
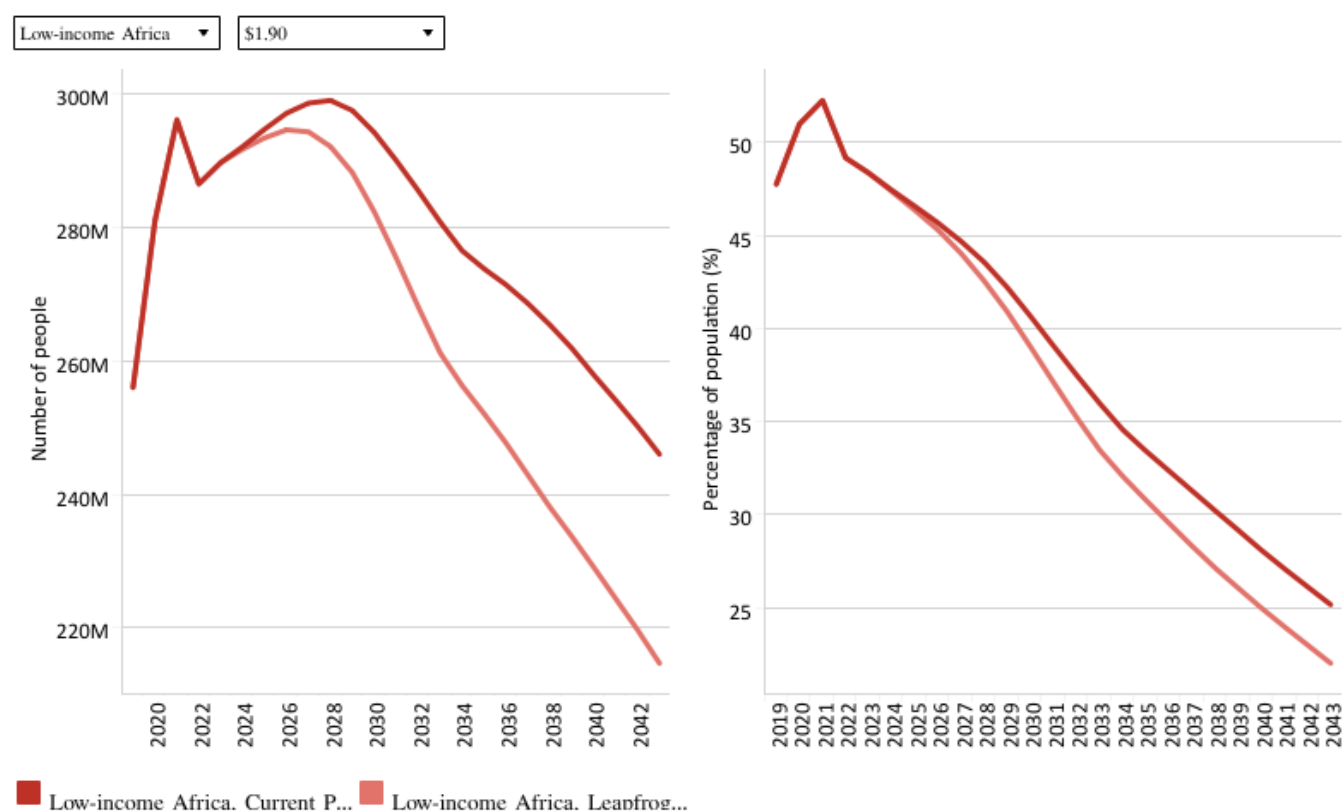
Low-income Africa ▼ $1.90 ▼

Legend: Low-income Africa. Current P...   Low-income Africa. Leapfrog...

Source: IFs 7.63 initialising from UN Population Division Population Prospects estimate, World Development Indicators population data and PovcalNet World Bank data

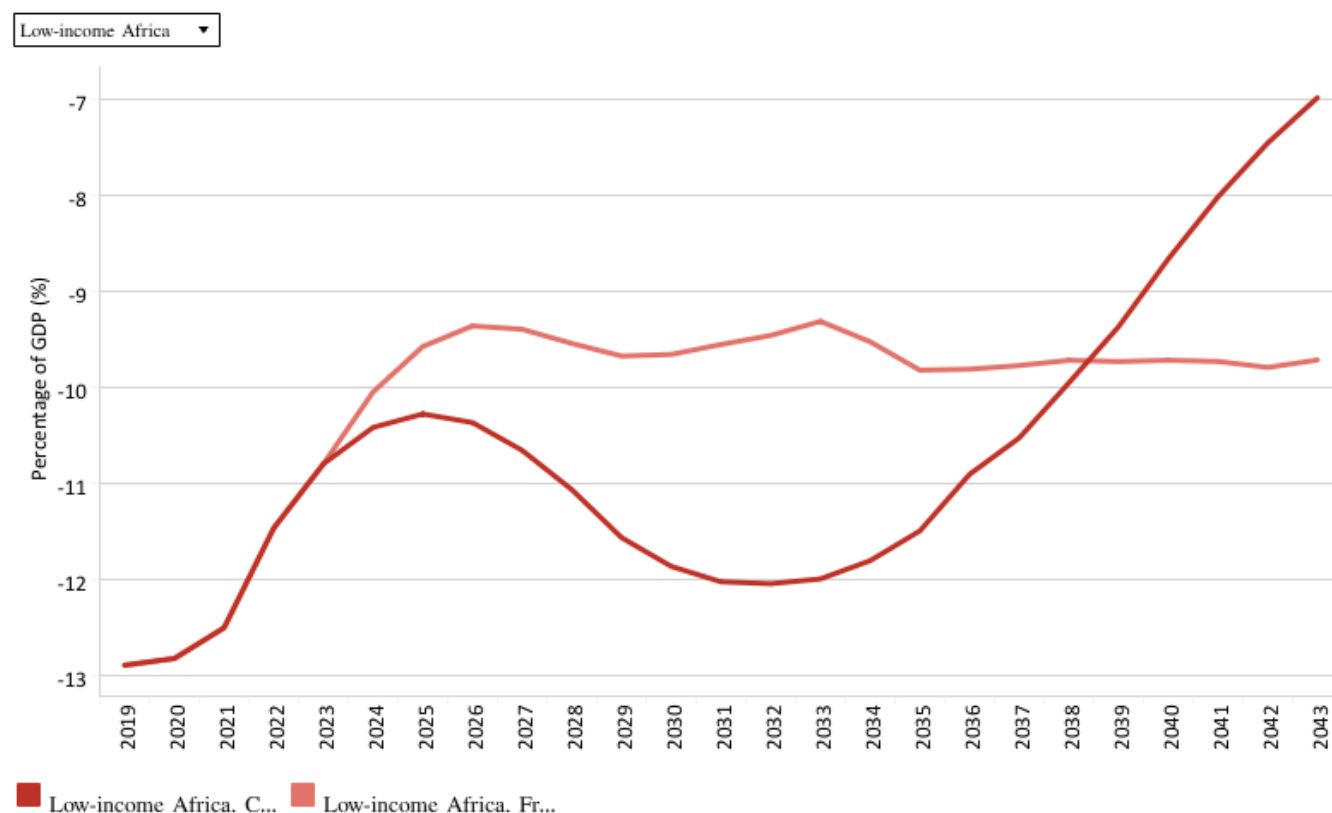⁜ View on Tableau Public   ↶ ↷ ↺ ↻ ▼ | ⬇▼ ⬚ ⋘ Share

In the Leapfrogging scenario, Madagascar will experience the largest decline in the number of extremely poor people (using US$1.90) among the low-income Africa countries by 2043, compared to the Current Path forecast. It will reduce extreme poverty by 13 percentage points in 2043 as a result of the Leapfrogging scenario interventions, compared to the Current Path forecast. This reduces extreme poverty by 5.3 percentage points for Mali and 5.2 for the DR Congo. Ethiopia, The Gambia and Sudan will register the least impact on poverty as a result of the Leapfrogging scenario mainly due to their already high rates of Internet connectivity.

Instead of 81.9 million extremely poor people in 2043, the DR Congo will have 72.7 million, a difference of 9.2 million people; in 2030, the difference will be 3.3 million people. Madagascar, the country that will experience the second highest impact, will only reduce poverty by 5.9 million people in 2043 compared to the Current Path forecast for that year. Whereas low-income Africa was forecast to have 246 million extremely poor people in 2043, that number would only be 214.7 million in the Leapfrogging scenario.

