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POLICY BRIEF

Key to the Horn

Ethiopia's prospects to 2030

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Few African countries have developed as rapidly as Ethiopia over the past 25 years and that economic growth has also been paired with a sizeable expansion of service delivery. Nonetheless, Ethiopians continue to suffer from some of the lowest levels of access to basic services of any country in Africa – and indeed the world. This policy brief summarises the results from a more comprehensive study that explores options for the Government of Ethiopia and its development partners to advance human development and economic growth between now and 2030.

Key points

- Agricultural productivity is extremely low. It is unlikely that Ethiopia will be able to continue to expand the amount of land under cultivation.
- Focusing on improving agricultural yield, while simultaneously implementing programmes that allow people to access and consume additional calories, could significantly reduce poverty and drive economic growth.
- Governance will remain an issue. While Ethiopia has made remarkable progress since the early 1990s, the government still relies heavily on donor funds and cannot mobilise sufficient revenue domestically.
- As the contribution of overseas development assistance (as a share of total GDP) declines, it will be increasingly important for the Government of Ethiopia to expand its capacity to collect and distribute revenues efficiently. This includes distributing services more broadly across ethnic groups, genders and regions.

Ethiopia has made tremendous progress across economic, social and human development indicators over the last 25 years. However, much of that progress has been achieved from a very low baseline. Significant hurdles remain between where the government would like Ethiopia to be and where the country is today. More importantly, fixating on recent achievements may obscure some of the complex challenges the country faces in the years to come.

Since the end of the civil war in 1991, Ethiopia has quadrupled primary school enrolment, halved child mortality rates, and doubled the percentage of people with access to clean water.[1] Ethiopia has also achieved the most rapid increase in access to improved sanitation facilities of any African country since 1990, moving from just 2.5% access to roughly 29% in 2016.[2] During the same period, it has combined improvements in service delivery with the third most significant decline in fertility rates and third-largest decline in undernutrition rates of any African country. This swift progress in human development has been made possible by sustained economic growth, in part facilitated by state-led development programmes in key sectors.

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Ethiopia's economy has been one of the ten fastest growing in the world since the early 2000s. From 2004 to 2013, the country's average annual gross domestic product (GDP) growth rate exceeded 10%, which was more than four percentage points faster than the average for Africa's other 26 low-income countries.[3]

More impressively, the Government of Ethiopia (GoE) accomplished this progress in the context of the Horn of Africa, a region with a long history of violence and instability. Moreover, unlike Equatorial Guinea, Chad, Angola and Liberia (the other top five fastest-growing African countries), Ethiopia has achieved rapid economic growth without a heavy dependence on natural resource exports. Despite all of that progress, however, significant challenges remain.

Ethiopians suffer from some of the lowest levels of access to basic services of any country in the world. In 2016, Ethiopia ranked 174 out of 186 countries in terms of access to clean water, and 161 in access to improved sanitation. The country has one of the lowest primary education survival rates in the world; nearly half of all students who begin primary school do not reach Grade 8. Furthermore, while Ethiopia is a largely agrarian society, it has some of the lowest agricultural yields globally (ranked at 154), making a large proportion of the population food insecure and vulnerable to climatic shocks or spikes in international commodity prices.

The country continues to rank near the bottom of the United Nations Development Programme's Human Development Index (HDI), scoring 174 out of 188 countries in 2015.[4] Furthermore, extreme poverty is a constant burden to development.

Despite a reduction in poverty of roughly 45 percentage points over the past 20 years, approximately 25% of Ethiopians – about 25 million people – still live in extreme poverty (defined as living on less than US$1.90 per day). On its current trajectory, Ethiopia is expected to reduce the percentage of the population living in extreme poverty to 10% by 2030, but that progress would still leave nearly 15 million people living in extreme poverty. Strategic investments in key development sectors could help to reduce poverty and improve other economic, human and social development outcomes.

Purpose

This brief explores Ethiopia's current path of development and examines policies that could accelerate Ethiopia's growth, support the country's transition to lower-middle-income status and advance human development up to 2030. It is a summary of a much more comprehensive independent report that was completed for the United States Agency for International Development,[5] using the International Futures forecasting system (IFs). IFs is hosted and developed by the Frederick S Pardee Center for International Futures at the University of Denver.[6]

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This policy brief first explores Ethiopia's recent history and its anticipated development trajectory (or the Current Path forecast). It then creates scenarios to simulate ambitious but realistic five-year interventions (2017–21) across different development sectors, and explores the effects of these interventions on development outcomes to 2030 or beyond. Finally, we explore the trade-offs between different interventions and how they could affect the country's current development trajectory.

