
AFRICA
COMMISSION
WORLD ECONOMIC FORUM
COMMITTED TO IMPROVING THE STATE OF THE WORLD
The Africa Competitiveness Report 2011
THE WORLD BANK
BANQUE AFRICAINE DE DEVELOPPEMENT
AFRICAN DEVELOPMENT BANK
AFRICAN DEVELOPMENT FUND
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The Africa Competitiveness Report 2011 is the result of collaboration between the World Economic Forum, the World Bank, and the African Development Bank.

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Robert Greenhill
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Jennifer Blanke
Lead Economist, Head of the Centre for Global Competitiveness and Performance

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Associate Director

Katherine Tweedie
Director, Africa

AT THE WORLD BANK

Robert Zoellick
President

Shantayanan Devarajan
Chief Economist, Africa Region

Marilou Uy
Sector Director, Finance & Private Sector Development, Africa Region

Michael Fuchs
Acting Sector Manager, Finance & Private Sector Development, Africa Region

Giuseppe Iarossi
Senior Economist, Finance & Private Sector Development, Africa Region

AT THE AFRICAN DEVELOPMENT BANK

Donald Kaberuka
President

Mthuli Ncube
Chief Economist & Vice President, ECON Complex

Désiré Vencatachellum
Director, Development Research Department

Peter Ondiege
Chief Research Economist, Development Research Department

Zuzana Brixiova
Principal Research Economist, Development Research Department

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The terms *country* and *nation* as used in this report do not in all cases refer to a territorial entity that is a state as understood by international law and practice. The terms cover well-defined, geographically self-contained economic areas that may not be states but for which statistical data are maintained on a separate and independent basis.

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Contents

Preface v
by Donald Kaberuka (African Development Bank Group), Søren Pind (Ministry of Development of Denmark), Klaus Schwab (World Economic Forum), and Robert Zoellick (World Bank Group)

Acknowledgments vii

Overview xi

Part 1: Assessing African Competitiveness

1.1 Exports, FDI, and Competitiveness in Africa 3
by Jennifer Blanke (World Economic Forum), Zuzana Brixiova (African Development Bank), Uri Dadush (Carnegie Endowment), Tugba Gurcanlar (World Bank), and Giuseppe Iarossi (World Bank)

Part 2: Capitalizing on Africa's Resources

2.1 Reforming Higher Education: Access, Equity, and Financing in Botswana, Ethiopia, Kenya, South Africa, and Tunisia 39
by Kwabena Gyimah-Brempong (University of Southern Florida) and Peter Ondiege (African Development Bank)

2.2 Strengthening Women's Entrepreneurship 67
by Mary Hallward-Driemeier (World Bank)

2.3 Assessing Africa's Travel & Tourism Competitiveness in the Wake of the Global Economic Crisis 89
by Jennifer Blanke and Ciara Browne (World Economic Forum) and Andres F. Garcia and Hannah R. Messerli (World Bank)

Part 3: Competitiveness Profiles

How to Read the Competitiveness Profiles 115

List of Countries 123

Competitiveness Profiles 124

About the Authors 195

Preface

DONALD KABERUKA, President, African Development Bank Group
SØREN PIND, Minister of Development of Denmark
KLAUS SCHWAB, Executive Chairman, World Economic Forum
ROBERT B. ZOELLICK, President, World Bank Group

The Africa Competitiveness Report 2011, the third report jointly published by our organizations, comes out at a time when Africa's recovery from the global economic crisis has been faster than it has in many other parts of the world. Indeed, Africa has seen what can be termed an "economic resurgence" over the past decade: between 2001 and 2010, gross domestic product growth on the continent averaged 5.2 percent annually—a rate also expected in 2011, and higher than the global average of 4.2 percent.

Questions remain, however, as to how sustainable this growth will be over the longer term. Recent events in North Africa suggest that much remains to be done to place Africa's economic development on a more solid footing.

The Africa Competitiveness Report highlights areas where we need urgent policy action and investment to ensure that Africa sustains its economic recovery and continues to grow in the future. It maps out the continent's policy challenges and presents a unified vision, shared by all our organizations, of the areas requiring critical attention. The *Report* can serve as a useful tool for African decision makers in public and private spheres to measure the business climate potential for fostering sustainable growth and prosperity.

As such, we hope this year's *Report* will stimulate discussion in both the private and public sectors on the issues at stake. The private sector can play a vital role in the process of reform. As essential stakeholders, businesses can support and advocate both for reforms that enhance competitiveness and for initiatives that create jobs. Governments will want to emphasize a sound business climate as a catalyst for long-term shared growth and prosperity.

The Africa Competitiveness Report focuses on harnessing Africa's underutilized resources: skills, female entrepreneurship, and natural and cultural resources. The *Report* also contains in-depth assessments of the state of competitiveness, the impact of foreign direct investment on the continent, and the trade performance of the region, including the potential of increased productivity growth in agriculture and agribusiness. Its final sections provide detailed competitiveness profiles for several African countries.

To grow further and be globally competitive, Africa needs to put in place the conditions for a vibrant private sector. The time is propitious to support reform and to help Africa improve its competitiveness and growth prospects. In today's interconnected world, Africa's prosperity is important to all of us, both as a source of global growth and to promote an inclusive and sustainable globalization.

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PARTNER INSTITUTES OF THE WORLD ECONOMIC FORUM

Algeria
Centre de Recherche en Economie Appliquée pour le Développement (CREAD)
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Yassine Ferfera, Director

Angola
MITC Investimentos
Estefania Jover, Senior Adviser

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South Africa-Angola Chamber of Commerce (SA-ACC)
Roger Ballard-Tremeer, Hon Chief Executive

Benin
Micro Impacts of Macroeconomic Adjustment Policies (MIMAP) Benin
Epiphane Adjovi, Business Coordinator
Maria-Odile Attanasso, Deputy Coordinator
Fructueux Deguenonvo, Researcher

Botswana
Botswana National Productivity Centre
Letsogile Batsetswe, Research Consultant and Statistician
Parmod Chandna, Acting Executive Director
Phumzile Thobokwe, Manager, Information and Research Services Department

Burkina Faso
Institut Supérieure des Sciences de la Population (ISSP), University of Ouagadougou
Samuel Kabore, Economist and Head of Development Strategy and Population Research

Burundi
University Research Centre for Economic and Social Development (CURDES), National University of Burundi
Richard Ndereyahaga, Head of CURDES
Gilbert Niyongabo, Dean, Faculty of Economics & Management

Cameroon
Comité de Compétitivité (Competitiveness Committee)
Lucien Sanzouango, Permanent Secretary

Cape Verde
INOVE RESEARCH—Investigação e Desenvolvimento, Lda
Rosa Brito, Senior Researcher
Júlio Delgado, Partner and Senior Researcher
Frantz Tavares, Partner and Chief Executive Officer

Chad
Groupe de Recherches Alternatives et de Monitoring du Projet Pétrole-Tchad-Cameroun (GRAMP-TC)
Antoine Doudjidingao, Researcher
Gilbert Maoundonodji, Director
Celine Nénodji Mbaipeur, Programme Officer

Côte d'Ivoire
Chambre de Commerce et d'Industrie de Côte d'Ivoire
Jean-Louis Billon, President
Jean-Louis Giacometti, Technical Advisor to the President
Mamadou Sarr, Director General

Egypt
The Egyptian Center for Economic Studies
Omneia Helmy, Deputy Director of Research and Lead Economist
Magda Kandil, Executive Director and Director of Research
Malak Reda, Senior Economist

Ethiopia
African Institute of Management, Development and Governance
Tegegne Teka, General Manager

Gambia, The
Gambia Economic and Social Development Research Institute (GESDRI)
Makaireh A. Njie, Director

Ghana
Association of Ghana Industries (AGI)
Patricia Djorbuah, Projects Officer
Cletus Kosiba, Executive Director
Nana Owusu-Afari, President

Kenya
Institute for Development Studies, University of Nairobi
Mohamud Jama, Director and Associate Professor
Paul Kamau, Research Fellow
Dorothy McCormick, Associate Professor

Lesotho
Mohloli Chamber of Business

Libya
National Economic Development Board
Entisar Elbahi, Director, Relations and Supported Services

Madagascar
Centre of Economic Studies, University of Antananarivo
Ravelomanana Mamy Raoul, Director
Razato Rarijaona Simon, Executive Secretary

Malawi
Malawi Confederation of Chambers of Commerce and Industry
Chancellor L. Kaferapanjira, Chief Executive Officer

Mali
Groupe de Recherche en Economie Appliquée et Théorique (GREAT)
Massa Coulibaly, Coordinator

Mauritania
Centre d'Information Mauritanien pour le Développement Economique et Technique (CIMDET/CCIAM)
Khira Mint Cheikhnani, Director
Lô Abdoul, Consultant and Analyst
Habib Sy, Analyst

Mauritius
Joint Economic Council of Mauritius
Raj Makoond, Director

Board of Investment
Kevin Bessondyal, Assistant Director, Planning and Policy
Dev Chamroo, Director, Planning and Policy
Veekram Gowd, Senior Investment Advisor, Planning and Policy
Raju Jaddoo, Managing Director

Morocco
Université Hassan II, LASAARE
Fouzi Mourji, Professor of Economics

Mozambique
EconPolicy Research Group, Lda.
Peter Coughlin, Director
Donaldo Miguel Soares, Researcher
Ema Marta Soares, Assistant

Namibia
Namibian Economic Policy Research Unit (NEPRU)
Jacob Nyambe, Senior Researcher
Fanuel Tjingaete, Director

Nigeria
Nigerian Economic Summit Group (NESG)
Frank Nweke Jr., Director General
Sam Ohuabunwa, Chairman
Chris Okpoko, Research Director, Research

Rwanda
Private Sector Federation
Molly Rwigamba, Acting Chief Executive Officer
Emmanuel Rutagengwa, Policy Analyst

Senegal
Centre de Recherches Economiques Appliquées (CREA),
University of Dakar
Diop Ibrahima Thione, Director

South Africa
Business Leadership South Africa
Friede Dowie, Director
Michael Spicer, Chief Executive Officer

Business Unity South Africa
Simi Siwisa, Director
Jerry Vilakazi, Chief Executive Officer

Swaziland
Federation of Swaziland Employers and Chamber of Commerce
Zodwa Mabuza, Chief Executive Officer
Sihle Fakude,Research Analyst

Tanzania
Research on Poverty Alleviation (REPOA)
Joseph Semboja, Professor and Executive Director
Lucas Katera, Director, Commissioned Research
Cornel Jahari, Researcher, Commissioned Research Department

Tunisia
Institut Arabe des Chefs d'Entreprises
Majdi Hassen, Executive Counsellor
Chekib Nouira, President

Uganda
Kabano Research and Development Centre
Robert Apunyo, Program Manager
Delius Asiimwe, Executive Director
Catherine Ssekimpi, Research Associate

Zambia
Institute of Economic and Social Research (INESOR),
University of Zambia
Mutumba M. Bull, Director
Patricia Funjika, Staff Development Fellow
Jolly Kamwanga, Coordinator

Zimbabwe
Graduate School of Management, University of Zimbabwe
A. M. Hawkins, Professor

Overview

The Africa Competitiveness Report 2011 comes out as the world emerges from the most significant financial and economic crisis in generations. While many advanced economies are still struggling to get their economies back on a solid footing, Africa has, for the most part, weathered the storm remarkably well.

Indeed, despite a small dip in growth during the crisis period, Africa has staged a quick and strong comeback. Between 2001 and 2010, growth in gross domestic product (GDP) on the continent averaged 5.2 percent annually, with the *African Economic Outlook* (AEO) projecting 5.2 percent growth in 2011 as well, higher than the global average of 4.2 percent projected by the International Monetary Fund (IMF). The key challenge for the continent is how to turn the ongoing recovery into strong, sustained, and shared growth that will lead to notable improvements in people's lives.

Yet despite its generally solid performance, much needs to be done to ensure that this growth continues into the future. One of the reasons that Africa was less affected by the crisis than some other regions (e.g., emerging Europe) was its limited integration, especially of its financial markets, into the global economy. Although this sheltered African economies over the shorter term, it holds them back in their development over the longer term. Indeed, one of the ingredients for sustained growth identified by the Growth Commission is the ability of a country to seize opportunities from the global economy, or, put differently, to engage with other countries and regions on mutually beneficial terms.[1] In fact, as this *Report* discusses, those regions such as East Africa that have experienced greater trade diversification have demonstrated greater resilience during the crisis.

More generally, African economies must continue to develop economic environments that are based on productivity enhancements to better enable them to ensure solid future economic performance. This means keeping a clear focus on strengthening the institutional, physical, and human capital prerequisites for a strong and competitive private-sector-led development. And it means focusing in particular on policies and interventions that open up opportunities for entrepreneurship and employment for all members of society. The state has an important role to play in this regard—through creating an enabling environment as well as identifying and removing obstacles to high-potential sectors and industries. This will be critical to ensuring that Africa accelerates its progress in the positive direction that it has taken over the past decade.

This year's *Africa Competitiveness Report* is the third in a series within a partnership among three institutions deeply committed to Africa's development. Following on our first joint report in 2007, the World Economic Forum, the World Bank, and the African Development Bank have come together once again to underscore the importance of discussing the challenges of competitiveness in Africa. Each institution approaches the topic in its own way, and together—when combined in this volume—they provide the reader with a rich set of complementary views about how to expand opportunities and increase productivity and growth in Africa (see Boxes 1 and 2). In addition, this year the Africa Commission and the Danish government have also provided their support to the *Report*.

This joint publication looks at different factors that affect competitiveness in Africa. By *competitiveness* we mean all of the factors, institutions, and policies that determine a country's level of productivity. The productivity of an economy, in turn, sets the sustainable level and path of prosperity that a country can achieve. In other words, more competitive economies tend to be able to produce higher levels of income for their citizens. A country's productivity level also determines the rates of return obtained by investment. Because the rates of return are the fundamental drivers of growth rates, a more competitive economy is one that is likely to grow faster over the medium to long term.

In today's globalized world, a country's trade performance and export sophistication and diversification are critical indicators of its competitiveness and are drivers of economic performance. Much research has demonstrated the importance of international integration and a strong export sector to enable small open economies to achieve high growth. In addition to providing an important revenue source, the export sector creates an important feedback loop for improving productivity and reinforcing competitiveness by increasing competition in the home market and providing firms with access to new technologies and techniques.

Box 1: Data used in this *Report*

The Executive Opinion Survey

The Executive Opinion Survey (Survey) conducted annually by the World Economic Forum captures the perceptions of leading business executives on numerous dimensions of the economy from a cross-section of firms representing its main sectors. The Survey compiles data in the following areas: government and public institutions, infrastructure, innovation and technology, education and human capital, financial environment, domestic competition, company operations and strategy, environment, social responsibility, Travel & Tourism, and health. All these areas feed into the 12 pillars of the Global Competitiveness Index.

The Survey gauges the current condition of a given economy's business climate, and the data generated from the Survey comprise the core qualitative ingredient of the Global Competitiveness Index as well as a number of other development-related studies and indexes carried out by the World Economic Forum and other institutions. The most recent Survey data cover a record 139 countries, with responses from more than 13,000 respondents worldwide, including 2,689 senior management respondents in 35 African countries.

In the Survey, business leaders are asked to assess specific aspects of the business environment in the country in which they operate. For each question, respondents are asked to give their opinion about the situation in their country of residence, compared with a global norm. To conduct the Survey in each country, the World Economic Forum relies on a network of over 150 Partner Institutes. Typically, the Partner Institutes are recognized economics departments of national universities, independent research institutes, or business organizations.

More information on the Executive Opinion Survey can be found in Chapter 2.1 of *The Global Competitiveness Report 2010–2011.*

Enterprise Surveys

The World Bank's Enterprise Surveys provide another important source of data for this *Report,* collecting both perception and objective indicators of the business environment in each country. While not carried out in every country in every year, the Enterprise Surveys are made up of larger sample sizes that allow for a nuanced analysis of the results, for example by economic sector and gender of respondent. The data are collected through face-to-face interviews with hundreds of entrepreneurs; hence responses reflect the managers' actual experiences. The data collected span all major investment climate topics, ranging from infrastructure to access to finance and from corruption to crime. Detailed productivity information includes firm finances, costs such as labor and materials, sales, and investment. The breadth and depth of data allow cross-country analysis by firm attributes (size, ownership, industry, etc.), and can probe the relationship between investment climate characteristics and firm productivity. Every year, 15–30 Enterprise Surveys are implemented, with updates planned for each country every three to five years. This reflects the intense nature of administering firm surveys, given that firms are required to respond to many detailed questions. So far over 125 countries have been surveyed, including over 22,000 entrepreneurs, senior managers, and CEOs in over 40 African countries. In 10 countries in Africa, surveys have been conducted more than once; hence panel data are also available to researchers around the globe. For more information, visit www.enterprisesurveys.org.

Doing Business Indicators

The World Bank's Doing Business Indicators are carried out on an annual basis, providing a quantitative measure of a particular aspect relevant to competitiveness: business regulations relevant to the operation of domestic small- to medium-sized enterprises (SMEs) throughout their life cycle. Specifically, they cover the following topics: Starting a Business, Dealing with Construction Permits, Registering Property, Getting Credit, Protecting Investors, Paying Taxes, Trading Across Borders, Enforcing Contracts, and Closing a Business. The indicators are built on the basis of standardized scenarios that permit consistency of approach and straightforward comparisons across countries. They also enable the tracking of reform efforts over time. Ease of use makes this a useful tool for policy analysis. The Doing Business data are updated annually; the most recent report (published in September 2010) covers 183 economies, 50 of them in Africa. Some of these indicators are included in the Global Competitiveness Index. For more information, visit www.doingbusiness.org.

These three methodologies have similarities and differences. They are similar to the extent that they all focus on issues related to the business environment and they are based on a survey of managers or experts. They differ in their objective: the World Economic Forum Survey aims at capturing the differences in the business environment across countries and at including the perspectives of CEOs and top managers, preferably with international experience. The World Bank Enterprise Surveys, on the other hand, aim at measuring many different aspects of the business environment and are more geared toward SMEs and domestically focused firms; the Doing Business data attempt to measure the regulatory environment across countries.

Themes for improved competitiveness

Over the last decade, many African countries focused on getting the economic fundamentals right. They put in place more sustainable fiscal policies, controlled inflation, and managed their debt. Some went further, addressing fundamental structural rigidities by divesting from private-sector activity, opening up some publicly dominated sectors—such as telecommunications—and reducing public-sector borrowing from the banking sector, which was crowding out private investment. These reforms paid off. Investors both domestic and foreign welcomed these reforms, and foreign direct investment (FDI) in particular increased from US$2.4 billion in 1985 to US$53 billion in 2008. Similarly, exports from Africa increased significantly and continuously. African countries witnessed a period of sustained economic expansion mostly fuelled by export-led growth.

Global integration offers incredible opportunities for increased investment, greater growth, and job creation. Africa must take advantage of this opportunity and must claim a greater share of world trade. The continent has made genuine progress in first-generation reforms. But to further boost competitiveness and increase volume and sophistication of exports, Africa must tackle much tougher second-generation reforms. Two strategies can help the continent achieve this goal: diversifying its product and market base, and capitalizing on its own underutilized resources: managerial skills, female entrepreneurship, and natural and cultural resources.

Diversifying products and markets

A great deal of empirical evidence suggests that international trade is positively associated with high economic growth.[2] The benefits of trade are well known: it raises income through specialization, increased competition, and the exploitation of economies of scale. It also increases the variety of products and services available in the market and promotes technological innovation.

Yet, despite improving over recent decades, Africa's share in world trade remains low, it is heavily concentrated in natural resources, and intra-African trade is particularly limited. Over the past 20 years, Africa has continued to depend heavily on natural resources for export revenues, whereas other regions largely diversified into processing industries. Only a handful of countries in Africa were able to increase their world market share of exports over the last decade, and these still began from a very low base. Much can be gained by diversifying exports and by further opening up regional trade.

The strategy each country must follow will depend on which industry it has a comparative advantage in. The cost of inputs (labor, capital, materials, energy), the quality of physical infrastructure, and the tax system are critical in determining a country's competitiveness in the global export markets for simple manufacturers. The availability of skilled labor and the capacity for innovation, along with input costs and the quality of policies, are the main drivers of competitiveness in heavy manufacturing. More generally, the major cross-cutting policy areas that constrain Africa's competitiveness across all main industry groups include those that increase indirect costs—trade logistics and infrastructure; and those that relate to poor business environments—access to land, availability of skills, and ability to absorb technology. The Global Competitiveness Index (GCI) discussed in Chapter 1.1 shows that these are areas in which the continent scores relatively poorly.

Regional integration can help African countries become more competitive and resilient to external shocks, as the recent experience of East Africa during the global financial crisis illustrates. Clearly, a lack of well-functioning transport and trade facilitation regimes is what is hindering many countries from becoming bigger

Box 2: The African Development Bank: Knowledge to improve investment climate and competitiveness

The *African Economic Outlook* (AEO) is an annual publication jointly produced by the African Development Bank and the OECD Development Centre beginning in 2001–02. These organizations were joined in 2007 by the UN Economic Commission for Africa and by the United Nations Development Programme (UNDP) in 2010. The publication reviews recent economic developments in Africa by adopting a comparative approach and a common analytical framework. It provides forecasts for key macroeconomic variables. The AEO surveys and analyzes the current socioeconomic performance of African economies and provides information on a country-by-country basis about their socioeconomic progress as well as on the short- to medium-term prospects of these countries. Each year, the AEO addresses a specific theme that focuses on a critical but under-researched area of Africa's socioeconomic development. The 2011 theme is *Emerging Economic Partnerships.* The AEO provides an overview of specific international developments that may impact African economies, country notes on selected number of countries, and a selected statistical appendix on African countries. The current edition of the AEO is the 10th and covers 51 African countries—1 more than in the previous edition. The key objectives of the AEO are to broaden the knowledge base on African economies and to offer valuable support for policymaking, investment decisions, and donors' interventions. Another important objective is to assist in capacity building. Through the involvement of African experts and institutions in its preparation, the AEO increases research capacity and reinforces their ownership. For more information, visit www.africaneconomicoutlook.org.

global players. Better logistics are strongly associated with trade expansion, export diversification, and the ability to attract FDI.

FDI inflows play an important role in improving competitiveness in African firms (both producers and suppliers) through advancing their managerial skills and technological capacities. Measures to encourage regional integration and trade in Africa are likely to attract additional market-seeking FDI. Similarly, services in most of Africa need to be further developed since the service sector is both an important input into the competitiveness of manufactures and an engine of growth in its own right. In addition to augmenting the capital stock, FDI can play an important role in improving total factor productivity (TFP) in African countries through advancing their technological capacities. The central role of FDI has been well recognized by African policymakers: without the transfer of technological capabilities and home-grown innovation, the productivity gap between African countries and more advanced economies will not be reduced and could even widen further.

While attracting growth-enhancing FDI would help raise competitiveness, achieving it requires that host countries create business environments where foreign investors can boost the productivity of existing domestic activities and generate positive spillovers. Open trade and investment regimes are critical in this regard, as FDI has been found to be particularly beneficial for growth where it encourages trade.[3] Raising human capital and technological capacity as well as developing infrastructure and financial sectors are crucial for attracting FDI that would generate positive spillovers for domestic economies. In other words, more competitive economies will tend to attract more FDI.

Finally, FDI is likely to exert the most positive impact on productivity and development in recipient African countries if multinational enterprises (MNEs) take a broader perspective and support them in this endeavor. Specifically, investing MNEs need to negotiate contracts that are fair and sustainable, adopt adequate and clean technologies, share knowledge, and in general adhere to good standards of corporate behavior.[4]

Managerial skills and higher education

In today's globalized world, no country can thrive without a capacity to generate, transmit, and utilize new knowledge. Put differently, today's globalized economy requires countries to nurture pools of well-educated workers.

Much progress has been made in getting children into school and achieving parity between boys and girls in African classrooms at the primary school level, and to a lesser extent at the secondary school level. But while rapid progress has been made in such basic-level enrollments, university enrollment has barely advanced, rising only from 4 percent in 1999 to 6 percent in 2007. Even though African countries have generally spent relatively large proportions of their national resources on education, the stock of human capital with a higher education in Africa continues to be very low by international standards.

Besides, research shows more and more that it is cognitive skills and learning, not years of schooling, that makes the difference. The reason is that cognitive skills could foster innovation and promote technology diffusion by equipping the workforce with the ability to absorb, process, and integrate new ideas into production and service delivery. The areas of higher education undertaken by a majority of African students are not in fields such as science, engineering, technology, and business, as is the case in rapidly growing emerging economies of Korea and China, but often in social sciences and the humanities. The result is a skill mismatch—university graduates remain unemployed, while African countries continue to face shortages of skilled labor.

The good news is that the rate of return to skills is high in Africa. What is therefore needed is a big push on quality education and skills, as was seen in Korea and other East Asian countries to underpin their growth miracles. The finding on the importance of cognitive skills for long-run growth should be a wake-up call for Africa, and should raise questions about the quality of the education now being provided.

The thriving telecommunications sector in many African countries can facilitate information transfer, knowledge, and learning. At the same time, tertiary education curricula and pedagogy need to be reformed. The pedagogical approach makes a difference in the quality and effectiveness of entrepreneurship education students receive. Consequently, a partnership between industry and government on tertiary education should be formed.

Women's entrepreneurship

The business case for expanding women's economic opportunities is becoming increasingly evident. The ability of women to participate fully and productively in the labor market is constrained in many regions, both by women's lower educational levels relative to men's and by social norms. This is inefficient, since increased women's labor force participation and earnings will enhance not only women's own economic empowerment, but also that of their children and the society as a whole.

The rate of women's entrepreneurship is high in Africa—higher than in any other region. However, this is not necessarily a sign of economic empowerment. In fact, although there are no performance gaps between men's and women's enterprises once differences in size, sector, and industry are taken into account, research shows that women are concentrated in the informal,

micro, low-growth, low-profit areas. These include food processing and vending, tailoring, batik making, beauty salons, selling charcoal, and producing handicrafts, among others.

While women are less likely to be operating larger firms in higher-value-added sectors, those who do so in fact manage firms that perform equally as well as those run by men. Two sets of explanations help to account for why women are less likely to be active in the higher-opportunity entrepreneurship activities. The first has to do with human capital. Women's education has continued to lag behind men's, including in areas of particular relevance to running a business such as financial literacy and management training. The second set of explanations regards control over assets. While business laws are largely gender blind, family, inheritance, labor, and land laws are often not. It is this group of laws that determine legal capacity and control over assets within the household and often limit women's decision-making authority. Furthermore, the laws and regulations affecting businesses (including licensing procedures) were designed for relatively large activities, which makes it difficult for micro enterprises to comply with them. Corruption and bureaucracy make matters worse, especially for women who are more vulnerable to physical pressure from corrupt officials. Finally, the main barrier to performance of women-owned enterprises is a cultural environment that makes it more difficult for women to start and run enterprises because of their traditional reproductive roles: women often must divide their time and energy between their traditional family and community roles and running the business.

Thus the agenda for expanding women's economic opportunities is not to increase entrepreneurship *per se,* but rather to enable women to move into higher-value-added activities, both in terms of taking the step from self-employment to being an employer, and in the types of activities in which the women entrepreneurs engage. Increasing women's human capital (education, management training, business mentors/networks), expanding the awareness of women's success as entrepreneurs, and improving women's voice in investment climate policy circles are important steps to achieve these results.

Cultural and natural resources

Africa is blessed by rich natural and cultural resources, which include a great deal more than the continent's vast supply of natural minerals. This unexploited endowment has great potential for employment generation, growth, and poverty reduction. One in twenty of all jobs in sub-Saharan Africa are in Travel & Tourism (T&T). And as the T&T sector grows, its job creation and income-generating potential rise exponentially. A US$250,000 investment in the tourism sector generates 182 full-time formal jobs, according to a study by the Natural Resources Consultative Forum.[5] This is nearly 40 percent more than the same investment in agriculture and over 50 percent more than in mining. At the same time, the T&T sector compares well with other sectors in regard to opportunities for SME development, career advancement, and lifelong learning potential.

The *Report* analyzes the T&T competitiveness of countries across the continent, using the World Economic Forum's Travel & Tourism Competitiveness Index. This analysis is complemented by World Bank research on the drivers of Africa's T&T competitiveness that investigates visa administration, air transport access, hotels and lodges, tour operators, ecotourism and biodiversity, and cultural heritage in Africa. This approach provides a sense of the opportunities and challenges provided by the tourism sector on the continent.

The development of the T&T sector offers significant opportunities for Africa to move up the value chain, fostering growth and development in the region. Travel & Tourism in Africa has many advantages on which to build, including price competitiveness, a strong affinity for tourism, and rich natural resources supported by efforts toward environmental sustainability. However, evidence shows that a number of obstacles remain to improving the region's competitiveness, notably improving safety and security, upgrading health and hygiene levels, developing various forms of infrastructure, and fostering the region's human capital. Given Africa's many strengths, improvements in these areas will greatly enhance its ability to reap the enormous potential benefits of tourism.

Framing the competitiveness agenda: National competitiveness councils

The government plays a crucial role in fostering competitiveness within the African continent. And this role should not be limited to facilitating a business-friendly environment and an adequate supply to human and physical infrastructure. The state should also adopt active and inclusive interventions in factors of production, especially in high-growth potential sectors. African governments need to be committed to fostering their economies' competitiveness by incorporating competitiveness more broadly and effectively into their national development strategies. It is therefore important that any intervention be brought together within a comprehensive strategy on competitiveness rather than being a series of ad hoc interventions.

Yet improving competitiveness is not the responsibility of government alone. Businesses and civil society also have their roles to play. What is needed is an ongoing dialogue about measures needed and progress made in various areas, as well as incentives to keep up the reform process.

As the world economy continues to globalize, promoting competitiveness and growth has been moving to the center of the attention of policymakers and business. However, progress is not easy to achieve, as it

often requires fundamental changes at all levels of society. Although government implementation of the right economic policy measures is a prerequisite to enhancing competitiveness, these measures need to be supported by the private sector and civil society in order to make them work efficiently. What makes the task even more difficult is that competitiveness depends on a myriad of factors that span many areas of the economy. Yet success is possible only if the underlying mechanisms are well understood and if the main actors are committed to making continuous efforts.

The common denominator of successful approaches is close cooperation among the public sector, business, and civil society, the three key actors. Over the past few years, national competitiveness councils (NCCs) have proven to be one of the most successful approaches to institutionalizing public-private dialogue on competitiveness. Recognizing that competitiveness can be enhanced only through joint actions, a number of countries have created NCCs that often play a major role in economic policymaking.

Yet at present only a few African countries have established active NCCs. Going forward, the creation of NCCs in Africa can play an important role in institutionalizing the ongoing process of reform and improvement, and also the sharing of best practices across the continent.

Structure of the *Report*

This *Report* includes four chapters, each addressing different aspects of competitiveness in Africa. The first chapter of the *Report* analyzes competitiveness across the continent by looking at a wide range of factors of the business environment that have an impact on productivity, as well as Africa's progress in integrating into the global economy through exports and FDI. The subsequent chapters focus on how Africa can better capitalize on its rich resource base—through reforming higher education, strengthening women's entrepreneurship, and improving the environment for developing Travel & Tourism on the continent. A number of concrete policy recommendations are made within the chapters.

The final section of the *Report* provides detailed Competitiveness Profiles for the African countries included in the World Economic Forum's Global Competitiveness Index. These profiles present the detailed rankings that go into the broader global competitiveness rankings.

Notes

1 Launched in April 2006, the Commission on Growth and Development brought together 22 leading practitioners from government, business, and the policymaking arenas, mostly from the developing world. The Commission was chaired by Nobel Laureate Michael Spence, former Dean of the Stanford Graduate Business School, with Danny Leipziger, former Vice-President of the World Bank as its Vice-Chair. Over a period of four years the Commission sought to gather the best understanding there was about the policies and strategies underlying rapid and sustained economic growth and poverty reduction. More information on the Commission and its findings can be found at www.growthcommission.org.

2 Some earlier controversies notwithstanding, more recent empirical literature (including a study focusing on within-country variations in trade and growth rather than cross-country regressions) has consistently showed positive links between trade and growth. See, for example, Lee et al. 2004 and Dollar and Kraay 2002.

3 Moran et al. 2005.

4 OECD 2002.

5 Hamilton et al. 2007.

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Part 1

Assessing African Competitiveness

CHAPTER 1.1

Exports, FDI, and Competitiveness in Africa

JENNIFER BLANKE, World Economic Forum
ZUZANA BRIXIOVA, African Development Bank
URI DADUSH, Carnegie Endowment
TUGBA GURCANLAR, World Bank
GIUSEPPE IAROSSI, World Bank

The aim of this *Report* is to highlight the prospects for strong, sustained, and shared growth in Africa and, more importantly, the obstacles to the continent's competitiveness and economic development. Such an assessment of Africa's economies comes at an important time. A consensus among policymakers and researchers has emerged that African countries have weathered the global economic crisis well. Yet questions remain as to how sustainable this growth will be over the longer term.

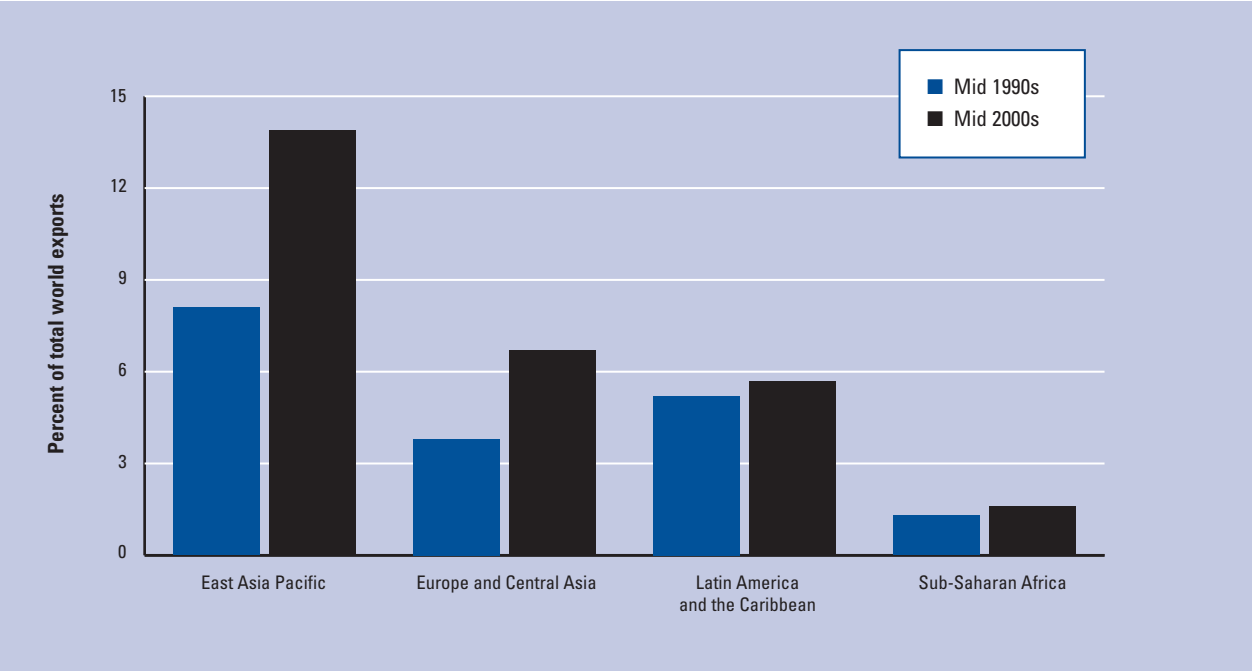
The recent economic downturn underscores the importance of developing a competitiveness-supporting economic environment that is based on productivity enhancements in order to better enable national economies to weather unexpected shocks and to ensure solid, long-term economic performance. This chapter assesses the competitiveness landscape in Africa through a variety of lenses. We look at the factors driving productivity in general, as well as the export performance and ability of African countries to attract growth-enhancing foreign direct investment (FDI).

Being for the most part small, open economies, African countries are well aware that a strong export performance is typically a prerequisite for reaching robust, sustained, and shared growth. In Africa, strong export performance does not mean only high export growth, but also increased diversification from low-value-added activities (such as the export of unprocessed commodities) to higher-value-added ones.[1] Such diversification lowers the volatility of growth through a reduced vulnerability of exports to external shocks. Exports of services can play an important role in this regard. According to Newfarmer et al., exports of services raises export growth, competitiveness, and diversification through lowering transaction costs in other export sectors, expanding existing activities, and creating new ones.[2] For example, tourism (discussed in Chapter 2.3) can have a positive impact on exports in the host country by creating foreign demand, enabling deeper understanding of foreign preferences and spillovers that raise quality standards, and thus making the existing export activities more competitive. Mauritius provides an example of a successful experience with tourism helping to diversify exports.[3]

African policymakers have recognized that FDI can also play a positive role in promoting growth, productivity, and development in their economies. FDI can be particularly beneficial for export sectors, as foreign companies help integrate developing countries into the global economy by easing access to foreign markets and including local enterprises in global production chains. Experiences from other world regions also suggest that FDI can help facilitate export diversification.[4]

Recently, the literature on FDI has found it to be beneficial for the host countries' growth when an enabling business environment—one that includes trade and investment openness—is in place. Especially when

Figure 1: World export shares, by region



Source: UN Comtrade database, authors' calculations.

FDI is accompanied by increased and diversified trade, host countries tend to accelerate their growth rates.[5] Since the impact of FDI on growth and productivity is typically higher in manufacturing and services than in mining, FDI flows into the service sectors (e.g., telecommunications, banking) can support countries in their efforts to diversify production and exports. By slashing transaction costs, they also raise export competitiveness.

In this context, this chapter examines recent trends and the main impediments for integrating African economies into global export markets, attracting growth-enhancing FDI, and raising overall competitiveness.

Trade and FDI in Africa: Recent trends

Over the last two decades, world trade (measured in current US dollars) has tripled. Many factors have contributed to this extraordinary advance. Among them are the liberalization of trade, the falling costs of communications and transportation, the slicing up of global production chains, an increased need for natural resources in fast-growing developing countries, and an increased appetite for diversity as incomes rose across the globe. International trade in services has particularly taken off because of the reduction in communication costs and the digitization of services.

However, not all developing regions benefited from this trend. East Asia's share of world exports grew spectacularly from 3.3 percent in 1980 to 8 percent in 1995, and then to 14 percent in 2008. Europe and Central Asia, as well as Latin America and the Caribbean, lagged behind, going from 1.2 and 6.5 percent in 1980 to 7 and 6 percent of world exports, respectively, in 2008. Meanwhile, sub-Saharan Africa's share of world exports showed little advance over this same period, and varied within a range of 1.3 and 1.6 percent. By 2008, sub-Saharan Africa captured the smallest share of world exports of any region, exporting just US$200 billion worth of goods for international markets, or US$100 per capita (Figure 1).

Although the growth of African economies as a whole accelerated in the past decade, their export growth rates continued to lag behind that of other developing regions, thus further widening the gap between Africa and the rest. Moreover, growth in exports in Africa has been mostly driven by mining, which represented 73 percent of export growth between 1995 and 2008, the highest of all regions. The lack of production and export diversification—in terms of both goods and partners—made many African countries vulnerable to external shocks. Indeed, more diversified countries and regions such as East Africa weathered the crisis better (as discussed in Box 3).[6] Reversing Africa's marginalization in global trade, diversifying its exports, and moving them up on the technology ladder are, therefore, key policy priorities.

Because of the dual linkages between FDI and trade, FDI inflows have exhibited similar trends as trade, rising rapidly during 2000s. While developed countries

continued to receive the majority of FDI inflows until 2009, the long-term geographical pattern has been gradually changing, with more inflows going to developing countries, especially in Asia. Africa was no exception to the general rise in FDI—in fact, FDI inflows to the continent more than tripled between 2001 and 2009.[7]

Looking ahead, a large body of literature has underscored how important it is for African countries to be integrated in the world economy and have a strong, sophisticated, and well-diversified export sector in order to maintain and achieve sustained growth. Moreover, the importance of creating enabling environment to attract FDI into high-growth potential sectors, beyond mining, cannot be overstated. Achieving these objectives will help Africa to improve competitiveness of its economies and raise productivity in order to achieve robust, sustained, and shared growth.[8]

Examining Africa's competitiveness

In order to identify the priority areas requiring urgent and sustained policy attention to improve competitiveness in Africa, in this section we provide a bird's eye view of the competitive landscape in Africa and an overview of where the continent stands vis-à-vis international benchmarks. We base this analysis on the World Economic Forum's Global Competitiveness Index (GCI).[9]

Within the GCI, *competitiveness* is defined as *the set of institutions, policies, and factors that determine the level of productivity of a country.*[10] The current and future levels of productivity, in turn, set the sustainable levels of prosperity that can be earned by an economy. In other words, more competitive economies tend to be able to produce higher levels of income for their citizens. The measurement of competitiveness is a complex undertaking. To this end, the GCI captures the idea that many different elements matter for competitiveness by looking at 12 distinct pillars:[11] institutions (public and private), infrastructure, the macroeconomic environment, health and primary education, higher education and training, goods market efficiency, labor market efficiency, financial market development, technological readiness, market size, business sophistication, and innovation.

