OVERVIEW

2014 African Transformation Report

Growth with Depth
The African Center for Economic Transformation is an economic policy institute supporting Africa’s long-term growth through transformation. Our vision is that by 2025 all African countries will drive their own growth and transformation agendas, led by the private sector and supported by capable states with good policies and strong institutions. We work toward that vision through our analysis, advice, and advocacy. Please visit www.acetforafrica.org.

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Foreword

Last year the UN Secretary-General’s High-Level Panel on the Post-2015 Development Agenda, which I co-chair, released its report setting a clear roadmap for eradicating extreme poverty. We recommended that the post-2015 goals be driven by five big transformative shifts. One of these shifts is a profound economic transformation to improve livelihoods by harnessing innovation, technology, and the potential of businesses. We concluded that more diversified economies, with equal opportunities for all, would drive social inclusion, especially for young people, and foster sustainable consumption and production.

Nowhere is the need for such a transformative shift greater than in Africa. Recognizing this imperative, the African heads of state and government recently endorsed the African Union’s transformation vision for 2063. The key dimensions of that vision are to address the structural transformation of Africa’s output and trade, strengthen Africa’s infrastructure and human resources, and modernize Africa’s science and technology.

I commend the African Center for Economic Transformation (ACET) for preparing this welcome report. It looks at transformation as a broad framework for growth and development and identifies best practices from Africa and beyond. It will be of great value to African policymakers as they draw up action plans to transform their economies and ensure that growth is sustained to improve the lives of an increasing number of Africans, consistent with the AU’s transformation vision. And by setting a transformation agenda, it will contribute to international discussions on the strategies and priorities for achieving many of Africa’s post-2015 development goals.

Five years ago, I welcomed ACET’s establishment in the expectation that it would give new meaning to African ownership of Africa’s destiny. With this report, ACET has earned that recognition.

Ellen Johnson Sirleaf
President
Republic of Liberia
Co-chair
UN High Level Panel on the Post-2015 Development Agenda
By 2050 Sub-Saharan Africa will have a larger and younger workforce than China or India. With the continent’s abundant land and natural resources, that workforce can be a global competitive advantage and a great asset in driving economic transformation.

Such a transformation will come through diversifying African economies, boosting their competitiveness in world markets, increasing their shares of manufacturing in GDP, and using more sophisticated technology in production. Economies will then become much more prosperous, less dependent on foreign assistance, and much more resilient to shocks—mirroring the successes of Asian and Latin American countries over the past several decades.

The impressive economic growth of many African countries since the mid-1990s—as well as the progress in governance and the turnaround in investor confidence—provides a solid foundation for transforming African economies for better jobs and shared prosperity.

This first African Transformation Report draws on our three-year research program of country, sector, and thematic studies to offer analyses and lessons that can be tailored to each country’s endowments, constraints, and opportunities. In 2010, working with local think tanks, we began to assess the transformation records, platforms, and prospects of 15 Sub-Saharan countries. Brief summaries of those studies appear in the country transformation profiles in an annex to the report. Working with African and international economists, our staff also produced cross-cutting studies of themes important to Africa’s transformation. And working with African consultants, we produced studies of sectors holding promise for adding value to Africa’s agricultural and manufactured products.

In 2011 we invited 30 leading thinkers on African development to come to Rockefeller’s conference center in Bellagio and to provide their perspectives on the challenges of economic transformation. Attending were African ministers and business leaders, academics from prominent think tanks, senior officials from multilateral development banks, and development specialists from Asia and Latin America. The workshop drew lessons from outside Africa to help us make our approach more responsive to the needs of African policymakers. It also explored possible networks for collaboration in pursuing Africa’s transformation agenda. All those taking part greatly enriched the discourse and resoundingly endorsed our work, including our plans to produce this report.

Economic transformation is now the consensus paradigm for Africa’s development. The UN’s High Level Panel on the global development agenda after 2015 sets out the priorities for transforming African’s economies for jobs and inclusive growth. The African Union’s Vision 2063 calls for integrating the continent’s economies so that they partake more in the global economy and in regional opportunities. The African Development Bank’s long-term strategy, At the Center of Africa’s Transformation, has the goal of establishing Africa as the next global emerging market. And the Economic Commission for Africa’s 2013 economic report, Making the most of Africa’s commodities: Industrializing for growth, jobs, and economic transformation, details what’s needed to promote competitiveness, reduce dependence on primary commodity exports, and emerge as a new global growth pole.

Our report’s main premise is that African economies need more than growth—if they are to transform, they need growth with DEPTH. That is, they need to Diversify their production, make their Exports competitive, increase the Productivity of farms, firms, and government offices, and upgrade the Technology they use throughout the economy—all to improve Human well-being.

A key feature of the report is ACET’s new African Transformation Index, which assesses the performance of countries on the five depth attributes of transformation and aggregates them in an overall index. It shows policymakers, business people, the media, and the public how their economies are transforming and where they stand in relation to their peers. It can thus be a starting point for national dialogues on key areas for launching transformation drives. We plan to refine the index in coming years and to expand its coverage beyond the 21 countries assessed here.

The report recognizes that transformation doesn’t happen overnight but is a long-term process. It requires constructive relationships between the state and the private sector. True, private firms will lead in producing and distributing goods and services, in upgrading technologies and production processes, and in expanding employment. But firms need a state that has strong
capabilities in setting an overall economic vision and strategy, efficiently providing supportive infrastructure and services, maintaining a regulatory environment conducive to entrepreneurial activity, and making it easier to acquire new technology and enter new economic activities and markets.

That will require committed leadership to reach a consensus on each country’s long-term vision and strategy and to coordinate the activities of all actors in pursuing economic transformation. Our hope is that the analysis and recommendations in this report will support them in moving forward with their transformation plans, policies, and programs.

Producing this report was possible only through the dedicated efforts of ACET staff, led by our Chief Economist Yaw Ansu, as well as the substantive contributions by think tanks and experts in Africa and across the globe, the constructive reviews of transformation studies and draft chapters by specialists well versed in the field, and the generous support of international foundations and development organizations that believed in our resolve to help drive the discourse on Africa’s economic transformation through growth with depth.

K.Y. Amoako
President
African Center for Economic Transformation
OVERVIEW

Transforming African economies through growth with depth

Since the mid-1990s many Sub-Saharan countries have seen solid economic growth buoyed by reforms in macroeconomic management, improvements in the business environment, and high commodity prices. Rising incomes are supporting the emergence of an African middle class, and young Africans are now much more likely to return home to pursue a career after an education abroad.

The premise of this first African Transformation Report is that the recent economic growth, while welcome, will not by itself sustain development on the continent. To ensure that growth is sustainable and continues to improve the lives of the many, countries now need to vigorously promote economic transformation. Growth so far has come from macroeconomic reforms, better business environments, and higher commodity prices. But economic transformation requires much more. Countries have to diversify their production and exports. They have to become more competitive on international markets. They have to increase the productivity of all resource inputs, especially labor. And they have to upgrade technologies they use in production. Only by doing so can they ensure that growth improves human well-being by providing more productive jobs and higher incomes and thus has everyone share in the new prosperity. So, what African countries need is more Diversification, more Export competitiveness, more Productivity increases, more Technological upgrading, and more improvements in Human well-being. In short, they need growth with depth.

The state, private firms, workers, the media, and civil society all have mutually reinforcing roles in promoting economic transformation. Private firms—foreign and local, formal and informal—lead in producing and distributing goods and services, in upgrading technologies and production processes, and in expanding the opportunities for productive employment. But they can be helped by a state that has strong capabilities in setting an overall economic vision and strategy, efficiently providing supportive infrastructure and services, maintaining a regulatory environment conducive to entrepreneurial activity, and facilitating the acquisition of new technologies and the capabilities to produce new goods and services and to access new foreign markets.

Similarly, the state can gain much from having firms and entrepreneurs weigh in on setting a national economic vision and strategy—and on designing policies, investments, and incentives to support that strategy.
And strong third-party mechanisms of accountability can draw in parliaments, independent media, academics, think tanks, and other parts of civil society to ensure that close collaboration between officials and firms does indeed support economic transformation.

**Economic transformation is now the agenda**

The UN High Level Panel on the development agenda after 2015 identifies four priorities to transform economies for jobs and inclusive growth. First is creating opportunities for productive jobs and secure livelihoods that make growth inclusive and reduce poverty and inequality. Second is raising productivity to accelerate and sustain growth everywhere by intensifying agriculture, developing industry, and expanding services—in whatever mix matches a country’s endowment. Third is setting an environment for business to flourish and connect through value chains to major markets at home and abroad. And fourth is supporting new ways of producing and consuming that sustain the environment.

The African Union’s 2063 Agenda calls for the region’s economies to integrate and to join the global economy. This will require developing human capital through education and training, especially in science, technology, and innovation. It will also require accelerating infrastructure development to link African economies and people by meeting the targets set for energy, transport, and information and communication technologies. And it will require fostering meaningful partnerships with the private sector.

The UN Economic Commission for Africa’s 2013 Economic Report on Africa calls for making the most of the continent’s commodities by industrializing for jobs, growth, and economic transformation. It notes that major firms are outsourcing tasks beyond their core competencies and thus shifting the structure of global value chains. That could change the relationships between the exploitation of oil, gas, and minerals and the location of industries that process them.

Those are just a few of the organizations propounding structural shifts from agriculture and mining to manufacturing and to services that are at the heart of economic transformation. But as this first African Transformation Report argues, there is more to transforming economies than shifting their structures.

**Growth with depth to transform African economies**

Many African economies are growing faster than they have in 40 years. Six of the world’s 10 fastest growing countries in the 2000s were in Sub-Saharan Africa: Angola at 11.1% a year, Nigeria 8.9%, Ethiopia 8.4%, Chad 7.9%, Mozambique 7.9%, and Rwanda 7.6%. And several others were above or near the 7% growth needed to double their economies in 10 years.