The report on which this summary is based sought to identify potential leverage points for the GoE to improve human development outcomes.

Methodology

The IFs forecasting system is a dynamic, global model that integrates data and outcomes across development systems. The model holds over 3 500 data series for 186 countries and produces long-term forecasts for hundreds of variables across development sectors (e.g. infrastructure, agriculture, health, etc.).

IFs is a dynamic scenario-building tool that allows for the modelling of long-term development futures. It allows users to perform three types of analysis. First, the user can analyse historical trends and relationships to understand how a country or region has developed over time. Second, these relationships are formalised in the model to produce Current Path forecasts. These initial forecasts, which are integrated across all systems within IFs, are useful indicators of where a country seems to be heading under current circumstances and policies, in the absence of major shocks to the system (wars, pandemics, etc.). Third, scenario analyses augment the Current Path analysis by exploring the leverage that policymakers may have to push systems to more desirable outcomes. The model is open-source and can be downloaded for free from http://pardee.du.edu/access-ifs.

Policy choices

Managing investments in key natural systems and improving basic human development should be cornerstones of the Ethiopian development strategy. Over the next five years, the GoE and development partners should collaborate to:

- **Improve agricultural yields** – As available land for agriculture diminishes, improvements in agricultural yields will be necessary to keep up with increasing demand for food. Improving yields will help to meet this demand, thereby reducing reliance on food imports, increasing food security, reducing hunger and growing incomes in the agricultural sector.
- **Improve access to safe water and sanitation** – Ethiopia's reduction in communicable disease rates has been a success story, but rates are still high (especially among children). Expanding access to safe water and improved sanitation facilities will reduce the prevalence of communicable disease and help to shrink Ethiopia's very high undernutrition rates, eventually reducing stunting and enhancing economic growth and productivity.
- **Increase primary school survival and completion** – Ethiopia's primary school survival rate is among the lowest in the world. The country has improved primary enrolment (now around 85%), but only about half of

the students who enrol in primary school make it to the final grade. Improving survival rates will expand the number of students moving through the education system, grow the stock of education across the population, and better position Ethiopia to expand its human capital resources and take advantage of its significant demographic dividend.

- **Maintain the pace of fertility rate reductions** – Ethiopia must continue to reduce fertility to accelerate demographic transition and stem the growth of an already large population. Ethiopia is the second most populous country in Africa, and close to 80% of the population lives in rural areas, creating challenges for delivery of public services and basic infrastructure.

To maintain past improvements and harness the benefits of continued investment, the GoE and development community need to ensure that rates of economic growth remain robust, and that the quality and capacity of governance are improved by:

- **Improving domestic revenue collection** – The GoE must increase tax revenues to sustain public investment as aid revenues (as a percentage of GDP) decline.
- **Carefully managing hydroelectric investments** – Given Ethiopia's various hydroelectric projects, such as the Grand Ethiopian Renaissance Dam, the country is poised to become a net energy exporter within the next decade. Ensuring that export revenues are invested back into the country, and simultaneously expanding rural electricity access, will ensure associated development benefits.
- **Maintaining the pace of economic structural transformation** – Ethiopia must continue the shift towards service and manufacturing sectors that add higher value. Shifting labour and production into higher value-added activities will help the country to pursue inclusive growth and continue on the path towards lower-middle income status.
- **Promoting social and political inclusion** – Recent protests have highlighted the need for greater social, economic and political participation. A lack of progress in this domain is likely to drive instability, which in turn could undermine progress in economic development.

Among the policy choices available for consideration, two sectors stood out as particularly influential for Ethiopia: agriculture and governance.

Importance of agriculture

Today, much of Ethiopia's population relies on subsistence agriculture. Almost 70% of the labour force works directly in the agricultural sector and, given its population size, total agricultural production is relatively high. However, because Ethiopia has some of the lowest agricultural yields in the region – and indeed the world – the productivity of the agricultural sector (on a per capita basis) is low.