Another important characteristic of the GCI is that it explicitly takes into account the fact that countries around the world are at different stages of economic development. Accordingly, the GCI distinguishes three stages of development. In its first stage, economies are *factor-driven* and countries compete based on their factor endowments—primarily unskilled labor and natural resources. As wages rise with advancing development, countries move into the *efficiency-driven* stage of development (the second stage), when they must begin to develop more efficient production processes and increase product quality in order to continue to be competitive. Finally, as countries move into the *innovation-driven* stage, they are able to sustain higher wages and the associated standard of living only if their businesses are able to compete with new and unique products. At this third stage, companies must compete by producing new and different goods and services using the most sophisticated production processes.[12] The full description of the GCI is shown in Appendix A.

This next section will assess the overall competitiveness of North Africa and sub-Saharan Africa as well as the performance of individual countries compared with international standards. To put the analysis into a global context, we also include a number of comparator economies and regions (Latin America and the

Table 1: Global Competitiveness Index 2010–2011 and 2009–2010 comparisons

	GCI 2010–2011		GCI 2009–2010
Country/Region	Rank*	Score	Rank†
China	27	4.8	29
Tunisia	32	4.7	40
Southeast Asian average		*4.3*	
India	51	4.3	49
South Africa	54	4.3	45
Mauritius	55	4.3	57
Brazil	58	4.3	56
Russian Federation	63	4.2	63
Namibia	74	4.1	74
North African average		*4.1*	
Morocco	75	4.1	73
Botswana	76	4.1	66
Latin American & Caribbean average		*4.0*	
Rwanda	80	4.0	n/a
Egypt	81	4.0	70
Algeria	86	4.0	83
Gambia, The	90	3.9	81
Libya	100	3.7	88
Benin	103	3.7	103
Senegal	104	3.7	92
Kenya	106	3.6	98
Cameroon	111	3.6	111
Tanzania	113	3.6	100
Ghana	114	3.6	114
Zambia	115	3.5	112
Sub-Saharan African average		*3.5*	
Cape Verde	117	3.5	n/a
Uganda	118	3.5	108
Ethiopia	119	3.5	118
Madagascar	124	3.5	121
Malawi	125	3.4	119
Swaziland	126	3.4	n/a
Nigeria	127	3.4	99
Lesotho	128	3.4	107
Côte d'Ivoire	129	3.3	116
Mozambique	131	3.3	129
Mali	132	3.3	130
Burkina Faso	134	3.2	128
Mauritania	135	3.1	127
Zimbabwe	136	3.0	132
Burundi	137	3.0	133
Angola	138	2.9	n/a
Chad	139	2.7	131

Source: World Economic Forum, 2009, 2010.
* Out of 139 economies.
† Out of 133 economies.

Box 1: Political unrest and competitiveness in North Africa

As discussed in the main text of this chapter, North Africa on average outperforms most sub-Saharan African countries, and Tunisia in particular receives a very strong assessment. The political unrest that the region has witnessed in recent months might make this assessment seem counterintuitive. However, it is very important to note that the GCI aims to gauge the extent to which countries have put in place the factors ensuring sustainable growth through productivity enhancements. It is not a measure of political risk. Nevertheless, it needs to be acknowledged that the recent political changes are likely to have a negative impact on the economy in the near term. The ongoing political transition will need to be accompanied by structural changes that could accelerate employment-intensive growth.

The recent events do not detract from the fact that Tunisia has been successful over recent decades. Its solid growth rates, averaging more than 4.7 percent between 1990 and 2010, have been widely attributed to the country's ability to put in place many factors favoring productivity, including better education, a more favorable environment for doing business, and the adoption of new technologies for productivity enhancements. Still, growth was not broad-based. Higher growth rates—according to Abed and Iradian, in the range of 6–8 percent a year[1]—and also more job-rich growth are needed in order for the benefits to spread to the middle and lower classes (see Box 1, Chapter 2.1).

The recent political change can be attributed in part to Tunisia's success across some areas and its less stellar performance in others: the country now has a more highly educated and well-informed population, which is demanding better job opportunities for the future than currently exist. It would benefit from enhancing the sophistication and knowledge intensity of its production processes, thus moving the economy from low-cost, low-value-added to a higher-value-added that would bring about job opportunities for the educated unemployed. At the same, adjustments to the educational system—including higher education—will be needed to reduce the mismatch between the existing skills and demand arising from these new job opportunities (see Chapter 2.1 on education).

In sum, we remain cautiously optimistic for Tunisia and the region as a whole, as long as the countries continue to put into place the reforms necessary for ensuring strong competitiveness and resilient economies.

Source: Abed and Iradian, 2011.

Note

1 Abed and Iradian 2011.

Caribbean,[13] Southeast Asia,[14] and the BRIC countries—Brazil, Russia, India, and China).

Africa's competitiveness in an international context

On average, both North Africa and sub-Saharan Africa are outperformed by Southeast Asia and by all of the BRIC economies. North Africa is ahead of Latin America, however, and also scores significantly higher than sub-Saharan Africa. Recent events in North Africa are discussed in Box 1. Only three countries from the African continent figure in the top half of the overall rankings: Tunisia (32nd), South Africa (54th), and Mauritius (55th) (Table 2). Tunisia is outperformed by China, the most competitive of the BRIC countries, but is more competitive than all other comparators in the table. South Africa and Mauritius are also behind China, as well as behind Southeast Asia and India, but ahead of Brazil, Russia, and the other regional averages.

Table 1 shows that there is a second group of countries that cluster together at approximately the same competitiveness level as the North African average, namely Namibia, Morocco, and Botswana, ranked 74th, 75th, and 76th, respectively. All countries that rank below these three perform worse than the Latin American and the Caribbean average, with Algeria and Libya outperformed by a number of sub-Saharan African countries. The remaining sub-Saharan African countries that do better than the regional average are Rwanda, Gambia, Benin, Senegal, Kenya, Cameroon, Tanzania, Ghana, and Zambia (Table 4).

On average, as we have seen in past years, performances vary greatly between the countries in the north and the south of the continent (Table 2). North Africa outperforms sub-Saharan Africa in 10 of the 12 pillars, namely institutions, infrastructure, macroeconomic stability, health and primary education (by a large margin), higher education and training, goods market efficiency, technological readiness, market size, business sophistication, and innovation. Sub-Saharan Africa outperforms North Africa on average in only two pillars: labor market efficiency and financial market sophistication. Nevertheless, vast differences in the sophistication of financial sectors exist even within sub-Saharan Africa, with financial sectors in low-income countries in that region being among the world's least developed. In contrast, financial sectors in several sub-Saharan African middle-income countries/emerging markets (e.g., Mauritius and South Africa) and a few frontier markets (e.g., Kenya) show much greater sophistication than the rest of the continent. Sub-Saharan Africa's middle-income countries also fare well relative to those in other regions of the world.

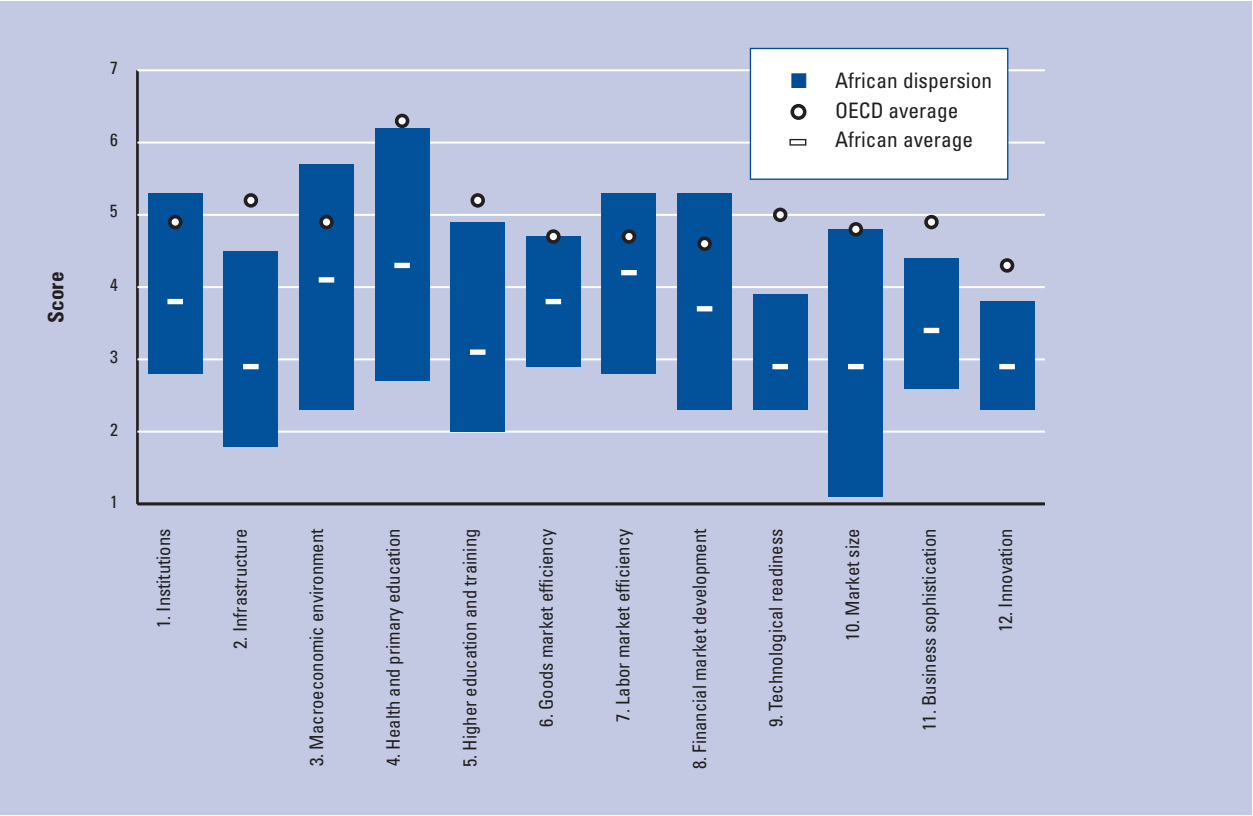
A comparison with other regions and countries highlights Africa's relative strengths and weaknesses. In particular, North Africa's performance is very close to the Southeast Asian average in the quality of institutions, infrastructure, and health and primary education

Table 2: The Global Competitiveness Index 2010–2011: Africa and comparators

	OVERALL INDEX		SUBINDEXES					
			Basic requirements		Efficiency enhancers		Innovation and sophistication factors	
Economy/Region	Overall rank	Score	Rank	Score	Rank	Score	Rank	Score
NORTH AFRICA								
Algeria	86	4.0	80	4.3	107	3.5	108	3.0
Egypt	81	4.0	89	4.2	82	3.8	68	3.5
Libya	100	3.7	88	4.2	127	3.2	135	2.6
Morocco	75	4.1	64	4.6	88	3.8	79	3.4
Tunisia	32	4.7	31	5.3	50	4.3	34	4.1
North African average		4.1		4.5		3.7		3.3
SUB-SAHARAN AFRICA								
Angola	138	2.9	138	2.8	130	3.2	139	2.5
Benin	103	3.7	104	3.9	120	3.4	81	3.3
Botswana	76	4.1	76	4.4	85	3.8	93	3.2
Burkina Faso	134	3.2	134	3.3	133	3.1	127	2.9
Burundi	137	3.0	135	3.2	139	2.5	138	2.6
Cameroon	111	3.6	111	3.8	121	3.3	105	3.1
Cape Verde	117	3.5	96	4.1	129	3.2	128	2.8
Chad	139	2.7	139	2.7	137	2.8	130	2.8
Côte d'Ivoire	129	3.3	133	3.4	116	3.4	110	3.0
Ethiopia	119	3.5	119	3.6	118	3.4	117	3.0
Gambia, The	90	3.9	90	4.2	105	3.5	64	3.5
Ghana	114	3.6	122	3.5	96	3.6	100	3.2
Kenya	106	3.6	126	3.5	79	3.9	58	3.6
Lesotho	128	3.4	124	3.5	132	3.1	116	3.0
Madagascar	124	3.5	118	3.6	124	3.2	113	3.0
Malawi	125	3.4	129	3.5	110	3.4	84	3.3
Mali	132	3.3	128	3.5	135	3.0	112	3.0
Mauritania	135	3.1	131	3.4	138	2.8	134	2.6
Mauritius	55	4.3	47	4.8	66	4.1	59	3.6
Mozambique	131	3.3	130	3.4	128	3.2	101	3.1
Namibia	74	4.1	54	4.7	91	3.8	92	3.2
Nigeria	127	3.4	136	3.1	84	3.8	83	3.3
Rwanda	80	4.0	84	4.3	98	3.6	87	3.3
Senegal	104	3.7	108	3.8	108	3.5	67	3.5
South Africa	54	4.3	79	4.4	42	4.4	43	3.9
Swaziland	126	3.4	110	3.8	126	3.2	131	2.8
Tanzania	113	3.6	116	3.7	114	3.4	94	3.2
Uganda	118	3.5	123	3.5	102	3.6	111	3.0
Zambia	115	3.5	121	3.6	101	3.6	90	3.3
Zimbabwe	136	3.0	137	3.0	134	3.0	122	2.9
Sub-Saharan African average		3.5		3.7		3.4		3.1
BRICs								
Brazil	58	4.3	86	4.3	44	4.4	38	4.0
China	27	4.8	30	5.3	29	4.6	31	4.1
India	51	4.3	81	4.3	38	4.4	42	4.0
Russian Federation	63	4.2	65	4.5	53	4.2	80	3.4
BRICs average		4.4		4.6		4.4		3.9
Latin American & Caribbean average		4.0		4.3		3.9		3.4
Southeast Asian average		4.3		4.6		4.2		3.7

Source: World Economic Forum, 2010; authors' calculations.

Figure 2: GCI score dispersion among African countries and OECD comparison



Source: World Economic Forum, 2010; authors' calculations.

pillars. Yet it is weaker than the Latin America and Caribbean average in half of the pillars, namely health and primary education, higher education and training, labor market efficiency, financial market development, technological readiness, and business sophistication. Sub-Saharan Africa's institutions are better assessed than those of the Latin America and Caribbean region, Russia, and Brazil. Further, sub-Saharan Africa's labor markets are on average more efficient than those of Latin America and the Caribbean on average, as well as those of both India
and Brazil.

Yet these averages mask significant differences among individual countries across the continent. Tunisia and South Africa have overall scores (out of 7) of 4.7 and 4.3, respectively, compared with Chad's score of 2.7. Figure 2 provides a visual representation of the dispersion in scores of the 35 African counties, with the regional averages shown by the line in the middle of each bar. In addition, we show the average performance of the group of Organisation for Economic Co-operation and Development (OECD) member countries, to provide a stringent international benchmark in each issue area (the OECD score is shown in the figure by a dot).

The figure demonstrates that the areas with the largest dispersions among African countries are in the macroeconomic environment, health and primary education, and market size pillars. The smallest gaps are in goods and labor market efficiency, technological readiness, business sophistication, and innovation. The best-performing countries from the continent actually outperform the OECD average in four areas: institutions, the macroeconomic environment, labor market efficiency, and financial market development. The biggest gaps in relation to the OECD, even compared with the best-performing countries in the region, relate to the quality of infrastructure and the level of technological readiness.

More generally, this analysis demonstrates the significant diversity among individual country performances within the continent in the various pillars. Table 3 shows the rankings of African countries in the 12 pillars of the Index, highlighting the three best performers in each case. As the table shows, Tunisia is one of the three highest-ranked countries in 9 of the 12 pillars, while Mauritius and South Africa are both among the top three in 6 pillars. Namibia, Morocco, and Rwanda are among the top three in 2 pillars.

Botswana, Rwanda, and Tunisia have notably strong institutional environments, ranked 32nd, 19th, and 23rd, respectively, on a par with such countries as Japan and France. Eleven other countries from Africa are in the top half of the institutional rankings: Gambia, Namibia, Mauritius, South Africa, Malawi, Cape Verde, Egypt, Ethiopia, Zambia, Morocco,

Table 3: Top three African performers in each pillar of the GCI

Country	1. Institutions Rank	2. Infra-structure Rank	3. Macro-economic environment Rank	4. Health and primary education Rank	5. Higher education and training Rank	6. Goods market efficiency Rank	7. Labor market efficiency Rank	8. Financial market development Rank	9. Techno-logical readiness Rank	10. Market size Rank	11. Business sophistication Rank	12. Innovation Rank
Algeria	98	87	57	**77**	98	126	123	135	106	50	108	107
Angola	119	136	122	139	138	133	87	134	130	64	139	133
Benin	87	113	82	108	112	100	85	95	122	124	99	60
Botswana	**32**	84	74	114	94	58	61	47	99	102	104	74
Burkina Faso	90	134	98	135	135	120	91	128	124	119	137	90
Burundi	138	132	121	120	139	137	81	139	137	137	138	134
Cameroon	107	126	53	116	117	119	99	123	118	91	116	95
Cape Verde	56	109	102	88	109	111	122	104	79	139	131	117
Chad	135	137	134	138	136	138	95	137	138	120	133	115
Côte d'Ivoire	133	99	94	136	116	118	105	112	102	94	112	109
Egypt	57	64	129	91	97	90	133	82	87	**26**	63	83
Ethiopia	59	115	127	119	129	92	72	121	133	79	123	105
Gambia, The	37	69	117	124	103	66	**16**	76	97	138	65	62
Ghana	67	106	136	122	108	75	93	60	117	83	97	99
Kenya	123	102	128	121	96	88	46	**27**	101	74	62	56
Lesotho	100	120	77	131	124	84	86	114	129	135	114	113
Libya	111	95	**7**	115	95	134	139	130	114	69	136	131
Madagascar	129	130	112	103	128	107	67	131	123	110	124	102
Malawi	52	131	135	125	120	85	50	64	121	127	89	72
Mali	109	121	65	134	132	124	121	133	128	117	128	91
Mauritania	116	122	118	127	137	131	114	138	132	130	134	132
Mauritius	43	**58**	62	**59**	**70**	**31**	59	29	**61**	112	**47**	82
Morocco	66	71	**31**	94	102	77	130	74	**75**	57	78	81
Mozambique	99	119	104	133	134	112	116	116	113	113	110	84
Namibia	38	**54**	40	112	111	56	55	**24**	88	114	88	96
Nigeria	121	135	97	137	118	87	74	84	104	**30**	76	98
Rwanda	**19**	101	106	111	121	70	**9**	69	100	128	94	71
Senegal	76	112	89	118	110	79	109	107	93	105	84	**55**
South Africa	47	63	43	129	**75**	**40**	97	**9**	76	**25**	**38**	**44**
Swaziland	70	94	92	130	125	106	90	80	136	132	121	135
Tanzania	83	128	115	113	133	108	77	90	131	81	98	86
Tunisia	**23**	**46**	**38**	**31**	**30**	**33**	79	58	**55**	67	**42**	**31**
Uganda	104	127	114	117	127	117	**27**	72	112	92	120	104
Zambia	65	118	120	128	114	65	107	49	110	111	90	80
Zimbabwe	105	129	139	126	115	130	129	105	135	134	119	122
Global leader	**SGP**	**HKG**	**BRN**	**BEL**	**FIN**	**SGP**	**SGP**	**HKG**	**SWE**	**USA**	**JPN**	**USA**

Source: World Economic Forum, 2010.

Notes: Ranks of the best three performers are highlighted in blue. *BEL* = Belgium, *BRN* = Brunei Darussalam, *FIN* = Finland, *HKG* = Hong Kong SAR, *JPN* = Japan, *SGP* = Singapore, *SWE* = Sweden, and *USA* = the United States.

and Ghana. Having built up strong institutional environments by international standards, these countries provide examples to follow for other countries in Africa. The large number of African countries at the bottom of the rankings in this area demonstrates the extent to which positive examples are critical for the region.

Mauritius, Namibia, and Tunisia are the top-ranked African countries for infrastructure, placing at 58th, 54th, and 46th, respectively. These countries have built good transportation infrastructures by regional standards, particularly their roads and ports. They are joined in the top half of the rankings by South Africa (63rd), Egypt (64th), and Gambia (69th). Yet even the ranks of these best regional performers remain middling, and the sheer underdevelopment of infrastructure in most of the continent is reflected by the much lower ranks of most African countries in this pillar.

The top three performers in the macroeconomic environment pillar include one oil-exporting country, Libya (ranked 7th), as well as two other North African countries, Morocco and Tunisia (ranked 31st and 38th, respectively). Six other countries are in the top half of the rankings (Namibia, South Africa, Cameroon, Algeria, Mauritius, and Mali). However, Table 3 shows that most African countries receive a poor assessment, which is often related to the management of the government finances. Although this is clearly a problem that is not specific to Africa, even better fiscal and monetary management are needed in most countries, the improvements achieved in the run-up to the global financial crisis notwithstanding.

Health and primary education remains among the greatest concerns for Africa, given that among the top three regional performers—Algeria, Mauritius, and Tunisia—only two of them, Tunisia and Mauritius, are ranked in the top half of countries in this pillar. In fact, all but five countries are in the bottom third of the rankings, with many rounding out the very bottom group (indeed, all but one of the bottom-10 ranked countries hail from Africa). Poor health indicators related in large part to high rates of communicable diseases, low primary education enrollment, and poor assessments of most national primary educational systems explain this poor result. This is arguably the area requiring the most urgent attention for improving Africa's competitiveness in the aggregate.

In terms of higher education and training, although the spread between the most and least successful countries in this area is smaller than it is for some of the other pillars, the overall performances are relatively weak. The top three ranked countries are Mauritius, South Africa, and Tunisia. However, of these three, only Tunisia places in the top half of all countries, illustrating the quite low rankings for countries from the region overall in this pillar. It is perhaps not surprising that secondary education and university enrollment rates and the assessment of the quality of higher education remain weak in the region, given that the primary educational base on which to build has not yet been put into place in most countries. This will be a critical area for attention as countries move up the value chain toward more complex production.

The situation is somewhat more positive when turning to the functioning of markets in Africa. The top three countries in the goods market efficiency pillar—Mauritius, South Africa, and Tunisia—have goods markets that are similar to those of countries such as Chile and Korea in their efficiency, although all remain below the average of OECD countries shown in Figure 2. South Africa, in particular, is characterized by strong competition in the market, a taxation system that is not distortive to business decisions, and an agricultural sector that is not very costly to the economy (unlike in many industrialized countries). Yet it is clear that most countries in Africa remain hobbled by regulations and other obstacles that diminish the efficiency with which goods and services are traded in their economies. Only four other countries are in the top half of the rankings in this pillar: Namibia, Botswana, Zambia, and Gambia. Eighteen African countries are in the bottom third of the rankings. Much can be done in the region to inject more competition into markets and make starting a business in the region less difficult.

Labor markets constitute another area where a few countries stand out for their comparatively good performance while most lag behind, and where we see some strong differences between North African and sub-Saharan African countries. Rwanda, Gambia, and Uganda receive the highest assessments, ranked 9th, 16th, and 27th, respectively, in this pillar. They are joined at the top half of the rankings by six other African countries: Kenya, Malawi, Namibia, Mauritius, Botswana, and Madagascar. These countries, to varying degrees, can count on flexible hiring and firing practices and relatively low non-wage labor costs. However, despite these relatively good performers, the table also shows that the labor markets in most African countries are among the least flexible and least efficient in the world, as also evidenced by high levels of unemployment in middle-income countries such as South Africa, Tunisia, and Botswana, as well as very high "working poverty" levels in many of the poorest countries in the region. Such labor market inefficiencies have been among the key factors setting off the political unrest throughout North Africa in recent months. Much must be done on the continent to free Africa's labor markets and unleash the potential of the region's workforce.

Financial markets provide a somewhat more positive picture, although significant disparities in terms of financial development remain. South Africa, ranked 1st in the region and an impressive 9th overall, has highly developed financial markets on a par with Switzerland and Canada, with relatively easy access to capital from

various sources, sound banks, and a well-regulated securities market. Although their financial markets are less developed than that of South Africa, Namibia, Kenya, and Mauritius also are ranked in the top third in this pillar, well ahead of most other countries in the region. Six other countries have financial markets that are placed in the top half of the rankings: Botswana, Zambia, Tunisia, Ghana, Malawi, and Rwanda. Yet, particularly given the turbulence seen in recent years in global financial markets, efforts to further develop and deepen Africa's financial markets, including additional strengthening of regulatory and supervisory frameworks, are necessary to ensure that financial resources in these countries are both available and allocated to their best use. It is notable that eight of the bottom-ten ranked countries in this pillar are from Africa, including countries from both North Africa and sub-Saharan Africa.

As Figure 2 shows, technological readiness is an area where African countries do overall quite poorly as a group and where they are well behind the OECD average. As shown in Table 3, the highest-ranked country in this area is Tunisia, at a relatively low 55th, and it is joined in the top half of the rankings only by Mauritius (61st). In fact, 28 of the 35 African countries are in the bottom third, and occupy eight of the bottom ten places overall. This is a reflection of the very low penetration rates of most ICT tools on the continent, related in part to the low prioritization given by many governments to encouraging information communication technologies (ICT) and other new technology adoption, as well as to low educational attainment. Other bottlenecks, such as the vast gap in energy supply and hence its relatively high cost, impede more widespread use of the Internet. Nevertheless, there are areas where Africa can be proud of its achievements—such as the innovative applications of m-banking (Kenya); m-agriculture (Niger, Senegal); and, in general, the rapid adoption of the mobile technology. In fact, several African frontier markets (e.g., Ghana, Kenya, and Senegal) are ahead of major emerging market economies such as India in the usage of mobile phones, demonstrating that in an enabling environment Africa can rapidly adopt modern technology.[15] Moreover, in recent years Africa has been the fastest-growing market for mobile phones in the world,[16] albeit from a low base. Despite the recent significant uptake of some technologies, however, ICT overall is an area where, in many cases, countries in other regions are simply moving faster. Given the significant potential of new technologies for information exchange and productivity enhancement, this is another clear area requiring urgent and sustained attention.

The size of markets also varies greatly among African countries. Table 3 highlights the three largest markets: those of South Africa, Egypt, and Nigeria. These three countries benefit from economies of scale afforded by significant domestic and foreign (trade) markets. While many African countries clearly cannot simply enlarge their domestic market size, they could do more to open their markets to trade and thus benefit from an enlarged foreign market size. There are many overlapping regional trade arrangements currently in place on the continent, most of which have met with mixed success at best. Trade barriers remain endemic in the region despite the great benefits that could be reaped by greater regional integration. Africa's export performance will be discussed in a later part of this chapter.

Turning to the most complex areas measured by the GCI, business sophistication is not yet an area of critical concern for most African countries, since they can still greatly enhance their productivity and competitiveness by improving on the more basic areas discussed above. However, for the few African countries that are nearing the transition to the most advanced stage of development, this area will become increasingly important. As luck would have it, the top three countries in this pillar—Mauritius, South Africa, and Tunisia—are classified in the efficiency-driven stage and therefore are nearing the stage when these more complex factors will become very important.

Finally, Kenya, Senegal, South Africa, and Tunisia are the top regional performers with respect to innovation, on a par with such innovative countries as India and Italy. These countries have high-quality scientific research institutions, invest strongly in research and development, and are characterized by a significant level of collaboration between business and universities in research. The low rankings of the other countries from the region should not be of significant concern at this stage, given the importance of focusing on the more basic areas for improvement first.

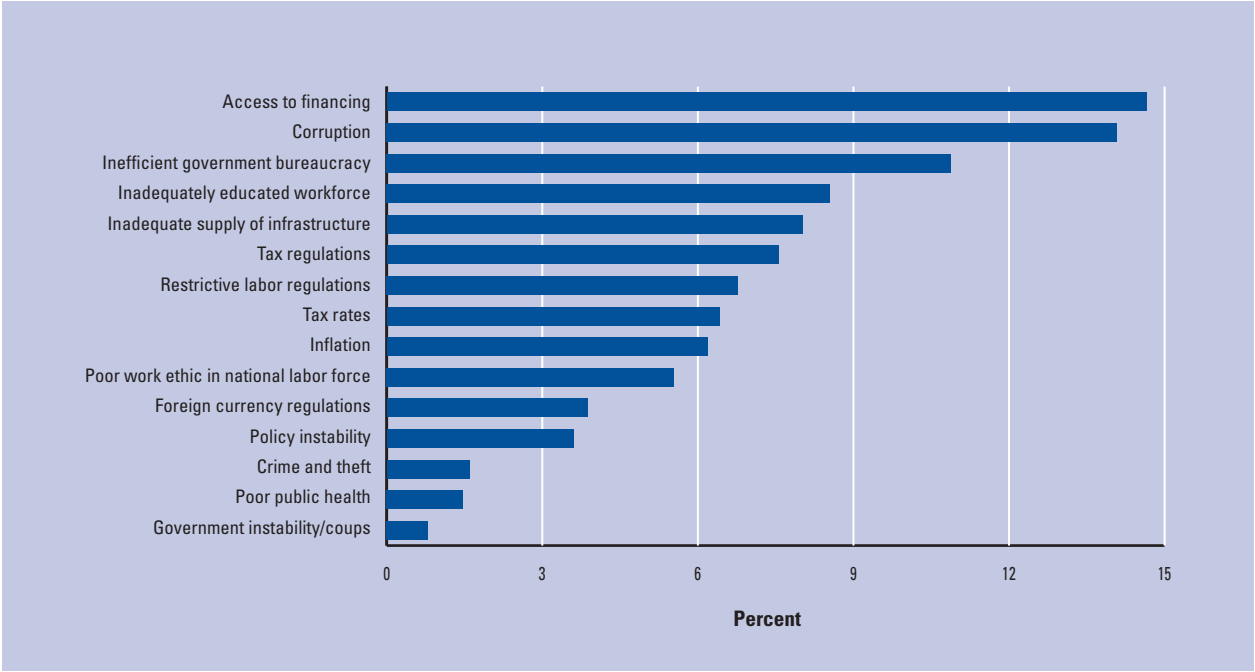
The overall picture is that strong area-specific performances are concentrated among a relatively small group of African countries, although pockets of excellence exist in a number of others. This demonstrates that Africa is home to a number of countries that provide strong best practice examples in various areas for the other African countries struggling to improve their competitiveness.

The most problematic factors for doing business in Africa

The results of the GCI thus provide a good sense of the many factors that are holding back Africa's competitiveness. To complement this analysis, each year the World Economic Forum collects the perspective of CEOs and top executives from around the world on the main bottlenecks to doing business in their countries. Specifically, they are asked to rank the most problematic factors that they face in doing business in their country out of 15 possible factors. Figures 3 and 4 show the aggregated results of these responses for North Africa and sub-Saharan Africa on average, respectively.

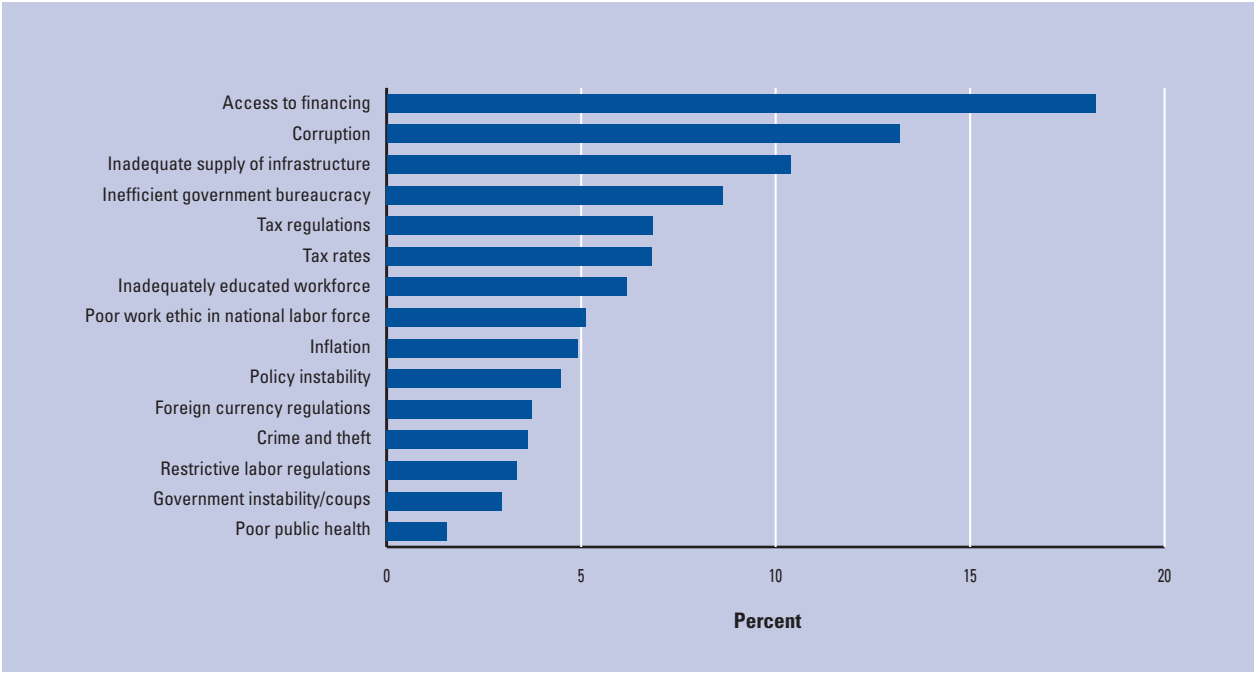
Figures 3 and 4 show that the top two factors for both regions are the same, and in the same order: insufficient access to financing and corruption. Although

Figure 3: Most problematic factors for doing business in North Africa (percent of respondents)



Source: World Economic Forum Executive Opinion Survey, 2010.

Figure 4: Most problematic factors for doing business in sub-Saharan Africa (percent of respondents)



Source: World Economic Forum Executive Opinion Survey, 2010.

Table 4: The evolution of key sectors and sub-Saharan Africa's performance: World market shares, by industry and region (1995–97 and 2006–08)

	Light manufacturing		Heavy manufacturing		Agricultural commodities		Agribusiness		Mining	
	1995–97	2006–08	1995–97	2006–08	1995–97	2006–08	1995–97	2006–08	1995–97	2006–08
East Asia and Pacific	14.9	25.1	5.3	13.8	10.2	9.6	10.0	12.2	6.1	7.6
Europe and Central Asia	3.3	5.6	1.5	3.3	11.9	12.0	3.5	5.3	9.8	13.0
Latin and Central America	3.6	3.4	3.4	4.0	12.9	10.8	10.9	12.6	8.1	8.2
Middle East and North Africa	0.7	0.9	0.2	0.3	3.0	6.7	1.3	1.8	4.2	5.1
NON-OECD	12.3	7.3	10.8	11.3	1.7	9.9	5.6	3.5	15.4	19.1
OECD	61.6	53.2	78.1	66.3	52.4	45.6	65.5	60.8	52.1	41.3
South Asia	2.7	3.6	0.3	0.6	2.5	2.7	1.7	2.2	1.0	1.9
Sub-Saharan Africa	0.9	0.9	0.3	0.4	5.4	2.7	1.5	1.7	3.4	3.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: UN Comtrade database, World Bank calculations.

these receive a relatively even weight in North Africa, in sub-Saharan Africa the lack of financing is the measurably more onerous impediment. Both regions also highlight inefficient government bureaucracy as well as an inadequate supply of infrastructure as major challenges.

It is interesting to note that, while business leaders in both regions also point to an inadequately educated workforce as a serious obstacle to doing business, poor public health is placed far down the list in both cases. This is curious given the major health challenges in many African countries, particularly in sub-Saharan Africa, and seems to indicate that business leaders in African countries do not consider that it significantly affects their ability to do business, at least not in comparison with other possible impediments. Once again, vast differences exist across countries. For example, according to the 2007 UNDP's *Swaziland Human Development Report: HIV and AIDS and Culture,* the widespread prevalence of HIV/AIDS in Swaziland—which, at about 26 percent of the 15–49 age group is the highest in the world—threatens not only competitiveness, but the very existence of the nation.[17]

However, despite this mystery about the health issues, the results of the Survey support the general findings discussed in the section above, reinforcing what has been known for some time. African countries must continue to develop their public institutions and financial markets, build up their infrastructure, and upgrade their educational systems. Indeed, given its importance, Chapter 2.1 of this *Report,* contributed by the African Development Bank, explores how to improve the higher educational system in Africa.

Africa's export composition and challenges

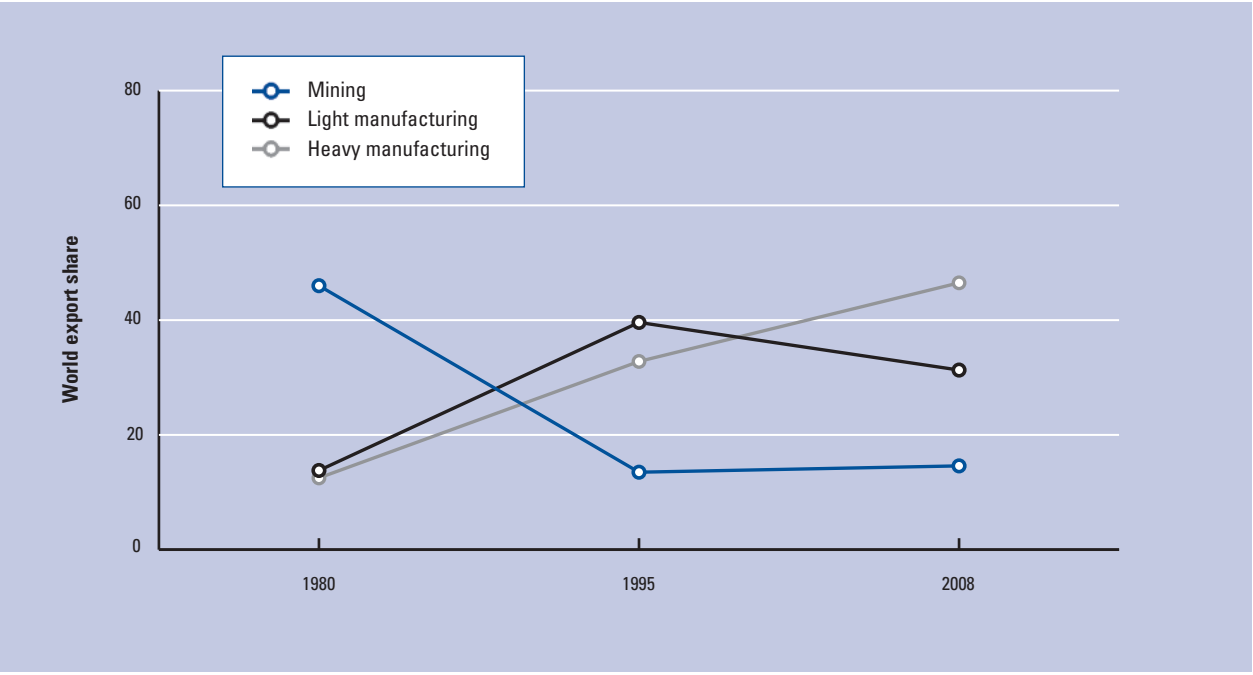
The major cross-cutting policy areas that constrain Africa's export competitiveness discussed above include those that increase indirect costs—trade logistics and infrastructure—and those that relate to a poor business environment, such as the availability of skills and the ability to absorb technology. These are also the areas in which sub-Saharan Africa in particular scores relatively poorly in comparison with other regions according to the Global Competitiveness Index. To achieve industrialization, export competitiveness, and subsequently sustained and more broad-based growth, the subcontinent needs to put special emphasis on making progress in these areas. Factors viewed as necessary for diversifying production and exports through export of services are similar: (1) human capital; (2) infrastructure, especially pertaining to telecommunications; and (3) adequate institutions, in particular in the area of regulations and contract enforcement.[18]

Given the daunting list of constraints that depress African productivity and export growth, African governments will need to (1) prioritize and sequence reforms and investments in the business environment and infrastructure in order to unleash the potential for growth in their industries, and (2) bring together policies to promote competitiveness within a coherent strategy rather than as a series of ad hoc interventions. Experience shows that, in isolation, these interventions tend to be ineffective.