Chart 39: Trade balance in CP and Free Trade scenario, 2019–2043
% of GDP

Source: IFs 7.63 initialising from World Development Indicators data

The Free Trade scenario represents the impact of the full implementation of the African Continental Free Trade Area (AfCFTA) by 2034 through increases in exports, improved productivity and increased trade and economic freedom.

The intervention is explained here in the thematic part of the website.

The trade balance is the difference between the value of a country's exports and its imports. A country that imports more goods and services than it exports in terms of value has a trade deficit, while a country that exports more goods and services than it imports has a trade surplus.

In 2019, low-income Africa had a negative trade balance of 13% of GDP, expected marginally to improve to 7% in 2043. The impact of the Free Trade scenario is set to increase this negative trade balance to 9.7%, although the rate fluctuates over time. By 2043, low-income Africa, in the Free Trade scenario, would be exporting to the value of US$889 billion instead of US$573 billion in the Current Path forecast and importing to the value of US$1 076 billion instead of US$676 billion.

Compared to the Current Path forecast, low-income Africa countries will decrease their imports measured as a per cent of GDP in the Current Path forecast, and only increases in the Free Trade scenario starting in 2028, increasing in 2038 at 37% and getting to 35% of GDP in 2043, 12.3 percentage points above the Current Path forecast for that year. By 2043, the growth in imports due to the Free Trade scenario will be largest in Togo (21 percentage points), followed by Burkina Faso

(20), Mali (19.7) and Sierra Leone (19.2). The impact of the Free Trade scenario on exports will be most in Burundi (185%), Ethiopia (103%) and The Gambia (87%), and least in Guinea, Chad and South Sudan (16%).

Chart 40: GDP per capita in CP and Free Trade scenario, 2019–2043
Purchasing power parity
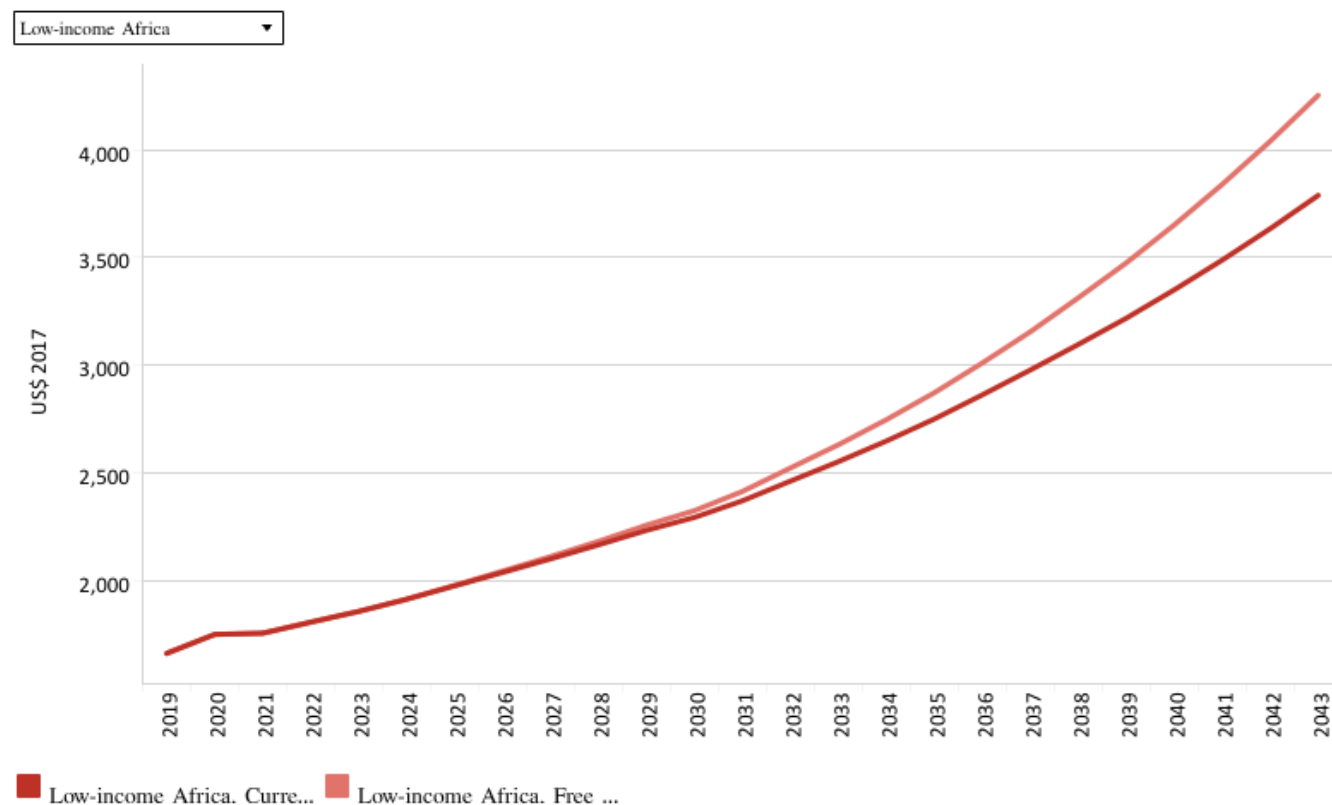
Low-income Africa

Low-income Africa. Curre...   Low-income Africa. Free ...

Source: IFs 7.63 initialising from UN Population Division World Population Prospects and World Development Indicators data

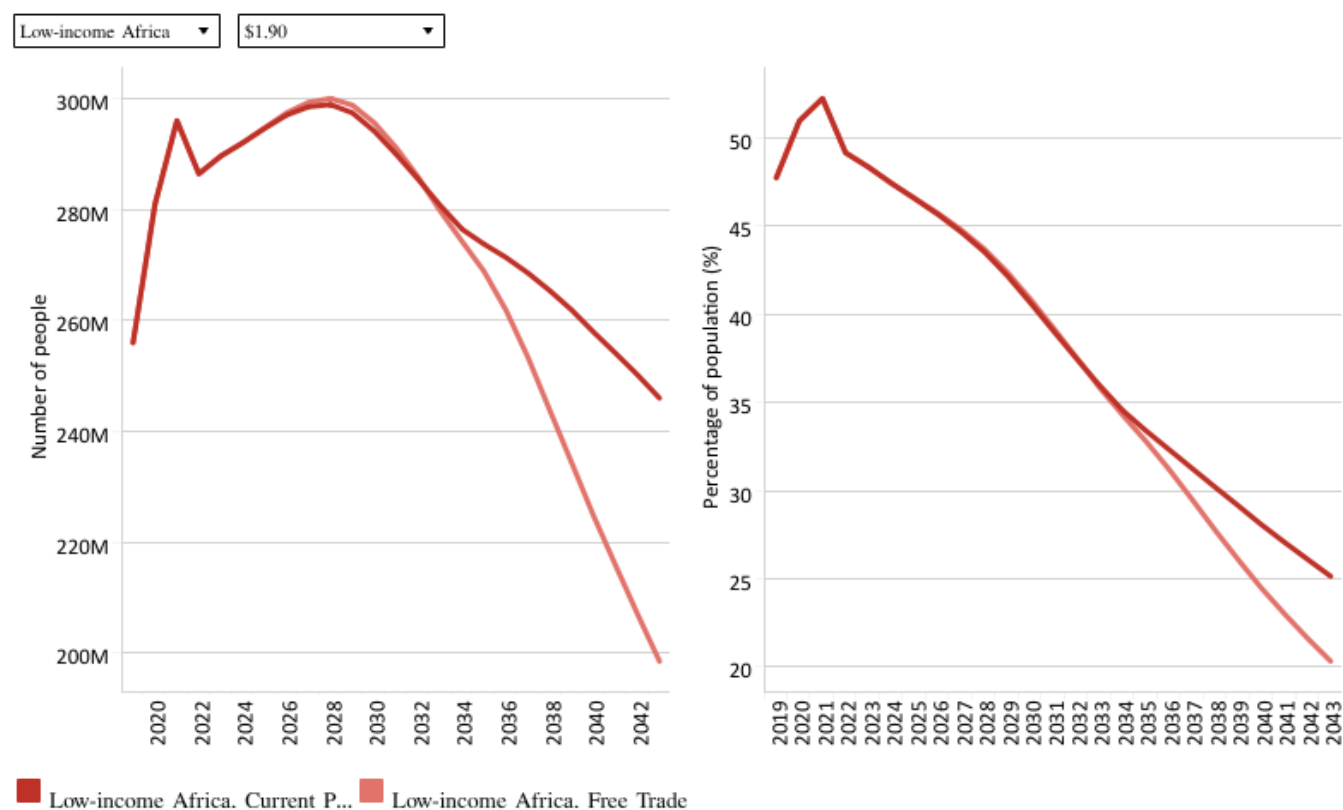View on Tableau Public   Share

GDP per capita for low-income Africa is US$1 660 in 2019 and is set to increase to US$3 790 in the Current Path forecast. In the Free Trade scenario, this will increase to US$4 255 in 2043, a difference of US$465.

