BOX 2.6.1 Potential growth in Sub-Saharan Africa

Sub-Saharan Africa's potential growth rose following the global financial crisis, above its long-term and pre-crisis averages, due to increases in the working-age population and capital stock accumulation. Notwithstanding these recent gains, potential growth could slow in the next decade, as labor force growth stagnates and capital accumulation moderates, which would weigh on per capita incomes and diminish the prospects for poverty reduction. However, structural reforms, including additional investment, stronger health and education improvements, and increased female labor participation, could help ensure that the region's potential growth remains robust.

Introduction

Sub-Saharan Africa (SSA)'s potential growth rose in the post-crisis (2013-17) period, above its long-term (1998-2017) and pre-crisis (2003-07) averages, and also above the regional population growth rate, signaling the prospect of gains in per capita incomes in the medium-term. The acceleration in potential growth was mainly due to increases in labor supply, capital stock, and total factor productivity (TFP) growth. Excluding South Africa, potential growth rose at a faster pace, above the emerging market and developing economies (EMDE) average, reflecting a stronger increase in capital accumulation.

Sustained per capita potential growth is critical for continued income convergence and poverty reduction, which is particularly relevant to countries in SSA where an increasing share of the world's poor reside (World Bank 2015e). SSA's prospects for continued and solid potential growth are favorable when South Africa is excluded, suggesting that the positive demographic trends that have recently boosted labor supply growth are likely to continue in the rest of the region, along with steady growth in capital accumulation and TFP.

Against this backdrop, this box will discuss the following questions:

- How has potential growth evolved in the region and what were its main drivers?
- What are the prospects for potential growth in SSA?
- What are the policy options for boosting the region's potential growth?

The box's main conclusions are that—in the absence of reforms—SSA's potential growth is likely to slow from the 3.3 percent rate achieved in the past five years to 3.2 percent in the next decade (2018-27), as growth in labor force stagnates and the rate of capital accumulation moderates, mainly reflecting a slowdown in employment and capital stock growth in South Africa. Such a decline in potential growth would limit the prospects for further gains in per capita incomes and poverty reduction. Excluding South Africa, potential growth in the rest of the region would remain steady at 5 percent a year. This underscores the importance of structural reforms to boost potential growth, including those that spur private investment, skills development, and female labor force participation.

How has potential growth evolved in Sub-Saharan Africa and what were its main drivers?

Potential growth increased in SSA following the global financial crisis to 3.3 percent a year during 2013-17, above its long-term (1998-17) average of 2.9 percent and pre-crisis (2003-07) average of 3 percent (Figure 2.6.1.1). By contrast, potential growth in other EMDE regions slowed sharply. Excluding South Africa, potential growth in the region rose from 3.6 percent a year in the pre-crisis period to 5 percent during 2013-17, above the EMDE average of 4.8 percent. This acceleration reflected the effects of significantly higher public investment and rising labor inputs, which offset the headwinds from a commodity price collapse (2014-15), and a slowdown in major trading partners, including in the Euro Area following the euro crisis (2010-13), and in China as it began rebalancing its economy toward domestic consumption.

The pickup in potential growth can be decomposed into its principal components:

