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# Malawi
## Scenarios

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## Scenario development

**Chart 38: Scenarios**

**Agriculture and Rural Development scenario**
- Boost agriculture productivity and commercialisation, and rural development

**Human Capital Push scenario**
- Emphasise improvements in human capital formation

**Business First scenario**
- Prioritise economic diversification/industrialisation

This section builds on the Current Path analysis, which revealed that Malawi has made progress in recent years but that it still faces significant development challenges. On its current trajectory, Malawi is forecast to improve its economic and human development outcomes but it will miss many of the development objectives as set out in MW2063.

In the scenario section, we model a series of ambitious interventions and combine them in three aggressive scenarios to overcome Malawi's development challenges. They will require significant political will, public support and technical prowess in execution. Achieving middle-income status will require progress on many fronts over many years.

Development is a long-term, integrated and complicated process. Malawi needs long-term commitment to a series of mutually reinforcing policies and interventions that will interact to create a virtuous upward circle of accelerating development.
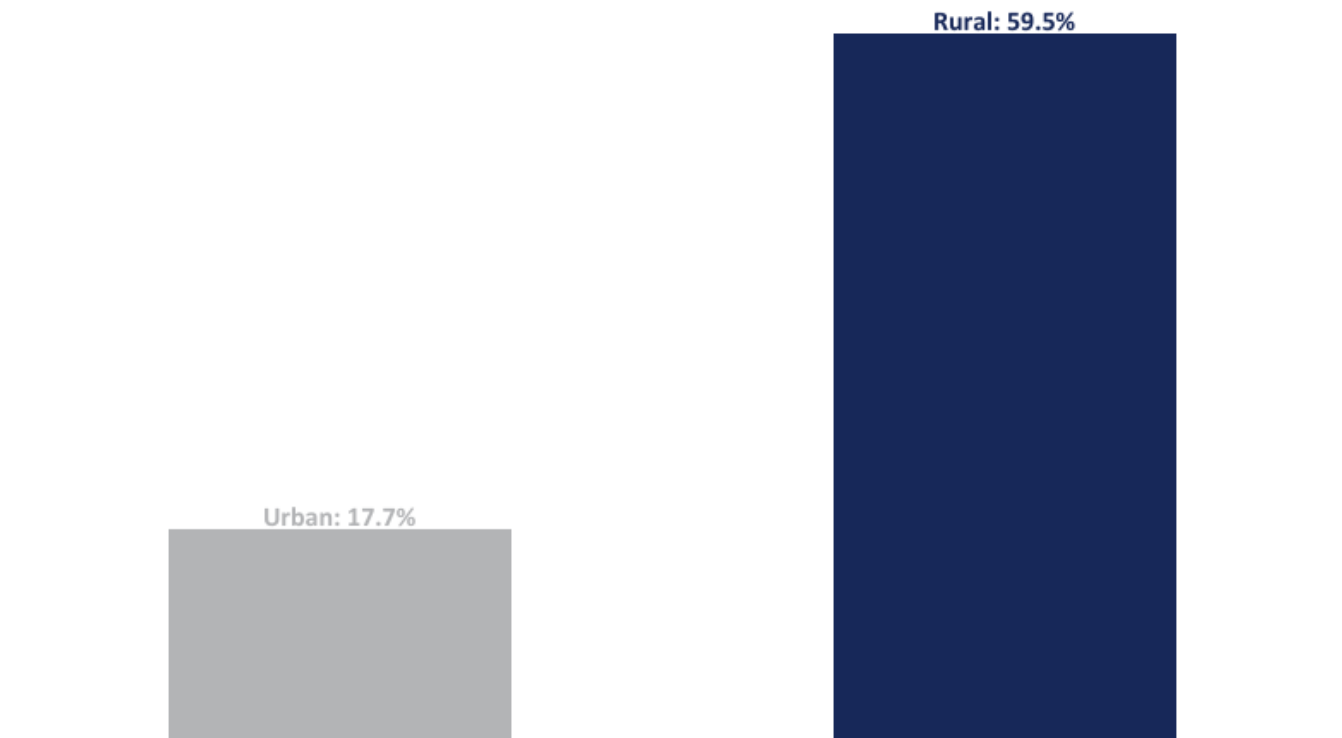
The first scenario, Agriculture and Rural Development, represents a series of policies to boost agriculture productivity and commercialisation, and rural development. A second scenario, Human Capital Push, emphasises improvement in human capital formation in Malawi. Finally, we present a Business First scenario that prioritises economic diversification/industrialisation. We then compare the outcomes of the three scenarios and combine them in a single, Combined scenario. The scenarios are analysed for their ability to propel the country towards reaching Malawi's goals and objectives as set out in the MIP-1 and MW2063.

Policy interventions in each scenario have been identified based on existing academic literature and the pillars and enablers of MW2063. The MW2063 pillars are (i) agriculture productivity and commercialisation; (ii) industrialisation; and (iii) urbanisation. There are seven groups of enablers: (i) mindset change; (ii) effective governance systems and institutions; (iii) enhanced public sector performance; (iv) private sector dynamism; (v) human capital development; (vi) economic infrastructure; and (vii) environmental sustainability.

## Agriculture and Rural Development scenario

Chart 39: Urban vs rural national poverty rate, 2016/17

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Source: JD Moyer et al, *Africa's path to 2063: Choice in the face of great transformation*

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*Context*

The Agriculture and Rural Development scenario mainly focuses on Pillar 1 of MW2063, which consists of enhancing agricultural production and productivity to realise the vision of inclusive wealth creation and self-reliance.

More than 80% of the Malawi population resides in rural areas and the vast majority of these rural dwellers are subsistence farmers who rely on rainfed agriculture. In addition, poverty in Malawi is predominantly rural. The national poverty rate was 59.5% in rural areas compared to 17.7% in urban areas in 2016/17.[1]Enhancing agricultural and rural development could significantly contribute to inclusive wealth creation and progress towards the attainment of the SDG targets.

**Chart 40: Summary of the Agriculture and Rural Development scenario interventions**

Increase average crop yields

Increase land area under irrigation

Reduce agricultural loss rate at production and from producer to consumer

Increase calorie per capita

Halt deforestation through environmental conservation and protection

Increase rural accessibility to all-weather roads

Increase government effectiveness

Increase rural electricity access

Increase government social welfare transfers

*Scenario interventions*

In this scenario, we proceed on the premise that the Malawi government prioritises improvements in agriculture productivity, which can be done by adopting modern and climate-smart agriculture technologies, improved seedlings, and increased fertiliser and pesticide use. The scenario increases average crop yields from 7.7 tons per hectare in 2019 to 16.5 tons per hectare by 2030, compared to 10.1 tons on the Current Path and 31.8 tons by 2063. The Current Path forecast for 2063 is 20 tons per hectare. This is similar to levels achieved by Djibouti and Eswatini in 1999. Malawi already achieved significant improvements between 2005 and 2012, where it increased average crop yields by 78%. In this scenario, average crop yields in Malawi increase by 77% over the period 2023 to 2030.

Likewise, land under irrigation and groundwater extraction are increased to mitigate rainfall variability; for example, prolonged droughts and seasons of insufficient and erratic rainfall. To this end, we apply an intervention to increase land area under irrigation from an estimated 70 000 hectares in 2019 to 96 000 hectares by 2030, compared to 70 000 hectares in the 2030 Current Path forecast — a 35% increase over the period 2023 to 2030. By 2063, the scenario would result in 151 000 hectares land under irrigation compared to 72 000 in the Current Path forecast for that year. The Gambia increased irrigation with similar levels in the early 1990s, where, between 1991 and 1999, the land area equipped for irrigation increased by 28.6%.

The subsistence farming practices in rural areas place a significant strain on land resources, and the increased land degradation and deforestation observed threaten agricultural productivity and sustainability. This scenario assumes an ecosystem-based approach that focuses on sustainable land management practices and ecosystem restoration and protection by increasing forest protection to protect rural communities against floods, soil erosion and other negative impacts of climate change. We apply an intervention that emulates a reduction in the deforestation rate through environmental conservation and protection. The result is an increase in forest land by 0.4 million hectares by 2063 to restore forest land to 2011 observed values. Cabo Verde and Kenya have had success in preserving and restoration of forest land.

The Agriculture and Rural Development scenario reduces post-harvest losses to increase food availability. This can be done through improved storage and refrigeration facilities. It reduces agricultural loss rate at production and from producer to consumer, and brings agricultural production losses down from 9.3% in the Current Path in 2063 to 8.5%. Agricultural loss and waste (as share of production) are reduced to 20% by 2030, compared to 30% in the Current Path forecast. Agricultural loss and waste are reduced to 14% by 2063 compared to the 21% in the Current Path. Eighteen other African countries are already achieving the level of Malawi by 2063.

The scenario also increases access to rural roads to reduce transportation time and cost and facilitate agricultural commercialisation. The intervention increases rural accessibility to all-weather roads from an estimated 47.4% in 2019 to 61.9% by 2030, compared to 49.4% in the Current Path forecast and to 80% by 2063. Currently, 25 African countries have already reached levels above 60% access.