Chart 41: Poverty in CP and Free Trade scenario, 2019–2043
Millions of people and % of total population

Low-income Africa ▼	$1.90 ▼

■ Low-income Africa. Current P... ■ Low-income Africa. Free Trade

Source: IFs 7.63 initialising from UN Population Division Population Prospects estimate, World Development Indicators population data and PovcalNet World Bank data
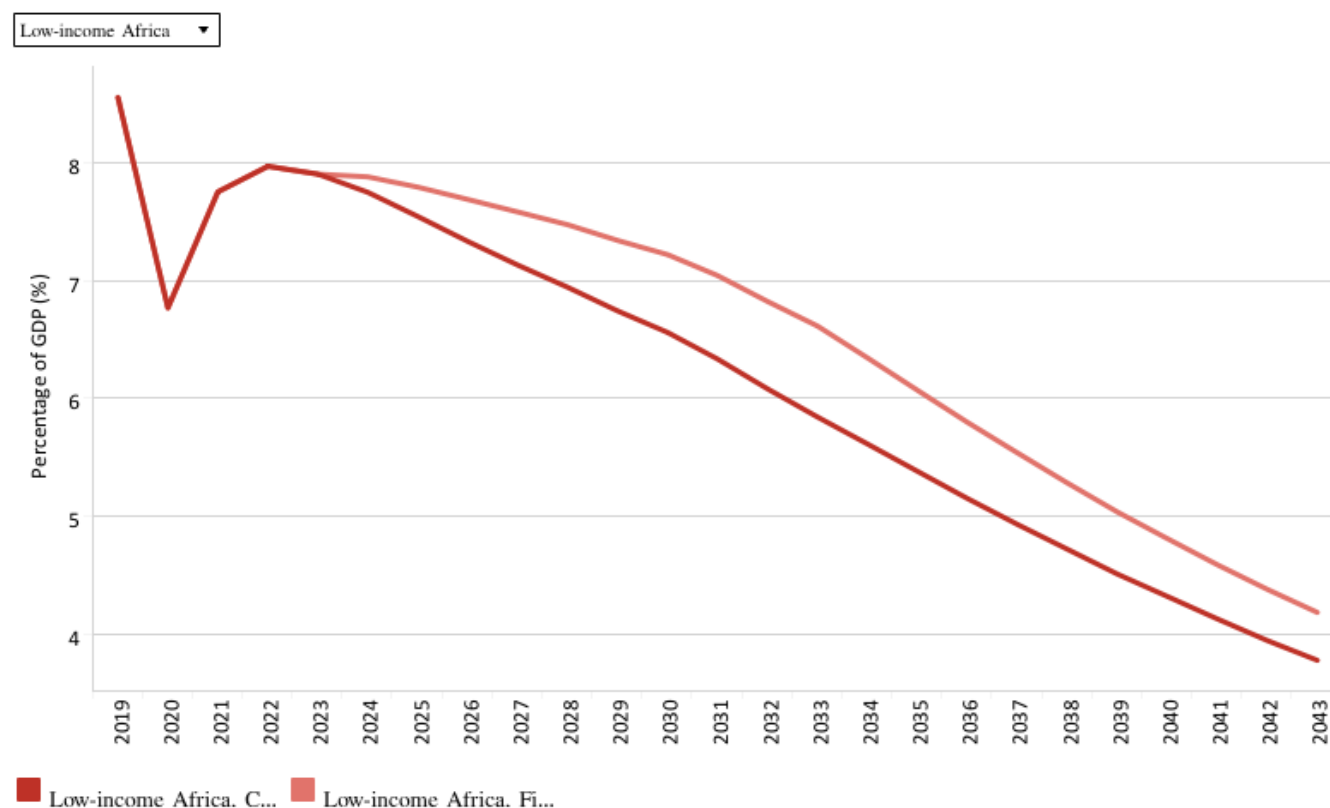
⠿ View on Tableau Public   ↺ ↻ ↩ ↪ ▼ | ⬇▼ ⛶ ⧉ Share

In the Current Path forecast, rates of extreme poverty (using US$1.90) in low-income Africa are set to decline from 47.8% in 2019 to 40.7% in 2030 and to 25.2% in 2043. In the Free Trade scenario, rates of extreme poverty start to decline from 2021 to 20.3% in 2043, 4.8 percentage points above the Current Path forecast. While the DR Congo will see the largest decline of 12.6 percentage points (compared to the Current Path), Madagascar experiences a decline of 11.7 percentage points by 2043.

In 2019, 256 million people were considered to live on less than US$1.90 per person per day in the group. In the Current Path forecast that will increase to 246 million in 2043. In the Free Trade scenario, extreme poverty numbers will decline to 198.5 in 2043. This means that the impact of the Free Trade scenario lifts additional 47.5 million people out of extreme poverty. The DR Congo, with its large poor population, will see the greatest improvement at 21.9 million people, followed by Madagascar at 5.3 million people.

Chart 42: Foreign aid in CP and Financial Flows scenario, 2019–2043
% of GDP

Source: IFs 7.63 initialising from Development Assistance Committee of the OECD data, and World Bank and OECD GNI estimates.

The Financial Flows scenario represents a reasonable but ambitious increase in worker remittances and aid flows to poor countries, and an increase in the stock of foreign direct investment (FDI) and additional portfolio investment inflows to middle-income countries. We also reduced outward financial flows to emulate a reduction in illicit financial outflows.

The intervention is explained here in the thematic part of the website.

Most aid goes to low-income and fragile states, while aid to upper middle-income countries has declined significantly. In 2019, the low-income Africa group received US$35.7 billion net aid that would continually increase to US$73.2 billion in 2043 in the Current Path forecast. However, as a per cent of GDP, aid continually reduces from 8.6% of GDP in 2019 to 6.5% in 2030 and to 3.8% in 2043. This is because the increase in aid does not keep up with the pace of economic growth within the group. The impact of the Financial Flows scenario on low-income Africa is an increase in aid as a percentage of GDP by 0.41 percentage points compared to the Current Path forecast in 2043 to 4.2% of GDP.
As a percentage of GDP, aid is highest in the small, fragile low-income African countries of South Sudan, CAR, Liberia and Malawi — mainly because of the relatively small size of their economies.

As a result, in the Financial Flows scenario, the reduction in aid as a per cent of GDP is slower than in the Current Path. By 2030, aid constitutes 6.6% of GDP and is at 3.8% of GDP in 2043. In 2030, low-income Africa will receive US$5.2 billion more aid in the Financial Flows scenario than in the Current Path forecast and US$10.1 billion more in 2043.

