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Kenya

Impact of sectoral scenarios on key indicators

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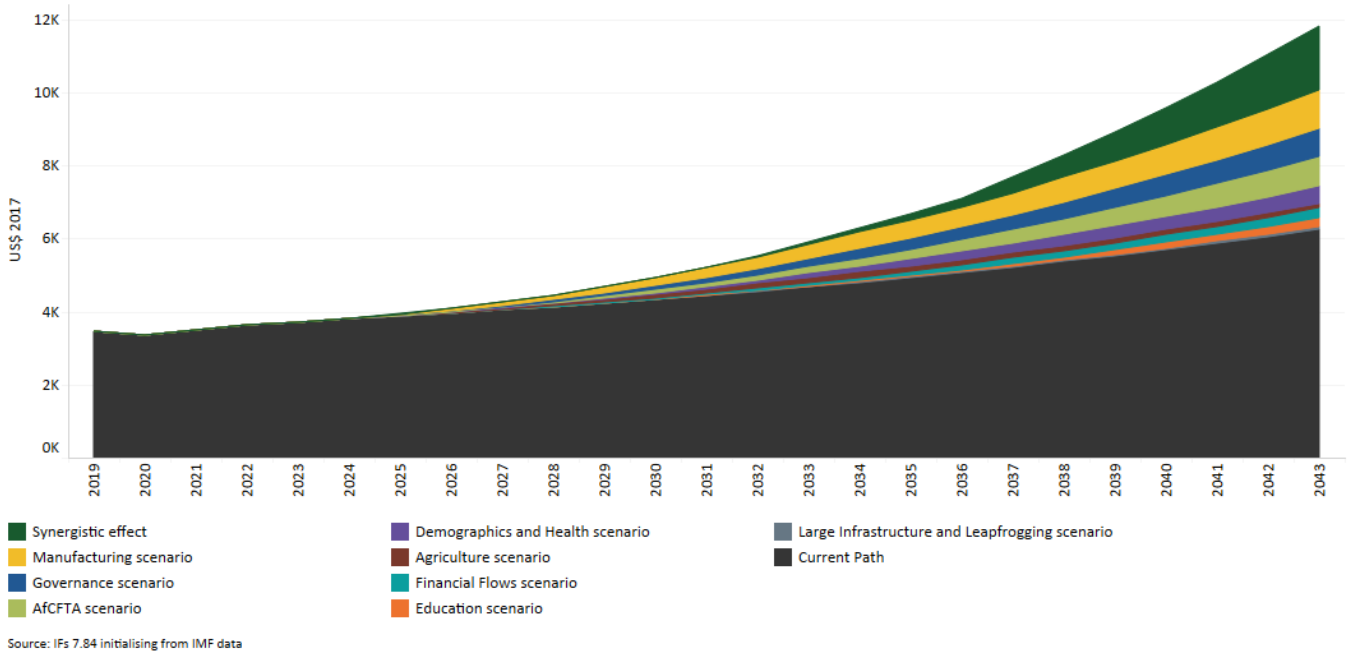


Source: IFs 7.84 initialising from IMF data

This section firstly explores the Kenyan economy and its unique characteristics, then examines the impact of the individual sectoral scenarios and the Combined Agenda 2063 scenario's impact on two key variables. The Combined Agenda 2063 scenario is a combination of all eight sectoral scenarios presented above, namely the Health and Demographics, Education, Infrastructure, Agriculture, Manufacturing, Free Trade, Financial Flows, and Governance and Stability scenarios.

Kenya has the largest and most diverse economy in East Africa. Its GDP measured in market exchange rates (MER) almost tripled between 1990 and 2019, growing from US$26.5 billion to US$73 billion. In this period, the average annual GDP growth rate was about 3.5%. The government instituted economic reform and liberalisation activities in 1993, such as removing exchange rate and price controls, privatising state-owned enterprises and adopting conservative fiscal and monetary policies.[1] These measures resulted in average annual growth above 4% from 1994 to 1996. However, the economy slowed down from 1997, partly owing to adverse weather conditions and the inability of the government to meet its commitment to governance reforms required by the International Monetary Fund (IMF), which led to IMF lending facilities and a US$90 million structural adjustment credit facility from the World Bank being suspended for three years.[2] The government subsequently undertook reforms such as establishing the Kenyan Ethics and Anti-Corruption Commission, which led to the IMF and World Bank support and programmes being restored.

Growth improved from 0.6% in 2002 to about 6.1% in 2006, mainly owing to reforms under the Economic Recovery

Strategy for Wealth and Employment Creation programme that increased government revenue and reduced national debts, releasing more funds for development projects.[3] However, post-election violence in 2008 further slowed down the economy, which was already affected by the global financial crisis of 2007/08 and earlier droughts. The economic pillar of Vision 2030 seeks to improve the prosperity of all Kenyans through an economic development programme that will achieve an average GDP growth rate of 10% per annum starting in 2012.[4] It focuses on structural transformation of the economy and infrastructure development. Under the first two MTPs, the country made significant progress in growing the economy. Between 2010 and 2019, the economy grew at an average of 5% per annum.[5] The MTP3 seeks to build on the progress made by achieving an economic growth rate of 7% per annum at the end of the implementation period.[6]

Despite the progress in transforming the economy, it is confronted with a number of challenges including overreliance on rainfall for agriculture, low manufacturing and export growth, persistent trade and balance of payment deficit, low investment rates, high unemployment rates, high costs of doing business, high energy cost, increasing cost of living, and high food prices.[7] These problems have been worsened by the COVID-19 pandemic. In 2020, the economy shrunk by 0.3% after achieving a 5% growth rate in 2019.[8] Nonetheless, the economy has shown signs of recovery and grew by 6.7% in 2021.