Given the large rural population, investing in rural access roads will promote positive economic impacts such as improved rural incomes, increased agricultural productivity and increased participation in the economy. Additional mobility and connectivity for rural population groups will also promote positive social impacts such as reducing poverty, reducing the exceptionally high maternal mortality rate and improving paediatric health by means of easier access to healthcare facilities.[2]

The Agriculture and Rural Development scenario also increases rural access to electricity, and this can also be achieved through non-traditional ways like mini-grid and off-grid solutions using renewable energy sources such as wind and solar. Promoting rural electrification can also increase income through new opportunities for work, especially in non-farm activities, and increase productivity.

In 2019, electricity access in rural areas was 5%, and it is set to improve to 16.1% in 2030 and to 85.7% by 2063 in the Current Path forecast. Our intervention improves the access rate to 35.6% by 2030 (comparable to Ethiopia in 2019) and to 95.5% by 2063. Between 2011 and 2018, electricity access in rural areas increased by 241.4% in Ethiopia, albeit from a very low base. In this scenario, electricity access in rural areas in Malawi increases by 300% between 2023 and 2030, from a very low base (5%).

While the scenario increases agriculture exports, it focuses on establishing food security by increasing food access. Calories per capita is used as a proxy for improvements in domestic food access to ensure improvements in food security instead of exports only. To this end, the interventions increase calories per capita, a proxy for food access, from 2 600 in 2019 to 3 132 by 2030 versus 2 793 on the Current Path, and 3 500 by 2063 versus 3 250 on the Current Path. These levels are already being achieved by countries such as Tunisia, Morocco, Algeria, Egypt, Libya and Mauritius. Between 2010 and 2017, calories per capita in Ethiopia increased by 12.3%. In this scenario, calories per capita increases by 15% over the period 2023 to 2030 in Malawi.

Empirical studies have shown that increases in grants and revenue allocation are among the key factors that contribute to the development of rural communities.[3] The scenario, therefore, assumes that the government of Malawi, with the support of its development partners, implements a broad social protection scheme (social welfare transfers) to build the resilience of the poor and those in vulnerable situations and to reduce their exposure and vulnerability to weather-related extreme events and other economic shocks. Finally, governance effectiveness is enhanced in this scenario to simulate an improved capacity for basic services delivery and better and well-targeted safety nets and agricultural subsidy programmes. For instance, a recent analysis of the Integrated Household Surveys (IHS) shows that the current agricultural subsidy programme instead of benefiting the poor disproportionately benefits richer agricultural households.[4] Therefore, we increased Malawi's governance effectiveness score as measured by the World Bank from 1.7 out 5 in 2019 to 3 out of 5 by 2030 and to 3.8 by 2063. The Current Path forecast is 2.02 in 2030 and 3.01 in 2063.

Finally, we increase government social welfare transfers from 0.8% of GDP in 2019 to 3.3% of GDP by 2030 and to 3.1% by 2063. The Current Path in 2030 is 2.4% of GDP; that is to say that the scenario improves transfers by 0.9 percentage points of GDP above the Current Path forecast in 2030.

Chart 41: Average GDP growth rates in the Agriculture and Rural Development scenario
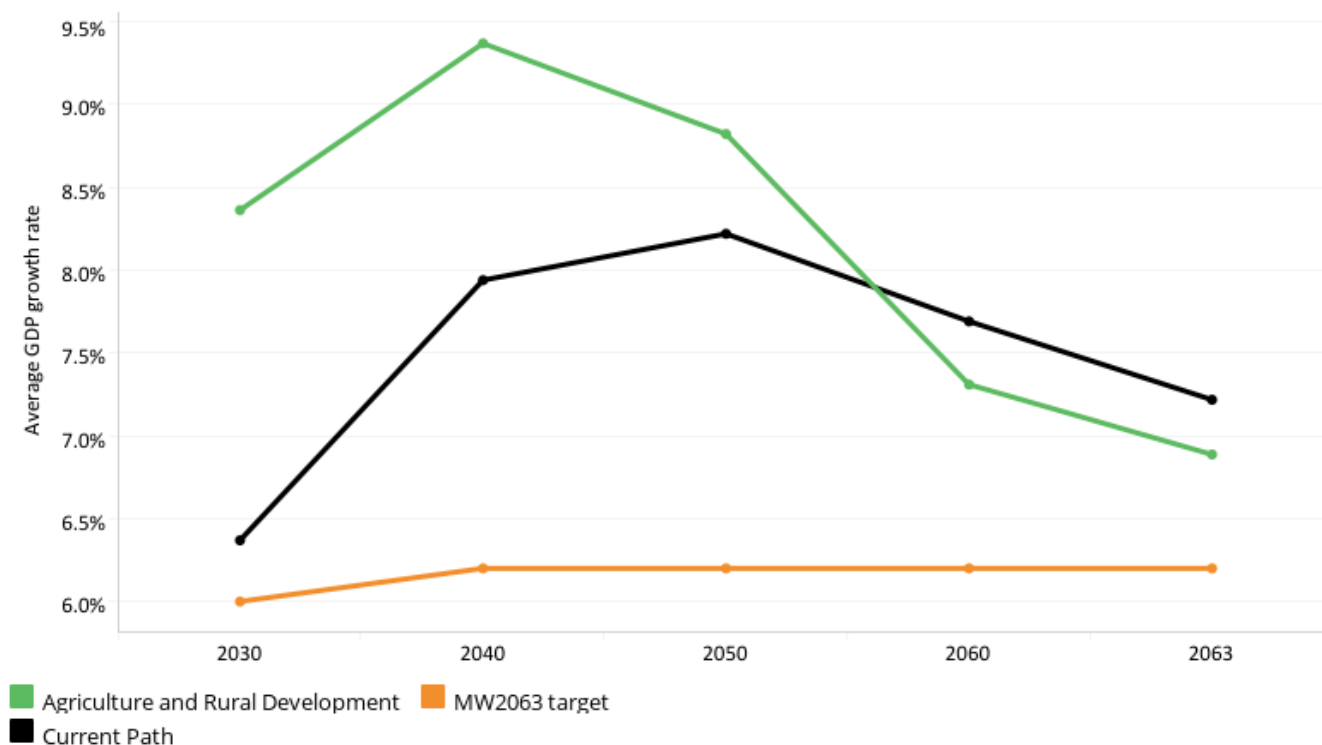
Source: Forecast in IFs, version 7.84

*Impact*

The materialisation of the Agriculture and Rural Development scenario would enhance wealth creation. In the scenario, Malawi records an average annual GDP growth rate of 6.5% between 2022 and 2030, 1.5 percentage points above the Current Path forecast of 5%, 0.5 percentage point above the MW2063 (MIP-1) target over the same period (see Chart 41).

Growth rates in the scenario remain above the Current Path forecast until 2060 before slightly declining below the Current Path. This is because economic growth tends to slow as economies mature and countries get richer. The size of the Malawian economy is, by 2063, significantly larger in the scenario than the Current Path forecast. The GDP per capita, or the average income (PPP at 2017 constant US$), climbs to US$1 782 by 2030 and to US$10 198 by 2063, US$140 above the Current Path forecast in 2030, and US$2 168 above the Current Path in 2063

## Chart 42: Progress towards some key SDGs and MIP-1 targets: Current Path vs Agriculture and Rural Development scenario

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| Focus area | SDG /MIP-1 indicators | . | . | . | . |
|---|---|---|---|---|---|
| MIP-1 Focus Area: Inclusive Wealth Creation / SDG Goal 1 | SDG Indicator 1.1.1b - % of population below $1.90 per day. | | | | |
| | GINI Coefficient | | | | |
| MIP-1 Focus Area: Health & Nutrition / SDG Goal 2 & 3 | SDG Indicator 2.1.1a - % of undernourished population | | | | |
| | SDG Indicator 2.2.1 - Stunting among children below 5 years of age | | | | |
| | SDG Indicator 3.1.1 - Maternal mortality rate per 100,000 live births | | | | |
| | SDG Indicator 3.2.1 - Under five mortality rate per 1000 | | | | |
| | SDG Indicator 3.2.2 - Infant mortality rate (per 1000 live births) | | | | |
| MIP-1 Focus Area: Education & Skills Development / SDG Goal 4 | SDG Indicator 4.1.1c - Primary education gross completion rate - Total | | | | |
| | SDG Indicator 4.1.1e - Lower secondary education graduation rate - Total | | | | |
| | SDG Indicator 4.1.1g - Upper secondary education graduation rate - Total | | | | |
| | MIP-1 outcome - Improved literacy levels | | | | |
| MIP-1 Focus Area: Water, Sanitation and Hygiene (WASH) / SDG Goal 6 | SDG Indicator 6.1.1 - % of people with access to improved water | | | | |
| | SDG Indicator 6.2.1 - % of people with access to improved sanitation | | | | |
| MIP-1 Focus Area: Energy Generation and Supply | SDG Indicator 7.1.1 - % of population with access to electricity | | | | |

⊹ View on Tableau Public          ↶ ↷ ↶ ↷ ▼ | ▽▼ ⧉ ⛋ Share

Due to the large socio-economic dependency on the agriculture sector, this scenario achieves rapid gains and contributes to inclusive wealth creation. The poverty rate at US$1.90 drops to 45.7% by 2030, 6.9 percentage points below the Current Path forecast of 52.6% in the same year. This results in 1.7 million fewer people living in extreme poverty in 2030, relative to the Current Path. Due to continuous inclusive wealth creation, the SDG of extreme poverty rate of less than 3% is achieved in 2043, a decade earlier than the Current Path forecast. Income inequality as measured by the Gini coefficient declines to 0.37 by 2030 below the MIP-1 target of 0.39.

