



Mali

Mali: Scenario Comparisons

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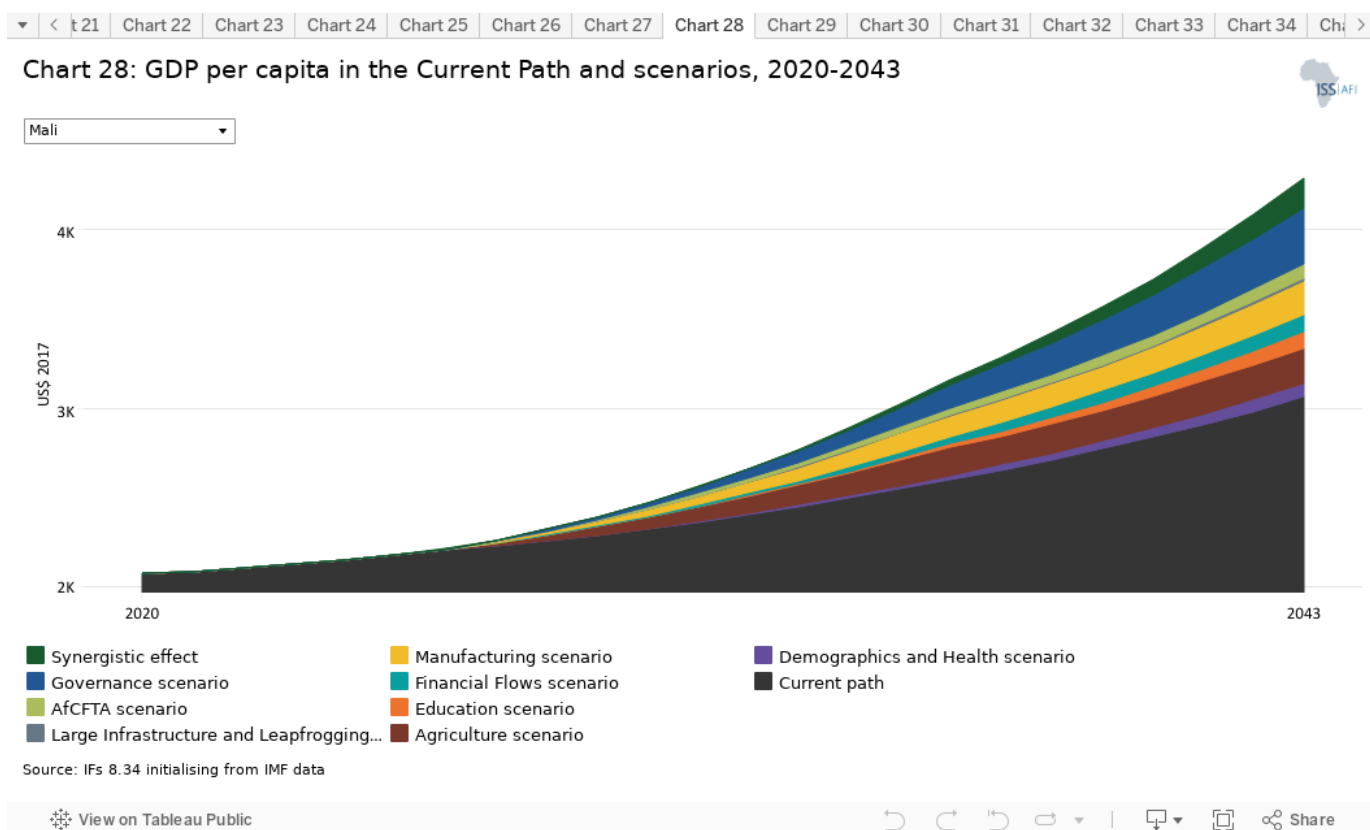


Chart 28 presents GDP per capita in purchasing power parity (PPP) in the Current Path and each of the eight sectoral scenarios, plus the synergistic effect and the Combined scenario. The data is from 2020 with a forecast to 2043.

The scenarios with the greatest impact on GDP per capita in Mali by 2030 will be the Agriculture scenario, followed by the Manufacturing and Governance scenarios. In the long run, however, governance becomes the most powerful tool to improve average incomes followed by the Agriculture and Manufacturing scenarios. Thus, it is quite clear that both in the medium and long term, Mali has to prioritise improved governance, investment in agriculture and a manufacturing transition to quickly increase average incomes and improve the standard of living.

In the Governance scenario, the GDP per capita for Mali will rise to US\$2 345 in 2030 slightly above the Current Path. By 2043, GDP per capita in the Governance scenario will rise further to US\$3 371, representing a 10.2% increase over the Current Path for that year. It means that the Governance scenario can raise GDP per capita in Mali by an additional US\$312 by 2043. Good governance and political stability can undoubtedly inspire investor confidence in the economy and attract more FDI into Mali, which can lead to growth. Likewise, good governance in the form of adherence to the rule of law, reduced corruption and improved transparency and accountability can lead to more rapid economic growth. Therefore, it suggests that if authorities in Mali can reduce the levels of insecurity in the country and promote good governance, the country will be set on a path of sustained economic growth.