Behind the growth are the implementation of better economic policies, the end of the decades-long debt crisis, high commodity prices and rising discovery and exports of oil, gas, and minerals, and the beneficial impacts of new information and communication technologies. But the structure of most Sub-Saharan economies has not changed much over the past 40 years. Production and exports are still based on a narrow range of commodities; the share of manufacturing in production and exports remains relatively low, as do the levels of technology and productivity across economies. On global markets African countries generally find it a challenge to compete, except in primary agricultural commodities and extractives. And the levels of vulnerable and informal employment are high—around 80% in many countries—which translate to high poverty levels—with around 50% of the population living on less than $1.25 a day. Pursuing economic transformation, or the growth with DEPTH agenda, is therefore imperative for African countries.

To make the case for transformation as growth with depth, we compare Africa’s performance with that of eight earlier transformers: Brazil, Chile, Indonesia, Malaysia, Singapore, South Korea, Thailand, and Vietnam. Forty years ago their economies had features that today characterize many African countries—widespread poverty, low productivity, low technology, and limited exports. But they ignited and sustained long periods of high GDP and export growth, economic diversification, technology upgrading, and productivity increases and greatly improved the lives of their people. Today several of them are upper middle- or even high-income countries (figure 1).

**Diversified production**

An essential part of economic transformation is acquiring the capability to produce a widening array of goods and services and then choosing which ones to specialize on in based on international relative prices.
region’s average share of manufacturing value added in GDP, an indicator of diversity in production, was less than 10% in 2010, much the same as in the 1970s. In contrast, the share is nearly 25% in the earlier transformers.

Export competitiveness

Exporting provides the opportunity to expand production, boost employment, reduce unit costs, and increase incomes. It also enables a country to better exploit its comparative advantage to generate higher incomes, which help pay for the investments in skills, capital, and technology needed to upgrade a country’s comparative advantage over time. And knowledge and exposure to competition gained from exporting help in diversifying to new economic activities and raising productivity. Export competitiveness can be measured by a country’s global export share divided by its global GDP share. If this share is high, the country exports a higher share of its GDP than the world average. For both exports and GDP we exclude extractives, since rising extractive production and exports in Africa normally does not indicate progress on economic transformation. Trends in this measure of export competitiveness show a large gap between the African countries and the earlier transformers. The share of non-extractive exports in nonextractive GDP rose between 1980 and 1985. It has since been on a downward trend, revealing that the region’s recent GDP growth has not been matched by corresponding growth in exports outside extractives.

Productivity gains on farms and in manufacturing

Around 60–70% of the population in Africa lives in rural areas, mostly dependent on agriculture. So increasing agricultural productivity would be a powerful way to raise incomes. Indeed, in most industrialization experiences, the rise in agricultural productivity allowed agriculture to release labor to industry, produce more food to moderate any hikes in urban industrial wages, supply raw
A transforming economy would have an increasing share of the labor force in formal employment as the shares of modern agriculture, manufacturing, and high-value services in GDP expand and as entrants to the labor force become more educated.

Technology upgrading throughout the economy

Productivity gains can come from more efficient use of existing resources and technology to produce the same goods and services, but rising productivity can be sustained only through new and improved technologies and increasing ability to master more sophisticated economic activities. Furthermore, as technology rises in manufacturing, a transforming economy can produce goods that command higher prices on the international markets. In both production and exports, the shares of medium- and high-technology manufactures in Sub-Saharan Africa are generally low—at around 12%, less than a third of the 39% for the comparators.

Human well-being

Improving human well-being involves many factors, including incomes, employment, poverty, inequality, health, and education, as well as peace, justice, security, and the environment. The two most directly related to economic transformation are GDP per capita and employment. If GDP per capita is rising, and remunerative employment opportunities are expanding, economic transformation will result in shared prosperity, and income inequality will be reduced or at least controlled. GDP per capita in Sub-Saharan Africa has not yet doubled its level in 1970, but for the comparators it has more than quintupled—a performance that African countries should now aspire to.

A transforming economy would have an increasing share of the labor force in formal employment as the shares of modern agriculture, manufacturing, and high-value services in GDP expand and as entrants to the labor force become more educated. The share of formal employment in the labor force is therefore a good indicator for tracking the human impact of economic transformation (in addition to GDP per capita). For much of Sub-Saharan Africa, the data are sparse, but the share of formal employment in the labor force is seldom above 25%. Contrast that with more than 50% for the comparators.

Tracking economic transformation—the African Transformation Index

To track how countries are transforming through growth with depth, this report introduces the African Transformation Index (ATI). The ATI is a composite of the five elements of DEPTH—Diversification, Export competitiveness, Productivity, Technology upgrading, and Human economic well-being. Here, we show country rankings on the ATI and on the five components for two three-year periods centered on 2000 and 2010 (averages of 1999–2001 and of 2009–11). We take averages because given the volatility of the commodity-dependent economies of Africa, the values of the relevant variables for any particular year could give misleading results. We show results for the 21 Sub-Saharan countries that have the required data. Note that the results reflect economic outcomes rather than policy inputs and institutional environments.

Putting together all of the elements of DEPTH, the ATI shows Mauritius, South Africa, Côte d’Ivoire, Senegal, Uganda, Kenya, and Gabon as the top seven countries on economic transformation in 2010 (figure 2). The middle seven are Cameroon, Madagascar, Botswana, Mozambique, Tanzania, Zambia, and Malawi. The least transformed are...
Benin, Ghana, Ethiopia, Rwanda, Nigeria, Burundi, and Burkina Faso.

The main surprises are Botswana, Ghana, and Nigeria. Botswana had a stellar record on GDP growth over 1970–2010, raising its per capita GDP to the second highest in Sub-Saharan Africa (after Gabon). But its economy is based primarily on the production and exports of raw diamonds—extractives—which we do not include in the measures of diversification and export competitiveness. The country has made efforts in recent years to diversify away from raw diamonds by moving into cutting and polishing, but the results have yet to register in the data. Meanwhile, the economy remains very weak in some of the key indicators of transformation. For example, the share of manufacturing in GDP is around 4% (11% in Burkina Faso, at the bottom of the transformation rankings), and cereal yields are about 375 kilograms per hectare (900 kilograms per hectare in Burkina Faso).5 Ghana’s poor showing in 2010 results mainly from a steady decline in manufacturing production, export diversification, and export competitiveness over the decade. It also relies considerably on unprocessed mineral exports (gold and bauxite). Nigeria’s poor showing also reflects its extreme dependence on producing and exporting oil.

Uganda, Mozambique, and Rwanda made the most progress on transformation, each improving its rank by three places or more. Kenya, Madagascar, Malawi, Côte d’Ivoire, Tanzania, and Ethiopia improved their rankings by one or two places. The worst deteriorations were in Ghana and Botswana. Ghana fell seven places, and Botswana five places, between 2000 and 2010. Burkina Faso, Cameroon, Senegal, and Zambia also dropped in rankings. (The special feature at the end of this overview shows rankings on the individual DEPTH subindexes.)

**Propelling economic transformation in Africa**

Again, growth with depth is needed to propel and sustain Africa’s economic transformation. It can diversify and technologically upgrade the economy. It can also expand formal jobs and self-employment and connect with the vast informal economy to reach small firms and boost their productivity and incomes so that a growing share of the population can share in the continent’s prosperity. And it can link African producers to global value chains and greatly broaden their markets.

But growth with depth is not mechanical. To pursue it, countries have to develop and implement strategies appropriate to their circumstances. In doing this they can learn from the other countries that have already transformed. Although there is no formula for economic transformation, there is some agreement on policies and institutions that have been important in driving the transformation of successful countries. Beyond peace and security, these include:

- Increasing state capacity for macroeconomic management, public expenditure management, and guiding economic transformation.
- Creating a business-friendly environment that also fosters effective state-business consultation and collaboration on economic transformation.
- Developing people’s skills for a modern economy.
- Boosting domestic private savings and investments.
- Attracting private foreign investment.
- Building and maintaining physical infrastructure.
- Promoting exports.
- Facilitating technology acquisition and diffusion.
- Fostering smooth labor-management relations.
- Identifying and supporting particular sectors, products, and economic activities in each country’s potential comparative advantage.

The exact combination and sequencing for the 10 drivers may differ from country to country, and even in the same country it may change over time. But awareness of how successful countries have used the drivers to help them transform can help African countries as they develop their own strategies. This inaugural *African Transformation Report* examines the policy options for several of the drivers. Others will be explored in detail in future reports. In addition to the 10 drivers here, each within the exclusive control of national policymakers and citizens, progress on regional economic integration will in several tangible ways also provide a tremendous boost to the economic transformation efforts of Sub-Saharan countries.

**The state and the private sector—partners in transformation**

Pursuing economic transformation well requires the state to be effective in providing an environment that is conducive to businesses in general, as well as in collaborating with the private sector and facilitating its upgrading of technologies and capability to competitively produce promising new goods and services, and to enter new export markets. Though the list of the roles is long, capacity limitations require African countries to focus on the ones essential for transformation.

*Managing the economy to enable businesses to flourish*

Economic transformation can take place only in an environment of prudent macroeconomic policies, which is also conducive to
Central to a country’s economic transformation is learning about and introducing new technologies, processes, products, and services—and breaking into foreign markets. This requires policy action on many fronts:

- **Macroeconomic and exchange rate management.** Fiscal and monetary policies should be pursued in ways that ensure that their impacts on inflation, wages, interest rates, and exchange rates are positive for promoting rapid growth in GDP, jobs, and exports. This requires constant monitoring of policy impacts and a willingness to make timely policy corrections where necessary.

- **Planning and managing public spending.** The state has to balance its spending on short-run consumption and long-run investment, with expenditures in line with the overall transformation program. It has to appraise and select public projects professionally—and carry them out efficiently to ensure value for money, with timely monitoring and reporting.

