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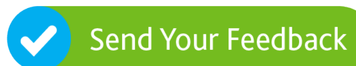

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Sovereigns – Sub-Saharan Africa

Demographics' boost to growth particularly powerful if amplified by productivity gains

Summary

Working-age populations in most Sub-Saharan African (SSA) countries will increase over the next several decades, supporting higher rates of economic growth. If paired with structural reforms that increase productivity, a growing workforce with a smaller dependent population can produce significantly higher real GDP growth rates, reducing poverty and inequality. But insufficient job creation would aggravate already high social risks.

» **Demographics have potential to boost GDP growth.** A growing workforce can spur higher rates of economic growth. However, the benefits to growth and livelihoods depend on other factors that increase human capital and employment opportunities. Higher economic growth, particularly if accompanied by a shift to higher-value-added output, would increase government tax collection, creating a larger revenue base to service debt.

» **Contribution to economic growth can be significant.** We estimate the increase in the working-age population will contribute about 0.3 percentage points to annual GDP growth in 2025-40 for rated SSA sovereigns, holding other factors constant. For countries such as Uganda (B2 negative), where the percentage of the population that is above or below working age will decrease most, the boost to growth could be 0.7 percentage points or higher. Other countries like Mali (Caa2 stable), Rwanda (B2 stable), Tanzania (B1 stable) and Ethiopia (Caa3 stable) could also experience significant growth from demographics. And increased productivity would boost economic growth further.

» **Improvements to institutions and infrastructure facilitate productivity growth but are difficult to achieve.** Rwanda, Senegal (Ba3 stable), Côte d'Ivoire (Ba2 stable) and Benin (B1 stable) are among SSA sovereigns that have strong institutions. But most SSA sovereigns have weak institutions, which limits their ability to implement productivity-enhancing reforms that can amplify the demographics-driven boost to economic growth. And while the sophistication of transport infrastructure can bolster sovereigns' export competitiveness and trade gains, structural bottlenecks can constrain productivity growth.

» **Growth in young, working-age population without adequate job creation could worsen social risks.**SSA sovereigns' credit profile will benefit from a growing labor force only if workers are deployed into productive sectors. The high share of informal employment and existing social and governance risks may limit real GDP growth in the coming decades.

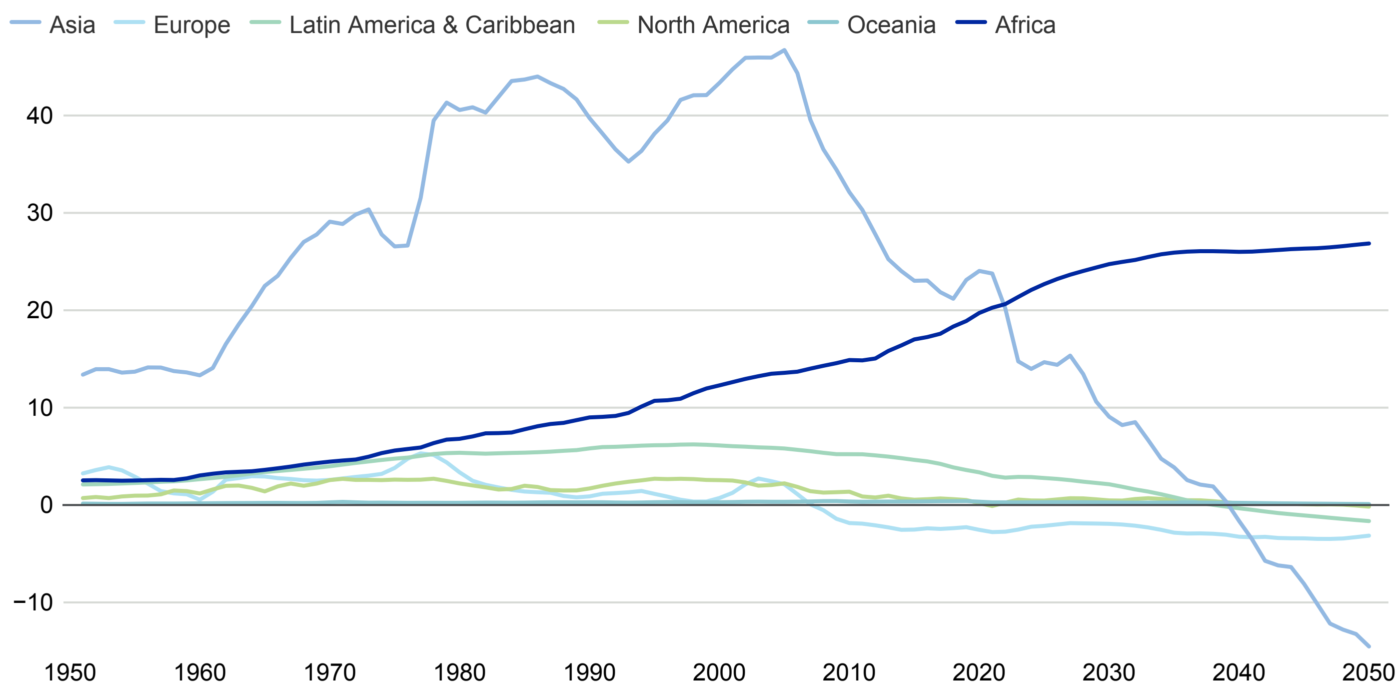
Demographics have potential to boost economic growth