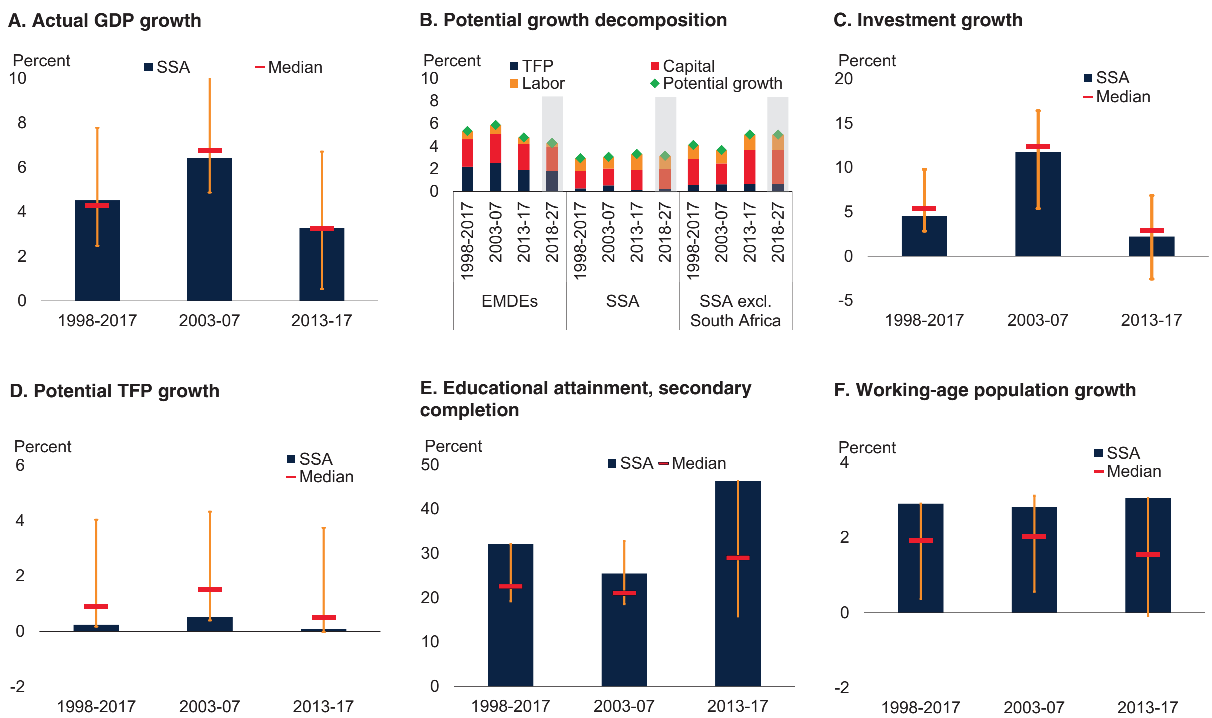
Rapid capital stock growth. Excluding South Africa, capital stock growth rose from 1.8 percent a year in 2003-07 to 2.6 percent in 2008-12. This increase partly reflected the stimulus measures countries in the region adopted to cushion the impact of the global financial crisis and support long-term growth. The impact of the stimulus on investment was amplified by efforts to improve the business environment and support investor confidence (Devarajan and Kasekende 2011). The growth of capital stock picked up to 2.9 percent during 2013-17, reflecting

Note: This box was prepared by Gerard Kambou, Sinem Kilic Celik, and Yirbehogre Modeste Some. Xinghao Gong provided research assistance.

BOX 2.6.1 Potential growth in Sub-Saharan Africa *(continued)*

FIGURE 2.6.1.1 Regional growth and drivers of potential growth

Although growth slowed in Sub-Saharan Africa during 2013-17, its underlying potential accelerated owing to increases in the share of working-age population and capital stock growth. Excluding South Africa, potential growth rose at a faster pace.



Sources: World Bank staff estimates, World Development Indicators, Penn World Tables.
Note: SSA stands for Sub-Saharan Africa.
A. C. -F. Median represents median of the six EMDE regional aggregates. Vertical lines indicate the range of the regional aggregates.

a strong public infrastructure investment drive in the fast-growing non-resource-intensive countries as well as an increase in foreign direct investment flows in metals exporters (World Bank 2017p). The contribution of capital stock growth to potential growth was 1.1 percentage points higher than the rates seen prior to the global financial crisis. If South Africa is included, the capital stock growth is more modest, with a 0.3 percentage points contribution to potential growth in 2013-17.

Solid labor supply growth. Labor supply growth picked up to 1.4 percent in the post-crisis period, above its longer-term average of 1.2 percent. This acceleration mainly reflected the effects on the labor supply of a bulge in the working-age population along with an increase in labor force participation rates. As a result, the contribution of labor inputs to potential growth increased by 0.2 percentage points in the post-crisis period, contrasting with other EMDE regions, where population aging has dampened the growth of the workforce. If South Africa is included, the contribution of labor supply growth to potential growth rises to 0.4 percentage points, reflecting stronger growth in the working-age population.

