



Ghana

Ghana: Scenarios

Enoch Randy Aikins

Last updated 06 December 2024 using IFs v8.26

Table of contents

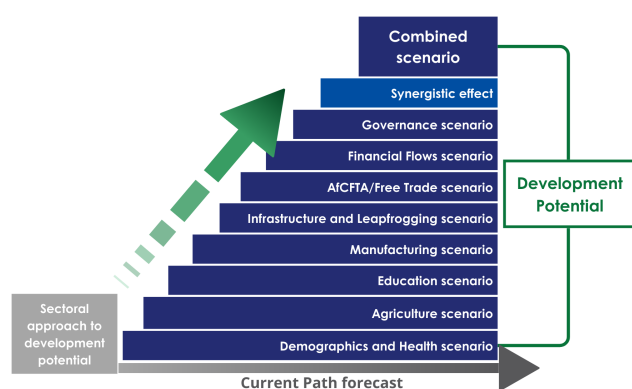
Ghana: Scenarios	3
Briefly	3
Demographics and Health scenario	4
Agriculture scenario	9
Education scenario	12
Manufacturing scenario	16
AfCFTA scenario	19
Large Infrastructure and Leapfrogging scenario	22
Financial Flows scenario	26
Governance scenario	29
Donors and Sponsors	33
Reuse our work	33
Cite this research	33

Ghana: Scenarios

- Briefly
- Demographics and Health scenario
- Agriculture scenario
- Education scenario
- Manufacturing scenario
- AfCFTA scenario
- Large Infrastructure and Leapfrogging scenario
- Financial Flows scenario
- Governance scenario

Briefly

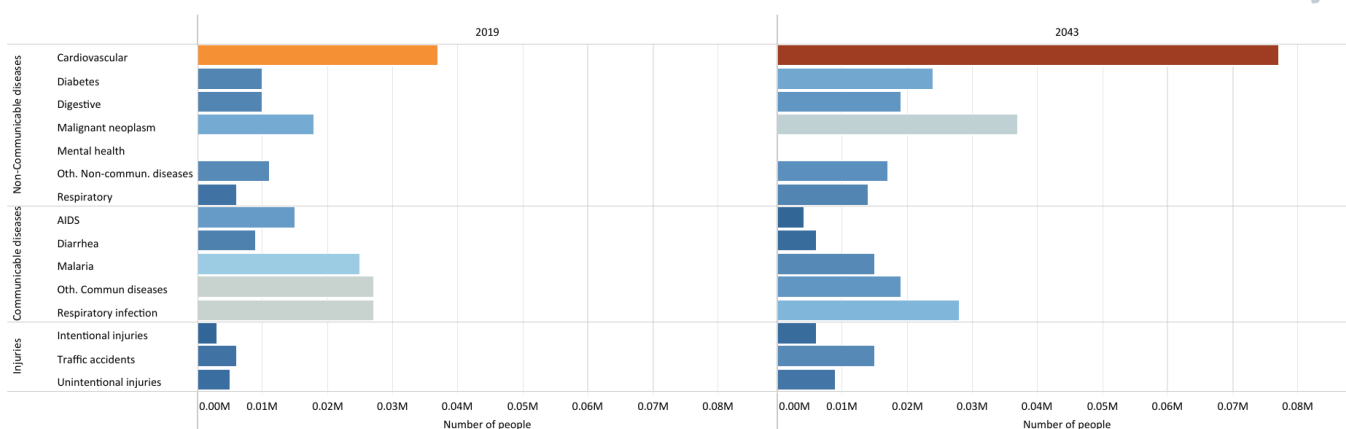
Chart 10: Relationship between Current Path and scenario



The eight sectoral scenarios as well as their relationship to the Current Path and the Combined scenario are explained in the [About Page](#). Chart 10 summarises the approach.

Demographics and Health scenario

Chart 11: Mortality distribution in the Current Path, 2019-2043



Source: IFs 8.26 initialising from IHME data

Chart 11 presents the mortality distribution in the Current Path from 2019 to 2043.

The Demographics and Health scenario envisions ambitious improvements in child and maternal mortality rates, enhanced access to modern contraception, and decreased mortality from communicable diseases (e.g., AIDS, diarrhoea, malaria, respiratory infections) and non-communicable diseases (e.g., diabetes), alongside advancements in safe water access and sanitation. This scenario assumes a swift demographic transition supported by heightened investments in health and water, sanitation, and hygiene (WaSH) infrastructure.

Visit the themes on [Demographics](#) and [Health/WaSH](#) for more detail on the scenario structure and interventions.

Ghana has made significant strides in improving access to healthcare in the past decade. Overall, there has been an [expansion](#) of healthcare facility coverage and the number of doctors and nurses per capita has risen. The government has also [promoted](#) community-based Health Planning and Services to support community-based primary healthcare. In 2003, the National Health Insurance Scheme (NHIS) was [established](#) to provide financial access to quality basic healthcare for Ghanaian residents. The scheme expanded to include free maternal care in 2008 and free mental healthcare services in 2012. Since its introduction, the NHIS has significantly increased healthcare service utilization and outpatient visits per capita.

Despite significant progress, Ghana still faces challenges in ensuring equitable access to healthcare. Disparities in the distribution of human resources and health facilities exist between regions and within communities. [Urban](#) and wealthier populations have better access to the NHIS than rural and poorer populations. As a result, [pregnant women](#) from poorer households usually deliver their babies outside healthcare facilities, and under-five mortality rates are higher among the poorest. Limited [government support](#) and delayed reimbursements have led to illegal charges and disruptions in service delivery, further straining the NHIS. Additionally, the [quality](#) of care remains a major concern, with issues such as ineffective administrative structures, inadequate equipment, and non-adherence to protocols impacting patient outcomes. Ghana's heavy reliance on [imported](#) pharmaceuticals and medical equipment exacerbates these challenges, leading to shortages of essential supplies, particularly in public facilities. These factors collectively contribute to the persistent disparities in healthcare access and outcomes in Ghana. Since the aftermath of the COVID-19 pandemic, the country has witnessed a large-scale brain drain in the health sector, with many nurses and doctors migrating to the UK, US and Canada. For instance, in [2022](#) alone, more than 1 200 Ghanaian nurses joined the UK nursing register. This large-scale emigration of critical health workers is affecting quality healthcare delivery.

As part of efforts to address these challenges, the government aims to allocate a larger portion of the national budget to healthcare to address infrastructure and workforce shortages. Ghana has initiated a roadmap for achieving Universal Health Coverage (UHC) by 2030, emphasising primary healthcare and community-based services. This has led to the introduction of Community-Based Health Planning and Services (CHPS), which aims to shift primary healthcare services from subdistrict health facilities to more accessible community settings. Over 6 500 CHPS compounds are currently operational, which has improved access to healthcare in rural areas, enhanced equity, fostered intersectoral collaboration, and improved service delivery efficiency. The government has also commenced the [Agenda 111 project](#) which aims to construct 101 district hospitals, 7 regional hospitals, 2 psychiatric hospitals and redevelopment of the Accra Psychiatric Hospital. This will ensure access to quality healthcare delivery in every district and region in Ghana.

Our modelling uses the International Classification of Disease (ICD) to differentiate between three broad categories: communicable diseases, non-communicable diseases and injuries, as well as 15 subcategories of mortality and morbidity. In 1990, communicable diseases caused about 90 000 deaths, constituting about 62.8% of total deaths in that year. This was followed by non-communicable diseases that caused 45 000 deaths (32% of total deaths) and injuries that caused 8 000 deaths (5.5% of total deaths). By 2023, deaths from non-communicable diseases had risen to constitute 47.3% almost half of all deaths (105 000) while deaths from communicable diseases had steadily risen to 101 000, representing 42% of all deaths. This means that the country has achieved its epidemiological transition (a point where deaths from non-communicable diseases outweigh deaths from communicable diseases). Deaths from injuries also rose to 8 000 (equivalent to 7.5% of all deaths). According to the [WHO](#), the top causes of death in Ghana include stroke, tuberculosis, HIV/AIDS, lower respiratory infections, heart diseases, malaria, preterm birth complications, diarrhoeal diseases, road injury and kidney diseases. The activities of illegal mining (galamsey) are also leading to further public health crises. [Research](#) has linked the pollution of water from galamsey to chronic diseases such as Kidney failures, birth defects and cancers as evident in many mining communities in the country. On the Current Path, by 2043, non-communicable diseases will continue to be the highest cause of death in Ghana causing 188 000 deaths, representing about 64.8% of all deaths in the country. The transition to deaths from non-communicable diseases as the main cause of mortality will inevitably increase health sector costs as they are more expensive to treat. By then, deaths from communicable diseases will rapidly decline to 73 000, constituting 25% of all deaths, while deaths from injuries will rise to 30 000, constituting the remaining 10.2%.

Access to improved, safe, treated water, such as piped water, is an important means of preventing the spread of communicable diseases. The country has carried out initiatives to provide access to hygienic facilities and clean water, notably in metropolitan areas. Ghana has made significant advancements towards the attainment of SDG goal 6.1 of universal access to safe drinking water. In 2023, 23.7 million people in Ghana (constituting 92.2% of the population) had access to improved water supply. This represents a significant improvement from the 73.8% in 2000. Out of this, 10.5 million people (representing about 36.4% of the population) had access to a piped water supply in the country, far below the average of lower-middle-income countries in Africa. However, improvement will slow on the Current Path so that at the end of the SDG implementation, 92.4% of people in Ghana will have access to improved water. In recent years, the activities of illegal mining also threaten safe drinking water in the country.

The use of heavy equipment, such as excavators, bulldozers and chafans has destroyed major river bodies in the country. Major rivers in the country like Pra, Ankobra, Pra, Oti, Offin and Birim which are source water have all been polluted. [The Ghana Water Company Limited](#) has already warned of severe water shortage in Ghana if the activities of galamsey are not curbed. It has stated that it is presently recording water turbidity levels of 14 000 NTU (Nephelometric Turbidity Units) far above the 2 000 NTU required for adequate treatment. [Experts](#) have warned that the country risks importing water by 2030. By 2043, it is projected that access to improved water will increase to about 95.1% of which piped water will constitute almost 58% connections.

Sanitation is a huge problem in Ghana, especially in the nation's capital. According to the [UN](#), only 57% of Ghanaians use

shared or public toilet facilities while 18% still relies defecate in open defecation. This poses a major health risk to the country with many people dying from WASH-related diseases. The WHO estimates show that 21 people die every day from preventable WASH-related diseases. A study by the World Bank also shows that Ghana loses US\$290 million annually due to poor sanitation. The country loses US\$79 million due to open defecation. In 2023, only about 27.3% of the population (4.8 million people) had access to improved sanitation, which was about half of the average of 52.5% for its income-group peers in Africa. The share of the population with access to shared sanitation at 45% is below Africa's lower-middle-income group average of 17.3% while populations with access to unimproved sanitation constitute the rest. On the Current Path, the proportion of the population with improved access to sanitation will rise to 48.6% by 2043, above the average of 62.5% for lower-middle-income countries in Africa. By this time, the share of the population with access to shared sanitation will decline to 32.5% above the average for its income-group peers.

Chart 12: Infant mortality rate in the Current Path and Demographics and Health scenario, 2019-2043

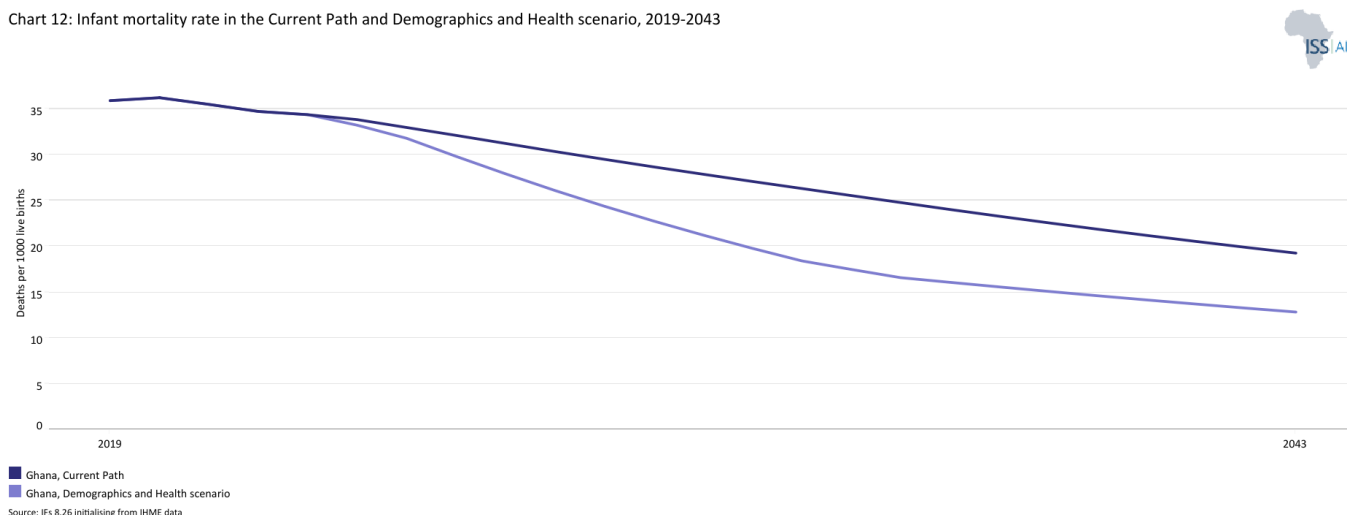


Chart 12 presents the infant mortality rate in the Current Path and in the Demographics and Health scenario, from 1990 to 2043.