SSA has one of the youngest populations globally and will increasingly be a key source of growth in the global working-age population (Exhibit 1). A growing pool of workers – if productively employed – has the potential to boost countries' economic growth. Uganda, Mali, Mozambique (Caa2 stable) and Angola (B3 positive) are among the SSA countries that will experience the largest increases in their working-age populations during the coming 15 years.

Exhibit 1

Number of working-age individuals is increasing in Africa but decreasing or stagnating elsewhere in the world

Annual change in working-age population (millions)



Sources: UN World Population Prospects and Moody's Ratings

The population of rated SSA sovereigns will increase to 1.4 billion by 2040, up 40% from 1 billion in 2025, according to United Nations projections. This growth will be driven by an increase in the working-age population (ages 15-65) since individuals below this age range account for 41% of the total population across rated SSA sovereigns and up to 49% in countries like Niger (Caa3 stable). Growth in the working-age population, combined with the decrease in SSA fertility and infant mortality rates, means the share of the SSA population that is too young or too old to work (the dependency ratio) is decreasing.[1]

The benefits to economic growth from these demographic changes come directly from gains in the labor supply and indirectly through increases in economywide savings and hence investments that are typically associated with a declining dependency ratio. Higher real GDP growth, especially if driven by growth in higher-value-added sectors, increases government revenue collection from taxes. Higher revenue supports sovereigns' credit strength by financing additional spending – for example on infrastructure and the provision of basic services – thereby reducing borrowing needs and debt burdens.

Additionally, a young working-age population with access to new technologies such as generative artificial intelligence can bring fresh ideas, innovation and an entrepreneurial spirit, which can stimulate the economy and drive job creation in higher-paying sectors, leading to a virtuous cycle of employment and economic growth. But if such job creation does not match the population growth and if existing social pressures continue to weigh on GDP growth, the benefits from the larger pool of working-age individuals will be limited.

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Contribution to economic growth can be significant