Modest TFP growth. Potential TFP growth rose slightly in 2013-17 from the rates seen prior to the global financial crisis. During 2003-07, TFP growth rose above its long-term average, supported by improvements in health and education outcomes, as well as by a decline in the share of the labor force engaged in agriculture and the associated reallocation of workers to higher productivity sectors (McMillan and Harttgen 2014). However, TFP growth remained subdued in the post-crisis period. TFP growth slows markedly if South Africa is included, reflecting the sharp decline in TFP growth South Africa experienced following the global financial crisis. Overall, the contribution of TFP growth to potential growth during 2013-17 was minimal. The low post-crisis increase in TFP growth in SSA and other EMDE regions has been attributed to a slowdown in convergence to the

BOX 2.6.1 Potential growth in Sub-Saharan Africa *(continued)*

technological frontier after a rapid catch-up in the decade preceding the crisis (Kemp and Smit 2015).

In summary, potential growth in SSA picked up in the post-crisis period, due to increases in the working-age share of the population, which boosted labor supply growth, and to increases in the capital stock from higher investment. TFP growth increased marginally, reflecting an apparent slowdown in the rate of absorption of new technology.

What are the prospects for potential growth in the region?

To examine this question, a baseline projection is constructed that assumes: population and its composition grow in line with a median fertility scenario (as projected in the UN Population Projections); recent trend improvements in education and health outcomes continue; and the investment-to-output ratios remain at their latest five-year average.

Under this scenario, the key determinants of potential growth would evolve as follows:

The underlying growth of the capital stock would remain steady, at around 3 percent a year. If South Africa is included, the capital stock trend growth moderates to 1.8 percent, consistent with a slowdown in investment.

Compared with other EMDE regions, SSA is experiencing a slow decline in fertility rates (Canning et al. 2015). As a result, the youth dependency rate would remain high and the share of working-age population would rise only slowly. Labor supply growth would remain broadly stable, at around 1.4 percent a year. However, if South Africa is included, labor supply growth could slow to 1.1 percent, reflecting declining employment growth in South Africa.

TFP growth would remain steady at 0.6 percent a year. If South Africa is included, TFP growth could rise, owing to South Africa's innovation strengths (World Bank 2017ae).

On balance, these factors suggest that, in the absence of reforms, potential growth would remain steady at 5 percent on average in the next decade, if South Africa is excluded, as the growth of capital stock and labor supply remains stable. The inclusion of South Africa changes the results. Potential growth would remain low at around 3.2 percent by 2027, as a slowdown in the growth of capital stock and labor supply is only partially offset by a modest increase in TFP growth. Potential growth at this rate would mean that GDP per capita in SSA would rise only very modestly, with unfavorable prospects of reducing the region's poverty headcount.

What are the policy options to bolster medium-term potential growth in the region?

This section assesses the benefits from the implementation of key structural reforms using scenario analysis. These include filling the region's investment needs, boosting human capital improvements, and increasing labor supply.

Filling investment needs. Although public investment picked up in the mid-2000s and reached a peak of 5.8 percent of GDP in 2014, this rate was well below the average for other EMDEs (World Bank 2017af).

SSA's infrastructure investment needs are particularly sizable. Increasing public investment would provide a short-run boost to output, but could also have favorable supply-side effects, including by spurring private investment (World Bank 2017af). Although many countries in the region have little fiscal space to raise public spending through deficit financing, there is scope to reallocate resources from less productive spending programs and to mobilize domestic revenues. Tax revenues as a share of GDP are low for most countries in SSA, and could be increased through reforms including broad-based consumption taxes, simplified tax design, and improved tax administration (Mabugu and Simbanegavi 2015).

Simulations based on the analysis presented in Chapter 3 suggests that if, over the next decade, the investment-to-GDP ratio for the region were increased by around 2.7 percentage points by 2027—an increase that is within historical precedent—the region's potential growth would be boosted by around 0.6 percentage points by 2027, and by 0.4 percentage points if South Africa is included.

Increasing human capital accumulation. Further improvements in education and health outcomes could bolster potential growth by raising labor force participation rates and TFP growth. Although the region has achieved significant improvements in these areas, much more remains to be done.