On the Current Path, the country's GDP is expected to reach US$124.3 billion in 2030 and US$258.3 billion in 2043, constituting an increase of 254% from its 2019 figure. Among the sectoral scenarios, the Free Trade scenario will add most to GDP, contributing about US$51.1 billion above the Current Path. This is followed by the Governance and Stability and the Infrastructure scenarios, which are projected to contribute US$47.8 billion and US$19.1 billion, respectively. GDP is projected to rise to US$576.3 billion in the Combined Agenda 2063 scenario, representing an increase of 685% from 2019 to 2043. This will exceed the Current Path forecast of US$258.3 billion, meaning that the Combined Agenda 2063 scenario will increase the size of the economy by an additional US$318 billion by 2043 —an increase of 123.1% compared with the Current Path forecast.

While GDP measures the size of the economy, GDP per capita is generally used to measure the standard of living. It is the most widely used and accepted index used to compare welfare among countries. The study uses GDP per capita measured in purchasing power parity (PPP) for this analysis. From 1990 to 2019, Kenya's GDP per capita increased by US$694, from US$2 806 to US$3 500, equivalent to an increase of 25%. This reflects the average growth in GDP of about 3.5% over the period, which exceeded population growth of about 2.8% in the same period. Despite the growth, Kenya's GDP per capita has grown more slowly than the average for lower middle-income countries in Africa, which increased from US$4 444 in 1990 to US$6 630 in 2019. As a result, the gap between the two is widening. Whereas the GDP per capita of Kenya was 63% of the average for lower middle-income Africa in 1990, it fell to 52% in 2019. With the projected increase in GDP and reduction in population growth, GDP per capita is set to reach US$6249 on the Current Path by 2043, although this will be 42.5% lower than the average of US$8 902 for lower middle-income countries in Africa.

The scenario with the greatest impact on GDP per capita by 2043 is the Free Trade scenario, followed by the Government and Stability and Health and Demographic scenarios. In the Free Trade scenario, Kenya's GDP per capita will increase to US$7 070 by 2043, which represents an increase of US$821 (or 13.1%) compared with the projections on the Current Path in 2043. This indicates that Kenya has considerable potential to increase GDP if it takes advantage of the full implementation of the AfCFTA. Trade between African countries has the benefit of increasing Kenya's exports, as it provides access to a much larger market and so can improve the country's manufacturing sector. This will lead to more rapid economic growth and increased employment in key sectors.

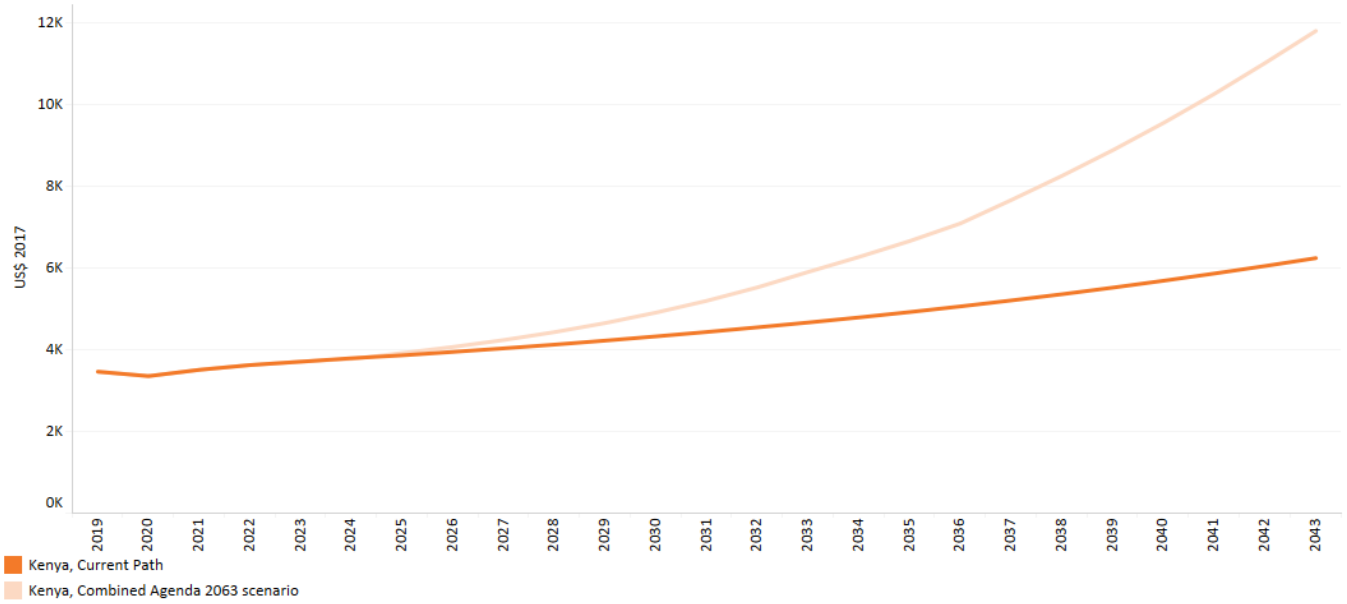
In the Governance and Stability scenario, GDP per capita is projected to rise to US$7 021 by 2043, representing a 12% increase over the Current Path forecast for that year. It means that the Governance and Stability scenario can raise GDP per capita in Kenya by an additional US$772 by 2043. Regime stability and good governance in the form of adherence to the rule of law, reduced corruption and improved transparency and accountability lead to more rapid economic growth. In the Health and Demographic scenario, Kenya's GDP per capita is projected to increase to US$6 713 by 2043, which is

US$464 (or 7.4%) above the projected value of US$6 249 in the Current Path forecast in the same year. The gain is associated with the expected decline in the fertility rate, which will cause a reduction in population growth and an increase in the ratio of working-age persons to dependants, resulting in a demographic dividend. Together with the anticipated economic growth, the dividend increases GDP per capita, suggesting that these three sectors should be supported to unlock more rapid economic growth in the long term.