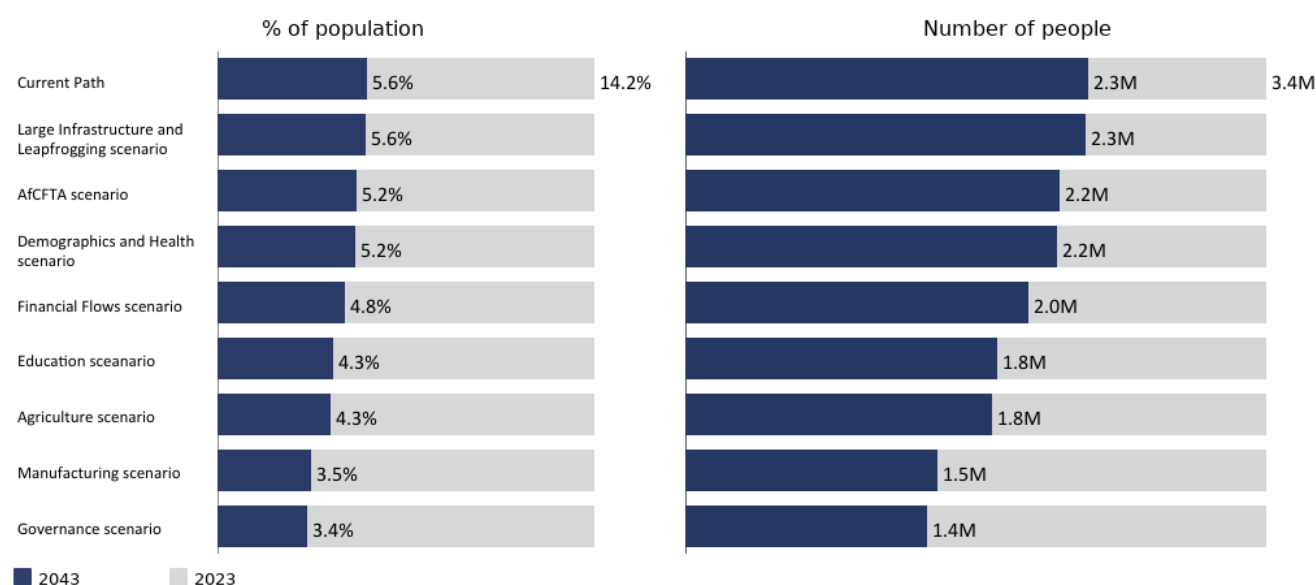
In the Agricultural scenario, Mali's GDP per capita (PPP) will increase to US\$3 252 by 2043, which represents an increase of US\$196 (or 6.3%) compared to the projections on the Current Path in the same year. The impact of the Agriculture scenario demonstrates the importance of the agricultural sector to economic growth in Mali. The sector is crucial to the economy, serving as a primary source of income and employment for many Malians, especially for rural populations. Its forward linkage with the manufacturing sector means that it also drives economic growth by supplying industries with raw

materials, generating income, fostering trade, and creating jobs in related industries such as food processing, transportation and retail. Consequently, it is no surprise that in Mali, there is a strong correlation between agricultural yields and economic performance, with the sector making a significant contribution to the country's GDP.

In the Manufacturing scenario, Mali's GDP per capita will increase to US\$3 249 by 2043, representing an increase of US\$190 or 6.2% more than the Current Path. According to economist Nicolas Kaldor's "engine of growth" hypothesis, manufacturing is the driving force behind economic growth. It has historically been the largest source of employment due to its backward and forward linkages with other sectors, and it plays a key role in transforming productivity structures across the economy. Therefore, it is no surprise that a strong manufacturing sector leads to significant improvements in GDP per capita. A thriving manufacturing sector is essential for achieving sustained economic growth and greatly enhancing the standard of living for the population in Mali.

Chart 29 | Chart 23 | Chart 24 | Chart 25 | Chart 26 | Chart 27 | Chart 28 | Chart 29 | Chart 30 | Chart 31 | Chart 32 | Chart 33 | Chart 34 | Chart 35 | Chi >

Chart 29: Poverty in the Current Path and scenarios, 2023-2043



Source: IFS 8.34 initialising from UNPD population prospects estimate, WDI and PovcalNet data

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Navigation icons: back, forward, search, share

Chart 29 presents poverty in the Current Path and for each scenario, from 2020 to 2043. The user can select the number of extremely poor people or the percentage of the population.

In the medium term (by 2030), the Agriculture scenario followed by the Governance and the Financial Flows scenarios has the greatest impact on poverty reduction. By 2043, the Governance, Manufacturing, Agriculture and Education scenarios are most effective at poverty reduction. This suggests that while financial flows particularly aid may be impactful in reducing poverty in the medium term, in the long run, it is not sustainable mainly because the contribution of aid declines as the economy grows in spite of volume increase.

Because it includes additional social grants, the Governance scenario has the largest impact on poverty reduction in Mali. In this scenario, 1.4 million people will live below the extreme poverty line of US\$2.15 by 2043, constituting 3.4% of the population. This will be 2.2 percentage points lower than the Current Path and equivalent to a reduction of about 940 000

people living in extreme poverty. Certainly, better governance ensures that public resources are utilised in an efficient manner to address the needs of the people instead of being diverted into individual pockets, which will impact poverty reduction significantly.

The Manufacturing scenario has the second-largest potential to reduce extreme poverty in Mali. In this scenario, the number of poor people will decline to 1.5 million (equivalent to 3.5% of the population), compared to the Current Path of 2.3 million people (5.6%) by 2043. It means that an aggressive industrialisation that leads to job creation and incomes has the potential to reduce extreme poverty in Mali by an additional 880 000 people.

The Agriculture scenario has the third-largest potential to reduce extreme poverty in Mali. In the Agriculture scenario, the number of poor people will decline to 1.7 million (equivalent to 4.3% of the population), compared to the Current Path of 2.3 million people (5.6%) by 2043. It means that an agricultural revolution in Mali has the potential to reduce extreme poverty by an additional 570 thousand people. This is expected given that nearly 80% of the Malian population depends on the agricultural sector for their livelihoods. It therefore underscores the importance of prioritising an agricultural revolution in Mali as a means of combating extreme poverty.

The Education scenario has the fourth-largest impact on poverty reduction in Mali. In this scenario, 1.8 million people (constituting 4.4% of the population) will live in extreme poverty by 2043. This will be 1.2 percentage points lower than the Current Path, and equivalent to a reduction of about half a million people living in extreme poverty. Education is an important tool to reduce extreme poverty. Increasing access and quality of education equips people with the requisite skills to either start a business or acquire a job which increases their income and ultimately improves their living standards. A recent report by UNESCO confirms that if students in low-income countries have at least basic reading skills, 171 million people can escape extreme poverty globally.