- **Making public procurement deliver value for money by reducing corruption.** The gap between available resources and those needed for transformation in Africa is huge. African countries therefore cannot afford to waste their public resources through corrupt and inefficient procurement processes that enrich a few politicians and officials and retard progress on transformation that would benefit all. The state thus has to put in place transparent and efficient procurement systems. Indeed, if governments spent as much time cleaning up procurement and executing projects efficiently as they did chasing finance from donors and other external sources, the impacts could be transformative.

- **Administering ports and customs and controlling corruption.** Moving goods in and out of a country in a timely and efficient manner is critical to transformation in a globalized world, particularly for smaller countries that need external trade, as in Africa. The state therefore has to increase the efficiency of airports, seaports, and border crossings. And simplifying customs procedures can speed clearing times, essential for participation in global value chains, and control corruption.

- **Streamlining regulation.** To encourage entrepreneurship and innovation, the state should regulate only what it should and can regulate. That can save money for both the firms and the government: the only losers will be corrupt officials.

- **Beefing up statistics.** The state has to produce timely and high-quality social and economic statistics to enable it to formulate better plans, monitor implementation, and change course where necessary. Such statistics also help the private sector in planning and deciding investments—and the citizenry in holding governments to account.

**Guiding transformation by setting a national vision and strategy**

In addition to the tasks above related to good economic management, policymakers can take more proactive steps to spark transformation. Central to a country’s economic transformation is learning about and introducing new technologies, processes, products, and services—and breaking into foreign markets. They should seek over time to move to higher value products by upgrading skills, learning about and introducing new technologies, processes, products, and services—and breaking into new foreign markets. They should also aim at making the transformation process in the modern sectors more labor intensive to expand the opportunities for productive employment.

The spark that ignites economic transformation is likely to come from the formal or modern sectors. But the informal or traditional sectors should not be forgotten. Conscious efforts should be made to promote links between them and the modern sectors spearheading the economic transformation. These would include assisting small enterprises and those in the informal sector to upgrade their capability to become competitive suppliers to the expanding modern sector firms—and implementing programs that encourage modern firms to source inputs from them. A similar approach would encourage a new class of commercial farmers and agroprocessors to source inputs from traditional smallholder farmers as through outgrower schemes.
The foregoing considerations should all inform the formulation of a clear national vision and strategy. The state guides the formulation of the vision and strategy or plan but consults closely with private firms, which in the end will be the main implementers. This requires a state that has the drive and capacity to play the traditional state roles in economic management and to collaborate with business in pursuing specific transformation initiatives.

A national vision and strategy can inspire citizens and mobilize their support for sacrifices in the early stages of economic transformation. The strategy can also clarify the interrelationships among government branches and between relevant government and private activities—thus improving information, understanding, and coordination among key actors in the economy. And the targets in the strategy can make it possible for citizens and businesses to hold government accountable for results.

Sub-Saharan countries have in recent years begun to take the lead in producing medium- and long-term plans more focused on the growth and transformation of their economies. In Ethiopia, Ghana, and Rwanda the new plans result from the country taking more ownership of the poverty reduction strategy process. In Kenya and Nigeria they emerge from a separate process. Too often, however, the expenditures in annual budgets bear little relation to the priorities in the medium- or long-term plans—and even less when separate government ministries or agencies carry out the two functions.

**Coordinating plan implementation**

One of the biggest challenges that many Sub-Saharan countries face in promoting economic transformation is coordination within government to produce and implement plans that are both coherent and realistic. Many plans are produced by planning agencies using experts from outside government, with little input and commitment of senior staff from other government ministries and agencies. A planning ministry, if separate from the finance ministry, seldom has much influence in ensuring that expenditures in the plan are actually reflected in the budget, making planning a paper exercise. Having planning and finance under one ministry could solve this, but it could also create the problem that the short-term exigencies of finance swamp the long-term studies and reflection needed for planning.

In addition, many government initiatives to support economic transformation will necessarily have to involve several government ministries and agencies. This requires effective coordination within government. Only an office whose authority is accepted by ministers and staff in other ministries and agencies can ensure this takes place. In some cases that would be a minister of planning, finance, or trade and industry whom colleagues see as senior to them. In others it would be an office directly under the president, vice president, or prime minister. Seen as having a higher rank, the office can convene various arms of government, assign tasks, monitor implementation, and discharge rewards and sanctions as occasions warrant. The office also needs top-class professional staff to earn and maintain the respect of other units in the government. Early archetypes would be South Korea’s Economic Planning Board, Taiwan’s (China) Council for Economic Planning and Development, and Singapore’s Economic Development Board, initially under the Ministry of Finance and later the Ministry of Trade and Industry. Later ones include Malaysia’s Economic Planning Unit, in the prime minister’s office, the National Economic and Social Development Board of Thailand, under the office of the prime minister, and India’s Planning Commission, chaired by the prime minister and run by a vice chair with a cabinet rank.

**Building centers of excellence**

The functions critical to the state’s support to economic transformation have to be performed well, so the institutions in charge of these functions and the people that work in them have to be first class. The institutions include the central bank, the ministry of finance, the national planning agency (where different from the ministry of finance), the ministry of trade and industry, the ministry of land and agriculture, the ministry of education and skills development, the national statistical service, the investment and export promotion agencies, the national development bank, the export finance facility (if different from the national development bank), the administration of customs, and the management of seaports and international airports.

For a leader serious about promoting economic transformation, the appointments to head the core functions should be based on competence and the ability to deliver results; they should not be used for patronage or to repay political debts. The same applies to the directors and deputy directors in these ministries and agencies. Sounds obvious, but look at the lineups in some African countries.

Many African countries now have a talent pool—in government, in business, in think tanks, and in the diaspora—that leaders could tap if they really want to pursue transformation. The senior staff should be empowered and supported to run these core ministries and agencies. Such implementation bodies as customs, ports management, and the investment and export...
Reformed core ministries and agencies could serve as centers of excellence and beacons for others to emulate in the public service.

Promotion agencies could be made into semi-autonomous statutory bodies with terms and conditions of service that are different from those in the civil service, set to attract the best. Appointments should be based on contracts, and continued employment should be based on performance, as specified in the contracts, not on changes in governments or on the whims of political leaders.

It will take time to change the culture in the whole public service and to find the resources to provide adequate remuneration. However, the reformed core ministries and agencies could serve as centers of excellence and beacons for others to emulate in the public service. And if these centers help promote faster economic growth and transformation, resources would be generated to pay for reform in the rest of the public service.

Fostering state-business collaboration

While the state would contribute to economic transformation, it is entrepreneurial firms, both large and small, that will spearhead the creation of employment and the production and distribution of goods and services that drive economic transformation. That is why government should create mechanisms that bring it into regular contact with business to seek its inputs. Organized labor is another key part of the collaboration, particularly in democracies where it can exercise the right to strike. Also in democracies, popular support for the economic transformation vision is necessary to gain acceptance for the difficult reforms that may be required.

State-business engagements should pursue three objectives: first, get business inputs on medium- and long-term national plans; second, seek feedback from business on how government policies and programs affect them; and third, design and monitor specific transformation initiatives.

Several Sub-Saharan countries have made some progress on the first objective, spurred partly by the poverty reduction strategy process, but business participation could be deepened beyond consultation. A good example in this direction was the process used by Kenya to prepare its Vision 2030 Plan. The National Economic and Social Council that spearheaded its preparation comprised business people and public officials.

On the second objective, several Sub-Saharan countries have public-private forums that meet periodically (say, once or twice a year) to discuss issues affecting the private sector. A good beginning, but these large meetings are too infrequent, and they tend to be long on ceremony and short on fact-based discussions of issues. And in some countries, various business associations submit presentations to the government during budget preparation time, advancing their particular interests. These exchanges between the government and business are welcome, but they could be improved.

The discussions should be substantive reviews of the impacts of government policies and actions on the general environment for business operations and how it could be improved—not focus on special favors for particular business subgroups. The meetings should be chaired by the head of government or the central coordinating agency. A secretariat should prepare analyses and reports to be discussed at the meeting and follow up on decisions taken and monitor their implementation by the relevant agencies.

Kenya’s National Economic and Social Council, with meetings chaired by the president or prime minister, operates in ways that move in this direction. Mauritius has a well-developed consultation mechanism between the government and business through the Joint Economic Council, an umbrella business organization.

The third objective—deliberating on selected transformation initiatives, the instruments to promote them, and the monitoring and compliance mechanisms—is not well developed. This stems in part from the low capacity and organizational weakness in government to translate general objectives in economic plans to specific initiatives to discuss with business. In addition, some governments, despite the rhetoric, still have not embraced business as a very important partner with knowledge and expertise that the state can and must tap.

How to ensure that strong collaboration among the government, business, and organized labor does not degenerate into “cronyism” among politicians, senior bureaucrats, big business people, and labor bosses? Academics and staff from independent economic think tanks should be members of the deliberative bodies. And the decisions by these bodies should be made available, together with their rationale, to the public (through the secretariat’s website and the media).

The incentive packages to promote the initiatives and the associated eligibility and performance criteria should also be published. And beneficiaries and performance should be made public periodically. In countries with strong and independent parliaments, the legislature can insist on the information being made available—and use it for accountability. Civil groups, including the media, could also demand the information and use it for accountability. And foreign donors supporting economic
transformation could support competent civil groups and think tanks to enhance their ability to ensure transparency and accountability.

**Embarking on governance reforms**

None of the foregoing will happen without solid progress on governance reforms—indeed, several countries are only beginning to embark on reforms.