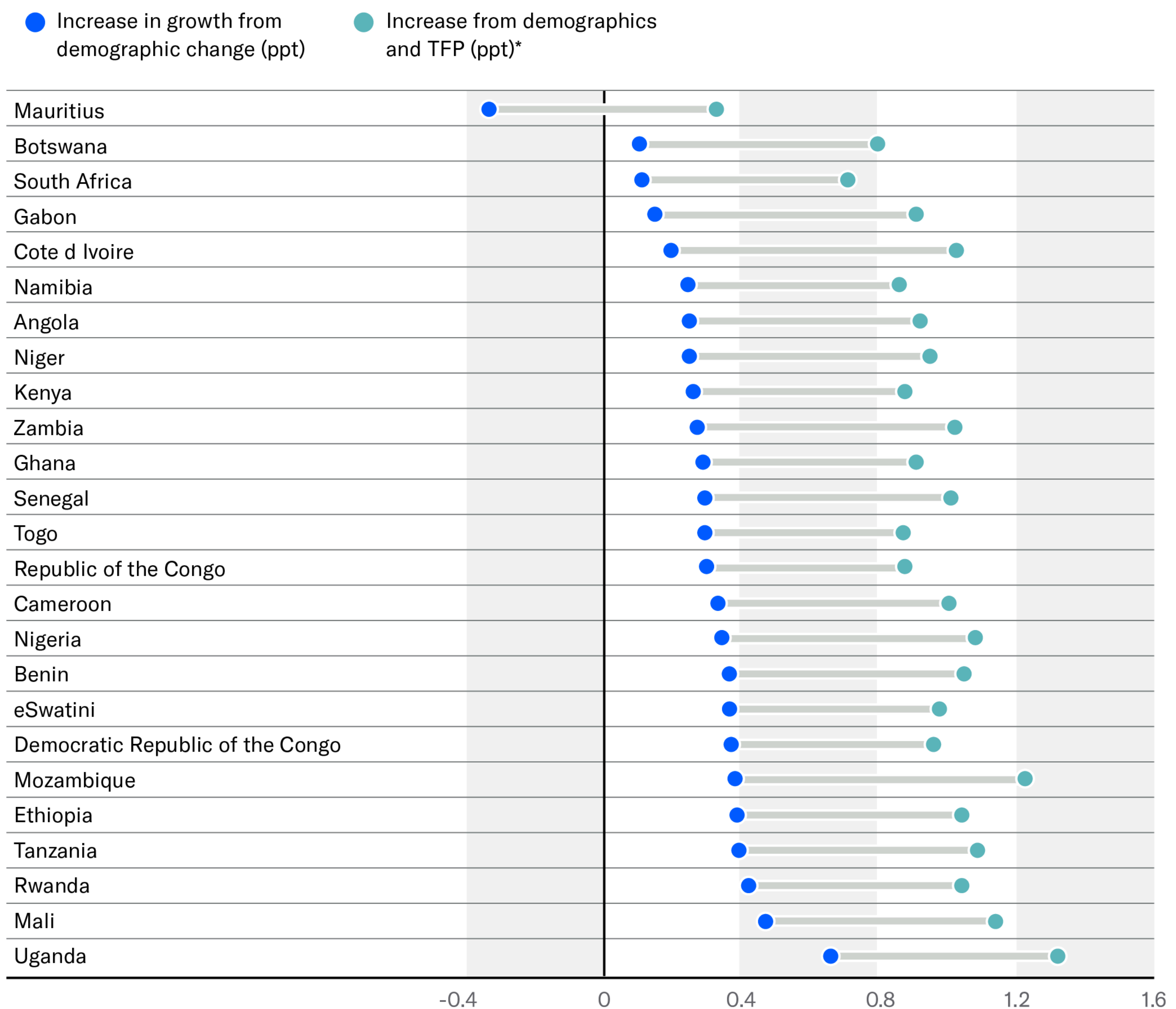
Holding all other factors equal, we project the upcoming demographic shift could add about 0.3 percentage points to average annual economic growth across rated SSA sovereigns over the coming 15 years (2025-40), with the largest increases in countries experiencing the most significant working-age population growth. (See highlight box at bottom of report for detail on our calculations.)

For instance, demographic factors alone have the potential to boost economic growth in Uganda by 0.7 percentage points. In Mali, Rwanda, Tanzania and Ethiopia – among the countries that will experience the largest increase in the working-age population – demographic factors alone could boost economic growth by 0.3 percentage points per year. The effect of demographic factors on real GDP growth would be amplified if SSA sovereigns can increase productivity (Exhibit 2).