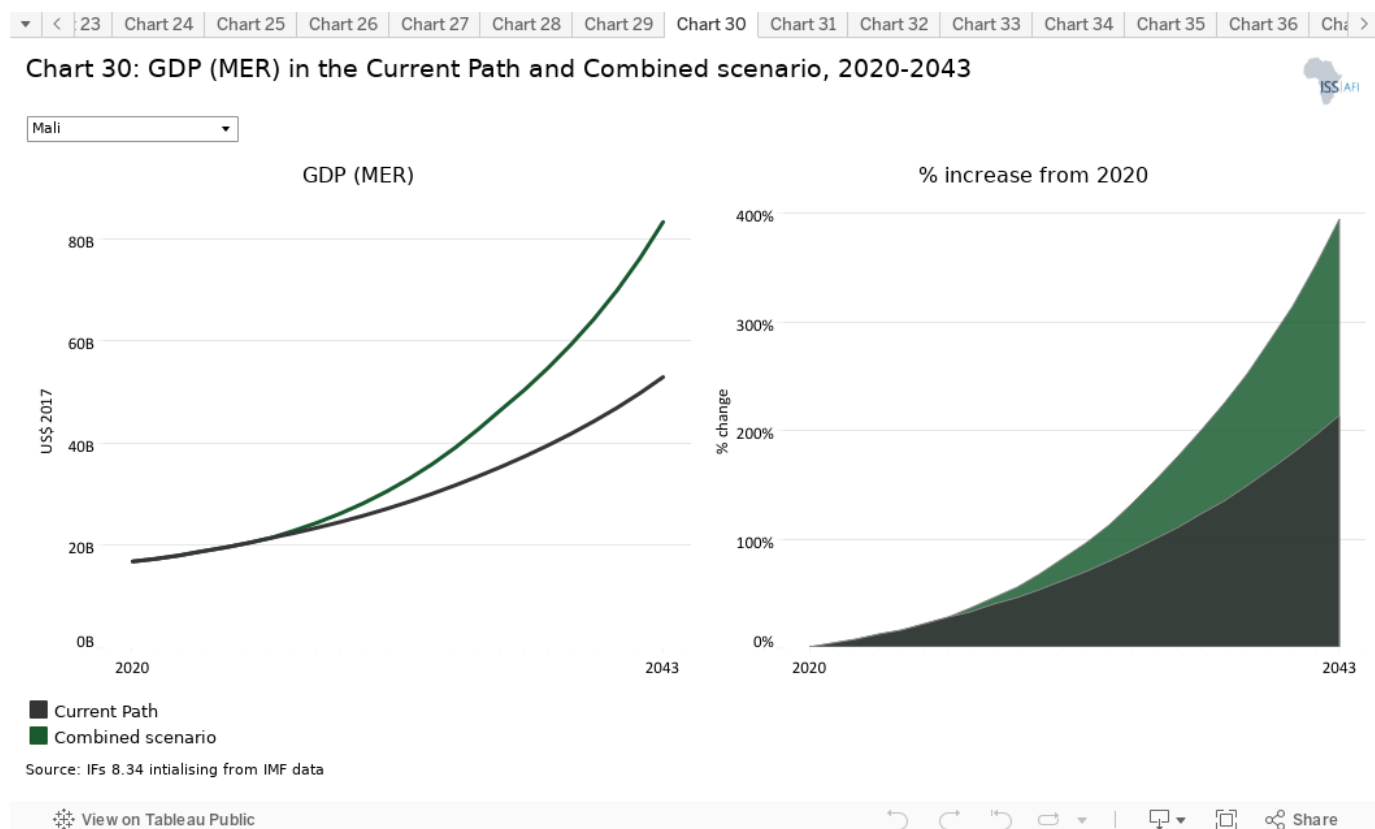


Chart 30 presents GDP in the Current Path and in the Combined scenario, from 2020 to 2043. The data is in US\$ 2017 and at market exchange rates (MER).

The Combined scenario combines all eight sectoral scenarios: Governance, Demographics and Health, Education, Large Infrastructure and Leapfrogging, Agriculture, Manufacturing, AfCFTA and Financial Flows.

Mali's GDP will rise to US\$28.3 billion in the Combined scenario, representing an increase of 9.5% (valued at US\$2.4 billion) over the Current Path in 2030. By 2043, the GDP of Mali will reach US\$83.3 in the Combined Scenario. This will exceed the Current Path of US\$53.0 billion, meaning that the Combined scenario will increase the size of the economy by an additional US\$30.4 billion by 2043—an increase of 57.3% compared to the Current Path. Indeed, in the Combined scenario, the economy is expected to grow at an average of 8.4% compared to the 5.5% economic growth projected in the Current Path. The massive economic growth projected in the Combined scenario indicates that an integrated development push across development sectors is the best way to achieve sustained inclusive growth and development in Mali.

Similarly, in the Combined scenario, the GDP per capita for Mali will increase to US\$2 468 (US\$167 larger than the Current Path) in 2030 and US\$4 284 by 2043. This will be US\$1 225 higher than the projection of US\$3 059 on the Current Path, meaning that the materialisation of the Combined scenario could significantly improve the living standard of the Malian population. The projected GDP per capita in this scenario will be US\$1 225 (or 40%) more than the Current Path average for low-income countries in Africa by 2043. The results reflect the importance of a multisectoral program of interventions to rapidly improve average incomes in Mali.

Chart 24 | Chart 25 | Chart 26 | Chart 27 | Chart 28 | Chart 29 | Chart 30 | **Chart 31** | Chart 32 | Chart 33 | Chart 34 | Chart 35 | Chart 36 | Chart 2 (2)

Chart 31: Value added by sector in the Current Path and Combined scenario, 2023-2043