True, there have been great strides in democratic transitions, the media are doing more as watchdogs exposing corruption and checking abuses of power, and civil society groups are promoting transparency and accountability. But political and economic governance will determine how well countries meet their transformation challenges and realize their full potential in moving forward. They will have to consolidate their recent progress in governance. And they will have to seal the cracks in their young democratic systems, dealing with entrenched corruption, costly electoral processes, and weak accountability mechanisms. Especially daunting will be formulating and implementing a long-term transformation vision and strategy across electoral cycles in polarized multiparty democracies.

**Promoting exports**

Exports provide the foreign exchange to import the machinery and technology necessary for technological upgrading. Over time, higher earnings from exports make it easier to finance investments to change a country’s underlying factor endowments (such as skills and technological capacity) and thereby its comparative advantage. Exposed to competition on international markets, exporters have to increase their efficiency in production and marketing, in the process showing other domestic producers what’s possible. Exporting also exposes domestic entrepreneurs to global tastes, standards, technologies, and best practices—providing opportunities for learning about new products, services, processes, and technologies that they could introduce at home.

The pathways to export expansion are determined by the relative comparative advantages and disadvantages of countries (box 1). Broadly speaking, Africa’s relative advantages are abundant low-wage labor and abundant land and natural resources. By mid-century almost a fifth of the global population of working age will be in Africa. Half the world’s acreage of cultivable land not yet cultivated is in Africa. And Africa’s known reserves of oil, gas, and minerals, with further exploration over the next decades, are set to grow dramatically. Sub-Saharan countries are, however, at a relative disadvantage in capital (including physical infrastructure), technology, and skills. So it makes sense for them to leverage their current comparative advantage while upgrading their capabilities in the disadvantaged areas.

To leverage their abundant labor resources into a competitive advantage in labor-intensive manufacturing exports, Sub-Saharan countries need to address their relative cost disadvantages, particularly with China and other Asian countries. Staying competitive in the export of labor-intensive manufactures based on a low-wage advantage will, however, become more difficult. Re-shoring and near-shoring, multinational companies from developed countries are relocating manufacturing back to, or near, their home bases. And such technological developments as three-dimensional printing and three-dimensional packaging of integrated circuits are likely to reduce the demand for low-skilled assembly workers. African countries will therefore need to consciously develop other sources of international competitive advantage, particularly skills, even as they ride their current low-wage advantage onto the initial steps of the manufactured exports ladder.

The prospects of Sub-Saharan countries are rather bright for manufacturing exports based on processing agricultural and extractive resources (oil, gas, and minerals), which they have in relative abundance. Many development successes have begun by working and transforming local natural resources. But processing tends to be intensive in capital and skills, so it would demand more of the factors Sub-Saharan countries lack, and less of the untrained labor they have in abundance. These constraints can be overcome through skill development and with deliberate programs to develop capabilities in more labor-intensive industries upstream and downstream. In agricultural processing, developing links to smallholders and improving their productivity and access to markets will also reduce rural poverty, as with oil palm in Malaysia.

Some Sub-Saharan countries also have good export prospects in services, particularly tourism based on the attractions of their varied cultures, wildlife, landscapes, and sunny beaches. Also promising are teleservices, such as business process outsourcing based on fairly low wages and medium skills—for the U.K and U.S. markets for Anglophone Africa and the French market for Francophone Africa. Again, skills development, in addition to investments and policy actions, will be needed to turn potential into a competitive advantage on the global market.

**The prospects of Sub-Saharan countries are rather bright for manufacturing exports based on processing agricultural and extractive resources (oil, gas, and minerals), which they have in relative abundance.**
Box 1  Four pathways to transformation

Chapters 5–8 of the *African Transformation Report* elaborate on four pathways to transforming African economies: labor-intensive manufacturing; agro-processing; oil, gas, and minerals; and tourism.

**Labor-intensive manufacturing—still the first rung?**

Sub-Saharan countries can leverage their abundant labor and low wages to enter the competitive production and export of manufactured goods. Garment manufacturing has been one of the first rungs that countries climb on their way up the manufacturing ladder. It is labor intensive. The capital requirements are generally modest. The technology and skills requirements are fairly simple. And there is also local demand for the products.

Most global exports of garments are now controlled by global value chains. At the head of the chains are the buyers—large retailers, marketers, and branded manufacturers. Mostly in Europe and the United States, they focus on design and marketing. Retailers and marketers such as Walmart, the Gap, and Liz Claiborne contract out their designs and requirements to suppliers in low-wage countries, mostly in Asia. Some of these suppliers (such as those in Hong Kong SAR [China]) have factories in several low-wage countries and coordinate the sourcing of inputs, the production of the garments, and the exports to buyers. Others (such as Li & Fung Ltd.) no longer produce, focusing instead on sourcing from and coordinating a wide network of factories owned by others. Under this triangle manufacturing the retailers and marketers at the top of the garment global value chains have no direct relationship with producers. These buyers now look for full-package suppliers who can deliver orders based on their designs or specifications. Brand manufacturers (such as Levi Strauss) still have direct relationships with factories in low-wage countries, either through factories they own or through production-sharing arrangements with factories owned by others.

Most Sub-Saharan garment manufacturers cannot now provide the full-package services that retailers at the top of the garment global value chains look for. Capabilities in most African countries are generally in the cut, make, and trim stage—and in niche African designs. So entering the garment global value chains for large-scale exports would have to be through production sharing with a brand manufacturer or through working with a larger supplier in triangle manufacturing.

In addition to garments, component assembly was one of the main ways for poor countries to leverage their low-wage labor to industrialize in the second half of the twentieth century. Korea, Hong Kong SAR (China), Singapore, and Taiwan (China), then Malaysia, and now China have been able to ride on the assembly of simpler consumer electronics (radios, televisions, cellphones, computers, computer peripherals) and home appliances (fans, refrigerators, air conditioners, microwave ovens) to enter the first rungs of the global manufacturing ladder.

Attracting foreign direct investment (FDI) for component assembly in Africa, particularly home appliances, will be abetted by large and buoyant markets, supported by the growing middle class, and perhaps more important by integrating the national markets. Only Nigeria and South Africa have a large enough domestic market to attract a market-seeking FDI (as many heavy home appliance manufacturers tend to be). But progress on regional integration would enable other countries to join them. The Southern African Development Community comprises 15 member states with a market of almost 250 million consumers, a combined GDP of $649 billion, and per capita income of $2,617. The 15 import $213 billion worth of goods, and their exports are valued at around $207 billion. Similarly, the Economic Community of West African States comprises 15 member states, with a market of about 320 million people, a combined GDP of $396 billion, and per capita income around $1,245. With an open market in each bloc, FDI manufacturers would become more interested in the blocs as possible sites for manufacturing plants. And member countries—even the small ones—would with good policies, adequate infrastructure, and logistics stand a better chance of becoming locations for FDI manufacturing.

**Agroprocessing—natural potential**

Agriculture has the potential to contribute greatly to economic
transformation. It can increase incomes in rural areas. It can also increase exports and the foreign exchange needed to import machinery and inputs for industry. It can supply the raw materials to support agricultural processing industries. It can release labor from agriculture to manufacturing and other sectors of the economy. It can boost the supply of food to the growing urban areas and the growing industrial labor force, thus moderating increases in the cost of living and consequently in wages. And it can expand the markets for inputs and consumption goods and services for the nonagricultural sectors.

The broader agriculture-to-agroprocessing value chain can, if successful, bring together a potent combination of genuine comparative advantage, scalability, and substantial spillovers for African countries. Agroprocessing typically offers a big step up in generating employment, income, and foreign exchange, which can be unlocked by well designed policies to overcome barriers that prevent domestic players from emerging, reaching scale, and becoming globally competitive.

Here the focus is on three major types of such opportunities:

- **Processing traditional exports** such as coffee, cocoa, and cotton, where Africa has demonstrated its global competitiveness in production, adding value, and creating jobs. Producer countries typically have relative advantages in raw material and labor costs that can, with the appropriate combination of policies and investments, offset other challenges to start a processing base. The scale of the commercial opportunity in processing is typically many multiples of the current raw production opportunity, making this a particularly high value area if successfully leveraged.

- **Scaling up promising non-traditional exports** such as fruits by upgrading the supply chain—from farms to processing factories—increasing farmer incomes, and generating jobs in factories and allied agribusiness services. A broad range of potentially very high value, but underexploited, crops and growing international demand provides a scale opportunity. If leveraged, the associated supply chain and infrastructure investments can form a platform for (or reduce the cost of) entry into other adjacent export sectors.

- **Substituting agricultural imports**, which are growing in importance given the rapid rate of increase in agricultural imports into Sub-Saharan Africa. The total value of imports rose 62% between 2007 and 2011 to reach $37 billion. Some of the fastest growing products are poultry meat and associated inputs such as soybean cake, which have increased 139% and 119% in value respectively to reach a combined value of $2.1 billion. They are set to continue this rapid increase as incomes and the consumption of meat, particularly by the growing urban middle class, rise. Upgrading the domestic supply chain to put local players on a competitive footing with imports is critical to unlocking this opportunity.

**Oil, gas, and minerals—part of portfolio of assets**

Africa is the least explored continent, but a large number of African countries are endowed with abundant oil, gas, and mineral resources and have economies that depend heavily on their extraction and exports. The extractive industry in many of these countries is highly concentrated on extraction upstream, so the exports are also limited to the raw primary product, not semi-processed or processed. The upstream part of the value chain is often in an enclave with few links to the rest of the economy, and the concentration on unprocessed products exposes countries to volatile prices and thus volatile revenues. This, coupled with the fact that extractive resources tend to be exhaustible and nonrenewable, makes sustainable development particularly challenging for countries highly dependent on them.