Exhibit 2

Increased productivity would boost economic growth more than an increase in the working-age population alone

Change in average real GDP growth (ppt)



*Increase in growth from demographic change captures the change directly attributed to growth in the working-age population. Increased growth from total factor productivity (TFP) captures the effect of TFP growth that is 0.5 percentage points higher per annum than the 20-year average.

Sources: PENN World Tables, UN and Moody's Ratings

Over a 15-year period, a 0.3% annual boost to GDP from demographics would increase income per capita about 4% (compared with income growth without the demographics-driven GDP boost). The boost to GDP and income would be even higher if growth in the working-age population of SSA sovereigns is combined with higher productivity growth: we estimate average real GDP growth rates could increase by 1% – more than four times faster than from demographic factors alone. That would translate into a 15% increase in income per capita over the 15-year period. Productivity can increase from a number of factors including education and human capital, technological progress, infrastructure development, institutional reforms and labor market flexibility.

Mauritius (Baa3 stable) is an outlier in SSA because it has an aging population, making its demographics situation more similar to that in many advanced economies. For most advanced economies with aging populations, policymakers are targeting productivity improvements to offset a lower contribution of labor to real GDP growth. We believe Mauritius will avoid a sharp reduction in real GDP growth rates from its aging population. The country has demonstrated an ability to adapt to external shocks and to transform its economic structure to boost income levels over multiple decades. For example, it has taken steps to attract foreign workers by increasing the number and duration of occupation permits. An increase in foreign workers can address skill mismatches that are a constraint for financial services and other service-oriented sectors, and offset negative demographic pressures. Additionally, the government is implementing policies to increase low female participation rates in the labor market, for example, by providing incentives to corporations that support child care centers.

Institution, infrastructure improvements facilitate productivity growth but are difficult to achieve

Strong institutions and infrastructure, along with favorable demographic shifts, can help countries boost productivity. While the demographic changes projected over the next two to three decades are more or less assured, the effect on economic growth is much less certain. The capability to leverage population growth with productivity-enhancing reforms is constrained by many SSAs' relatively weak institutions.

Institutions include the legal system (for example, the protection of property rights) and the political system (the level of political stability) – both of which affect macroeconomic stability. The strength of institutions can influence the ability of businesses to grow and create jobs, and the ability of workers to find and keep jobs.

Rwanda, Senegal, Côte d'Ivoire and Benin are among the SSA sovereigns we assess as having relatively strong institutions. Countries like Tanzania and Kenya (B3 negative) could also translate favorable demographics into higher real GDP growth rates given their moderately strong institutions.

Additionally, the sophistication of transport infrastructure, such as roads, airport and seaports, can bolster export competitiveness and trade gains. And increased domestic connectivity can foster inclusive growth and facilitate migration from rural to urban areas.

Southern African countries like South Africa (Ba2 stable), Botswana (A3 stable) and Namibia (B1 positive) have relatively well-developed infrastructure capacity, according to the World Bank's Logistics Performance Index (LPI),[2] which provides a composite measure of a country's logistics. But structural bottlenecks to the labor and product markets have constrained productivity growth. These countries will also experience smaller increases in the share of the working-age population over the next 15 years, limiting the economic benefits from demographics.

Countries like Rwanda, Tanzania and Kenya in East Africa, and Benin and Côte d'Ivoire in West Africa, have better infrastructure capacity than many other SSA sovereigns and have shown productivity growth improvements. These factors mean they could increase the growth impulse from demographics. Projects like the Bagamoyo Port in Tanzania and Rwanda's major road rehabilitation projects aim to reduce congestion and handling costs, and increase trade capacity.

Growth in young, working-age population without adequate job creation could worsen social risks

While demographics, infrastructure and institutions have the potential to support SSA sovereigns' economic growth and credit quality, other factors are constraints. For example, we assess sovereigns' credit exposure to six social risks, including demographics, under our ESG methodology. For most SSA sovereigns, credit exposure to demographics – which encompasses more than just the size of the working-age population – is moderate or not material. But SSA sovereigns' credit exposure to other social risks – including access to education and income equality – is mostly high or very high (Exhibit 3). These exposures weigh on economic growth and can stoke social tensions.