The infant mortality rate is the probability of a child born in a specific year dying before reaching the age of one. It measures the child-born survival rate and reflects the social, economic and environmental conditions in which children live, including their health care. It is measured as 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 infant mortality rate is an important marker of the overall quality of a country's health system. In 2023, the infant mortality rate in Ghana was 34.4 deaths per 1 000 live births—a drop of more than half of the 70 deaths per 1 000 live births in 1990. This was 9.4 deaths fewer than the average of 43.8 deaths for lower-middle-income countries in Africa. On the Current Path, the infant mortality rate will decline further, reaching 19.3 deaths per 1 000 live births by 2043, which is 11.7 fewer deaths than the average for lower-middle-income countries in Africa. It means that Ghana will not achieve the SDG target of 12 deaths per 1 000 live births even by 2043 and can only be achieved by 2058 in the Current Path.

The Demographics and Health scenario will reduce the infant mortality rate in Ghana further to 12.8 deaths per 1 000 births by 2043. This is 6.4 deaths fewer than in the Current Path and almost a third of the Current Path average of lower-middle-income countries in Africa. This also means that the country can also meet the SDG goal by 2043 if rapid interventions are implemented.

Chart 13: Demographic dividend in the Current Path and the Demographics and Health scenario, 2019-2043

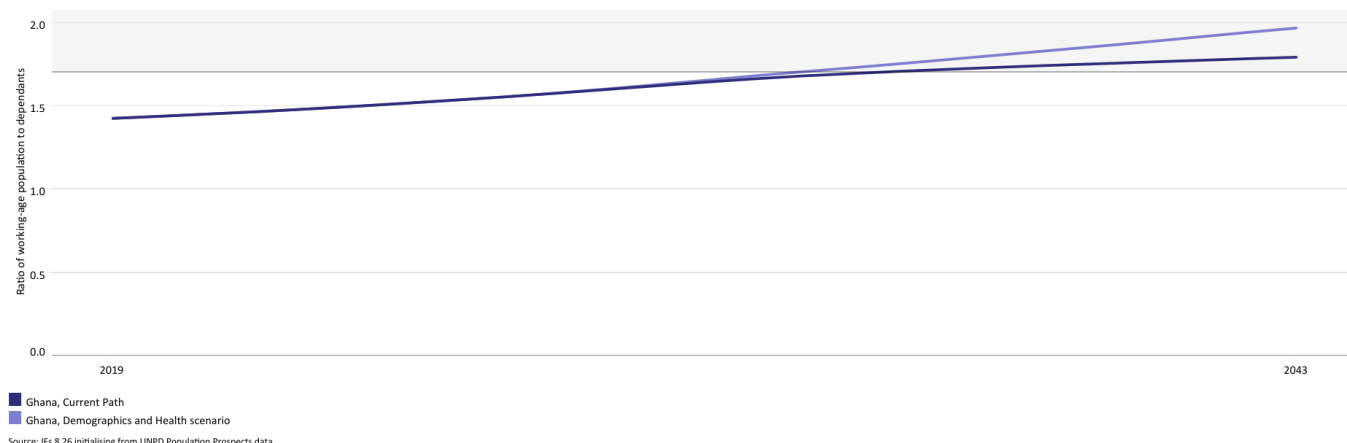


Chart 13 presents the demographic dividend in the Current Path and in the Demographics and Health scenario, from 2019 to 2043.

The dividend is the window of economic growth opportunity that opens when the ratio of working-age persons to dependents increases to 1.7 to 1 and higher.

Demographers typically differentiate between a first, second and even third demographic dividend. Given Ghana's youthful population structure and the strides made in the past two decades, the study focuses on the first dividend. There are different ways to conceptualise the first demographic dividend. For example, [studies](#) have shown that a promising demographic window occurs when less than 30% of the population falls within the ages 0–14 years (children) while those above the age of 65 years and above (elderly) make up less than 15%. [Alternatively](#), a demographic dividend opens when a country attains an average median age of between 26 and 41 years. We generally use the ratio of working-age persons to dependants, i.e. the size of the labour force (between 15 and 64 years of age) relative to dependants (children and elderly people).

The demographic dividend is the economic growth generated by changes in the population structure. It generally materialises when the ratio of the working-age population to dependants is at least 1.7-to-1, meaning that for every dependant, there are 1.7 workers. When there are fewer dependants to take care of, it frees up resources for investment in both physical and human capital formation. [Studies](#) have shown that about one-third of economic growth during the East Asia economic 'miracle' can be attributed to the large worker bulge and a relatively small number of dependants. However, the growth in the working-age population relative to dependants does not automatically translate into rapid economic growth unless the labour force acquires the needed skills and is absorbed by the labour market. Without sufficient education and employment generation to successfully harness their productive power, the growing labour force (especially those in urban areas) could increasingly become frustrated with the lack of job opportunities leading to social tension and even the emergence of civil instability.

In 2023, the ratio of the working-age population to dependants in Ghana was 1.48-to-1 which means that on average, there were only 1.5 persons of working age (15–64 years of age) for every dependant in Ghana. This represents an improvement from the ratio of 1-to-0 in 1990 and above the 1.3-to-1 average for lower-middle-income countries in Africa. On the Current Path, Ghana will achieve the minimum ratio of 1.7 working-age persons for each dependant required for the materialisation of the demographic dividend or demographic gift by 2035.

The Demographics and Health scenario pushes the country above this target such that by 2043, the ratio of the working-age population to dependants is projected to be 2.0-to-1 in the scenario instead of the 1.8-to-1 as in the Current

Path and above the average of 1.6-to-1 for the country's income-group peers in Africa by 2043. Increasing the size of the working-age population in Ghana can be a catalyst for growth if they are educated and employment opportunities are generated to successfully harness their productive power. Otherwise, it could turn into a demographic 'bomb', as many people of working age may remain unemployed and in poverty, potentially creating frustration, social tension and conflict.

Agriculture scenario

Chart 14: Crop production and demand in the Current Path, 1990-2043
Area chart show demand less production

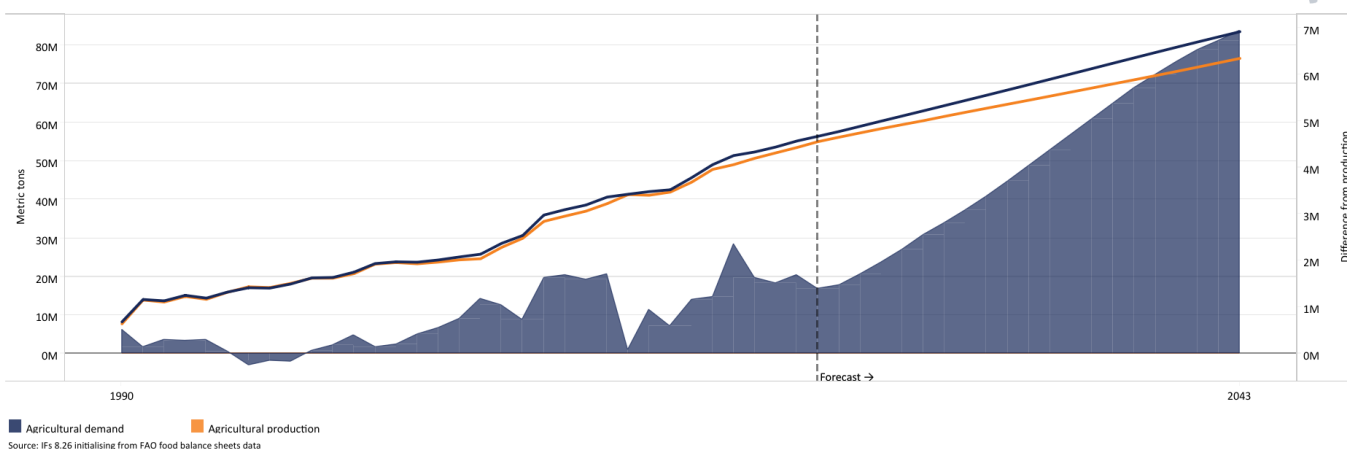


Chart 14 presents crop production and demand in the Current Path from 1990 to 2043.

The Agriculture scenario envisions an agricultural revolution that ensures food security through ambitious yet feasible increases in yields per hectare, thanks to improved management, seed, fertiliser technology, and expanded irrigation and equipped land. Efforts to reduce food loss and waste are emphasised, with increased calorie consumption as an indicator of self-sufficiency and prioritising it over food exports. Additionally, enhanced forest protection signifies a commitment to sustainable land use practices.

Visit the theme on [Agriculture](#) for our conceptualisation and details on the scenario structure and interventions.

Agriculture is the primary activity and source of income and employment for Ghana's inhabitants, particularly in the northern regions whose output potential is virtually untapped. The agriculture sector in Ghana [employs](#) over half of the workforce and provides a primary source of livelihood for most of the country's poorest households. Ghana has introduced several policies to improve agricultural productivity. In 2017, the government [launched](#) the "Planting for Food and Jobs" initiative, which aims to increase food security and farmer income by providing improved seeds and fertilizers. The PFJ programme offers subsidies for fertilisers and improved seeds, addressing soil fertility and climate resilience, which is crucial for small-scale farmers. The "Ghana Feed the Future Agriculture Policy Support Project" also [focuses](#) on data-driven policy reforms to encourage private-sector agricultural investment, which is crucial for job creation and economic stability. Moreover, through the [Ghana Agricultural Investment](#), the government supports sustainable practices through various laws and frameworks. Furthermore, the [Modernizing Agriculture in Ghana Programme \(MAG\)](#), a CAD\$135 million initiative, aims to increase productivity by providing agricultural extension services and developing value chains, benefiting millions of farmers. Likewise, programmes like [BRIDGE-in Agriculture](#) empower youth with finance and technical support, fostering sustainable agricultural practices.

Aside from the government, there are other non-governmental organisations that also support agricultural activities in the country. The [USAID's Feed the Future](#) initiative employs a behaviour-change approach to assist Ghana in achieving self-sufficiency by enhancing agricultural productivity and profitability, strengthening market systems, improving access to finance, promoting resilience, optimising economic inclusion, and improving nutrition. This is accomplished through evidence-based interventions such as targeting food security initiatives in northern Ghana, protecting marine fisheries,

promoting diverse and nutrient-rich crops, improving processing and storage, and partnering with private firms to expand their businesses and meet national and global standards. These combined efforts aim to modernise agriculture, increase productivity and ensure food security

Despite its huge potential, the sector is confronted with several challenges that impede its growth. Some of the challenges faced are related to the poor state of infrastructure and the effects of climate change, with irregular rains leading to annual flooding and a protracted dry season. Many large, medium and small dams for various purposes, including irrigation, remain underdeveloped. The government, in 2017, under its flagship project of one village, one dam, promised to construct dams in the northern region to promote all-year farming. However, this initiative received limited funding and most of the dams constructed dried up during the dry season. As a result, water scarcity during the extended dry season harms output, household income and living standards. Limited technological adoption, poor soils, dependency on rainfed systems, and insufficient infrastructure further hampered low yields. In recent years, the activities of galamsey have caused the destruction of farmlands, particularly cocoa. Data from the COCOBOD shows that cocoa production, currently at 429 323 metric tons, is less than 55% of its seasonal output, mainly due to illegal mining activities. In the Mankurom community alone, over 100,000 acres of cocoa have been destroyed due to galamsey.

In 1990, Ghana's average crop yield of 2.0 metric tons per hectare was below the average of 2.5 metric per hectare for its income-group peers in Africa. Over the years, the country has witnessed an improvement in agriculture yields such that by 2023, the average crop yield per hectare of 8.0 metric tons was above the average of 5.3 metric tons per hectare for lower-middle-income countries in Africa. This means that compared to its income-group peers, Ghana has been able to adopt improved technology and mechanised agriculture that significantly increased its yield per hectare over the years. On the Current Path, yield per hectare will rise to 10.0 metric tons per hectare by 2043, which will be 53.4% higher than the average of lower-middle-income African countries. Sustaining Ghana's agricultural yields will prove challenging in the face of increased population growth, increasing galamsey (illegal mining) and limited and declining agricultural land.

Total agriculture production in 1990 stood at about 8.4 million metric tons. Of this, 7.8 million metric tons, representing 93.1%, were crops, with the remainder constituting meat production. By 2023, total agricultural production in Ghana had grown to 56.1 million metric tons. Of this, crop production constituted 98.1%, equivalent to 55.1 million metric tons, meat production and fish production constituted the remainder of the total production. Ghana's principal agricultural commodities include maize, roots, vegetables and fruits, cassava (tubers), oil palm, rubber, rice, cashew nuts and cocoa. For instance, Ghana is the world's second-largest cocoa producer and exporter after the Ivory Coast.

Ghana faces huge crop loss and waste estimated at 19.3% of total production. This is largely due to post-harvest losses for crops, estimated at 7.5% of production, and transmission losses for crops, at 8.5%. Such losses can be a result of pest and disease infections, spoilage and the lack of adequate and effective storage facilities. Fish and meat also witnessed loss and waste accounting for 29.7% and 20% of total production respectively. As such, enhancing roads, storage facilities, and market access is crucial for reducing post-harvest losses and boosting farmer incomes

In terms of demand, the total demand for agricultural products in Ghana has always been more than the total production. Total demand stood at about 8.9 million metric tons in 1990, of which 8.3 million metric tons, equivalent to 93% of total demand, were for crops. The remaining demand was for meat (232 000 tons) and for fish (393 000 tons). Since then, domestic demand has rapidly outgrown production, and by 2023, agricultural demand had reached 58.2 million tons. Of the total demand, 97.0% is for crops (56.4 million tons). The remaining demand is for meat (764 000 tons) and for fish (1.0 million tons).