A first step to realizing the blessings of natural resource endowments and avoiding the curses is to get better at geological surveys to know what you have and at negotiating with foreign companies to get fair deals. Three instruments dominate in exacting revenues from the extractors: taxes on profits, royalties per unit of production, and equity stakes.
should also expand their exports to such emerging economies as Brazil, China, and India. But they need to avoid being lured by high commodity demand into relaxing their efforts to industrialize and upgrade the technology of their exports. They should seek to take better advantage of the preferences available to them—but in ways that do not foreclose their policy options for diversifying their production and upgrading their technologies. And they should work hard to prevail on their partners in Europe

Because resources, once extracted, are gone forever, a second step in turning oil, gas, and minerals into blessings is to see them as part of a portfolio of national assets that also includes human capital, physical capital, financial capital, and institutional capital. Countries can enjoy fast growth and fat revenues from extraction for a time, but they can end up worse off than before a boom if they do not use their share of the revenues to build those other assets—for this and future generations. Government revenues from oil, gas, and minerals can also promote technological upgrading, higher productivity, and growth in other economic sectors.

That is why it is important to spend today to build human, physical, and financial assets along with the institutional assets not just for regulating extraction but also for selecting and monitoring projects—and for delivering services and managing the entire economy. It is also important to separate resource revenues from other revenues and to invest them for the long term.

Tourism—for leisure and for business

Sub-Saharan Africa had 34 million international visitors in 2011. Half were leisure tourists, a quarter were visiting family and friends, and about a sixth were business and professional visitors. On current trends the arrivals are set to rise to 55 million over the 2010s, contributing $66 billion to the region’s GDP by 2020, and 6.5 million jobs, up from 5.2 million at decade’s start. Adding indirect and induced spending, tourism’s total contribution would almost triple to $172 billion and almost 16 million jobs. Those projections are on current trends. Given the continent’s recent dynamism they are likely to be low, especially for business and professional travel. And for those visiting family and friends, their increased contributions to spending and investment are likely to be considerable.

Boosting tourism would contribute to Africa’s economic transformation by increasing the foreign exchange to finance imports, creating jobs, and increasing demand for local material inputs. And by advertising countries to the rest of the world, it would help attract foreign investment. Tourism Towards 2030 forecasts international tourist arrivals of 1.4 billion in 2020 and 1.8 billion by 2030. East, West, and Southern Africa would have 55 million international tourists in 2020 and 88 million in 2030.¹

The institutions that countries choose for tourism, the policies they adopt, their attendant regulations, and their ability to implement them are all important—whether the economy is market-driven with little regulatory interference, whether the state wields a heavier hand, or whether the sector is merely stifled by outdated legal and regulatory clutter. The actions of public institutions can go a long way to determining whether the needed long-term private investment is forthcoming. Public investments in tourism (from infrastructure to marketing programs) are also critical, as is assuring coordination of the myriad, cross-sector programs that affect tourism.

The private sector, crucial for investing in and operating tourism facilities, has a key role as an interlocutor with government. Working through professional and trade associations, firms can defend their interests in line with their profit motive, achieve credible, competitive service standards for the industry, highlight their concerns to government, and advocate specific positions through analysis of policy proposals.

¹. UNWTO 2011.
and the United States to harmonize their trade preferences, particularly those under the European Union’s Everything But Arms and the U.S. African Growth and Opportunity Act, to make them more useful to Africa’s transformation efforts. The regional markets in Sub-Saharan Africa could also support a dynamic expansion of exports, but governments will have to do much more to remove barriers to intraregional trade and improve regional transport infrastructure.

A viable export-oriented strategy for Sub-Saharan countries would thus emphasize adding value to agricultural and extractive resources, developing related upstream and downstream industries, and promoting links along the chain. It would also opportunistically pursue labor-intensive manufacturing, taking advantage of foreign direct investment and using well run special economic zones and specialized industrial parks to reduce costs. And it would promote tourism based on culture and natural assets (wildlife and year-round sunny beaches) and telephone and simple information technology services. All have to be based on a higher platform of skills, so short-, medium- and long-term strategies to develop skills have to be core parts of the export drive.

Formulating an explicit export strategy

If countries see expanding and diversifying exports as top priorities, they need clear strategies for pursuing them. An export promotion strategy could be an elaboration of the objectives for exports in the national transformation strategy. Among the key areas to address:

- Maintaining a general economic environment that makes exporting profitable.
- Adding value to selected traditional exports, based on market prospects.
- Providing targeted support to promising nontraditional or new exports, including technologically more advanced exports.
- Strengthening the country’s position in existing export markets and diversifying into new ones.
- Attracting export-oriented foreign direct investment, particularly in manufacturing.
- Responding to the immediate skill requirements of the exports being promoted.

Export promotion requires a whole-of-government approach and close state-private sector collaboration. It requires more than just the Ministry of Trade and Industry; it requires several ministries and agencies in government, including the Ministries of Planning, Finance, Agriculture, Infrastructure, Education, Science and Technology, Mineral and Petroleum Resources, and Tourism—as well as the Central Bank and the Export Credit and Guarantee Agency. Coordination within government by a central coordinating agency is thus essential. As with the overall economic transformation strategy, the export strategy should be developed in consultation with the private sector. And it should have sensible targets monitored and discussed by the state and exporters in the state-private sector collaboration forum.

Enhancing the profitability of exports

A realistic exchange rate is key to the profitability of exports because it determines how much exporters receive in domestic currency for their foreign exchange earnings. If the exchange rate is too low, receipts in domestic currency might not cover their costs, so they would not survive as exporters. To avoid this, the exchange rate, once set at a level that makes exports profitable, should move over time to reflect movements in the costs of domestic factors of production and trends on international markets. Since the exchange rate also determines the domestic currency price of imports and therefore the welfare of a large number of consumers and producers, the government cannot just keep hiking it to keep up with rising domestic costs. It will be important, therefore, to take measures to contain domestic costs.

Prudent macroeconomic policy that controls inflation can help keep domestic costs down. Efficient and honest administration of customs and ports can also save exporters unnecessary costs and delays. Domestic exporters are put at serious cost disadvantage if they have to pay high tariffs on imports used in producing exports. But a duty drawback or bonded warehousing scheme can ensure that they get access to imported inputs at free-trade prices. They are similarly disadvantaged if they do not have access to reliable infrastructure at reasonable prices. In the short term, special economic zones can provide quality infrastructure (which the country cannot afford to provide on a national basis), ease the administration of duty drawback schemes, and pilot the streamlining of regulations. Export credit and insurance are also critical, and several governments run programs to cater to these needs, including guarantees to banks to ease exporters’ access to credit. But such incentives are sometimes considered subsidies and may thus be subject to countervailing duties.

Apart from these general measures, governments may also find it justifiable to use fiscal or credit measures to enhance the profitability or reduce the production and marketing costs of selected export products or selected types of firms, such as domestic small and medium-size enterprises or export-oriented firms, including foreign-owned subsidiaries, subject to compliance with World Trade Organization rules.
Protecting domestic producers

Import substitution has often been the gateway to breaking into export markets. The significant share of unbound tariffs and the gap still prevailing between bound and actual tariff rates for many Sub-Saharan countries, together with the more favorable safeguard provision on imports, still provide room for selective import substitution. In this sense, the cap on bound rates rules out excessively high tariff rates that foster highly inefficient import-substitution industries. It also strengthens the hand of policymakers in resisting pressure from domestic industry for high levels of protection.

Providing subsidies

A deficiency in tariff protection is that, even if the raised rates are explicitly temporary, there is no way to discipline firms enjoying the protection if they fail to improve their efficiency. Subsidies can overcome this disadvantage since the actual conferring of the benefits can be firm-specific and contingent on performance even if the eligibility criteria are objective and broad. Subsidies to promote exports include cash payments, credit at below-market interest rates, tax exemptions, reduced tax rates, and reduced prices for services such as infrastructure. And making the subsidies contingent on exports provides a practical and efficient way to monitor and enforce discipline. To be considered, however, are the opportunity costs in relation to other government spending, given the other urgent needs in poor countries.

Most Sub-Saharan countries are now exempt from the World Trade Organization prohibition on using subsidies that are specific to and contingent on exports. This enables them to use export processing zones or special economic zones to attract firms, particularly foreign-owned firms, and to encourage them to export. But countries should view subsidies contingent on exports as temporary measures to facilitate building domestic capability and productivity. The quicker these are built and the subsidies withdrawn, the better, for there is no merit in a poor country persisting in paying subsidies to supply goods and services to other countries, particularly richer ones, at lower prices.

Requiring firms to hire local workers

The World Trade Organization’s Trade Related Investment Measures agreement prohibits governments from requiring firms to buy “products of domestic origin,” but it places no restrictions on the requirement for firms to hire local labor, which in principle could apply to both foreign and domestically owned firms (and thereby satisfy the national treatment requirement). However, such a requirement must be consistent with the profit motives of firms, and the country must have people with skills that firms, including foreign ones, would find in their economic interest to hire. So, there is still scope for countries to combine focused skills development with strategic programs to attract export-oriented foreign-owned firms. Highly trained locals that foreign-owned firms find economical to take on as managers, engineers, and technicians not only provide employment. They also present a cadre of potential entrepreneurs who can set up dynamic modern firms in the future.

Increasing access to technology

Expanding, diversifying, and technologically upgrading exports have to be part of the economic transformation agenda. Governments have two main options to help firms acquire technology. First, they can facilitate licensing by providing access to information (including subsidized technology study tours), easing regulations, and providing targeted subsidies, contingent on performance, to lower the cost of technology licenses (or critical new machinery). Second, they can establish research and development facilities that address technological constraints in specific subsectors in consultation with firms.

Building technical knowledge and skills

Economic transformation demands a healthy workforce equipped with the knowledge and skills to be highly productive on farms, in firms, and in government offices—and to generate innovations in technologies, processes, products, and services.