Exhibit 3

Exposure to social risks, infrastructure and institutional weaknesses constrain productivity growth, limiting gains from demographics

ESG scoring, key: Very high exposure; High exposure; Moderate exposure; Not material

Strength: Weaker - Stronger (1 = weakest to 5 = strongest)

Countries	Social IPS	Demo-graphics	Access to Basic Services	Education	Health and Safety	Housing	Labor and Income	Logis-tics*	Institu-tions*	Working-age population (%) 2025	'40	Change (ppt)
Angola	Very high	Moderate	Very high	Very high	High	High	Very high	5	4	51	56	▲
Benin	High	Moderate	Very high	High	High	High	High	4	3	53	57	▲
Botswana	High	Not material	High	Moderate	High	Moderate	High	2	1	62	64	▲
Cote d Ivoire	High	High	High	High	High	Moderate	High	3	2	56	58	▲
Cameroon	Very high	Moderate	High	High	Very high	High	Moderate	5	4	54	58	▲
Democratic Republic of the Congo	Very high	High	Very high	Very high	Very high	Very high	Very high	5	5	49	53	▲
Republic of the Congo	Very high	Not material	High	High	High	High	Very high	5	5	56	58	▲
Ethiopia	Very high	Moderate	Very high	High	Very high	Very high	High	5	4	56	60	▲
Gabon	High	Not material	Moderate	High	Moderate	Moderate	High	5	5	58	61	▲
Ghana	High	Moderate	Moderate	High	Moderate	High	High	4	5	58	61	▲
Kenya	High	Not material	High	Moderate	High	High	Very high	4	3	59	61	▲
Mali	Very high	High	Very high	Very high	Very high	High	Very high	5	5	50	54	▲
Mozambique	Very high	Moderate	Very high	Very high	Very high	High	High	5	5	53	58	▲
Mauritius	Not material	Moderate	Moderate	Not material	Not material	Not material	Not material	4	1	63	58	▼
Namibia	High	Moderate	High	High	High	High	Very high	3	2	58	61	▲
Niger	Very high	High	Very high	Very high	Very high	High	High	5	5	48	51	▲
Nigeria	Very high	Moderate	Very high	Very high	Very high	High	Very high	4	5	53	57	▲
Rwanda	High	Not material	Very high	High	Moderate	High	Very high	3	2	57	61	▲
Senegal	High	Moderate	High	High	High	Moderate	Moderate	5	2	55	58	▲
eSwatini	Very high	Not material	High	Moderate	High	Moderate	Very high		5	60	64	▲
Togo	High	Moderate	Very high	High	High	Moderate	High	5	4	56	58	▲
Tanzania	Very high	Moderate	Very high	Very high	High	High	Moderate	3	3	53	57	▲
Uganda	Very high	Not material	Very high	Very high	High	High	Very high	5	4	53	60	▲
South Africa	High	Not material	Moderate	Moderate	High	Moderate	Very high	1	1	63	65	▲
Zambia	Very high	Not material	Very high	High	High	High	Very high	5	5	55	59	▲

*"Logistics" represents the latest scores on the World Bank's Logistics Performance Index - Quality of Trade and Transport-related Infrastructure. "Institutions" represents our assessment of institutions and governance strength under our Rating Methodology: Sovereigns. The shading is a qualitative depiction of the quantitative scores for both logistics and institutions.
Sources: World Bank, UN and Moody's Ratings