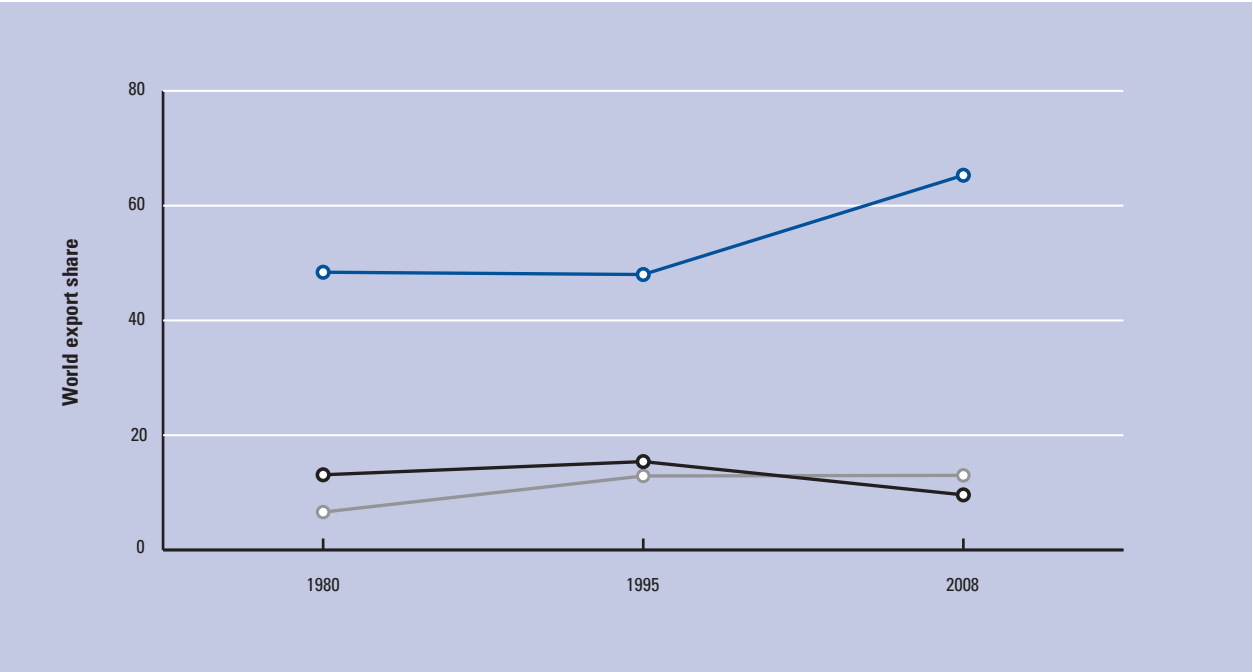
There is new hope for Africa, grounded in improved macroeconomic frameworks and policies, the rise of an African middle class, and the opportunity presented by tighter links with fast-growing emerging markets. In the long term, as wages rise in these countries, Africa's comparative advantage could shift toward manufactures

Figure 5: Composition of world export of light manufacturing, heavy manufacturing, and mining, 1980–2008

5a: East Asia Pacific



5b: Sub-Saharan Africa



Source: UN Comtrade database, World Bank calculations.

and new export growth opportunities may open up. This new opportunity is important given how little progress has been made to date: sub-Saharan Africa's international competitiveness in individual industries, especially in manufacturing and agro-processing, has seen little improvement over the last two decades. Its exports remained undiversified and their growth was overwhelmingly accounted for by natural resources. Sub-Saharan Africa's world market share in processing industries is not only low but has remained virtually unchanged. The region exports just 0.9 and 0.3 percent of world light and heavy manufacturing exports, respectively, while developing countries in the aggregate saw their share of world exports increase dramatically, from 19 percent in 1995 to 33 percent in 2008 (Table 4).[19]

Of the US$140 billion growth in sub-Saharan African exports between 1995 and 2008, 73 percent were mining-related commodities. By comparison, the export growth that spurred the Asian economies has increasingly relied on an expanding list of manufactures. By the 2000s, East Asia Pacific was already going through its second wave of export diversification, moving from relying mainly on light manufacturing into higher-value-added heavy manufactures. In 2006–08, about 80 percent of East Asian exports came from manufacturing industries (Figure 5).[20]

The evolution of key industries and Africa's performance

Constraints that depress countries' productivity and ability to compete in the global markets tend to have varying degrees of relevance for different industries. Hence prioritizing reforms depends on the specific industries in which countries compete. Manufactures and agribusiness represent about 70 percent of world export in goods and provide many opportunities for learning, absorbing technology, and job creation. Therefore we focus our analysis on these industries—light manufacturing, agricultural commodities, agribusiness, and heavy manufacturing—in the next sections. Exports of mining products are discussed in Box 2. The recent experience in trade diversification in East Africa is discussed in Box 3.

Light manufacturing

In value terms, exports of light manufacturing from sub-Saharan Africa grew at a fair pace between 1995–97 and 2006–08, slightly more than doubling to US$19.8 billion. However, sub-Saharan Africa's overall share of light manufacturing world exports has remained low, even declining from 1.2 percent in 1980 to less than 0.9 percent in 2008. Top exporters in sub-Saharan Africa are South Africa, Botswana, Namibia, Mauritius, and Kenya, which together accounted for close to 75 percent of exports of light manufactures in 2008. These were followed by emerging manufacturers such as

Box 2: Mining in sub-Saharan Africa

The mining sector is where sub-Saharan Africa captures the highest share of world exports. Its exports of mining commodities, primarily oil and metals, grew from US$9 billion in 1995–97 to about US$130 billion in 2006–08, rising from 3.4 percent of world exports to 3.8 percent. This increase is in part attributable to rising prices of major commodities such as crude petroleum and copper, where volumes doubled and prices have increased more than five- and threefold, respectively, since early 1999. While oil and metals comprised equal shares of African exports in 1995, fuel exports made up three-quarters of all mining exports from the region by 2008.

Studies reveal both the benefits and problems associated with resource extraction. Alexeev and Conrad find that, in the long run, resource-rich countries have significantly higher levels of income than others.[1] However, Collier and Goderis show that, while commodity exports initially increase output, they cannot sustain growth.[2] They suggest that, after two decades, output for the typical African commodity exporter may be around 25 percent lower than it would have been without the resource boom.

Although these findings have important policy implications in terms of the potential effects of the "Dutch Disease," geology does not have to be destiny. Countries such as Chile and Botswana—which have been among the fastest-growing economies of the world in the past two decades—have relied almost entirely on mining exports to spur their growth. Others, such as Malaysia and Indonesia, were able to derive a significant share of their export revenues from mining, while at the same time growing competitive manufacturing industries. Sub-Saharan African countries rich in mining and commodities could offset the effects of the "resource curse" by using the revenues for investment instead of consumption, thus moderating the increase in demand for consumer goods and services that could otherwise fuel a Dutch Disease. With strategic investments, such as those in trade infrastructure along main trade corridors, mining revenues could help improve the overall competitiveness of these economies and support growth and job creation.

Notes

1 Alexeev and Conrad 2009.

2 Collier and Goderis 2007, 2008.

Box 3: Trade diversification in East Africa during the global recession

Background: East Africa's resilience during the crisis

At an annual growth rate of about 7 percent, the East African Community (EAC)—consisting of Burundi, Kenya, Rwanda, Tanzania, and Uganda—was among the fastest-growing groups worldwide during 2005–08. In 2009, its median growth rate of 4.7 percent continued to place the EAC among the fastest-growing subregions. This box highlights the factors behind this resilience, with a focus on trade and especially export diversification. Besides building resilience to shocks such as the global economic crisis, export diversification is a key for the long-term development of African countries because it reflects and reinforces the shift in production from low- to higher-value-added goods. Moreover, recent research found that, in Africa, policies that enhance export diversification accelerate countries' growth by raising total factor productivity.[1]

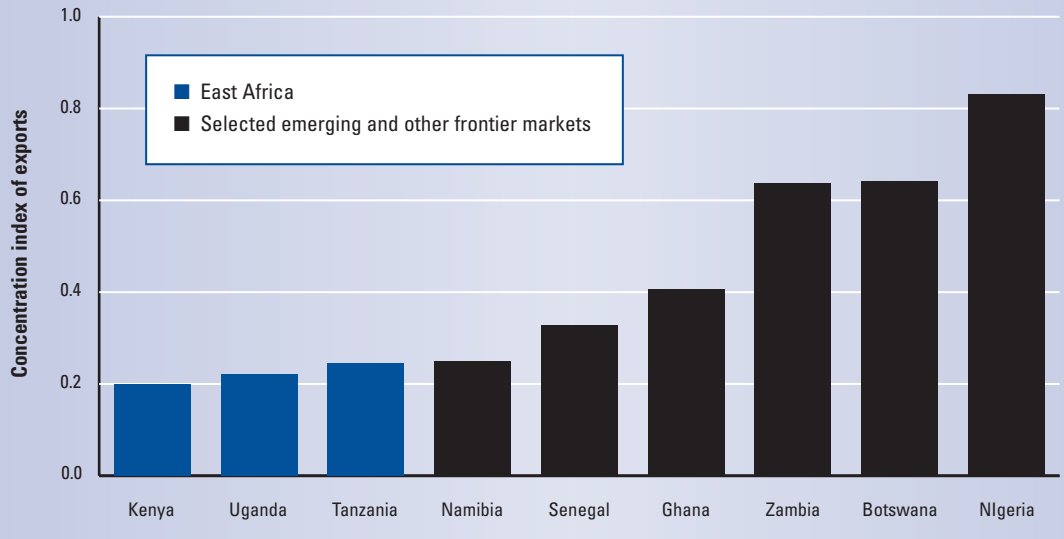
Because of its limited integration into global financial markets, East Africa was mostly shielded from the direct impact of the crisis through the financial channel. The trade transmission channel was not particularly harmful because of the region's weaker trade ties with Europe and its greater regional ties. Similarly, FDI inflows into EAC countries increased marginally in 2009, while they declined substantially in many other developing regions.

Several other factors have contributed to the EAC's strong performance, including the accumulation of policy buffers prior to the crisis, effective countercyclical responses during the crisis, and timely financial assistance from multilateral organizations. A greater export diversification in the EAC than in other African subregions, both in terms of products and trading partners, helped East Africa weather the severe external shock that the crisis presented. More broadly, export diversification boosts countries' export competitiveness by reducing their political and economic risks. This was shown also by the performance of many developing countries, including in North Africa, which saw marked drops in exports and outputs during the crisis as a result of their dependence on a few commodities and/or on markets in advanced economies.

The role of trade diversification

In terms of the *product diversification* of exports from Kenya, Uganda, and Tanzania, in 2009 the top three products accounted for less than 40 percent of total exports. Such shares are well below levels observed in resource-rich countries such as Nigeria and Botswana (where they account for 80 and 90 percent, respectively) or other frontier markets (e.g., countries that have recently accessed or are just about to access international capital markets) such as Ghana (where they account for about 70 percent). These differences in product market concentration are reflected in Figure 1. Necessities, especially basic food, accounted for the majority of the region's exports—both total exports and exports to the rest of Africa, making the region less vulnerable to the global slump because of its lower income elasticity of demand. Most of the manufacturing goods, which were more vulnerable to declining demand during the crisis than foodstuffs, are exported to the rest of East Africa. While currently a large share of the regional trade is in agricultural products, over the medium term, regional strategies need to develop complementarity in more sophisticated and

Figure 1: Concentration index, 2008



Source: Authors' calculations, based on the UNCTADstat *Foreign Merchandise* database, http://unctadstat.unctad.org/TableViewer/tableView.aspx?ReportId=120.
Note: Herfindahl-Hirschmann Index, ranging from 0 to 1 (maximum concentration).

Box 3: Trade diversification in East Africa during the global recession

higher-value-added products to raise East African countries' capacity to trade.

East Africa is also characterized by greater regional integration and reliance on intra-regional and intra-African trade than other regional economic blocs. Vast differences exist even among the five EAC countries, with the highest share of intra-regional trade recorded by Kenya (above 20 percent) and the lowest by Rwanda (about 2 percent) during 2005–08. Nevertheless, in the run-up to the crisis, about 20 percent of East African exports were within EAC countries, a share notably above those in other regions. The continued healthy growth rates in the subregion protected the individual countries from the major drop in demand that proved so damaging to developed and emerging economies elsewhere. The crisis has only reinforced the East African countries' drive to integrate; the common market introduced in 2010 is also likely to boost trade further.

A key characteristic of East Africa is its large share of informal trade. For example, in 2009, Uganda's informal exports to the EAC and to Sudan and the Democratic Republic of Congo combined exceeded its total formal exports (Table 1). The large informal trade suggests that formal trade can expand further, provided that barriers are reduced. Increasing the stock and quality of regional infrastructure would also encourage intra-regional trade.

Incentives to formalize are crucial for fostering growth through innovation and technology adoption—key elements of knowledge-based economies—as firms operating in the informal sector find it more difficult to innovate and adopt new technology. This is partly the result of their limited access to capital. The free mobility of skilled workers is a pre-requisite for open trade. Easing and modernizing migration policies to facilitate the flow of labor and to address persistent skills shortages in specific fields would also help foster regional trade and raise competiveness.

South-South linkages

Intensified trade flows between East Africa and China and the other BRICs, as well as the Gulf countries, have also contributed to the subregion's solid growth during the crisis. Again, the intensity of these trade relations varied across individual East African countries, with Tanzania exporting about 25 percent of its exports to BRICs in 2009.

Rising ties with Asia and the Gulf countries are not unique to East Africa; they played a positive role during the crisis in other Africa's subregions as well. In particular, frontier markets (e.g., Tanzania) and transition low-income countries (e.g., Ethiopia) with closer ties to the BRICs recorded milder declines in trade and growth than other low-income countries. In fact, export revenues of frontier markets and transition low-income countries rose in 2009.

Source: Brixiova and Ndikumana, 2011.

Note

1 Hammouda et al., 2010.

Table 1: Uganda: Formal and informal trade, 2005–09

	2005	2006	2007	2008	2009
TOTAL EXPORTS	**1,013**	**1,194**	**2,113**	**3,073**	**3,125**
Formal	813	962	1,337	1,724	1,567
Informal	200	232	777	1,349	1,558
FORMAL EXPORTS TO:					
East African Community (%)	18	16	21	22	22
Sudan (%)	6	10	12	14	12
Congo, Dem. Rep. (%)	7	5	7	7	10
INFORMAL EXPORTS TO:					
East African Community (%)	57	62	21	16	13
Sudan (%)	5	3	59	69	78
Congo, Dem. Rep. (%)	38	35	20	15	9

Sources: Authors' calculations based on Uganda Bureau of Statistics, 2010; Bank of Uganda, 2007, 2009.
Note: Exports in US$ (millions).

Nigeria, Madagascar, and Lesotho, whose increased exports of leather and apparel lead their success in this sector.[21]

The most significant boost to sub-Saharan Africa light manufacturing was perhaps the preferential treatments that were granted by the United States and the European Union under the Africa Growth and Opportunities Act (AGOA), the Everything but Arms (EBA) initiative, the Cotonou Agreement, and the Lome Convention. These initiatives granted virtually duty- and quota-free access to nearly all countries in Africa. For example, trade preferences under AGOA provided sub-Saharan African countries with a price advantage of 10 to 20 percent relative to exporters in countries for which tariffs were levied. It is partially thanks to AGOA that sub-Saharan Africa's exports of clothing grew threefold since 1995 to US$2.5 billion, on average, between 2006 and 2008, making up more than 12 percent of all light manufacturing exports from the region. By 2008, for example, apparel made up the largest share of Madagascar's exports, outgrowing its exports from rich mining resources and employing 107,530 people. The recent decimation of Madagascar's apparel production with the removal of AGOA eligibility underlines the importance that such preferences have had on the competitiveness of African garment producers that were able to break into the export markets. The apparel industry across the subcontinent was, for the most part, dominated by foreign investors originating in Asia and occasionally in Europe and the United States, who aimed to exploit the advantages conveyed by a combination of trade preferences and cheap labor.

While these preferential trade arrangements supported light manufacturing in select cases, on the whole, sub-Saharan African exporters were unable to match the drop in prices by East Asian competitors, especially after the elimination of quotas in 2004. The unit value of Chinese apparel exports was 28 percent lower in 2008 than in 2004, for example. By 2008, Vietnam alone exported more light manufacturing products than all sub-Saharan African countries combined.

Today, East Asia Pacific is the biggest exporter of light manufactures in the developing world, producing more than 25 percent of world exports in these industries. It has been the leader in this sector since 1995, and its share of world exports grew from 15 percent in 1995–97 to 25 percent in 2006–08.

East Asia Pacific's success is driven not only by the high productivity of its workers and firms, but also by the enabling business environment that supports seamless transport networks and reliable supplies of inputs and energy. A number of studies on sub-Saharan Africa's business environments, including the previous edition of this *Report,* emphasized the importance of high indirect costs in depressing the productivity of African firms relative to other countries.[22] Indeed, while factory-floor productivity is relatively low in many African countries, it is not so low—relative to wages—as to explain the continent's weak manufacturing competitiveness.

Assessments on global manufacturing competitiveness show that basic requirements of an enabling investment climate—namely, the cost of labor and materials; energy cost; trade, finance, and tax systems; and the quality of physical infrastructure—are critical in determining a country's competitiveness in the global export markets for simple manufacturers. A forthcoming study on sub-Saharan African light manufacturing competitiveness suggests that many of the root causes of the productivity and cost issues in African light manufacturing can be traced to policy problems relating to poor trade logistics and infrastructure, as well as to a lack of competition and input industries.

Recent studies have showed that high indirect costs (infrastructure, logistics, and transport), combined with business environment–related losses depress productivity in sub-Saharan Africa.[23] Trade infrastructure and logistics become especially relevant for light manufacturing industries because of the low margins and seasonality that characterize this industry. It is therefore telling that the countries that rank the highest in terms of infrastructure in the GCI are also the top exporters of light manufactures in sub-Saharan Africa. On the whole, Southeast Asian countries, whose market share of light manufacturing exports are exponentially higher than those in sub-Saharan Africa, score 24 percent higher in terms of the competitiveness of their economy in basic requirement as measured by the GCI.

Agricultural commodities

Sub-Saharan Africa has been losing market share in global agriculture exports in terms of unprocessed commodities. Its share of world exports in agricultural commodities was slashed in half, from 5.4 percent in 1995–97 to 2.7 percent in 2006–08. The decline was mainly the result of lagging agricultural productivity in the region. Its number one export product, cocoa, accounted for more than 30 percent of the continent's exports; cocoa was followed by coffee, tea, and tobacco. Top exporters of agricultural commodities were Côte d'Ivoire, Ghana, Kenya, South Africa, Ethiopia, and Nigeria, all of which (except Nigeria) lost market share despite increasing their exports in absolute terms.

Given its endowments of land, climate, and labor, sub-Saharan Africa should have a strong comparative advantage in agriculture. On the face of it, the subcontinent has the resources to both feed its growing population and meet the world's burgeoning demand for food and other agricultural products. In sub-Saharan Africa, demand for food is expected to reach US$100 billion by 2015, double the levels in 2000. There are encouraging success stories, such as the production of

cassava chips in Ghana, organic coffee in Tanzania, cut flowers in Kenya, and aquaculture in Malawi. However, these remain few and far between, and they have not been sufficient to improve the subcontinent's overall export performance in terms of both agribusiness and agricultural commodities. Although Africa has the highest rate of people living in rural areas in the world, the continent still imports 45 percent of its rice and 85 percent of its wheat.

Agribusiness

Agribusiness accounts for a large and rising share of gross domestic product (GDP) in developing countries. Though the share of agriculture typically decreases as per capita income increases, the share of agribusiness tends to increase, reaching 30 percent of GDP in some instances.

There is immense potential to scale-up agribusiness in sub-Saharan Africa, as demonstrated by emerging successes in Kenya, Tanzania, and Ghana. However, this potential remains largely untapped. Sub-Saharan Africa's share of world exports in agribusiness is the lowest of all developing regions, followed closely by the Middle East and North Africa. Its share, however, has seen a modest rise—from 1.5 to 1.7 percent between 1995–97 and 2006–08. The region's exports grew at a fair rate, more than doubling since 1995–97, which is slightly above world averages.

The top sub-Saharan African exporters of agribusiness include South Africa, Kenya, Côte d'Ivoire, Namibia, Zimbabwe, Nigeria, Mauritius, Tanzania, and Senegal. Among these, the fastest growth was experienced by Nigeria and Senegal, which increased their exports exponentially twenty- and sevenfold, respectively, although from a very low base. Fruits and vegetables are the major agribusiness exports of the subcontinent, closely followed by fish and fish preparations, together accounting for about 50 percent of sub-Saharan Africa's agribusiness exports.

Africa's poor performance in export markets for agribusiness is in part explained by its slow productivity growth. Value-chain studies focusing on sub-Saharan Africa show that, while agricultural productivity improved in parts of the region, it lagged behind vis-à-vis other regions. Although farm-level unit production costs in Africa are comparable with those found in Brazil and Thailand, these farms suffer from low levels of productivity, which in turn make agriculture economically impoverishing and technically unsustainable. The international and domestic logistics costs that provide natural protection for local producers pose a significant barrier to their competitiveness when it comes to exporting. For example, Mozambican cassava producers that are competitive in domestic markets would need to cut their logistics and production costs by more than 80 percent to become competitive in European markets. Overall, the studies identified a lack of political commitment, prejudice against small-holder agriculture, high transaction costs that are driven by weak physical infrastructure, widespread information asymmetries, low levels of marketed surplus, and high export taxes as the main constraints to agricultural productivity in sub-Saharan Africa.

The agricultural commercialization experiences from these regions offer some interesting lessons for the future of agriculture in Africa. For example, studies from Brazil and Thailand show that competitiveness in these originally "backward" areas was reached in two stages, first in lower-value commodities and later in higher-value and processed agricultural goods. Other factors contributing to their success included improved agricultural technology developed by government supported agencies such as Empresa Brasileira de Pesquisa Agropequária (Brazilian Agricultural Research Corporation, or EMBRAPA), permissive land policies, improved public infrastructure and business development services, a supportive policy environment, and liberalized markets that allowed international signals to transmit. As a result of these policies, Brazil and Thailand became the leading global suppliers of soybeans and cassava, among other agricultural exports.

Heavy manufacturing

At an aggregate level, the trends in exports of heavy manufactures in sub-Saharan Africa are similar to those of light manufacturing. Africa's exports are tiny and captured only 0.4 percent of world markets, a slight increase from 1995–97, when it produced 0.3 percent of world exports. Unlike light manufacturing, however, sources of origin for heavy manufacturing are less diversified. The overwhelming majority of exports, more than 75 percent, come from South Africa. Nigeria, Côte D'Ivoire, Swaziland, and Kenya are other major exporters of heavy manufactures.[24]

Despite beginning from a low base, heavy manufacturing performed better in terms of export growth rates than both agribusiness and light manufacturing industries in sub-Saharan Africa. Most of the growth came from South Africa, Nigeria, Côte d'Ivoire, and Kenya. In 2008, Nigeria primarily exported transport equipment, Côte d'Ivoire cleansing products, and Kenya chemical elements and compounds. These were the top exports for these countries also in 1995, except for Kenya, which primarily exported iron and steel during this time.

Unlike light manufacturing, heavy manufacturing exports of developing regions are dominated by a handful of emerging economies from each region such as China, Mexico, Malaysia, Brazil, Turkey, and South Africa. According to the *2010 Global Manufacturing Competitiveness Index,*[25] the availability of skilled labor and capacity for innovation, the cost of labor and materials, and energy cost and policies are the three main drivers of manufacturing competitiveness reported by

the 500 senior leaders of manufacturing industries from around the world. Presumably in the case of heavy manufacturing, it is more pertinent for a country to be able to offer its investors a sound basis for advanced engineering and capacity for technology adoption and innovation than it is for the country to be able to go beyond the economic competitiveness at the level of the traditional factor costs, which remain critical for the competitiveness of light manufacturing industries.

In most low- and lower-middle-income countries, financial and physical infrastructures, as well as the required advanced skills, are simply absent or inadequate for heavy manufacturing to flourish. The *2010 Global Manufacturing Competitiveness Index* ranks talent-driven innovation—which emanates from improved higher education—as the leading driver of manufacturing competitiveness. Correspondingly, as we have seen earlier, the GCI indicates that sub-Saharan Africa ranks especially poorly in terms of its systems of higher education and its ability to adopt technology. Those sub-Saharan African countries—such as South Africa and Kenya—that achieved improvements in these areas, as well as progress in what is defined by the GCI as the basic requirements of an economy (institutions, infrastructure, macroeconomic environment, and health and basic education), are among those whose exports of heavy manufactures grew the fastest since 1995–97.

FDI, growth, and productivity in Africa

As seen earlier, African countries rank particularly low on innovation and technology adoption. Because of their generally low savings rates (especially among sub-Saharan African oil importers), underdeveloped domestic financial sectors, and often inadequate access to borrowing on international capital markets, their investment is constrained by available resources or their ability to attract FDI. In this concluding section we (1) discuss trends in FDI inflows to Africa, including during the crisis years of 2009 and 2010; (2) examine the impact of FDI on growth, through both investment in physical capital (factor accumulation) and total factor productivity (TFP) channels;[26] and (3) look ahead and discuss how, in the future, African countries can attract growth-enhancing FDI, especially FDI that raises innovation and hence TFP.

In addition to providing capital, FDI can stimulate growth by helping improve the TFP of African countries by advancing their technological capacities. Besides the transfer of managerial skills, technological spillovers from FDI can occur through the transfer of more advanced technologies and the demonstration of their applications, as well as through technical assistance to domestic suppliers and customers. In turn, the central role of FDI has been recognized by African policymakers: without transfer of technological capabilities and resulting home-grown innovation, the productivity gap between African countries and more advanced economies will not be reduced and could even widen further.

FDI trends in Africa

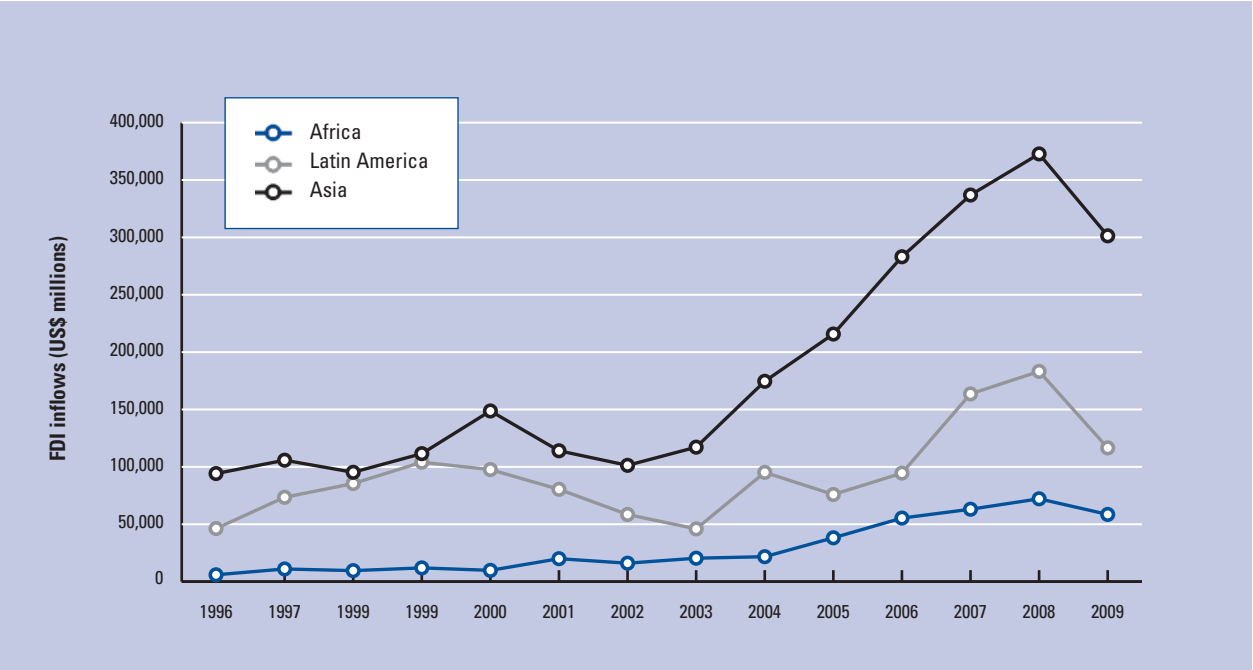
One of the key differences between advanced economies on one hand and developing and emerging market economies on the other lies in the amount of physical (and human) capital these groups of countries possess and the level of technology they utilize. With relatively low savings rates, volatile export revenues, and substantial investment requirements, most African countries need to rely on capital inflows, in particular FDI, to finance their development needs and reduce these gaps. Accordingly, over the years many African countries deregulated and (at least partially) liberalized their capital accounts, with a view to attracting FDI.[27]

During 2001–09, developed economies continued to account for most of the world FDI flows: they were the main source of outward FDI and received about 60 percent of total inflows during this period. Nevertheless, the long-term geographical pattern of the FDI flows has been changing, with more FDI going to developing countries, including countries in Africa (Figure 6). In fact, in 2009, developing and transition countries received almost half of the world's FDI. Preliminary estimates indicate that in 2010—for the first time—developing and transition countries received more than 50 percent of world FDI inflows.[28]

Although the reasons for the increase in private capital flows to low-income countries varied, on the "domestic economic fundamentals/pull side" they included privatization and deregulation; improvements in general investment environment, including trade liberalization and cutting costs of doing business; and broader considerations such as political and macroeconomic stability. On the "external/push side," private capital flows to low-income countries were closely related to the business cycle upswing and the heightened risk appetite of foreign investors.[29]

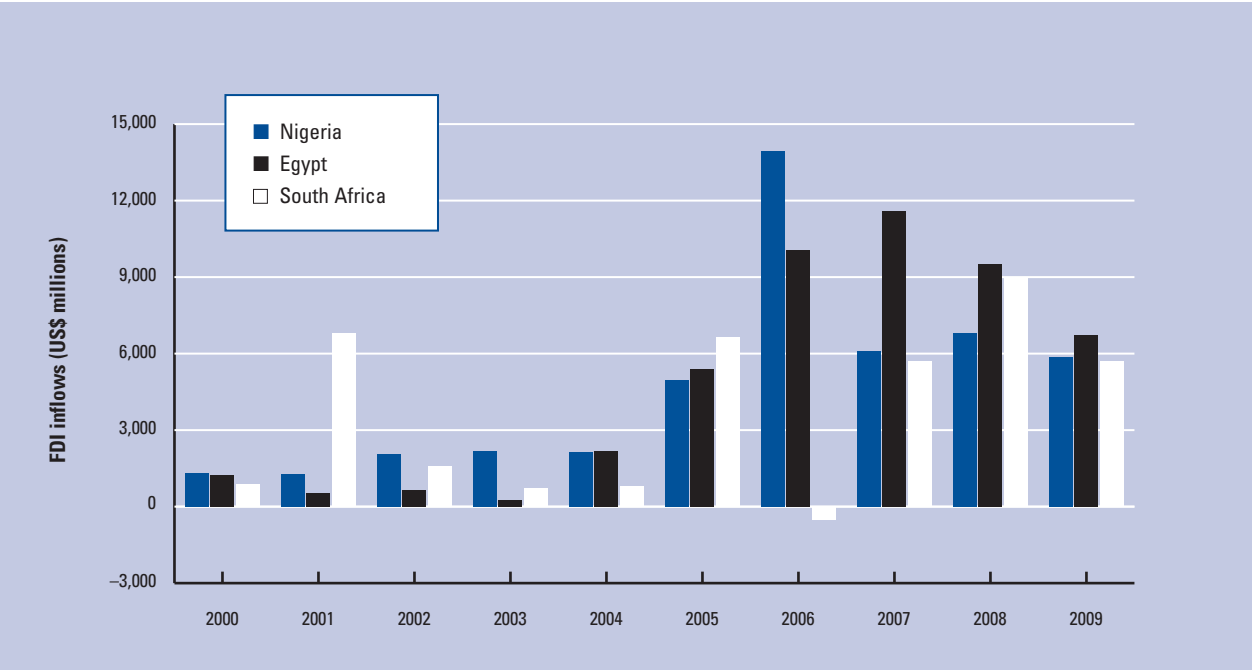
African countries also experienced a surge in capital flows; they received about 8 percent of total capital flows and 10 percent of FDI going to developing countries during 2001–09.[30] Indeed, after years of relatively slow growth, net capital inflows to Africa accelerated in the 2000s and surged between 2004 and 2007. Peaking at almost US$76 billion in 2007, the net capital inflows amounted to about 5 percent of Africa's GDP at that time. This share was close to those of both the Middle East and Latin America (about 6 percent of GDP), but notably below capital flows received by Central and Eastern Europe and the Commonwealth of Independent States countries (15–16 percent of GDP). At the same time, since FDI accounted for the majority of their private capital inflows, African countries were mostly shielded from the sudden halt in capital flows

Figure 6: FDI inflows into Africa, Asia, and Latin America, 1996–2009 (US$, millions)



Source: UNCTAD *FDI Statistics* database.

Figure 7: FDI to Nigeria, Egypt, and South Africa, 2000–09 (US$, millions)



Source: UNCTAD *FDI Statistics* database.

Table 5: Output, exchange rates, and FDI flows during financial crises

	GDP growth (average, %)		US$ exchange rate (change, %)*		FDI flows (change, %)	
	1997–98	2008–09	1997–98	2008–09	1997–98	2008–09
Africa total (median)	4.4	4.0	3.0	5.4	–17.2	–20.7
Emerging markets	5.3	1.8	13.9	4.9	–64.3	–38.3
Frontier markets	4.5	5.2	8.6	11.1	13.9	16.0
Transition countries	3.6	6.3	6.2	3.1	–8.9	–25.3
Pre-transition countries	3.9	3.3	1.1	5.4	–44.1	–66.0
Oil exporters	7.9	4.0	1.1	5.4	50.1	–17.2
Fragile states	8.9	3.2	1.1	4.6	–9.6	–19.9

Source: Authors' calculations, based on the African Economic Outlook and UNCTAD databases.
Notes: The two crises considered here are (1) the Asian crisis and (2) the Great Recession.
* A positive number reflects depreciation of local currency relative to US dollars.

that affected other regions during the recent global economic crisis.

FDI has been distributed unevenly even within Africa, with the top five recipient countries receiving the bulk of FDI inflows to Africa prior to the crisis, between 2001 and 2008. Still, results vary according to perspective. In absolute terms, three largest countries—Egypt, Nigeria, and South Africa—received similar, large amounts of FDI, but in per capita terms Nigeria was notably below Egypt and South Africa and close to the African average prior to the crisis (Figure 7). Resource-rich countries and the minerals sectors attracted a large share of these flows, but more recently investors have discovered countries other than Nigeria and South Africa, their long-standing investment destinations. Since the mid 2000s, "frontier market" low-income countries, such as Ghana, Uganda, and Zambia, have gained increased attention of foreign investors.[31] Beyond mining, the services sector—especially telecommunications and banking—has been receiving a disproportionate share of FDI in Africa, contributing to diversification of production and stimulating the export of services and other sectors.

Among various subregions, Southern Africa received the largest share of total FDI (36 percent) going to Africa in 2009.[32] Countries in North and West Africa also fared well and received about 30 and 20 percent of Africa's FDI inflows in 2009, respectively.[33] In West Africa, oil exporters (e.g., Nigeria and Guinea) and emerging and frontier markets (e.g., Cape Verde, Côte d'Ivoire, Ghana, and Senegal) attracted the lion's share of this subregion's FDI, with Nigeria predominating. Given that West Africa (and particularly some of the above-mentioned countries) experienced the highest real GDP growth among Africa's subregions during 2001–08, the impact of FDI on growth and productivity in these countries is examined below.

FDI resilience during the global financial crisis

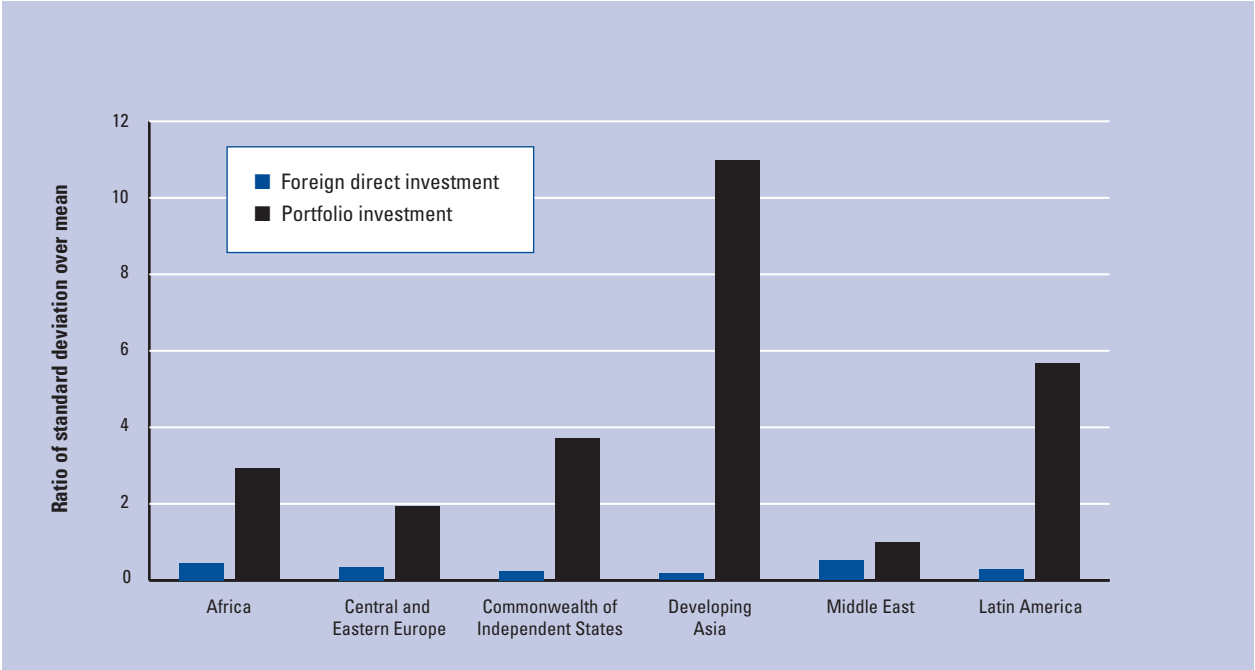
Before the crisis, FDI flows to Africa and other developing regions were less volatile than portfolio flows (Figure 8), since FDI decisions are mostly based on longer-term factors and less affected by short-term shocks. While the motivating factors of FDI are complex and vary across sectors and firms, the driving forces typically include political stability, prudent macroeconomic policies, trade openness, liberal investment policies, high-quality institutions (including the financial sector), the stock of human and physical capital, and natural resources.

Overall FDI to Africa remained resilient during the global financial crisis in 2009, both relative to other financial flows to Africa and relative to FDI flows to other world regions (Figure 9). Despite the decline of about 20 percent, in 2009 FDI flows to Africa were less volatile than other financial flows that year. Moreover, Africa's share of global FDI inflows rose from 3 percent in 2007 to 5.1 percent in 2009.[34] This relative resilience is partly the result of policies that African countries introduced in the 1990s and 2000s. In addition to liberalizing investment regimes, a number of countries shifted from targeting FDI for specific sectors to establishing a broad enabling investment climate. Besides incentives to foreign investors, the increased interest in attracting FDI has been evidenced by the formation of the New Partnership for Africa's Development (NEPAD) in 2001.