## Chart 43: Inflow of FDI in CP and Financial Flows scenario, 2019–2043
% of GDP
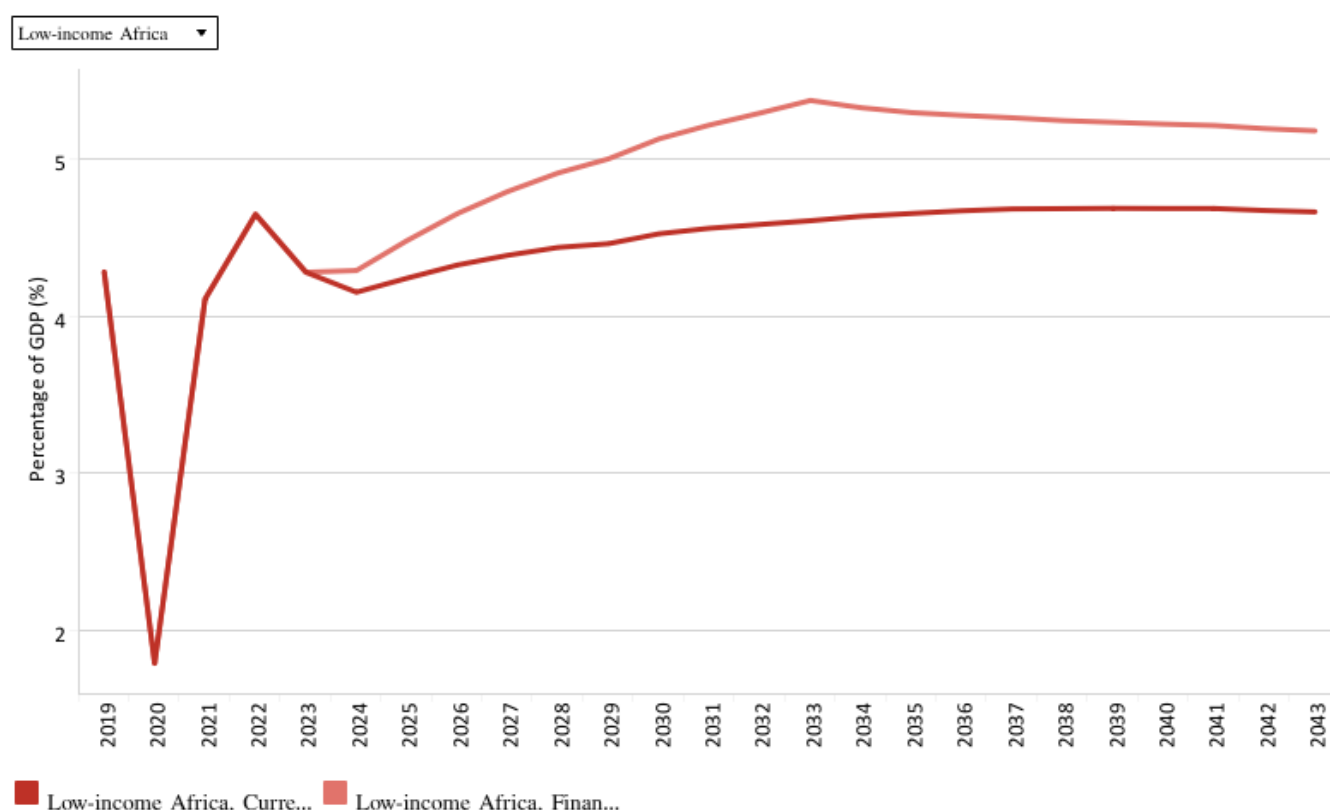
Low-income Africa ▼

■ Low-income Africa. Curre...   ■ Low-income Africa. Finan...

Source: IFs 7.63 initialising from International Monetary Fund World Economic Outlook database

⁘ View on Tableau Public   ↺ ↻ ↺ ⟳ ▼ | ⬇ ▼ ⛶ ⸰ₒ Share

FDI typically goes to middle- and high-income countries rather than low-income countries. In 2019, Liberia, Mozambique and Sierra Leone receive the largest FDI inflows of >7% of GDP of low-income Africa. Burundi and South Sudan receive the least FDI of low-income Africa countries, perhaps due to the instability in those countries. The impact of the Financial Flows scenario will be the greatest in Liberia where it will boost FDI by additional 2.2 percentage points compared to the Current Path, followed by Mozambique (1.5) and Sierra Leone (0.94). Within the low-income Africa group, FDI inflows will increase to 4.7% in 2043 from 4.3% in 2019 in the Current Path forecast. The Financial Flows scenario will increase FDI inflows to 5.2% of GDP in 2043.

Chart 44: Remittances in CP and Financial Flows scenario, 2019–2043
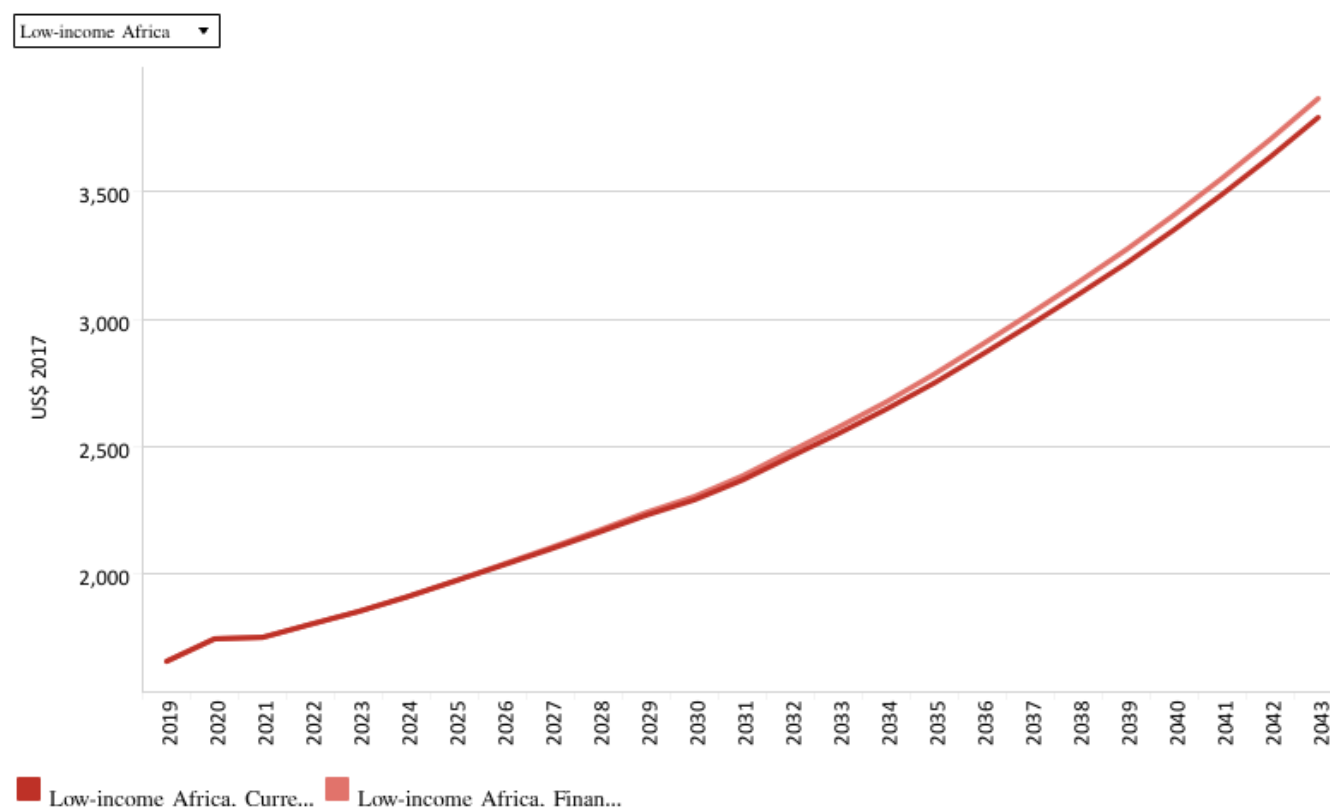Billions US$ 2017 and % of GDP
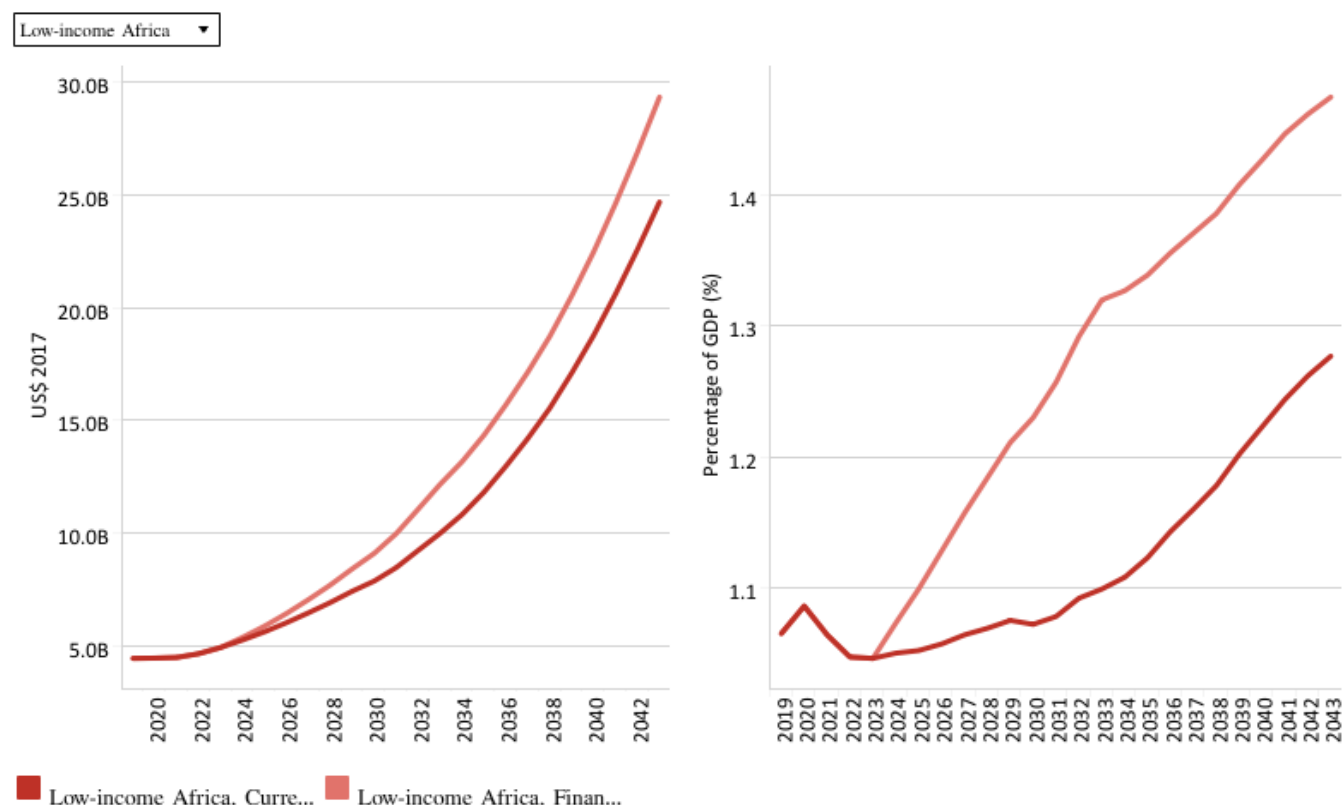
Low-income Africa ▼