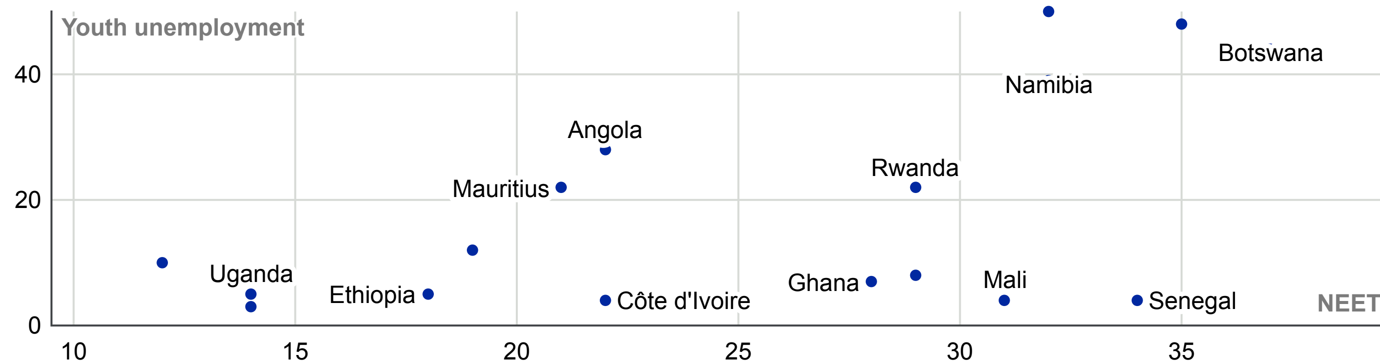
The benefits to growth from demographics will depend on the existence of suitable jobs for the expanding working-age population. Without a vibrant and growing economy that can absorb these workers into productive employment, growth of the working-age population can lead to increased underemployment and social instability. SSA sovereigns will benefit from a growing labor force only if workers are deployed into productive sectors.

In addition Southern African countries like South Africa, Botswana, Namibia, Senegal, Angola, Rwanda and eSwatini (B3 positive) have high rates of youth that are not in employment, education or training (NEET), partly reflecting disparities in female labor force participation rates and educational attainment (Exhibit 4).

Exhibit 4

Large number of youth unemployed or outside labor market reflects structural challenges that may limit demographics-driven GDP boost

Youth unemployment (%), and youth not in employment, education or training (%)



Sources: International Labor Organization, World Bank and Moody's Ratings

Estimating the effect of demographics on economic growth in SSA

In this report, we estimate the effect of demographic changes on economic growth by estimating real GDP growth based on several factors – productivity, human capital, demographics, labor force participation rates and capital accumulation. To estimate the effect from changes in the population and working-age population, we use demographic projections from the United Nations. The model allows us to estimate the effect of changes in the size and composition of the population on economic growth, while controlling for other factors.

Economic growth is the sum of total factor productivity growth (TFP) and the growth rate in human capital and working-age population plus capital accumulation, assuming a country's investment-to-GDP ratio remains unchanged. Using long-term assumptions for productivity and human capital growth rates, capital depreciation rates and an initial capital stock, we then calculate real GDP growth rates for 2025 to 2040 assuming no change in the population and compare those to real GDP growth rates using the UN population forecasts. For some countries without data on productivity or human capital growth, we used proxy values based on countries with similar levels of income.

» We assume productivity growth (TFP) and human capital growth are in line with their long-term trends. This means that changes in productivity or human capital are not due to recent policy changes or economic events.

» With an initial capital-output ratio, we hold investment-to-GDP constant and allow for capital depreciation in line with its long-term trend. When GDP per worker grows faster than capital per worker, the capital-output ratio declines, meaning investment becomes more efficient.

» We compare average real GDP growth rates based on no change in the population or size of the working-age population against an alternative using the UN population forecasts. In each scenario, we assume employment-to-population labor force participation (% of working-age population) remains unchanged. This assumes that new entrants into the working age population find employment at a rate that doesn't change the employment-to-population ratio.

Endnotes

1 The dependency ratio is the percentage of the population below the age 15 and above the age of 64.

2 The World Bank's Logistics Performance Index (LPI) is a comprehensive benchmarking tool that provides an evaluative measure of countries' logistics performance. The LPI is based on survey responses to questions capturing critical aspects of the logistics environment such as infrastructure, quality of service, shipment reliability, and overall efficiency.

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