Throughout the world, the primary sectors (e.g., agriculture, mining) and services such as telecommunications, transport, and consumer services (e.g., health services) were less sensitive to the business cycle and thus less affected by the crisis than manufacturing. The low share of FDI in manufacturing has made Africa more immune to a decline in overall FDI flows than other world regions, where manufacturing plays a prominent role (e.g., emerging Europe). Accordingly, a number of oil exporters such as Egypt, Nigeria, Angola, and Sudan received the highest absolute FDI inflows (above US$3 billion) in 2009, while Ghana's FDI increased markedly since 2007, reflecting developments of the emerging oil sector. Cross-border mergers and acquisitions in Africa reflected these sector trends, with M&A sales rising in mining and transport in 2009, but markedly declining in manufacturing.[35]

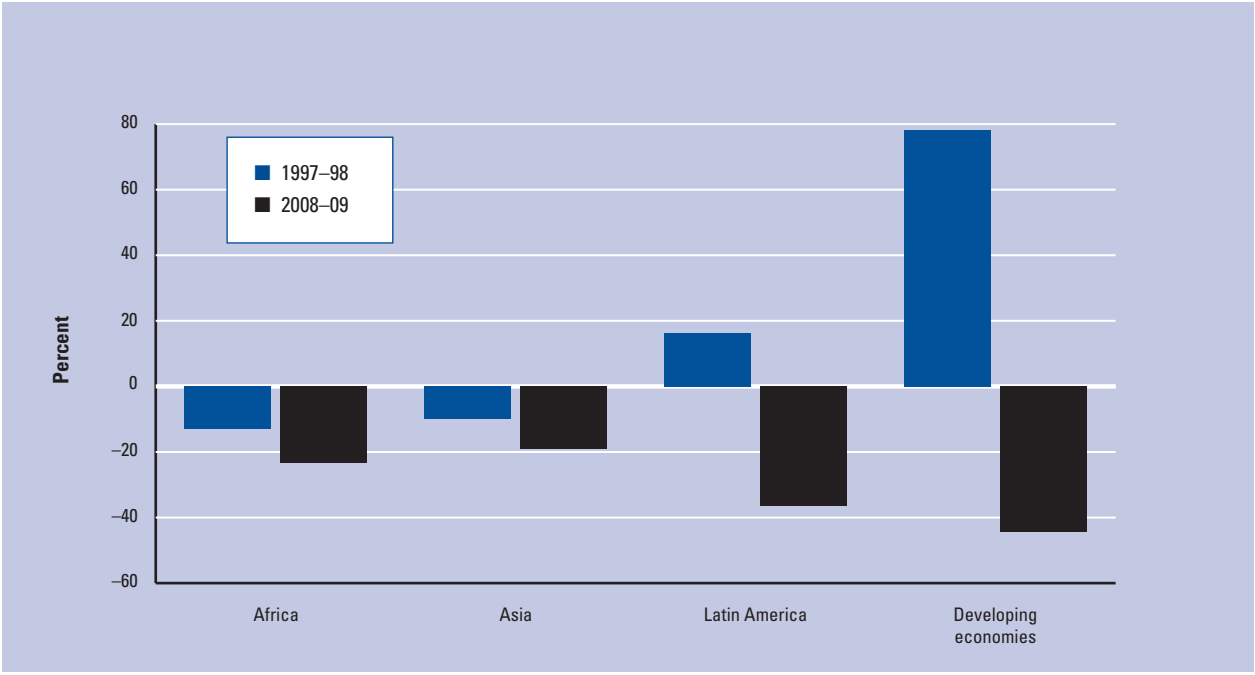
Moreover, vast differences emerged among Africa's subgroups. When dividing the continent into analytical subgroups such as emerging markets, frontier markets, and so on, two observations stand out. First, FDI to frontier markets actually increased between 2008 and 2009, driven by continued high growth and strong growth prospects as well as depreciating exchange rates that made some of the factors of production (e.g., labor) cheaper (Table 5). Second, FDI to pre-transition countries that are yet to develop robust institutions and financial sectors markedly declined, underscoring the

Figure 8: Volatility of capital flows, 1996–2008 (relative coefficient of variation)



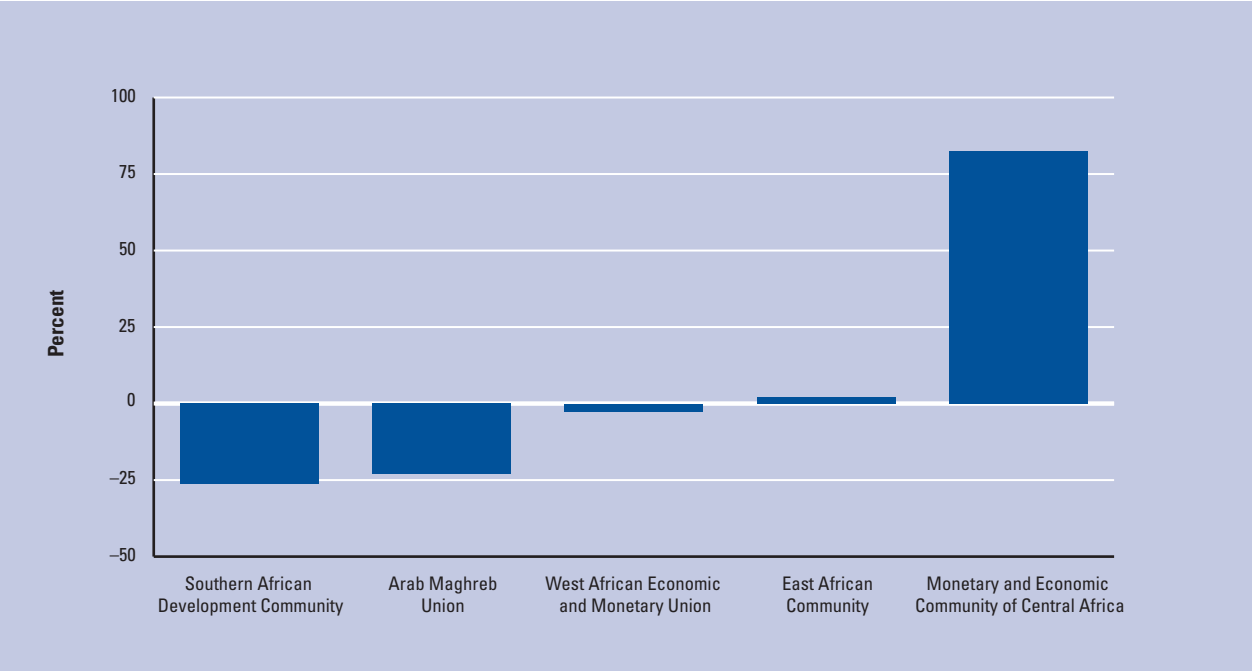
Source: Authors' calculations, based on the IMF's *World Economic Outlook* database online.

Figure 9: Change in FDI inflows during financial crises, percent (1997–98 and 2008–09)



Source: Authors' calculations based, on UNCTAD's *FDI Statistics* database.
Note: 1997–98 denotes changes in FDI inflows between 1997 and 1998 (the Asian financial crisis) and 2008–09 denotes change in FDI inflows between 2008 and 2009 (the global financial and economic crisis).

Figure 10: Change in FDI inflows between 2008 and 2009, by Africa's regional trade arrangements (percent)



Source: Authors' calculations, based on UNCTAD's *FDI Statistics* database.

role of economic fundamentals in offsetting short-term shocks.

When analyzing changes in FDI flows according to regional trading blocs, the performance of the Monetary and Economic Community of Central Africa (CEMAC) improved from 2008, as the regional trade arrangement benefited from substantial flows to Equatorial Guinea (about US$2.5 billion more than in 2008).[36] FDI continued to flow to the East African Community (EAC) at an unchanged rate because of the substantial resilience this subregion exhibited during the crisis (Figure 10).[37]

Beyond the crisis: The impact of FDI on longer-term growth

This section takes a rearview look at the impact of FDI on growth and productivity prior to the crisis, with a view to drawing policy conclusions for the post-crisis setting. While the impact of FDI inflows has created substantial controversy in the development debate, African policymakers have increasingly viewed FDI as a potential source of growth and development for their economies. FDI can stimulate growth not only through increasing capital stock, but also through its positive spillovers on technology and management, thus raising TFP and competitiveness.[38]

At the same time, policymakers have recognized that the benefits of FDI are markedly reduced when such investments use outdated technology; lack connection with local communities; avoid paying taxes; and, last but not least, create a culture of dependency. Other concerns relate to unequal distribution of the benefits of FDI and/or taking advantage of market concentration. Some policymakers fear the loss of political independence as a possible negative effect of FDI.

Evidence on the FDI-growth nexus from West African emerging and frontier markets

The section below re-examines the FDI-productivity nexus in selected West African countries, using the growth accounting framework. In this framework, FDI raises growth and productivity through its positive effect on (1) capital accumulation and (2) TFP, which would result from technology transfer and knowledge diffusion, the increased efficiency in management, competition, and better production techniques. While substantial literature on FDI, growth, and productivity exists, the issue of identifying the channels through which FDI impacts growth has received less attention.[39] In this context, the growth accounting approach is helpful for understanding which channels—productivity or capital accumulation or both—are affected by FDI.[40]

To provide country-level evidence of the impact of FDI on growth and development, this section uses annual data for emerging and frontier markets in West Africa (Cape Verde, Ghana, Nigeria, and Senegal) and a fragile West African country (Sierra Leone) from 1987 to 2008. It compares the results with those for Egypt, which was particularly successful in attracting FDI following structural reforms undertaken in mid 2000s,

until 2010. As discussed above, West African countries have been receiving increased amounts of FDI in recent years, including from South Africa. Sierra Leone's case is relevant because of the rapid growth the country has achieved after the war ended and the special tax incentives it has provided for FDI.[41]

Table B1 in Appendix B presents several useful insights about the impact of FDI on growth and channels of transmission in West African countries and Egypt.[42] First, in Senegal and Ghana, positive impact on FDI occurs through the increased marginal product of capital rather than TFP, and hence is driven more by factor accumulation than by productivity increases.[43] This is consistent with the GCI methodology: both these countries belong to the group of factor-driven economies, where technological adoption and innovation are less important and countries compete more on the basis of factor accumulation, in this case capital. Regarding the impact of FDI on growth through positive spillovers and TFP, among the five West African countries studied (Cape Verde, Ghana, Senegal, Nigeria, and Sierra Leone), the marginal product of TFP with respect to FDI is positive (and statistically significant) only for Cape Verde. In concrete terms, this implies that a 1 percent increase in FDI investment increases Cape Verde's growth rate by about 0.31 percent, through increasing TFP. Again, this result is consistent with the GCI methodology: since Cape Verde is in the efficiency-driven stage of development, technology adoption and innovation are becoming more important. In Nigeria, FDI does not seem to have any significant impact on growth at the aggregate level.

These observations are also consistent with the literature on the need to establish necessary threshold conditions for FDI to have a positive impact on growth.[44] A related strand of literature has focused on linking FDI with trade openness.[45] A sufficiently open (and competitive) environment needs to be in place in the host country for foreign investors to contribute to raising the efficiency of existing activities and for the host country to adopt technology, thus generating positive spillovers for the rest of the society and increasing productivity. Accordingly, the government of Cape Verde has pursued market-oriented economic reforms since the early 1990s, including a widespread privatization program and an opening up of the economy to FDI. The main recipient sectors included tourism, light manufacturing, and transport and communication services.

The impact of FDI on TFP is positive but not significant in Senegal, and it is even negative (albeit not significantly so) in Ghana and Nigeria. While Senegal and Ghana are ranked above the sub-Saharan African average on the GCI described above, they are still in the factor-driven stage. Their investment climates have demonstrable weaknesses, especially in infrastructure. More specifically, while Senegal has a relatively flexible labor and product markets, it is set back by a small market size and an overall weak infrastructure, especially in the power sector.[46] In Ghana, the lack of spillovers so far can be in part explained by the low share of FDI going to the manufacturing sector, where positive technology spillovers are likely to occur. The performance of Ghana's FDI is also constrained by the limited access to land, difficulties with registering property, the rigid labor market regulations, and the lack of skilled workers.[47] On the positive side, the impact of FDI on growth through capital accumulation is positive (and significant) for Ghana and Senegal, suggesting that FDI helps overcome shortages of capital, which are caused, in part, by the limited access to finance.[48]

Among the countries studied, Nigeria was the only one where FDI does not seem to have a positive impact through either of the two channels—the increased TFP or higher marginal product of capital.[49] This indicates that Nigeria's advantage stemming from a sizeable market and relatively sophisticated financial sector has been eroded by the country's weak and deteriorating institutions and its low degree of ICT penetration, among other impediments. Moreover, FDI has been disproportionately concentrated in the extractive industries, even though their share in total FDI has been declining. Ayanwale argues that when broken into subsectors, some components of FDI already exhibit positive impact on growth. Specifically, FDI in the telecommunications sector has the most positive effect on the economy, while FDI in the manufacturing sector affects the economy negatively because of the overall poor business environment and the low level of human capital.[50] The evidence of the positive growth impact of FDI in Nigeria's telecommunications sector is consistent with the export performance section above that posits that FDI inflows into services can enhance production and export diversification as well as growth.[51]

In Egypt, FDI has a positive and significant impact on TFP. According to the GCI methodology, Egypt is already in transition to the efficiency-driven stage. Moreover, in 2004, Egypt implemented structural reforms—such as revamping the banking sector and liberalizing labor markets—aiming to raise the role of the private sector in the economy and diversify its production base. On the FDI side, the reforms included establishing one-stop shops, opening up manufacturing to FDI, and abolishing limits on foreign equity participation in services, including telecommunications and financial services. The reforms were successful in encouraging FDI inflows and paid off, especially during the global financial crisis, when the country continued to generate over 4 percent of its GDP through FDI, even during the most severe part of the crisis (June 2008–09). In 2009, Egypt was the second largest recipient of FDI inflows in Africa (after Angola) and, according to UNCTAD, was poised to lead the post-crisis

FDI recovery.[52] Clearly the recent events in Egypt and the surrounding political instability will negatively impact FDI. However, the data discussed here cover the 1987–2008 period, so these recent events have not been taken into account in the reported results.

Policy implications for attracting growth-enhancing FDI after the crisis

As discussed in the above section, FDI can be a catalyst for growth in African emerging and frontier markets through two main channels: (1) increased TFP and (2) increased capital stock. The analysis shows that, even though FDI's contribution to growth through investment has been positive in most West African frontier markets studied, the positive spillovers of FDI on TFP have so far taken place only in Cape Verde and the benchmark case, Egypt—the only two countries that have moved beyond the factor-driven stage of development. This, together with the low domestic investment rates, suggests that further removal of barriers to competition and trade (along the lines of reforms seen in Egypt in the mid 2000s) is paramount. Adequate human capital stock and technological and physical infrastructure, as well as removing barriers to the access to credit, could also go a long way in this regard.

For example, as the case of Sierra Leone and also those of Ghana and Senegal illustrate, the empirical analysis undertaken seems consistent with the GCI methodology as well as with the empirical literature. This suggests that some minimal threshold of development (e.g., in the financial sector, human capital, and infrastructure) is needed for the host countries to benefit from FDI through technology transfer and increased productivity.[53] In other words, if the institutional, technological, and human capital gap with the investor's country is too wide, the host country would find it difficult to absorb the technological and know-how transfer. Thus efforts to raise human capital and technological capacity, as well as to develop infrastructure and financial sectors, are crucial for attracting development-friendly FDI and reaping its maximum benefits.

Since some minimal level of domestic resources is needed to co-finance FDI projects, strengthening domestic financial systems and capital markets to facilitate savings and credit in the host countries would help attract FDI. Given that exports and FDI reinforce each other and some FDI is even contingent on exports, further trade liberalization could be FDI-enhancing. In turn, FDI inflows into services (e.g., telecommunications, banking) cuts transaction costs and can promote diversification and growth. The African countries aiming to encourage intra-African FDI and maximize its benefits may want to adopt measures encouraging regional integration and trade. A positive side effect of such steps could be attracting additional market-seeking FDI from developed economies.

Conclusions

This chapter has analyzed the competitiveness of African countries, based on the results of the Global Competitiveness Index (GCI), the region's trade performance, and its related ability to attract growth-enhancing FDI. The results show that there is a significant variety in the quality of performances across the continent. Some countries have been quite successful in putting into place many of the factors for sustained economic success, yet many obstacles to competitiveness remain across the majority of African countries.

Overall, the major cross-cutting policy areas that constrain Africa's competitiveness across all main industry groups include those that increase indirect costs—trade logistics and infrastructure; and those that relate to poor business environments—access to land, the availability of skills, and the ability to absorb technology. The GCI shows that many of these are areas in which sub-Saharan Africa scores relatively poorly in comparison with other regions. To achieve industrialization, export competitiveness, and strong, sustained, and shared growth, Africa needs to put special emphasis on making progress in these areas. Given the dual linkages between trade and FDI, structural reforms—especially those that would remove barriers to competition and encourage trade as well as attract FDI—have a particular potential to ensure sustained growth. In turn, FDI flows to high-skill service sectors such as telecommunications or banking can help African countries diversify their production and exports and accelerate export growth.

Given the daunting list of obstacles that constrain African productivity, export growth, and the ability to attract growth-enhancing FDI, sub-Saharan African governments will need to prioritize and sequence reforms and investments in their business environments and infrastructures in order to unleash the potential for growth in their industries. In doing so, it is important that the policies to promote competitiveness are brought together within a coherent strategy rather than being implemented as a series of ad hoc interventions. Experience shows that measures adopted in isolation tend to be much less effective.

Notes

1 Clearly, causality runs also from growth to diversification, especially at lower levels of income. Newfarmer et al. (2009) discuss these issues in detail and posit that diversification has an inverted U relationship with income.

2 Newfarmer et al. 2009.

3 A number of developing countries have tried to use tourism for diversifying their exports, with mixed results.

4 Based on research on FDI in India, Banga (2006) found that FDI may help export diversification in the host country if it raises the export intensity of industries that have a low share in world exports. Indirectly, FDI may encourage export diversification by increasing the export intensity of domestic firms. Buckley et al. (2002) examined the impact of FDI in the Chinese manufacturing and found that FDI helped develop high-tech and new products.

5 Moran et al. 2005.

6 *Trade diversification* here refers to the broader sense and encompasses not only new products but also higher-quality existing products and expansion into new markets.

7 FDI inflows to Africa peaked in 2008 at US$72.2 billion, before falling to US$58.6 billion and further to US$51.1 billion during the crisis years—that is, in 2009 and 2010. In 2010, for the first time developing countries accounted for more than half of the world's FDI (UNCTAD 2010, 2011).

8 See, for example, Commission on Growth and Development 2008; Hausmann et al. 2006, 2007; Johnson et al. 2006, 2007; Berg et al. 2008.

9 The Global Competitiveness Index was developed for the World Economic Forum by Xavier Sala-i-Martin and Elsa V. Artadi, in collaboration with the World Economic Forum's Competitiveness team, and was first introduced in *The Global Competitiveness Report 2004–2005*.

10 Clearly, these institutions, policies, and factors also influence the future level of productivity that the country is likely to achieve.

11 The 12 pillars are measured using both quantitative data from public sources (such as inflation, Internet penetration, life expectancy, and school enrollment rates) as well as data from the World Economic Forum's Executive Opinion Survey (the Survey), conducted annually among top executives in all of the countries assessed. The Survey provides crucial data on a number of qualitative issues (e.g., corruption, confidence in the public sector, and the quality of schools) for which no quantitative data exist.

12 The concept of stages of development is integrated into the Index by attributing higher relative weights to those pillars that are more relevant for a country given its particular stage of development. Countries are allocated to stages of development based on two criteria: (1) the level of GDP per capita at market exchange rates, and (2) the extent to which countries are factor driven. See Appendix A for more details on the GCI methodology.

13 The Latin American and Caribbean average includes data for the following countries: Argentina, Barbados, Bolivia, Brazil, Chile, Colombia, Costa Rica, the Dominican Republic, Ecuador, El Salvador, Guatemala, Guyana, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Puerto Rico, Suriname, Trinidad and Tobago, Uruguay, and Venezuela.

14 The Southeast Asian average includes Brunei Darussalam, Cambodia, Indonesia, Malaysia, the Philippines, Singapore, Thailand, Timor-Leste, and Vietnam.

15 Africa was the first continent in the world to implement free roaming, allowing any user in a foreign country to receive and send calls and messages at local rates (AfDB and OECD 2009).

16 AfDB and OECD 2010.

17 UNDP 2007.

18 Mattoo 2009.

19 UN Comtrade, World Bank calculations.

20 UN Comtrade, World Bank calculations.

21 UN Comtrade, World Bank calculations.

22 Gelb 2005.

23 Eifert et al. 2008; World Economic Forum, International Bank for Reconstruction and Development/World Bank, and African Development Bank 2009.

24 UN Comtrade, World Bank calculations.

25 Deloitte and the US Council on Competitiveness 2010.

26 Total factor productivity measures the efficiency with which inputs such as labor and capital are utilized.

27 *FDI* is defined as investment made to acquire a lasting management interest (usually at least 10 percent of the voting stock) in an enterprise operating in a country other than that of the investor. It is the sum of equity capital, reinvestment of earnings, other long-term capital, and short-term capital as shown in the balance of payments.

28 Preliminary estimates indicate that the overall FDI to developing countries increased by 10 percent in 2010. However, the overall increase to developing countries occurred in the context of declining FDI to Africa (UNCTAD 2011).

29 Dorsey et al. 2008.

30 According to the UNCTAD data, FDI to Africa accounted for 9.6 percent of FDI to developing countries in 2001 and 12.2 percent in 2009.

31 In this section, African countries are grouped into (1) emerging markets, (2) frontier markets, (3) transition countries, and (4) pre-transition countries. The classification depends on how far the countries are from emerging market status. Oil exporters and fragile states form separate groups. Frontier markets and transition (taking-off) economies exhibited at least several of the following criteria prior to the crisis: (1) growth acceleration; (2) macroeconomic stability, increasing role of the private sector in the economy; (3) export diversification; and (4) development of financial markets and increased interest of international institutional investors. Emerging market economies already reached middle-income status and, in some cases, had markedly more developed financial markets (e.g., South Africa, Kenya). In contrast, pre-transition economies are yet to adopt policies and institutions to facilitate growth take-off, a sufficient presence of the private sector, and the interest of investors. See Brixiova et al. 2011.

32 Among these FDI flows, intra-African investment was an important source of funds in several Southern African countries, especially in Mauritius, Mozambique, Malawi, with South Africa being the main investor.

33 UNCTAD 2010.

34 UNCTAD 2010, 2011. Preliminary estimates indicate that FDI fell by 14 percent in 2010, with flows to South Africa and Nigeria taking a heavy hit. FDI to Africa accounted for 12.2 percent of FDI to developing countries in 2009 and 9.6 percent in 2010.

35 UNCTAD 2010.

36 Members of the Monetary and Economic Community of Central Africa (CEMAC) are Cameroon, the Central African Republic, Chad, the Republic of the Congo, Equatorial Guinea, and Gabon.

37 The East African Community (EAC) is the regional intergovernmental organization of Burundi, Kenya, Rwanda, Tanzania, and Uganda.

38 TFP is defined as that part of output not explained by inputs.

39 Moreover, because of limited data, fewer studies have examined the impact of FDI on growth in Africa, especially sub-Saharan Africa, than in other regions (e.g., Latin America, Asia, and the Middle East).

40 The framework is detailed in Appendix B.

41 The data for FDI, GDP (in 2000 constant prices), and investment (in 2000 constant prices) in these five countries were obtained from the African Development Bank database. The employment data are taken from the International Labour Organization (ILO) database. The ordinary least squares (OLS) method is used to estimate the relationship between FDI and economic growth in these countries (Table 3). Minitab (version 16) and Stata (version 10) were used to regress the growth of GDP over a constant term, share of investment to GDP, growth rate of labor force, and share of FDI in GDP.

42 The growth accounting equation has a particularly limited explanatory power for variations of growth rates in Nigeria and Cape Verde. In Nigeria, the economic performance is largely driven by fluctuations in oil prices, while Cape Verde is heavily dependent on remittances, which accounted for about 20 percent of GDP in the 2000s. These effects outweigh the impact of changes in FDI, domestic capital, and labor on growth rates.

43 As in other African countries, Ghana has numerous incentives in place to attract foreign investment, based on its Investment Promotion Act of 1994. These include customs duty import exemptions, tax holidays, rebates (based on regional locations), and capital allowances. However, as the low inflows in the 1990s indicated, incentives without an enabling environment are unlikely to attract significant FDI; flows increased in the 2000s after the environment was improved.

44 See Borensztein et al. 1998; Alfaro et al. 2004, and others. Borensztein et al. 1998 showed that FDI positively impacts growth only when the host country reaches a threshold level of human capital, measured by years of schooling. Alfaro et al. 2004 found that FDI raises growth when the host country has a developed financial system. Applying the growth accounting framework to 69 countries in 1970–89, Wang and Wong 2009 clarified the channels through which the threshold conditions operate: FDI raises productivity growth when the host country reaches a threshold level of human capital; it promotes capital growth when a well-functioning financial system is in place.

45 Kandiero and Chitiga 2003; Moran et al. 2005.

46 Senegal has been developing a special economic zone (SEZ) in the Diamniadio-Bargny region with a view to attracting FDI as well as domestic investors. The area will comprise an industrial and commercial free zone with extensive, up-to-date infrastructure to accommodate about 400 companies (Oxford Business Group 2010).

47 Aryeetey et al. 2010.

48 Ndikumana and Verick 2008 investigated the bilateral relationship between domestic investment and FDI and found (1) that domestic private investment with strong performance also crowds in FDI and (2), in turn, that one way in which FDI can have a positive impact on growth is through enhancing domestic capital accumulation.

49 In 2006, Nigeria undertook reforms to encourage FDI. A "one-stop-shop" investment center was created, cutting steps necessary to obtain a business permit. In addition to free export processing zones where firms are free from paying taxes, including income and VAT taxes, the country offers fiscal incentives to foreign investors. Nevertheless, unclear land property rights remain a key hindrance to attracting FDI, alongside relatively weak governance.

50 Ayanwale 2007. These findings are consistent with Alfaro's 2003 empirical analysis. Using cross-country data for 1981–99, she showed that the effect of FDI on growth depends on the sector involved. FDI in the primary sector tends to have a negative effect, while investment in manufacturing a positive one.

51 For all five West African countries studied, taken together, FDI had a positive impact on growth through factor accumulation (at a 5 percent significance level) but not through technology spillovers. For every 1 percent increase in investment, growth would be higher by 0.55 percentage points. This is consistent with the observation that, according to the GCI methodology, all countries but Cape Verde are in the factor-driven stage of their development.

52 UNCTAD 2010.

53 Hermes and Lensink 2003 showed that a more developed financial system positively influences technological diffusion (and growth) associated with FDI. Similarly, Borenzstein et al. 1998 found that FDI positively impacts productivity when a country has sufficient human capital stock.

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Appendix A: Structure of the Global Competitiveness Index

This appendix presents the structure of the Global Competitiveness Index 2010–2011 (GCI). The numbering of the variables matches the numbering of the data tables that appear in *The Global Competitiveness Report 2010–2011*. The number preceding the period indicates to which pillar the variable belongs (e.g., variable **1.**01 belongs to the 1st pillar, and variable **12.**04 belongs to the 12th pillar).

The computation of the GCI is based on successive aggregations of scores from the indicator level (i.e., the most disaggregated level) all the way up to the overall GCI score. Unless mentioned otherwise, we use an arithmetic mean to aggregate individual variables within a category.[a] For the higher aggregation levels, we use the percentage shown next to each category. This percentage represents the category's weight within its immediate parent category. Reported percentages are rounded to the nearest integer, but exact figures are used in the calculation of the GCI. For example, the score a country achieves in the 9th pillar accounts for 17 percent of this country's score in the *efficiency enhancers* subindex, irrespective of the country's stage of development. Similarly, the score achieved on the subpillar *transport infrastructure* accounts for 50 percent of the score of the infrastructure pillar.

Unlike the case for the lower levels of aggregation, the weight placed on each of the three subindexes (*basic requirements*, *efficiency enhancers*, and *innovation and sophistication factors*) is not fixed. Instead, it depends on each country's stage of development.[b] For instance, in the case of Benin—a country in the first stage of development—the score in the *basic requirements* subindex accounts for 60 percent of its overall GCI score, while it represents just 20 percent of the overall GCI score of Australia, a country in the third stage of development.

Variables that are not derived from the Executive Opinion Survey (Survey) are identified by an asterisk (*) in the following pages. All of the variables are described in more detail in the "How to Read the Competitiveness Profiles" section of this *Report*. To make the aggregation possible, these variables are transformed onto a 1-to-7 scale in order to align them with the Survey results. We apply a min-max transformation, which preserves the order of, and the relative distance between, country scores.[c]

Variables that are followed by the designation "1/2" enter the GCI in two different pillars. In order to avoid double counting, we assign a half-weight to each instance.[d]

Weight (%) within immediate parent category

BASIC REQUIREMENTS

1st pillar: Institutions 25%

A. Public institutions 75%

1. Property rights 20%
   - 1.01 Property rights
   - 1.02 Intellectual property protection 1/2

2. Ethics and corruption 20%
   - 1.03 Diversion of public funds
   - 1.04 Public trust of politicians
   - 1.05 Irregular payments and bribes

3. Undue influence 20%
   - 1.06 Judicial independence
   - 1.07 Favoritism in decisions of government officials

4. Government inefficiency 20%
   - 1.08 Wastefulness of government spending
   - 1.09 Burden of government regulation
   - 1.10 Efficiency of legal framework in settling disputes
   - 1.11 Efficiency of legal framework in challenging regulations
   - 1.12 Transparency of government policymaking

5. Security 20%
   - 1.13 Business costs of terrorism
   - 1.14 Business costs of crime and violence
   - 1.15 Organized crime
   - 1.16 Reliability of police services

B. Private institutions 25%

1. Corporate ethics 50%
   - 1.17 Ethical behavior of firms

2. Accountability 50%
   - 1.18 Strength of auditing and reporting standards
   - 1.19 Efficacy of corporate boards
   - 1.20 Protection of minority shareholders' interests
   - 1.21 Strength of investor protection*

2nd pillar: Infrastructure 25%

A. Transport infrastructure 50%
- 2.01 Quality of overall infrastructure
- 2.02 Quality of roads
- 2.03 Quality of railroad infrastructure
- 2.04 Quality of port infrastructure
- 2.05 Quality of air transport infrastructure
- 2.06 Available seat kilometers*

B. Energy and telephony infrastructure 50%
- 2.07 Quality of electricity supply
- 2.08 Fixed telephone lines* 1/2
- 2.09 Mobile telephone subscriptions* 1/2

3rd pillar: Macroeconomic environment 25%
- 3.01 Government budget balance*
- 3.02 National savings rate*
- 3.03 Inflation* e
- 3.04 Interest rate spread*
- 3.05 Government debt*
- 3.06 Country credit rating*

(Cont'd.)

Appendix A: Structure of the Global Competitiveness Index *(cont'd.)*

4th pillar: Health and primary education 25%

A. Health.....50%

4.01 Business impact of malaria [f]
4.02 Malaria incidence* [f]
4.03 Business impact of tuberculosis [f]
4.04 Tuberculosis incidence* [f]
4.05 Business impact of HIV/AIDS [f]
4.06 HIV prevalence* [f]
4.07 Infant mortality*
4.08 Life expectancy*

B. Primary education.....50%

4.09 Quality of primary education
4.10 Primary education enrollment rate* [g]

EFFICIENCY ENHANCERS

5th pillar: Higher education and training.....17%

A. Quantity of education 33%

5.01 Secondary education enrollment rate*
5.02 Tertiary education enrollment rate*

B. Quality of education 33%

5.03 Quality of the educational system
5.04 Quality of math and science education
5.05 Quality of management schools
5.06 Internet access in schools

C. On-the-job training 33%

5.07 Local availability of specialized research and training services
5.08 Extent of staff training

6th pillar: Goods market efficiency 17%

A. Competition 67%

1. Domestic competition .....variable [h]

6.01 Intensity of local competition
6.02 Extent of market dominance
6.03 Effectiveness of anti-monopoly policy
6.04 Extent and effect of taxation
6.05 Total tax rate*
6.06 Number of procedures required to start a business* [i]
6.07 Time required to start a business* [i]
6.08 Agricultural policy costs

2. Foreign competition.....variable [h]

6.09 Prevalence of trade barriers
6.10 Trade tariffs*
6.11 Prevalence of foreign ownership
6.12 Business impact of rules on FDI
6.13 Burden of customs procedures
10.04 Imports as a percentage of GDP* [g]

B. Quality of demand conditions.....33%

6.14 Degree of customer orientation
6.15 Buyer sophistication

7th pillar: Labor market efficiency 17%

A. Flexibility 50%

7.01 Cooperation in labor-employer relations
7.02 Flexibility of wage determination
7.03 Rigidity of employment*
7.04 Hiring and firing practices
7.05 Redundancy costs*
6.04 Extent and effect of taxation [1/2]

B. Efficient use of talent.....50%

7.06 Pay and productivity
7.07 Reliance on professional management [1/2]
7.08 Brain drain
7.09 Female participation in labor force*

8th pillar: Financial market development 17%

A. Efficiency.....50%

8.01 Availability of financial services
8.02 Affordability of financial services
8.03 Financing through local equity market
8.04 Ease of access to loans
8.05 Venture capital availability
8.06 Restriction on capital flows

B. Trustworthiness and confidence 50%

8.07 Soundness of banks
8.08 Regulation of securities exchanges
8.09 Legal rights index*

9th pillar: Technological readiness.....17%

A. Technological adoption.....50%

9.01 Availability of latest technologies
9.02 Firm-level technology absorption
9.03 FDI and technology transfer

B. ICT use 50%

9.04 Internet users*
9.05 Broadband Internet subscriptions*
9.06 Internet bandwidth*
2.08 Fixed telephone lines* [1/2]
2.09 Mobile telephone subscriptions* [1/2]

10th pillar: Market size 17%

A. Domestic market size 75%

10.01 Domestic market size index* [j]

B. Foreign market size.....25%

10.02 Foreign market size index* [k]

INNOVATION AND SOPHISTICATION FACTORS

11th pillar: Business sophistication.....50%

11.01 Local supplier quantity
11.02 Local supplier quality
11.03 State of cluster development
11.04 Nature of competitive advantage
11.05 Value chain breadth
11.06 Control of international distribution
11.07 Production process sophistication
11.08 Extent of marketing
11.09 Willingness to delegate authority
7.07 Reliance on professional management [1/2]

(Cont'd.)

12th pillar: Innovation.....50%

- 12.01 Capacity for innovation
- 12.02 Quality of scientific research institutions
- 12.03 Company spending on R&D
- 12.04 University-industry collaboration in R&D
- 12.05 Government procurement of advanced technology products
- 12.06 Availability of scientists and engineers
- 12.07 Utility patents*
- 1.02 Intellectual property protection [1/2]

Notes

a Formally, for a category *i* composed of *K* indicators, we have:

$$category_i = \frac{\sum_{k=1}^{K} indicator_k}{K}$$

b The weights are the following:

Weights	Factor-driven stage (%)	Efficiency-driven stage (%)	Innovation-driven stage (%)
Basic requirements	60	40	20
Efficiency enhancers	35	50	50
Innovation and sophistication factors	5	10	30

For further information, see Chapter 1.1 of *The Global Competitiveness Report 2010–2011*.

c Formally, we have:

$$6 \times \frac{(\text{country score} - \text{sample minimum})}{(\text{sample maximum} - \text{sample minimum})} + 1$$

The *sample minimum* and *sample maximum* are, respectively, the lowest and highest country scores in the sample of economies covered by the GCI. In some instances, adjustments were made to account for extreme outliers. For those indicators for which a higher value indicates a worse outcome (e.g., disease incidence, government debt), the transformation formula takes the following form, thus ensuring that 1 and 7 still corresponds to the worst and best possible outcomes, respectively:

$$-6 \times \frac{(\text{country score} - \text{sample minimum})}{(\text{sample maximum} - \text{sample minimum})} + 7$$

d For those categories that contain one or several half-weight variables, country scores for those groups are computed as follows:

$$\frac{(\text{sum of scores on full-weight variables}) + \frac{1}{2} \times (\text{sum of scores on half-weight variables})}{(\text{count of full-weight variables}) + \frac{1}{2} \times (\text{count of half-weight variables})}$$

e In order to capture the idea that both high inflation and deflation are detrimental, inflation enters the model in a U-shaped manner as follows: for values of inflation between 0.5 and 2.9 percent, a country receives the highest possible score of 7. Outside this range, scores decrease linearly as they move away from these values.

f The impact of malaria, tuberculosis, and HIV/AIDS on competitiveness depends not only on their respective incidence rates but also on how costly they are for business. Therefore, in order to estimate the impact of each of the three diseases, we combine its incidence rate with the Survey question on its perceived cost to businesses. To combine these data we first take the ratio of each country's disease incidence rate relative to the highest incidence rate in the whole sample. The inverse of this ratio is then multiplied by each country's score on the related Survey question. This product is then normalized to a 1-to-7 scale. Note that countries with zero reported incidence receive a 7, regardless their scores on the related Survey question.

g For this variable we first apply a log-transformation and then a min-max transformation.

h The *competition* subpillar is the weighted average of two components: *domestic competition* and *foreign competition*. In both components, the included variables provide an indication of the extent to which competition is distorted. The relative importance of these distortions depends on the relative size of domestic versus foreign competition. This interaction between the domestic market and the foreign market is captured by the way we determine the weights of the two components. Domestic competition is the sum of consumption (C), investment (I), government spending (G), and exports (X), while foreign competition is equal to imports (M). Thus we assign a weight of (C + I + G + X)/(C + I + G + X + M) to *domestic competition* and a weight of M/(C + I + G + X + M) to *foreign competition*.

i Variables 6.06 and 6.07 combine to form one single variable.

j The size of the domestic market is constructed by taking the natural log of the sum of the gross domestic product valued at purchasing power parity (PPP) plus the total value (PPP estimates) of imports of goods and services, minus the total value (PPP estimates) of exports of goods and services. Data are then normalized on a 1-to-7 scale. PPP estimates of imports and exports are obtained by taking the product of exports as a percentage of GDP and GDP valued at PPP. The underlying data are reported in the data tables section of *The Global Competitiveness Report 2010–2011* (see Tables 10.03, 10.04, and 10.05 of that *Report*).

k The size of the foreign market is estimated as the natural log of the total value (PPP estimates) of exports of goods and services, normalized on a 1-to-7 scale. PPP estimates of exports are obtained by taking the product of exports as a percentage of GDP and GDP valued at PPP. The underlying data are reported in the data tables.

Appendix B: The impact of FDI on productivity in selected countries: An empirical investigation

Table B1. Regression results (dependent variable: growth rate of real GDP)

	I/GDP	FDI/GDP	∅L/L	Adjusted R^2
Cape Verde	0.0231 (0.17)	0.3048* (1.99)	–2.553 (–0.99)	0.052
Ghana	0.0869* (2.29)	–0.1292 (–0.77)	–0.0230 (–0.12)	0.157
Nigeria	0.4671 (1.48)	–0.2458 (–0.48)	21.44 (1.41)	0.058
Senegal[1]	0.1659† (1.91)	0.7736 (1.67)	–5.987 (–1.45)	0.318
Sierra Leone	0.0263 (0.04)	0.1599 (0.33)	4.697*(3.06)	0.295
Egypt	0.01162 (0.16)	0.4003* (2.71)	0.1862 (0.67)	0.212

Source: Authors' calculations.

* Denotes significance at 5 percent; † denotes significance at 10 percent.

[1] Data for Senegal are for 1988–2008.

In this appendix we empirically investigate the FDI-productivity nexus in selected West African countries, using the growth accounting framework. In this framework, FDI affects growth and productivity through its effect on total factor productivity (TFP), which would result from technology transfer and knowledge diffusion, increased efficiency in management, competition, and better production techniques. The framework also looks at the impact of capital on output (the marginal product of capital, or MPK). In the growth accounting approach, output is produced according to:[1]

$$Y = AL^{\alpha}K^{1-\alpha}, \quad (1)$$

where Y is output, A is TFP, L is labor, K is capital, and α $(1-\alpha)$ is the share of labor (capital) in output. The marginal product of capital becomes:

$$MPK_p = (1-\alpha)\, AL^{\alpha}K^{-\alpha}, \quad (2)$$

which assumes identical technologies (α and A),and that cross-country differences in marginal productivity of capital stem from differences in the level of capital. Countries with same levels of capital would differ in their rates of return on capital depending on their level of TFP, A.

Denoting FDI stock as F, the aggregate production function becomes:

$$Y = A(F)L^{\alpha}K^{1-\alpha}, \quad (3)$$

with $A(F)$ reflecting the possibility that FDI influences TFP. Marginal product of FDI (MPFK) under this production function becomes:

$$\begin{aligned} MPFK &= A_F L^{\alpha}K^{1-\alpha} + (1-\alpha)\, A(F)L^{\alpha}K^{-\alpha} \\ &= A_F L^{\alpha}K^{1-\alpha} + MPK_p, \end{aligned} \quad (4)$$

where A_F is the effect of FDI on TFP. Where such spillover effect is positive, the social return on FDI is higher than the private marginal product of capital, $MPK_p = (1-\alpha)\, AL^{\alpha}K^{-\alpha}$. The total differentiation of logarithm of (3) yields the following modified growth accounting equation:

$$\frac{dY}{Y} = \frac{A_F dF}{A} + \alpha\frac{dL}{L} + (1-\alpha)\frac{dK}{K}. \quad (5)$$

Since from (1), $(1-\alpha) = MPK_p\frac{K}{Y}$ and $dK = I$, the last term becomes $\beta\frac{I}{Y}$ where $\beta = MPK_p$. Similarly, the first term of (5) can be rewritten as $A_F\frac{Y}{A}\frac{dF}{Y}$, where dF is FDI flow and $\lambda = A_F\frac{Y}{A}$ is the first term of (4). Note that λ is the marginal product of TFP that can be attributed to FDI spillovers. Equation (5) then changes to:

$$\frac{dY}{Y} = \lambda\frac{dF}{Y} + \alpha\frac{dL}{L} + \beta\frac{I}{Y}. \quad (6)$$

Annual time-series data for emerging and frontier markets in West Africa (Cape Verde, Ghana, Nigeria, and Senegal) in 1987–2008 are used and the results compared with those for Egypt. The data for FDI, GDP (in 2000 constant prices), and investment (in 2000 constant prices) in these countries were obtained from the African Development Bank, *African Economic Outlook* database, available at www.africaneconomicoutlook.org. The employment data are taken from the International Labour Organization, *Key Indicators of the Labour Markets* database, available at http://www.ilo.org/empelm/what/lang—en/WCMS_114240/index.htm. The ordinary least squares (OLS) method is used to estimate the relationship between FDI and economic growth. Estimations were carried out with Minitab (version 16) and Stata (version 10).[2]

Notes

1 This section is based on Sadik and Bobol 2001 and Al-Mawali 2004.

2 Given that all the variables are in ratios, the inherent (1) trends cancel each other and hence non-stationarity is not as such an issue.

Part 2

Capitalizing on Africa's Resources

CHAPTER 2.1

Reforming Higher Education: Access, Equity, and Financing in Botswana, Ethiopia, Kenya, South Africa, and Tunisia

KWABENA GYIMAH-BREMPONG, University of Southern Florida
PETER ONDIEGE, African Development Bank

In an increasingly interdependent and globalized world, countries that are able to compete and effectively participate in the global economy are those with large and rapidly expanding stocks of human capital. The importance of education, especially higher education, for Africa's economic growth has been highlighted by the recent World Bank publication *Accelerating Catch Up: Tertiary Education for Growth in Africa*.[1] Unfortunately, very little work has been done to study Africa's tertiary education sector—including elements such as enrollment trends, relevance, efficiency, adequacy, management, and financing.

The objective of this chapter is to analyze systems of higher education in Africa using five African countries—Botswana, Ethiopia, Kenya, South Africa, and Tunisia—as case studies. Other countries that were originally meant to be included—Mauritius, Senegal, Ghana, and Nigeria—were excluded because of inadequate coverage in the initial stages.

Specifically, the chapter analyzes current enrollment trends, accessibility and equity, governance, quality and relevance, financing, university-industry linkages (UILs), and entrepreneurship education in tertiary education curricula. The idea is to look at what works well and what does not, to consider what challenges need to be confronted, and to discuss lessons learned and the way forward for reforming tertiary education in Africa.