The implementation of the Agriculture and Rural Development scenario could boost agricultural commercialisation and food security, in line with the fundamental Pillar 1 of MW2063. The agricultural export is forecast to be 5.7 million metric tons by 2030 and 52.7 million metric tons by 2063, then about 41.5 million metric tons larger than the Current Path forecast. Malnourishment in the population is halved by 2030 compared to the Current Path and the country becomes a net exporter of agricultural produce. In sum, in this scenario, Malawi will produce enough food for its domestic needs and provide a surplus for import substitution and exports.

Chart 42 displays the impact of the Agriculture and Rural Development scenario on meeting some of the key MIP-1 and SDG targets. Overall, the findings show that a development pathway driven by agriculture production and commercialisation could improve human and economic development in Malawi. However, the improvement will likely not be fast enough to help Malawi achieve most of the SDG targets by 2030 and will not succeed in graduating the country to lower middle-income status by 2030 and to upper middle-income level by 2063.

## Human Capital Push scenario

### Chart 43: Malawi vs Africa life expectancy, 1990–2063
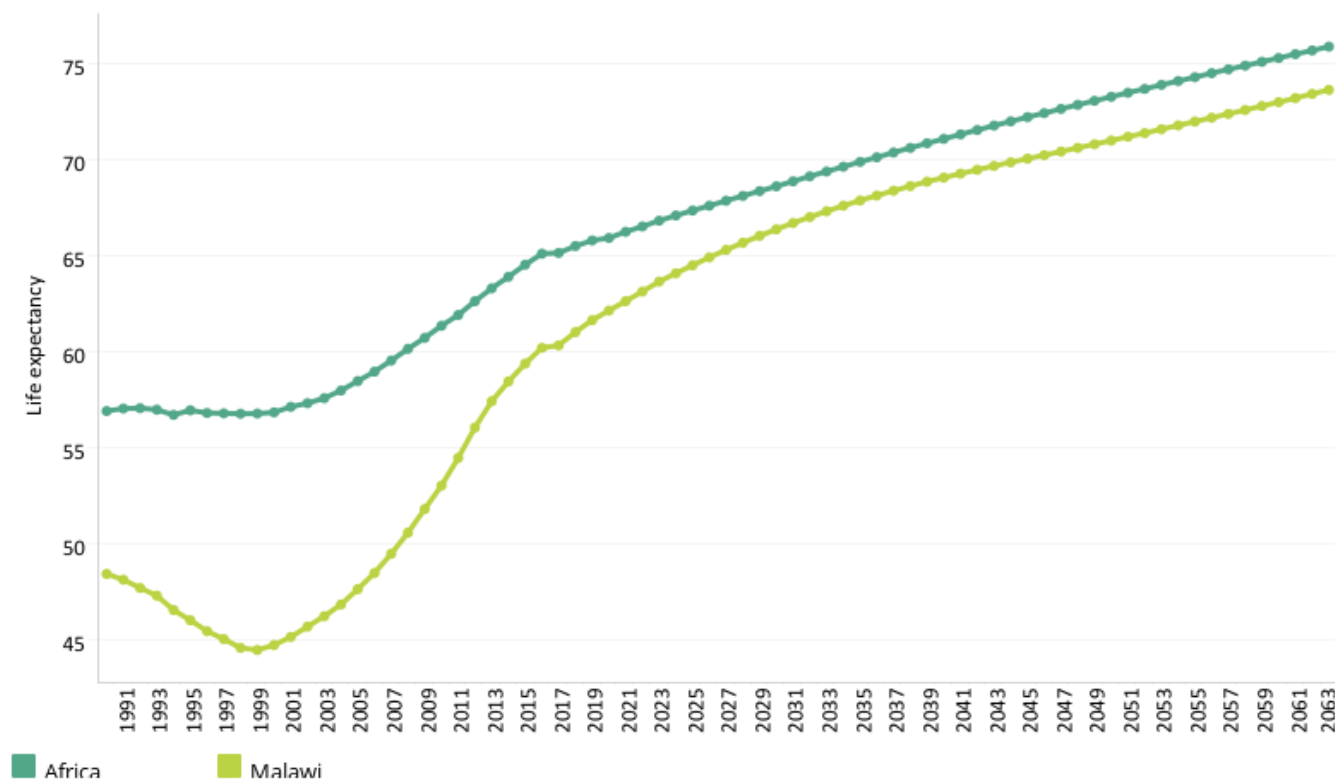


Source: IFs 7.84 initialising from IHME GBD data

Legend: ■ Africa   ■ Malawi

*Context*

This scenario model's Enabler 4 (private sector dynamism) of MW2063, given the importance of human capital in the development process. Human capital formation through education, skills and health of the population is one of the key enablers for the acceleration of the broad-based growth and development of a country. It is key for inclusive wealth creation as it improves the job and income prospects of the poor segment of society.

Malawi has invested significantly in its health sector with spending measuring 4.8% of GDP in 2017,[5] but the country continues to suffer from poor health outcomes. In 2019, Malawi ranked 185th for overall health efficiency among 191 WHO member states,[6] a statistic that reflects the poor state, inequality and ineffectiveness of the sector. Also, Malawi scores very low in life expectancy and ranked 40th in Africa. Malawi also continues to experience challenges in its education sector. Secondary school net enrolment and completion rates are extremely low at 17% and 22%, respectively, in 2018, and Malawi's gross enrolment ratio for tertiary education at about 1.6% is one of the lowest in the world. Better prioritisation and targeted interventions on key issue areas could bolster Malawi's potential to improve its human capital stock.

**Chart 44: Summary of the Human Capital Push scenario interventions**

Reduce AIDS-related deaths, maternal mortality and child mortality

Increase access to improved sanitation and sources of water

Increase primary education survival rate

Increase lower secondary enrolment rate and completion rate

Increase lower secondary to upper secondary transition rate

Increase upper secondary education graduation rate

Increase vocational training enrolment rate

Improve the quality of education

Increase the tertiary gross enrolment rate and graduation rate

Increase share of science and engineering students in tertiary graduates

Increase gender empowerment and modern contraceptive use

*Interventions*

In line with MW2063, this scenario emphasises human capital development. It assumes reforms are undertaken to improve efficiency in the health and education systems. According to Nobel Prize winner in economics Robert Lucas and former World Bank chief economist Paul Romer, economic development depends above all on a country's ability to value its human capital.[7] For these reasons, the scenario reduces HIV/AIDS-related death rates by 41% between 2023 and 2030, in line with the strides made by Guinea Bissau that reduced AIDS-related deaths by 30% from 2010 to 2017. This can be achieved through the roll-out of lifesaving antiretrovirals (ARVs) and aggressive information campaigns about the disease. Such action could increase life expectancy and promote good health to ensure greater productivity of affected Malawians.

In order to reduce the high communicable disease burden, the scenario prioritises investments in water, sanitation and hygiene (WaSH) infrastructure. In this scenario, access to clean water reaches 97% by 2030, compared to the Current Path forecast of 93.5%. Sanitation provision is also prioritised such that 67.5% of Malawians have access to improved sanitation by 2030, compared to 51% projected in the Current Path forecast. This increase of 72% from 2023 to 2030 would not be unique to low-income countries as Mozambique achieved a 93% increase between 2000 and 2007.

The scenario addresses the high maternal mortality ratio by ensuring that all women and girls have access to quality and timely health services, particularly antenatal and postnatal care. We apply an intervention that reduces maternal mortality by 57% relative to the Current Path over the period 2023 to 2030, bringing down the death rate by more than 100 deaths (per 100 000 live births) by 2030 compared to the Current Path. Rwanda achieved similar reduction levels between 2003 and 2010, reducing the maternal mortality ratio by 57%. Reducing the high child mortality rates is also addressed in this scenario and a 42% reduction over the next eight years is implemented. The Malawian government achieved similar reduction levels between 2009 and 2016 working together with community-based organisations. Continuing the aggressive roll-out of antenatal and delivery care, distribution of insecticide-treated nets, field vaccinations programmes and making community-based education programmes freely available will support the reduction of infant mortality rates.

Regarding education-specific interventions, the scenario increases primary education survival rates to increase the pool of students to transition and enrol in secondary school. In this scenario, the primary education survival rate increases from 63.8% in 2020 to 91% by 2030, which is comparable to Morocco in 2009. This is above the 75.2% forecast on the Current Path in 2030. This improvement can be achieved by addressing the low transition rates directly through better quality primary education and through investment in more secondary schools.