■ Low-income Africa. Curre...   ■ Low-income Africa. Finan...

Source: IFs 7.63 initialising from World Development Indicators data

⊹ View on Tableau Public   ↶ ↷ ↶ ↷ ▾ | ⬇▾ ⬚ ⋘ Share

Low-income Africa is a net receiver of remittances at US$4.5 billion in 2019, set to increase to US$24.7 billion in 2043, and in the Financial Flows scenario this will further rise to US$29.3 billion in 2043. In 2019, 15 out of 23 countries were net receivers of remittance, with Ethiopia topping the list at US$1.7 billion, followed by Uganda at US$871 million. The following countries are considered to be net remittance senders: Eritrea, Chad, Sudan, Rwanda, CAR, Niger, Mozambique and the DR Congo. By 2043, Ethiopia will benefit most from Financial Flows scenario by boosting remittances receipt by an additional US$1.6 billion, followed by Uganda at US$1.2 billion.

Chart 45: GDP per capita in CP and Financial Flows scenario, 2019–2043
Purchasing power parity

Low-income Africa ▾

Legend: Low-income Africa. Curre... | Low-income Africa. Finan...

Source: IFs 7.63 initialising from UN Population Division World Population Prospects and World Development Indicators data

⁂ View on Tableau Public   ↶ ↷ ↺ ↻ ▾ | ⊡▾ 🔲 ⤸ Share

In 2019, the GDP per capita in low-income Africa was US$1 660. In the Current Path forecast, GDP per capita would come to US$3 790 in 2043. Instead, in the Financial Flows scenario, it comes to US$3 864, a difference of US$74. Compared to the Current Path forecast, Malawi receives the largest increase at US$266 in 2043, followed by Liberia and Rwanda. Somalia, CAR and Burundi achieve the smallest improvement at less than US$28 per person.

Chart 46: Poverty in CP and Financial Flows scenario, 2019–2043
Millions of people and % of total population

Low-income Africa ▼ $1.90 ▼

Legend: ■ Low-income Africa. Current P...   ■ Low-income Africa. Financial...

Source: IFs 7.63 initialising from UN Population Division Population Prospects estimate, World Development Indicators population data and PovcalNet World Bank data

⊹ View on Tableau Public   ↺ ↻ ↺ ↱ ▼ | ⬇▼ ⧉ ⚹ Share

Trade openness will reduce poverty in the long term after initially increasing it due to the redistributive effects of trade. Most African countries export primary commodities and low-tech manufacturing products, and therefore a continental free trade agreement (AfCFTA) that reduces tariffs and non-tariff barriers across Africa will increase competition among countries in primary commodities and low-tech manufacturing exports. Countries with inefficient, high-cost manufacturing sectors might be displaced as the AfCFTA is implemented, thereby pushing up poverty rates. In the long term, as the economy adjusts and produces and exports its comparatively advantaged (lower relative cost) goods and services, poverty rates will decline.

The difference between the Current Path forecast and the Financial Flows scenario is equivalent to 5.2 million fewer extremely poor people in 2030 and 11.8 million fewer in 2043. The largest decline is in the DR Congo (2.7 million people) and Madagascar (1.5 million).
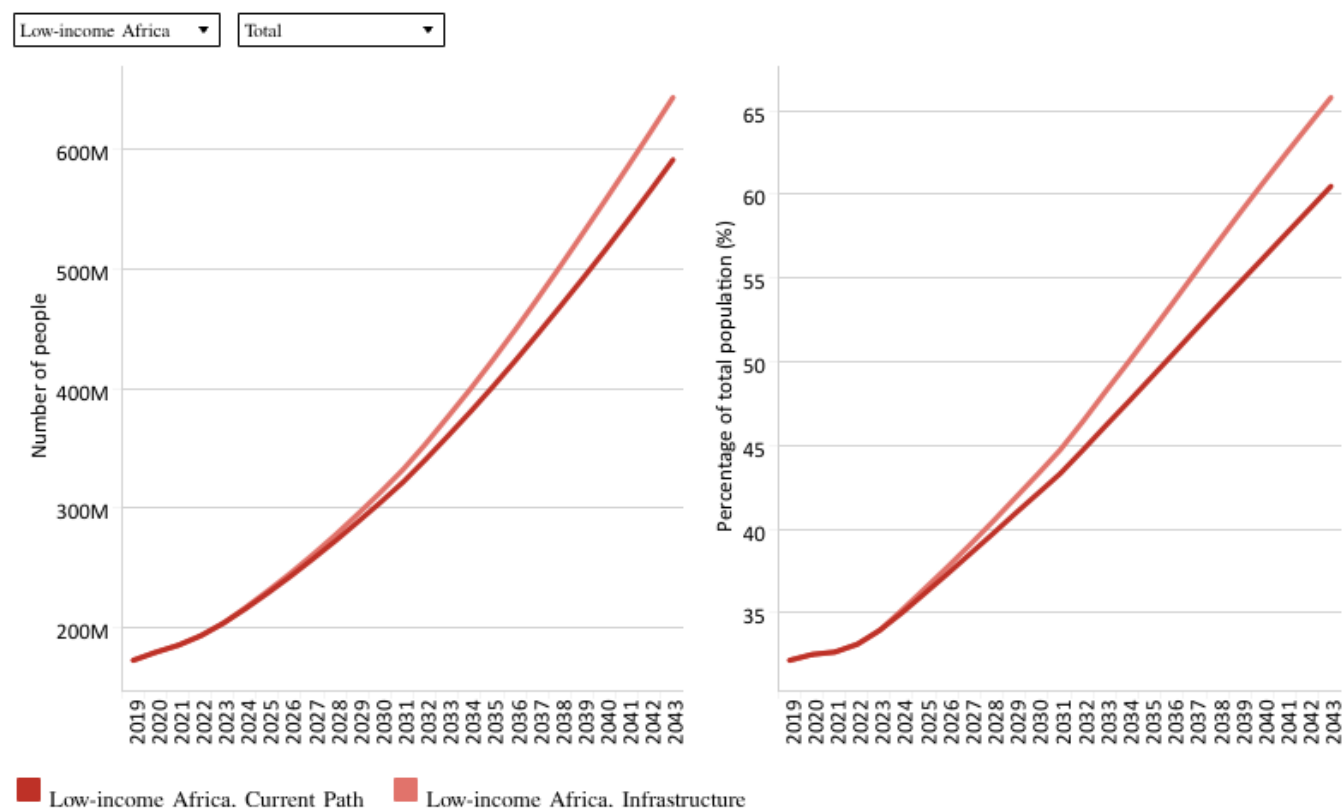
The extreme poverty rate in 2019 (at US$1.90) was 47.8%, which is likely to decline to 40.7% in 2030 and 25.2% in 2043. In the Financial Flows scenario, the rate of extreme poverty marginally declines to 24% in 2043.