Low agricultural productivity in Ethiopia results in a high level of food insecurity and some of the highest burdens of hunger and undernutrition in Africa. Hunger and undernutrition have important linkages to health outcomes such as stunting, the prevalence of communicable diseases and the development of human capital in society. As Ethiopia's population grows it will be increasingly difficult to achieve food security without relying heavily on imported food, which leaves the country vulnerable to international price fluctuations.

> Low agricultural productivity results in high food insecurity and burdens of hunger and undernutrition in Africa

Even as Ethiopia continues its development and seeks to transition its economy toward the sectors of manufacturing and services that add higher value, agriculture will remain a crucial driver of economic growth and an important component of the country's development trajectory. Ethiopia has already increased land under crop cultivation by more than 50% since 2000 and the acreage of additional land that can be placed under cultivation without significant expense is finite.

Governance

Strategic, government-led, public investment in infrastructure has driven Ethiopia's recent economic growth. But, the GoE has also benefitted from high levels of foreign aid from its international partners (averaging near 11% of GDP since the mid-1990s). Foreign aid to Ethiopia is, however, forecast to decline (as a percentage of GDP) over the next 5–10 years, which will constrain the government's capacity to deliver public services. Therefore, the ability of the GoE to mobilise revenue more effectively will be an issue of increasing importance in the years to come.

An inability to generate sufficient revenues through tax collection (as opposed to development assistance) – coupled with a rapidly expanding population, which grew by an estimated 2.6% in 2016 alone – will require the GoE to move beyond the strategies that have enabled rapid progress over the past decade. Having gathered much of the low-hanging fruit (e.g. service delivery in urban areas), and with international aid (as a share of GDP) likely to decline, improving capacity to mobilise revenue and deliver services more broadly will be critical to meeting the needs of Ethiopia's growing population and ensuring domestic stability.

> Foreign aid to Ethiopia is forecast to decline (as a percentage of GDP) over the next 5–10 years

The current security situation complicates questions over the GoE's capacity. Large protests erupted in November 2015 and continued through much of 2016, concentrated in the regions of Oromia and Amhara. Protesters have been demanding increased political and economic inclusion. The government response has largely failed to settle the unrest, and a state of emergency was imposed in October 2016. These protests have exposed deep-rooted tensions among Ethiopia's diverse ethnic groups and frustrations over perceived systematic political and economic exclusion.[7]

Scenarios

All policy choices involve either explicit or implicit trade-offs. Investing more money in education, for example, diverts resources that could have been spent on health, infrastructure or security. An investment in education can pay significant dividends by producing more highly skilled workers and more educated voters. But such investments, as with so many forms of government spending, take decades to significantly improve the welfare of individuals, let alone an entire country.

To sustain recent gains made across human development indicators – and build on previous success – the GoE will need to carefully balance key policy decisions, with long-term objectives in mind.

Figure 1 compares the effects of 12 policy interventions against the Current Path forecast across three outcome indicators: percentage change in poverty, the Human Development Index (HDI) and GDP per capita.

Again, the Current Path represents a plausible future for Ethiopian development and is the baseline against which the following scenarios are evaluated. The change in the percentage of the population living in extreme poverty (compared to the Current Path) in 2030 is represented on the vertical axis. The change in Ethiopia's HDI score (compared to the Current Path) in 2030 is represented on the horizontal axis. The change in GDP per capita (compared to the Current Path) in 2030 compared to the Current Path is represented by the bubble size.

Because all the negative scenarios cause a reduction in GDP per capita (relative to the Current Path) in 2030, the smallest bubble represents the most