The scenario improves enrolment and graduation rates at lower secondary and upper secondary levels to increase the number of learners potentially proceeding to tertiary level. The lower secondary enrolment rate is increased to 75% by 2030 (on par with Democratic Republic of Congo), 11.6% percentage points above the Current Path forecast at 63.4%. The lower secondary completion rate improves from 38.4% in the Current Path forecast to 53% by 2030 (on par with Sierra Leone) and to 100% by 2060. The transition rate from lower secondary to upper secondary increases to 96% by 2030, on par with levels achieved in Mozambique. This is a substantial increase above the 76.4% forecast on the Current Path in the same year. Malawi achieves a 100% transition rate by 2040, up from 70.5% in 2019. The upper secondary education graduation rate is increased to 34% by 2030, on par with Liberia. This is a 7.8% percentage point increase from 26.2% forecast in the Current Path in 2030. Also, the portion of science, technology, engineering and mathematics (STEM) students and the share of students in technical and vocational education and training (TVET) increase to bolster adequate labour supplies and respond to the demands of the Fourth Industrial Revolution. Thus, the enrolment rate in vocational training increases to 20% by 2030. Mozambique managed a 45% increase between 2009 and 2016.

The scenario increases Malawi's Harmonized Test Scores at primary and secondary education levels as a proxy for improvement in education quality. The Harmonized Test Scores are averaged across grades and subjects for those tests covering multiple grades and programmes. The scenario assumes a 10% improvement in the quality of education for both primary and secondary education. This is in line with achievements made by Chad that improved primary test score rates by 13% between 1995 to 2005 and Burundi that improved secondary test scores by 10% between 2015 and 2019. Quality and relevant education is crucial for economic development. Countries such as South Korea and Malaysia have succeeded in transitioning to emerging market status thanks in part to their investments in building some of the best education systems in the world.

In line with the priority targets as set out in MIP-1, the Human Capital Push scenario reduces fertility rates by increasing access to and ensuring the uptake of modern contraceptives. The scenario assumes an aggressive uptake of modern contraceptive use such that 99.8% of women have access by 2030, in comparison to 69.2% achieved in the Current Path forecast. This can be achieved by improving family planning, campaigning to raise awareness and increasing the uptake of modern contraceptives especially among the younger and poorer population cohorts. High fertility rates can constrain human capital formation by straining poor families' budgets and reducing available resources to feed, educate and provide healthcare to children. A decline in the below 15-years dependency age group helps governments and parents to invest more in each child in terms of education and health with positive effects on human capital formation.

Finally, the scenario improves gender empowerment to improve women's reproductive and education rights, and promotes gender parity and inclusiveness in human capital development.

## Chart 45: Average GDP growth rates in the Human Capital Push scenario

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**Legend:**
- Human Capital Push (purple)
- Current Path (black)
- MW2063 target (orange)

Source: Forecast in IFs, version 7.84

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*Impact*

If the Human Capital Push scenario is to materialise, it would lead to an average growth rate of 5.3% between 2022 and 2030, compared to 5% on the Current Path over the same period (Chart 45). The GDP per capita (PPP and 2017 constant US$) in this scenario increases to US$1 685 by 2030, US$44 above the Current Path forecast. The GDP per capita gets to US$9 247 by 2063, US$1 217 more than the Current Path forecast.

## Chart 46: Progress towards some key SDGs and MIP-1 targets: Current Path vs Human Capital Push scenario

ISS|AFI

| Focus area | SDG /MIP-1 indicators | |
|---|---|---|
| MIP-1 Focus area: Inclusive Wealth Creation / SDG Goal 1 | SDG Indicator 1.1.1b - % of population below $1.90 per day. | |
| | GINI Coefficient | |
| MIP-1 Focus Area: Health & Nutrition / SDG Goal 2 & 3 | SDG Indicator 2.1.1a - % of undernourished population | |
| | SDG Indicator 2.2.1 - Stunting among children below 5 years of age | |
| | SDG Indicator 3.1.1 - Maternal mortality rate per 100,000 live births | |
| | SDG Indicator 3.2.1 - Under five mortality rate per 1000 | |
| | SDG Indicator 3.2.2 - Infant mortality rate (per 1000 live births) | |
| | SDG Indicator 3.7.1 - Contraception use as % of fertile women | |
| MIP-1 Focus Area: Education & Skills Development / SDG Goal 4 | SDG Indicator 4.1.1c - Primary education gross completion rate - Total | |
| | SDG Indicator 4.1.1e - Lower secondary education graduation rate - Total | |
| | SDG Indicator 4.1.1g - Upper secondary education graduation rate - Total | |
| MIP-1 Focus Area: Water, Sanitation and Hygiene (WASH) / SDG Goal 6 | SDG Indicator 6.1.1 - % of people with access to improved water | |
| | SDG Indicator 6.2.1 - % of people with access to improved sanitation | |
| MIP-1 Focus Area: Energy Generation and Supply | SDG Indicator 7.1.1 - % of population with access to electricity - Total | |

⊹ View on Tableau Public          ↶ ↷ ↺ ⤵ ▼ | ⬚▼ ⧉ ⤜ Share

Investment in human capital has a long lead time. As a result, Malawi's US$1.90 poverty rate declines to 50.6% by 2030, only two percentage points below the Current Path forecast of 52.6% in the same year, but its impacts increase over time. The Human Capital Push scenario lifts an additional 809 000 people out of extreme poverty in 2030, relative to the Current Path. The SDG of eliminating extreme poverty is achieved in 2053 in this scenario, four years earlier than the Current Path forecast.

Fertility rates are brought down to 2.3 births per woman by 2030, compared to 3.4 on the Current Path, reducing the population in 2030 to 23.5 million people instead of 24.2 million on the Current Path. The impact is that in 2063 the population will be 35 million people compared to 38.8 million in the Current Path forecast. The annual population growth rate is 1.6% in 2030, 0.5 percentage points below the MIP-1 target of 2.1%. This decline in the fertility rate could help Malawi reap its demographic dividend earlier than the Current Path forecast with significant positive effects. The minimum ratio of 1.7 working people to each dependant (children and elderly people) required for the materialisation of the demographic dividend is achieved in 2033, eight years earlier than in the Current Path forecast.

This scenario improves well-being quality as the life expectancy is one year above the Current Path forecast of 66.3 years in 2030. However, it is below the MIP-1 target of 71.9 years for the same year, reflecting Malawi's score on the Human Development Index forecast to be 0.52 by 2030, above the MIP-1 target of 0.48.

In this scenario, Malawi achieves the SDG targets relative to primary education completion and contraceptive use and gets closer to achieving some SDG goals by 2030 (see Chart 46). The maternal mortality target of fewer than 70 deaths per 100 000 live births will likely be achieved in 2043, a decade earlier than in the Current Path forecast. The target on infant

mortality rate to 12 deaths per 1 000 live births is likely to be achieved in 2040, also a decade earlier than under the Current Path.

Better human capital is an important catalyst for the acceleration of the broad-based growth and development of the country, but the benefits from investment take time to materialise, as reflected in the scenario outcomes presented in this section. Investment in human capital affects labour productivity with a long time lag, so it takes more than 15 years until output surpasses a programme that invests mainly in infrastructure.[8] Thus, a development pathway driven mainly by investments in human capital will improve human and economic development in Malawi but will likely not be enough to achieve most of the SDG targets and to graduate Malawi to lower middle-income status by 2030.

## Business First scenario

### Chart 47: Share of population and GDP, rural vs urban areas
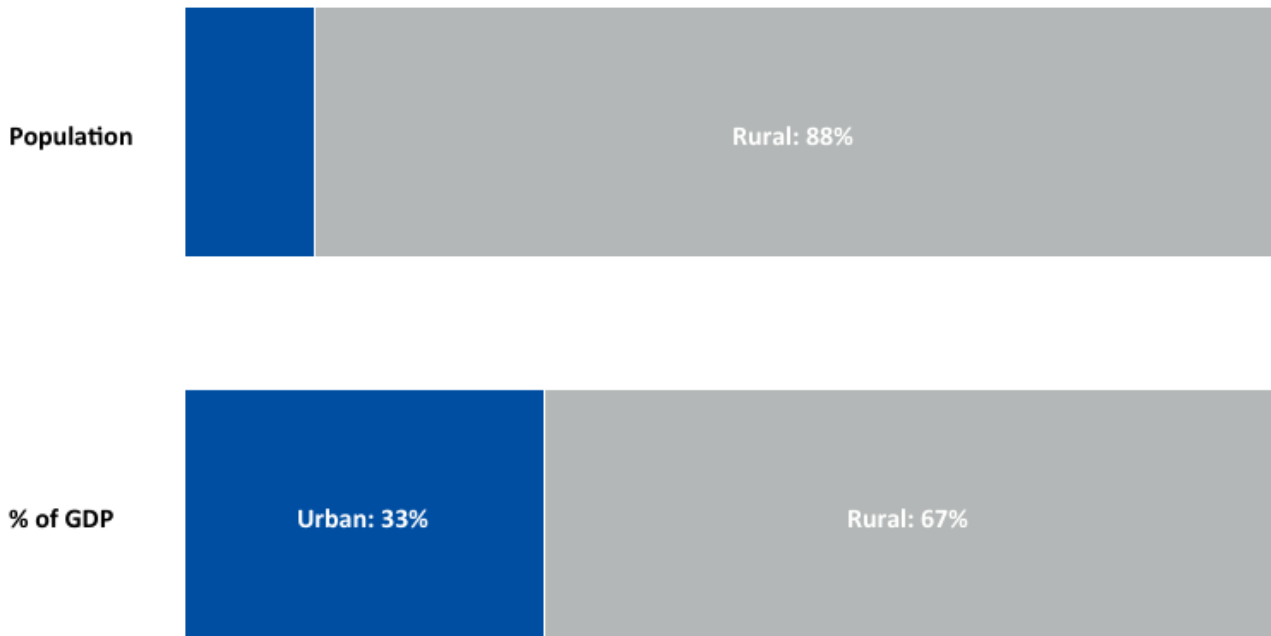


Source: M El Hedi Arouri et al [2014]