Chart 47: Electricity access in CP and Infrastructure scenario, 2019–2043
Millions of people and % of population

ISS|AFI

| Low-income Africa ▼ | Total ▼ |

■ Low-income Africa. Current Path   ■ Low-income Africa. Infrastructure

Source: IFs 7.63 initialising from World Development Indicators data

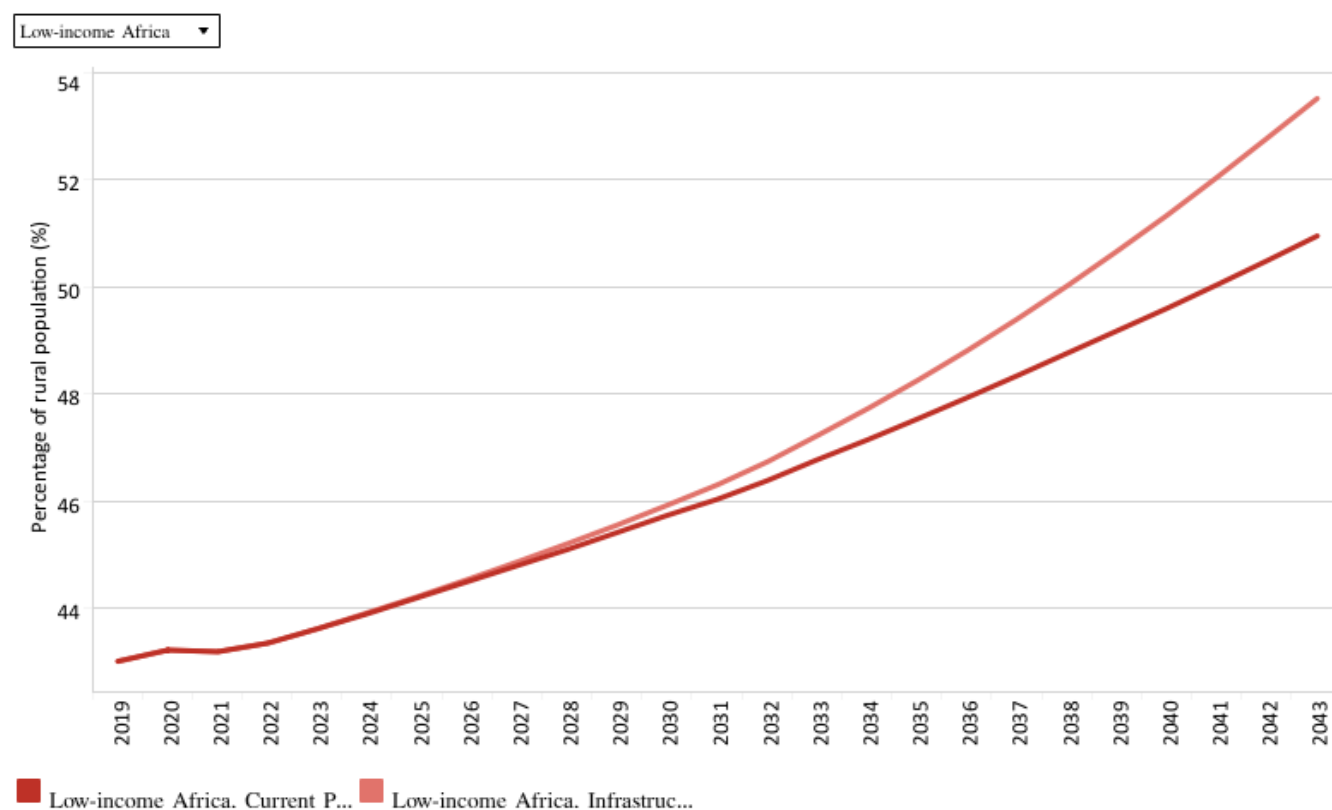⁙ View on Tableau Public   ↺ ↻ ↰ ↱ ▼ | ⬇▼ ◻ ⤬ Share

The Infrastructure scenario represents a reasonable but ambitious increase in infrastructure spending across Africa, focusing on basic infrastructure (roads, water, sanitation, electricity access and ICT) in low-income countries and increasing emphasis on advanced infrastructure (such as ports, airports, railway and electricity generation) in higher-income countries.

Note that health and sanitation infrastructure is included as part of the Health/WaSH scenario and that ICT infrastructure and more rapid uptake of renewables are part of the Leapfrogging scenario. The interventions there push directly on outcomes, whereas those modelled in this scenario increase infrastructure spending, indirectly boosting other forms of infrastructure, including those supporting health, sanitation and ICT.

The intervention is explained here in the thematic part of the website.

In 2019, electricity access in low-income Africa stood at 32.2%, in 2030 it will increase to 42.1%, and in 2043 Current Path forecast it reaches 60.5%. The Infrastructure scenario has the effect of boosting electricity access across member countries by an average of 5.3 percentage points in 2043 compared to the Current Path forecast, of which 2.5 percentage points pertains to people living in urban areas. Sierra Leone and South Sudan will see the greatest boost in access to electricity due to the Infrastructure scenario of 17.5 and 14.8 percentage points in 2043. At the same time, Ethiopia and Chad will see the least improvements.

Chart 48: Rural road access in CP and Infrastructure scenario, 2019–2043
% of rural population within 2 km of an all-weather road

Low-income Africa ▼

■ Low-income Africa. Current P...   ■ Low-income Africa. Infrastruc...

Source: IFs 7.63 initialising from World Bank Rural Access Index data

⁙ View on Tableau Public   ↶ ↷ ↩ ↪ ▾ | ⎙▾ ⛶ ⁂ Share

Indicator 9.1.1 in the Sustainable Development Goals refers to the proportion of the rural population who live within 2 km of an all-season road and is captured in the Rural Access Index.

In 2019, 43% of the population in rural areas in low-income Africa lived within 2 km from an all-weather road. The Current Path forecast is that this will improve to 45.7% by 2030 and to 51% by 2043, and to 53.5% in the Infrastructure scenario. The low-income Africa countries with the best access in 2019 were Sierra Leone (69%) and Sudan (68.5%). The worst performing countries were Mali (17.5%) and Chad (16.1%). Rwanda gains most from the Infrastructure scenario, improving access by 5.8 percentage points above the Current Path forecast by 2043, followed by The Gambia. In the conflict-ridden states of South Sudan and Burundi, the Infrastructure scenario has the least impact on rural access to all-weather roads of less than 0.6 percentage points.

Chart 49: GDP per capita in CP and Infrastructure scenario, 2019–2043
Purchasing power parity
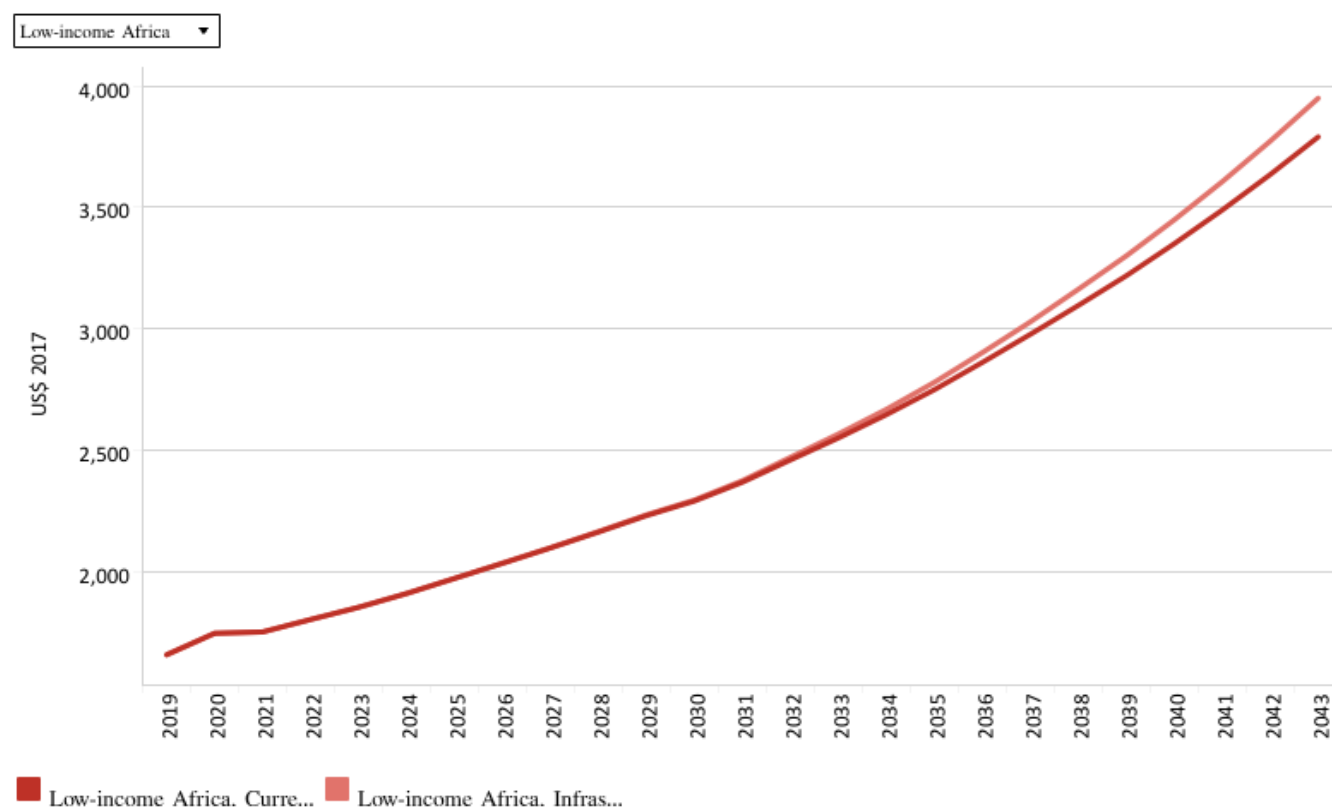
Low-income Africa ▼

Low-income Africa. Curre...   Low-income Africa. Infras...