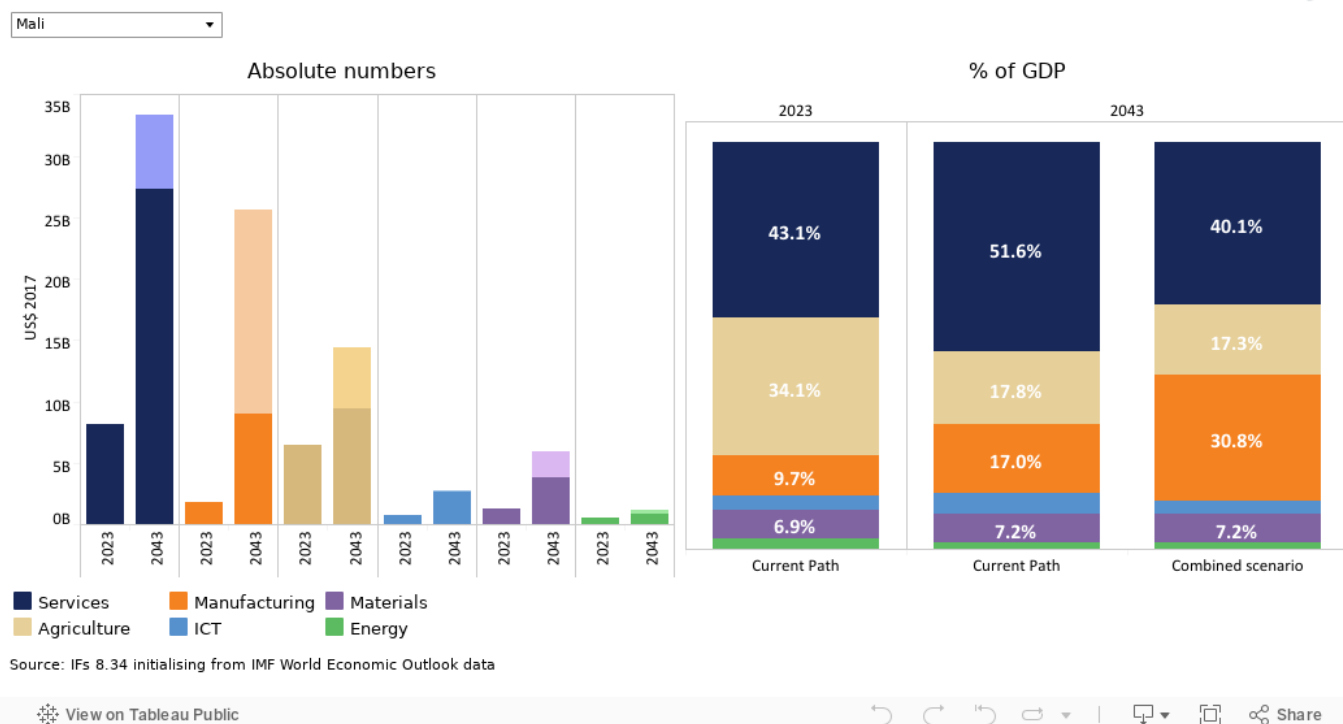


Chart 31 presents the value added by sector in the Current Path and in the Combined scenario, from 2020 to 2043. The data is in US\$ 2017 and as a percentage of GDP.

Our modelling provides forecasts in six economic sectors namely agriculture, energy, materials (including mining), manufactures, services and ICTech.

The structure of the Malian economy will undergo significant transformation in the Combined scenario. The size of each sector increases in the Combined scenario (as expressed in US\$ terms) given the huge increase in the size of Mali's

economy, but their relative contribution to GDP changes. In summary it appears that Mali has the capacity to grow its manufacturing sector in the long term without trading it off with the agriculture.

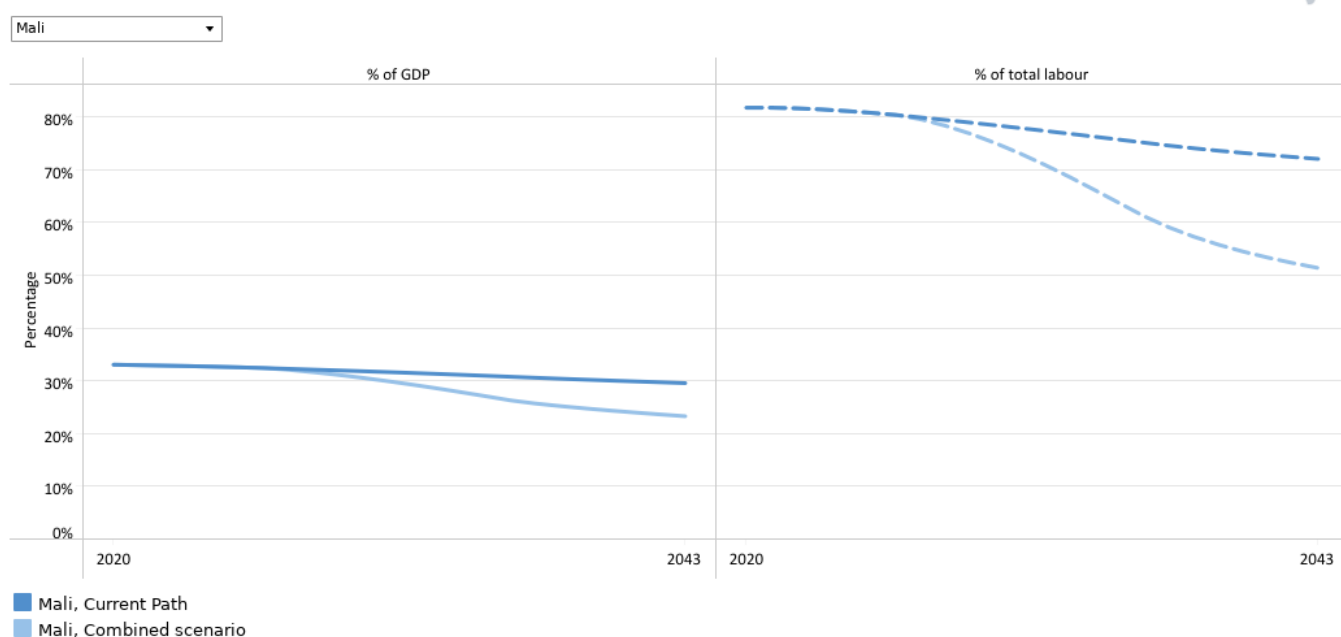
In 2030, the agriculture sector will record the largest improvement in the scenario valued at US\$1.3 billion over the Current Path. This will be followed by the services and the manufacturing sectors with an improvement of US\$931 million and US\$163.6 million, respectively, over the Current Path in 2030. The materials, ICT and energy sectors will record modest gains of US\$94.8 million, US\$84.5 million and US\$25.5 million. respectively. above the Current Path in 2030.

By 2043, the service sector will still be the largest contributor to GDP at 40.1% (valued at US\$33.4 billion), although this will be lower than the Current Path of 51.6% (valued at US\$27.3 billion). The manufacturing sector will be the second-largest contributor to GDP in the scenario by 2043 with a share of 30.8% (equivalent to US\$25.7 billion)—higher than the Current Path of 17.0% (US\$9.0 billion). It means that the manufacturing sector stands to benefit and grow more than other sectors in the Combined scenario. The share of the agriculture sector will decline to 17.2% (valued at US\$14.4) in the Combined scenario compared to 17.8% (valued at US\$9.4) in the Current Path in 2043. Although it declines in its contribution, it will therefore be larger in absolute terms.