⚙ View on Tableau Public     ↶  ↷  ↺  ⤵ ▼  |  🖵▼  ▣  ⤳ Share

*Context*

Economic growth in Malawi is mainly driven by the dynamism of the agriculture sector. The COVID-19 pandemic has further demonstrated the importance of building resilience through diversification. There is a need to enhance the manufacturing industry with strong backward and forward linkages with the agriculture, mining and service sectors to achieve sustained growth, reduce poverty and diversify the sources of income and foreign exchange earnings in Malawi. Also, urbanisation is critical to economic growth and development as it fosters entrepreneurship and increases productivity. Cities in Africa generate between 55% and 60% of the continent's GDP.[9] In 2018, 12% of the Malawian population resided in only the four major urban areas yet these were responsible for contributing 33% to the national GDP. When urbanisation is managed sustainably, it reduces poverty and provides several social and economic benefits. The Business First scenario, therefore, prioritises economic diversification and industrialisation. This scenario models pillars 2 and 3 of MW2063. Pillar 2 of MW2063 focuses on industrialisation to transform the Malawi economy, and Pillar 3 consists of an urbanisation push.

**Chart 48: Summary of the Human Capital Push scenario interventions**

Increase government transparency, economic freedom and business regulation

Reduce cost of investing in renewables

Increase urbanisation rate

Increase electricity access

Increase broadband connectivity

Increase government spending on R&D

Increase paved road length

Increase investment in manufacturing

Increase FDI inflows

Increase gender equality

Reduce electricity transmission losses

Increase mining and manufacturing exports

**Scenario interventions**

A thriving private sector is crucial to enhance economic transformation and industrialisation and to achieve robust growth. However, the business environment in Malawi is very challenging. In the World Bank's 2020 Doing Business report, Malawi ranked 109th of out a 190 countries globally for the ease of doing business. Simplifying administrative procedures and formalities (reducing red tape) makes it easier for firms, specifically small- and medium-sized enterprises (SMEs) to do business, to test new ideas and to grow. Therefore, this scenario proceeds on the premise that Malawi authorities undertake business environment reforms aimed at reducing business costs and risks through improved business regulations, and providing more economic freedom and transparency.

In the Business First scenario, the score for regulatory quality as measured by the World Bank reaches 1.99 (out of 5) by 2030 (similar to Rwanda in 2008) and 3.17 by 2063. Between 2012 and 2019, regulatory quality in Ethiopia improved by 20%. In this scenario, the score for regulatory quality in Malawi increases by 10% between 2023 and 2030. We increase the score for economic freedom as measured by the Fraser Institute by 14% between 2023 and 2030. Rwanda improved its score for economic freedom by about 23% between 2000 and 2007. In the Fraser Institute's Economic Freedom Index, Malawi reaches a score of 4.7 (out of 10) by 2030, comparable to the level of Rwanda in 2014 (Current Path in 2030 = 3.1). The scenario also focuses on increasing government transparency by curbing corruption and improving the country's Corruption Perception Index. In Transparency International's Corruption Perception Index, Malawi reaches a score of 4.7 (out of 10) by 2030, slightly below Rwanda. The Current Path forecast in 2030 is 3.1 out of 10.

In addition to an efficient bureaucracy and macroeconomic stability, reliable energy access and good infrastructure also matter for growth and economic diversification. The historically unstable macroeconomic environment and infrastructure deficit of Malawi undermine private sector development. Thus, this scenario proceeds on the premise that the government undertakes fiscal consolidation measures to reduce fiscal deficit and to improve macroeconomic stability. The scenario also assumes that the government of Malawi continues its efforts to broaden the tax base and enhance tax revenue collection. Increased government revenue could help the government to reduce its fiscal deficit and improve

macroeconomic stability. The intervention increases government revenue by 73% between 2023 and 2030. Between 2014 and 2016, government revenue in Rwanda increased by 24.5%.

Underpinning a vibrant business environment is the provision of reliable and sufficient energy, information and communication technology (ICT) and transport infrastructure. The scenario therefore builds on the assumption that the government increases access to energy for all communities and addresses the vast electricity inequality between urban and rural areas. In this scenario, the costs of investing in renewables are reduced such that renewables using mini- and off-grid solutions would become viable options for communities and businesses and make up 26.5% of the total energy mix of the country by 2030. National electricity access is improved from 18% in 2020 to 34.6% by 2030 and to 91.3% by 2063. The scenario also prioritises a reduction in electricity transmission losses and reduces losses by 28% between 2023 and 2030. In the late 1990s, Angola achieved a reduction rate in transmission losses by 49% over five years.

Access to roads in good condition reduces transaction costs, enhances productivity and facilitates connectivity. The scenario therefore improves transport infrastructure by increasing the paved road length to 41.8% of the total network by 2030. This is a 3.4% percentage point improvement above the Current Path trajectory. Affordable and reliable broadband connectivity can also lead to the expansion of mobile banking services and increased access to finance, which is cited as one of the top constraints to business in the country. The scenario therefore expands broadband connectivity by increasing mobile broadband adoption to reach 107.5 subscriptions per 100 people by 2030, an increase of 19.2 subscriptions from the projected 88.3 subscriptions in the Current Path forecast. Fixed broadband subscriptions are also prioritised and reach 15 subscriptions per 100 people by 2030 — a slight increase from the projected 13 subscriptions in the Current Path forecast.
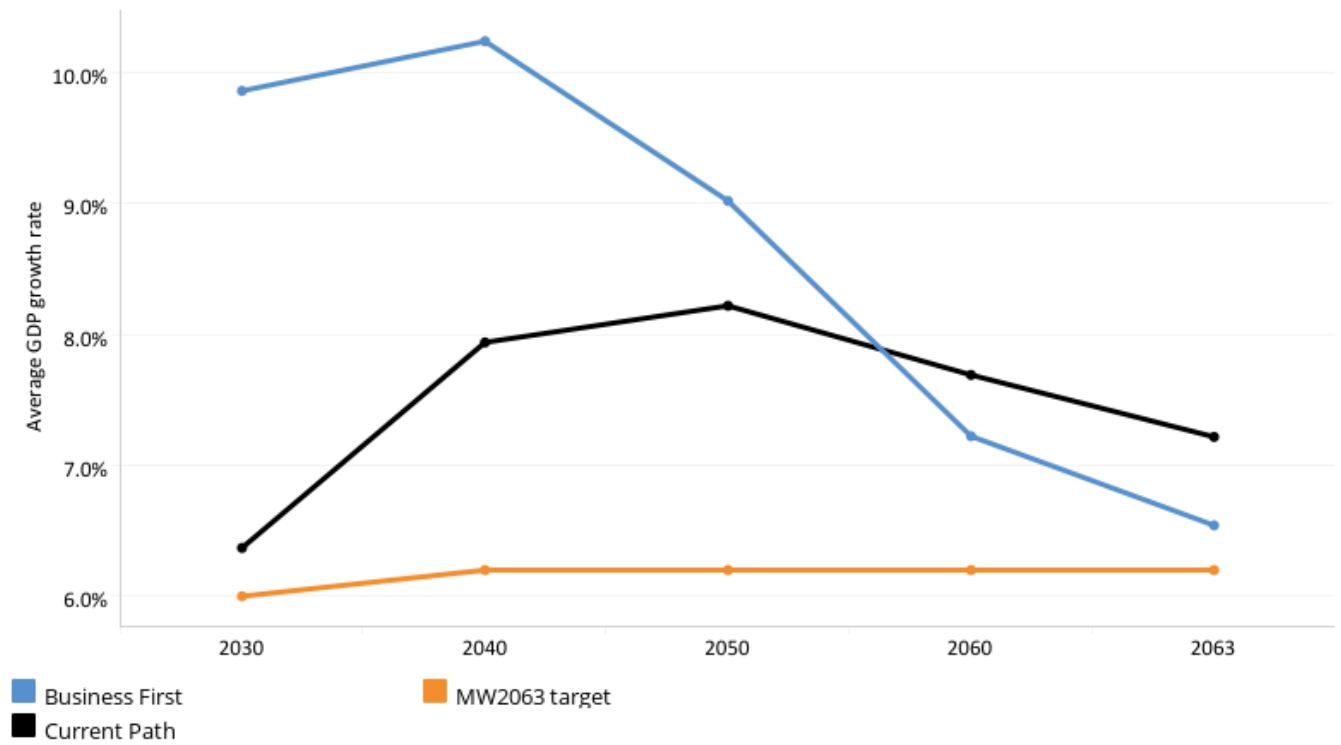
The Business First scenario also simulates improvements in domestic and foreign direct investment in the Malawian economy by an improved business environment that attracts more investors. Foreign direct investment (FDI) is not a panacea for development but can contribute to changing the future of Malawi as it brings much needed capital and technologies. In this scenario, FDI flows to Malawi reach 4.3% of GDP by 2030 (similar to Togo in 2005). The Current Path forecast in 2030 is 3.3% of GDP. We also increased domestic investment in all the sectors of the economy. Domestic investment as a share of GDP in Malawi is lower than in countries such as Uganda, Ethiopia and Mozambique. Investment in the manufacturing sector, for instance, is expected to increase to 5.5% of GDP by 2030, whereas the Current Path forecast in 2030 is 3.7% of GDP.