In contrast, the External Financial Flows scenario, which will increase Kenya's GDP per capita to US$6 535 by 2043, will have a marginal impact on GDP per capita — an improvement of US$286 (or 4.6%) above the Current Path forecast. Although remittances, aid and FDI inflows are positively associated with economic growth, their impact largely depends on the behaviour of households and firms. The Agriculture scenario has an even smaller impact: the scenario will increase GDP per capita to US$6 370, US$121 (or 1.9%) more than the country's Current Path forecast by 2043. The marginal impact of the Agriculture scenario on GDP per capita reflects the declining share of agriculture's contribution to GDP expected to occur over the period.

Chart 37: GDP per capita in Current Path and Combined Agenda 2063 scenario, 2019–2043

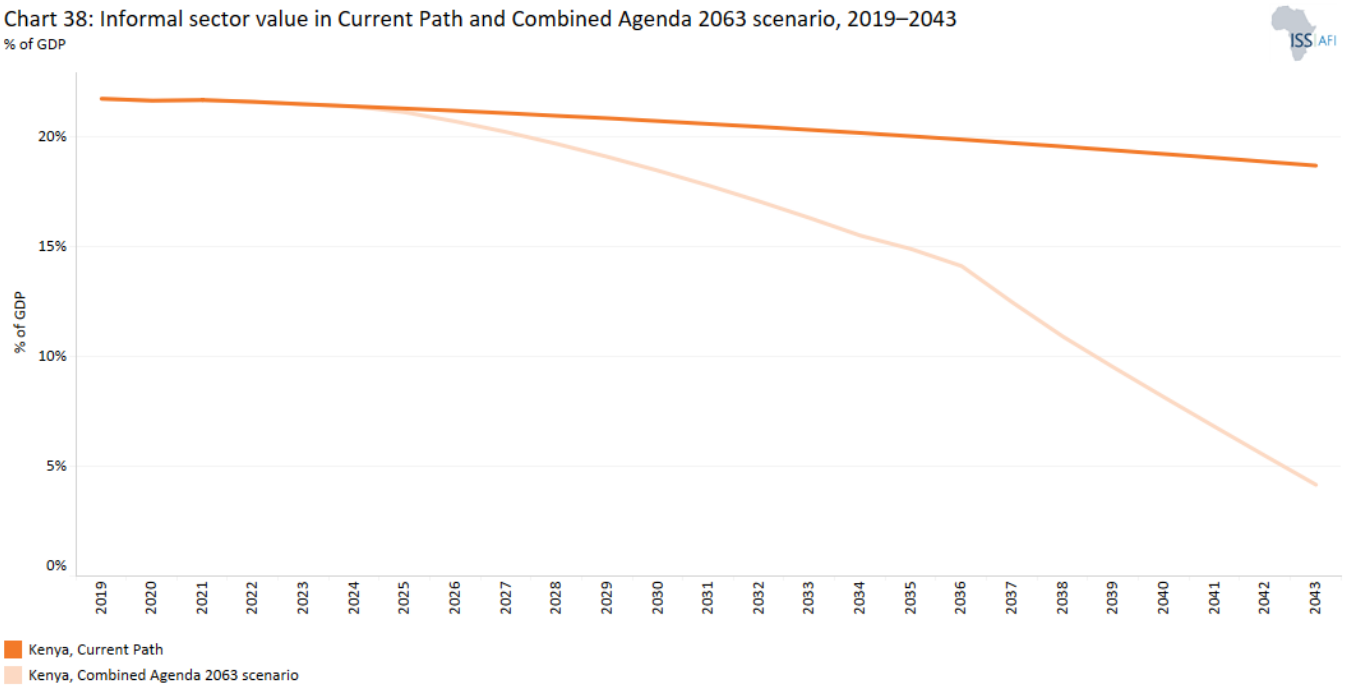
Purchasing power parity



Source: IFs 7.84 initialising from IMF data

Kenya's GDP per capita is estimated to increase to US$10 950 by 2043 in the Combined Agenda 2063 scenario. This will be US$5 217 higher than the projection of US$5 733 on the Current Path forecast meaning that the Combined Agenda 2063 scenario could improve GDP per capita by an additional 91% by 2043. The projected GDP per capita in this scenario will be US$2 783 (or 25.4%) more than the Current Path forecast average for lower middle-income countries in Africa by 2043. The massive growth projected in the Combined Agenda 2063 scenario is due to the intersectoral impact of the policy interventions underpinning the various scenarios, which are necessary for achieving sustainable economic growth in Kenya.