Source: IFs 7.63 initialising from UN Population Division World Population Prospects and World Development Indicators data

⊹ View on Tableau Public   ↶ ↷ ↺ ↻ ▾ | ⬇▾ ⛶ ⋖ Share

The GDP per capita for low-income Africa was US$1 660 in 2019 and is set to increase to US$3 790 in the Current Path forecast compared to US$3 949 in the Infrastructure scenario by 2043. Guinea gains the most in GDP per capita and increases US$335 above the Current Path forecast by 2043, followed by Uganda (US$288). Burundi, which benefits the least, will only add US$21 per person by 2043 from the Infrastructure scenario.

Chart 50: Poverty in CP and Infrastructure scenario, 2019–2043
Millions of people and % of total population

| Low-income Africa ▼ | $1.90 ▼ |

■ Low-income Africa. C...   ■ Low-income Africa. In...

Source: IFs 7.63 initialising from UN Population Division Population Prospects estimate, World Development Indicators population data and PovcalNet World Bank data
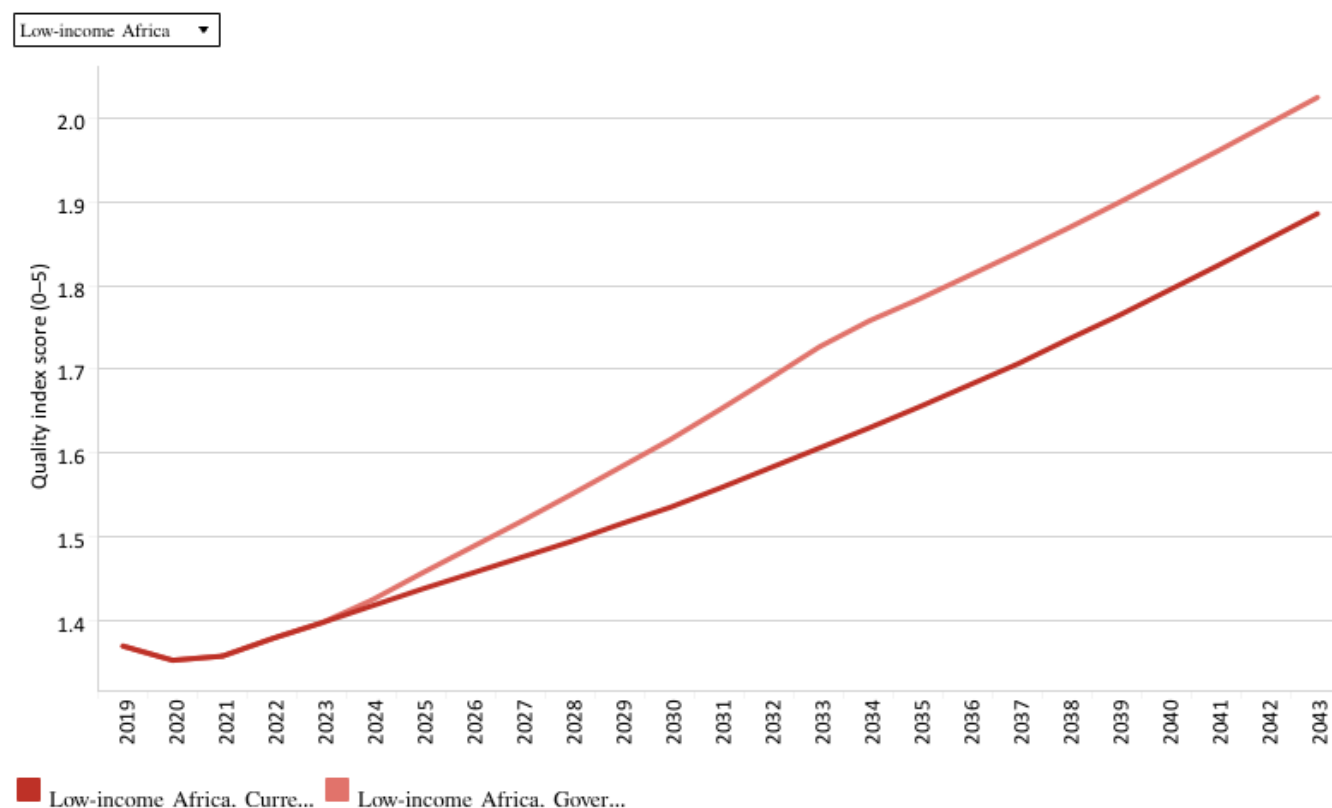
⊹ View on Tableau Public   ↺ ↻ ↺ ↪ ▼ | ⬇▼ ⬚ ⊶ Share

The Current Path forecast is that extreme poverty in low-income Africa (using US$1.90) will increase from 256 million people (47.8% of the population) in 2019 to 294 million in 2030 (or 40.6%), before decreasing to 246 million (or 25.2% of the population) in 2043. The number of extremely poor people in the Infrastructure scenario in 2030 is 293.8 million and 233 million in 2043. These numbers represent 40.7% and 40.6% of the total population, respectively. The decline in poverty is most significant in Madagascar and Guinea with 3.3 and 3.2 percentage points less in the poverty rates in 2043 compared to the Current Path forecast.

Chart 51: Gov effectiveness in CP and Governance scenario, 2019–2043
World Bank quality index score for government effectiveness

Low-income Africa ▼

Legend: ■ Low-income Africa. Curre...   ■ Low-income Africa. Gover...

Source: IFs 7.63 initialising from Kaufmann, Kraay and Mastruzzi (2010) data

⸬ View on Tableau Public   ↶ ↷ ↺ ↻ ▾ | 🖵 ▾   ⛶   ⤳ Share

The Governance scenario represents a reasonable but ambitious improvement in accountability and reduces corruption, and hence improves the quality of service delivery by government.

The intervention is explained here in the thematic part of the website.

As defined by the World Bank, government effectiveness 'captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies'.

Chart 51 presents the impact of the interventions in the Governance scenario on government effectiveness.

The Governance scenario improves government effectiveness by 0.14 (or 7%) in 2043 above the Current Path forecast in low-income Africa. Eritrea improves the most at 16.8% and Madagascar the least at 2%.