Although African countries have generally spent relatively large proportions of their national resources on the production of education, the stock of human capital with tertiary education in Africa continues to be very low compared with other regions of the world. While the proportion of the adult population (25 years and older) who have completed tertiary education averaged 3.94 percent in the world in 2010, the average for sub-Saharan Africa in that year was 0.78 percent. The average years of tertiary education completed by the adult population in Africa is 0.05, compared with 0.2 for the world as a whole, as shown in Table 1. This figure varies among different African countries—for example, the proportion of the adult population that has completed tertiary education and the average years of tertiary education are 0.43 and 0.02, respectively, for Ethiopia; in Tunisia, this is 6.20 and 0.11, respectively (Table 1).

Table 1: Tertiary educational attainment, Africa and the world

Country/Region	Adult population with tertiary education (percent)	Average years of tertiary education
Botswana	2.70	0.06
Ethiopia	0.43	0.02
Kenya	2.00	0.05
South Africa	0.60	0.08
Tunisia	6.20	0.11
Sub-Saharan Africa	0.78	0.05
World	3.94	0.20

Source: Authors' calculations, based on Barro and Lee, 2010.

Other major concerns include the relevance of the fields of study, the curricula, and the effectiveness of pedagogy for the development needs of African countries as well as the general quality of programs and graduates. While about 50 percent or more of students enrolled in tertiary educational institutions in fast-growing countries such as Korea, China, and Taiwan are enrolled in science, engineering, technology (SET) or business, only about 20 percent of tertiary education students in Africa are enrolled in these subjects. The result is that while graduates of African tertiary educational institutions go unemployed, African countries continue to face shortages of skilled labor. The perceived low quality and irrelevance of tertiary educational institutions, as well as their small size, indicate that it may be difficult for these institutions and their graduates to lead Africa's development.

There is solid theoretical and empirical evidence that education—especially tertiary education that emphasizes SET and business—has a strong positive effect on the growth rate of income in all countries.[2] The quality of tertiary education, as well as the subjects studied, may be more important for growth than the quantity of people who have obtained a tertiary education. For example, a high-quality SET-based and empirical inquiry–driven tertiary education may contribute more to a country's growth than a social science–based education that is not driven by relevant research based on local needs. This positive effect could come through several channels, including knowledge creation and spillovers,[3] as well as the ability to borrow and adapt technologies.[4]

In a recent study, Teal concludes that African economic growth has been powered by increased investment in physical capital rather than increased tertiary education.[5] However, he also finds that investment in physical capital depends on the availability of an educated workforce, suggesting that tertiary education indirectly contributes positively to income growth in Africa.

Several researchers argue that it is not only the quantity but also the quality of tertiary education that matters for income growth.[6] In addition, democratic access to improved tertiary education can be a pro-poor growth strategy.[7] When the quality of tertiary education is unequal among groups, it generates inequality in incomes.[8]

Africa has devoted substantial resources to higher education, especially in the last decade, during which some African countries have doubled or tripled capacity at considerable cost. Indeed, some African countries spend a larger proportion of their GDPs on tertiary education than most rich industrial nations. However, the stock of human capital with a tertiary education is low. The average quality of that education is equally low, with most African countries at the bottom of world rankings, as various analysts show. In addition, tertiary educational institutions are producing workers with skills that are irrelevant to the needs of Africa. The unemployment rates among graduates of tertiary institutions are in the double digits in most African countries, while businesses are not able to find the skilled labor they need. This suggests a mismatch between what the tertiary institutions produce and the skills that businesses demand. This has led to massive emigration of African graduates of tertiary education to the developed world, effectively making African countries pay for the training of workers for developed countries. There are also questions of gender and of geographical and socioeconomic equity in access, as well as cost inefficiency, in tertiary educational institutions in Africa.

The low endowment and low quality of tertiary education in Africa has serious implications for the continent's development in an increasingly globalized world in which economic growth and development is critically dependent on knowledge intensities of countries. A workforce with abundant high-quality, relevant tertiary education may hold the key to Africa's future development. Although economic growth rates in African countries rose dramatically in the last decade, most of that growth was the result of commodity price booms. It is unlikely that this commodity price–led growth will be the region's recipe for long-term growth and development. African countries may have to transition very quickly from natural resource–based growth to growth that is based on knowledge.

Knowledge creation and accumulation, together with a positive work ethic, is seen as the key to long-term success in economic development.[9] In addition to the well-established private benefits of higher education (including better employment possibilities, higher salaries, and a greater ability to save and invest), higher education also has a major public benefit: it enhances economic development through technological catch-up.[10] This idea supports the proposition that expanding tertiary education may promote faster technological catch-up and improve a country's ability to maximize its economic output. Raising tertiary education attainment as well as its quality in sub-Sahara Africa will enable these countries to stimulate innovation, promote the diversification of products and services, and maximize returns from capital assets through more efficient allocation and management.[11] In the face of competition from South and East Asian countries, a more skill-intensive route to development could provide both resource-rich and resource-poor countries with an avenue for raising domestic value-added. These arguments underscore the importance of tertiary education for the development of African countries.

This analysis is timely, relevant, and important for Africa's development for a several reasons. First, this is the first time a comprehensive and comparative study of higher educational systems in African countries has been done. At the minimum, there is the need to ensure that African countries get suitable social and private returns

Table 2: Tertiary enrollment statistics, 2000–07

Country/Region	2000 GER (percent)	2000 Total enrollment	2000 Women (percent)	2007 GER (percent)	2007 Total enrollment	2007 Women (percent)	Change in enrollment (2000–07)
Botswana	3.0	6,332	47.0	5.0	16,950	50.0	167.7
Ethiopia	0.8	67,732	22.0	1.8	210,456	25.0	210.7
Kenya	4.8	89,016	35.0	3.4	139,524	36.0	56.7
South Africa	14.0	644,763	55.0	15.0	761,090	55.0	18.0
Tunisia	19.0	180,044	48.0	32.0	364,283	57.0	102.3
Africa*		2,342,358			4,139,797		76.7

Sources: UIS, 2009; Republic of Kenya, 2010.
* For 2003–08.

on their tertiary education investment. Second, the internal efficiency of the educational system must improve, and these institutions must be made responsive to the needs of society. Finally, it is important that higher educational institutions provide the necessary skilled workers as well as the intellectual leadership for Africa's development.

This chapter defines *tertiary education* as post-secondary education, and *tertiary educational institutions* as those institutions (both public and private) that provide training in post-secondary education. The composition of tertiary institutions differs across countries in the sample. Although the discussion in this chapter is relevant to all tertiary institutions, most of it is directed at universities.

The rest of the chapter is organized as follows: the first section discusses recent trends in tertiary education enrollment, with particular reference to the most recent period and to access and equity issues in tertiary education in the five countries. The next section discusses issues of governance, quality, and relevance of higher education; the third section focuses on entrepreneurship education in Africa. This is followed by a discussion of financing issues involved in higher education; the subsequent section is devoted to a discussion of university-industry linkages in African universities. The final section discusses the lessons, challenges, and the way forward for Africa.

Access to tertiary education

Several African countries, including the five case-study countries presented in this chapter, have dramatically expanded the capacities of their tertiary educational sectors. Between 2003 and 2008, enrollment in African universities increased from 2,342,358 to 4,139,797—a 76.74 percent increase compared with a 53.2 percent increase worldwide over the same period. However, Africa's gross enrollment ratio (GER) of less than 6 percent is the lowest rate in the world.[12] Most of the reasons for this low GER can be attributed to the continent's lack of capacity to absorb the demand, because the number of students seeking admission to tertiary institutions far outpaces the rate of capacity expansion in these countries. For example, in Kenya less than 20 percent of candidates who qualify for admission to tertiary institutions each year actually gain admission to these institutions.[13]

Enrollment in tertiary institutions has more than doubled in the last decade in each of the five countries. This increased demand for tertiary education is partly a function of demographics, as most African countries are undergoing demographic transitions. The proportion of the population between the ages of 18 and 24 (the age at which most people enter tertiary educational institutions) is increasing rapidly. It is expected that the growth rate of demand for tertiary education will slow in the second half of the 21st century, when the demographics again shifts.

Most African governments have responded to the rapidly expanding demand for higher education in two ways: (1) by expanding the supply of tertiary education in the public sector, and (2) by allowing the private sector to set up and expand tertiary educational institutions and programs to complement the public-sector supply. Between 2000 and 2007, enrollment in private tertiary institutions in Africa increased by more than 80 percent. In Kenya, for instance, such enrollment increased by 230 percent, rising from 10,639 in 2005 to 35,179 in 2010.[14] In some cases, the increase in private enrollment was purely a private effort; in others, it was the result of joint public-private collaboration.

However, there remain serious accessibility problems, because the demand for access far exceeds the capacity to meet it. There are also serious issues relating to gender, regional, racial, and socioeconomic equities of access to tertiary education. In addition, equity issues relating to access to particular academic programs are of concern.

Tertiary education enrollment, 2000–07

Drawing from UNESCO data, tertiary education enrollment trends in the five countries are not different from the average for Africa (Table 2). Total enrollment in Botswana increased by 167 percent over the seven-year period; in Ethiopia and Tunisia, the increase was 210 and 102 percent, respectively. Tertiary enrollment increased by 56 percent in Kenya and 18 percent in South Africa during the same period. By 2009, enrollment in South

Africa had increased to 799,490, of which 118,622 were graduate students. In spite of the rapid rise in enrollment, what remains clear is that enrollment ratios remain generally low and lag behind those in other parts of the world. In 2007, Tunisia had the highest GER among the group, at 32 percent—unusually high for African countries. Tunisia was followed by South Africa, with a GER of 15 percent, while Ethiopia had the lowest GER, of 1.8 percent. Tunisia's GER was higher than that of China at 23 percent and the worldwide average of 23.8 percent.

UNESCO's data on enrollment suggest that about 23 percent of tertiary enrollment in African countries, and 17 percent in the sample countries, are in SET. The rest are enrolled in other fields, including about 33 percent in the social sciences and 35 percent in education. In Ethiopia, 25 percent of students are enrolled in education, 40 percent in social sciences and business programs, 8 percent in science, and 7.5 percent in engineering.

Botswana's tertiary educational system has two public universities, the University of Botswana and the new Botswana International University of Science and Technology (BIUST) that opened in March 2011, as well as Botswana Teachers College, the Botswana Institute of Management, the Botswana College of Accountancy, and specialized research institutions such as the Okavango Research Institute. In Botswana, only 12 percent of students in public universities are currently enrolled in SET, while the majority are enrolled in the social sciences and education.

By 2007, enrollment in Ethiopian tertiary educational institutions had reached 210,456 students in 21 public universities and 60 private universities, more than tripling enrollment in a space of only eight years. Ethiopia achieved this seemingly impossible feat by expanding admissions to existing public tertiary institutions, building new ones, and attracting a large number of private providers.[15] However, Ethiopia's GER, of less than 2 percent, was among the lowest in the world in 2007. In addition, the gender ratio in tertiary institutions in Ethiopia was very low: only 25 percent of graduate students were female, most of whom were enrolled in the social and human sciences.

Kenya currently has 7 public and 27 private universities. However, it had a low GER of about 3.4 percent (in 2008); this ratio has been decreasing over the years. The major cause of the low enrollment ratios in Kenya seems to stem from supply constraints rather than demand for enrollment. Demand for enrollment is growing faster than the ability of the tertiary educational systems in Kenya to meet it. For example, in the 2002–03 academic year, 42,158 candidates out of a total of 194,798 qualified for admission to Kenyan universities. Out of this number, only about 25 percent, or 11,046, were admitted. This represented about 5.7 percent of the potential pool of applicants.[16] In 2006–07, public universities were able to admit only 3.8 percent of the 260,665 potential applicants through the Joint Admission Board (JAB), even though 26.1 percent of the applicant pool qualified for admission to the country's universities. There were similar experiences in Botswana, Ethiopia, South Africa, and Tunisia.

An alternative way to expand enrollment in Kenya is through a scheme called *Module II admissions.* Under this plan, students are admitted with the condition that they pay not only the full cost of their education at the public universities, but pay an amount that is the equivalent of attending a private tertiary institution. In this way, the universities generate extra revenue to fund their operations. Kenya is increasingly relying on this source of funding: in 2008, about 40 percent of all admissions to tertiary institutions of learning were of this variety.

In 2008, South Africa had 23 public tertiary educational institutions—11 universities, 6 comprehensive universities, and 6 technical universities—that enrolled a total of 761,090 students. Universities of technology offer vocational education at both degree and subdegree levels, while comprehensive universities' curricula fit somewhere in between the two, offering programs for research degrees to career-oriented diplomas. The comprehensive education reforms were codified in the 1997 Education Reform Act, focusing on (1) increasing participation in tertiary education for all, (2) providing greater responsiveness (relevance) to the needs of society, and (3) boosting cooperation and partnerships. The state was to act as an enabler and supervisor of the system rather than as its controller. The technical universities were upgraded from the technikons to full universities during the 2003 reforms.

South Africa has achieved gender parity in tertiary education enrollment. In addition to gender parity, blacks make up the majority of students enrolled in tertiary institutions, although the enrollment share for blacks is far less than their share in the South African population overall. In terms of subject areas studied, however, its distribution remained unchanged between 2000 and 2007. In 2000, 32 percent of students were enrolled in business, commerce, and manpower; 41 percent were enrolled in human and social sciences; and 27 percent were enrolled in SET. In 2007, the respective ratios were 30 percent, 42.3 percent, and 27.6 percent. In spite of the relatively rapid expansion, the public sector is not able to provide enough access to a majority of people who qualify. South Africa's relatively low GER for a country at its income level suggests there is a problem with access to tertiary education.

Tunisia enrolled about 364,283 students in 13 public universities, 24 institutes of technological studies, and 20 private universities in 2007, giving it a GER of 32 percent. What is impressive about the Tunisian expansion in tertiary education is that it did not come at the expense of quality. Tunisia's tertiary education is ranked the highest in Africa and it is in the top quartile worldwide in terms of quality. In 2008, 38 percent of tertiary education

Table 3: ICT use and policies in tertiary education in five countries

Country	National ICT policy	National ICT education policy	Tertiary education connection through ICT	ICT in distance education
Botswana	Yes: Maitlamo and Vision 2016	Policy that ICT should be available in all junior and senior secondary schools and tertiary institutions	Yes	Yes: Botswana College of Distance and Open Learning
Ethiopia	Yes: WoredaNet Initiative	Policy to connect all schools, but only 35 percent of schools have computers	A few individual universities have computers but most universities are not connected	No: Only 15 percent of universities use ICT for distance learning
Kenya	Yes: National ICT Policy (2006)	Yes: Kenya Education Sector Support Program (KESSP) (2005)	Yes, all universities are connected via Kenya Education Network Trust (KENET), allowing for joint development and distribution of course materials	Yes
South Africa	Yes: Accelerated and Shared Growth Initiative for South Africa (ASGISA) (2005), South African State Information Technology Agency (SITA) (1999), Information Society and Development (ISAD) (2007), and Electrical Contractors Association of S. AFRICA (ECA) (2002)	Yes: ECA (2002), Universal Service and Access Agency of South Africa (USAASA) (2001), Education Network (EDuNet), and Enhanced Learning Investigation (TELI) (1995)	Yes, but not all universities are connected to a national system; several projects such as African Virtual Open Initiatives and Resources (AVOIR) are in place	Yes: Free and open-source software (FOSS), Knowledge Environment for Web-based Learning (KEWL), Next Generation(NextGen), SakaiSA, and ASGISA
Tunisia	Yes: RTES (2002–07)	Yes: Educational Act (2002)	Yes	Tunisian Virtual School, Virtual University of Tunisia

Source: *info*Dev, 2007.

enrollment in Tunisia was in medicine and SET, one of the higher showings in these areas in Africa. This ratio also compares favorably with the enrollment ratio of 37 percent for East Asia.[17] Tunisia has also achieved gender parity in tertiary education enrollment and geographical balance. Finally, the government's policy of keeping tuition low ensures access equity across all socio-economic classes. Although there are a growing number of private tertiary education providers in the last decade, these institutions enroll a very small proportion of the student body in Tunisia.

Responses to inadequate supplies of tertiary education in Africa

The capacity in publicly provided tertiary educational institutions cannot grow fast enough to meet anticipated demand in the continent. The high demand is partly due to the relatively high private returns to higher education in these countries,[18] and partly due to the fact that most parents recognize that their children's future is through tertiary education. In addition, recent trends in international emigration suggest that most Africans see tertiary education as a necessary condition for emigration to the developed world.[19]

In Kenya, the enrollment capacity of tertiary institutions is expected to grow at the rate of 5 percent per annum, at best, until 2015. But capacity needs to grow at least twice as fast to meet demand.[20] In Ethiopia, even though enrollment in tertiary education tripled between 2000 and 2007, the country's GER still remains below 2.0 percent. And in Tunisia, demand still outstrips capacity to provide spaces for students. This may suggest that the supply of higher education in these countries could be another example of governments failing to adequately meet the demand. It is clear that if these countries are going to boost their tertiary enrollment, the private sector has to play an increasing role. To meet this demand for higher education, these countries have adopted three strategies: distance learning and ICT use; international enrollment, and private provision.

Distance learning and ICT use

All five countries considered here are using some form of distance educational programs to increase access to tertiary education, However, *info*Dev suggests that the use of ICT to deliver courses in African countries is inadequate, even though they have enacted ICT policies (Table 3). Indeed, with the exception of Tunisia and North African countries, distance education is primarily delivered through print material.

International enrollment

Wealthy families in the five countries have been able to send their dependents abroad for tertiary education. For example, in 2004, about 14,123 Kenyan students were studying in universities based in Organisation for Economic Co-operation and Development (OECD) countries and not Kenyan universities—this is equivalent to about 13 percent of all tertiary education students in Kenya. South Africa had about 5,619 students in OECD universities, representing 0.8 percent of South African university students. Similarly, a large number of students from Botswana, Ethiopia, and Tunisia, especially at the graduate level, were studying in European universities. For most families with modest incomes, it may be impossible to afford university education outside their countries of origin short of a scholarship offer from their government or from foreign organizations. Clearly, tertiary education outside Africa or out of a student's country of residence represents a relatively small fraction of the tertiary education enrollments in these countries.

Private provision

From a small number of institutions at the beginning of the 1990s, private tertiary institutions have increased rapidly to fill the unmet demand. These private universities are either branches of well-established universities from the developed world that provide specific programs in African countries or completely independent institutions established in Africa. They tend to be relatively small, offering a limited range of courses and programs—such as those in business administration, technology, and nursing—that are in high demand. They focus mainly on instruction, with little emphasis on research. An important characteristic of these private universities is that they charge enough in tuition and fees to, at a minimum, fully cover the cost of the education they provide. These private universities operate with the encouragement of governments, which see them as a way to relieve pressure on the public universities.[21]

Bjarnason et al. provide three typologies of private suppliers of tertiary education: elite, religious, and demand absorbing.[22] *Elite* private-sector providers refer to world-class academic leadership, which is generally limited to academic institutions in the United States. At best, private tertiary institutions in Africa are semi-elite, with an emphasis on good teaching and very little research. They are mainly in business-related fields, focusing on business administration curricula, and often have ties to foreign universities.

Religious providers, such as those affiliated with churches and other religious institutions, tend to be nonprofit-oriented institutions but are set up to generally spread the ideology of the religion. By far the largest and the fastest-growing portion of private providers of higher education in Africa can be characterized as *demand absorbing.* They are market driven, are entrepreneurial in their approach, provide small niche programs, are careful to minimize cost, and do not generally have large overhead such as physical infrastructure and extensive student support services. In most cases, they charge "market-rate" tuition.

A major concern with the private provision of tertiary education in some of these countries has been one of quality control. It is believed that, because of lack of strong administrative and quality controls, fly-by-night providers are able to set up shop in African countries, provide substandard degree programs in areas that are in high demand, and charge exorbitant fees.[23] The solution to these perceived or real quality problems lies in the regulation and governance of private higher-education providers. In South Africa, where private tertiary institutions are required to receive certification before they offer any classes and where institutions receiving authorization are subject to review a year later, substandard private-sector tertiary education is less likely to be a problem than it is in countries that take a hands-off approach to tertiary education.

Botswana has 10 private universities that enroll about 20 percent of the country's higher-education students, and 2 public universities with 80 percent of the students. A 2008 White Paper on Higher Education envisages increasing the GER to 17 percent by 2016 and ultimately to 25 percent by 2026.[24] Botswana sees private universities as playing a key role in this expansion. Its private universities—such as Linkokwing University of Creative Technologies (a branch campus of an Indonesian university), NIIT, ABM University College, and Ba Isago University College—provide niche programs in emerging skill needs such as ICT and business administration, among others. These institutions are for-profit and tend to be branch campuses of foreign universities. An interesting aspect of private provision in Botswana is the joint public-private collaboration in which the government subsidizes private tertiary education. In addition, the government pays for students' tuition costs at private tertiary institutions.

Ethiopia has aggressively pursued private higher educational institutions since 1990. There are currently over 60 private tertiary educational institutions, enrolling about 17 percent of students. These institutions are either operated as foreign branches of well-established European, American, or other OECD universities or for-profit independent private institutions. Most of these institutions are small and provide programs in one or two areas of concentration—mostly in business, nursing, and ICT—where market demand is very strong and highly related to labor market needs.

Kenya currently has 34 universities, of which 7 are public and 27 private. In 2009, the private sector enrolled about 22 percent of the student population. This compares with an enrollment ratio of just over 13 percent in 2004, suggesting that enrollment in the private sector grew much faster than in the public sector. Private tertiary institutions tend to concentrate

on providing programs in specific niche areas. For example, Kiriri Women's University of Science and Technology provides science and technology programs for women, Strathmore University focuses on ICT and business management, and Aga Khan University offers advanced nursing and medicine programs.

There were about 103 private tertiary institutions in South Africa in 2008, which together enrolled less than 10 percent of the tertiary-level students in that year. These institutions are relatively small, with enrollments ranging from under 1,000 to 20,000 students, and offer a small range of programs. Unlike their counterparts elsewhere, these institutions are not established in response to excess demand in the public sector but rather were set up to offer particular programs—such as business, theology, ICT, health, beauty, and fashion—not offered by public tertiary institutions. In 2008, these institutions were very much concentrated in a few states in South Africa: 93 percent were concentrated in only three states—Gauteng (54 percent), Western Cape (21 percent), and Kwazulu-Natal (17 percent).

In 2008, there were about 20 private tertiary educational institutions in Tunisia, which enrolled less than 1 percent of the total number of students in programs of higher education. They offer training in areas such as technology, where demand exceeds supply in public institutions. Although the private sector currently plays an insignificant role in Tunisian tertiary education, the government anticipates that its role will increase in the future because it is providing incentives to private providers. Public-private collaboration in the provision of tertiary education in Tunisia takes several forms, including government subsidy for private tertiary educational institutions. The government pays the tuition of students who go to private tertiary institutions, provides land and subsidized capital construction (up to 25 percent of the cost of construction), provides subsidies for utilities, and pays some of the salaries of faculty for up to 10 years of the establishment of the institutions.

Equity of access to tertiary education

Issues associated with gender inequity, regional differences in admission, and different groups enrolling in particular subjects, as well as differences in enrollment according to race and socioeconomic class, are also of concern. In 2000, of the five countries only South Africa had achieved gender parity, with women constituting 55 percent of university enrollment. By 2007, Botswana and Tunisia had also achieved gender parity in university enrollment, while, to date, Ethiopia and Kenya still remain behind although both are making progress in this area (Table 2). Gender inequities also manifest itself in fields of study: women generally tend to be under-represented in SET and mathematics, while they tend to be over-represented in liberal arts and social sciences. Kenya's educational plans envision achieving gender parity through a variety of policy approaches, including affirmative action and quotas. In all five countries the female/male enrollment ratio is much higher in private than in public tertiary institutions. This may in part reflect the fact that private institutions tend to enroll more students in social sciences, business, technology-related fields, and the humanities than in the natural and laboratory sciences.

Another dimension of access inequity is related to geography and socioeconomic status. Often, because admission is based strictly on performance in national examinations, admission to universities tends to be skewed toward households with higher incomes and social connections that can afford to send their children to the best secondary schools. Although the reliance on national examination results usually ensures higher academic standards from incoming students, this process tends to discriminate against students from rural and poorer regions of a country where secondary schools tend to be of lower quality on account of poor resource inputs. In Kenya, for example, in 2005 only 3.2 percent of students from the Coast Province met the minimum qualification for admission to a university, compared with 21.6 percent from Central Province. In Ethiopia, similar patterns exist between rural and urban areas, especially between Addis Ababa and other parts of the country. In South Africa, there is a concentration of tertiary educational institutions in Gauteng, Eastern and Western Cape, and Kwazulu-Natal Provinces, while such institutions in other provinces are very sparse. This inequity has implications for regional differences in enrollment in tertiary institutions.

These regional inequalities in access are exacerbated by regional differences in income and wealth because wealthier regions and districts tend to have the best secondary schools. The introduction of self-sponsorship admissions (full fee-paying admissions) into public tertiary institutions increases the access inequality based on socioeconomic status because students from poorer backgrounds are less likely to be able to pay full tuition for their tertiary education in either public or private institutions.

In addition, not all races have equal access to tertiary education in Africa. This is especially the case in South Africa, where the apartheid regime systematically restricted access to tertiary education for the majority black population as well as other non-white citizens. While the education reforms of 1997 attempted to address this inequality, racial inequality in enrollment seems to persist. In 2008, blacks—who constitute 79 percent of the South African population—made up 63 percent of students enrolled in tertiary institutions; on the other hand, whites—who constituted 10 percent of the population—made up 24 percent of tertiary school enrollment. Moreover, whites comprised 34 percent of all university students while blacks made up 50 percent, but white enrollment in technical universities was as high as 77 percent.

The current structure of enrollment by field of study suggests that South African blacks tend to enroll in less prestigious tertiary institutions. There are also wide variations in the racial composition of students in different fields of study. Blacks make up 60 percent of all SET enrollment, while whites make up 26 percent; and 78 percent of enrolled students in education are black, while only 15 percent are white. This situation has implications for the future racial composition of the skilled workforce in South Africa.

Other accessibility issues: Entry pathways, differentiation, and articulation

Other issues of access to tertiary education in all the five countries include different pathways of entry to tertiary education, differentiation, and articulation. There appear to be no generally systematic policies in these countries to facilitate the admission of older students (those older than the prime college-attending age of 19–24 years). However, some tertiary educational systems have recognized this issue and are developing policies to ease this problem. For example, Kenya's new Higher Education Policy recognizes this need and is providing pathways for older students to access tertiary education, particularly through its Module II programs.

Other issues impinging on access are differentiation and articulation in the tertiary educational systems. *Differentiation* refers to the emergence of distinct types of tertiary educational institutions in response to a country's need for different types of skills; *articulation* is a mechanism that allows students to move from one type of institution to another type, or to move laterally among the same type of institutions across geographical locations. In theory, different institutions at the same level are supposed to specialize in different areas in order to meet the needs of a country. After all, differentiation is supposed to allow universities to specialize and thus increase efficiency and innovation in the areas they have chosen. In most of the five countries, institutions are set up to provide differentiation; in some, such as Kenya, South African, and Tunisia, there is also evidence of course differentiation. However, as institutions begin to provide programs in "hot areas," they seem to encroach on each other's territory. The result is a gradual erosion of the element of differentiation between institutions.

Governance, quality, and relevance

Rapidly expanding enrollment in tertiary educational institutions in these countries has raised concerns about the governance, efficiency, quality, and relevance of tertiary education for the countries' development needs. There is a perception that these institutions are inefficient and produce relatively low-quality graduates with skills that are not very relevant for the labor market. For example, although there is a shortage of skilled labor in these countries, there is also evidence of both open and disguised unemployment of graduates of tertiary institutions.

The quality of output/service is partly a function of the quality of inputs, including managerial inputs and the environment in which production takes place. Input quality and a better environment are necessary, but they may not be sufficient conditions to achieve a higher-quality output. The critical inputs include the physical and social infrastructures—such as classrooms, offices, laboratories, library facilities, and student expectations—along with a well-qualified and motivated faculty and support staff; high-quality, motivated students; and a competent and forward-looking visionary administration. All these should be combined with the appropriate political and financial support that sets out what outcomes are expected, what incentives will be given to achieve them, and what the consequences are for failing to achieve those objectives.

Governance

The productivity of the tertiary educational sector, its efficiency, and the quality of its output as well as the relevance of its curricula are intimately related to the sector's governance structure. Governance provides the institutional environment within which the educational enterprise functions. Efficiency in both system governance and institutional governance is necessary for the educational system to produce the desired results. This requires accountability and transparency, neither of which can be possible without the autonomy of higher educational institutions. Autonomy implies freedom to make management decisions, such as allocating resources among programs and determining the optimal input combination.

Good governance includes promoting quality, responsiveness, transparency, and accountability in the sector as well as providing it with appropriate standards, incentives, and information. Tertiary education governance in these countries is a tricky business. On the one hand, the need to produce skilled labor to meet development needs, the amount of public resources devoted to providing tertiary education, and the political power that students in tertiary educational institutions wield may suggest the need for the government's central control of these institutions. On the other hand, the need for academic freedom, the freedom to innovate in both teaching and research, to achieve efficiency generally, and the ability to respond to changing environments suggests that these institutions should be free from political control as much as possible if they are to succeed. The governance structure of tertiary institutions that emerges in any country is the result of a balance between these contrasting forces. While some countries set up structures that allow for the central government's direct control of structures, others set up buffers between the political administration and the governance system (Table 4).

Table 4: Governance and quality assurance bodies in higher education in the five countries

Country	Highest governance body	Relevant legislation	Accrediting body	Relevant legislation
Botswana	Tertiary Education Council	Tertiary Education Act (1999)	Tertiary Education Council	Tertiary Education Council (1999)
Ethiopia	Ministry of Education	Higher Education Proclamation (2003)	Higher Education Relevance and Quality Agency (HERQA) (2003)	Higher Education Proclamation (2003)
Kenya	Commission for Higher Education	Universities Act (1985)	Commission for Higher Education	Universities Act (1985)
South Africa	National Council on Higher Education	Higher Education Act (1997)	Higher Education Qualification Council (HEQC)	Higher Education Act (1997)
Tunisia	Ministry of Higher Education and Research	Higher Educational Framework (1989), Law 4 (2008)	n/a	n/a

Source: Ng'ethe et al., 2008.
Note: *n/a* means not available.

Table 5: Composition of membership on buffer governing boards

Country	Administration	Academic representative	Students	Government	Private sector	Undefined	Total
Botswana	2	1	1	5	3	2	14
Ethiopia	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Kenya	n/a	n/a	n/a	21–25	n/a	3	24–28
South Africa	n/a	n/a	n/a	n/a	n/a	17	17
Tunisia	n/a	n/a	n/a	All	n/a	n/a	n/a

Source: Saint et al., 2009.
Note: *n/a* means not available.

Table 4 shows the highest governance bodies (external) and the relevant legislation that established these bodies, and quality assurance agencies with the appropriate legislation that established them. In addition, there are internal governance bodies that are charged with the day-to-day administration of the universities—dealing with academic issues as well the hiring (and firing) of university staff, finance, different academic disciplines, and other aspects of tertiary education governance. The differences in the structures of governance across the five countries are based largely on the degree to which the political system has direct control of the decision-making process in higher education.

Table 5 shows the composition of buffer governing boards in the five countries. In general, there is a mix of internal and external members on these boards, with most countries trying to strike a balance between internal and external membership. However, in some cases—such as South Africa—it is not clear how membership on these boards is determined. Another aspect of governance authority is who appoints the chair and members of these boards. In Botswana and Kenya, the head of state (who is the chancellor of the university) and the minister of education appoint the chair; in South Africa, the chair and membership of this governing board are appointed based on a stakeholder representation formula stipulated by law.

The appointment of internal administrators of universities also differs across countries. For example, in Kenya, the chief operating officer is appointed on a competitive basis, the university board appoints the chief officer's deputies, and the deans are elected by staff while department heads are appointed by the vice chancellor. In South Africa, on the other hand, the board appoints the chancellor and all senior management, including deans (but not department chairs).

Quality assurance

The quality of a tertiary educational system is multi-dimensional, since tertiary institutions are multi-output producers—of teaching, research, and service, among other outputs. An institution may excel in one or two dimensions but not in others. Similarly, evaluating the quality of a tertiary educational system is very difficult because different evaluators may emphasize different aspects of quality; hence they will rank the same

Table 6: Quality rankings of tertiary education in the five countries

Country	African ranking	Global ranking
Botswana	6	87
Ethiopia	26	126
Kenya	5	86
South Africa	2	57
Tunisia	1	27

Source: UNESCO, 2007.

Table 7: The Global Competitiveness Index rankings on individual education indicators*

Country	Tertiary education enrollment rate	Quality of the educational system	Quality of math and science education	Quality of management schools	Internet access in schools	Local availability of specialized research and training services	Extent of staff training
Botswana	114	48	79	113	94	108	54
Ethiopia	129	60	94	106	127	122	122
Kenya	123	32	69	59	91	56	70
South Africa	99	130	137	21	100	49	26
Tunisia	69	20	8	22	47	27	18

Source: World Economic Forum, 2010.
* Rank out of 139 countries.

institution or system differently. However, there is general agreement that the quality of these institutions is low by international standards for the five countries (Table 6).[25] Only Tunisia is ranked in the top quartile of quality rankings globally. In addition, it ranks as first regionally (Africa), followed by South Africa and Kenya.

These tertiary institutions rank very low in research productivity as measured by publications, citations, or patent awards. South Africa had the highest number of ISIC publications of the group between 2002 and 2007, with a count of 29,225, while Botswana produced 948 ISIC publications in the same period.[26] Given the relatively large size of the South African tertiary system, this is not very impressive by international standards. While there is definitely some subjectivity in institutions' rankings, the fact that most of them tend to be ranked low in all cases seems to suggest that the rankings are correct.

Another quality measure of tertiary educational systems is their ability to improve the competitiveness of their countries. The Global Competitiveness Index (GCI) discussed in Chapter 1.1 ranks the quality of educational systems in various areas (Table 7). Apart from Tunisia, which ranks in the top quartile in most categories of tertiary educational systems, the four African countries are ranked low in most of the categories.

A major cause of low productivity and quality has to do with lack of resources. Although these countries devote a relatively larger share of their national resources to providing tertiary education than other parts of the world, low incomes imply that these high ratios still translate to low *absolute* amounts. For example, although Ethiopia may spend six times its per capita income on a student in a tertiary institution, this translates into about 20 percent of per student expenditure in a typical OECD country. While resources for tertiary education have grown moderately at best in most African countries, enrollment has exploded, as in the case of Ethiopia.

Both rapid enrollment growth and relatively stagnant funding has resulted in a reduction in per student resources for tertiary education as well as a reduction in the quality of such inputs. For example, the proportion of faculty without terminal degrees has increased; so have student-faculty ratios, and physical infrastructure in some institutions has deteriorated with a concomitant deterioration of teaching and learning environments. In addition, there is a lack of resources to support research and staff training. For example, between 2000 and 2007, Botswana devoted only 0.43 percent of its GDP to research and development (R&D); South Africa devoted 0.87 percent of its GDP. In Ethiopia, the per capita expenditure on research at public universities was less than US$20.00 per year during the 2000–07 period. On the other hand, Tunisia devoted about 2 percent of its GDP to support research and training.

Research productivity and output in these universities is low because few resources are allocated to the research enterprise (Table 8). Annual per capita research expenditures range from a low of US$1.30 in Ethiopia to a high of US$76.20 in South Africa. Besides, only a

Table 8: Higher education research expenditures in the five countries, 2007

Country	Total research expenditures (US$ millions, PPP)	Percent of GDP	Per capita expenditure (US$ PPP)	Percent performed by higher educational institutions
Botswana	84.91	0.38	46.30	5.80
Ethiopia	106.79	0.17	1.30	14.60
Kenya	n/a	n/a	n/a	n/a
South Africa	3,654.27	0.92	76.20	19.30
Tunisia	660.61	1.02	65.41	38.41

Source: UIS, 2009.
Note: *n/a* means not available.

Table 9: Science and technology enrollments

Country	Total enrollment in science & technology	Enrollment ratio in science and technology
Botswana	2,778	17.68
Ethiopia	30,284	14.39
Kenya	n/a	n/a
South Africa	181,596	23.86
Tunisia	133,910	36.76

Source: Authors' calculations, based on UIS, 2009.
Note: *n/a* means not available.

small proportion of the research takes place in higher educational institutions. This suggests that expenditures on research at these universities are too low by international standards to generate any meaningful research output. However, a few countries—such as Tunisia—are making a good effort to increase research resources. For example, 2.5 percent of government budget in Tunisia goes to support research in universities and research laboratories, a figure that is higher than the OECD average of 1.5 percent. In addition, research funding in Tunisia grew by 300 percent between 2000 and 2008.

Relevance

Skilled labor shortages in these countries have an impact on their economies. These shortages are also evident in the very high private returns to tertiary education in Africa—these returns are among the highest in the world. This situation implies that graduates should have no difficulty in finding productive employment. These countries' relatively large investments in tertiary education are intended to address this skill shortage. Unfortunately, there is evidence of open unemployment, underemployment, and disguised unemployment among graduates in all five countries. Anecdotal evidence indicates that graduate unemployment in these countries is very high,[27] which results in a massive emigration of highly educated Africans. This suggests that there is a mismatch between what these institutions produce and the skills needed in the countries.

Unlike the fast-growing countries of East Asia, where 50 percent or more of students in tertiary educational institutions are enrolled in SET and mathematics, only a very small proportion of students are in SET or business in the five countries (Table 9). These enrollment rates also compare unfavorably with the rates in OECD countries. However, there are differences across the five countries, with enrollments in SET and mathematics higher in Tunisia (37 percent) than in the other four.

It is difficult to evaluate with any precision the degree to which tertiary institutions are meeting the skill needs of these countries because there are inadequate statistics on labor demand. Indirect methods must be used to evaluate whether these institutions are training graduates in the areas needed, and whether those trained are equipped with the skill sets necessary to meet the development needs of their countries. One method is to compare the expected number of graduates—a number derived from projections of manpower needs in particular fields—with the actual number of graduates produced in those fields.

In Botswana, it is estimated that unemployment rates among tertiary education graduates is about 15 percent, suggesting that these institutions are training students in skills that are, possibly, not very relevant for the needs of the country. A relatively large proportion of university graduates go unemployed for long periods of time in Ethiopia as well. This mismatch also manifests itself in high emigration rates among Ethiopian graduates even though the country lacks skilled workers, for which

it heavily relies on technical aid. In Kenya, too, there appears to be a mismatch between industry skill needs and those possessed by university graduates.

The number of SET and business graduates produced by the system in South Africa between 2003 and 2007 fell below what was expected by the Council on Higher Education (CHE), while the number of graduates produced in the social and human sciences exceeded the numbers expected in these fields. This may suggest that the South African system is not meeting the needs of the economy given that it is not producing an appropriate mix of skilled workers as envisaged by the CHE. Although there are no serious overall shortages of skilled labor in the country, there are serious shortages of skilled South Africans in critical areas of SET that the system is not able to fill. South Africa has had to rely
on labor imports to meet demands in these critical areas.

It is estimated that unemployment rates among Tunisian tertiary education graduates is about 19 percent, even though it leads African countries in enrolling students in SET and mathematics and produces high-quality graduates. This has led to high rates of emigration of these graduates, especially to OECD countries. This situation led the government to adopt the strategy of linking education to technical innovation by establishing technology parks. However, it is important to take cognizance of the recent events in Tunisia and other North African countries that have led to revolutions in these countries (see Box 1), a situation arising mainly from high graduate unemployment and the countries' inability to create adequate jobs and shared growth in their economies.

Several reasons may account for why tertiary education in the five countries is generally of poor quality and less relevant to their needs. These include each country's particular history, slow economic growth, labor market policies, a lack of university-industry linkages (UILs), resource constraints, and the inability of these institutions to change and adapt curricula and pedagogy to the changing skill needs of the economy because of inflexible governance and management structures. Most of these countries (possibly excluding Ethiopia) inherited educational systems that were either geared toward colonial administration and therefore stressed medium-level administrative clerical skills rather than problem-solving skills, or they were geared toward ensuring racial segregation (South Africa). The educational system therefore focused on social sciences and the humanities, and a pedagogy based on what is written in books rather than a focus on SET-based, practical problem-solving pedagogy. The skill sets developed in these institutions may be less appropriate for these countries' development needs in an increasingly globalized world that depends on knowledge-intensive production. Unfortunately, most of these countries have not been able to restructure and change their educational systems to meet their development needs.

These economies have not grown fast enough to absorb the growing supply of graduates. The rapid economic growth of some countries has been based on natural resource extraction, which tends to demand few skilled workers. For the most part, growth has not been a shared and job-creating growth. In addition, partly because of labor market policies that compensate graduates equally, regardless of the skill shortages in different fields and without regard to the marginal productivity of labor, there is no incentive for students to enroll in needed fields such as SET. Also, because of the possibility of emigration when a student graduates, students think of their degrees as "passports" for emigration to a developed country.