Chart 38: Informal sector value in Current Path and Combined Agenda 2063 scenario, 2019–2043



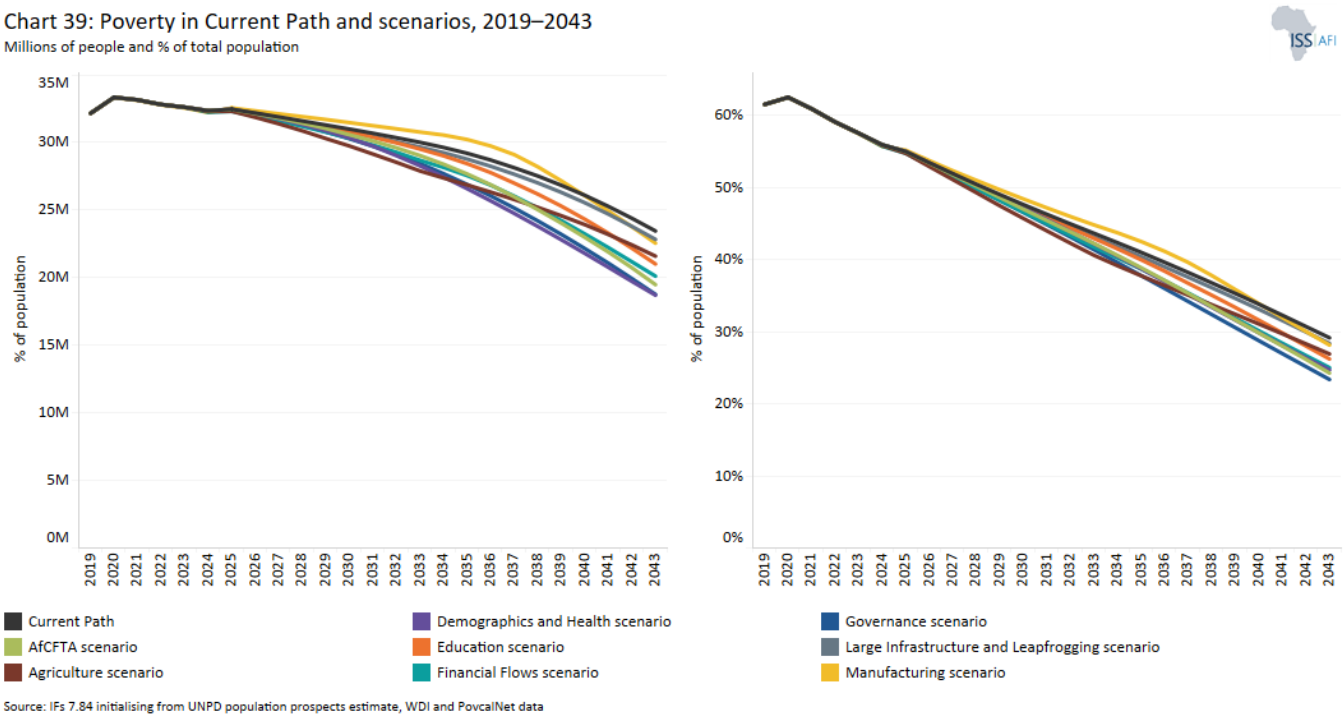
Source: IFs 7.84 initialising from Elgin and Oztunali (2008), and Schneider and Enste (2012) data

In 2019, the size of Kenya's informal sector amounted to US$14.6 billion, equivalent to 21.8% of GDP. At this rate, the size of Kenya's informal sector is below the average for lower middle-income countries in Africa at 29.5%. Thus, in terms of formalisation of the economy, Kenya is performing better than the average for its income peers on the continent, despite facing some challenges. On the Current Path, the size of the informal economy will increase to US$44.3 billion by 2043, although its contribution to GDP will decline to 18.7% by then. In the Combined Agenda 2063 scenario, the size of the informal economy will decline to US$5.3 billion, representing just 1% of GDP, in 2043. It means that the Combined Agenda 2063 scenario, with the expected technological advancement, has the potential to reduce the informal economy in Kenya by US$39 billion, which can boost government tax revenue.

Poverty and Inequality

Chart 39: Poverty in Current Path and scenarios, 2019–2043

Millions of people and % of total population



Source: IFs 7.84 initialising from UNPD population prospects estimate, WDI and PovcalNet data

This section examines the impact of the individual sectoral scenarios and the Combined Agenda 2063 scenario's impact on poverty and inequality. The Combined Agenda 2063 scenario is a combination of all eight sectoral scenarios presented above, namely the Health and Demographics, Education, Infrastructure, Agriculture, Manufacturing, Free Trade, Financial Flows, and Governance and Stability scenarios.

There are numerous methodologies of and approaches to defining poverty. The study measures income poverty and uses GDP per capita as a proxy. In 2015, the World Bank adopted the measure of US$1.90 per person per day (in 2011 international prices), also used to measure progress towards the achievement of Sustainable Development Goal 1 of eradicating extreme poverty. To account for extreme poverty in richer countries occurring at slightly higher levels of income than in poor countries, the World Bank introduced three additional poverty lines in 2017: US$3.20 for lower middle-income countries; US$5.50 for upper middle-income countries; US$22.70 for high-income countries. According to the 2015/16 Kenya Integrated Household Budget Survey, poverty levels (at US$1.90) declined from 46% in 2005 to 36.1% in 2015.[9]

As a lower middle-income country, Kenya therefore uses the US$3.20 benchmark for extreme poverty. In 2019, 32.2 million Kenyans lived below this threshold, equivalent to 61.5% of the population, a 10.9 percentage points below the average for lower middle-income countries. The high levels of poverty in the country have often been attributed to widespread corruption such as bribery, fraud and tribal favouritism within the government.[10] Corruption tilts decisions and diverts scarce resources that could be used for improving social services. On the Current Path, the number of people living in poverty in Kenya is expected to stand at 23.5 million, constituting 29.1% of the population, by 2043. This corresponds to a decrease of 32.4 percentage points in the extreme poverty rate over 24 years. By this time, the poverty rate in Kenya will be lower than the average for its income peers such that the country's poverty rate will be 9.1 percentage points lower than the projected average of 38.3% for lower middle-income countries in Africa.