Despite the increase in domestic production, reaching 78.7 million metric tons in 2043, it will not be enough to meet domestic demand that will rapidly grow to 88.7 million metric tons. As a result, excess demand for agricultural products will reach 10 million by 2043. This indicates that Ghana faces the risk of food shortages in the future if drastic measures are not taken to revamp the agriculture sector to increase domestic production.

With total agricultural demand outgrowing domestic production, Ghana will have to rely on imports to meet its domestic demand. In 2023, Ghana's net import of crops stood at 5.6% of total crop demand, which was lower than the average of 11.8% for lower-middle-income countries in Africa. Also, the net import of fish stood at 41.8% of total fish demand, while the net import of meat was estimated at 40.6% of total meat demand all far above the average for lower middle-income countries. Reliance on **food imports** has grown, even for essential items like rice, poultry, sugar and vegetable oils.

In light of its huge population, shrinking agricultural land, water scarcity and other effects of climate change, Ghana remains food insecure and vulnerable to international price shocks and disruptions in supply chains. In the Current Path, net crop imports will grow in Ghana to 9% of total crop demand by 2043 while that of meat and fish will be 37.7% and 79% of their respective demands respectively. This suggests a growing level of national food insecurity; however, it can also be a result of changes in dietary preferences. Greater import dependence makes Ghana more vulnerable to international price shocks and accompanying risks of disruptions in the global supply chains as seen during COVID-19. Thus, while Ghana has increased agricultural production, the sector needs major reform to focus and incentivise the production of goods like vegetables and fruits in which Ghana has a comparative advantage.

Chart 15: Import dependence in the Current Path and Agriculture scenario, 2019-2043

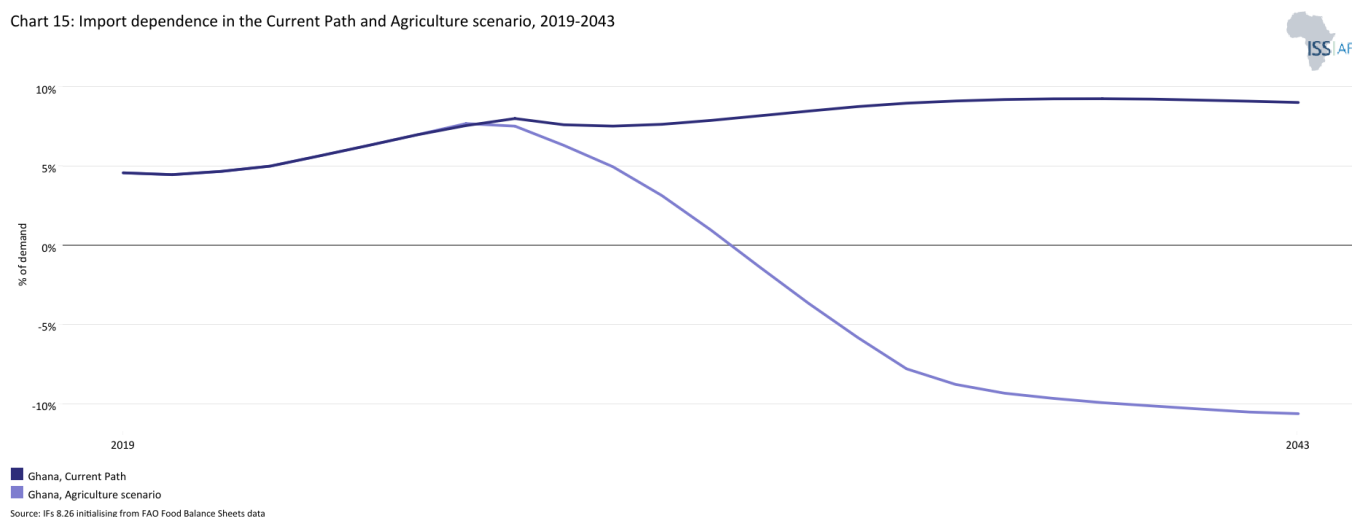


Chart 15 presents the import dependence in the Current Path and the Agriculture scenario, from 2019 to 2043.

In the Agriculture scenario, yield per hectare will increase to 11.9 metric tons by 2043—a 19.0% improvement compared to the Current Path and almost twice the average of lower-middle-income countries in Africa. The improvement in yields will lead to an improvement in total agricultural production. By 2043, in the Agriculture scenario, total production will increase to 90.1 million tons, almost 11.5 million metric tons, or 14.6%, more than the Current Path by 2043. Annual crop production in Ghana will rise by 15% over the Current Path to 88.1 million tons in the Agriculture scenario by 2043. The increases in crop production in the Agriculture scenario reduce the import dependency of crops in the country compared to the Current Path. Indeed, Ghana will become a net exporter of crops under the scenario so that by 2043, the net export of crops will reach 10.6% in the Agriculture scenario. This means that Ghana has the potential to be food sufficient and export to other countries in the longer term if agriculture is revolutionalised.

Education scenario

Chart 16: Progress through education funnel in the Current Path, 2023-2043

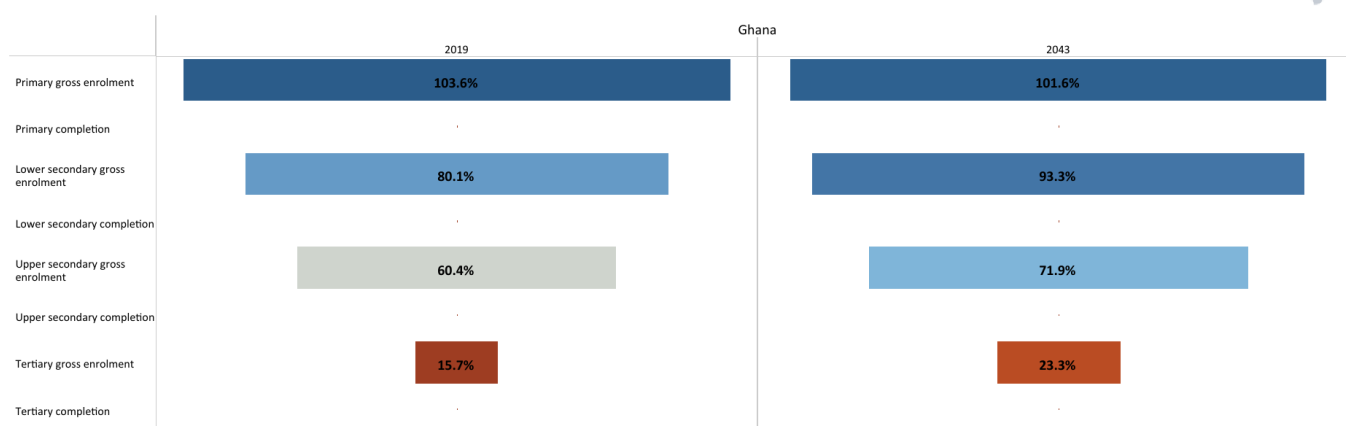


Chart 16 depicts the progress through the educational system in the Current Path, from 2019 to 2043.

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

Visit the theme on [Education](#) for our conceptualisation and details on the scenario structure and interventions.

Ghana's education [system](#) has a 6-3-4-4 structure: six years of elementary school, three years of junior secondary school, and three years of senior secondary school, followed by four years of university study. Over the years, Ghana's education system has been characterised by low funding, which is reflected in inadequate educational infrastructure and learning materials, especially at the basic level, where public schools constitute the majority. In 2023, Ghana spent US\$3.1 billion on its education system—this amount is equivalent to 4.0% of the country's GDP. At this rate, Ghana's spending on education was below the average of 4.5% for lower-middle-income countries in Africa. On the Current Path, Ghana's total expenditure on education will reach US\$9.1 billion, constituting 3.9% of GDP, by 2043.

About 38.0% of spending on education in Ghana is on the upper-secondary level making it the largest educational expenditure in the country. This departs from the trend observed in most African countries where much of the spending is done at the primary or lower-secondary level. The high spending at the upper-secondary levels is mainly due to the implementation of the free senior high school programme that commenced in 2017 which has increased enrolment significantly at the secondary level. With the government absorbing almost all the cost of secondary schools including academic user, boarding and feeding fees, it is therefore not surprising that more of the country's education budget is spent at this level. On average, it costs US\$666 to educate a student at the tertiary level. This is almost 2.6 times what was spent on lower-secondary students, 4.4 times the cost of educating a child at the primary level. However, it is less than the US\$1 189 that is spent on educating a tertiary-level student. While this has expanded access at the secondary levels, it has also crippled the other levels especially the basic levels as it leaves little resources available. Nonetheless, spending at the primary level constitutes 16.2% while spending on lower secondary and tertiary levels constitutes 16.4% and 19.4%, respectively.

The education system can be viewed as a long funnel where children enter at the primary level and exit after completing

tertiary-level education. Many children enter the system at the wide mouth of the funnel, but few complete the entire journey—from primary to secondary school and then university—to eventually graduate with a tertiary or equivalent education at the other end. However, the education funnel in Ghana largely mirrors funnel leakages and cracks along the way.

Ghana has implemented several policies to enhance its education system and improve access, notably through the Education Strategic Plan (ESP) 2018-2030. These policies include the Free Senior High School (SHS) initiative, launched in 2017, which aims to eliminate tuition fees and improve access for all students. Additionally, the government has expanded physical school infrastructure and facilities to accommodate increased enrollment, improved quality through the provision of core textbooks and supplementary readers, and rationalised teacher deployment. To improve equity, the government has implemented a policy reserving 30% of places in elite senior secondary schools for students from public junior secondary schools.

In 2023, the gross enrolment rate for primary school students in Ghana was 106.0%, an increase from 71.4% in 1990 higher than the average of 101% of lower-middle-income countries in Africa. Comparing this to the net enrolment rate of almost 90.3% in the same period leads to two important conclusions. First, a number of children in Ghana who are of school-going age are not in school. Secondly, many classrooms in Ghana are likely to be crowded by older students as is the case in many African countries. On the Current Path, Ghana's gross and net enrolment rates will almost converge at 100% meaning by then classrooms will be filled with students of appropriate age.

The gross primary completion rate stood at 88.7% in 2023, indicating that a number of children who enrolled did not complete the last grade of primary school in Ghana as is the trend in most low- and lower-middle-income countries in Africa. On the Current Path, Ghana's progress in ensuring more children complete primary school will be maintained throughout the forecast period such that, by 2043, almost every primary school student will complete the last grade. This progress in Ghana ensures that its educational system will mirror that of a developed country an advanced educational system where access at the basic level is universal and an older population is highly educated. Of those who complete primary-level education, some will transition immediately to the lower-secondary level, some will enrol in the lower-secondary level after some years out of school and some will never enter the lower-secondary level, and so on, through the upper-secondary and tertiary levels.

In Ghana, more students transition from primary level to lower-secondary level than they do from lower-secondary level to upper-secondary level. In both cases, the rates are higher than Ghana's income-group peers in Africa: gross enrolment for lower- and upper-secondary levels in the country stood at 83.2% and 61.6%, respectively, in 2023. For instance, gross enrolment at upper-secondary has risen sharply from the paltry 12.6% in 1999 to this present level. These rates are far above the averages of 69.4% and 44.6% for its income peers. The high enrolment rates at the primary and secondary levels are due to Ghana's free and compulsory education at the basic levels and free senior secondary school policy commenced in 2018. By 2043, gross enrolment for the lower-secondary level will rise to 93.3%, while that of the upper-secondary level will rise to 71.9%.

In 2023, the completion rate stood at 72.4% in the lower-secondary level while that of the upper-secondary level was 36.6%. Although these rates are above the average for its income peers in Africa (50.7% for lower-secondary and 34.9% for upper-secondary), it is an indication of a contraction in the educational funnel in Ghana. A particular worry is the low completion rate at the upper-secondary levels especially after the introduction of free senior high school. It denotes that there are other significant barriers that prevent students from completing secondary school despite being free. It also confirms the several reports in the country that although free, students are forced to pay unapproved monies due to the inability of the government to meet its commitment. By 2043, 84.0% of students will complete their lower-secondary education compared to 53.0% in upper-secondary level.

At the tertiary level, the situation is less rosy as enrolments in the tertiary level remain low. In 2023, only 15.7% of people

within the age group were enrolled in tertiary institutions in Ghana, slightly below the average rate for lower-middle-income countries in Africa of 16.1%. This will only improve to 23.3% by 2043 on the Current Path. Only about 11% of the relevant age group in Ghana graduated from a tertiary institution with at least a first degree in 2023 and this will slightly rise to 15.6% by 2043. This is slightly above the average rate of 9.4% for lower-middle-income countries.

Ghana has done well to eliminate the gender gap in access to education. Unlike its income peers, there is no gender inequality in access at the primary and the lower-secondary levels as the ratios of female to male enrolment and completion are 100% in Ghana and will continue on the Current Path even by 2043. At the upper-secondary level, there were 94 females enrolled in lower-secondary schools for every 100 males in Ghana, as opposed to the average of 95 females for every 100 males in lower-middle-income Africa. However, the ratio is lower when it comes to completion. In 2023, there were 89 and 98 females who completed in lower- and upper-secondary schools respectively for every 100 males in Ghana. At the tertiary level, the gap is worsened there were 79 females enrolled compared to 100 males as opposed 90 females to males average rate for lower-middle-income Africa.