On the supply side, governments do not discriminate in terms of which subject areas are financed. Once students are accepted to a university, the government subsidy tends to be the same for each student without regard to the subjects studied. One of the major weaknesses of tertiary education in these countries is the inflexibility and static nature of the programs offered. Instead of expanding areas that are in demand and contracting or eliminating areas that are not, the universities continue to offer programs that may be of little relevance. Students are forced into existing program offerings and, once admitted into a program, are seldom allowed to transfer to another one. In this way dying programs are kept alive while the expansion of needed programs is thwarted. The universities have molded their teaching and research agendas on the "high standards" of OECD countries focusing on niche areas. While this may be important in bringing fame to the researcher, specialization in a very narrow niche may be of little relevance to the needs of the country.

One of the major reasons that the universities tend to educate and produce a labor force whose skill sets are not needed is that there are few linkages between universities and industry in these countries, and also the private sector is inadequately developed in most of them. Often industry has no idea what the curricula in universities are, is never asked for inputs in training programs, and faculty research is unrelated to what businesses are doing. Businesses, on the other hand, have come to see universities as isolated islands of academic "pomposity" where academics do not to work with the industry and therefore are never approached to help solve real industry problems. While most of these countries pay lip service to UILs, it will take serious national efforts at nurturing this linkage: it is not likely to grow organically on its own in the current economic and social climate.

Tertiary institutions generally train people for the future, and hence the way they train students should be in anticipation of the future labor and research needs of the country. In this regard, manpower planning by

Box 1: Recent political events and graduate unemployment in Tunisia

The recent political events have changed the political landscape of the North Africa region and have had a potential impact on the economic performance of the region. Tunisia has been the catalyst for the current Arab unrest. With a well-educated—to the tertiary level—population, it was precisely these unemployed graduates who took to the streets of Tunis, leading to the turbulence. It is interesting that the current events were sparked by a Tunisian graduate—who could not find work and took to selling fruit and vegetables from a cart that was demolished by local authorities, leading to his self-immolation. With no jobs and no prospects, the future was dismal for these graduates. The political upheavals in these countries call for governments to address issues related to the quality and relevance of education, to skills development and apprenticeship training, and to job-creating economic growth.

Tunisia has persistently high unemployment rates. For instance, in 2007, young people (aged 15–24) had the highest unemployment rates in the nation, exceeding 30 percent; these rates were gender neutral. On the other hand, unemployment rates for the age groups 25–34 and 35–44, as well as the overall unemployment rate, were higher for women.

In fact, the persistently high unemployment rates among the educated seems to be a general feature of labor markets in North African countries, suggesting that there is a persistent mismatch between the demands of the economy and skills offered by recent university graduates. The unemployment rate for those with a tertiary education (19 percent) is much higher than the average rate of 14.1 percent. The second-highest rate (which is also higher than the country's average rate) is found among those with a secondary education. A similar picture of the unemployment rates is revealed in Algeria, Egypt, and Morocco.

Unemployment rates in Tunisia have been high for many years now, but the composition of unemployment by level of education has changed dramatically over the past two decades. For example, in 1994, the total unemployment rate was 15.8 percent, and in 2007 it was 14.1 percent. The rate of unemployment among Tunisians who have completed tertiary education increased by 500 percent; from 3.8 percent in 1994 to 19 percent in 2007. During the same period, unemployment among illiterate workers was reduced by about two-thirds (from 16.8 percent to 5.9 percent), and unemployment for workers with a primary education also declined significantly (from 19.2 percent to 13.5 percent). Finally, there was an increase in unemployment rates for workers with a secondary education (from 13 percent in 1994 to 15.45 in 2007).

Tunisia and most of the African countries need to address some important constraints and macroeconomic weaknesses, particularly the persistently high youth unemployment rates, especially among university graduates. They also need to continue strengthening the institutional and input prerequisites for a strong and competitive private sector–led development, and to continue implementing policies and interventions that open up opportunities for productive entrepreneurship and employment for all members of society.

Sources: AfDB, 2011; European Commission, 2010.

these countries may be a necessary input into the curriculum development planning of universities if they are to succeed in producing graduates who have the required skill sets for national development.

Entrepreneurship in higher-education curricula

Entrepreneurship is central to the growth and development of a country because it is the most important factor in bringing about innovation and new ideas that move an economy along.[28] The role of entrepreneurship in least-developed countries may be more critical to economic development than it is in high-income, developed countries. There is a consensus by governments and development agencies that the development of small- and medium-sized enterprises (SMEs) based on entrepreneurial knowledge and spirit is critical for economic development. The role of entrepreneurship in development is not limited to economic/business activities; indeed, social entrepreneurs, political entrepreneurs, and other types of entrepreneurs are all equally important in moving the society forward.[29] African countries now see entrepreneurship as a way of reducing high rates of unemployment, especially among youth, and reducing poverty. In this regard, entrepreneurship in higher-education curricula should be prioritized.

The objective of entrepreneurship education is to assist young people to become innovators and active participants in the labor market.[30] Urban makes a distinction between traditional management education and entrepreneurship education:[31] while the former is functional and does not care about the stage of the

Table 10: Entrepreneurship programs in the five countries

Country	Doctorate	Master's degree	Undergraduate degree	Undergraduate module	Entrepreneurial activities	Outreach
Botswana		■	■		■	
Ethiopia						
Kenya	■	■	■		■	■
South Africa		■	■	■	■	■
Tunisia			■	■	■	

Source: Compiled by author from World Economic Forum, 2009.

enterprise, the latter is mainly concerned with the discovery and building phases of business. Entrepreneurship education is more concerned with developing skills, knowledge, and attitudes necessary to *build* a business, while traditional management programs are concerned with how to *manage* a business.

Entrepreneurship education is generally accepted as a separate field of study in higher educational institutions and is probably one of the fastest growing.[32] The fast growth of entrepreneurship education is mainly caused by demand from both students and businesses for entrepreneurial skills. Despite the importance of entrepreneurship, entrepreneurship education—at least at the university level—did not take off until the 1970s, when the first course in the field was offered at Harvard University. Currently, several universities in both developed and developing countries offer a variety of courses on entrepreneurship. For example, Stanford University in the United States offers a PhD program in entrepreneurship, and Kenyatta University in Kenya offers a master of science degree and a doctorate in entrepreneurship.

There is a wide variation in entrepreneurship education across the five African countries. Kabongo finds that while about half of all African universities he surveyed offer some courses or programs in entrepreneurship, few offer degree programs or specialization in that discipline.[33] While some countries offer entrepreneurship programs in which students can earn certificates up to doctoral degrees, others offer only courses; still others offer concentrations and/or extension services. In addition, curricula and pedagogical approaches to entrepreneurship education differ across countries and even across institutions within the same country. While some institutions stress coursework, others may stress practical training and experiential learning.

The pedagogical approach makes a difference in the quality and effectiveness of the entrepreneurship education students receive. For example, Styrdom and Adams report that when students were required to start and run a business as part of their entrepreneurship education at the University of Pretoria, after graduation they were more successful in forming businesses and engaged more in entrepreneurial activities than their counterparts who were not.[34] The result may suggest that practical training may be extremely important in entrepreneurship education.

The types of entrepreneurship education offered in the five countries range from full-blown doctoral programs in Kenya through master's and MBA programs in South Africa to almost nonexistent programs in Ethiopia (Table 10). Most of the degree programs are either in business and management schools or in colleges of education; only a few science and engineering and other students get the opportunity to take courses in entrepreneurship. Generally, students from colleges other than business (and, in rare cases, engineering) get to take specializations or courses in entrepreneurship (where available) because of the exclusionary, discipline-focused nature of tertiary education in these countries.

Entrepreneurship education in Botswana has been embedded in the educational curriculum at all levels since the 1990s. The government's objective is for graduates from entrepreneurial programs to establish and grow SMEs as a way to reduce unemployment and spur economic growth. At the university level, entrepreneurship education is embedded in the business curriculum at the University of Botswana. There are no degree programs or specializations in entrepreneurship, but business students take courses in the field as part of their business education. Students also undertake experiential learning by being attached to businesses through the University of Botswana Business Clinic (UBBC), which is considered the ultimate experience in the student's entrepreneurship education. Since 2008, the UBBC has offered short-term training programs for entrepreneurs as well as occasional educational programs, such as Start and Improve Your Business (SIYB). Business students of the University of Botswana also have access to further business education through international business education organizations such as the Association Internationale des Étudiants en Sciences Économiques et Commerciales (AIESEC) and Students in Free Enterprise (SIFE).

Mafala's evaluation of the UBBC suggests that students who participated in the clinic gained some valuable experience although the clinic has not continued on a consistent basis for lack of funding and graduates' inability to get jobs.[35] Moreover, the review suggests that participants in the program are no more likely to start

or develop a business than their counterparts who did not participate. In addition, Moremong-Nganunu and others' evaluation of the SIYB program suggests that the program has no significant effect on entrepreneurial activities in Botswana, implying that entrepreneurship education in Botswana has not been effective.[36]

Ethiopia sees entrepreneurship as a way out of high unemployment rates and abject poverty. There are no degree programs or specific set of courses systematically devoted to entrepreneurship education at the country's universities. However, there appears to be a number of programs at vocational and technical training schools designed to develop skills. Several private universities that focus on providing business courses have been established in recent years, but no Ethiopian university has a program with strong industry linkages.

Entrepreneurship education has long been a part of the Kenyan educational philosophy and landscape. The publication of the *Kamunge Report* in 1988 put entrepreneurship education at the center of Kenyan tertiary education.[37] Kenya views entrepreneurship as a vehicle for self-employment, hence as a way to reduce unemployment, increase income, and reduce poverty. Entrepreneurship education is part and parcel of the curriculum of technical and vocational schools in Kenya. Its success is reflected in the fact that Kenyatta University offers both PhD and master's degree programs in entrepreneurship development, Moi University and the University of Nairobi offer undergraduate courses in entrepreneurship, and Higher Diploma degree programs are offered at Kenya Technical Teachers College. Training in these programs includes coursework, research, and attachment to industry. In addition, the government has established the Regional Center of Entrepreneurship Development at Kenyatta University for outreach activities in entrepreneurship. Besides research and teaching entrepreneurship as a genuine field of academic study, Kenyan universities are also engaged in training teachers of entrepreneurship for secondary and vocational training schools.

Although there has not been any formal evaluation of the effectiveness of entrepreneurship education in Kenya, it appears that this training has been successful. Kenya is one of the most dynamic countries in Africa when it comes to the development of SMEs, especially in the ICT sector. While a large proportion of SMEs established may fail or may not grow, the fact that they continue to be established in both the formal and informal sectors suggests that entrepreneurship education in Kenya has succeeded in developing the entrepreneurial spirit that gives confidence to would-be entrepreneurs to start new businesses.

Entrepreneurship education in South Africa is institutionalized by the Higher Education Act of 1997, which reformed the higher educational system. In addition, the National Small Business Act of 1996 mandated entrepreneurship education. The government of South Africa established the Small Enterprise Development Agency that is linked to its Outcomes Based Education Strategy. The objective of education reforms in South Africa is the development of skills—especially technical and entrepreneurial skills of the majority of citizens—to increase economic growth as a way to reduce unemployment. Several South African universities and academic departments provide entrepreneurship education.

As in most countries, the degree to which entrepreneurship education is embraced in a university's education agenda differs across universities in South Africa. While some universities offer entrepreneurship as a full degree program at both graduate and undergraduate levels, others offer it as a concentration within a degree program (such as an MBA); still others offer a course or two in entrepreneurship studies within another degree program. Entrepreneurship education is more likely to be offered by the universities of technologies that focus on training people in technical skills than by those universities that focus on training students for intellectual endeavors. Most South African universities that offer these programs do so through their colleges of business or commerce; some universities, however, provide an entrepreneurship module within engineering degree programs. Most of the universities that offer entrepreneurship degree programs also engage in outreach activities, in part because these activities generate incomes for the institutions. Pedagogy involves both coursework and practical training; however, the relative weight given to coursework and experiential learning differ across universities and programs.

An important aspect of entrepreneurship education is the pedagogy used in training these students. There is evidence that, at least in South Africa, entrepreneurship education is more effective when there is an element of experiential learning involved. Whether entrepreneurship education is succeeding in creating a class of entrepreneurs in South Africa or not is not yet known, since there has not been a systematic evaluation of these programs. However, the GEM *2006 South Africa Country Report* suggests that: (1) entrepreneurship education does not encourage entrepreneurship as a career, (2) a paradigm of entrepreneurship does not exist in South Africa, and (3) entrepreneurship skills are lacking in South Africa.[38] The report's conclusions suggest that entrepreneurship education may not be achieving its objectives.

In Tunisia, entrepreneurship education is embodied in law as enshrined in the 2002 Educational Reform Act.[39] Entrepreneurial skills are to be developed through individual and group activities in all courses within the educational system. Thus not only does the law require that entrepreneurship education be implemented in every course in the entire educational system, it also suggests the pedagogical approach to be used to achieve this objective. To provide for entrepreneurship activities, Tunisia established several technology parks to spur

Table 11: Higher education expenditure in five countries and the world

Country/Region	Per capita expenditure (US dollars)	Education expenditure/ GDP (percent)	Education expenditure/ government expenditure (percent)	Tertiary expenditure/ education expenditure ratio (percent)	Per student expenditure/GDP per capita
Botswana	4,600	8.1	21.3 (2008)	12.5	313.4
Ethiopia	863	5.5	23.0	20.0	683.4
Kenya	1,600	7.0	17.9	16.0	235.4
South Africa	1,934	5.1	16.2	13.0	98.2
Tunisia	4,634	7.1	23.4	28.0	64.1
Africa	2,000	7.2	22.4	22.0	292.7
World	4,600	5.3	15.5	22.0	124.4
			12.0 (OECD)		**28.0 (OECD)**

Sources: SARUA, www.sarua.org; UIS, 2008; World Bank, 2010b.

business incubation, especially in the field of ICT. These parks are to collaborate with higher educational institutions, including students and research organizations to develop new businesses.

Financing higher education

Financing higher education in most African countries has generally been a challenge, and—at at time when the continent can least afford not to expand in this arena—the challenge has become more difficult. Indeed, per student spending on tertiary education has been declining in recent decades. The World Bank estimates that between 1990 and 2004, per student expenditure in African tertiary educational institutions *decreased* by 4 percent a year.[40] Compared with other parts of the world, tertiary education financing on the continent remains inadequate.

Resources available to finance tertiary education in the five countries are far lower than elsewhere (Table 11). For example, the average per student expenditure in tertiary education in Africa is about US$2,000, while the world average is US$4,600. Rapid increases in enrollment combined with slow growth in funding suggest that there will be large expenditure gaps in the five countries.

The relative lack of adequate resources to finance tertiary education in some of these countries may be due to low incomes. However, they devote a larger share of their GDP to fund tertiary education than the rest of the world (Table11). Similarly, they devote even larger proportions of government expenditure to education than the rest of the world, and the share of national education expenditures that goes to tertiary education is larger than the average for the rest of the world. The ratio of per student expenditure to per capita GDP is much higher in Africa than in the rest of the world. For example, in 2007, the per student expenditure on tertiary educational institutions in Africa as a ratio of per capita GDP averaged about 2.93 compared with the world average of 1.24 and 0.28 for OECD countries.

There is, however, a wide variation in tertiary education per student expenditure/GDP per capita ratios across the five countries. For example, while this was 6.83 in Ethiopia, it was 0.64 in Tunisia. These figures suggest that, on average, these countries may be making greater efforts to finance education than other parts of the world.

Tunisia, the country that devotes most resources to tertiary education of the five, exemplifies the high education-funding effort that still leads to low absolute expenditures on education. In 2008, Tunisia spent 7.4 percent of its GDP on education (2.04 percent on tertiary education) compared with 5.3 percent in OECD countries; 23.4 percent of its government expenditure was for education, while the OECD average was 13.4 percent. However, in the same year, Tunisia's per student spending on tertiary education was US$4,634, compared with the OECD average of US$9,984 in PPP. The difference in absolute per capita spending stems from differences in per capita GDP; the lower per capita GDP in Tunisia translates into lower absolute per student spending, given the expenditure/GDP ratio. However, per student expenditure on tertiary education in Tunisia exceeds those of countries in its income level.

Although the financing of tertiary education in Tunisia is below OECD standards, it is comparable with that of middle-income countries. Funding in other countries, such as Ethiopia, is woefully inadequate for any level of income. Ethiopia's per capita student spending of US$863.00 in 2007 is far less than adequate for quality tertiary education. Regardless of the amount of resources devoted to tertiary education, the mechanisms for allocating it among universities in a system vary across countries.

An important aspect of tertiary education expenditure is its efficiency. There are two aspects of efficiency—internal and external. *Internal efficiency* refers to whether the allocation of expenditure leads to an optimal mix of inputs to produce tertiary education effectively. Internal efficiency is measured, among other things, by the ratio of capital expenditure to total expenditure, and the proportion of recurrent expenditure devoted to instructional

staff. *External efficiency* refers to the ability to allocate funding to effectively produce what society expects the universities to produce. External efficiency is measured by such outcomes as returns to different levels of education, producing the appropriate skill mix for the economy, and employment rates among university graduates.

The efficiency of spending varies among the five countries. In Tunisia, for example, the ratio of capital to total expenditure, the share of current expenditure on instructional staff, and the student/teacher ratios are 25 percent, 64 percent, and 19 percent, respectively. These are similar to OECD averages of 34 percent, 66 percent, and 15 percent, respectively. At the extreme end, the averages for Ethiopia are 9 percent, 50 percent, and 41 percent, respectively. Figures for the other three countries lie between the two extremes. Regarding external efficiency, it is clear that returns to tertiary education in all the five countries are high, suggesting the possibility of external efficiency. However, returns to education are a function of labor market policies as well as the growth of demand for skills.

Employment measures of external efficiency, on the other hand, suggest the existence of external inefficiency in the five countries. The fact that there is a high rate of unemployment among these graduates suggests that external efficiency has not been achieved. Even in Tunisia, unemployment among university graduates was estimated to be 19 percent in 2008, and it is not uncommon for Tunisian university graduates to take up to 60 months to get a job.

Financing for tertiary education in the five countries comes from several sources: government, student fees, private-sector gifts, international development agencies, and other donors (Table 12). While the government is the source of practically all financing of tertiary education in Tunisia, Botswana, and Ethiopia (75–85 percent), it provides about 40 percent of the funding in South Africa. The distribution of the funding is allocated differently among specific institutions in tertiary educational systems in the five countries. For example, in South Africa, the universities of technology rely more on government funding than general universities do.

In South Africa, government funding of higher education is based on the principles of shared cost, equity and redress, and development. Because both student and society benefit from education (except in the cases of public goods, such as nursing, in which the public is the major beneficiary), the principle of shared cost suggests that both the student and government should contribute to the provision of education. The principle of equity and redress implies that nobody should be denied an education on the basis of race, gender, or socioeconomic status, hence these factors should be considered in funding tertiary education. The principle of development links higher education

Table 12: Sources of financing for higher education in five countries, 2008 (percent)

Country	Government	Student fees	Own revenue sources
Botswana	78.0	22.0	0.0
Ethiopia	75.0	15.0	6.0
Kenya (2007)	60.0	39.6	4.0
South Africa	40.0	28.0	33.0
Tunisia	85.0	16.6	1.5

Sources: Authors' calculations, based on UIS, 2009 and government sources.

funding to the production of highly qualified skills to meet national development needs.

The government allocates subsidies to tertiary educational institutions through the South African Post-Secondary Education Foundation based on a formula that is driven by enrollment. Besides the formula-driven subsides, tertiary institutions receive extra funding earmarked for capital projects, municipal assessment, financial aid schemes, and funding for redress. A system of rewarding institutions for research productivity has been implemented. Since 2004, funding has been based on plans drawn up by institutions to achieve the government's national policy goals.

The next-largest source of revenue for universities in these countries is fees paid by students. The proportion of students' contribution to financing tertiary education varies among the five countries (28 percent in South Africa and 39 percent in Kenya, for example). A large part of government funding in public universities goes to support student welfare, such as food and housing, rather than tuition. It is only in a few cases, such as South Africa and Kenya, that students are required to make modest contributions to tuition payment.

A second group of students, not supported by the government (e.g., the Module II students in Kenya), pays the full cost of their education in public universities as if they were in private universities. In Kenya, 39 percent of all students admitted to public universities were in this category. In Botswana, Ethiopia, South Africa, and Tunisia, there are efforts to increase cost recovery in tertiary education. On the other hand, Botswana's government directly pays for students to attend private tertiary institutions.

Governments have devised several mechanisms to make it possible for students to pay their share of the cost of their tertiary education: grants; loans guaranteed by the government; and graduate taxes, as in the case in Ethiopia. The essence of the graduate tax is that payment for the cost of education is deferred until after graduation. While loan schemes have been implemented in all

the five countries, evidence suggests that loan repayment remains a challenge.

A third source of revenue for university financing is internally generated funds. These are mainly from tuition fees for part-time studies, certificate courses, ICT courses, distance education, and other market-driven courses. For example, in Ethiopia, while full-time students in public tertiary educational institutions pay no tuition fees, all part-time students in these institutions pay modest tuition fees. In addition to these fees, universities also generate modest revenues from contract research and other services that they provide to private businesses and the community as a whole. The amounts of income generated from this source differ not only across countries but also across institutions in the same country. For example, while this source of revenue is almost absent in Botswana and Tunisia, it is sizable in South Africa.

There is very little external support for tertiary education, including international resources. However, there is indirect support through graduate scholarships, research collaboration, and student and faculty exchanges. In general, there is not much financial support of tertiary education from the private business sector in these countries.

The cost of tertiary education and the funding mechanisms in each country depend on the objectives of the government and the political economy of education in that country. For example, in Tunisia, the government pays about 85 percent of tuition and provides scholarship, grants, and loans that are means tested. In addition, tuition is deliberately kept low to ensure equitable access for all socioeconomic classes. Admission to tertiary institutions, however, depends on performance in entrance examinations, secondary school grades, coursework, and enrollment quotas placed on specific programs. Private institutions are allowed to charge higher tuition fees than public ones. Affordability is ensured through a system of grants and loans that makes it possible for students from low-income households to participate. However, there is evidence of socioeconomic inequality since a disproportionately larger share of university students come from middle- or high-income backgrounds. On the other hand, students pay a larger share of the cost of tertiary education in Kenya and South Africa than in the other three countries.

The current systems of funding tertiary education in the five countries face challenges on issues of equity: students from well-to-do families tend to benefit at the expense of students from low-income ones. Students from high-income households are more likely to gain admission to universities and benefit under the current systems than students from low-income backgrounds. In the same way, the existing funding systems are likely to benefit urban areas at the expense of rural areas and those without good secondary schools. If there is gender inequity in university admission, as is the case with Ethiopia and Kenya, the current funding approaches will perpetuate the gender inequity in tertiary education.

The discussion above shows that governments have been the major source of funding for tertiary education in the five countries. With the possible exception of Tunisia, this funding has not kept up with the rapid growth in enrollment, resulting in decreases in per student funding. Given the relatively low growth of some of these economies and the fact that most African countries have just started demographic transitions, it is unlikely that government revenues can grow fast enough to keep pace with enrollment growth in the foreseeable future. Thus there is a need to find new and innovative ways of financing tertiary education in African countries.

University-industry linkages

Universities and other tertiary educational institutions have and continue to play leading roles in the development of societies, training skilled labor for the economy and creating processes and knowledge that lead to new products and technologies. The quality of human capital and tertiary institutions determines which countries move to the technology frontier in the world and which countries do not.[41] If skilled labor trained by these tertiary institutions is to be useful to the economy, it must meet the needs of the economy. Hence the tertiary institutions must take into account the skill needs of the society. If knowledge created in these institutions is to be useful to society, it has to be transferred to industry rather than kept in the labs of the institutions. This knowledge transfer can be achieved through constant communication and collaboration between universities and industry in R&D as well as other innovative activities. UILs therefore become critical if the universities are to play meaningful roles in the development of nations. UILs focus on how universities interact with industry as a whole for their mutual benefit and to support the development of countries. In addition, countries with a developed private sector that enables entrepreneurship to flourish are likely to tap into UILs by creating a domestic market for university-produced technologies.

In an era of open innovation, R&D efforts in industry alone are not sufficient to drive innovation in a country;[42] innovation requires strong UILs. UILs have been instrumental in the development of industrialized countries. In the United States, for example, research from land grant universities fueled the development of modern agriculture and agro-industries; current innovation revolves around universities creating growth poles such as California's Silicon Valley and Boston's Route 128. In the developing world, there are strong UILs in countries such as China, Korea, and Brazil, among others. UILs provide incentives for universities to conduct research with practical applications through the funding

Table 13: University-industry linkages and competitiveness in Africa: GCI 2010–11 rankings

Country	Local availability of specialized research and training services	Firm-level technology absorption	Capacity for innovation	Quality of scientific research institutions	Company spending on R&D	University-industry collaboration in R&D
Botswana	108	81	103	82	70	69
Ethiopia	122	124	106	102	123	101
Kenya	56	67	52	54	34	55
South Africa	49	35	47	29	40	24
Tunisia	27	33	36	38	35	41

Source: World Economic Forum, 2010.

they receive from industry; in turn, industry is able to influence the type of research conducted by universities.

In parts of the world—such as Silicon Valley and Route 128, where universities have been catalysts for economic and social development—the universities have not only transformed themselves as entrepreneurial institutions that commercialize the technologies they have invented, but they have also worked closely with businesses to develop innovative ideas. Entrepreneurial universities are those that seek and recognize opportunities, take risks, and work with businesses or other organizations to exploit these opportunities.

The ability of universities to forge linkages of course depends on the political environment as well as the governance structure within which they operate. UILs are likely to emerge in environments where governments promote these linkages and where universities have autonomy to pursue opportunities when they arise. Unfortunately for many African countries, there are few university systems that take UILs seriously, with the possible exception of South Africa and Tunisia. Although there seems to be some evidence of UIL policy borrowing by some African countries, it appears that these efforts do not involve local industries. For example, Kruss and Peterson report that, while there is evidence of some UIL in the pharmaceutical industry in South Africa, none of the collaboration involves local pharmaceutical companies as a university's partner; the universities seem to work exclusively with foreign companies.[43] African tertiary institutions have not, and are not, leading the way in innovation, leaving the continent less competitive internationally.

The rankings of these countries in innovation competitiveness show that two of the countries—Botswana and Ethiopia—do not fare well in this regard. Tunisia, South Africa, and Kenya, however, rank relatively highly in this area (Table 13). In the area of university-industry collaboration in R&D, only South Africa is ranked in the top quartile of countries out of the 139 surveyed in the GCR 2010–2011. There are wide differences among the five countries, with the rankings ranging from South Africa's 24th to Ethiopia's 101st position.

There are several reasons why UILs are weak in Ethiopia and in most of the African countries. It is possible that there is a dearth of experienced research talent able to identify problems facing local industry and formulate a research agenda to solve them; there is also a lack of large pools of researchers in these countries that could collaborate to solve industry problems. Second, given the small sizes of enterprises in African countries and their less-developed private sector, it is most likely that their industries lack the ability to absorb new technologies. The result is that, even when universities do develop new technologies, there may be no innovators to bring the technology to the market either through the development of new products or through the development of new processes.

A related obstacle to the development of robust UILs is the low level of R&D expenditure by African industry. In none of the countries studied does R&D expenditure exceed 1 percent of GDP, and most of this is spent by the government. The presence of UILs is predicated on industry funding basic or applied research in universities. With low research funding, university faculty are forced to use all their time teaching and the only role business plays in tertiary education is to suggest curricular changes. Besides, with little to no research funding from industry, university faculty have no incentives to work with industry.

Botswana does not seem to have any well-documented and articulated national UIL policy, although there is the general expectation that university and business will collaborate to solve the country's development problems. However, some faculty members at the University of Botswana (UB) collaborate with industry to conduct joint research. For example, faculties in engineering, geology, and hydrology at the UB have collaborated with the water sector. Similarly, the Department of Agriculture at the UB conducts research on animal husbandry and the beef-exporting sector in Botswana. In addition to the UB, special research institutions such as the Okavango Delta Basin research project also have a major impact on water and land management in Botswana.

In Ethiopia, the National Science and Technology Policy (NSTP) of 1993 mandated tertiary educational institutions to help build, generate, select, upgrade, and disseminate appropriate technology for the development of Ethiopia. The NSTP was not mandated to encourage or facilitate UILs, and, as a result, it has not been successful in UILs. However, some individual faculty members and groups have made attempts at forging university-industry relationships. For example, the technology faculty of Addis Ababa University formed the Technology Faculty Industry Linkage (TFIL) in 2000 to foster collaboration between the engineering faculty and industry. This effort failed for lack of funding. There were attempts to replace TFIL with the Higher Education Industry Resources Integration Center (HEIRIC), funded by industry and the Chamber of Commerce. HEIRIC also failed for lack of funding and general support. Overall, UILs in Ethiopia have not succeeded partly because of the over-concentration of UIL activities in Addis Ababa, with no linkages to different regions and enterprises, and partly because of a lack of interest from researchers, a lack of skills, and a lack of funding.

However, there are examples of successful linkages between foreign universities and industry in Ethiopia. One example is the highly successful small-scale agricultural extension program of Haramaya University, a largely experiential BSc program in agriculture that forces the faculty to bring the classroom to the field. The program provides constant extension services to small-scale farmers and also helps the academic staff to revise their curricula to reflect local conditions.

Although Kenya does not have a national policy on UILs and does not vigorously promote such linkages, there do exist some linkages between individual academic departments in a few universities and some industries at the student and faculty levels. Most degree programs in business, engineering, law, and ICT in Kenyan universities require internship and industrial attachment for graduation. Two private universities in Kenya—Strathmore University and the United States International University—require industrial attachment for *all* degree programs. In addition, a few university departments have signed collaborative agreements and conduct joint research with industry. For example, in 2006, Safaricom Kenya Limited signed an agreement with Moi University to set up and support a modern telecommunications laboratory on the latter's campus. The agreement also included faculty internship at Safaricom so the former could improve their skills at the university's laboratories.

Kenya established the National Council for Science and Technology in 1977 to advise the government on technology and UILs. In addition, the government provides research grants to faculty through the Commission for Higher Education. The report of the Taskforce for the Development of National Strategy for University Education in Kenya of 2008 suggests that there exist formal channels for university-industry relationships, but that these channels are not fully used by either side.[44] The report also suggests increasing R&D expenditure to 1 percent of GDP and establishing a venture capital fund to finance technology transfer from university to industry. The report suggests several strategies to make these linkages effective. One is to establish a national policy on university-industry collaborative research; another is to develop policies on university-industry innovation clusters and/or technology parks, and yet another is to promote joint research between universities and industry and other research organizations.

In addition to local universities, Kenya hosts a large number of local and foreign research institutes, some of which are affiliated with foreign universities that interact with local industry, government, and other research institutions. For example, the International Livestock Research Institute has been instrumental for the development of the Kenyan livestock industry, while ICRISAT Nairobi has been instrumental in the development of semi-arid agriculture in Kenya and the rest of East Africa. These institutions employ a large number of Kenyan science graduates who then go on to work with either industry or other academic institutions, thus transferring research skills to industry.

South Africa spent about 0.98 percent of its GDP on R&D in 2007, a ratio that is lower than those of OECD and East Asian countries, but comparable to those countries that are in similar stages of development, such as Brazil. Of the 0.98 percent of GDP spent on R&D, 58 percent—more than half—comes from industry, suggesting a strong potential for meaningful UILs. The Higher Education Act of 1997 gave South African universities three missions: social and industry outreach (mainly market-driven, entrepreneurial activities based on spinoffs of research results), research parks, and university-business joint research. The well-endowed universities emphasize research, while some of the less-well-endowed—such as the universities of technology—focus more on teaching and skilled development missions.

South Africa adopted a comprehensive science and technology (S&T) policy in 2002 to bring structural transformation to the economy based on developed-country models of encouraging collaboration among tertiary institutions, industry, other research institutions and government.[45] While UILs are not widespread in South Africa, a few industries have forged linkages with universities based on the abilities of universities to help solve specific industry problems. Large mining companies that need the specific research skills of universities to complement the work of in-house research have forged research alliances with universities; so has the wine industry. In the ICT sector, Telekom South Africa has established centers of excellence in selected engineering departments to conduct joint research.

South African universities are not making much effort to commercialize their research results. For

example, the HIV/AIDS vaccine project at the University of Cape Town has very little UIL with local industry. Where South African universities collaborate with industry, they do so with foreign companies rather than local ones, as in the case of the biotechnology industry. However, the wine industry collaborates with South African universities in R&D. In a survey of a large number of firms, Kruss and others found that only large, technology- and export-oriented firms engaged in collaborative research with universities.[46] Large mining companies with large internal research departments collaborate with universities, while a large number of SMEs do not.

Between 1998 and 2006, enrollment in computer science in tertiary institutions in Tunisia increased from 4,000 to 40,000. In addition to the rapid expansion of science education, the government has also established six technology parks distributed across the country and has financed technology transfers and adoption through the Société d'Investissement en Capital à Risque (SICAR). Tunisia spends about 2 percent of its GDP on R&D, a proportion comparable to the low end of that of OECD countries and far higher than lower-middle-income countries. The government provides 80 percent of research funding, and university research absorbs 67 percent of R&D expenditures in Tunisia.

UILs, which are coordinated by the Higher Council for Scientific Research and Technology, are crucial if the government is to achieve its objective of rapid technical transformation and get a return on its investment. Innovation policies that encourage UILs have been implemented through a series of programs, including the 1992 Research Results Valorization, which funds projects involving partnerships among industry, universities, research organizations, and professional groups. Less than 100 projects have benefitted from this project so far. The 1994 Decree 94-536, Premium Innovation Research and Development, supports original research leading to the development of new products or process. The government pays up to 50 percent of the cost of the project; to date about 43 projects have been submitted by 40 companies for consideration.

In 2003, the Federative Research Program was created with the intention of setting industry, research institutions, and universities to tackle problems in nationally defined priority areas, such as ICT, biotechnology, and water. The National Program of Research and Innovation was set up in 2003 to respond to Tunisian industry needs for innovation and improvement in competitiveness. Projects on innovation were to be collaborative efforts between universities, industry, and other research institutions. UIL efforts in Tunisia seem to be top-heavy and mandated, organized, and financed by the government, with no organic development of the relationship between universities and industry. It is not clear to what extent these relationships have been successful.

Lessons, challenges, and the way forward

The five African countries considered in this chapter have shown both similarities and differences in their approaches to increasing the efficiency and efficacy of their tertiary educational systems. Some have been more successful in various ways than others—for example, some have achieved gender parity in enrollment, but some have not. The next section considers the lessons that can be learned, the challenges that lie ahead, and the way forward for African countries to make higher education a key player in its development efforts.

Summary and lessons

Enrollments in tertiary educational institutions in the five African countries over the last two decades have increased rapidly—by an average of more than 200 percent—with Ethiopia recording a much faster rate of expansion than the others. This was faster than the enrollment growth rate in any other region of the world. Progress has been made toward gender parity in tertiary education enrollment in all five countries, and three have achieved full gender parity to date. In spite of the rapid growth in enrollment, the GERs continue to rank among the lowest in the world: Ethiopia's GER comes in at less than 2 percent. Tunisia, however, has seen an increase in enrollment ratios up to international standards. Socioeconomic and regional inequity, as well as gender inequity, have occurred in some cases.

The majority of students are enrolled in the social sciences and the humanities; there is relatively low enrollment in the SET and mathematics fields. However, most of these five countries have not been able to transform their tertiary educational systems to meet the needs of their increasingly technology-driven economies. The result is that a large proportion of graduates have acquired skills that are less in demand, while skill shortages abound. The mismatch between skill needs and skills produced by these institutions is manifested in increased unemployment among graduates in the midst of skill shortages. Another consequence is the emigration of some of the graduates.

Funding has not kept pace with increasing enrollments, with the result that per student funding has decreased by an average of 4 percent annually over the period 1994–2004. This has happened in spite of the fact that these countries spend a larger proportion of their resources on tertiary education than do other parts of the world. Low per student funding has resulted in a deterioration of physical infrastructure; inadequate library and laboratory space; increased student/faculty ratios; and, in some cases, inadequately qualified senior professors to guide the academic enterprise. The net result is that the quality of tertiary education has decreased by international standards, along with the rapid expansion of enrollment. A major reason for the decrease in quality is the inability of government to finance the rapid growth in tertiary education.

The inability of the public-sector institutions to absorb the increasing number of students seeking admission has led to the rapid expansion of private tertiary education in these countries. Often, these private institutions provide programs that are in high demand at reasonable cost, and although they charge the full cost of providing this education, in some cases they even make a profit. The rapid growth of private tertiary institutions and their ability to compete with publicly funded institutions suggests two things: (1) some tertiary education students are capable of paying for their own education and the government need not support them, and (2) the cost of providing a tertiary education in the public sector may be too high, and efficiency may need to improve in publicly funded tertiary institutions. These two factors suggest that governments should be judicious in financing students at the tertiary education level, financing only those who are unable to pay for their education and ensure an efficient allocation of funding in these institutions.

Entrepreneurship education has not been systematically incorporated into the curricula of tertiary institutions in many of these countries. In most of them it is not offered at all as part of the university curriculum; in cases where it is taught, it is not offered as a major or integrated into the whole curriculum, leaving it as a series of disjointed courses. The only exception is Kenya, where some universities offer master's and doctoral degrees in entrepreneurship. Similarly, in spite of the need for university-industry collaboration to spur development, these countries do not have well-articulated and established UILs, suggesting that tertiary institutions may not be contributing to the development of industry in the countries.

Countries have different structures of tertiary education governance. These may manifest themselves in differences in efficiency and in their ability to adjust to new circumstances in order to take advantage of new opportunities to train students in innovative directions. Despite written policies that purport to provide tertiary institutions with operational autonomy, some governments still exert political control over their day-to-day administration. Internal governance of tertiary institutions has not been efficient by international standards, as a relatively larger share of tertiary education expenditure goes to current expenditure than is optimal, and a lower percentage than optimal is spent on instruction. Given that graduates frequently remain unemployed in the face of skill shortages, one can argue that these tertiary institutions are not externally efficient either.

Tertiary education efforts and outcomes in Tunisia seem to be the exception among the five countries. Tunisia's experience suggests that it is possible to simultaneously and rapidly expand tertiary education enrollment, ensure gender equity, improve quality, and redirect education toward fields that are deemed national priorities. At the same time, Tunisia transformed its tertiary education curricula to one emphasizing S&T without compromising quality. Indeed, Tunisia's tertiary educational system was consistently ranked in the top quartile worldwide.

The experiences described in these case studies—in particular, the Tunisian experience—offer lessons for African countries on how to expand tertiary education. The first lesson is that tertiary education in Africa can be dramatically expanded, transformed, and improved at the same time. Second, such improvements and expansion require an increased infusion of resources because expansion and quality improvement cannot be had "on the cheap"—Tunisia spends a relatively large proportion of its national resources on tertiary education. The third lesson is that education policy and efforts should be intrinsically linked to national development policy and that tertiary education reforms should be part and parcel of education reforms generally. The Tunisian reforms were linked to national priorities; tertiary education policy was linked to economic development, research, and industrial policies. Tertiary education reforms are likely to fail if pre-tertiary education is also not reformed. In Tunisia, education reforms involved transforming the pre-tertiary education curricula to emphasize science, mathematics, and information technologies, thus making it possible for the reforms at the tertiary levels to be successful. The fourth lesson is that tertiary education requires a continuous and full commitment from the government. In Tunisia, education reform was a central priority of the government, which often initiated and pushed the reforms from the top. Finally, education reform is a continuous process—policy reforms may need continuous monitoring and revisions.

Challenges

There are several challenges facing these five countries as they provide tertiary education for their growing populations. The inability to meet the rapidly expanding demand for tertiary education that is partly caused by the burgeoning demographic transition is a major concern. Among the challenges are the need to overcome capacity constraints; to prevent or reverse declines in quality; to ensure the relevance of tertiary education to the countries' needs and also its contribution to industrial development; and to provide for its cost, financing, and governance. These challenges are likely to persist in the coming years and need to be addressed.

The tertiary educational systems in these countries face the major problem of their inability to generate enough resources to finance the expansion needed to meet increasing demand. While demand has been growing at exponential rates, the resources to finance that expansion have, at best, grown at arithmetic rates, thus setting up a Malthusian catastrophe in tertiary education. The typical response has been to expand capacity without resources to support the expansion, resulting in decreased quality, increased student-faculty ratios, a

deterioration of the physical infrastructure, and the use of often inexperienced or adjunct faculty to staff courses. The faculty has very little time for research, thus decreasing knowledge creation. Another aspect of the preoccupation with teaching is the inability to reform the curriculum to reflect the needs of the country, thus making tertiary education less relevant. Most of the countries are therefore producing graduates who are not employable in the midst of skill shortages. The lack of research efforts and productivity on the part of faculty means that tertiary institutions cannot collaborate with local industry to solve countries' development problems.

Exacerbating the inability to finance expansion of tertiary education is the fact that, in most of these countries, governments bear an overwhelming financial burden. For example, in Tunisia, Botswana, and Ethiopia, about 80 percent of the cost of tertiary education is borne by the government regardless of the student's ability to pay. Worse, students are funded whether or not they study subjects in fields that countries regard as national priorities. In addition, the systems of funding create social inequities. Often the systems of rationing university admissions also create socioeconomic and regional inequalities. If there are gender inequalities in admissions, a gender bias is added to these inequalities in funding. Such a system of funding perpetuates and indeed expands social inequalities in society.