The Business First scenario also improves export diversification by increasing manufacturing and mining exports in line with MW2063. The mining sector remains an area of potential economic diversification through which Malawi could increase its exports. The scenario increases government spending on research and development (R&D) activities, which is particularly low in Malawi, to support the country's move up the agro-processing ladder. This scenario assumes that mining exports will increase by 60% by 2030, and manufacturing exports will increase by 5% to reach 20% of GDP by 2030. This is a 2.4% percentage point increase above the Current Path forecast by 2030. Also, government spending on R&D activities doubles to 0.07% of GDP by 2030 (the Current Path forecast in 2030 is 0.035% of GDP).

The government of Malawi, through its secondary cities plan, has recognised the important role that urbanisation will play in getting Malawi to middle-income status, and the need to accelerate urbanisation is well supported as Pillar 3 in MW2063. The scenario assumes therefore that the government implements the Malawi Secondary Cities Plan (MSCP) with rigour and urgency and increases the urbanisation rate from the expected 19.9% in the Current Path forecast to 25% by 2030.

## Chart 49: Average GDP growth rates in the Business First scenario

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Legend:
- Business First (blue)
- Current Path (black)
- MW2063 target (orange)

Source: Forecast in IFs, version 7.84

⁜ View on Tableau Public    ↶ ↷ ↺ ↻ ▼ | 🖵▼ ⛶ ⤴ Share

**Impact**

If the Business First scenario materialises, the average growth rate between 2022 and 2030 reaches 7%, two percentage points above the Current Path forecast, and one percentage point above the MIP-1 target (see Chart 49). The GDP per capita (PPP and 2017 constant US$) is US$1 827 by 2030, US$185 above the Current Path forecast. The share of the manufacturing sector in GDP is 17.4% by 2030, above the MIP-1 target of 12.6%. These imply that the Business First scenario has the potential to enhance industrialisation and lead to more wealth creation

## Chart 50: Progress towards some key SDGs and MIP-1 targets: Current Path vs Business First scenario

| Focus area | SDG /MIP-1 indicators | |
|---|---|---|
| MIP-1 Focus area: Inclusive Wealth Creation / SDG Goal 1 | SDG Indicator 1.1.1b - % of population below $1.90 per day. | |
| | GINI Coefficient | |
| MIP-1 Focus Area: Health & Nutrition / SDG Goal 2 & 3 | SDG Indicator 3.2.2 - Infant mortality rate (per 1000 live births) | |
| | SDG Indicator 2.1.1a - % of undernourished population | |
| | SDG Indicator 2.2.1 - Stunting among children below 5 years of age | |
| | SDG Indicator 3.1.1 - Maternal mortality rate per 100,000 live births | |
| | SDG Indicator 3.2.1 - Under five mortality rate per 1000 | |
| | SDG Indicator 3.7.1 - Contraception use as % of fertile women | |
| | MIP-1 outcome - Managing population growth: Fertility rates (National) | |
| MIP-1 Focus Area: Education & Skills Development / SDG Goal 4 | SDG Indicator 4.1.1c - Primary education gross completion rate - Total | |
| | SDG Indicator 4.1.1e - Lower secondary education graduation rate - Total | |
| | SDG Indicator 4.1.1g - Upper secondary education graduation rate - Total | |
| | MIP-1 outcome - Improved literacy levels | |
| MIP-1 Focus Area: Water, Sanitation and Hygiene (WASH) / SDG Goal 6 | SDG Indicator 6.1.1 - % of people with access to improved water | |
| | SDG Indicator 6.2.1 - % of people with access to improved sanitation | |
| MIP-1 Focus Area: Energy Generation and Supply | SDG Indicator 7.1.1 - % of population with access to electricity - Total | |

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

The poverty rate at US$1.90 remains high at 54.4% by 2030, 2.2 percentage points above the Current Path forecast of 52.6%. This translates to 42 000 more poor people than the Current Path forecast in 2030. The reason for the initial increase in extreme poverty is because economic transformation/industrialisation is funded by an initial crunch in consumption that slows the progress towards attaining the SDG targets in the first few years, especially those related to human development (Chart 50). Investment aimed at developing non-resources sectors such as manufacturing take time, often decades, to yield expected results. This is typically associated with short- to medium-term costs relating to poverty or consumption. For instance, in the scenario, household consumption will represent 66.7% of GDP by 2030 compared to 78.7% on the Current Path. However, in the long term, the Business First scenario generates inclusive wealth creation. The average growth rate between 2030 and 2040 is 10.2% compared with 7.3% on the Current Path. This inclusive wealth creation lifts an additional 2.4 million people out of poverty compared to the Current Path forecast in 2040.
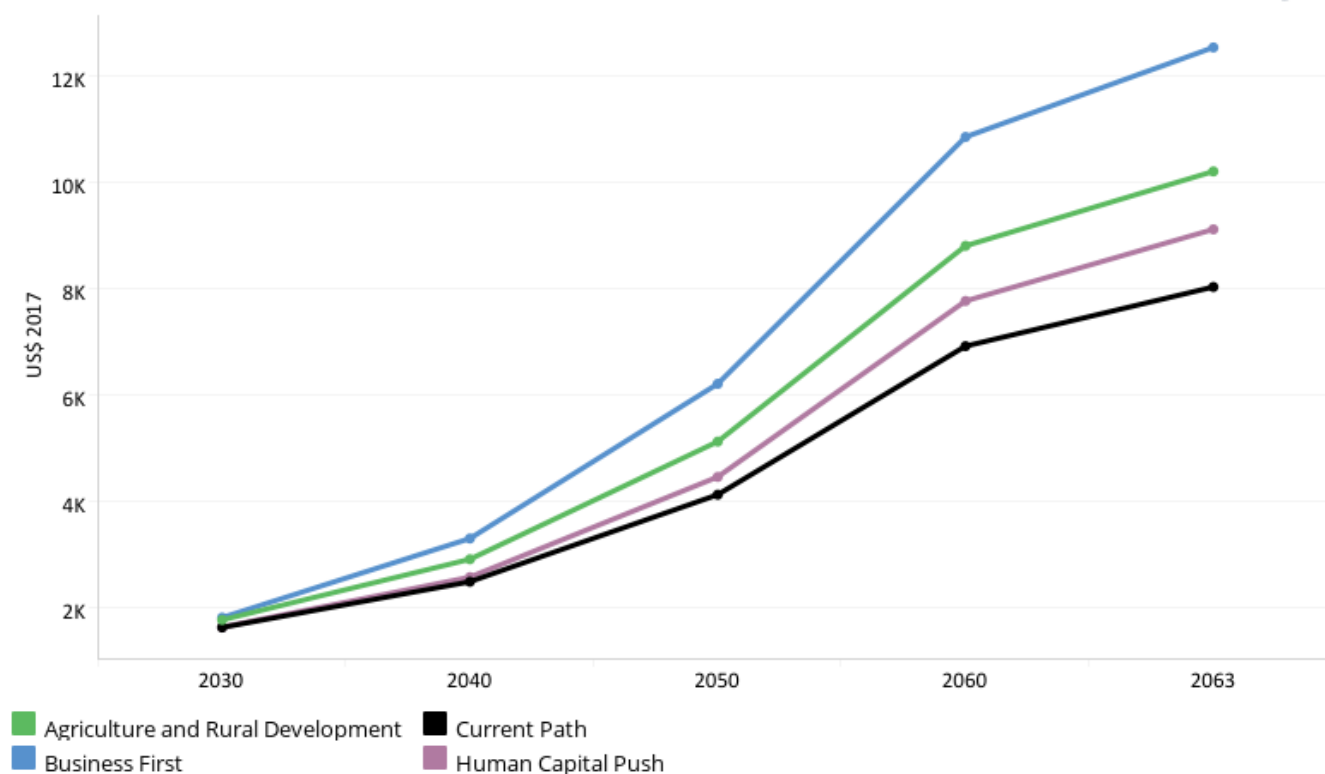
Overall, the findings show that the materialisation of the Business First scenario could generate high inclusive growth rates in the long term and improve human and economic development in Malawi. However, alone, the scenario is unlikely to help Malawi achieve most of the SDG targets by 2030, and the country is unlikely to graduate to lower middle-income status by 2030 and to upper middle-income level by 2063. This scenario alone could graduate Malawi to lower middle-income status by 2034, but it will miss the upper middle-income threshold by a small margin by 2063.