Enrolments in vocational training and science and engineering education, which are considered crucial to the future of work, are quite low. The government has highlighted the importance of technical and vocational education in equipping students with practical skills for the workplace. As such, it has **prioritised** the support and reform of Technical, Vocational, and Educational Training (TVET) institutions at the senior high school level to facilitate skills acquisition. However, this is yet to be reflected in the enrolment rate in technical and vocational programmes. In 2023, only a paltry 6.5% of upper-secondary school students were enrolled in vocational training programmes in Ghana. This is just about half the average for lower-middle-income countries in Africa. On the Current Path, this rate will be stagnant as Ghana will continue to lag behind its income peers and will continue even by 2043. Similarly, the engineering and science education at the tertiary level is relatively low in Ghana. In 2023, 14% of tertiary graduates in Ghana enrolled in science and engineering programmes. This was below the average of 16.0% for lower-middle-income countries in Africa. On the Current Path, the proportion of tertiary graduates enrolled in science and engineering programmes will steadily rise to 18.9% by 2043, almost at par with the average for its income peers in Africa.

Beyond the limited access to education in the country, there are also problems with the quality of education. Ghana still faces numerous barriers to providing quality education for all children. The quality of education varies widely, especially in rural areas where schools often lack basic infrastructure, leading to overcrowded classrooms and **classes** being held outdoors. Estimates show that there are still about **5400** schools under trees. Furthermore, **students** frequently miss educational milestones, enrol and drop out repeatedly, and miss significant amounts of school due to factors such as childhood marriage, teen pregnancy, HIV/AIDS and poverty. For rural students, long and unsafe commutes to school also pose additional challenges, while children with disabilities often face inaccessibility and a lack of support from teachers. Also, the mass implementation of the free SHS programme led to initial challenges including the **double track system** which affected the quality of education. There have also been occasional **food shortages** and poor food quality in secondary schools which affect school attendance.

To enhance teacher quality and effectiveness, the government has implemented continuous professional development programs and mandatory in-service training and workshops. These **initiatives** ensure that teachers are equipped with modern teaching methodologies and subject knowledge. In 2019, the government **introduced** a new standards-based curriculum aimed at improving learning outcomes and aligning with international standards. This curriculum emphasises critical thinking, creativity and problem-solving skills, and includes subjects like coding and robotics at the basic education level. However, students are yet to be given textbooks on this new curriculum. In 2023, the average test score for primary and secondary students in Ghana stood at 35.1 and 35.2 out of 100, respectively. While the primary test score for Ghana was above the average of 33 for its income-peers, that of its secondary test score was below the 41.8 average score for lower-middle-income countries.

Chart 17: Mean years of education in the Current Path and Education scenario, 2019-2043
15 to 24 year age group

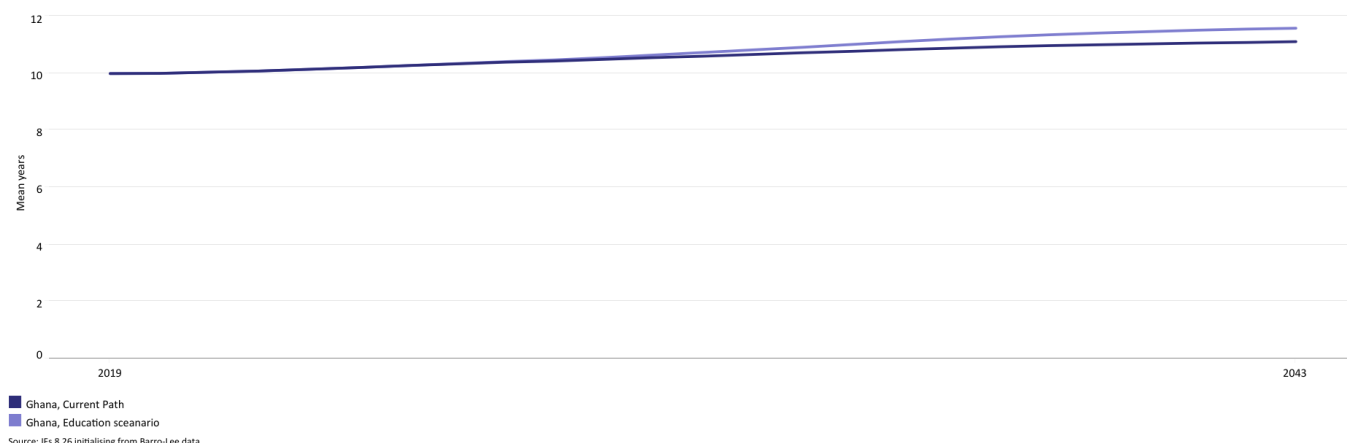


Chart 17 presents the mean years of education in the Current Path and in the Education scenario, from 2019 to 2043, for the 15 to 24 age group.

The average years of education in the adult population (aged 15 years and older) is a good first indicator of the stock of knowledge in society.

In 2023, the mean years of education attained by adults between 15 and 24 years in Ghana stood at 10.1 years— below the average of 7.8 years for lower-middle-income countries on the continent. In the Current Path, the average Ghanaian between the ages of 15 and 24 years will have received 11.1 years of education by 2043. On average, females received 0.9 years more schooling than males and forecast to remain till 2043. In the Education scenario, the mean years of adult education in Ghana will increase to 11.6 by 2043, 0.5 years more than the Current Path and higher than the average for lower-middle-income countries in Africa. The interventions in the Education scenario also close the gender gap in educational attainment in Ghana.

The Education scenario further increases average test scores for primary students to 44.4 in 2043, which is 17.5% more than in the Current Path and 27% above the average of lower-middle-income countries in Africa in the same year. By 2043, the average test scores for secondary students in Ghana will rise to 44.6%—this is 12.3% higher than the Current Path and the average of lower-middle-income countries in Africa. It means that the Education scenario has the potential to improve the quality of education (reflected in the test scores) in Ghana above that of its income-group peers in Africa.

Manufacturing scenario

Chart 18: Value-add by sector as % of GDP in the Current Path, 2019-2043

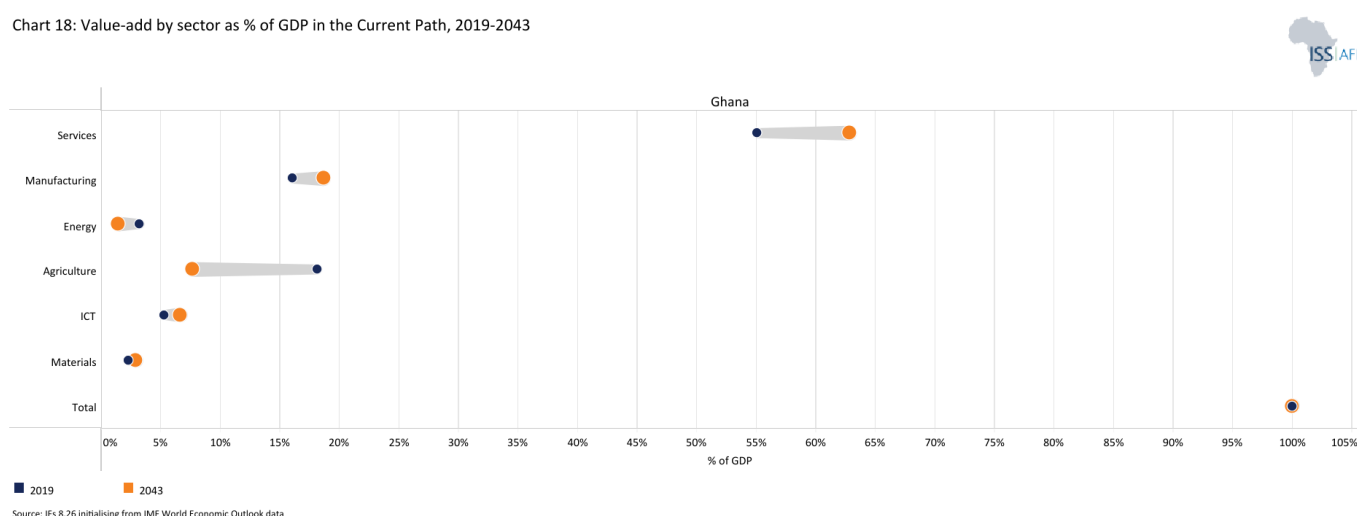


Chart 18 presents the share of GDP in the Current Path from 2019 to 2043.

In the Manufacturing scenario, reasonable but ambitious growth in manufacturing is envisaged through increased investment in the sector, research and development (R&D), and improved government regulation of businesses. This aims to enhance total labour participation rates, particularly among females where appropriate and is accompanied by increased welfare transfers to unskilled workers to mitigate the initial rises in inequality typically associated with a low-end manufacturing transition.

Visit the theme on [Manufacturing](#) for our conceptualisation and details on the scenario structure and interventions.

The manufacturing [sector](#) is a vital driver of economic growth, job creation and industrial development globally. Ghana's manufacturing sector is an important source of job creation, [employing](#) over 250 000 people. The sector is [diverse](#), encompassing industries such as mining, light manufacturing, aluminium smelting, food processing, cement and shipbuilding. Key [commodities](#) produced include cocoa processing, breweries, palm oil, textiles, chemicals, pharmaceuticals, electric vehicles, aluminium and cement.

Over the years, Ghana has made significant strides in promoting investments in the manufacturing sector and implemented several initiatives to promote the sector. These [initiatives](#) include exempting manufacturing sector investors from minimum foreign capital requirements, offering incentives for manufacturing and export entities through the free zones scheme, and supporting MSMEs through the MSME and Entrepreneurship Policy. By implementing these measures, Ghana aims to attract foreign investment, stimulate domestic manufacturing and contribute to economic growth. Also, the Industrial Transformation Agenda, [launched](#) in 2017, is a 10-point plan aimed at boosting local production and reducing import dependency, particularly in sectors like automotive and pharmaceuticals. Similarly, the One District, One Factory (1D1F) initiative [seeks](#) to establish a factory in each district, thereby enhancing local value chains and creating jobs. Furthermore, Ghana [aims](#) to leverage the African Continental Free Trade Area (AfCFTA), which is headquartered in Accra, to expand market access, which could boost manufacturing capabilities and job creation.

Despite these initiatives, Ghana's manufacturing sector continues to face several challenges. High [electricity costs](#) and unreliable power supply burden manufacturing businesses, increasing production costs and reducing profitability, particularly for energy-intensive industries. Additionally, [high import](#) and indirect taxes and levies further contribute to the high cost of production, despite some location tax incentives. Access to finance also [remains](#) a significant hurdle, especially

for small and medium-sized enterprises (SMEs). Banks often perceive the manufacturing sector as high-risk, limiting credit availability and imposing stringent borrowing conditions. This lack of financial support hinders investment in modern technologies, innovation and growth opportunities. Moreover, **limited access** to formal training in supply chain management and development results in high costs and transport inefficiencies. Infrastructure limitations, variable lead times, and poor road and rail networks pose additional challenges for the industry.

The three largest contributors to GDP in Ghana are the service, agriculture and manufacturing sectors. In 2023, the service sector in Ghana contributed US\$41.9 billion to the economy, equivalent to 55.1% of GDP. This is followed by the contribution of the agriculture sector valued at US\$13.6 billion, equivalent to about 17.9% of GDP. The manufacturing sector contributed US\$12.1 billion, representing 15.9% of GDP in 2023. In the same period, the information and communications (ICT) sector contributed US\$4.0 billion, constituting 5.2% of GDP, while the contributions of the energy and materials sectors were valued at US\$2.8 billion (3.7% of GDP) and US\$1.7 billion (2.3% of GDP), respectively.

On the Current Path, the service sector will extend its dominance in the economy with its contribution to GDP to more than double in size to US\$147.9 billion by 2043 (62.8% of GDP). By then, the manufacturing sector will still be the second-largest contributor and will be valued at US\$43.9 billion (18.6% of GDP). The agriculture sector in Ghana by 2043 will be the third-largest sector valued at US\$ 18.0 billion. This will be closely followed by the contribution of ICT to GDP valued at US\$ 15.6 billion. The material and energy sectors' contributions in 2043 will be valued at US\$6.8 billion and US\$3.3 billion, corresponding to 2.9% and 1.4% of GDP, respectively.

Typically when countries embark on a manufacturing transition, inequality and poverty may initially increase. This is because resources and investments are diverted to more capital and knowledge-intensive sectors, which leads to an initial crunch in consumption. However, in the long term, these efforts stimulate inclusive growth with a greater impact on poverty and inequality reduction. Policies aimed at industrialisation, therefore, need to be accompanied by measures to mitigate these initial adverse effects. These could include efforts to directly support extremely poor families through social programmes or welfare spending to cushion vulnerable people.

In 2023, the total welfare transfers to unskilled households in Ghana amounted to US\$5.4 billion equivalent to 8.1% of GDP, above the average for lower-middle-income African countries. On the Current Path, government welfare transfers to households will increase to about US\$17.7 which will represent 8.9% of GDP by 2043. At this rate, it will still be above the average of 7% of GDP for Ghana's income group peers in Africa.