Almost
70%
OF THE LABOUR FORCE WORKS DIRECTLY IN THE AGRICULTURAL SECTOR

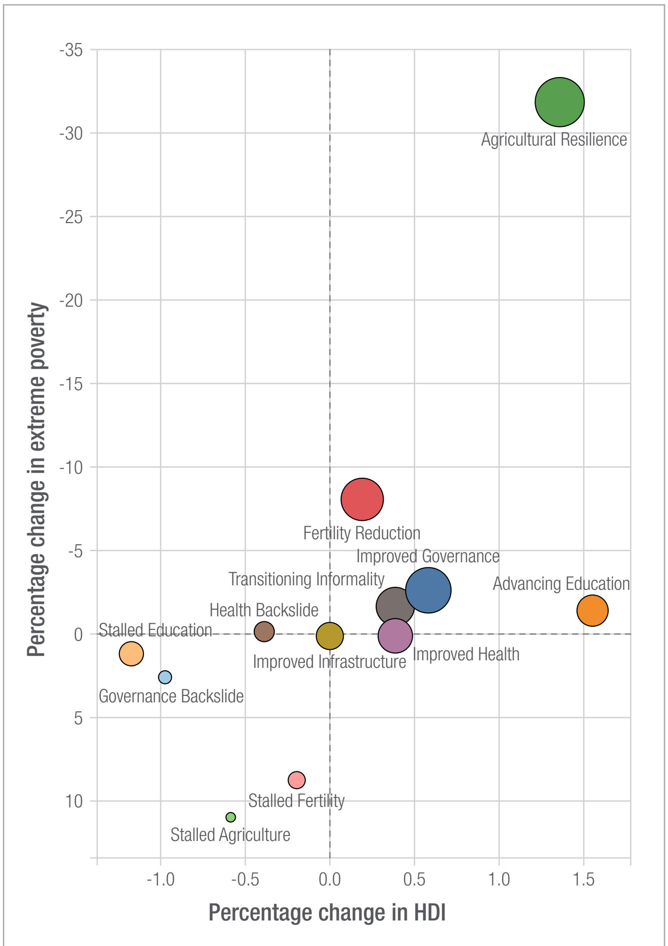
severe reduction in GDP per capita, rather than the least significant improvement. The key drivers and specific interventions in each sector are detailed in the larger report available on the ISS website.

The Agricultural Resilience scenario causes the most significant reduction to the percentage of people living in extreme poverty by 2030, reducing poverty by 32% relative to the Current Path. This scenario also results in the largest increase in GDP in 2030 and improves the HDI relative to most other scenarios. Given the central role of agriculture in the Ethiopian economy, it is not surprising that a comprehensive push on agriculture produces impressive results.

Although the Agricultural Resilience scenario stands out, other scenarios also have positive results. The Advancing Education scenario causes the most dramatic improvement in the HDI (1.5%), a minor reduction in poverty (more than 1%) and an above average increase in GDP per capita (about 0.5%). The Improved Governance scenario leads to a sizeable increase in GDP (more than 3%) and reduction in poverty (about 3%), and the third-largest improvement in HDI (0.5%). The Fertility Reduction scenario has strong effects on GDP per capita (an increase of about 2.5%) and reduces the percentage of people living in poverty (more than 8%), but it does not have much of an impact on the HDI.

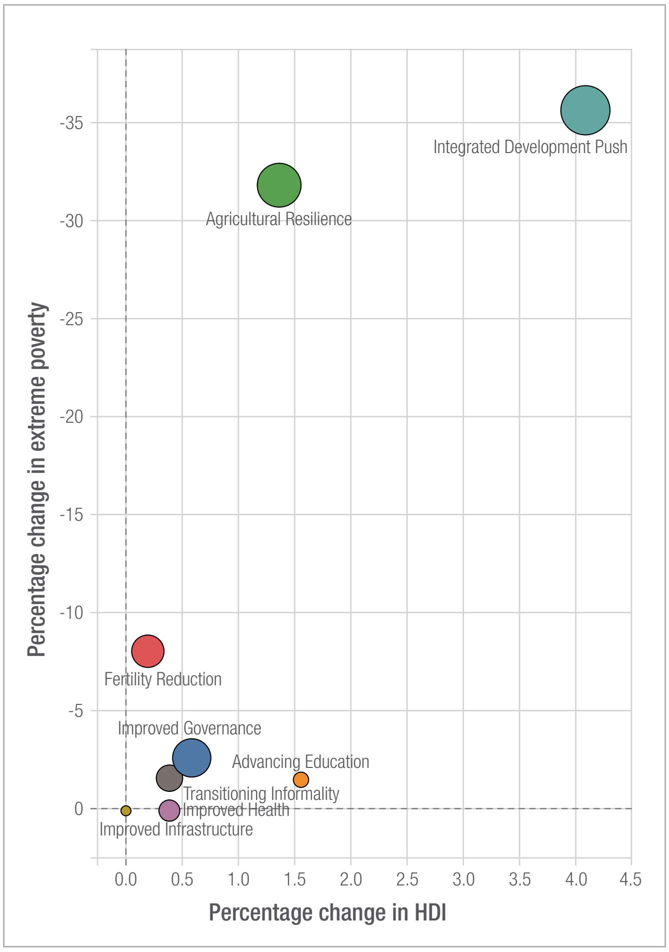
For illustrative purposes, Figure 1 includes scenarios in which Ethiopia experiences a lack of progress commensurate with some of the positive scenarios. These scenarios illustrate the potential consequences of a stagnation in different areas of development in Ethiopia, and/or a situation where a lack of economic, social and political progress leads to an internal governance crisis.