The Governance and Stability scenario has the greatest potential to reduce extreme poverty in Kenya, in terms of a

reduction in the poverty rate. Kenya, like most African countries, has weak state institutions and ineffective governments that have been slow to transform the country. In the Governance and Stability scenario, the number of poor people is projected to decline to 18.8 million (equivalent to 23.4% of the population), compared with the Current Path forecast for 2043 of 23.4 million people (29.1%). It means that improved governance in the form of greater transparency and accountability has the potential for 4.7 million fewer people to be living in extreme poverty by 2043. This confirms existing studies that poverty in Kenya can be attributed to the enduring corruption in the country.[11] Certainly, better governance and greater stability ensures that public resources are utilised in an efficient manner to address the needs of the people instead of being diverted into individual pockets will impact poverty reduction significantly.

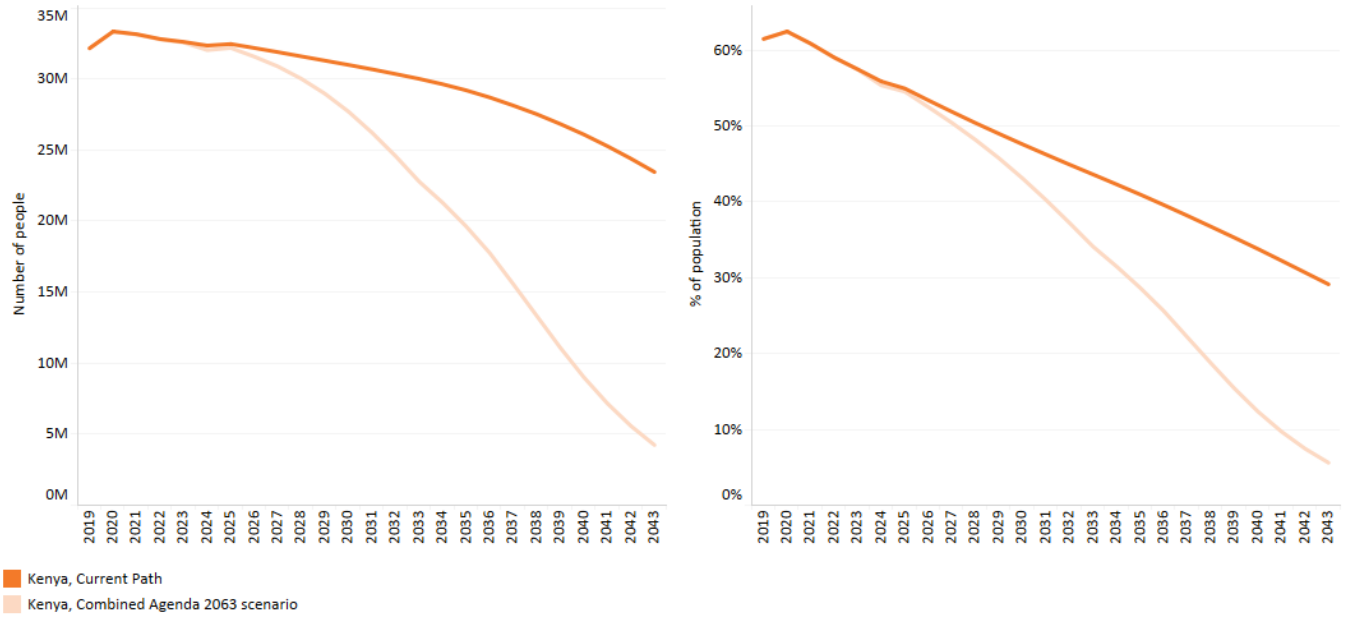
The Free Trade scenario has the second largest impact on poverty reduction in Kenya. In the scenario, 19.5 million people are expected to be living in extreme poverty by 2043, constituting 24.2% of the population. This will be 4.9 percentage points lower than the Current Path forecast, equivalent to a reduction of about 4 million people. 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 that reduces tariffs and non-tariff barriers across Africa will increase competition among countries with primary commodities and low-tech manufacturing exports. Countries with inefficient, high-cost manufacturing sectors might be displaced as the AfCFTA is implemented, thereby increasing poverty rates. In the long term, as the economy adjusts and it produces and exports its comparatively advantaged (lower relative cost) goods and services, poverty rates will decline.

In the Demographics and Health scenario, by 2043 the number of Kenyans living in extreme poverty is projected to decline to 18.7 million people, equivalent to 24.7% of the population, making it the scenario with the third largest impact on poverty reduction. This means that the Health and Demographic scenario will reduce extreme poverty in the country by an additional 4.8 million people (or 4.5 percentage points below the Current Path forecast) over the forecast period. The reduction in extreme poverty in this scenario follows from the decline in the fertility rate and Kenya's smaller population compared with its Current Path forecast.

In contrast, the Agriculture scenario has a much smaller impact on poverty reduction compared to these scenarios. In this scenario, by 2043 Kenya's poor population is forecast to reduce to 21.6 million people (26.9% of the population). This is a decline of 2.2 percentage points from the Current Path forecast for the same year. Despite Kenya's population being predominantly rural and with over 70% of the rural population depending on the agriculture sector for their livelihoods.[12] As the economy undergoes structural transformation, the relevance of agriculture diminishes over time and so does its impact on poverty reduction as more people leave the sector for other sectors. In addition, numerous challenges, such as unfavourable climatic conditions, small number of land titles, and high cost of input confronting the sector, act as disincentive to farmers, hence the minimal impact of the Agriculture scenario on reducing extreme poverty in Kenya.