By mid-century Sub-Saharan Africa will have a larger and younger workforce than India or China. Its share of the world’s working-age population (ages 15–64) is set to double from just more than 10% in 2010 to about 20% in 2050—to 1.22 billion, slightly higher than India’s at 1.14 billion and much larger than China’s at 790 million. The share of 15–24-year-olds in the working population would be 18.5%, well above the projected world average of 13.5%.6

This young and growing workforce can be a global competitive advantage and a great asset in driving economic transformation—if it is healthy and has the right skills. Or it could be a drag on growth and a threat to social and political stability.

What’s needed to make the labor force an asset is well known. Ensure universal primary education. Boost secondary and tertiary enrollments. Improve the quality of teaching. Increase the scientific and technological orientation of the education system and align it
Early industrialization relies on low-unemployed or inactive. Typically, most of the effort is government-led in traditional education and training systems. Also to be considered is complementing that system by moving outside it to quickly produce workers with the skills that businesses need.

The challenges are big on both the supply and the demand sides. Start with supply.

- Educational attainment in Sub-Saharan Africa, despite recent progress, is still generally lower than elsewhere.
- The quality of teaching and classroom materials is also low, so students are not learning, nor are they expanding their capabilities for self-development.
- Primary enrollments are up, but completion rates are still low, secondary and higher enrollments are very low, and teaching is not geared to science or technology.
- Vocational, technical, and polytechnic education is underdeveloped.
- Structured programs for continuing education and on-the-job training are weak.

Now move to demand and the ironic situation of economies having a tough time employing even the small numbers of secondary school and college graduates. A study of 23 countries found that just over half of college graduates (ages 25–34) were working in the informal economy, a fifth were in the informal economy, and the rest were unemployed or inactive. For secondary school graduates, 36% were in formal work, 46% were in informal work, and the rest were unemployed or inactive.

Early industrialization relies on low- and mid-level technicians, prepared mainly by technical and vocational institutes, mainly at the secondary level. The region’s share of vocational students at the secondary level is around 8%. In South Korea the share of technical-vocational high schools in the 1970s was around 45%. In Singapore the Institute of Technical Education and the polytechnic system enroll about half the students in upper secondary and higher education.

What’s needed to fix things? A lot, and no one system is right for all countries and all times. Here are some improvements and innovations that could be considered by countries aiming to promote economic transformation.

**Extending access to basic education and improving quality**

Improving quality requires qualified, motivated teachers and good teaching materials. As countries have expanded primary schooling, they have found it more difficult to attract good teachers, particularly in rural areas. And it could get worse. To achieve universal primary schooling by 2015, it is estimated that the region will need 4 million teachers, up from 2.4 million in 2006.

One way to address the shortfall is to supplement the output of the normal teacher training systems by taking unemployed college and upper secondary graduates, training them for about six months, and deploying them to schools. The initial training would be followed by periodic further training during, say, the long school breaks. Incentives should attract graduates to stay on for a set number of years or to choose teaching as their profession. That could kill two birds—providing more teachers and reducing graduate unemployment—with one stone.

Good (and affordable) teaching materials are also important for quality. Primary students in many Sub-Saharan countries do not have textbooks they can bring home; instead students share books that are locked up at the end of the school day. In 15 countries that are part of a consortium in East and Southern Africa to monitor educational quality, only about 40% of sixth graders had their own reading and math textbooks. Developing context-appropriate textbooks and streamlining their production and distribution could reduce costs and improve learning.

So could loading more African textbooks onto simple e-readers, as with Worldreader and One Laptop per Child. For two years Worldreader has been putting Amazon Kindle e-readers—and more than half a million books, many of them by Africans—in the hands of students in Ghana and Kenya. iRead students in Ghana are scoring better on reading tests. Working with bilNu, an Australian app maker, Worldreader now has its books available on low-end cellular phones, enabling half a million readers, many of them in Africa, to view 20 billion pages a month. One Laptop per Child claims to have delivered 2 million laptops loaded with educational software and content students in developing countries, among them Ghana, Rwanda, and Sierra Leone.

**Expanding technical and vocational education**

Policymakers need to view technical and vocational education as essential to supporting their transformation strategies. They should align the training with the jobs being created in industry and make it a true stepping stone to good career prospects. They should emphasize training that provides a solid foundation in language skills and in science, technology, engineering, and mathematics for lifelong learning and skills upgrading. And they should campaign at the highest
levels to lift the image of technical and vocational education and let potential students know about the new work prospects stemming from the economic transformation strategy.

Many Sub-Saharan governments may not have the central control that the Asian countries had over education in the second half of the twentieth century, but they still have room to maneuver. They can favor technical and vocational institutes (at the secondary and tertiary levels) in their expansion of public education. They can charge lower tuition in these institutes, as South Korea did. They can also subsidize tuition at private technical and vocational institutes, since governments cannot expand these institutions at the pace needed.

Businesses have to be part of technical and vocational education and training for practical reasons. First, it is expensive. In Singapore the cost of training at a polytechnic is about the same as that at a medical doctor. In Sub-Saharan Africa the unit costs are up to six times those for general secondary. Second, involving businesses in curriculum design increases the relevance to industry and motivates them to provide industrial equipment support, internships during training, and jobs on graduation. Third, businesses can also provide attachments for teachers to refresh their skills—and be a source of instructors. Fourth, businesses will be more confident that they can hire people with the skills they need to make investments profitable. Indeed, if businesses have been part of formulating the national transformation strategy—and their investment plans are informed by that strategy—their involvement in training is one of the key ways of working with government in implementing it (box 2).

**Favoring science and technology at universities**

Governments can also favor university enrollments in science, technology, engineering, and mathematics (STEM). In Brazil, Chile, and South Korea public universities focus precisely on those disciplines, leaving the private sector, which provides around 70% of higher education in each country, to focus on the less expensive humanities and social sciences.

As with technical education, students in public universities enrolled in STEM courses could pay lower tuition fees, and those in private universities could receive subsidies. State funding for facilities and faculties could favor STEM departments at public universities, and new faculty openings could be similarly skewed toward STEM departments. The state could also offer competitive grants to private universities to steer them toward science and technology. In some cases the state might even do more to promote such education by providing grants to upgrade several private nonprofit universities rather than incurring the full expense of building a new university.

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**Box 2  What company executives have to say about productivity and skills in Africa**

ACET interviewed top executives of 10 multinational manufacturing companies with operations in sectors aligned to Sub-Saharan Africa’s comparative advantages and with some type of manufacturing presence in emerging markets. The objective was to find out the key factors that the companies consider when deciding where to locate their manufacturing operations, with a specific view to Sub-Saharan Africa.

The most important factors they cite are labor productivity (expressed primarily as the education and skills of the workforce) and policies (consistent policy environment, fiscal incentives, and tariff and nontariff barriers).

The low productivity and high costs arising from the lack of education and skills make it infeasible for them to locate in Sub-Saharan Africa, especially in comparison with India and other low-cost producers. As one executive said: “Until there is an educated and skilled workforce, all other initiatives and incentives are of no use.”

The lack of skills affects not only the companies’ manufacturing but also the presence of a reliable and skilled local supply chain. Several executives interviewed indicated that a strong local supply chain does not yet exist, except for South Africa to a degree. Companies need to be able to source components and parts locally to sustain cost-effective manufacturing. And the more technically sophisticated the product, the more difficult it is for companies to find local components.

Source: ACET interviews of company executives.
Again, behind quantity lurk quality and relevance—and behind quality are adequate numbers of qualified instructors. Vacancy rates for university faculty in Sub-Saharan Africa run 25–50%, with science and technology at the high end. To fill these slots and those opened by expanding science and technology courses will not be easy, but here are some possibilities.

- First, enhance the incentives by offering research grants, lowering teaching loads, and increasing benefits. That can help in retaining faculty. It can also attract nationals teaching or working at research institutes outside Africa. South Africa and Taiwan (China) did this to attract top scientific talent from the diaspora.

- Second, ramp up graduate training in STEM, both at national universities and through indemnified scholarships at foreign universities. National universities should also seek partnerships with world-class universities to accept students and send visiting professors, as Rwanda has done with Carnegie Mellon.

- Third, encourage donors to fund training for university lecturers and, as a short-term measure, pay for visiting (and retired) professors and researchers to teach at African universities.

Moving outside traditional systems

The number of youths in Africa who have graduated from secondary and higher institutions but are unemployed is large and growing. This difficulty could be turned into an advantage.

Countries should consider a skills development program outside the traditional institutions to provide specific job-oriented short-term training for high school and university graduates who either are unemployed or working in jobs that do not use their education. Right from the start, such a program should be organized with business. This type of training initially cannot take place in traditional universities and other mainstream education institutions given their academic cultures and set curricula that make them less able to engage with businesses and adapt flexibly to meet their needs. This need not be only for establishing new institutes. Some existing institutes could be taken outside the regular academic system, given a mission-oriented governance structure, and run jointly by the government and business.

Skills for agribusiness. Few African countries have institutes dedicated to training young graduates so that they can go into agroprocessing or agribusiness—or into work solving the technical problems of these sectors. Exceptions include floriculture in Ethiopia and wine in South Africa. Governments should consider developing or spinning off an institute to develop skills, amass knowledge, and solve problems for a small number of products in which they have a comparative advantage. The institute should partner with private producers, work with them to solve their problems, and prepare graduates for careers in the product, either as staff or as entrepreneurs. Chile has done this for fish and fruits, Finland for forest products.

Skills for mining. Many African countries are exporting oil, gas, and minerals, but the resources have mainly been developed as enclaves projects with few links with the economy and few jobs for nationals. With resource-based industrialization as one of the more promising transformation options, governments need to promote links between extraction and the economy. How? By targeting skills development. Governments should partner with extractive firms to support efforts to produce skills relevant for extractives and related activities. The government of Botswana did just this in partnering with Debswana, the diamond miner. Companies could also strengthen engineering and other science departments in existing universities and in technical and vocational institutes. The Jubilee Technical Training Center, recently set up at the Takoradi Polytechnic in Ghana by the Jubilee Partners, an oil drilling and production company, will offer courses in instrumentation, occupational health and safety, and mechanical, electrical, and process engineering.