In the Combined scenario, the share of ICT and materials will decline below the Current Path to constitute 3.2% and 7.2%, respectively, although although both will be larger in absolute terms. The share of the energy sector will rise above the Current Path to 1.5%.

Chart 26 Chart 27 Chart 28 Chart 29 Chart 30 Chart 31 Chart 32 Chart 33 Chart 34 Chart 35 Chart 36 Chart 2 (2) Chart 4 (2)

Chart 32: Informal sector in the Current Path and Combined scenario, 2020-2043



Source: IFs 8.34 initialising from Elgin and Oztunali (2008), and Schneider and Enste (2012) data

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Chart 32 presents the size of the informal sector as a percentage of the total economy in the Current Path and in the Combined scenario, from 2020 to 2043.

In the medium term, the Combined scenario will lead to a modest reduction in the informal economy estimated at 30.6% of GDP in 2030 instead of the 31.8% in the Current Path. Similarly, the size of the informal labour force in Mali will decline to 75.1% in the Combined scenario instead of 78.4% in the scenario. However, in the long term, the Combined scenario will

result in a significant reduction in the size of the informal size in Mali.

By 2043, the size of the informal sector in Mali will decline to 23.3% of GDP although its absolute value will rise to US\$19.4 billion. At this rate, the contribution of the informal economy will be lower than the 29.6% (valued at US\$15.7 billion) on the Current Path and below the average for low-income countries in Africa at 27.0%. Likewise, by 2043, there will be about 1.2 million fewer labour in the informal sector as compared to the Current Path. This will correspond to informal labour constituting 51.4% of total labour in the Combined scenario instead of 72.1% in the Current Path, reflecting the anticipated improvement in state capacity through more tax revenue. If Malian authorities manage to steadily formalise ever-larger portions of the large informal sector through digitisation, for example, it could lead to increased productivity, higher GDP and more government revenue.

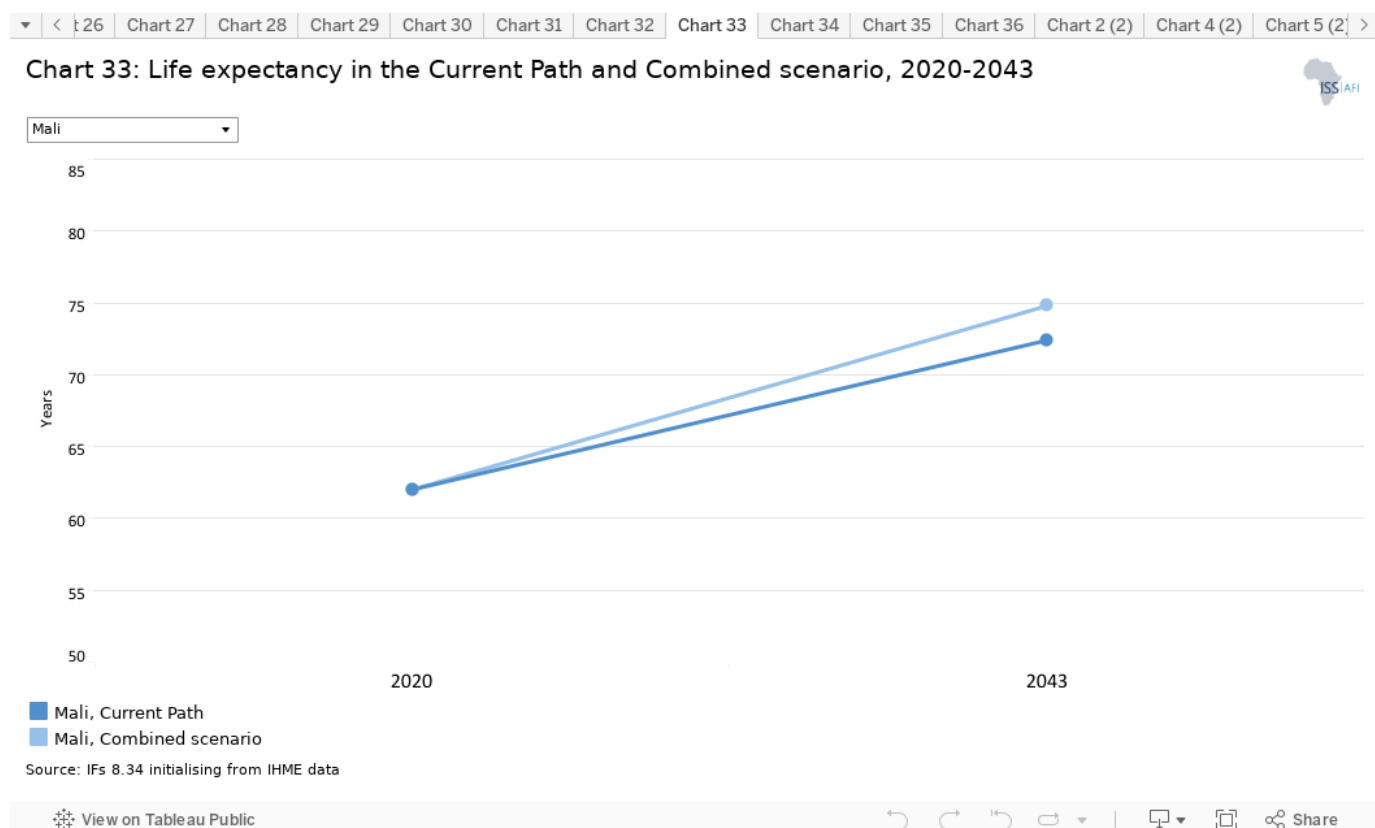


Chart 33 compares life expectancy in the Current Path with the Combined scenario from 2020 to 2043.