- *Education:* SSA lags in education outcomes. In half of the countries in SSA, less than 50 percent of the youth complete lower secondary education and under 10 percent go on to higher education (World Bank 2017ag). Learning outcomes have been generally poor and gender disparities remain significant at the secondary and tertiary levels (Oyelere 2015). Priorities vary depending on country-specific circumstances, but

BOX 2.6.1 Potential growth in Sub-Saharan Africa *(continued)*

they center on investing in effective teaching, ensuring access to quality education for the poor, and closing gender gaps (World Bank 2017ag).

- *Health*: SSA's average life expectancy of 59 years in 2015 (World Bank 2017ah) also lags other EMDE regions, and falls well short of 80 years in advanced economies. SSA is disproportionally affected by the impact of infectious diseases. Building strong health systems, as well as setting up regional coordination mechanisms, is critical for providing adequate health services to the populations (World Bank 2016l).

To illustrate the benefits of tackling these issues, simulations were conducted that assumed that secondary school and tertiary enrollment rates, and life expectancy will rise over 2018-27 by as much as the largest historical improvement in any ten-year period for SSA. This would imply a rise in secondary school completion rates of 3.7 percentage points, tertiary completion rates of 0.4 percentage points, and life expectancy of 3 years. The effect of these assumptions would be to raise potential growth by around 0.1 percentage points by 2027, compared with 2013-17, the same if South Africa is included.

Increasing labor supply. The labor force participation rate for women in SSA was around 65 percent in 2015 (UNDP 2016), well below the 76 percent rate for men, indicating significant scope for increasing the number of women in the workforce. Studies have shown that gender equality in labor force participation rates in the region is severely affected by the burden of unpaid labor, which is predominantly born by women, as well as by gaps in educational attainment and restrictions in access to credit markets (Seguino and Were 2015). This points to the policy and institutional frameworks that are needed to increase female labor force participation.

To illustrate the possible benefits of such measures, simulations were performed that assumed that the female labor force participation rate rises by 1 percentage points, equivalent to the largest historical ten-year improvement achieved by the region in the past 20 years. The simulations suggest that this would raise potential growth by around 0.1 percentage points by 2027, compared to 2013-17, the same if South Africa is included.

Overall impact on potential growth. Raising the investment-to-GDP ratio, and increasing secondary school and tertiary education completion rates as well as life expectancy closer to advanced-economy levels, as assumed in the scenarios described above, could boost SSA's potential growth by 0.7 percentage points by 2027. Additional gains (0.1 percentage points) could also be expected from labor market policies that encourage female labor force participation. Overall, a combination of additional investment, increased education and health improvements, and higher female labor force participation could raise SSA's potential growth by 0.8 percentage points to 5.8 percent by 2027, excluding South Africa. If South Africa is included, similar reforms would boost potential growth by 0.7 percentage points to 3.8 percent on average by 2027 (Figure 2.6.1.2).

Other productivity-enhancing reforms. In addition to the types of reforms that can be captured in the models described in Chapter 3, there are other productivity-enhancing reforms that could also pay significant dividends (AfDB et al. 2013). These include diversification to reduce reliance on the resource sector; stronger property rights to encourage productivity-enhancing investment; and greater transport connectivity to spur competition. Across the region, there is scope for raising productivity in the formal sector, the agricultural sector, and nonfarm informal sector, which could further boost the region's potential growth (World Bank 2016l).

- *Economic diversification*: Economies in the region are striving to diversify away from natural resource exports, especially by taking steps to make their manufacturing sectors more competitive. Competitiveness within SSA suffers as a result of poor business environments, lack of infrastructure, and high unit labor costs (Bhorat and Tarp 2016). Along with increased human capital and the removal of trade barriers, improvements in transport and energy infrastructure could increase the productivity and competitiveness of the region, and facilitate its integration into global value chains (Allard et al. 2016). While the business environment has improved, there remains considerable scope for simplifying regulations and administrative procedures for starting a business, increasing the efficiency of the legal system, and reducing regulatory uncertainty.