Skills for construction. In the 1970s, when Korea’s transformation strategy called for it, the country created specialized training institutes to quickly develop a cadre of skilled construction workers. When it began building the Seoul Busan expressway, the World Bank doubted the feasibility. The country finished the project ahead of schedule using its own trained expertise. Later, when the economy went into recession, it deployed its skilled construction workers to the Middle East, earning valuable foreign exchange.

Now consider roads in Africa. Many governments have looked to foreign donors and financing entities to support road construction, thinking only of the product—a road—and not of who is building it and how. But foreign contractors typically bring their own technical staff and skilled workers. Through the rest of the 2010s billions of dollars will be poured into Africa’s transport network under the Program for Infrastructure Development in Africa, requiring many millions of workers. Billions more will go into national highways and feeder roads.

Rather than just thinking of getting foreigners to finance and build...
A recurring theme throughout this report is the potential for regional integration to accelerate economic transformation in Africa.

Roads (and major buildings) for them, governments should think about developing construction capabilities and skilled construction workers, which foreign finance would help put to work. For that to happen, governments need to enter serious discussions with donors and development banks about local hiring preferences in construction tenders.

**Upskilling workers through lifelong learning**

Also important is upgrading the skills of people already on the job, not once but all through their working lives. A national qualifications framework can support competency-based skills training, and technical and vocational institutes, especially those outside the regular education system, can offer such training outside work hours. Companies and unions can pay into a skills development fund, open to employers or directly to workers, to finance the cost of training.

The organization of training, the split of training between in-house and outside, and the nature of funding and terms of access will naturally differ by country. But such programs for upskilling and lifelong learning have driven the transformations in Finland, Ireland, Singapore, South Korea, and many others.

**Providing literacy, training, and apprenticeships for informal workers**

Engineering an economic transformation is impossible if many workers cannot read or are locked in low-return activities. By 2015 Sub-Saharan Africa will have 176 million people ages 15 and older who are illiterate, 44 million of them ages 15–24 and set to be in the labor force for decades. Added to this are many literate people working in activities with low earnings. Because it will take time for the formal economy to absorb the bulk of the labor force, countries should provide literacy training for adults and opportunities for those in informal work to enhance their skills and earnings—in three ways.

- Adult literacy programs can be run at low cost in school classrooms and other community facilities after hours and during weekends. Again, unemployed secondary and university graduates could be recruited and trained as teachers, and those already working could volunteer. Grants to civil society organizations could attract them as well. Coming out of war in 1975, Vietnam set the goal of universal literacy in the South, and thanks to communities working with government, 1.3 million of the 1.4 million targeted were literate by 1978.
- Second-chance programs, some run by private providers and subsidized by the state, can encourage young school dropouts to go back to school or get instruction that enables them to obtain primary and secondary diploma equivalents. Simplified curricula, especially for English, allow students to progress quickly and get back into the formal system.
- Apprenticeships dominate in providing trade skills in Sub-Saharan Africa, with easy entry and often in mother tongues. But most are detached from the formal economy and technological advances. To remedy this, technical and vocational institutes could update the skills of educated master craftsmen for free or at subsidized rates. They could also provide incentives to their graduates operating as independent technicians who are running repair and installation shops to take on and train apprentices. And they could enroll apprentices in complementary training and expose them to modern industrial equipment. Burkina Faso, Ghana, and Senegal are moving in these directions.

In addition, competency-based tests that enable apprentices and craftsmen in the informal economy to formally certify their skills would set standards and lift the quality of craftsmanship, as they have done in Kenya and Mauritius.

**Regional integration for Africa’s transformation**

A recurring theme throughout this report is the potential for regional integration to accelerate economic transformation in Africa. Many Sub-Saharan economies are small and have to import most inputs in order to manufacture. They also lack a large domestic market that would provide some form of natural protection for their manufacturers. These challenges are ultimately surmountable through becoming competitive on global export markets. But at the early stages of industrial development they make it more difficult for domestic firms to compete against foreign firms that have the advantages of scale and dense industrial clusters. The report provides several examples of how integration of national markets in the region can help countries overcome these challenges and seize opportunities to advance on economic transformation.

One example is the garment industry. Sub-Saharan exporters now import most of their fabric. But the region has the potential, with additional progress on regional integration, to develop a more integrated textiles and clothing industry. West African countries like Burkina Faso and Mali are significant producers and exporters of raw cotton, but they lack the logistics, large middle class, and industrial infrastructure.
of some of their coastal neighbors such as Côte d’Ivoire, Ghana, Nigeria, and Senegal. A regional cotton textile and garment industry, which would be more competitive than the current national industries, could be facilitated by an Economic Community of West African States customs union and better intercountry transport infrastructure.

With several countries across Africa now producing oil and gas, the crude ingredients for a synthetic textile industry are more available. Regional integration could help turn this potential into a viable industry. In addition, Sub-Saharan countries should get the European Union and the United States to allow garments incorporating inputs sourced from any country in the region to qualify for full duty preferences under Everything But Arms and the African Growth and Opportunity Act, regardless of whether the supplying country is developing or least developed and whether it also is eligible.

In agroprocessing, easier market access among countries would boost the fruit and juice industry in East and West Africa. It would also accelerate soybean growing, processing, and trade in the region. For example, Nigerian soy products could be exported more easily to Angola and Senegal to support modern poultry industries and improve diets, particularly in the fast-growing urban areas. Even in traditional agricultural exports, improved regional integration would enable African countries to realize more value—for coffee it would make feasible the establishment of a coffee trading hub in say Nairobi, which would help coffee exporters from Ethiopia, Tanzania, and Uganda as well.

More integrated regional markets would also greatly improve the chances of attracting FDI in garments, textiles, agroprocessing, and other forms of manufacturing, particularly for smaller countries. Today, only Nigeria and South Africa have domestic markets large enough to attract market-seeking FDI. But regional economic blocs could enable many more countries to have access to the benefits of a wider domestic market. The Southern African Development Community comprises 15 member states with a market of almost 250 million consumers, and a combined GDP of $649 billion. Similarly, the Economic Community of West African States comprises 15 member states, with a market of about 320 million people and a combined GDP of $396 billion. With an open market in each bloc, FDI manufacturers would become more interested in the blocs as possible sites for manufacturing plants. And member countries—even the small ones—would with good policies, adequate infrastructure, and logistics stand a better chance of becoming locations for FDI manufacturing.

There are also opportunities in services. Tourism could get a boost if it were possible for tourists obtaining a visa for a country in East, West, or Southern Africa that could be used to travel to other neighboring countries, along the lines of the Schengen model. Together with other forms of regional cooperation, such developing regional game circuits in East and Southern Africa, this could attract more tourists and encourage Africans to travel and pursue business opportunities within the region. Nationals of some Economic Community of West African States, Southern African Development Community, and the East African Community member countries can now travel within their blocs without visas, and there are attempts to pilot the Schengen model for tourists from the outside.

In skills development African countries could pull together in ways that make the whole better than the sum of the parts. Examples include regional centers of excellence in science and technology, as pioneered by the African University of Science and Technology in Abuja, the African Institute of Science and Technology in Arusha, Tanzania, and the International Institute for Water and Environmental Engineering in Ouagadougou. Countries could go further and develop common curricula, textbooks, and accreditation systems in science and technology. This would not only reduce the unit costs of textbooks. It would also integrate skills markets and promote cooperation in developing and exchanging scientific and technical knowledge.

What would it take for Africa to seize the opportunities that regional integration offers for economic transformation? Three key elements:

- Financing and building regional infrastructure, including roads, rail, ports, air connections, and information and communication technologies, notably under the Program for Infrastructure Development in Africa.
- Trade facilitation, including customs and other cross-border regulations (with one-stop border posts as a key element), as well as logistics, shipping, forwarding, finance, and insurance driven by the private sector.
- Political leadership and commitment to the regional project.

**Regional infrastructure—linking countries and providing cheaper services**

Infrastructure is critical for each country’s economic transformation. But the supply of some important infrastructure, such as power (particularly hydroelectric power and natural gas) and seaports, tends to be location specific. (Landlocked countries are at a particular disadvantage when it comes to seaports.) Arrangements enabling countries that are well endowed with these...
Most of the funding for infrastructure will come from the resources that national governments can mobilize at home

types of infrastructure to develop them at scale so as to also serve neighboring countries at lower cost (than those countries could produce for themselves, if all) can promote faster transformation in both countries. Second, just as national roads and other means of transport integrate and widen the market within a country, regional roads and other transport systems can be a boon to regional integration.

Africa’s infrastructure contributed to more than half the continent’s faster growth in the 2000s, and it can contribute even more moving forward, according to the landmark study, *Africa’s Infrastructure: A Time for Transformation*, prepared by the African Union, African Development Bank, and World Bank.17 Several roadblocks stand in the way, however: missing links in regional systems, poor household access to networks, high costs because of little competition, and frequent outages increasing the premium for alternative power sources. The demand for power is set to rise fivefold from around 600 terawatt hours in 2010 to more than 3,000 in 2040. To meet that demand, power generation will have to rise from 125 gigawatts to around 700. But with the priority regional projects identified by the Program for Infrastructure Development in Africa, access to power would shoot to 70%, reaching 800 million more Africans. Annual cost savings for producing electricity are expected to average $30 billion a year, totaling $850 billion.

Transport volumes are expected to rise sevenfold, and twice that for landlocked countries. The cargo that goes through ports is expected to rise from fewer than 300 billion tons today to more than 2 billion in 2040, delivering efficiency gains of more than $170 billion, and possibly much more as the planned trade corridors begin to operate. The demand for broadband connections will shoot up even faster to serve the greater use of information and communication technologies—from 300 gigabits per second to 6,000 by 2020, or even before. That alone has the potential to boost the continent’s GDP by 1%.