Chart 19: Value-add by the manufacturing sector in the Current Path and Manufacturing scenario, 2019-2043

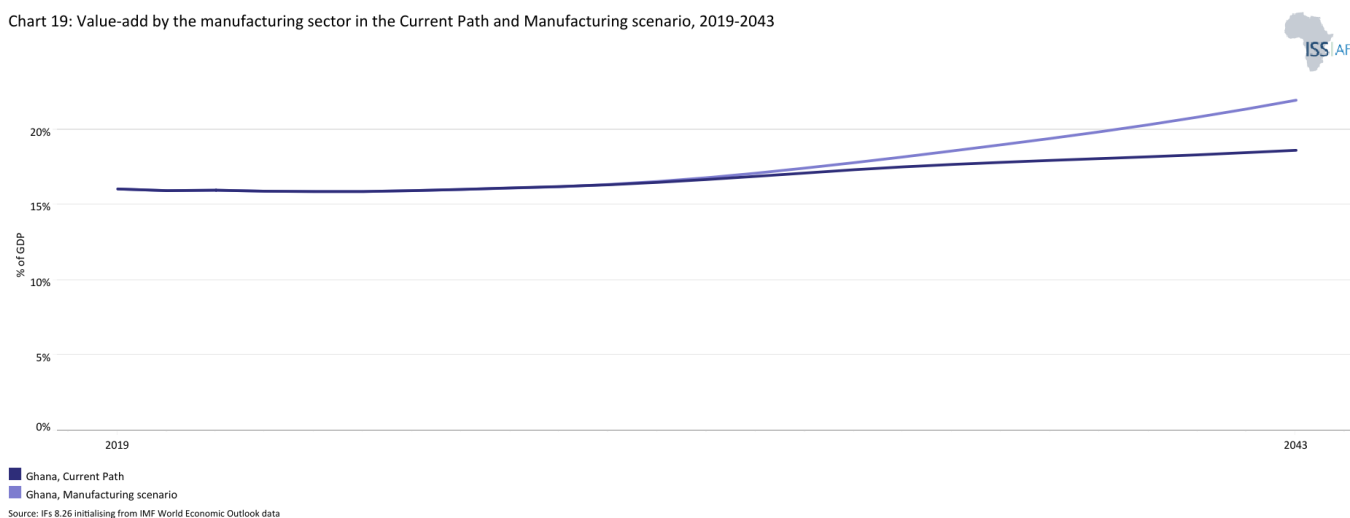


Chart 19 presents the contribution of the manufacturing sector to GDP in the Current Path and in the Manufacturing scenario, from 2019 to 2023. The data is in US\$ and % of GDP.

In the Manufacturing scenario, Ghana makes substantial progress in industrialisation such that, by 2043, the share of the manufacturing sector in GDP is about 22%, equivalent to US\$55.4 billion. This will be about 3.3 percentage points of GDP above the Current Path valued at US\$12 billion. However, industrialisation is a difficult and long-term process. It requires constructive relationships between the state, which provides encouragement and support, and the private sector. Firms need a state with strong capabilities in setting an overall economic vision and strategy, efficiently providing supportive infrastructure and services, and maintaining a regulatory environment conducive to entrepreneurial activity. Additionally, firms need a state that makes it easier to acquire new technology and enter new economic activities and markets.

AfCFTA scenario

Chart 20: Export and imports as % of GDP in the Current Path, 2000-2043

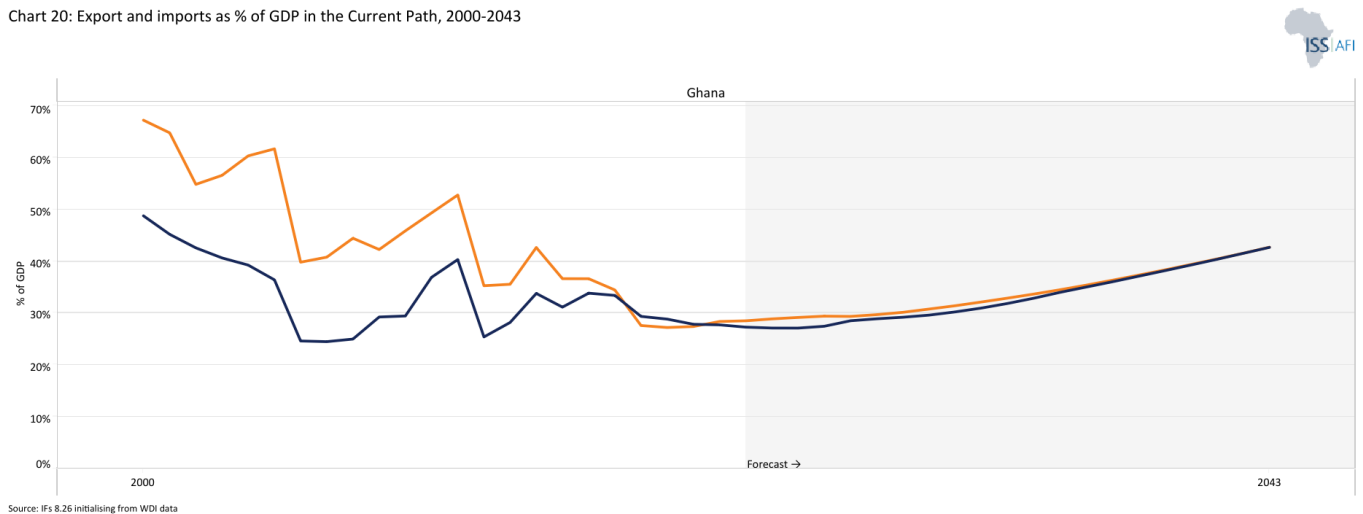


Chart 20 depicts exports and imports as a percentage of GDP, from 2000 to 2043, in the Current Path and in the AfCFTA scenario.

The AfCFTA scenario represents the impact of fully implementing the African Continental Free Trade Agreement by 2034. The scenario increases exports in manufacturing, agriculture, services, ICT, materials and energy exports. It also includes improved multifactor productivity growth from trade and reduced tariffs for all sectors.

Visit the theme on [AfCFTA](#) for our conceptualisation and details on the scenario structure and interventions.

Ghana's trade policy is centred around driving economic growth, enhancing export competitiveness, and integrating the country into the global economy. Ghana has [signed](#) several multilateral, regional and bilateral trade agreements. As a longstanding member of the World Trade Organisation, it is a signatory to the WTO trade facilitation agreement. At the regional level, Ghana is a member of ECOWAS, whose mandate is to promote economic integration and facilitate trade in the West Africa region. The country has also ratified and signed the African Continental Free Trade Agreement (AfCFTA), whose secretariat is located in Accra. Ghana's bilateral trade agreement includes the Economic Partnership Agreement (EPA) with the EU and the interim agreement with the UK, facilitating tariff reductions on a substantial portion of goods. It also has the Trade and Investment Framework Agreement with the US which ensures that its exports enjoy duty-free tariff preference under the African Growth and Opportunity Act (AGOA) and the Generalized System of Preferences (GSP) programme.

To further stimulate trade, Ghana has [implemented](#) policies focused on trade liberalisation, reduced tariffs and investment incentives to attract foreign capital. The Ghanaian government aims to position Ghana as a regional automotive hub in sub-Saharan Africa. To achieve this, the government [offers](#) tax incentives and other benefits to attract Original Equipment Manufacturers (OEMs) to establish assembly plants. Several major automakers, including Toyota, Volkswagen, Nissan, Suzuki, KIA and Mahindra, are already assembling vehicles in Ghana. Recent amendments to [tax laws](#), such as changes to excise duties and the introduction of the Growth and Sustainability Levy, are intended to improve fiscal sustainability. However, these changes may impact businesses by influencing production costs, competitiveness, and the overall economic landscape.

However, access to financing remains a significant [challenge](#) for local companies, with high commercial bank interest rates averaging 32%. This makes exporting to Ghana less attractive for foreign businesses, as they face limited financing options.

Additionally, Ghana's high government debt and challenges in domestic revenue mobilisation further hinder economic growth and business activity. Other **factors** including costly and difficult financial services, a lack of government transparency, corruption, underdeveloped infrastructure, a complex property market, unreliable power and water supply, high cross-border trade costs, bureaucratic hurdles, and unskilled labour force further hinder Ghana's trade potential.

In 1990, the sum of Ghana's exports and imports stood at 42.7% of GDP, which was below the average of 48.2% for lower-middle-income countries in Africa. However, since then, Ghana's economy has become more open to trade compared to its income peers in Africa. By 2023, trade openness had risen to 55.9% of GDP compared to the 43.4% average for lower-middle-income African countries. On the Current Path, this trend will continue as the sum of Ghana's exports and imports slightly increase to 72.2% of GDP, as compared to the average of 51.1% for its income-group peers in Africa.

In 1990, the total export volume in Ghana stood at US\$2.4 billion, constituting 16.9% of GDP, below the average of 23.5% for its income-group peers. Since then, exports from Ghana have grown rapidly. By 2023, Ghana's exports of US\$20.8 billion were equivalent to 27.3% of GDP, above the average of 19.0% for lower-middle-income African countries. Its primary **exports** include gold, crude petroleum, cocoa beans, coconuts, Brazil nuts, cashews, and cocoa paste, mostly to the United Arab Emirates, Switzerland, the US and India.

On the Current Path, total exports in Ghana will reach 35.9% of GDP, equivalent to US\$84.4 billion, in 2043, far above the 23.6% average of its income-group peers in Africa.

In terms of imports, Ghana's total imports grew from US\$3.7 billion, equivalent to 25.9% of GDP in 1990 to US\$21.7 billion, representing 28.6% of GDP, in 2023. At that rate, total imports as a proportion of GDP in Ghana were higher than the estimated average of 24.2% for lower-middle-income African countries in the same year. The country's top **imports** are large volumes of refined petroleum, coated flat-rolled iron and steel, cars, rice, and special-purpose ships mostly from China, the Netherlands, India, the US and Côte d'Ivoire. On the Current Path, Ghana's imports as a proportion of GDP will rise so that by 2043 they will be 36.3% of GDP, equivalent to US\$85.5 billion and above the 27.2% average for its income peers.

Chart 21: Trade balance in the Current Path and AfCFTA scenario, 2019-2043

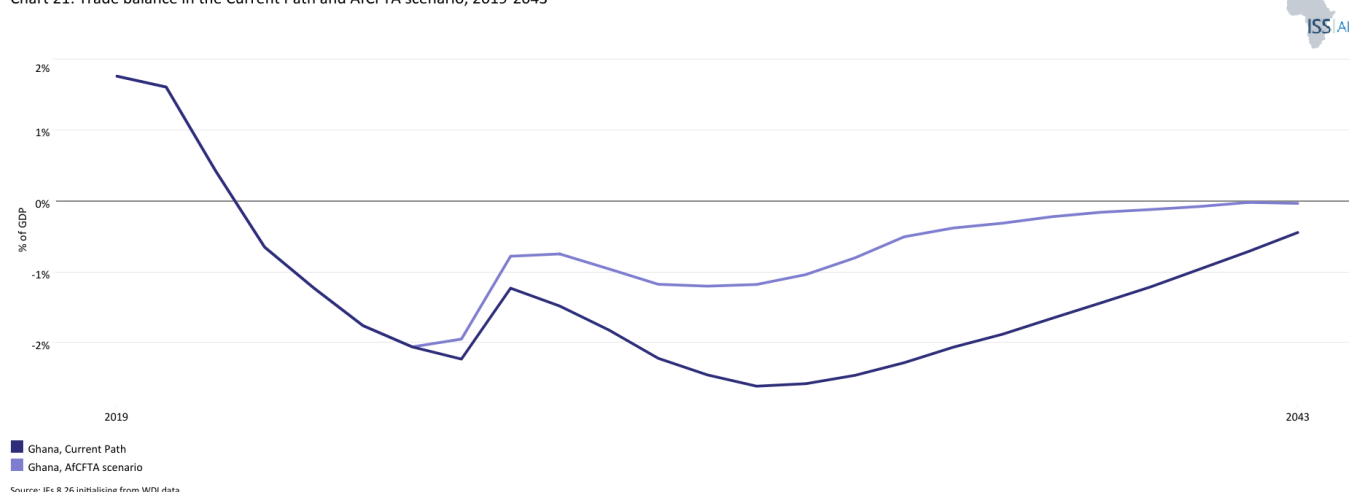


Chart 21 presents the trade balance in the Current Path and in the AfCFTA scenario, from 2019 to 2043, as a percentage of GDP.

The high import volumes coupled with its low export volumes lead to a chronic deficit in Ghana's trade balance. Like most

African countries, it imports large volumes of mostly finished or processed goods. Its export quantities are small, and most of it is raw materials, with little or no value addition occurring within the country. This results in low export revenues and higher import expenditures. Ghana's trade balance historically has been in deficit except for the period 2020 to 2022 mainly due to the COVID-19 pandemic and Russia's invasion of Ukraine which led to disruption in the global supply value chain. The country recorded its worst trade balance in 2005 with a deficit equivalent to 25% of GDP. Since then, there has been a sturdy decline so that by 2023, Ghana's trade deficit constituted 1.2% of GDP, an improvement, far lower than the average of 5.2% for lower-middle-income African countries.

By 2043, Ghana's trade deficit in the Current Path will constitute about 0.4% of GDP, whereas, in the same year, the AfCFTA scenario will mitigate this situation leading to a slightly lower deficit of 0.02% of GDP. This is also far below the average of 3.9 for its income peers in Africa. In the AfCFTA scenario, the sum of Ghana's exports and imports as a percentage of GDP will reach 85.5% by 2043. This will be about 13.3 percentage points above the Current Path and 33.4 percentage points below the average of lower-middle-income African countries.

These figures suggest that Ghana stands to benefit from the full implementation of the AfCFTA, which will improve competitiveness, particularly in growing the country's manufacturing sector.