## Comparing scenario impact

### Chart 51: GDP per capita (PPP) in each scenario



**Legend:**
- Agriculture and Rural Development (green)
- Business First (blue)
- Current Path (black)
- Human Capital Push (purple)

Source: Forecast in IFs, version 7.84

View on Tableau Public     Share

All the scenarios contribute to wealth creation as GDP per capita increases in each scenario relative to the Current Path, shown in Chart 51. The Business First scenario has the biggest impact on GDP per capita by 2030 and by 2063 but falls behind in achieving human capital targets. The GDP per capita (PPP and 2017 constant US$) is US$1 827 in 2030, and US$12 524 in 2063. The Agriculture and Rural Development scenario has the second biggest impact on GDP per capita by 2030 and by 2063 and has the biggest impact on inclusive wealth creation in the short to medium term. The GDP per capita is US$1 782 by 2030 and US$10 198 by 2063, US$140 above the Current Path forecast in 2030, and US$2 168 above the Current Path in 2063. The GDP per capita in the Human Capital Push scenario improves marginally (US$43.5) above the Current Path in 2030 but many of the critical human capital targets are significantly improved. However, in 2063 it gets to US$9 247, which is US$1 217 above the Current Path forecast. The effect of investment in human capital on wealth creation appears in the long term. Overall, none of the individual scenarios is likely to graduate Malawi to lower middle-income status by 2030 and to upper middle-income level by 2063.

## Chart 52: Extreme poverty at US$1.90 in each scenario
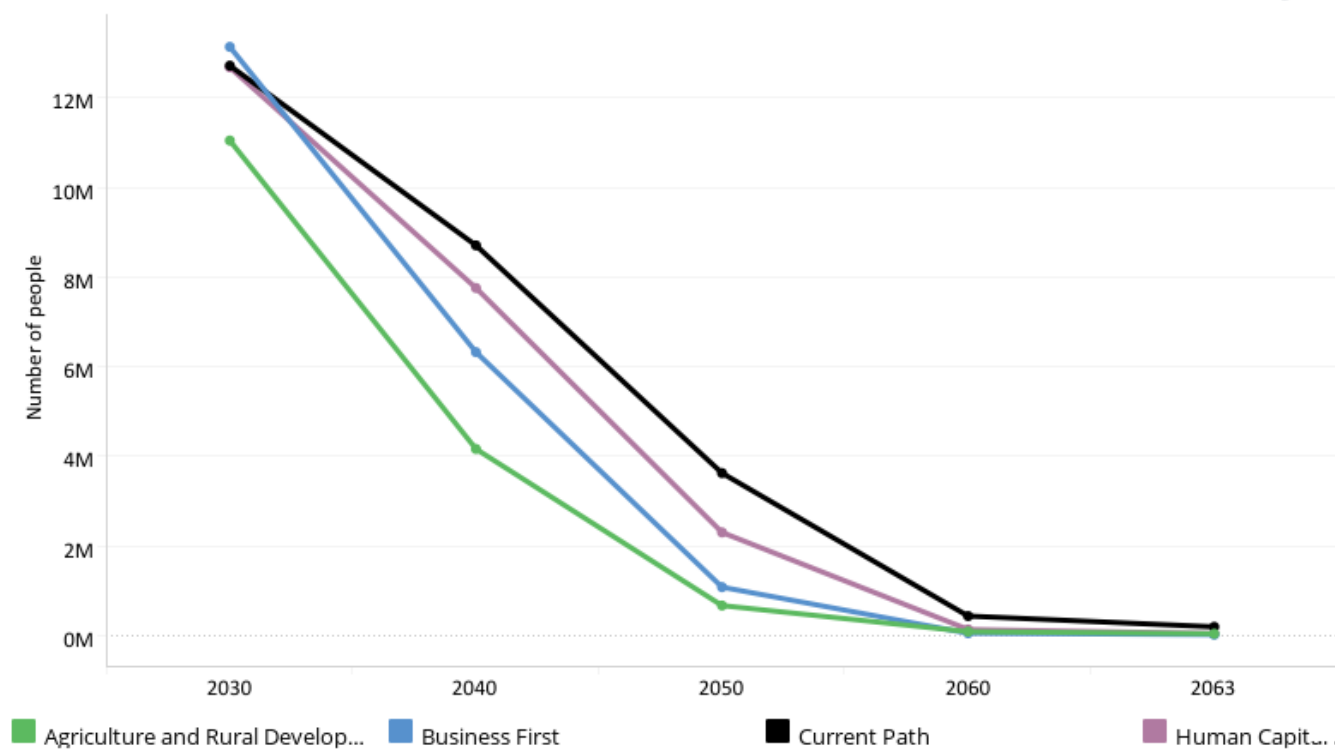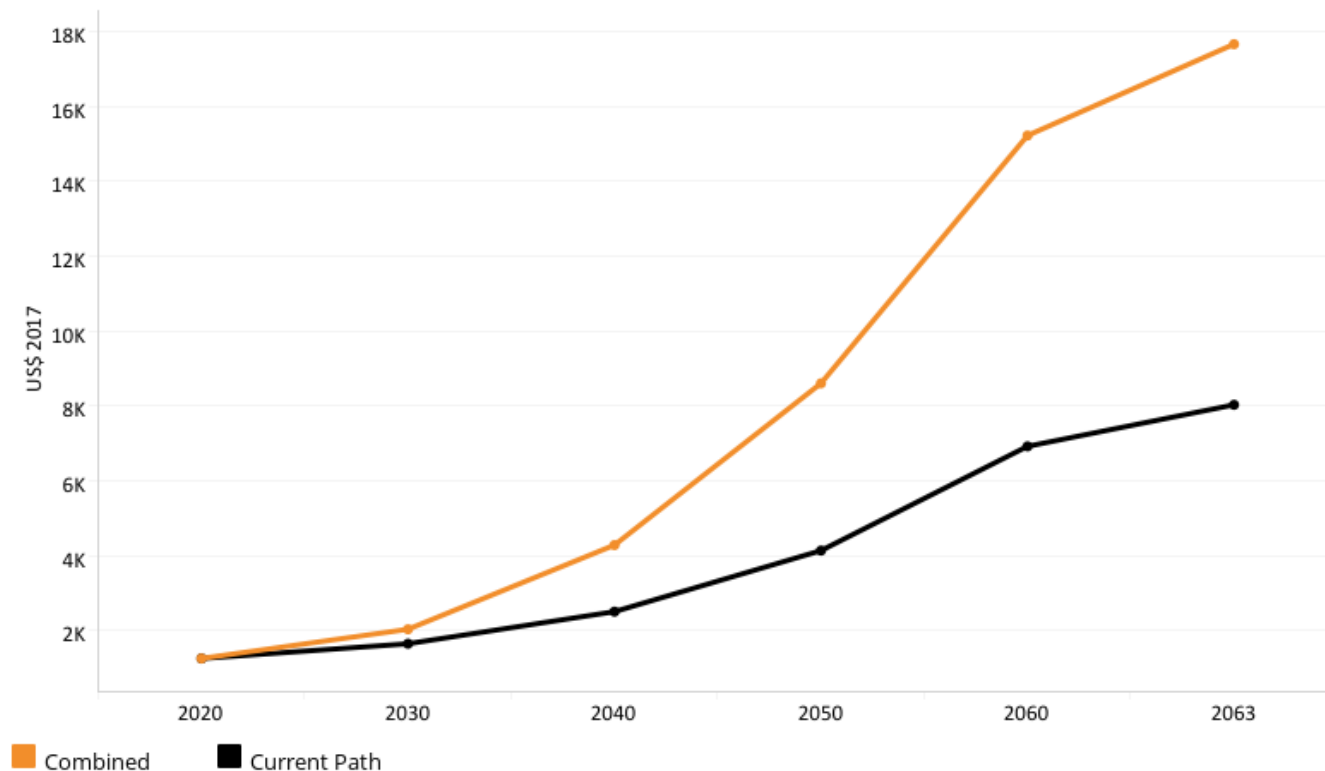


Source: Forecast in IFs, version 7.84

Chart 52 shows that all the scenarios lead to inclusive wealth creation as the poverty rate in each scenario is lower than the Current Path forecast. However, between 2023 and 2050, the Agriculture and Rural Development scenario leads to more inclusive wealth creation as it has the lowest number of people living in poverty. It is followed by the Human Capital scenario, which is the closest to achieving the SDG targets relative to human development.