Chart 52: GDP per capita in CP and Governance scenario, 2019–2043
Purchasing power parity
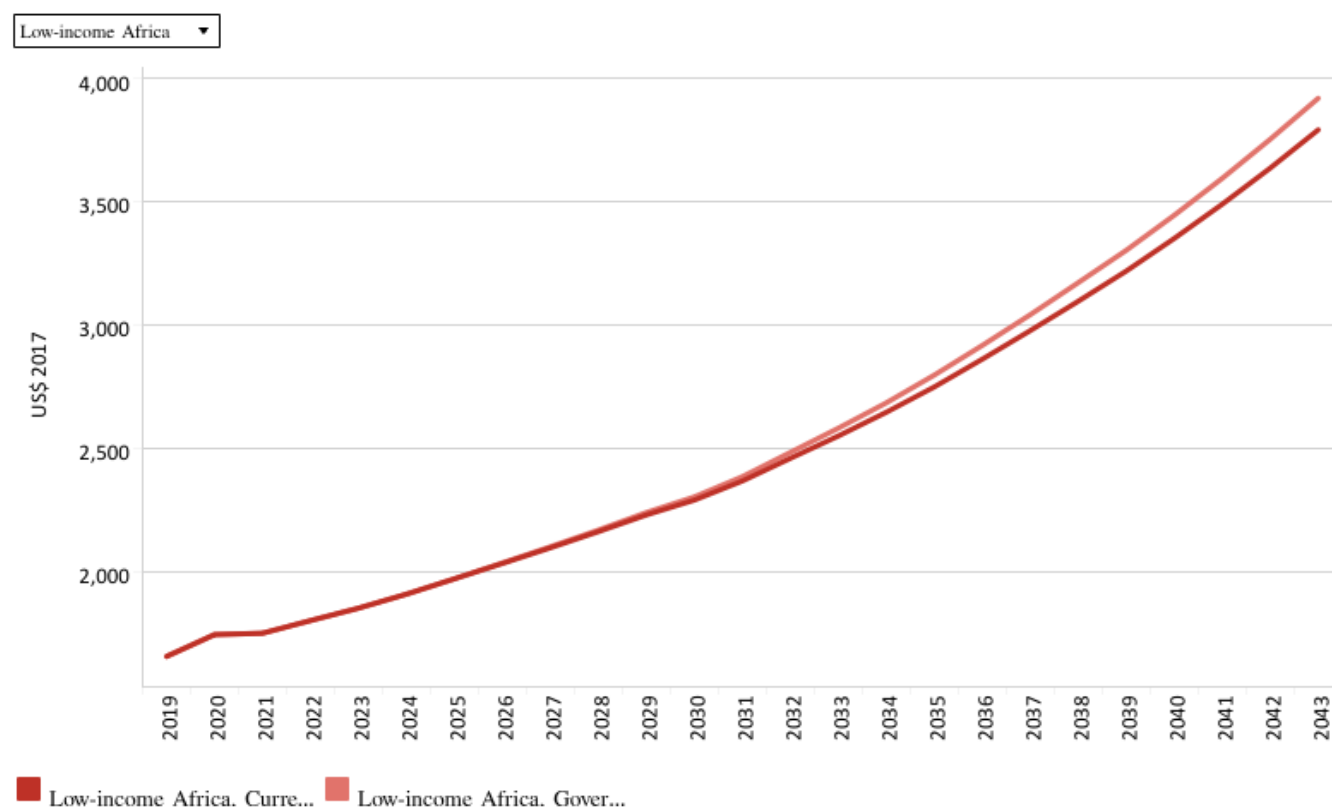
Low-income Africa ▼

Low-income Africa. Curre... | Low-income Africa. Gover...

Source: IFs 7.63 initialising from UN Population Division World Population Prospects and World Development Indicators data

⁂ View on Tableau Public ↺ ↻ ↺ ↻ ▼ | 🖫 ▼ ⧉ ⧉ Share

In 2019, GDP per capita in low-income Africa was US$1 660 and is set to improve to US$3 790 in 2043. In the Governance scenario, GDP per capita increases to US$3 917. Sudan will gain the most in the Governance scenario compared to the Current Path forecast at US$219. Somalia will gain the least at a meagre US$41 above the Current Path forecast for 2043.

Chart 53: Poverty in CP and Governance scenario, 2019–2043
Millions of people and % of total population

| Low-income Africa ▼ | $1.90 ▼ |

■ Low-income Africa. Current P...   ■ Low-income Africa. Governan...

Source: IFs 7.63 initialising from UN Population Division Population Prospects estimate, World Development Indicators population data and PovcalNet World Bank data

⁜ View on Tableau Public

The rate of extreme poverty (using US$1.90) was 47.7 % in low-income Africa in 2019, equivalent to 256 million people. In the Governance scenario, extreme poverty will decline to 24% (234.1 million people) by 2043, compared to 25.2% (246 million people) in the Current Path forecast. Extreme poverty in Madagascar and Mali will decline by 2.3 and 2.2 percentage points in 2043 compared to the Current Path forecast. The Governance scenario has the least impact on Ethiopia and The Gambia, where extreme poverty will decline the least.

Impact of scenarios on carbon emissions

Chart 54: Carbon emissions in CP and scenarios, 2019–2043
Million tons of carbon (note, not CO_2 equivalent)

ISS|AF
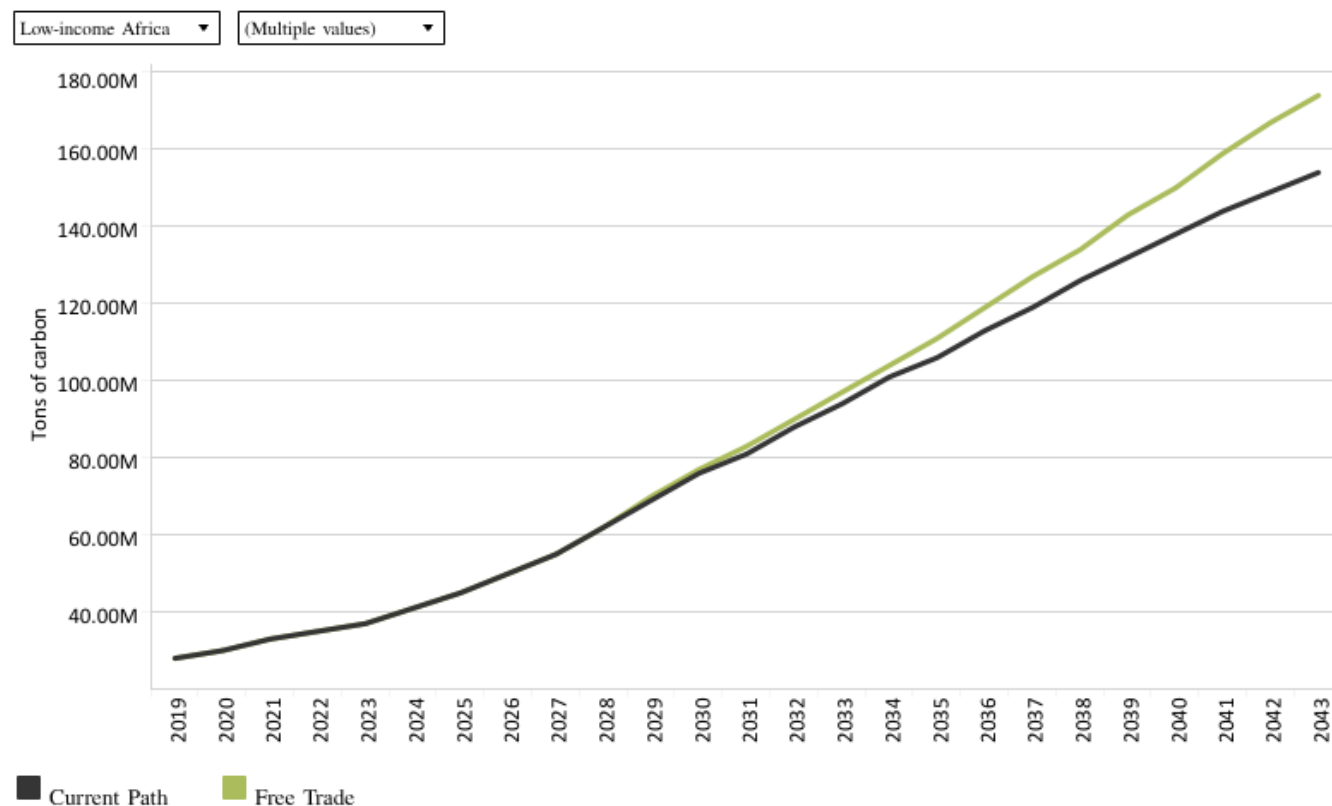
Source: IFs 7.63 initialising from Carbon Dioxide Information Analysis Center data

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This section presents projections for carbon emissions in the Current Path for low-income Africa and the 11 scenarios. Note that IFs uses carbon equivalents rather than CO2 equivalents.

In 2019, the low-income Africa group released only 28 million tons of carbon of which 69% was released by only three countries (Egypt, Algeria and Nigeria). In the Current Path forecast, low-income Africa will release 154 million tons of carbon in 2043 as a result of greater economic activity and increased population growth.

The Free Trade scenario is the most carbon-intensive scenario (at 174 million tons), followed by agriculture (at 167 million tons), while in the Demographic scenario, carbon emissions in 2043 will be below the Current Path forecast at 150 million tons.

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About the authors

Mustapha Jobarteh joined the ISS in January 2022 as a Senior Researcher in the African Futures and Innovation programme in Pretoria. Before joining ISS, Mustapha was a senior lecturer and Head of the Department of Economics and Finance at the University of the Gambia and a research fellow with the Center for Policy, Research and Strategic Studies. His interests include macroeconomics, international trade and econometric modelling. Mustapha has a PhD in economics from Istanbul Medeniyet
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