Large Infrastructure and Leapfrogging scenario

Chart 22: Electricity access: urban, rural and total in the Current Path, 2000-2043

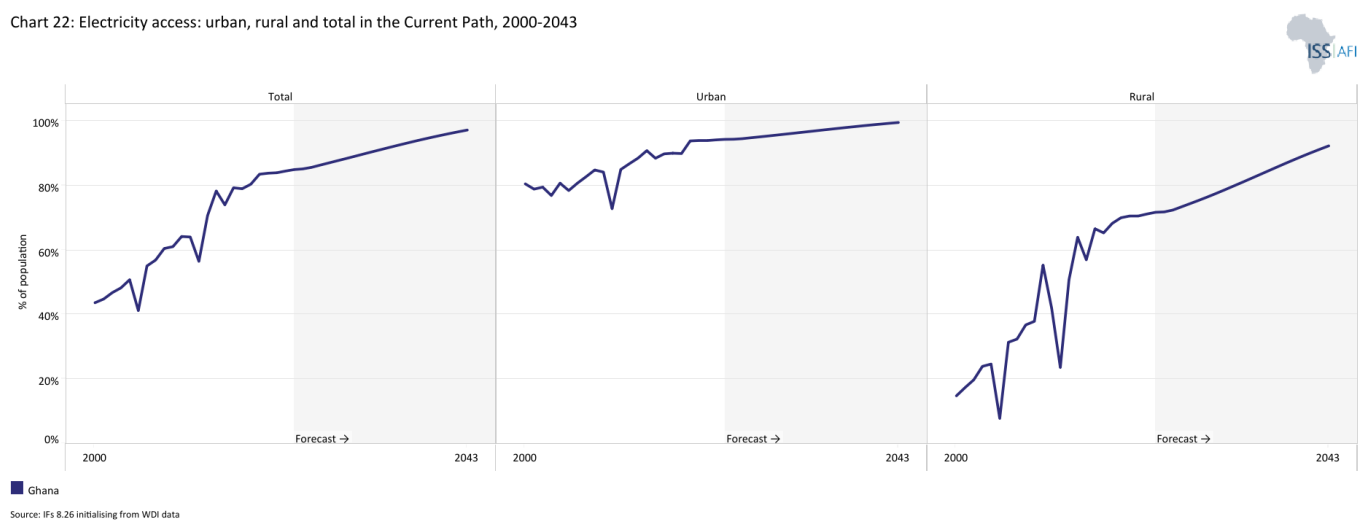


Chart 22 presents the Current Path of access to electricity for urban, rural and the total population from 2000 to 2043.

The Large Infrastructure and Leapfrogging scenario involves ambitious investments in road and renewable energy infrastructure, improved electricity access and accelerated broadband connectivity. It emphasises adopting modern technologies to enhance government efficiency and the rapid formalisation of the informal sector, incorporating significant investments in major infrastructure projects like rail, ports, and airports while highlighting the positive impacts of renewables and ICT.

Visit the themes on [Large Infrastructure](#) and [Leapfrogging](#) for our conceptualisation and details on the scenario structure and interventions.

Modern [infrastructure](#) can improve productivity, augment healthy lifestyles, boost educational outcomes and facilitate government effectiveness. This study focuses on both physical and digital infrastructure, including roads, electricity access and ICT. Physical infrastructure, such as roads and railways, is a critical driver of economic growth and an important component of development. It facilitates the movement of people, goods and services, promotes intra-country trade and serves as an enabler of social service provision such as education and health.

According to the [Africa Infrastructure Development Index \(AIDI\)](#) of 2022, Ghana (with a score of 31.8) ranked 12th in infrastructure development. AIDI consists of four composite indicators — transport, electricity, ICT and water supply and sanitation needs. Although Ghana has made significant strides in improving the quality and quantity of basic infrastructure, the country's infrastructure stock is limited and aged. Improved road transport will yield a range of economic benefits for Ghana. Recognising these potential benefits of expanded road transport, the government has made efforts with the goal of improving transport infrastructure and creating a more modern Ghana. As a result, several road [projects](#) have been constructed both in the national capital and other major cities such as Kumasi and Cape Coast. In August 2024, the government also launched the District Road Improvement Programme which aims to empower Metropolitan, Municipal, and District Assemblies (MMDAs) with tools and equipment for road construction and maintenance in the various districts. Despite these initiatives, Ghana still lags behind its peers when it comes to improved road infrastructure. By 2023, the total length of roads in Ghana has increased significantly from 38 145 km in 1990 to 72 646 km. Out of these, only 27% were paved—far below the average rate (41.7%) for lower-middle-income countries in

Africa meaning that the country has poorer road networks compared to its income peers on the continent. On the Current Path, by 2043, the total road network in Ghana will increase to 104 967 km. By this time, paved roads will rapidly expand to constitute 62.8% of all roads close to the 64.9% paved roads average for its income peers in Africa.

Regarding access to electricity, the country has made significant investment in electricity generation capacity over the years, Ghana's power supply sources include hydroelectricity and thermal plants. It **consists** of 1.584MW of installed hydro, 3.758MW of thermal power plants (mostly fuel by natural gas from Nigeria and sometimes light crude oil), and 112MW of solar generation. The major **source** of hydro production in Ghana is the Akosombo dam which was constructed in 1965 generate 1 020MW. Other hydro sources of power include the **Kpong Hydro** Plant established in 1982 which generates 160MW. The **Bui Dam** which was also constructed from 2007 and completed in 2013 also generates 400MW of hydro power for the country. Major thermal **sources** include the Karadeniz Powership Osman Khan (470MW), Aksa Enerji Oil Fired Power Plant (370MW) and Sunon Asogli Power Plant Phase II (360 MW), mostly owned and operated by independent power producers. Aside these, the **Volta River Authority** also operate the TAPCO (T1), TICO(2), Tema Thermal Plant 1&2, among others. The VRA also operate various solar plants such as Navrongo, Lawra and Kaleo solar plants.

As a result of these significant investments in electricity generation, Ghana has improved electricity access rate among its population. In 2023, 84.9% of Ghanaians had access to electricity — above the average of 67.7% for lower-middle-income countries in Africa. Indeed, Ghana **exports** power to Togo, Burkina Faso and Benin. Consistent with the trend in most African countries, in 2023, an overwhelming 94.3% of urban dwellers had access to electricity compared to 71.7% of rural dwellers. This depicts a locational disparity in favour of urban areas. Despite this disparity, it must be noted that Ghana has one of the highest electricity access rates among people mainly due to its investment by successive governments in rural electrification projects that expanded access to rural areas.

Despite this high access rate, supply is unstable and unreliable with the country going through different periods of load shedding also known as Dumsor. A notable one is the load shedding that **occurred** from 2014 to 2016 that had damaging impact on the economy. Solving this power came at a costly intervention to the nation as the government had to procure emergency power plants agreement. This contributed to the energy sector debt through the capacity charges agreement that enabled independent power producers to provide added capacity to address the power shortages during the electricity crises. According to the government, the country paid a total of **US\$937.5** million in capacity charges between 2017 and 2020. The power sector risk collapse with the government heavily **indebted** to the independent power producers. Already, the **Sunon Asogli** power has shut down its 560MW due to US\$259 debt owe by the electricity company of Ghana. Three more other **IPPs** have also threaten to shut down for similar debt concerns. The debt crisis is worsen by the inefficiencies of the power distribution company, the electricity company of Ghana (ECG) that consistently recording loses. For instance in 2022, the company recorded a total loss of about **GHC10.2** billion. Without effectively addressing the root cause of these perennial debt, Ghana's power sector stands at a risk of collapse.

On the Current Path, access to electricity will reach 97.2% of the population by 2043, which is above the average of 81.5% for Ghana's income-group peers. The disparity in electricity access in favour of urban residents will continue as all urban residents will have access to electricity by 2043. However, the gap will be closed gradually so that, by 2043, the rural electricity access rate will reach 92.3% far exceeding the average rate of 63.8% for lower-middle-income countries in Africa.

Aside from physical infrastructure, technological advancement is essential for economic growth. Technology improves productivity and reduces the transaction costs and bottlenecks associated with doing business. A dynamic **ICT sector** is vital for a country that wishes to benefit from the digital economy.

In 2023, the total number of fixed broadband subscriptions in the country was estimated at about 1.9 per 100 people—more than twice the average of 3.9 per 100 people in lower-middle-income Africa. In the Current Path, fixed broadband subscriptions will rise to 19.8 per 100 people by 2043, above the average of 22.0 subscriptions per 100 people for lower-middle-income African economies. In 2023, Ghana had a mobile broadband subscription rate of 118.9 per 100

people, higher than the average of 64.1 for lower-middle-income countries on the continent. On the Current Path, Ghana's progress in mobile broadband subscription will be slower compared to the average for its income peers. By 2043, mobile broadband subscriptions will rise to 154.2 per 100 people—slightly above the average of 148.2 per 100 people for its income-group peers.

Chart 23: Cookstove usage in the Current Path and Large Infra/Leapfrogging scenario, 2019-2043

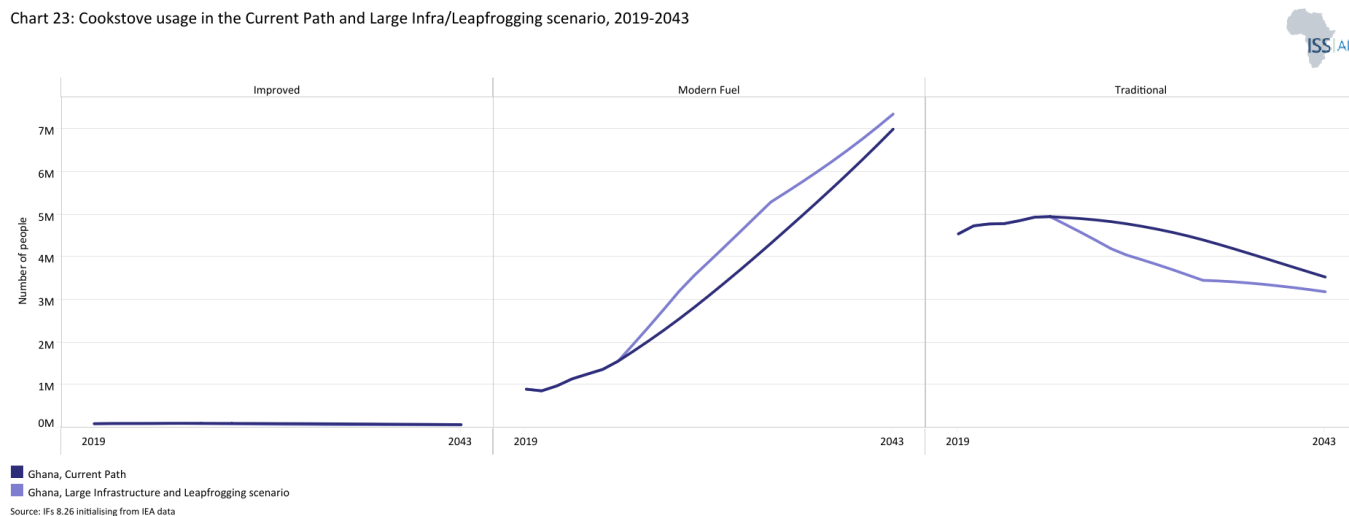


Chart 23 presents the number of people using cookstoves in the Current Path and in the Large Infrastructure and Leapfrogging scenario, from 2019 to 2043.

Our modelling distinguishes between three types of cookstoves: traditional, improved and modern.

In 2023, 78.2% of households in Ghana used traditional stoves such as firewood and charcoal for cooking, while 20.2% used modern stoves for cooking. Only a negligible 1.6% of the population used improved cookstoves. This is disproportionately low considering the current relatively high electricity access rate in the country. It means that the low usage of modern fuel for cooking in Ghana may be due to the unstable power supply or high cost. A similar trend is observed in most lower-middle-income countries in Africa with 48.5% of people using traditional cookstoves and 47.7% using modern fuel for cooking. The usage of traditional stoves for cooking contributes to pollution and carbon emissions and negatively impacts the health of these households. However, as access to electricity in urban and rural areas increases, more households will likely switch from traditional cookstoves to improved and modern fuel stoves, such as electric and gas cookers.

Based on the Large Infrastructure and Leapfrogging scenario, Ghana will attain a universal electricity access rate by 2035 meaning that all people in Ghana irrespective of their location have access to electricity. A major consequence of improved access to electricity is causing people switch from using traditional cooking such as firewood and charcoal to modern stoves. However, in the case of Ghana, this link is not automatic as there may be other barriers that prevent households from using modern fuel to cook. These barriers can include the cost of using modern fuel, unstable power supply and even the cost of buying modern fuel stoves.

As a result, 69.3% of households in Ghana are expected to use modern fuel for cooking in the Large Infrastructure and Leapfrogging scenario. This is above the average of the country's income peers at 67.6%, compared to 66.0% in the Current Path by 2043. This will lead to a slight reduction in the usage of traditional cookstoves such that, by 2043, only 30.1% of households will use traditional stoves compared to 33.3% in the Current Path. Clearly, the reduction in the usage of traditional cookstoves will reduce health-related diseases and carbon emissions arising.