Life expectancy measures the average lifespan of individuals in a country. In 2023, the average life expectancy at birth in Mali was 63.7 years, which was about 2.6 years lower than the average for the country's income-group peers in Africa. Women in Mali generally live longer (64.4 years) than men (62.9 years). In the Current Path, life expectancy will increase to 67.4 years in 2030 and 72.4 years by 2043, which will be slightly higher than the average of 71.7 years for low-income African countries. In the Combined scenario, life expectancy will increase to 68.7 years in 2030 and 74.8 years by 2043, which will be 2.4 years more than the country's Current Path in the same year. In both the Combined scenario and the Current Path, women will be expected to live about two years longer than men by 2043.

Chart 34: Domestic Gini in the Current Path and Combined scenario, 2020-2043

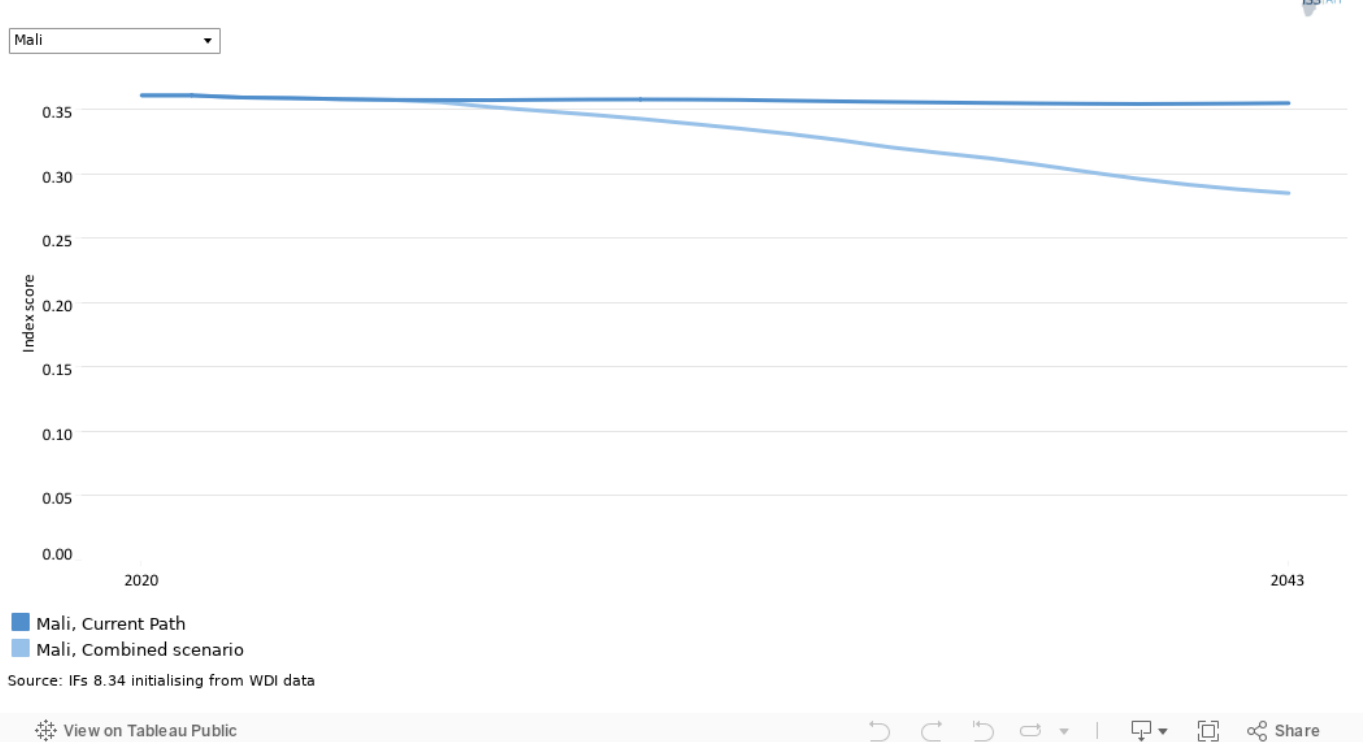


Chart 34 compares the Gini coefficient in the Current Path with the Combined scenario for 2023 and 2043.

In the Combined scenario, both the number and the proportion of poor people in Mali will significantly decline. In the medium term, the 2.3 million people (representing 7.8% of the population) will live below the poverty line of US\$2.15 by 2030 in the Combined scenario. In the long term, extreme poverty in Mali will be reduced further such that by 2043, only about 150 000 people in the country (0.4% of the population) will be living in extreme poverty. This means that, compared to the Current Path, almost 2.2 million more people could be lifted out of poverty by 2043 in this scenario. Indeed, in the scenario, Mali could meet its SDG target of eliminating extreme poverty by 2037 compared to the Current Path where such a goal can only be met in 2051. In addition, the projected proportion of poor people in Mali in the Combined scenario will be far lower (23.7 percentage points lower) than the average of 24.1% of low-income African countries by 2043.

The Gini coefficient is the standard measure of the level of inequality in a country where a higher score depicts greater inequality while a lower score shows a more equal country. High levels of income inequality have many negative effects including a breakdown of social structure and cohesion, which can result in instability.

Historically, inequality in Mali has been lower than the average of its income-group peers in Africa. In 2023, Mali's Gini coefficient was 0.36 compared to the average of 0.40 of the low-income country in Africa. This makes Mali the least unequal country among the low-income countries in Africa and the sixth least unequal in Africa. On the Current Path, income inequality in Mali will remain at the same level across the forecast horizon.

In the medium term (by 2030), Agriculture, Governance and Financial flows are the scenarios with the greatest impact potential to reduce income inequality in Mali. However, in the long term by 2043, the Manufacturing scenario scenario has the greatest potential to reduce income inequality followed by the Governance and Education scenarios. In the Combined scenario, inequality in Mali will slowly decline to 0.34 in 2030. By 2043, inequality in the scenario will further reduce below the Current Path with a Gini coefficient of 0.29 by 2043 compared to 0.35 in the Current Path. This means that economic growth in the Combined scenario will be broadly shared.