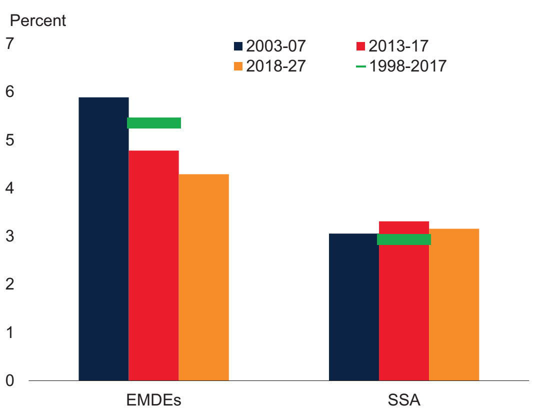
- *Boosting agricultural productivity*: Across the region, the share of employment in low-productivity agriculture remains high. Many countries have substantial scope for raising agricultural productivity, including by taking steps to improve land titles, increasing access to credit for investment in new farming techniques, improving the awareness of modern farming techniques, and improving the infrastructure needed to connect farms to markets. In

BOX 2.6.1 Potential growth in Sub-Saharan Africa *(concluded)*

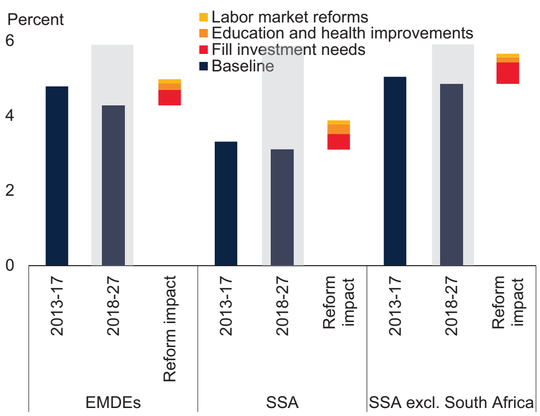
FIGURE 2.6.1.2 Policies to stem declining potential growth

The expected gradual decline in the region's high fertility rates could slow the growth of the working-age population, and a weakening of the investment rate will moderate capital stock growth. In the absence of reforms, a slowing expansion of the labor supply and capital stock could reduce regional potential growth from 3.3 percent in 2017 to 3.2 percent by 2027, below the EMDE average. However, the region's potential growth could be boosted to 3.8 percent by 2027 through policies to spur investment, improve education and health, and boost female participation rates. Excluding South Africa, potential growth could reach 5.8 percent by 2027.

A. SSA potential growth



B. SSA potential growth under reform scenarios



Source: World Bank staff estimates.

Notes: GDP-weighted averages. Derived using the methodology described in Annexes 3.1 and 3.3. Policy scenarios are described in Annex 3.3.

Ethiopia, public investments in irrigation, transportation and power have produced a significant increase in agricultural productivity and incomes, which resulted in growth-enhancing structural change (Rodrik 2017).

- *Raising productivity in the nonfarm informal sector*: Recent studies found that in many countries the decline in the share of the labor force engaged in agriculture has been matched by a sizable increase in the share of the labor force employed in the informal sector (Diao et al. 2017). Raising the productivity of the informal sector has become an important policy objective. Fostering a supportive regulatory environment, and promoting investment in basic infrastructure such as electricity, road networks, and information technology, are important areas of reforms that could make the informal sector more dynamic and formal, and increase its contribution to the region's long-run economic growth (Bhorat and Tarp 2016).

Conclusion

Potential growth rose to 3.3 percent in Sub-Saharan Africa in the past five years, above the pre-crisis and longer-term averages, owing to the growth of the working-age population and capital stock. However, in the absence of reforms, SSA's potential growth would remain low at around 3.2 percent by 2027, given likely trends in labor supply and investment, which suggests that per capita income growth would stagnate. The low potential growth rate is mainly due to a moderation in trend growth in South Africa. Excluding South Africa, potential growth rose by 5 percent on average following the global financial crisis, above the EMDE average, reflecting a stronger increase in the rate of capital accumulation.

There is considerable scope for boosting potential growth with structural reforms, including policies to increase investment, improve health and education outcomes, and raise female labor force participation. Bold steps in these areas could boost SSA's potential growth by around 0.8 percentage points to 5.8 percent on average over the next decade. Other productivity-enhancing reforms, including diversification to reduce reliance on commodities, stronger property rights to encourage productivity-enhancing investment, and greater transport connectivity to spur competition, could safeguard and bolster these gains. A robust implementation of such policies would be critical if the region is to take full advantage of its demographic dividend.