Chart 24: Access to mobile and fixed broadband in the Current Path and Large Infra/Leapfrogging scenario, 2019-2043

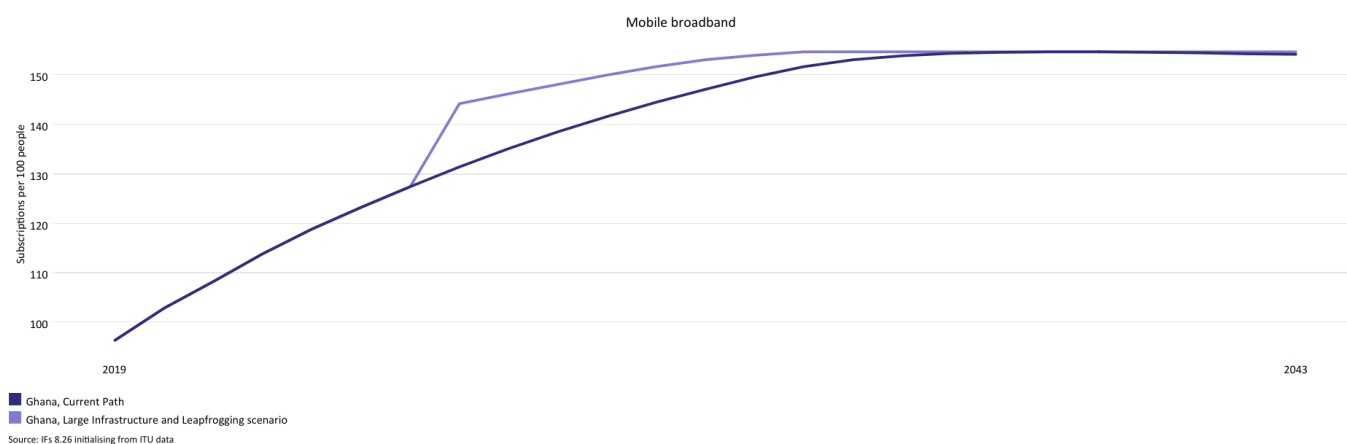


Chart 24 presents the percentage of the population and number of people with access to mobile and fixed broadband in the Current Path and in the Large Infrastructure and Leapfrogging scenario, from 2019 to 2043. The user can toggle between mobile and fixed broadband.

The Large Infrastructure and Leapfrogging scenario will lead to a larger increase in fixed broadband access, so that, by 2043, subscriptions will likely be at 30 per 100 people compared to 19.8 subscriptions on the Current Path. This will be higher than twice the Current Path average of 22.7 for lower-middle-income African countries. Owing to the high performance in improving access to mobile broadband in the country, in the Current Path, reaching 154.3 subscriptions by 2043, the Large Infrastructure and Leapfrogging scenario has only a marginal impact to reach 154.8 subscriptions in the same period.

Financial Flows scenario

Chart 25: FDI, foreign aid and remittances as % of GDP in the Current Path, 1990-2043

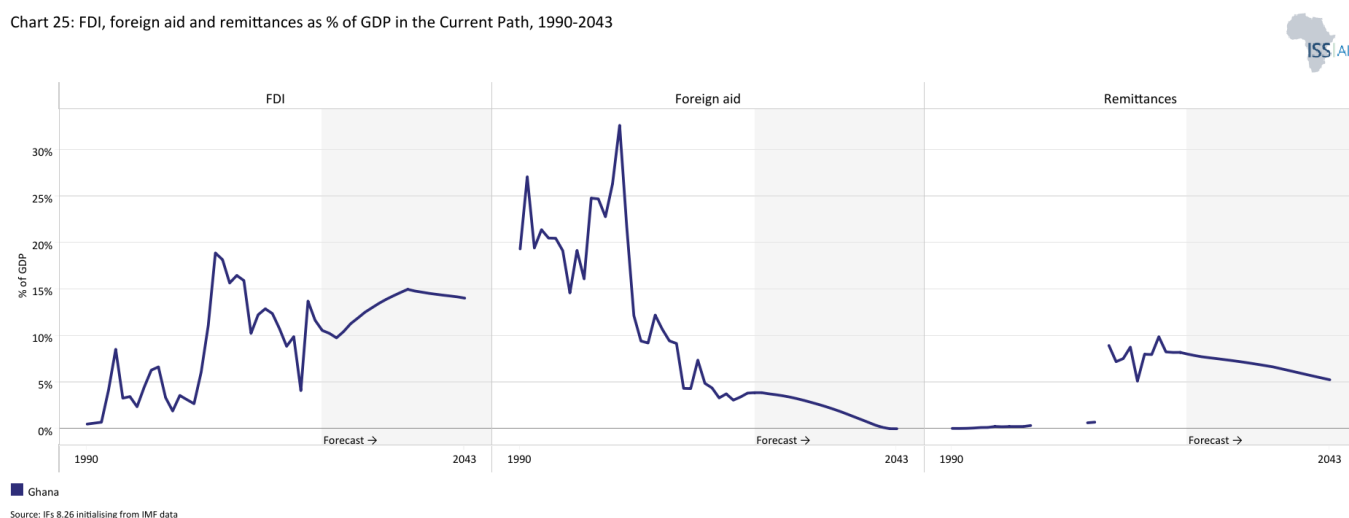


Chart 25 presents the trends in FDI, aid and remittances in the Current Path as a percentage of GDP, from 1990 to 2043.

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

Visit the theme on [Financial Flows](#) for our conceptualisation and details on the scenario structure and interventions.

Ghana has implemented several policies to attract Foreign Direct Investment (FDI). The GIPC Act of 2013 provides a regulatory framework for foreign investments, ensuring transparency and investor protection, particularly in sectors like mining, oil and gas, agriculture and manufacturing. Additionally, the government [offers](#) various incentives such as tax holidays, reduced corporate tax rates, and import duty and VAT exemptions. Furthermore, significant [investments](#) in transportation, energy, and telecommunications aim to improve the business environment. The Ghana Free Zones Authority (GFZA) [oversees](#) the establishment and operation of free zones, offering special incentives and regulations to attract foreign investment and export-oriented industries. Combined with a stable political environment, abundant natural resources and a strategic location, these policies have created a favourable investment climate in Ghana.

However, there are still challenges in attracting FDI. Economic [uncertainties](#), such as exchange rate volatility and high inflation, deter potential investors. [Poor infrastructure](#), particularly in transportation and utilities, hampers investment opportunities and increases operational costs. Furthermore, high minimum capital requirements and bureaucratic hurdles complicate the investment process, making Ghana less attractive to foreign investors. Weak [governance](#) and corruption further undermine investor confidence, as investors prefer stable legal environments for their investments.

FDI inflows to Ghana, like most countries in Africa, are historically low. In 1990, the total FDI inflow to Ghana was equivalent to a paltry 0.3% of GDP, below the average of 0.7% of GDP for lower-middle-income countries in Africa. By 2023, FDI inflows to Ghana have grown to 5.3% of GDP above the average of 2.8% of GDP for lower-middle-income African countries. Ghana's FDI is predominantly [directed](#) into several major industries, including manufacturing, building and construction, tourism, services, general trading and export trading, and agriculture, which are critical for job creation and economic growth. However, the promising [sectors](#) are the downstream oil, gas and minerals processing; construction and

real estate; mining-related services subsectors; agribusiness and food processing; ICT and business-related services; textiles and apparel. On the Current Path, FDI inflows will rise steadily to 6.1%—above the Current Path average of 3.4% for its income peers on the continent by 2043.

Typical of a developing economy, foreign aid to Ghana has significantly declined since 1990. In 1990, the total aid received by Ghana constituted 9.7% of GDP, compared to 7.6% received by other lower-middle-income African countries in the same period. Most aid was received in the early 2000s as the country joined the Highly Indebted Poor Countries (HIPC) and received debt forgiveness. For instance, between 2000 to 2005, aid as a percentage of GDP averaged around 13%. Since then, aid as a major source of revenue for the country has declined significantly. By 2023, total aid as a percentage of GDP constituted a paltry 1.9%, equivalent to US\$1.5 billion. This was close to the average of 1.8% for other lower-middle-income countries in Africa. The low aid-to-GDP ratio is not only a reflection of declining aid but also the growth of the Ghanaian economy. Most aid to the country goes into the health, education and agriculture sectors, with an emphasis on the poorest and most vulnerable populations. Aid and donor support are also used to strengthen institutions, implement anti-corruption campaigns, enhance tax policies, and boost social services.

As part of the effort to reduce the reliance on aid, the President in 2018 announced the Ghana Beyond Aid vision. In his speech on Ghana's 61st Independence Day celebration, the President stated *"It is time to pursue a path to prosperity and self-respect for our nation. A Ghana Beyond Aid is a prosperous and self-confident Ghana that is in charge of her economic destiny; a transformed Ghana that is prosperous enough to be beyond needing aid, and that engages competitively with the rest of the world through trade and investment."* However, this vision has yet to materialise, especially after the 2022 economic crisis where Ghana had to seek debt relief from multilateral and bilateral creditors. For instance, in June 2024, the country received US\$2.8 billion in debt relief from bilateral creditors as part of the IMF programme and effort to achieve fiscal consolidation. On the Current Path, foreign aid will decline further to a negligible level by 2043.

Remittances are increasingly becoming an important source of financial flows globally, especially to African countries. Just like many African countries, many Ghanaians have migrated abroad mainly for education and in search of greener pastures. The remittances from these immigrants have become a vital source of inflow to their families. At the macro level, remittances often provide a buffer against economic shocks and contribute to national financial stability. In 1990, Ghana received US\$3 billion in remittances, constituting 0.02% of GDP, below the average of 1.2% for lower-middle-income African countries. Since then, remittances to Ghana have grown rapidly. Currently, Ghana is the second-largest recipient of remittances in sub-Saharan Africa with remittance inflows largely surpassing official development assistance. By 2023, total remittances constituted 4.0% of GDP equivalent to US\$3.1 billion. At this rate, remittances to Ghana were slightly higher than the average rates for its income peers in Africa. Remittances to Ghana are primarily received by families and relatives of migrants, with significant contributions from those in the US, the UK, and neighbouring African countries like Nigeria and Côte d'Ivoire. These funds are crucial for covering essential expenses such as education, healthcare, rent and general household upkeep. However, the high cost of sending money to Ghana, as is the case for many African countries, discourages immigrants from sending money back home. On the Current Path, remittances to Ghana will increase to US\$5.8 billion (2.4% of GDP), at par with the other lower-middle-income countries.

Chart 26: Government revenue in the Current Path and Financial Flows scenario, 2019-2043

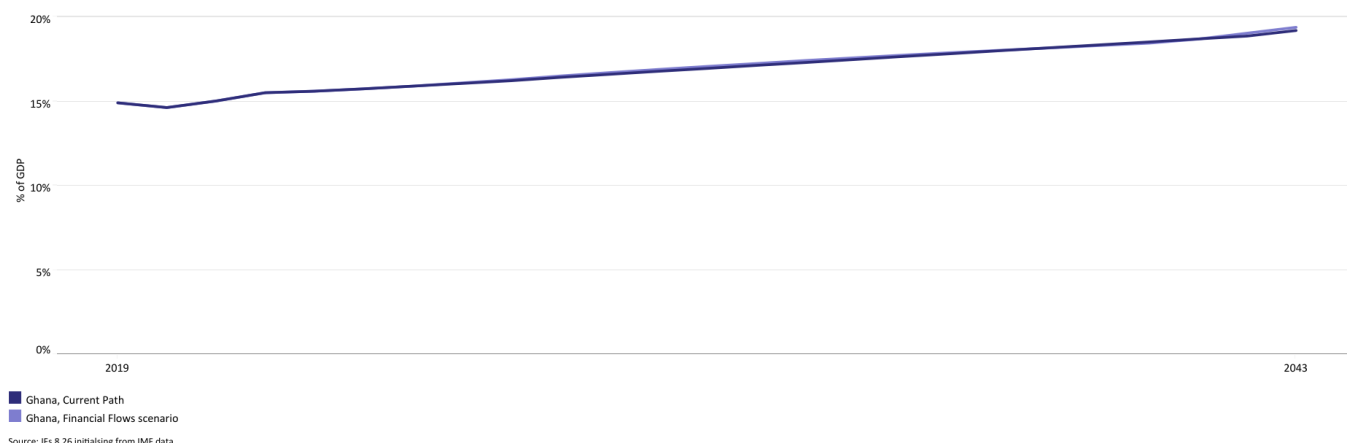


Chart 26 presents government revenue in the Current Path and the Financial Flows scenario, from 2019 to 2043. The data is in US\$ 2017 and % of GDP.

Wagner's law, or the law of increasing state activity, is the observation that public expenditure increases as national income rises. It is reasonable to expect that government revenues will increase as a per cent of GDP in the Financial Flows scenario compared to the Current Path forecast.

Higher external inflows in the form of FDI, aid and remittances have increased government revenue. For instance, increased FDI means higher GDP growth, which in turn increases revenues accrued to the government through corporate and income taxes, royalties and indirectly through value-added tax. In 2023, the government's total revenue in Ghana amounted to US\$11.9 billion, equivalent to 15.6% of GDP—slightly below the average of its income-group peers in Africa. Similarly, Ghana's revenue without aid, estimated at 13.7% of GDP, is lower than the average of 14.8% for lower-middle-income countries in Africa. This relatively lower government revenue without aid reflects the strong state capacity in Ghana to mobilise revenue for development compared to its income peers in Africa.

In the Financial Flows scenario, government revenue will rise to US\$48.6 billion in 2043, representing 19.4% of GDP almost at par with the average for lower-middle-income countries in Africa in the same year. Compared to the Current Path, the Financial Flows scenario will improve government revenue in Ghana by almost an additional US\$3.4 billion by 2043.