Chart 35: Carbon emissions in the Current Path and Combined scenario, 2020-2043
 Million tons of carbon (note, not CO₂ equivalent)

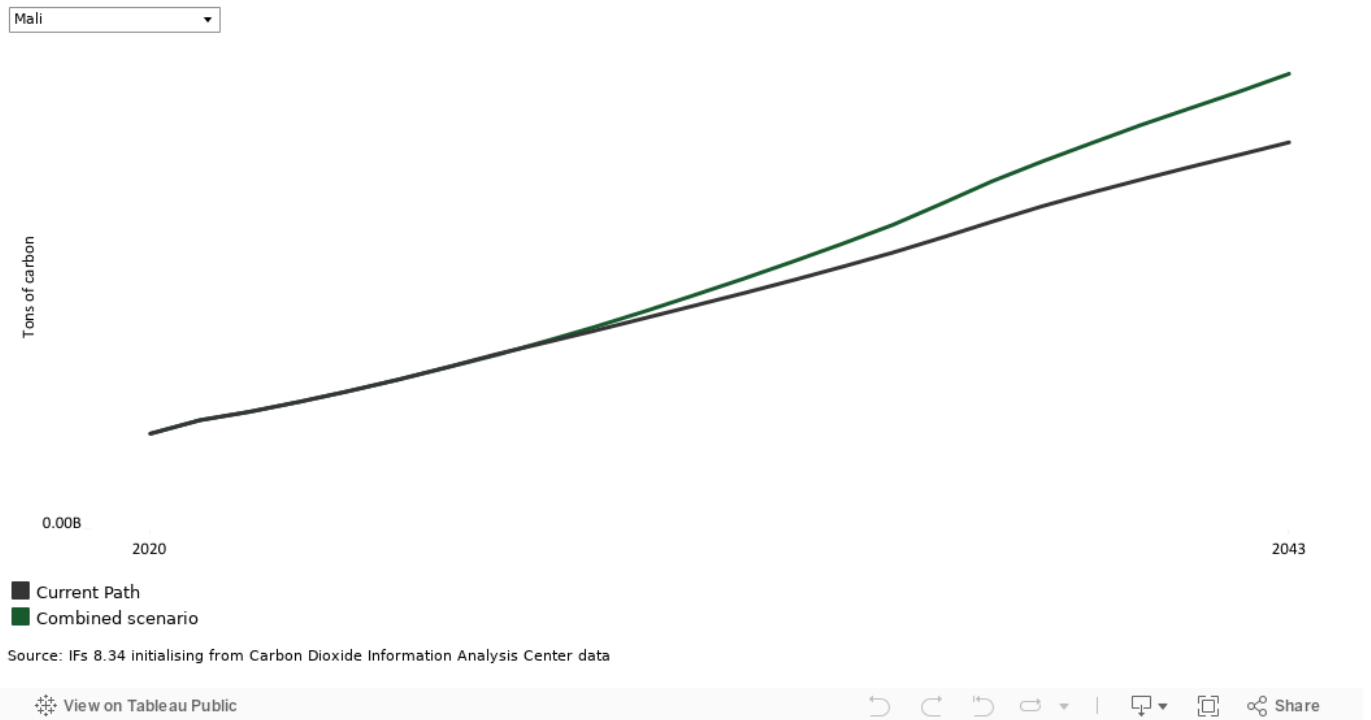


Chart 35 compares carbon emissions in the Current Path with the Combined scenario from 2020 to 2043. Note that the data is in million tons of carbon, not CO₂ equivalent.

Like most African countries, Mali’s emission of carbon is very low. In 2023, Mali released about 2.4 million tons of carbon from fossil fuel use - the 4th-largest emitter among low-income African countries.

According to the [Greenhouse Gas Emissions Factsheet](#) by ClimateLinks, deforestation is one of Mali’s main causes of carbon emissions, accounting for around 17% of all greenhouse gas emissions. Logging, fuelwood use and the spread of agriculture are a few examples of the causes of deforestation. In addition to increasing CO₂ emissions, the loss of forest cover diminishes the country’s capacity to absorb carbon through natural carbon sinks, worsening Mali’s overall carbon footprint.

The energy sector in Mali is a substantial source of carbon emissions, mainly as a result of the country’s reliance on conventional biomass for cooking and heating. Most people still use firewood and charcoal as their primary energy sources in rural regions, which increases indoor air pollution, harms people’s health and increases carbon emissions. Inadequate public transportation infrastructure, the use of a large number of outdated and inefficient automobiles and a lack of vehicle emission requirements are the leading causes of the transportation sector’s contribution to carbon emissions. These elements raise fuel consumption, which in turn causes a rise in CO₂ emissions.

Mali has taken steps to reduce carbon emissions and prepare for the impacts of climate change. In its Intended Nationally Determined Contributions (INDC), the country committed to reducing emissions by 27% from projected levels by 2030, compared to the status quo. The country set specific targets for emission reductions across various sectors: agriculture (29%), energy (31%) and Land Use Change and Forestry (LUCF) (21%). To decrease its reliance on fossil fuels, Mali has focused on promoting renewable energy sources, such as solar and wind. Efforts to reduce biomass demand and associated carbon emissions include initiatives aimed at increasing access to cleaner cooking technologies. Additionally, Mali has pursued sustainable land management practices to combat deforestation.

On the Current Path, carbon emissions from fossil fuels will increase 3.9 million tons in 2030 and to 7.2 million tons by 2043. In the Combined scenario, Mali's total carbon emissions will rise to 8.4 million tons—17.7% higher than what is estimated in the Current Path in the same year. The materialisation of the Combined scenario and achieving sustainable economic development will come at the cost of more carbon emissions in Mali. However, the country can rely on its huge renewable energy potential to pursue a green development pathway.

The impact of the scenarios differs. In the medium term (by 2030) and long term (2043), the Agriculture, Manufacturing and Governance scenarios are the most carbon-intensive scenarios. It is important to note that these are also the scenarios that have the most potential to increase economic growth and reduce poverty. This implies that embarking on aggressive economic growth will come at a cost to the environment. For instance, intensive manufacturing involves the production of low-end manufacturing goods that will imply more fossil fuel usage. On the other hand, the Large Infrastructure and Leapfrogging as well as the Demographics and Health scenarios are the least carbon-intensive scenarios in Mali, the latter because of the reduction in population growth.