Figure 1: Comparing the effects of sectoral interventions on selected development indicators (2030)



Source: IFs version 7.27

Figure 2: Comparison of all positive sectoral scenarios with the Integrated Development Push scenario (2030)



Source: IFs version 7.27

While agriculture seems to have the most positive effect on development across these three indicators, it is important to recognise that there is no silver bullet for development. Reducing poverty and achieving food security are important objectives, particularly in the short term.

But, if the GoE hopes to transition into lower-middle-income status, Ethiopia will need to simultaneously improve outcomes in health, education and governance along with improving the efficiency of its agricultural sector. To illustrate the impact of a combined push across development sectors, we combined the positive interventions from the sectoral scenarios into an Integrated Development Push scenario (Figure 2). This scenario simulates a future in which the GoE employs a coordinated policy approach targeted at the key leverage points identified in this report.

> To reach lower-middle-income status, Ethiopia needs to simultaneously improve health, education and governance

In these scenarios the country could see a significant regression in human development and growth. For example, the Stalled Agriculture scenario increases the number of people living in extreme poverty by more than 10% in 2030, while the Stalled Education scenario creates a more than 1% reduction in Ethiopia's HDI score in 2030 relative to the Current Path.

An Integrated Development Push could propel growth rates to between 8% and 11% across the forecast horizon, whereas a governance crisis coupled with stalled human development could see growth rates fall to 2% by 2030. Importantly, under the Integrated Development Push, Ethiopia nearly reaches the target of 11% annual growth through 2020 set out in its second Growth and Transformation Plan II, whereas along the Current Path growth is forecast to average about 7% annually. The accelerated growth that results from a coordinated push across development sectors could enable Ethiopia to achieve lower-middle-income status around five years earlier (i.e. by 2025) than in the Current Path forecast.[8]

The interventions in this report aim to be both ambitious and realistic. Intervening across the sectors outlined above will help to sustain economic growth and improve human development outcomes by 2030. While the interventions above represent a five-year policy push, many of the effects of investments in human development will not be achieved for numerous years. Moreover, the danger persists of institutional inertia, a situation wherein policymaking fails to evolve because existing strategies have been successful in recent memory.

The GoE must build on past successes and have the foresight to enact policies that establish a path to long-term growth. No one intervention is a panacea, but an integrated development push across sectors could put Ethiopia on a path to long-term sustainable development.

Notes

1. World Bank, Ethiopia Country Report, 2015. www.worldbank.org/en/country/ethiopia/overview.
2. This figure is taken from the WHO UNICEF Joint Monitoring Programme and includes a fairly significant reclassification of shared facilities. For more detail, see Box 5.5 on p.87 of the main report.
3. World Bank income groups. See https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups.
4. United Nations Development Programme, Human Development Report 2015, http://hdr.undp.org/sites/default/files/2015_human_development_report.pdf.
5. This report will be available on the ISS website shortly.
6. More information on IFs, including detailed descriptions of the Current Path forecast, scenario development and the assumptions of the model, is available at http://pardee.du.edu/access-ifs.
7. AK Allo, The Oromo Protests have Changed Ethiopia, Al Jazeera, 21 November 2016, retrieved from www.aljazeera.com/indepth/opinion/2016/11/oromo-protests-changed-ethiopia-161119140733350.html.
8. There is a discrepancy in how these figures are measured because the World Bank uses gross national income (GNI) (Atlas Method) instead of GDP to classify income levels. GNI includes net receipts of income from abroad, whereas GDP does not. Also, the Atlas Method of calculation adds a price conversion factor to control for price and exchange rate fluctuations. Furthermore, IFs uses 2011 US dollars, while the World Bank calculates GNI at current US dollars.

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