Governance scenario

Chart 27: Government Effectiveness score in the Current Path, 2002-2043

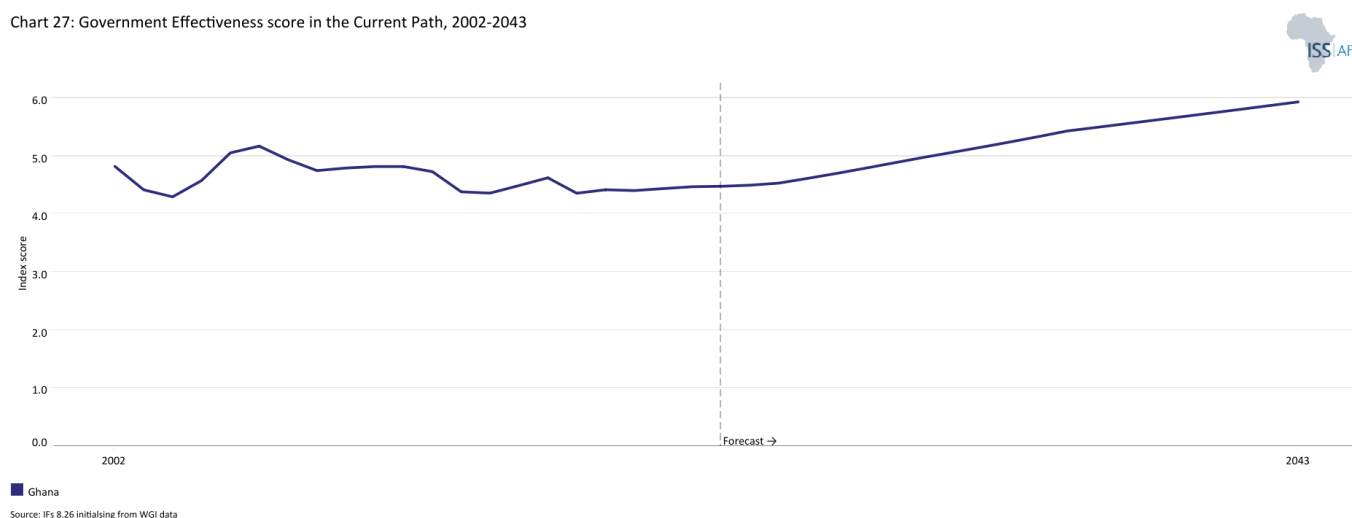


Chart 27 presents the Current Path of government effectiveness comparing the country to the average for the Africa income group, from 2002 to 2043.

Generally, Ghana performs better on governance indices than most African countries. The composite 'governance triangle' in our modelling measures a state's progress using the average of these three indices. To this end, it includes an index (0 to 1) for each dimension, with higher scores indicating improved outcomes. Ghana's score on the composite governance index of 0.58 in 2023 was 16.2% higher than the average for its income peers in Africa. A further disaggregation into the three dimensions of the triangle (i.e. security, capacity and inclusion) shows that the country performs better across all these three indexes compared to its income peers.

Its score of 0.78 for 2023 was 9.9% higher than the average of 0.71 for lower-middle-income countries on the continent. Ghana has long been considered an oasis of peace in West Africa. Unlike many countries in the region, it has not experienced civil war, direct terrorist attacks, or major political crises that could destabilise its peace and security. The country has successfully organised seven relatively peaceful elections since its transition to democracy under the 4th republic in 1992. However, there are growing security challenges, particularly along its northern border. Ghana's northern border with Burkina Faso is porous, allowing for the movement of guns and contraband. Given that terrorists **control** nearly half of Burkina Faso, this movement poses a security risk to the country and raises concerns about possible spillover consequences. Additionally, communities in northern Ghana, such as the Mamprusi and Kusasi ethnic groups in Bawku, have been **facing** long-term tensions and armed conflict. These conflicts, which are typically motivated by ethnic, chieftaincy and political rivalry, further create conditions that extremist groups can exploit. Also, northern Ghana **suffers** from socioeconomic issues, including limited resources and employment prospects to the south, making young people from border towns even more vulnerable to extremist recruiting. The worsened security situation in the **Sahel region** since the departure of French troops further increases the risk of violence spreading to Ghana.

As part of an effort to prevent insecurity, Ghana has implemented several **measures** to address these challenges, including launching the "See Something, Say Something" campaign to encourage residents to report suspicious activity. The government has **boosted** security forces in the north to deter violence from beyond its borders by deploying three new brigades and two battalions to the region. Despite these efforts, analysts **warn** that focusing solely on external threats may overlook internal drivers of conflict that make communities vulnerable to extremist influence. On the Current Path, Ghana's score on the governance security index will reach 0.83, higher than the average for lower-middle-income African countries, by 2043.

Regarding governance capacity, Ghana's score in 2023 of 0.36 was 16.1% higher than the average of lower-middle-income Africa. Despite this relatively higher performance, its score on the governance capacity index is hindered by the widespread corruption in the country. Corruption in Ghana has become an endemic canker that is destroying the country and jeopardising its future. Ghana currently ranks 70th on the [2023 Corruption Perception Index](#), tied at a score of 43 together with Benin, Oman, Senegal, Solomon Island, Hungary, Kuwait, Senegal and the Timor-Leste. Indeed since 2012, the country has not been able to cross a score of 50 on the Index, indicating how poorly it has been performing. Ghana's scores over the recent years also depict the deteriorating situation of corruption in Ghana, consistently declining from a score of 48 in 2014.

The Ghana Integrity Initiative has [estimated](#) that the country loses as much as US\$3 billion to corruption every year; this estimate was confirmed by the 2021 Ghana Integrity of Public Services Survey (GIPSS) [report](#), which indicated that about GHS5 billion was paid as bribes to public officials in 2021 alone. The Auditor General also reports similar findings. Indeed, the 2022 [Afrobarometer Survey](#) indicates that about 77% of Ghanaians believe corruption in the country has increased, compared to only 33.2% who believed the same in 2017. This perception was worsened by the President's forced removal of the then auditor general Mr. Yao Domelovo from office who many Ghanaians believed was fighting corruption.

The government in 2018 established the office of the special prosecutor to address systematic corruption. However, this effort has not been successful. The first special prosecutor appointed by the President [resigned](#) citing political interference from the President. His successor has also [complained](#) of inadequate funding, logistics and resources and expressed his frustration about fighting corruption. On the Current Path, Ghana's progress on the governance capacity index will continue to be better than the average for its income-group peers such that by 2043, its score of 0.44 will be 10.7% more than the average for lower-middle-income countries in Africa.

Another factor affecting the low performance on the governance capacity index is the low government effectiveness. 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'. Ghana's score of 2.2 in 2023 was however about 21% higher than the income group average. On the Current Path, this trend will continue so that, by 2043, Ghana's score on government effectiveness will be 18.3% higher than the group average for lower-middle-income countries in Africa.

Just like security and capacity, Ghana's performance on the Governance Inclusion Index is higher than its income-group peers in Africa. In 2023, Ghana scored 0.61 on the inclusion index, which was about 27.1% higher than its income-group peers rated at 0.48. Ghana is often touted as a beacon of democracy and a torchbearer in multiparty politics on the continent. Its post-independence history was marked by oscillation between military and democratic governance leading to the truncation of the First, Second, and Third Republics. Since the inception of the 4th Republic and her return to constitutional rule in 1992, the country has successfully organised eight successive presidential and parliamentary elections that have led to peaceful alternation of power between the two major parties - the National Democratic Congress (NDC) and the New Patriotic Party (NPP). The [EIU 2023 democracy](#) report categorises Ghana as a flawed democracy that ranked 6th in sub-Saharan Africa and 65th best in the world. Likewise, the [V-Diem 2024- Liberal Democracy Index](#) (LDI) also ranked Ghana as the 5th best in Africa and 55th best in the world.

However, this democratic gain is not yielding the expected democratic dividends. The effect is that many Ghanaians have become disenchanted with the democratic processes. According to the [2024 Afrobarometer African Insight report](#), public satisfaction with the functioning of democracy in Ghana has declined to 51%, a sharp decrease from 74% in 2012. Alarmingly, there has been a rise in the acceptance of military intervention, with support for military rule increasing from 14% in 2012 to 32% in 2024. This poses great danger to Ghana's democratic stability. The country is scheduled for another parliamentary and presidential election on 7 December 2024. While the integrity of the electoral process remains high,

emerging threats such as monetisation, political vigilante violence and misinformation can affect the quality of the elections. The mistrust between the electoral commission and the main opposition party can also undermine the credibility of the elections. As such all these concerns need to be addressed to ensure peaceful elections with credible outcomes in December.

In terms of gender equality and empowerment, the country has seen little progress despite being a signatory to several global, continental and national frameworks of gender equality. So far, Ghana has had one woman as a former Speaker of Parliament, three women Chief Justices, two women Electoral Commission Chairpersons and for the first time one of the two major political parties (the NDC) also appointed a female running mate for the December 2020 general elections. However, there is still much that needs to be done to achieve gender parity in representation as the country is still lagging behind. Since the Fourth Republic, representation of women in Parliament has consistently been less than 15%, significantly below the global benchmark of 30% representation in National Assemblies or Parliaments. Also, the proportion of women appointed as ministers and District Chief Executives has consistently been less than 20% each since independence. In addressing this low representation and empowerment of women, Ghana enacted the Affirmative Action Gender Equity Bill 2024 in July 2024. The Bill, which originated from a roundtable discussion in 2011, has seen successive governments give only nominal attention to its advancement. The primary objective of the Bill is to ensure gender parity in representation and participation across governance, public positions of power, and all state decision-making processes.

On the Current Path, Ghana will still perform better so that by 2043 the country's score on the Governance Inclusion Index of 0.36 will still be 22.6% above the average of lower-middle-income countries in Africa.

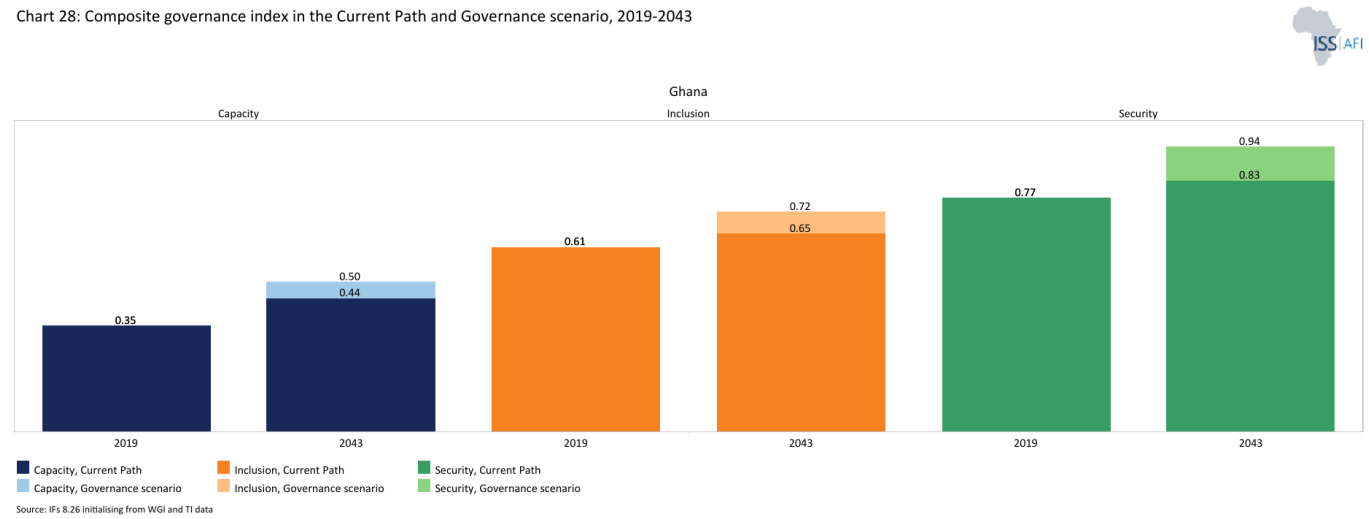


Chart 28 presents the composite governance index for the Current Path versus the Governance scenario, from 2019 to 2043.

This scenario assumes better governance: stability, capacity, and inclusion. It measures a state's progress using the average of these three indices. To this end, it includes an index (0 to 1) for each dimension, with higher scores indicating improved outcomes.

Visit the theme on Governance for a full conceptualisation and details on the scenario structure and interventions.

In the Governance scenario, Ghana's score on the composite governance index will improve to 0.72, which is about 12.5% above the Current Path by 2043 and about 30.9% above the Current Path average of lower-middle-income Africa in the same year. Ghana's score on the governance security index will improve to 0.94 in the scenario, which is 13.2% above the

Current Path by 2043 and about 25.3% above the Current Path average of lower-middle-income African countries in the same year. Governance capacity will also improve in the Governance scenario, with its score increasing to 0.5 by 2043, constituting a 13.6% improvement above the Current Path and 31.63% above the average of its income-group peers on the continent. Regarding inclusion, the Governance scenario will improve Ghana's score on the Governance Inclusion Index by 10.6% above the Current Path, reaching 0.72 by 2043. In the scenario, Ghana's score is 35.9% higher than the average of lower-middle-income countries in Africa in 2043.

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 (2024) Ghana. Published online at futures.issafrica.org. Retrieved from <https://futures.issafrica.org/geographic/countries/ghana/> [Online Resource] Updated 06 December 2024.

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.

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.