Chart 40: Poverty in Current Path and Combined Agenda 2063 scenario, 2019–2043

Millions of people and % of total population at US$3.20 poverty line

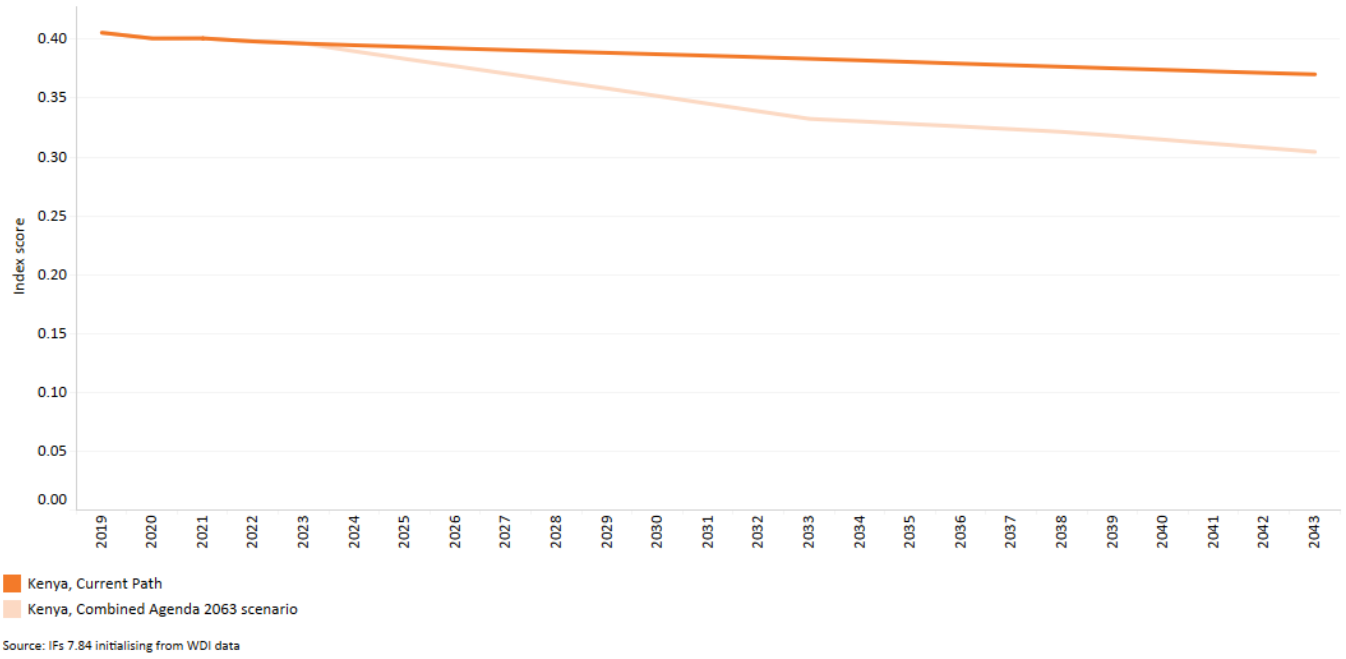


Source: IFs 7.84 initialising from UNPD Population Prospects estimate, WDI population data and PovcalNet World Bank data

In the Combined Agenda 2063 scenario, both the number and proportion of poor people in Kenya will significantly decline. By 2043, about 4.9 million people in the country (6.2% of the population) will be living in extreme poverty. This means that, compared with the Current Path forecast, 18.6 million more people could be lifted out of poverty by 2043 in this scenario. This is equivalent to a decline of 23 percentage points compared with the Current Path forecast for 2043. In addition, the projected proportion of poor people in Kenya in the Combined Agenda 2063 scenario is 31.8 percentage points lower than the average (38.2%) for lower middle-income African countries by 2043.

Chart 41: Domestic Gini index score in Current Path and Combined Agenda 2063 scenario, 2019–2043

Index score



Source: IFs 7.84 initialising from WDI data

The benefits of economic growth may not be evenly distributed in a country due to inequality. High levels of inequality