The annual bill for capital spending and for operations and maintenance is expected to run about $0.5 billion for information and communication technologies, $18 billion for transport, and $40 billion for power, or just under $60 billion a year for all regional projects. Private and official financing will be forthcoming if projects are sound and the enabling environments are good. Financiers will invest in creditworthy utilities if the potential for returns is high. But most of the funding for infrastructure will come from the resources that national governments can mobilize at home.

In April the African Development Bank proposed the Africa50 Fund as a vehicle to augment its funds by leveraging financing from central bank reserves, sovereign wealth funds, pension funds, and the diaspora to boost its funding of infrastructure projects. Targeting projects that fall between the mainly public (major ports) and the mainly private (submarine cables), the fund hopes to raise $50 billion and begin operating before the end of the year.

For projects to get off the ground, however, they have to be well prepared. The New Partnership for Africa’s Development infrastructure preparation fund provides financing for early stage work on regional projects. But such facilities will need replenishment to increase the flow of bankable projects. They also need to be better coordinated. Of the various facilities, most support separate phases of project development, not all phases—from concept to feasibility and due diligence and to structuring the legal and financial sides of the deal. And preparing a project is not cheap—it can run to 10% of the full project cost, especially for those involving the private sector, or to $25 million for a $250 million project.

Facilitating trade—reducing costs, speeding transit

The ratio of trading costs to production costs in Africa is about 12%, compared with 4% for Western Europe and 7% for Latin America.18 Not only are the costs higher, but multiple borders and controls cause delays and slow commerce. Reducing those costs will boost the competitiveness of firms and enable them to export more. The increase in trade will increase the opportunities for productive jobs and higher incomes, spurring economic growth and reducing poverty.

Trade facilitation involves simplification, harmonization, and standardization across countries. Better physical infrastructure will help reduce costs and enable larger volumes of trade. But action is also needed to harmonize regulations and to simplify streamline border procedures. Licensing vehicles to operate across borders and harmonizing insurance regulations and payment procedures is under way in most parts of the continent, usually under the aegis of the regional economic communities. Also under way is the harmonization of vehicle standards, such as axle loads, weight limits, and vehicle dimensions. Such reforms are financially cheaper than improving infrastructure services, but they can be much more costly politically.

One-stop border posts are becoming a major part of the trade facilitation drive, following promising experience on the continent, especially in Southern Africa. Space and facilities are provided so that transit traffic stops once for inspection
and clearance by the two countries’ authorities the border. As important as the physical co-location of two countries’ border authorities is the steady adoption of border management systems that help integrate the various national authorities for customs, immigration, security, and health and phytosanitary regulation. But the challenges can be as great as those for cross-border harmonization, because of bureaucratic inertia, fiefdoms, and rent-seeking.

Information and communication technologies can help, because cross-border trade is complicated, with many players. Suppliers and buyers have to deal with four agencies—the traditional ones for customs, immigration, quarantine, and security—and perhaps with the authorities and ports and airports. Then there are the freight forwarders, banks, insurance companies, and other businesses for legal and accounting services.

To make things easier for traders, many countries are moving to single windows and automating customs to speed clearance and transit. Kenya, Mauritius, Senegal, and South Africa have tailored systems to do this, and more than 30 others use the United Nations Conference on Trade and Development’s off-the-shelf system.

Having information online for the movement of trucks, goods, people, and money cuts back on times at checkpoints (and even on the need for checkpoints) and on the opportunities for bribes. Digitally recorded transactions reduce the need for paper forms, data checks, and transactions with officials. Mobile phones can be used to pay some fees.

With trade so complex, developing single windows naturally takes time, progressing through many small steps. Kenya, having integrated some of its customs processing, formed Kentrade to begin assembling its single window. It is looking through that window for similar windows across its borders and through its ports.

Also important is opening those windows to informal traders, who face bribes, unofficial fees, and other hassles. Facilitating trade for small producers and traders by reducing paperwork and waiting time can lower their costs, encourage them to enter markets across borders, and boost their incomes.19

**Political leadership and commitment**

Building infrastructure and facilitating trade will require strong national leadership. The African Economic Community, endorsed by the Abuja Treaty of 1991, envisages full integration of all African countries by 2034, with eight regional economic communities as building blocks. In broad terms, the integration process envisions free trade areas (with tariffs eliminated among the member states) leading to customs unions (with common external tariffs), then a common market (with free movement of factors of production), followed by an economic and monetary union, with common fiscal and monetary policies and, eventually, a common currency.

The regional economic communities are at different stages of integration, with the Southern African Development Community, Common Market for Eastern and Southern Africa, East African Community, and Economic Community of West African States significantly more advanced than the other four. In addition, there is an issue of overlapping membership, subgroups (such as the Southern African Customs Union) that are more integrated than the other members, and with varying degrees of political commitment. A pragmatic and stepwise approach has led to progress in several areas—not dramatic, but sufficiently visible and beneficial to the parties to serve as models and build interest in supporting integration. Thus the AU heads of state agreed in 2008 on a minimum integration program, which would identify and act on priorities for accelerated integration—again in a pragmatic manner. One result was the move toward a Tripartite Free Trade Area, comprising the 26 countries of the Common Market for Eastern and Southern Africa, Southern African Development Community, and East African Community, with negotiations continuing. But with free trade areas still being negotiated, the path is long from free trade area to customs union to common market and to economic and monetary union. Just look at the European Union.

What should be the priorities for political and business leaders in promoting economic integration in the interests of each country’s economic transformation?

For the short term they should begin to improve the soft infrastructure that will ensure the payoffs from building and maintaining hard infrastructure. Reforming institutions and regulations can improve the quality—and the competitiveness—of transport and logistics services. That will require incurring the wrath of those now benefiting from trucking monopolies, roadblocks, and administrative barriers and talking with express shippers and freight forwarders about the biggest constraints to their operations.

For the medium term they should build the hard infrastructure for their economies to work and trade better. Identifying and preparing bankable projects, especially those in energy and transport, including those for the priority action plan of the Program for Infrastructure
Development in Africa through 2020, can start the process of partnering with the private sector to smooth the flows of goods, services, workers, and capital. That will require working with the various project preparation facilities and understanding their key features, issues, and requirements for success.

For the long term they should continue on the long path to common markets and eventually on to economic and monetary union. Unifying Africa’s small and fragmented markets will increase trade, attract foreign investors, and support the growth of exports—creating jobs, reducing inequality, and extending prosperity. That will require rationalizing today’s eight regional economic communities to a more manageable number and increasing their financing and clout.

To keep in mind in all this is that African economies are far from monolithic. Some are large, others small. Some are rich in minerals, others not. Some are coastal, others landlocked. Some are at peace, others wracked by conflict. Some are beginning to pursue long-term transformation plans, others struggle with daily exigencies. Some have rapidly growing pools of talented business people and dedicated technocrats, others work to develop basic skills. Some have world-class logistics, others budding express shippers and freight forwarders. That is why each country has to assess its assets, its constraints, and its realistic prospects as it embarks on its economic transformation by pursuing growth with depth.

Notes


References


SPECIAL FEATURE \ LOOKING AT THE AFRICAN TRANSFORMATION INDEX IN GREATER DEPTH

Country Ranking by Subindex

2010 Subindex Rank

<table>
<thead>
<tr>
<th>Subindex</th>
<th>Rank</th>
<th>2010 Score</th>
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<tbody>
<tr>
<td>Diversification</td>
<td>1</td>
<td>55</td>
</tr>
<tr>
<td>Export competitiveness</td>
<td>2</td>
<td>81</td>
</tr>
<tr>
<td>Productivity</td>
<td>3</td>
<td>78</td>
</tr>
<tr>
<td>Technological upgrading</td>
<td>4</td>
<td>69</td>
</tr>
<tr>
<td>Human well-being</td>
<td>5</td>
<td>68</td>
</tr>
</tbody>
</table>

Top 5 countries overall in blue, Bottom 5 overall in red

Raking on Overall ATI and Subindexes

2010 Overall Rank

<table>
<thead>
<tr>
<th>Subindex Rank</th>
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<tbody>
<tr>
<td>DEH</td>
<td>1</td>
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D\ Diversification  E\ Export competitiveness  P\ Productivity  T\ Technological upgrading  H\ Human well-being

What the graphs show:
- Over all ATI and Subindexes
- 2010 Subindex rank
- Top 5 countries overall in blue, bottom 5 overall in red
- Refer to page 23

Notes:
- African Transformation Report 2014
- Special Feature
- 2010 overall rank
- Over all rank change 2000–2010
- Over all ATI score, 2010

1. MAURITIUS
2. SOUTH AFRICA
3. CÔTE D’IVOIRE
4. SENEGAL
5. UGANDA
6. KENYA
7. GABON
8. CAMEROON
9. MADAGASCAR
10. BOTSWANA
11. MOZAMBIQUE
12. TANZANIA
13. ZAMBIA
14. MALAWI
15. BENIN
16. GHANA
17. ETHIOPIA
18. RWANDA
19. NIGERIA
20. BURUNDI
21. BURKINA FASO
What the graphs show

The top figure ranks the 21 countries with data by their scores on the overall ATI, and plots the five subindex values for each country. Note how the Diversification scores are generally high, and the Human well-being scores, generally low.

The middle figure shows how countries rank on each of the five subindices, the top five in blue and the bottom five in red.

Countries in the lower figure are ranked by their overall ATI score as in the top figure. Each country’s change in overall ATI ranking from 2000 to 2010 is given in the second line at the top of the figure. Note that Mozambique picked up four places while Botswana slipped five. The graph shows the ranking of each country in each subindex. Note the dispersion for Botswana from third on Human well-being to last on Productivity increases. Also note the dispersion for Nigeria—from fourth on Technological upgrading to last on Diversification.

Source: ACET research. See annex 1.