In the initial 10 years of intervention, the number of extremely poor people in the Business First scenario is slightly above the Current Path (see Chart 52). This is because resources and investments are diverted to more capital and knowledge-intensive sectors, which lead to an initial crunch in consumption. Growth-enhancing structural transformation is one of the key mechanisms through which developing countries can accelerate economic growth. However, early development economists, such as Simon Kuznets, find that structural transformation can increase consumption inequality. If the Business First scenario were to materialise, Malawi could experience increased consumption inequality over the first 10 years. However, in the long term, these efforts stimulate more rapid inclusive wealth creation. For instance, the poverty rate by 2045 in the scenario is 9.8% compared to 19.7% on the Current Path. This translates to 3.2 million fewer poor people than the Current Path forecast. In the long term (from 2060), the Business First scenario has the lowest number of extremely poor people surviving under US$1.90 per day.

## The Combined scenario/MW2063 scenario

### Chart 53: GDP per capita (PPP) – Combined scenario vs the Current Path



Source: Forecast in IFs, version 7.84

⁂ View on Tableau Public                                    Share

The three scenarios have significant synergy and complementarity between them. For instance, human capital development is a key enabler for industrialisation and economic diversification. Increasing agricultural production and commercialisation can also pave the way for manufacturing through agro-processing, and improving access to broadband connectivity and the associated digitalisation can help connect small agricultural producers to large vendors. A Combined scenario could therefore be the best option to achieve most of Malawi's development objectives as set out in MW2063. The Combined scenario comprises all the MW2063 pillars: agriculture productivity and commercialisation, urbanisation, and industrialisation, and the enablers: effective governance systems and institutions, enhanced public sector performance, private sector dynamism, human capital development, economic infrastructure, and environmental sustainability.

Chart 53 shows the impact of the optimistic Combined scenario on GDP per capita compared to the Current Path. The materialisation of the Combined scenario would lead to an average growth rate of 8.5% between 2022 and 2030, 3.5 percentage points above the Current Path over the same period. This rate is high but not unprecedented in low-income African countries. Ethiopia achieved an average growth rate of 10.6% from 2005 to 2014, and Rwanda achieved an average growth rate of 8.3% from 2004 to 2012. Malawi achieved an annual average growth rate of 7.2% over the period 1971 to 1978, largely enabled by its agricultural exports. The scenario represents a coordinated push across the MW2063 pillars and would enable Malawi to achieve many of its targets and goals (MIP-1, SDG and MW2063). This scenario is therefore

aggressive but possible for Malawi even though the monetary cost to shoulder would undoubtedly be high. Funding would require international donor assistance, foreign investors and efforts to enhance domestic revenue mobilisation combined with effective implementation.

In the Combined scenario, GDP per capita (PPP) is US$2 029 by 2030 (US$387 higher than the Current Path forecast) and US$17 669 by 2063 (US$9 639 more than the Current Path forecast). If the optimistic Combined scenario were to materialise, Malawi could graduate to lower middle-income status by 2032[10] and achieve upper middle-income status in 2058.



Chart 54: Extreme poverty at US$1.90 – Combined scenario vs the Current Path
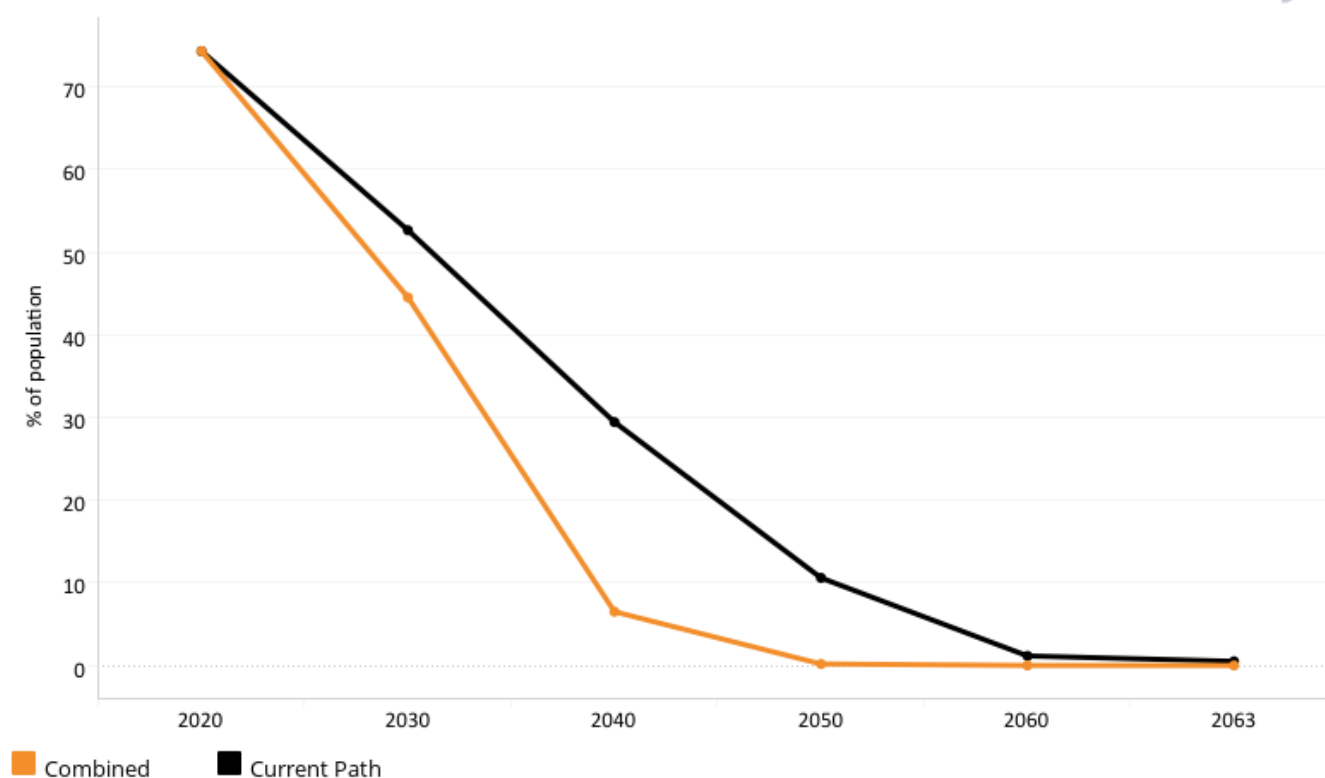
Source: Forecast in IFs, version 7.84

The Combined scenario leads to more inclusive wealth creation, especially in the long term. The poverty rate is 44.5% by 2030, eight percentage points below the Current Path forecast. It reaches 6.5% in 2040 compared to 29.4% on the Current Path. Malawi eventually achieves the elimination of extreme poverty (defined as the rate below 3% of the population) in 2043, 14 years earlier than the Current Path forecast.

## Chart 55: Progress towards some key SDGs and MIP-1 targets: Current Path vs Combined scenario

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| Focus area | SDG /MIP-1 indicators | C |
|---|---|---|
| MIP-1 Focus Area: Inclusive Wealth Creation / SDG Goal 1 | SDG Indicator 1.1.1b - % of population below $1.90 per day. | |
| | GINI Coefficient | |
| MIP-1 Focus Area: Health & Nutrition / SDG Goal 2 & 3 | SDG Indicator 2.1.1a - % of undernourished population | |
| | SDG Indicator 2.2.1 - Stunting among children below 5 years of age | |
| | SDG Indicator 3.1.1 - Maternal mortality rate per 100,000 live births | |
| | SDG Indicator 3.2.1 - Under five mortality rate per 1000 | |
| | SDG Indicator 3.2.2 - Infant mortality rate (per 1000 live births) | |
| | SDG Indicator 3.7.1 - Contraception use as % of fertile women | |
| | MIP-1 outcome - Managing population growth: Fertility rates (National) | |
| MIP-1 Focus Area: Education & Skills Development / SDG Goal 4 | SDG Indicator 4.1.1c - Primary education gross completion rate - Total | |
| | SDG Indicator 4.1.1e - Lower secondary education graduation rate - Total | |
| | SDG Indicator 4.1.1g - Upper secondary education graduation rate - Total | |
| | SDG Indicator 4.5.1i - Upper secondary education gross enrolment rate parity index (femal.. | |
| | SDG Indicator 4.5.1k - Years of education for population 15+ parity index (female/male) | |
| MIP-1 Focus Area: Water, Sanitation and Hygiene (WASH) / SDG Goal 6 | SDG Indicator 6.1.1 - % of people with access to improved water | |
| | SDG Indicator 6.2.1 - % of people with access to improved sanitation | |
| MIP-1 Focus Area: Energy Generation and Supply | SDG Indicator 7.1.1 - % of population with access to electricity - Total | |

⁜ View on Tableau Public    ↶ ↷ ↰ ↱ ▾ | ⬇▾ ⛶ ⅋ Share

Chart 55 displays the impact of the Combined scenario on meeting some of the key SDG and MIP-1 targets.

*Risks*

The forecasts presented in these reports are subject to an array of risks. First, export disruptions by Ukraine or Russia could again interrupt global grain supplies which will further increase food prices. Second, additional increases in energy prices or a global recession next year could reduce exports and result in a sharp decline in commodity prices with a negative effect on growth. Third, adverse weather patterns can reduce yields and undermine growth and food security. To some extent, the IFs forecasts capture the impact of some recent shocks, reflected in the use of averages from recent years. In addition, it is possible to model the impact of these shocks in IFs if and when they occu

# Endnotes

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