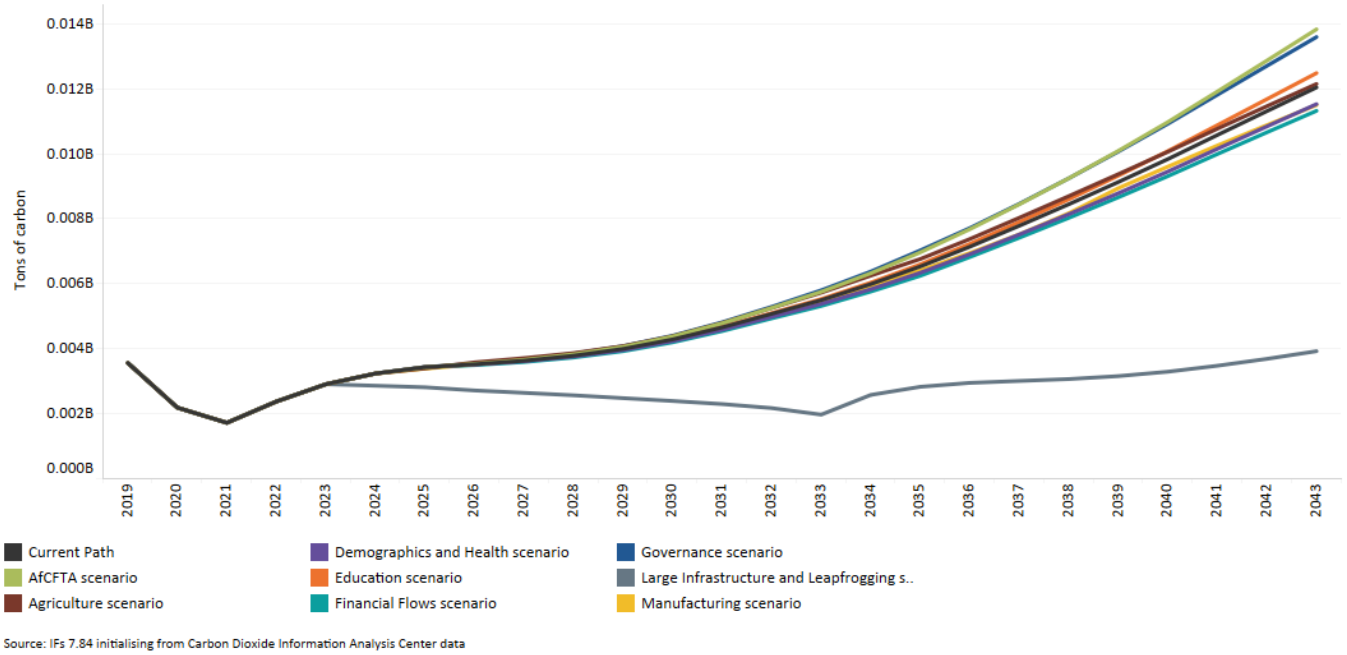
have many negative effects including a breakdown of social structure and cohesion which can result in instability. While Kenya has pursued aggressive growth over the years, it has not been accompanied by the appropriate transfers and redistribution of wealth to guarantee the dividends of inclusive growth. Inefficient tax administration and collection facilitate the evasion, avoidance and exemption of taxes by wealthy corporations and individuals. This, coupled with high levels of corruption and cultural practices in the country, has contributed to widening the gap of economic inequality.[13]

The Gini coefficient is the standard measure of the level of inequality in a country. A higher score depicts greater inequality while a lower score shows a more equal country. Historically, Kenya has had high levels of inequality despite improvements over the period. According to Oxfam International, 0.1% of Kenya's population own and control more wealth than the remaining 99.9% of the population. Similarly, the 10% richest people in Kenya earn about 23 times more than the poorest 10%.[14] There is also a large gender disparity in Kenya regarding economic empowerment. Over 96% of rural women in Kenya work on farms, yet only 6% of them hold land titles.[15]

In 1992, Kenya's Gini coefficient was 0.58 compared with the score of 0.47 for the average lower middle-income countries in Africa. By 2019, Kenya's Gini coefficient had improved to 0.41 and is expected to improve further reaching 0.37 by 2043 on the Current Path. This makes Kenya the 15th most unequal country among the 23 lower middle-income countries in Africa and 36th in Africa. The scenario that has the potential to reduce inequality the most in Kenya is the Manufacturing scenario followed by the Education and Financial Flows scenarios. Conversely, the Infrastructure and the Health and Demographic scenarios are those with the least impact on inequality. To achieve a more just and equal society in Kenya, authorities must focus on welfare transfers that target the poorest people of the population. In the Combined Agenda 2063 scenario, inequality in Kenya is projected to reduce more rapidly, reaching 0.31 by 2043, which means that the Combined Agenda 2063 scenario has the potential to reduce inequality in Kenya by 16.2% relative to the Current Path forecast.

Carbon emissions

Chart 42: Carbon emissions in CP and scenarios, 2019–2043
Million tons of carbon (note, not CO_2 equivalent)



Source: IFs 7.84 initialising from Carbon Dioxide Information Analysis Center data

The IFs platform forecasts six types of energy, namely oil, gas, coal, hydropower, nuclear and other renewables. To allow comparisons between different types of energy, the data is converted into billion barrels of oil equivalent. The energy contained in a barrel of oil is approximately 5.8 million British thermal units (MBtus) or 1 700 kilowatt-hours (kWh) of energy. Kenya relies greatly on renewable sources for its energy production. According to the International Renewable Energy Association, Kenya is the leading producer of geothermal energy in Africa and the fourth globally. In 2021, the country discovered oil in the tertiary basin and Sunbird-1 well which is expected to increase oil production. Gas discoveries were made in the offshore Lamu Basin, Anza Basin and Mbawa-1 well and the Sunbird-1 well. There are plans for further oil explorations under the integrated field development plan with the potential to discover 10 new fields.[16]

In 1990, Kenya produced 2 million barrels of oil equivalent (BOE) of hydro and other renewable energies, which represented 43% and 57% of total energy production, respectively. By 2019, the production of other renewables had grown significantly to 47 million BOE, constituting 94.3% of total energy production. The remaining 5% was mainly sourced from the production of hydropower, which was equivalent to 3 million BOE, with negligible production of gas, coal, oil and nuclear power. Other renewable energy sources used in Kenya include geothermal, wind, solar, tidal and bioenergy.[17] On the Current Path, it is projected that by 2043, the production of other renewable energies will constitute about 98% of total energy production (188 million BOE). This will be complemented by a projected 4 million BOE of hydropower produced in the same year.

Energy production that is non-renewable in nature results in rising carbon emissions, necessitating a strong focus on making energy production more sustainable while still prioritising economic growth. Carbon is released in many ways, but the three most important contributors to greenhouse gases are carbon dioxide (CO2), carbon monoxide (CO) and methane (CH4), with the latter having the biggest negative impact. Each has a different molecular weight. IFs uses carbon rather than CO2 equivalent.