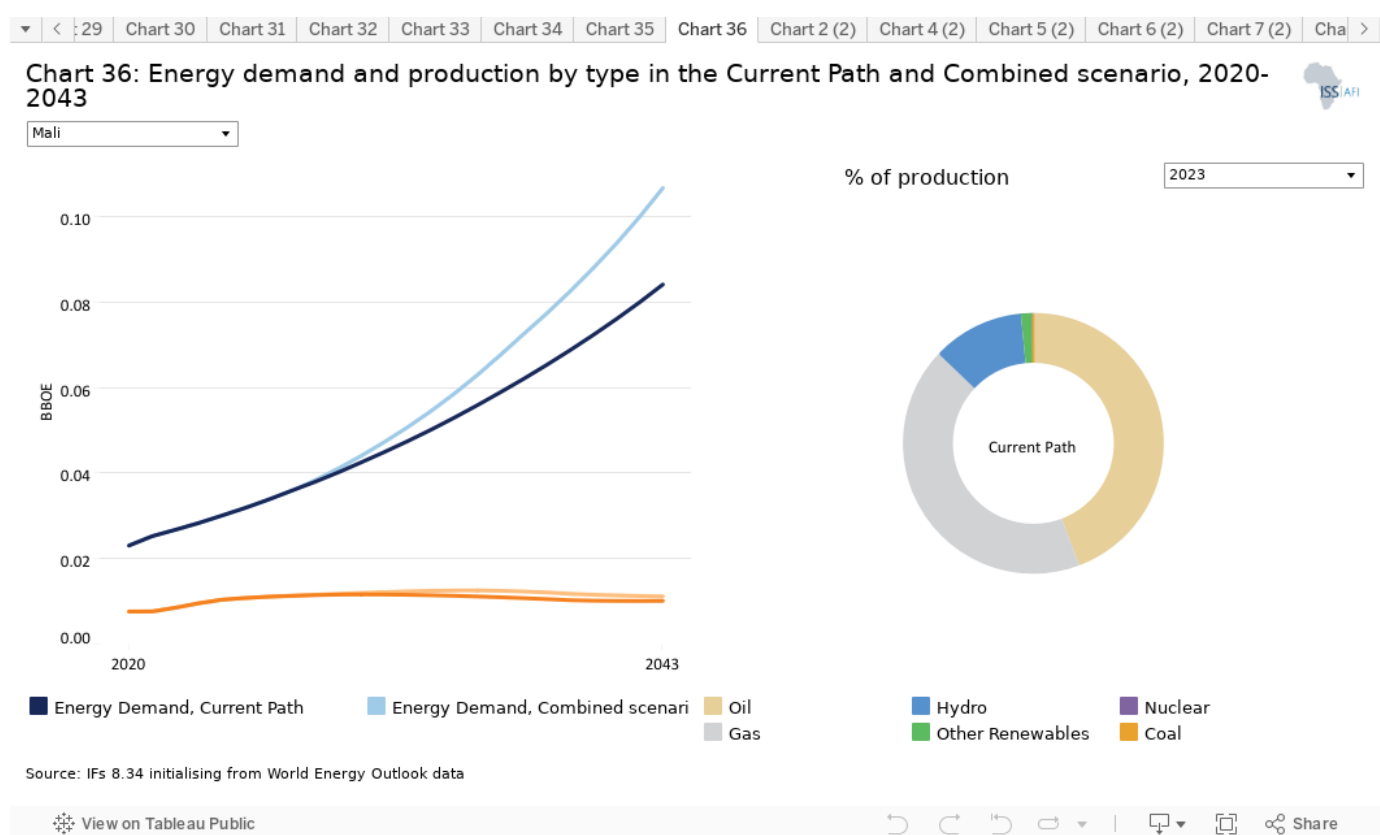


Chart 36 compares energy demand and production in the Current Path with the Combined scenario from 2020 to 2043. Production is done in six types, namely oil, gas, coal, hydro, nuclear and other renewables. The data is converted into billion or million barrels of oil equivalent (BOE) to allow for comparisons. Note that energy production could be for domestic use or for export.

The total energy produced in Mali in 2023 was equivalent to 9.7 million BOE. In the same period, total energy demand of 28.3 million BOE was almost three times its than total production. This signifies a significant energy deficit that the country needs to meet. On the Current Path, total energy demand will outgrow production so that the demand for energy will be equivalent to 30.3 million BOE in 2030 and 65.6 million BOE in 2043. The main source of energy in Mali is oil, followed by gas and hydro. In 2023, the total amount of oil produced in the country amounted to 4.2 million BOE, constituting 43.8% of total energy production. The total amount of oil produced will increase to 20 million BOE, with its share declining to 42% in 2030 and 29.4% of total energy production on the Current Path by 2043. Gas production constituted 42.4% (almost

4.1 million BOE) of total energy production in 2023 but will rapidly decline to about 38.3% in 2030 and 16.8% (valued at 300 000 BOE) in 2043 on the Current Path.

Hydro, which in 2023 constituted just 11.2% of total production (1.1 million BOE), is projected to slightly rise to 13.0% in 2030 but decline to 7.8% by 2043 in the Current Path. Solar energy production is currently low, estimated at 0.9% of total production. However, this will grow rapidly to constitute 4.8% in 2030 and 29.8% of total energy production (8.1 million BOE) by 2043 in the Current Path. At this point, solar energy will become the largest source of energy produced in Mali overtaking oil, gas and hydro. Other renewable energy mostly from biomass also accounted for 1.4% of total energy production and will remain so by 2030 but decline to 1% in 2043.

As expected energy demand in the Combined scenario is higher, creating a larger energy deficit, with renewable energy becoming the dominant energy source, surpassing oil and gas. In the Combined scenario, energy demand in Mali jumps to 44 million BOE in 2030 and 106.8 million BOE by 2043. This will be 1.5 million BOE in 2030 and 22.6 million BOE by 2030 more than the Current Path. Although the total energy production of 29.0 million BOE in the Combined scenario in 2043 will be 10.7 million BOE more than the Current Path, it will fall short of the total demand. Indeed, by 2043, the excess demand for energy of 18.3 million BOE will be almost twice the Current Path projections.

In the Combined scenario, the share of other solar energy in total energy production in the country will rise significantly to constitute 61% of total energy production to become the leading contributor. This will be 31 percentage points more than its contribution to total energy production in the Current Path. The share of hydro production estimated at 7.9% in 2043 in the scenario will also be above its contribution to total energy production in the Current Path. Consequently, the contribution of oil and gas to energy production in the scenario will be 10.5 and 16.5 percentage points, respectively, below the Current Path by 2043.

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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.

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