The lack of adequate funding means that tertiary institutions are not able to attract the best faculty in their specific fields, which leads to quality decline; nor are they able to retain those they have on staff. In an increasingly globalized world, these tertiary institutions face a global market for academic talent and should be prepared to offer competitive wages and working conditions to attract and retain staff.

An essential aspect of any quality academic environment is one of shared governance and academic freedom. Unfortunately, in some countries, academic departments have very little input in terms of course and curriculum design and faculty evaluation. Promotion and tenure decisions tend to be politicized, making it difficult to recruit and retain good faculty. At the systems level, the leadership of institutions and the highest policymaking bodies are usually appointed by either the head of state or government, or the minister of education.

These tertiary institutions also face a cost structure that is too high, in both absolute and relative terms. Some countries are spending three to four times per capita GDP on a tertiary education student, compared with 40 percent in OECD countries. Part of the higher cost of producing tertiary education is a result of the low quality of inputs. The high cost of producing tertiary education in African countries may also be due to the relatively small sizes of individual institutions, especially as individual institutions in a system compete to provide similar programs. Finally, tertiary institutions in these countries are extremely costly because they tend to provide services to students—such as food, housing, and healthcare—that are not part of education itself at no cost to the students. These services are provided by governments because they are politically popular. The challenge is for governments to find the political courage to eliminate these expenditures.

The way forward

The major challenges facing tertiary education in African countries are how to expand access and at the same time improve quality and relevance, how to make it more equitable, and how to provide adequate financial resources. Overcoming these challenges will involve a massive expansion and restructuring of tertiary educational systems in particular, and education generally. Based on the evidence from the five countries, this should be based on three pillars: quantity and equity, quality and relevance, and financing.

Quantity and equity: Expanding access

One of the major challenges facing African countries is providing enough resources to expand access to tertiary education. Part of the problem can be traced to governments' willingness to finance everyone who gains admission to a tertiary institution. One way to expand access is to make students contribute to their own education. This is already occurring in some African nations, such as Kenya, through cost recovery and Module II programs, but the scope needs to be increased. Given that private returns to tertiary education are high in African countries, cost recovery should be increased and, where possible, governments should aim for full cost recovery. The popularity of private, for-profit providers of tertiary education in Africa suggests that a large number of students can afford to pay fully for their tertiary education.

Second, to ensure that the right sets of skills are acquired by students, government support for tertiary education should be geared to high-priority fields for the nation's development. It should not cover student welfare expenditures, since these are not related to education. This approach to funding would allow government to support more students who are truly needy, and would also introduce some form of equity into the financing of tertiary education in African countries.

Expanding access also would entail providing different pathways to higher education. The current system of admissions is focused almost exclusively on secondary-school graduates and full-time students; there should be a mechanism to admit nontraditional students who may not attend a tertiary institution on a full-time basis or who may attend through Module II.

One possible way of expanding access to tertiary education is through the use of ICT for distance learning. Most providers use either a residential model or an

on-campus delivery system. This is one of the reasons why the per course cost of higher education in Africa is so high. A possible way around this is to use ICT to deliver tertiary educational instruction through distance learning. Another possible way to reduce the unit cost is through increased specialization by institutions. Although most African tertiary institutions were set up to cater to certain specialties, recently most have started to offer the same sets of courses and programs. The result is that they do not excel in any area. More importantly, because tertiary institutions try to provide a small portion of every discipline, the unit cost of providing any specific program is high because institutions are not able to take advantage of economies of scale. To take advantage of economies of scale, differentiation among tertiary educational institutions needs to be encouraged.

Given that the public sector is unable to meet the demand for tertiary education in the foreseeable future, private provision of tertiary education is increasingly critical. Governments should provide the appropriate regulatory framework and the right incentives for the private sector to expand their provision of tertiary education. These incentives may include student loans, tax holidays, subsidies for the construction of infrastructure, subsidies to hire faculty, the ability to bid for government research grants, and the ability of students to use government scholarships to attend private tertiary institutions. To ensure quality, all private tertiary education providers in a country should be brought under same quality assurance mechanisms as the public universities and should be continuously monitored. There could be public-private partnerships in the provision of tertiary education in which the private sector may be contracted to provide some services (e.g., housing) directly to students.

Quality and relevance

The quality of education is more important than the quantity for development outcomes. This implies that, for African countries to benefit from improved tertiary education, they should focus with laser-like precision on improving quality and relevance even as they struggle to increase quantity. This can be achieved only through a radical restructuring of existing tertiary educational systems by carrying out curricular reforms, instituting appropriate funding mechanisms, and providing incentives.

The central focus of any reform should be high-quality improvements and upgrades. The quality of any output or service partly depends on the quality of its inputs—physical infrastructure, faculty, staff, and, above all, management. Maintaining infrastructure and retaining faculty and staff should be the top priority. While workers are trained in these countries with the appropriate skills to become high-quality faculty members, they have often emigrated because of poor working conditions in their home countries. Tertiary institutions could attract appropriate talent by providing appropriate working conditions, including academic freedom, shared governance, and research support. Improving quality would also involve setting quality standards and strengthening the oversight of quality assurance bodies.

No systematic quality control mechanism exists either through accreditation boards or internal self-study, or through periodic program evaluations. The result is that programs continue to be offered long after they have outlived their usefulness or when their quality is not up to the desired standards. Quality assurance bodies could set minimum standards expected of graduates and researchers from such programs, and tertiary institutions should be held accountable for reaching these standards. Programs that consistently fail to meet these minimum standards should then lose their accreditation. Another way to ensure high quality is to link the funding of universities to quality outcomes; institutions that consistently meet or exceed these standards would have their funding increased, while those that consistently fail to meet these standards would have their funding decreased.

A focus on quality without relevance to the needs of Africa is an inappropriate and inefficient way of providing tertiary education for Africa. To make it relevant, curricula must be completely restructured. The emphasis should be on moving from an emphasis on social sciences and the humanities to one focusing on science, engineering, mathematics, and entrepreneurship with particular application to African problems. The curricular redesign should involve inputs from industry and non-tertiary academic institutions, as well as other stakeholders. If the curricula are to focus on the solution of African problems, then the pedagogical approach should be one of experiential learning. Experiential learning can also be conducive and supportive of strong UILs in Africa, which would also encourage the private sector to support tertiary institutions.

A radical restructuring and redirection of tertiary education toward S&T is not likely to be successful unless primary and secondary education is also redesigned to emphasize S&T to prepare students for the new curriculum at the tertiary level. Finally, it may be necessary for tertiary educational systems to move away from the disciplinary silos approach and allow students to take courses from many disciplines before declaring a major. Allowing students to pursue a program of general education before specializing in a particular field will not only broaden the outlook of the students but also allow them to combine several areas, thus getting a more rounded education. Successful entrepreneurs, for example, are generally those who combine skills from different fields to solve a problem. Constraining students to a particular field, as the current system does, limits the problem-solving potential of these graduates.

Achieving high quality and relevance in tertiary educational programs may be impossible without quality

governance and leadership. Thus the quality of governance in tertiary educational systems in African countries needs to improve. In practically all five countries, the heavy hand of government in the governance of tertiary education is everywhere, both at the systems level and the institutional level. Although most countries have buffer bodies that make policy and set general rules and standards for the system, most members of these bodies are chosen by the government and are directly responsible to the minister of education or the head of state. More often, governments have used their appointing powers to staff these bodies with political supporters. These factors have led to decisions based on political considerations rather than on what is in the long-term interest of tertiary education. Making these boards truly independent of political control—through mechanisms such as staggered terms that are far longer than any presidential term, and the ability to remain in office once appointed and confirmed, regardless of changes in the political environment—would be a step toward effective leadership.

Internally, the current system of hiring the chief executives and the appointment of university councils involves a great deal of political influence. Thus the current process may not yield the best candidate to lead the institution but rather one whose political views may be similar to those of the incumbent government. A way to overcome this is for the chief executive to be chosen through a competitive, transparent hiring process conducted by an independent search committee formed by the university community at large with the participation of other stakeholders. In addition to hiring, the chief executive should be responsible to an independent board of trustees dedicated to the long term-interests of the institution. The board would then set the standards of performance for the chief executive and provide the incentives (both positive and negative) to achieve these objectives.

Financing

The current system of financing tertiary education in the five countries, and in Africa generally, is not sustainable. These countries need to explore several possible additional sources of funding. The establishment of endowment funds to finance tertiary education is a well-established practice in North American and European universities, yet this is not a funding source that has been explored by African universities. Administrations of tertiary educational institutions could approach their alumni, businesses, foundations, individuals, and families to contribute to endowment funds. In this connection, the universities could forge strong links with their alumni in the diaspora. Businesses could be encouraged—through tax breaks and other incentives—to contribute to endowed research and teaching professorships in their fields of interest.

Another possible source of funding is the entrepreneurial activities of the universities themselves. Although some tertiary educational institutions offer short courses at more than their cost, there are far too few of these courses. Given the pent-up demand for such courses, tertiary institutions should expand these programs. These institutions can also raise additional funding through consulting and other contract research with business and other government entities. This requires close cooperation with businesses—hence the importance of establishing strong and extended UILs. The use of this source of funding is also likely to increase the relevance of tertiary education for African economies, since the research and teaching efforts of the institutions are likely to focus on African problems if they rely in part on industry collaboration for funding. This source of funding and the associated UILs will be successful only if university faculty and students are given appropriate incentives to work with industry.

Another possible source of funding of tertiary education is emigration "fees." A disproportionately large share of the students of African tertiary institutions emigrate to work in developed countries and the oil-exporting Gulf countries after graduation. While the destination countries benefit from the skills of these emigrants, they do not contribute to the cost of their training. Since African countries are training graduates for the use of destination countries, they could negotiate with the destination countries to pay a training fee for their services. This could be a fixed amount for each graduate employed by the destination country. The income so generated could then be used to fund expansion and quality improvements in African tertiary institutions to finance more training.

The role of development partners

Multilateral and bilateral development partners can complement the efforts of African countries to improve tertiary education. Given that one of the major constraints on expanding, improving, and transforming tertiary education in Africa is a lack of funding, development partners can help African countries by providing additional funding and educational resources. Currently, development partners provide very little direct support, if any, for tertiary education, although they do provide support for education generally. One of the reasons for this lack of support for tertiary education stems from the perceived belief that it does not contribute to social development as much as earlier education. However, with the publication of the World Bank's 2008 report on the subject, this perception is now changing.[47]

Modest external financial support directed specifically at the tertiary educational sector in African countries could achieve major improvements to the sector. The funding should be strictly targeted for specific purposes and should be in addition to, rather than in place of, countries' own contributions. The contribution of

development partners could be conditional on extra contributions by African countries. To ensure that these funds are effectively utilized to expand, improve, and transform tertiary education, they could be given on a cash-on-provision basis—that is, countries actually receive the funding only if they deliver the desired outcome. In addition to financing, institutions of higher learning in development partner countries can help improve tertiary education in African countries by providing and sharing reading and other library resources, especially electronic materials. Finally, these institutions could provide free educational materials—such as those provided by MIT's OpenCourseWare—to African universities.[48]

In addition, development partners—such as the African Development Bank and the World Bank—could support the training of senior tertiary education staff in education management techniques and curricula development. One of the major weaknesses in African tertiary education is weakness in its governance and administration, especially as they relate to curricular development, enrollment management, optimal resource combination, and cost reduction. This training could involve collaborative arrangements whereby senior managers from institutions in a development partner country are seconded to institutions in an African country to help in developing institutional management and staff. This training should be done in African countries so that any management training not only focuses on what is of importance to the African countries but also takes into consideration African institutions and environment.

Clearly, African tertiary educational institutions have a lot of work in front of them. There are many challenges to transforming them into effective, relevant, and accessible institutions that work for African countries. But it is possible to make use of the lessons that have been learned in some of the five countries considered here, and the potential rewards are great.

Notes

1 World Bank 2008a.

2 Barro and Lee 2010; Gyimah-Brempong et al. 2006; Krueger and Lundhal 2001; Mankiw et al. 1992; Self and Grabowski 2003; World Bank 2008a; World Economic Forum 2009; among others.

3 Caselli and Coleman 2006.

4 Commission on Growth and Development 2008. The report reflects the views of a Commission consisting of 19 well-known and experienced policy, government, and business leaders, mostly from the developing world, and two renowned economists. It was written over two years during which the Commission interacted, consulted with, and learned from leading academics, business leaders, policymakers, and NGOs. The report reflects the learning over this period and is informed by the Commission members' own experience.

5 Teal 2010.

6 Altinok and Murseli 2006; Hanushek and Kimko 2000; Hanushek and Wobmann 2007.

7 Morley at al. 2009.

8 Hanushek and Kimko 2000.

9 Landes 1998.

10 Bloom et al. 2006.

11 World Bank 2008a.

12 UNESCO 2007. According to UNESCO, the gross enrollment ratio, tertiary level, is the sum of all tertiary-level students enrolled at the start of the school year, expressed as a percentage of the mid-year population in the 5-year age group after the official secondary school–leaving age.

13 Republic of Kenya 2008a.

14 Republic of Kenya 2010.

15 Teshome and Kebede 2009.

16 See Republic of Kenya, 2008a.

17 See World Bank 2008b.

18 Psacharopoulus and Patronis 2004.

19 Nyarko 2010.

20 See Republic of Kenya 2008a.

21 See Altbach et al. 2009.

22 Bjarnason et al. 2009.

23 See Alemu 2010; Levy 2007; Materu 2007; Oketch 2004.

24 Government of Botswana 2008.

25 This assessment is based on UNESCO 2007.

26 *ISIC* refers to International Standard Industrial Classification of all economic activities. The ISIC Code 2212 refers to the publishing of newspapers, journals, and periodicals. This is the code description and numeric code of an international classification system.

27 Gyimah-Brempong, forthcoming.

28 Schumpeter 2003.

29 Tracey and Phillips 2007.

30 UNESCO 2007.

31 Urban 2010.

32 Urban 2010.

33 Kabongo 2009.

34 Styrdom and Adams 2009.

35 Mafala 2009.

36 Moremong-Nganunu et al. 2008.

37 Republic of Kenya 1988.

38 Bosma and Harding 2007.

39 Act 2002-80, Tunisia's 2002 Educational Reform Act.

40 World Bank 2010.

41 Caselli and Coleman 2006.

42 Chesbrough 2007.

43 Kruss and Peterson 2009.

44 Republic of Kenya 2008b.

45 Government of the Republic of South Africa 2002.

46 Kruss et al. 2009.

47 World Bank 2008a.

48 The Massachusetts Institute of Technology provides free, online lecture notes, exams, and videos through its OpenCourseWare program. See http://ocw.mit.edu/index.htm for more information.

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CHAPTER 2.2

Strengthening Women's Entrepreneurship

MARY HALLWARD-DRIEMEIER, World Bank

The rate of women's entrepreneurship is high in Africa—higher than in any other region. However, this is not necessarily a sign of economic empowerment. Indeed, among entrepreneurs, the share of those who are self-employed compared with those who are employers is highest in Africa, particularly in low-income sub-Saharan Africa. While women account for 40 percent of the non-agricultural labor force, they make up 50 percent of the self-employed but only 25 percent of employers.

Beyond the question of rates of entrepreneurship, there is also a question of whether there are performance gaps between men's and women's enterprises. Among employers, we find that—after accounting for differences in size, sector, and industry—any gender gap in performance becomes statistically insignificant. Among the self-employed, there is more variation and some evidence of gender gaps (particularly where women work part-time and/or in rural areas). Rather, where gender patterns are most striking is in firm size and sector and industry type: women are disproportionately found in smaller firms, in the informal sector, and in lower-value-added industries. Thus the agenda for expanding women's economic opportunities is one of enabling women to move into higher-value-added activities, both in terms of taking the step from self-employment to being an employer, and in broadening the types of activities in which they engage.

This chapter begins by looking at gender-disaggregated patterns of entrepreneurship across regions, and then by income groups within Africa.[1] It compares the performance of women's and men's enterprises, focusing on the performance of employers, as the enterprises they run have the greatest productivity and growth potential. It examines the distribution by gender across types of entrepreneurial activities being pursued. It shows the importance of controlling for key characteristics of enterprises (sector, size, industry) and entrepreneur (particularly education) in accounting for most gender gaps in firm performance. In understanding the differences in gender sorting across types of enterprises and entrepreneurial activities, the chapter examines gender differences in human capital and access to finance and assets. However, additional constraints in the investment climate could also be important—with women entrepreneurs well positioned to identify them

This chapter draws on the forthcoming work *Expanding Opportunities for Women Entrepreneurs in Africa* by the same author, with the assistance of Reyes Aterido, Mark Blackden, Ousman Gajigo, Tazeen Hasan, and Alejandro Rasteletti. It also complements the 2007 *Africa Competitiveness Report* chapter "Gender, Entrepreneurship, and Competitiveness in Africa" by Bardasi et al. It uses updated data from countries in the region, compares self-employment with being an employer, and focuses on additional dimensions of how to strengthen women's opportunities—by addressing gender gaps in access to assets, incorporating a wider set of measures of human capital, and finding ways to strengthen women's voices in policymaking decisions.

and to propose solutions. Thus, the chapter concludes with a discussion of how to increase women's participation in the policy dialogue addressing issues of relevance to entrepreneurs.

Where do women work?

Using national household and labor force surveys from 137 countries, Figures 1a and b look at where women and men are economically active. Economic participation is subdivided into five employment categories, with a sixth category reflecting non-participation in the labor force. Employers (dark blue bars) are clearly a small share of the overall population for both women and men. Self-employment (pale gray bars) represents a much larger share. The shares that are in paid employment are represented by the black bars and unpaid workers by white bars. The share in agriculture (whether as self-employed, as an employer, or as a paid or unpaid employee) is represented by the light blue bars.

There are a number of patterns that can be seen across regions. First, women are less likely than men to be in the labor force in every region. Men's labor force participation is both higher than women's and exhibits less variation across regions. Women's participation rates are highest in Africa (equivalently, the rate of those who do not participate in the labor force is lowest in Africa), and the gender gap in participation is lowest in Africa.

Second, agriculture represents the most common form of employment within three regions. It is highest in Africa, with little difference in gender shares. But the share of women participating in the non-agricultural labor force in Africa falls, on average, to 25 percent. This is higher than it is in the Middle East and South Asia (less than 20 percent, but lower than the 28 percent in East Asia Pacific, 35 percent in Eastern Europe and Central Asia, and 40 percent in Latin America and the Caribbean).[2]

Third, Africa and the Middle East and South Asia are the two regions where women's share in self-employment is higher than in wage employment. For men, in every region, wage earners outnumber the self-employed by at least two to one. Eastern Europe and Central Asia is the region where wage employment is particularly high and self-employment relatively low.

Fourth, rates of being an employer are low in all regions for both women and men. However, in aggregate, their activities account for a much higher share of overall employment and output, as their businesses employ those who report themselves as paid workers and unpaid workers.

Fifth, gender gaps in wage employment are greater in Africa than in the other regions. The overall availability of wage work is lowest in Africa—and is disproportionately filled by men.

One of the principal explanations for these different patterns is differences in income levels. Figure 2 looks within Africa, dividing countries by income levels. It is clear that there is significant heterogeneity within the continent, with the middle-income countries reporting patterns more similar to those of Latin America and the Caribbean or Eastern Europe and Central Asia than to low-income countries in Africa.

Thus, high rates of agricultural activities and lower rates of being out of the labor force characterize the low-income countries. In Africa's middle-income countries, agricultural employment drops significantly. The share of those in wage work rises with country income and the share in self-employment falls. The share of employers, however, does not appear to vary significantly.

Figure 3 repeats this information, rescaling it based on including only those in the non-agricultural labor force. It shows that in low-income African countries, more than half of women in the non-agricultural labor force are self-employed—twice the rate seen in lower-middle-income countries, which is again almost twice the rate seen in upper-middle-income countries. The share of wage earners more than doubles when moving from low- to middle-income countries, and the share of unpaid workers falls dramatically.

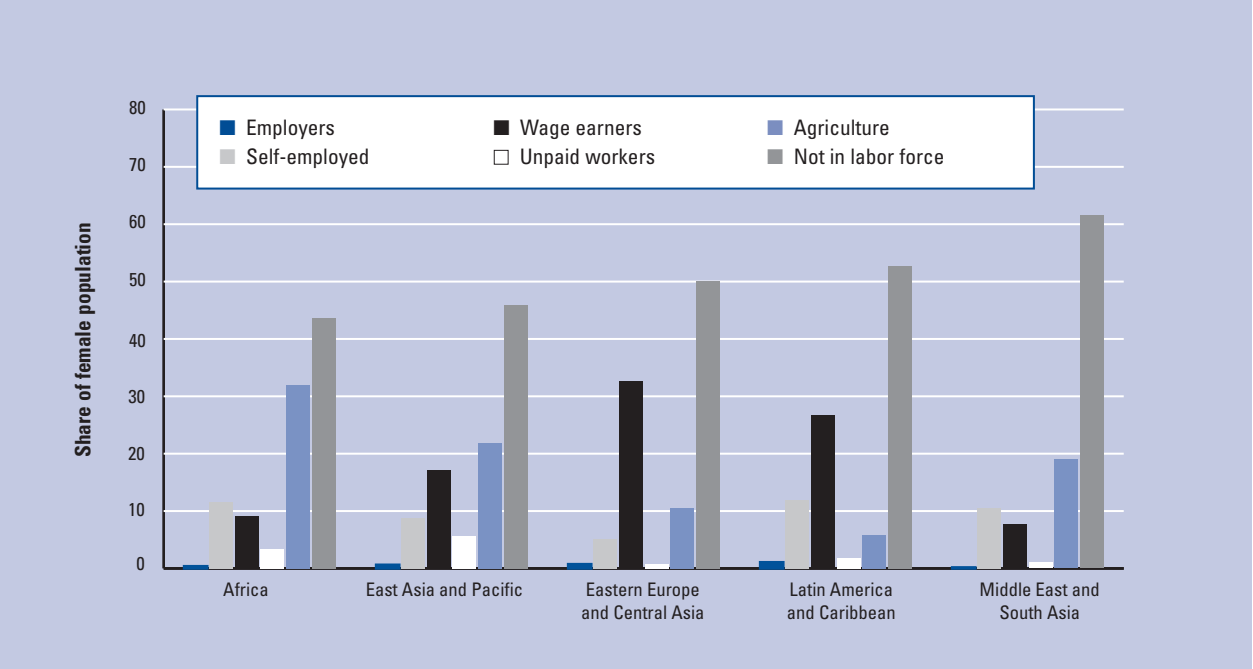
Figure 4 shifts the perspective from the distribution of women across employment categories to look at each employment category and the share within it that is female. To benchmark the different categories, the far right bar (pale blue) shows the overall share of the non-agricultural labor force that is female. In each case, the light blue bar is below 50 percent; there are more men than women in the non-agricultural labor force. By comparing the heights of the other bars in the graph it is possible to see whether women are disproportionately more or less likely to be in that employment category.

In low-income countries, women make up approximately 42 percent of the non-agricultural labor force. However, they comprise half of the self-employed and unpaid workers, but only a quarter of the employers. In lower-middle-income countries, the share of women in employment categories is less skewed. In upper-middle-income countries, the share of self-employed women is not much higher than the overall rate of women in the non-agricultural labor force. The share of women among unpaid workers is higher, but from Figure 3 we also know this is only a small share of the labor force.

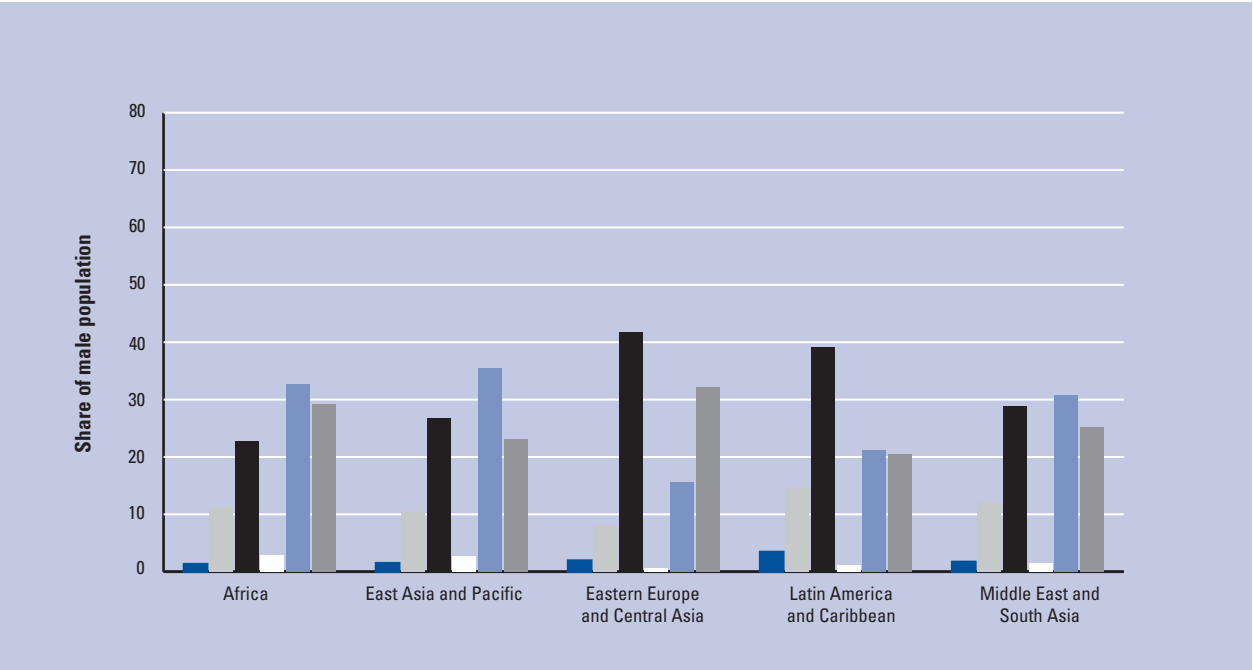
What is true is that the share of women in self-employment falls as income rises. However, the share of employers that are women remains relatively constant, at 25 percent. Explanations that account for women's involvement as employers need to go beyond simple links to development, and are explored below after laying out the patterns of the different types of enterprises run by women and by men.

Figure 1: Where women and men work, by region

1a: Women

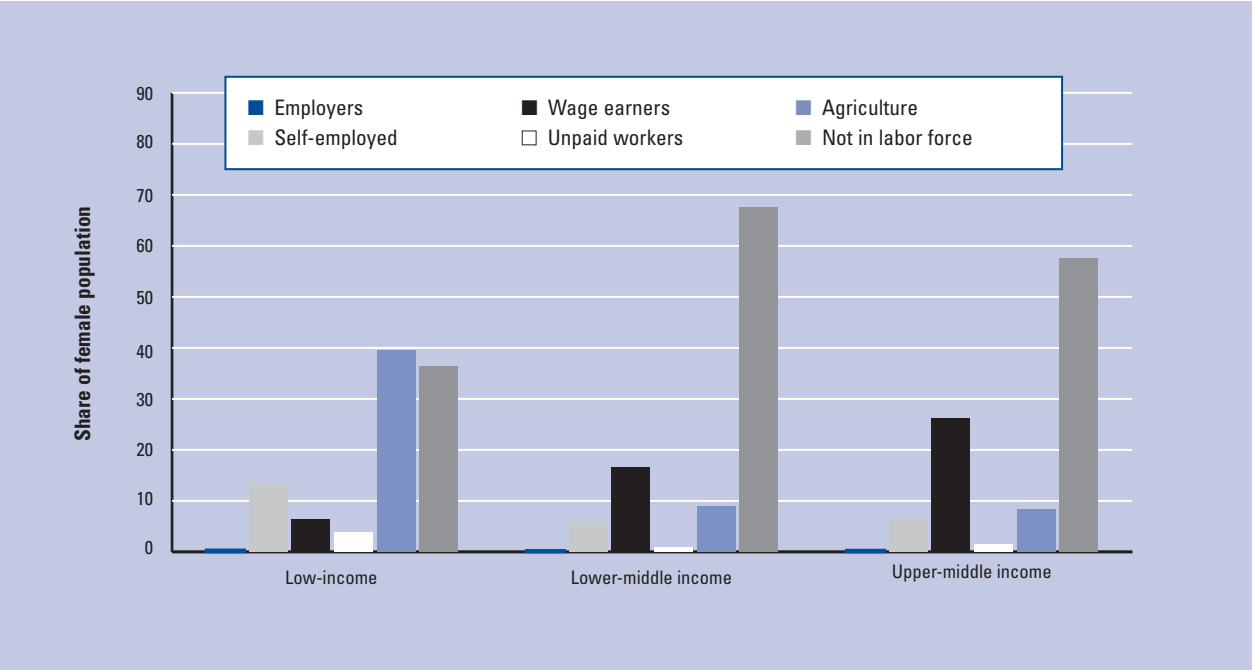


1b: Men



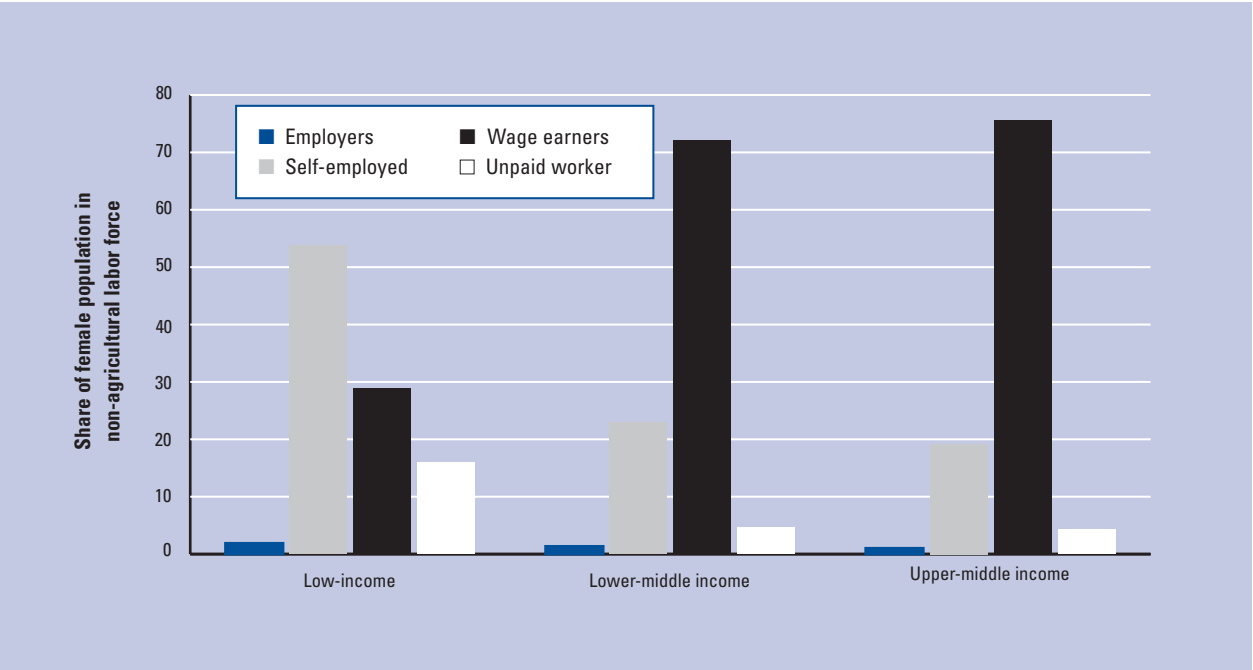
Source: National household and labor force surveys, various years (2000–10)

Figure 2: Where women work in Africa, by income level



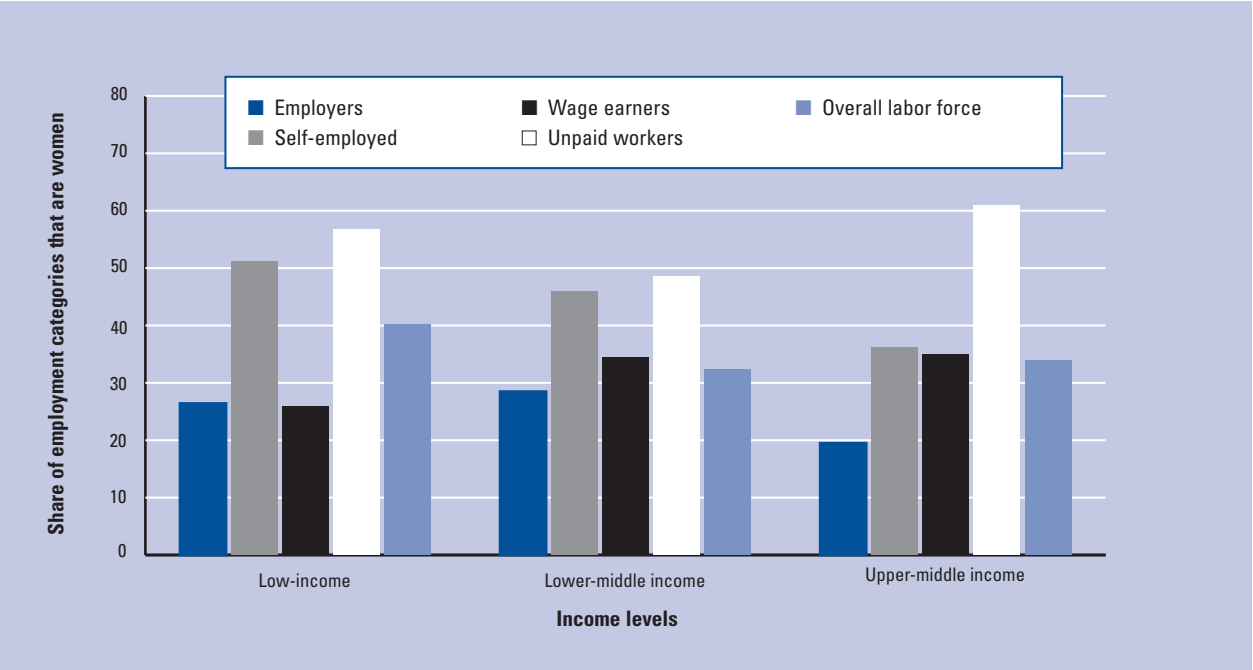
Source: National household and labor force surveys, various years (2000–10).

Figure 3: Working women in non-agricultural labor force in Africa, by income level



Source: National household and labor force surveys, various years (2000–10).

Figure 4: Women's share of employment categories in the non-agricultural labor force



Source: National household and labor force surveys, various years (2000–10).

Types of enterprises run by women and men

One challenge in comparing "women's" and "men's" enterprises is definitional. What criteria should be used in making this distinction?

For some enterprises, this is not a meaningful distinction. Behind this question is the assumption that women and men may face different constraints or be able to draw on different resources in starting or running a business. For some types of firms this should not be relevant. For example, for firms that are state owned, are publicly traded, or are incorporated so that the enterprise is an independent legal entity, the gender of an individual owner is not likely to matter. However, for smaller firms, the characteristics of the entrepreneur could matter more. For example, there might be gender gaps in property rights, in the ability to apply for credit, or in the likelihood of harassment from officials.

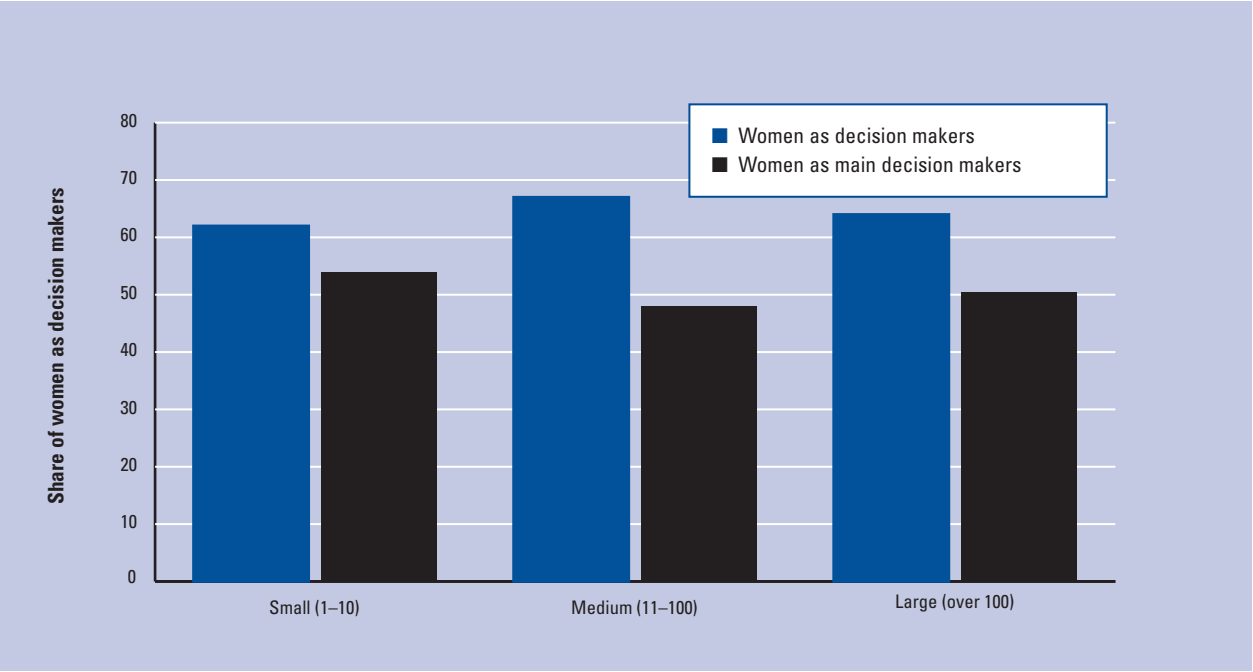
For the vast majority of small firms, the same person is the owner, manager, and key decision maker within the business. Knowing the gender of that person is sufficient. However, for firms with multiple owners, or for firms where the owner is not the person running the firm, multiple definitions are possible. Ownership and decision-making control are two possibilities, with a further question of whether it is necessary to look only at the principal owner or decision maker, or whether the presence of female participation is sufficient. It is not that one is correct, but these two possible criteria imply varying degrees of inclusion in "women's" enterprises that may affect the comparisons with "men's."

The World Bank's Enterprise Surveys provide a means of examining the importance of the different definitions—and the potential differences in the opportunities and constraints women and men may face in operating and growing their businesses. The Enterprise Surveys provide detailed information on investment climate conditions and firms performance based on large, random samples of entrepreneurs.[3] Now covering over 100,000 entrepreneurs in 100 countries, this database provides an important tool for looking at female and male entrepreneurs around the world. The Enterprise Surveys collect information on "female participation in ownership." A follow-on survey in six African countries also collected information on the principal decision maker. In as many as half the firms with some female ownership, the woman is not the main decision maker.

Figure 5 illustrates that the distinction between having "female participation in ownership" and a woman as the primary decision maker running the business are not the same thing. Of establishments with multiple owners of whom at least one is female, half do not have a woman as a main decision maker and 35 percent (including 55 percent of partnerships) do not have a woman even participating in a decision-making role. This was not a random distribution of firms. It was the larger, more productive multiple-owner businesses that tended to include female members among the owners but not as decision makers.

Beyond distinguishing between "female participation in ownership" and "women as prime decision

Figure 5: Female decision makers in firms with (some) female owners, by firm size



Source: Hallward-Driemeier et al., 2011.

maker," we also look at sole proprietors where the owner and decision maker are almost always the same person. This makes distinctions along gender lines much clearer, but the firms in the sample often have fewer employees and lower levels of sales.

For the larger Enterprise Survey sample, the share of enterprises with "female participation in ownership" and the share of sole proprietors who are women show that the former includes a higher share of "women enterprises." While "female participation in ownership" averages over 25 percent across the region, there is considerable variation across countries, with Niger reporting 10 percent and Ghana just under 50 percent. When restricted to sole proprietors, the shares of female firms are substantially lower (for example, in Swaziland and Botswana), but there are some exceptions (e.g., Ghana, Kenya, Rwanda, and Zambia,).

Beyond looking at rates of ownership, the next section examines whether there are consistent differences by gender in the types of enterprises women and men run. As has been found in the literature,[4] women are more likely than men to work in smaller firms, in the informal sector, and in lower-value-added sectors. This has been documented based on household survey data or on samples of microenterprises.[5] The results here also show how the pattern changes when looking at the set of employers that largely operate in the formal sector (Figures 6a, b).

Size of the enterprise

Using the "female participation in ownership" criterion, there is little difference in gender composition by size—until reaching fairly large firms in Africa. However, looking only at sole proprietorships, the share of women declines with firm size, even starting at firms with 10 or more employees. Sub-Saharan Africa has relatively lower female participation for all sizes of firms, and more so for larger firms (see in Figure 7 that female participation is roughly 35 percent in all size categories outside of sub-Saharan Africa but in that region it is roughly 28 percent for small- and medium-sized enterprises and 15 percent for large firms).