Carbon emissions in Kenya are relatively low, partly because the country has made a conscious effort at reducing its

carbon emissions. In 2019, opposition from local communities and civil society resulted in the Kenyan courts cancelling the environmental licence for the planned 1 050 MW Lamu Coal Power Station on the shoreline of Manda Bay, close to Lamu Old Town, a UNESCO World Heritage site. The following year, the Industrial and Commercial Bank of China announced that it had withdrawn plans to finance the US$2 billion coal-fired power plant, a first in Kenya and closely linked to the Lamu Port–South Sudan–Ethiopia Transport (LAPSSET) Corridor mega-infrastructure project.[18]

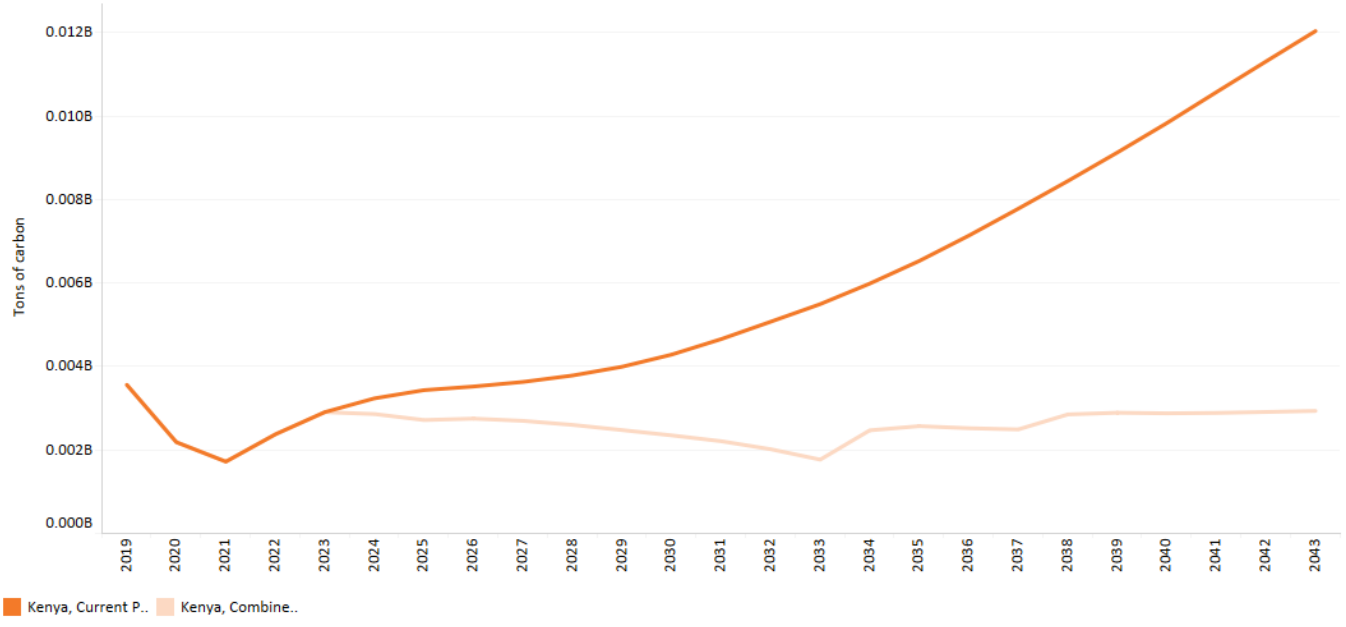
In 1990, Kenya released about 2 million tons of carbon and by 2019 the amount had doubled to about 4 million tons, reflecting the extent of electricity production from hydro and other renewable sources instead of fossil fuels. Even at this low rate in 2019, Kenya's carbon emissions make it the 14th largest emitter of carbon in Africa indicating the low levels of emissions on the continent. The agriculture sector is the leading source of carbon emissions, contributing about 62.8% of total emissions. It is followed by the energy, industrial processes and waste sectors, which contribute 31.2%, 4.6% and 1.4% of total emissions in the country, respectively.[19]

On the Current Path, carbon emissions are projected to triple to 12 million tons by 2043 relative to the 2019 figures. By then, Kenya will be the 18th largest emitter of carbon on the continent, mainly due to the country's reliance on hydropower and other renewable energy sources. The advantage is clear, given that Kenya had the 10th largest economy in Africa in 2019 and is expected to have the ninth largest by 2043. The country releases little carbon compared with other African countries with similar levels of economic activity.

Due to the significant use of renewable energy in Kenya, future increases in emissions in the sectoral scenarios are modest and, in some cases, even below the Current Path forecast (e.g. in the Infrastructure scenario, where additional electricity generation is from renewables). By 2043, Kenya's carbon emissions will increase most (to 13.8 million tons) in the Free Trade scenario, which also results in the largest economic growth. Emissions will be below the 2043 Current Path forecast in the Financial Flows, Infrastructure and Leapfrogging, and Demographics and Health scenarios. Indeed, in the Infrastructure scenario, emissions will still equate to 3.9 million tons of carbon by 2043.

Chart 43: Carbon emissions in Current Path and Combined Agenda 2063 scenario, 2019–2043

Million tons of carbon (note, not CO_2 equivalent)



Source: IFs 7.84 initialising from Carbon Dioxide Information Analysis Center data

In the Combined Agenda 2063 scenario, Kenya's total carbon emissions of 2 million tons will be equal to almost six times less than what is estimated in the Current Path forecast. It means that achieving sustainable economic development while

reducing the environmental cost in Kenya is possible, and the country can benefit greatly from its huge potential for producing renewable energy. For instance, with its large geothermal reserves, Kenya can increase its current installed capacity at least eight times.[20] As such, Kenya must push to fully transition to renewable energies to unlock greater economic growth in a sustainable manner.

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