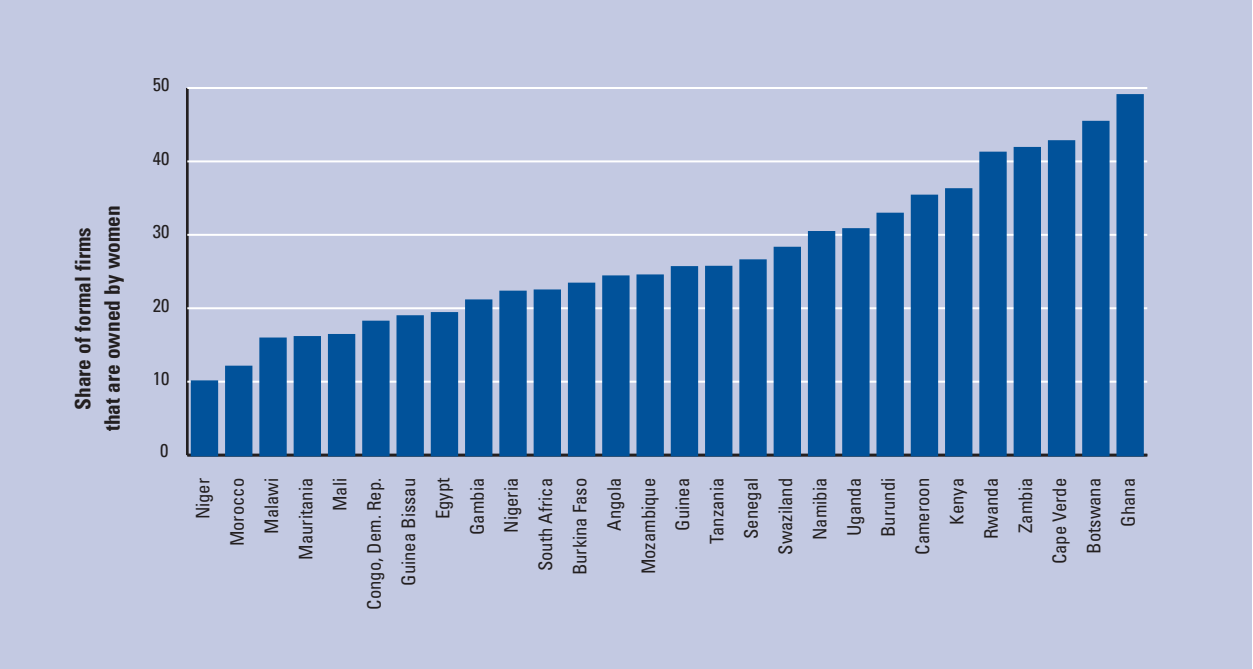
Formal or informal?

Rates of informality are high in many countries in Africa. Figures 8a and b show this from two different perspectives. The first uses data from national household surveys, and asks what share of women and men register their businesses. The second flips the perspective and looks at informal businesses, and asks what share of these businesses is run by women. The first better captures whether there are differences across gender in rates of formality. The second takes into account the fact that there are gender gaps in rates of participation as well as gender gaps by sector.

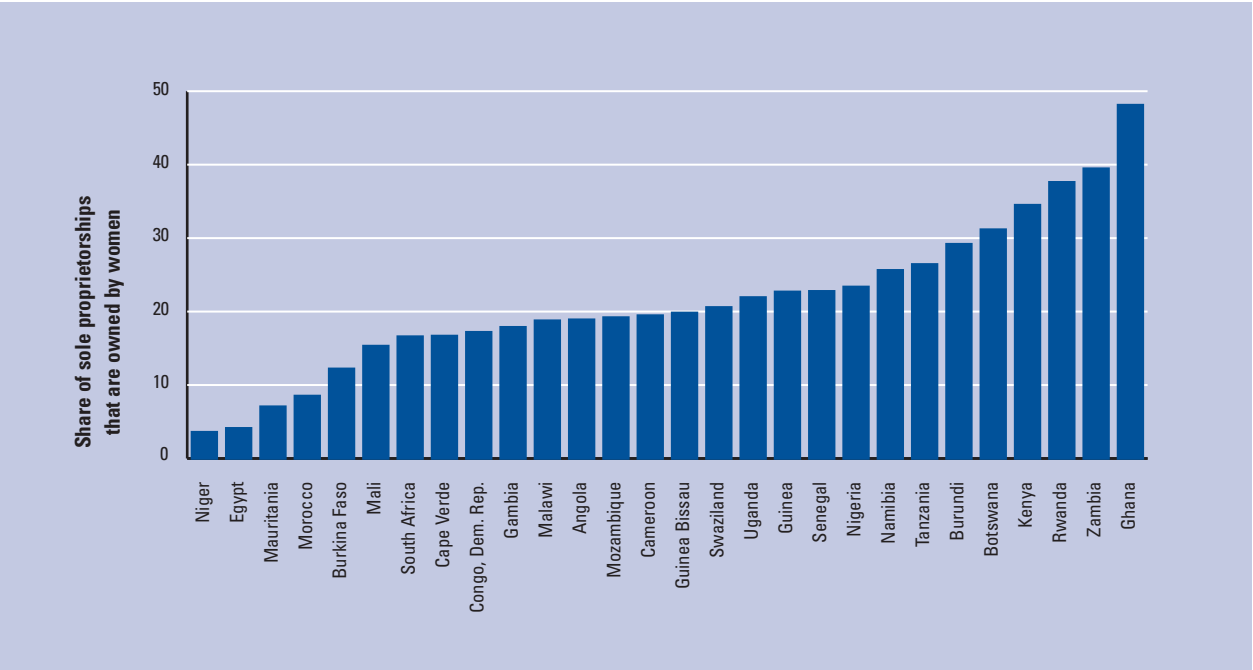
Using the household data, women-run firms are more likely to be informal than those run by men in all countries for which we have data. This difference persists even after distinguishing between those entrepreneurs who are employers and those who are not

Figure 6: Share of formal firms that are owned by women in Africa

6a: All formal firms



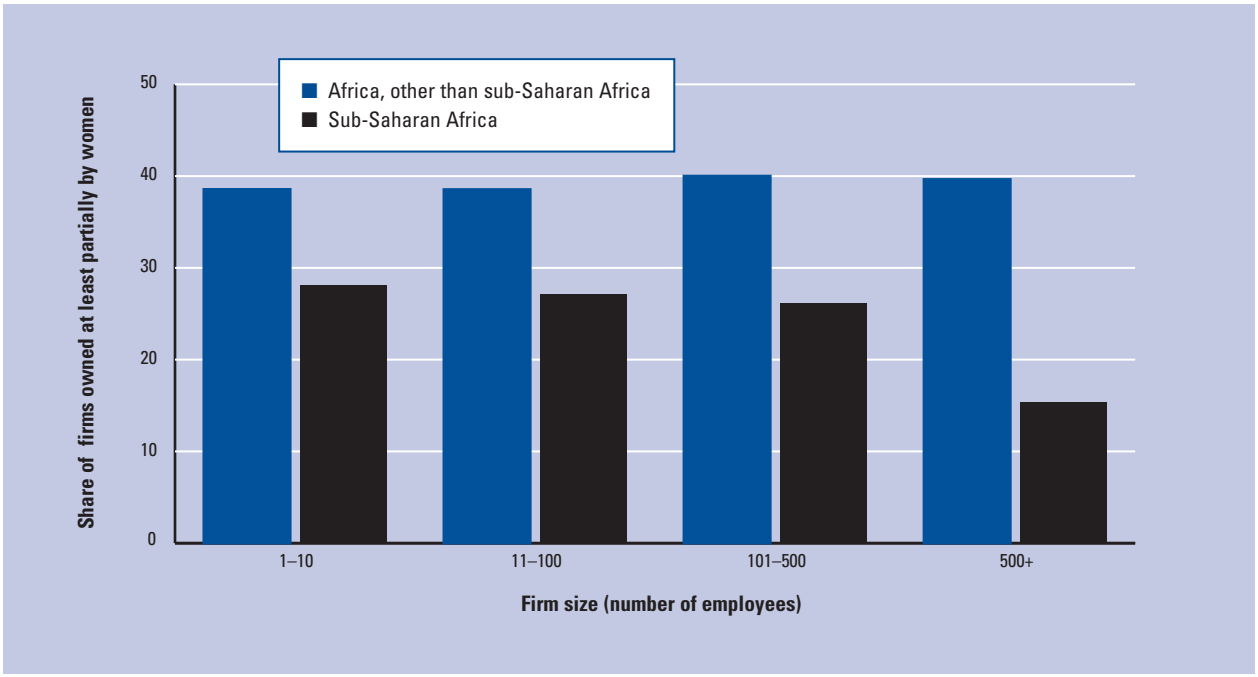
6b: Formal sole proprietorships



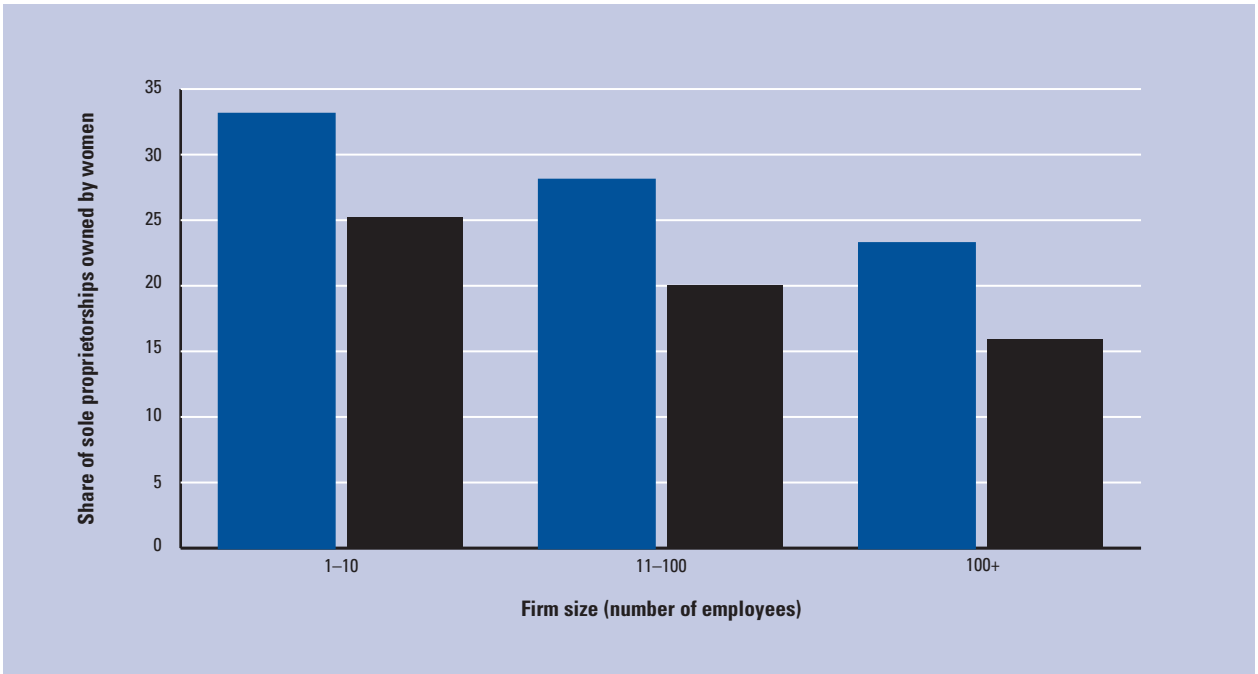
Source: Enterprise Surveys, World Bank, various years (2006–10).

Figure 7: Share of firms that are owned by women, by size

7a: All formal firms



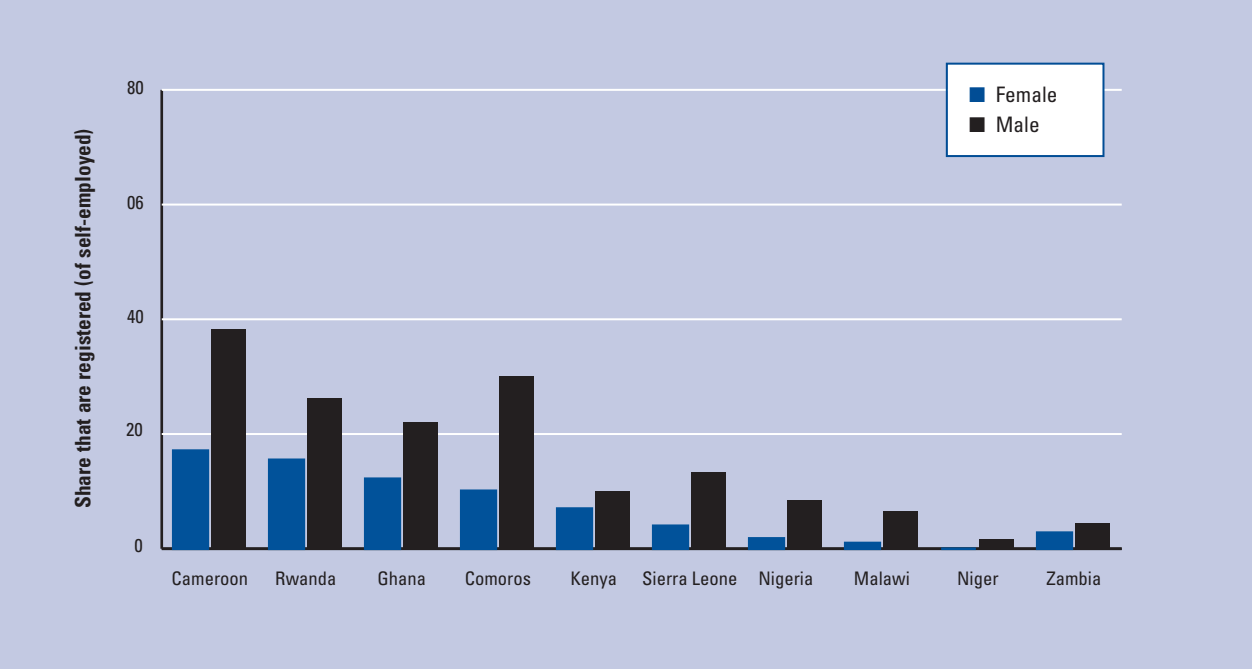
7b: Formal sole proprietorships



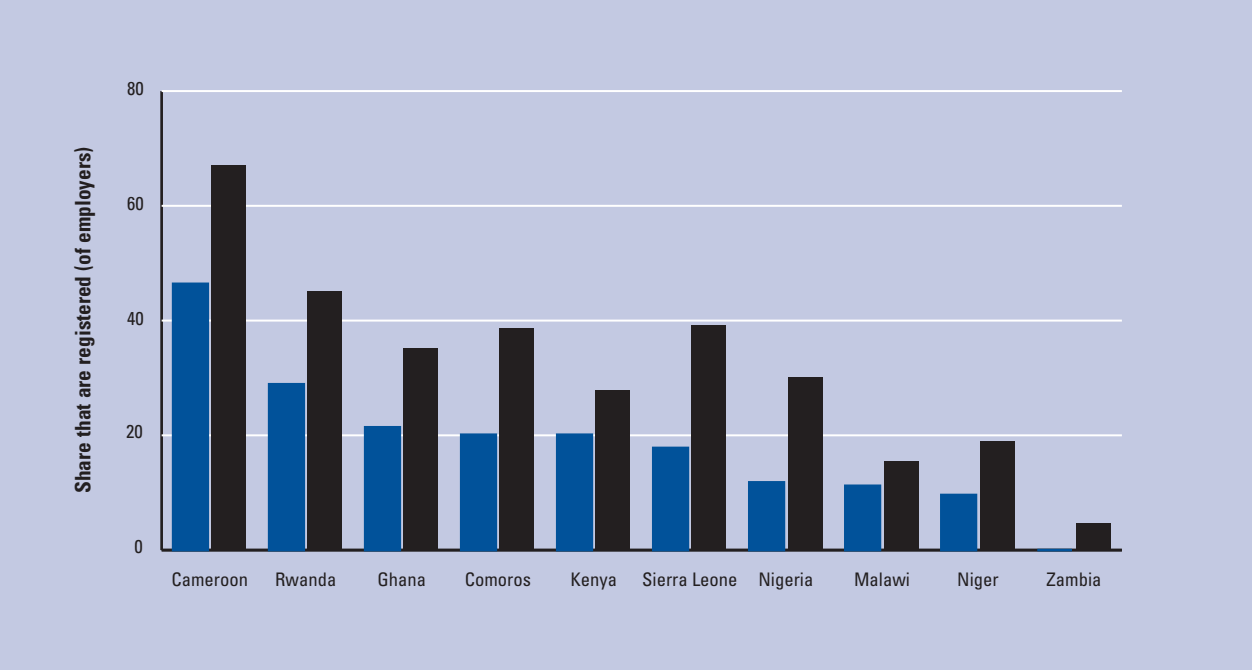
Source: Enterprise Surveys, World Bank, various years (2006–10).

Figure 8: Share of individuals who register their business

8a: Self-employed individuals



8b: Employers



Source: Hallward-Driemeier et al., 2011.

(Figures 8a and b; the bars in Figure 8b are higher than those in 8a). While employers are more likely to register, clearly the majority in most countries still do not register their businesses. For most countries, the gender gap is somewhat smaller among employers than the self-employed.

Looking at firms with employees in the informal sector that operate full-time, the share that are owned by women are still below half in all but three countries (Botswana, Namibia, and Swaziland), but the rates are higher than those in the formal sector (see Figure 9). There is also less of a decrease in the share of firms owned by women when looking at all informal firms from sole proprietors (in part reflecting that the large majority of informal firms are sole proprietorships).

Among firms with 20 or more employees, the share that is registered is significantly higher than the share of smaller firms, and with little gender gap. This is even more pronounced among larger firms (more than 100 employees). Women are more likely to be working in informal enterprises, but those running larger businesses are as likely as men to register their enterprise.

Sector of operation

Female entrepreneurs are, unsurprisingly, not uniformly distributed across all industries. This has important ramifications since, like their formal status, industries differ in their profitability, size, and opportunities for growth. Figure 10 shows, by sector, the share of registered firms that are owned by women. Women concentrate more than men in services and traditional, lower-value-added sectors such as garments and food processing. Men concentrate relatively more in other manufacturing and metals.

Female micro-entrepreneurs are less likely to be in the manufacturing sector and more likely to be in services. Women's participation across sectors tends to increase with literacy rates; the vast majority of women in low-literacy countries are in services.[6]

Productivity

Having shown that female entrepreneurs are relatively more concentrated in self-employment and in lower-value-added activities (they are less likely to be registered, and more likely to be in smaller firms and in more traditional sectors), the question is whether this matters. Are women's enterprises less productive or profitable than men's? Looking only at the average productivity of men's and women's enterprises, a performance gap is evident. However, controlling for the enterprises' characteristics (i.e., the sector and size of the business), and controlling for entrepreneur's characteristics (e.g., education and past experience), these gaps shrink and often disappear.[7]

Figure 11, which uses the formal Enterprise Surveys from 37 countries in Africa, shows the effect of controlling for enterprise characteristics. When comparing women and men without taking into consideration the types of businesses they run, one finds a 5.8 percent gap in labor productivity. Controlling for sector closes this gender gap somewhat and reduces its statistical significance. Adding in the size of the enterprise reduces the coefficient and the gap is borderline significant. Finally, controlling for the capital intensity of the enterprise makes the coefficient far from significant. Simply comparing women and men indicates there is a gender gap in labor productivity, but comparing women and men in the enterprises of the same sector, size, and capital intensity, there is no productivity gap. Thus, the productivity gap stems from women operating in lower-value-added sectors and smaller firms, rather than as a result of gender *per se.*

Constraints to improving performance: Differences by gender or type of enterprise?

Do women face additional constraints to running and improving their enterprises? Figure 12 shows the responses to objective questions about experienced obstacles, looking at four issues: the frequency of payments needed to "get things done," access to finance, manager time with officials, and losses from electricity outages. The differences are more significant by size than by gender. Among formal firms, smaller firms are less likely to be able to access finance. But smaller firms' managers spend less time with officials and face somewhat less frequent demands for bribes, perhaps reflecting that smaller firms are less likely to be fully compliant with the regulations and stay under the radar of officials.

Similar patterns are also found in more subjective measures of what entrepreneurs identify as being constraining, as well as when dividing the sample by sector and gender rather than by size. Enterprise characteristics—rather than gender *per se*—help account for which obstacles are seen as being relatively constraining to the operation and growth of existing businesses.

Strengthening women's entrepreneurship

The evidence provided so far shows that where gender matters most is in the selection of type of entrepreneurial activity—that is, self-employment versus employer, and size and sector of the enterprise. Thus in order to strengthen women's entrepreneurship we must understand what steers women to choose lower-return activities. Three areas are focused on here: access to human capital, access to financial and physical capital, and other investment climate constraints.

Looking first at patterns across countries, *Expanding Opportunities for Women Entrepreneurs in Africa* shows how differences in human capital and access to assets are part of the explanation.[8] In lower-income countries, the educational attainment of women is lower than men's—both the absolute share of women who attain various

levels of education is lower than the share of men and the relative educational achievement gap with men is larger. As women's education improves and the gender-education gap closes, their inclusion among wage earners increases. Thus relatively lower levels of education help account for the relatively higher share of self-employed women.

The other dimension of access to capital is access to assets, which is associated with security of property rights. *Improving the Legal Investment Climate for Women in Africa* introduces the *Women's Legal and Economic Empowerment Database (Women LEED Africa),* which illustrates the various ways that women's formal legal capacity and property rights differ from men's.[9] It shows that gender gaps in legal and economic rights are relatively widespread across the region. It should be noted that the pattern of gaps does not follow clear income patterns: middle-income countries are as likely as low-income countries to have gender gaps in formal economic rights. However, the pattern of rights is associated with the share of women who are employers; where women's economic rights are stronger, the share of employers who are women is higher. The association is robust to controlling for both income and level of education of the country.

Strengthening access to human and physical capital

Human capital is a key asset of entrepreneurs. It includes not only formal education, but also specific business skills such as management techniques, as well as the experience the entrepreneur brings to the business.

Education

Education is the most documented measure of human capital—and one where a gender gap has persisted for years.

In most countries, three patterns emerge (Figure 13). First, men (gray and white) tend to be more educated than women (blue and black). Second, employers are more educated than self-employed entrepreneurs. Third, this is particularly true *within* gender (i.e., male employers are more educated than male self-employed entrepreneurs; female employers are more educated than female self-employed entrepreneurs), but often not *across* genders. Self-employed women are almost always the least educated among the four categories.

An individual's level of education is strongly correlated with the success of the enterprise. Entrepreneurs with more education are more likely to earn higher profits and their enterprises to be more productive. And women and men benefit similarly from higher education. In most countries in the region, women have less education than men, although the gap is closing with younger generations. Not controlling for the entrepreneur's education can result in apparent gender gaps in performance. However, when comparing those with similar levels of education, there is no significant gender gap.

Managerial techniques

Education is not the only measure of human capital that has been tested for and found to matter. There has been a particular interest in specific types of human capital, namely managerial techniques that should be associated with higher productivity. Recent research shows the importance of management techniques in improving firms' performance across a range of developed and developing countries.[10] Using a similar set of indicators in five sub-Saharan African countries, Hallward-Driemeier and Aterido's analysis shows that the use of these techniques is relatively low in the region—but significantly correlated with higher productivity. Women were slightly less likely to use these techniques. But those who did benefitted from them to the same extent as men.[11]

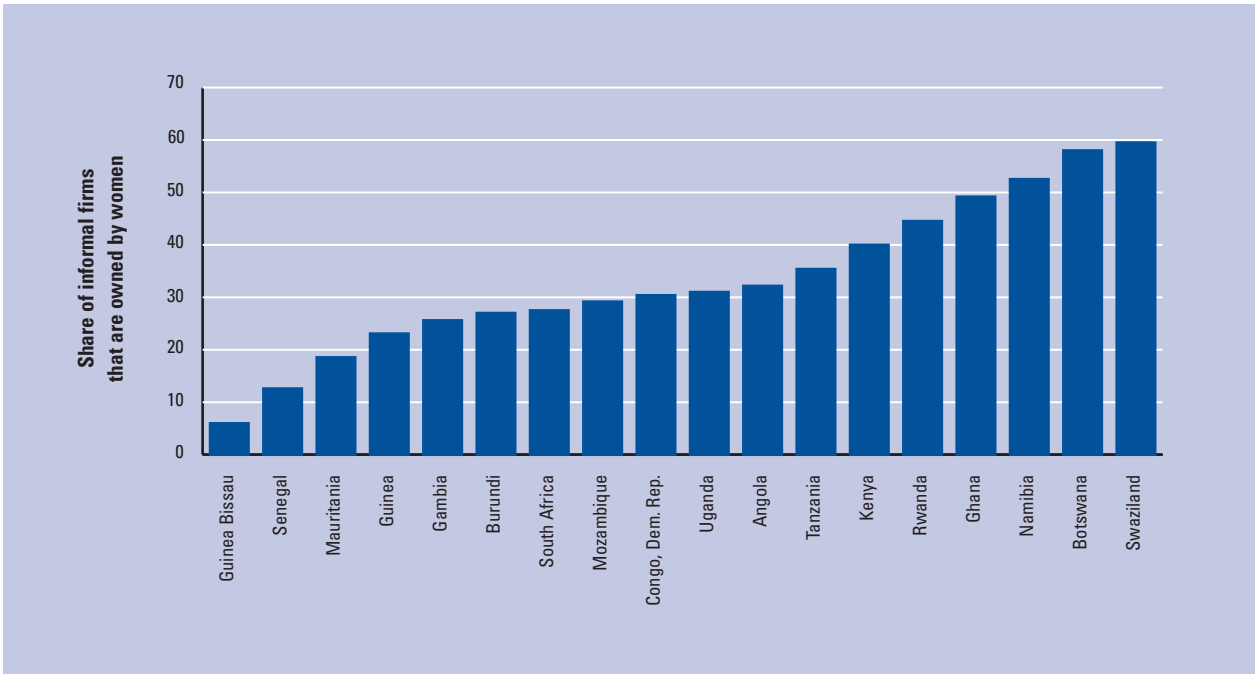
Prior labor market experience

Another important human capital variable is experience. Entrepreneurship-related experience may, in some cases, be a bigger determinant of productivity than non-specialized formal education. Because of the likely presence of learning by doing, heterogeneity in experience is important. This could be the result of a better understanding of the available opportunities in particular product lines (and, correspondingly, a better appreciation of relevant constraints and how to navigate them). It also reflects the development of valuable contacts for finance and/or the accumulation of non-tangible but important management and production skills that can be learned only on the job.[12] Gender is also likely to affect labor supply. The time demand for men and women at home vary, and this sometimes leads to different elasticities of labor supply. Consequently, both the duration and type of experience may differ by gender.[13]

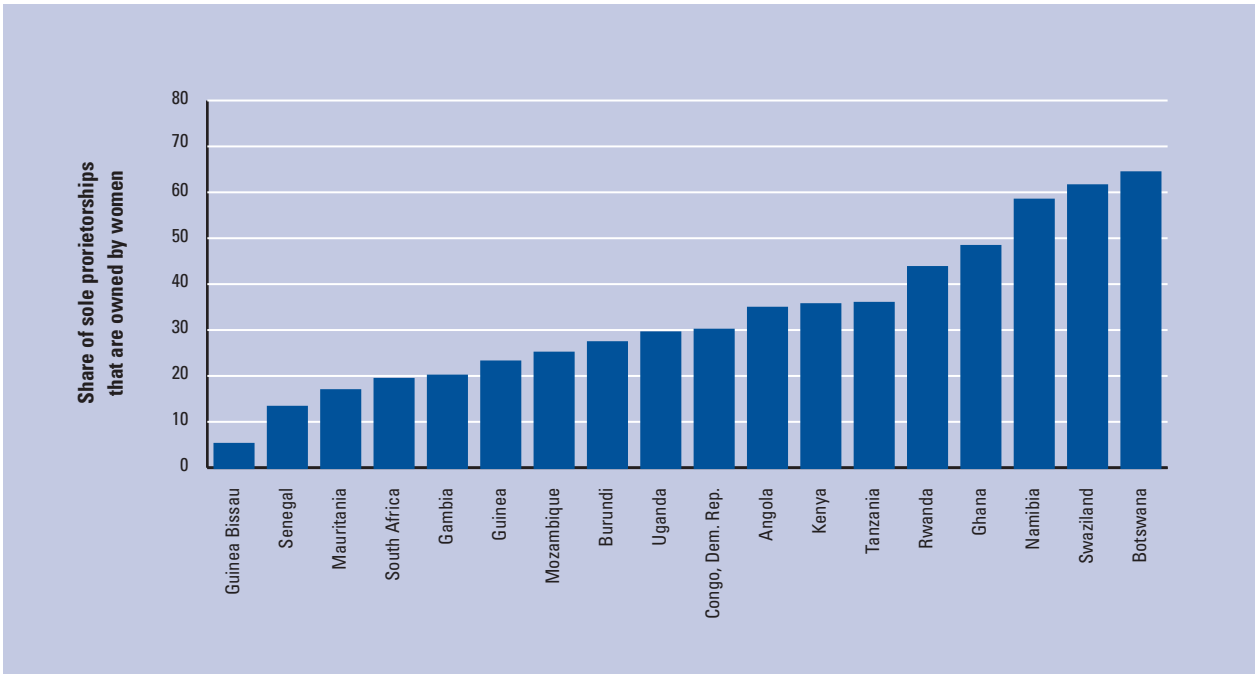
As in education, when it comes to the background of entrepreneurs, the difference between the formal and informal sectors is greater than the difference across gender. New entrepreneurs were far more likely to start an enterprise in the sector in which they had been employed prior to starting their business. Within a sector, the types of prior experience women had is far more similar to that of their male colleagues in that same sector than to women in other sectors.[14] However, there was some evidence of a gender gap in the informal sector. Female entrepreneurs in the informal sector were significantly more likely to have been unemployed and looking for a job in the months preceding their entry into entrepreneurship than male entrepreneurs in the informal sector (29 percent versus 21.6 percent). The percentage of men in the informal sector who used to be paid enterprise (both formal and informal) employees (50 percent) significantly exceeds the percentage of women in that category (39 percent).

Figure 9: Share of informal enterprises (with employees) that are owned by women in Africa

9a: All informal firms



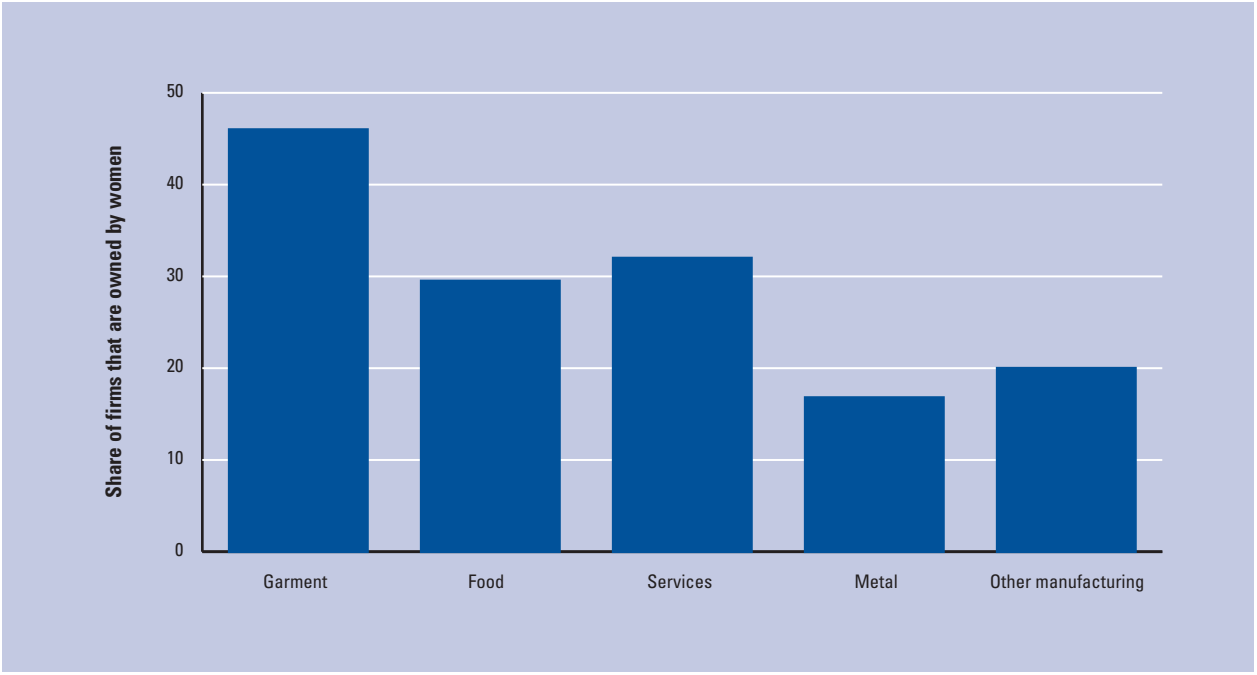
9b: Informal sole proprietorships



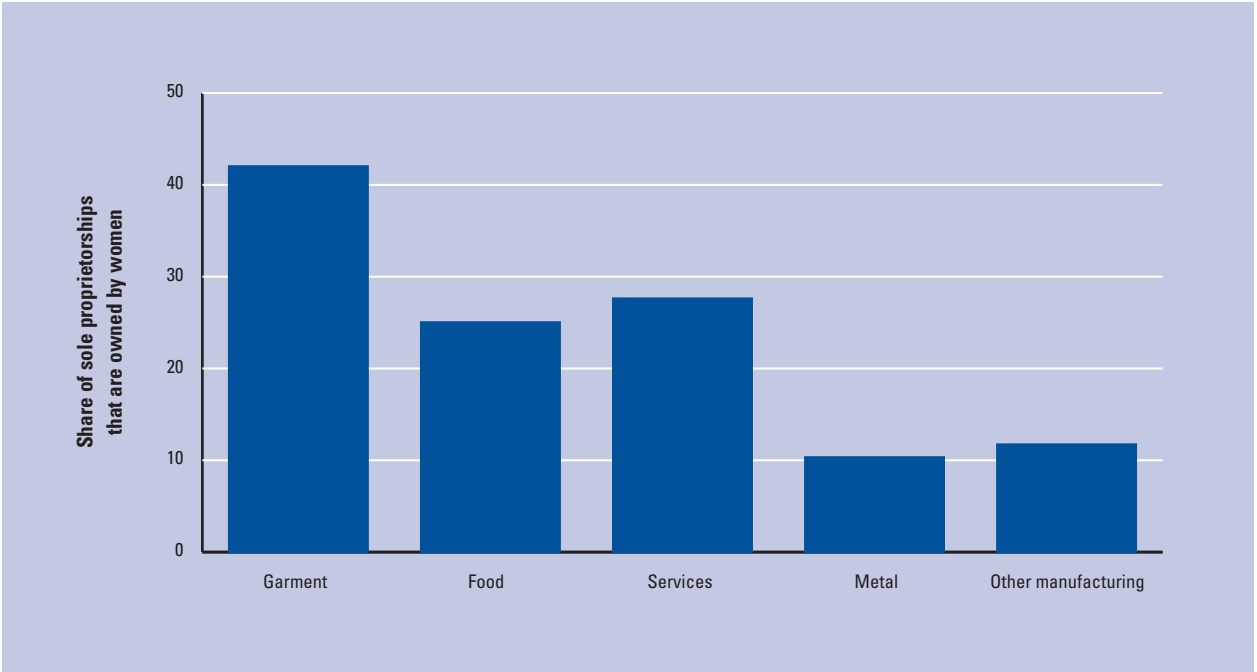
Source: Enterprise Surveys, World Bank, various years (2006–10).

Figure 10: Women's participation across industries: Share of firms that are owned by women

10a: All formal firms

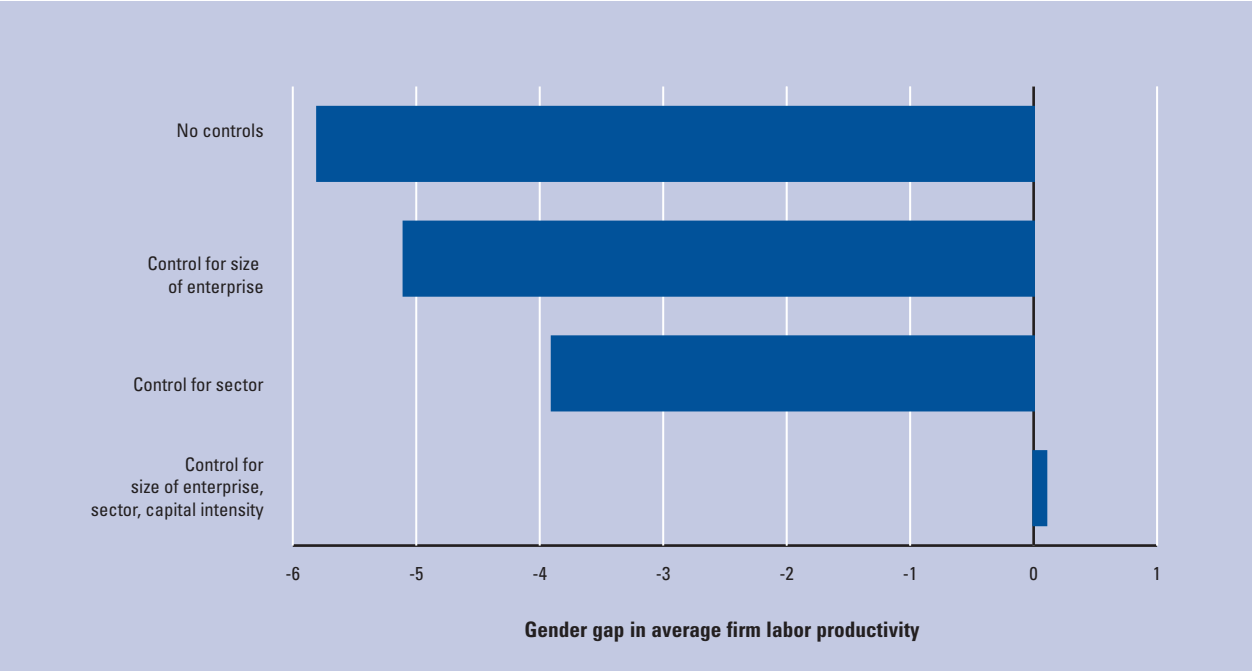


10b: Formal sole proprietorships



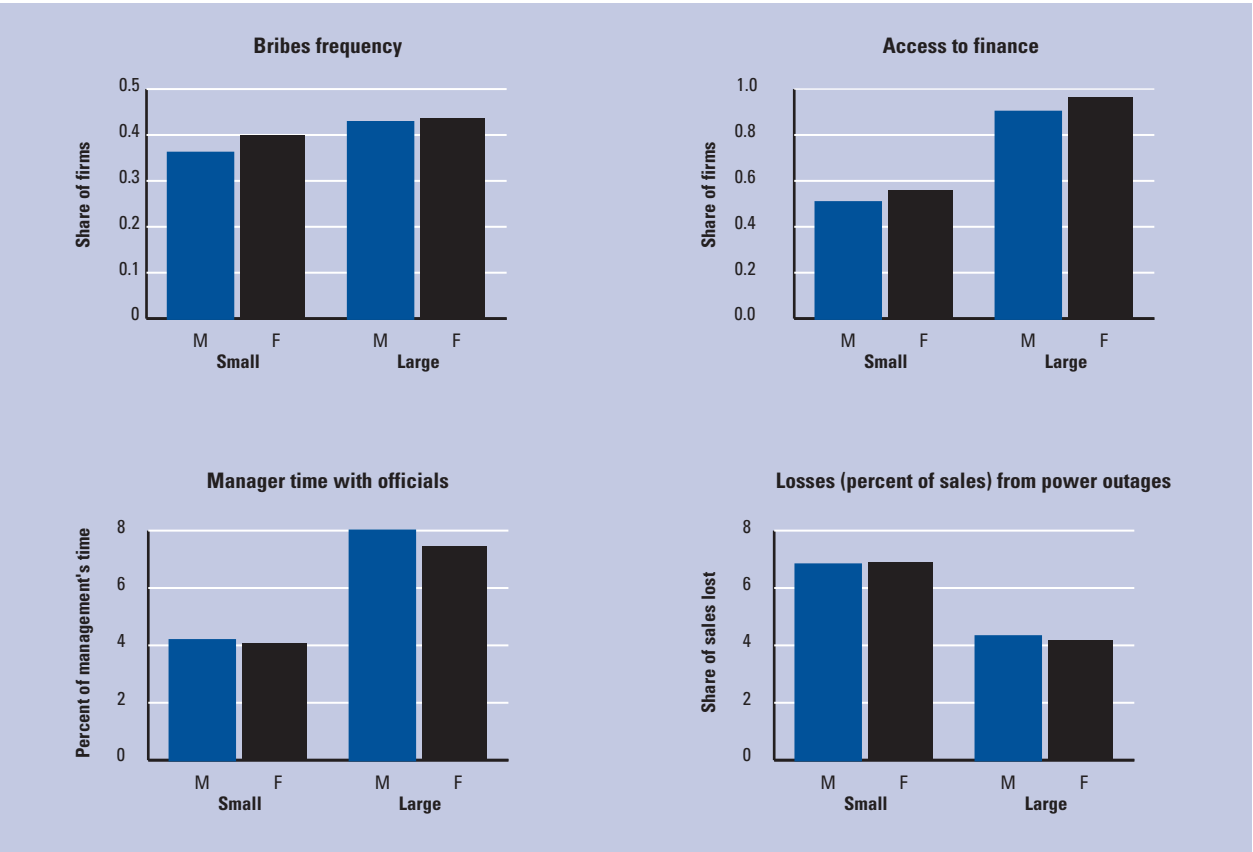
Source: Enterprise Surveys, World Bank, various years (2006–10).

Figure 11: Gender gap in performance by different enterprise characteristics



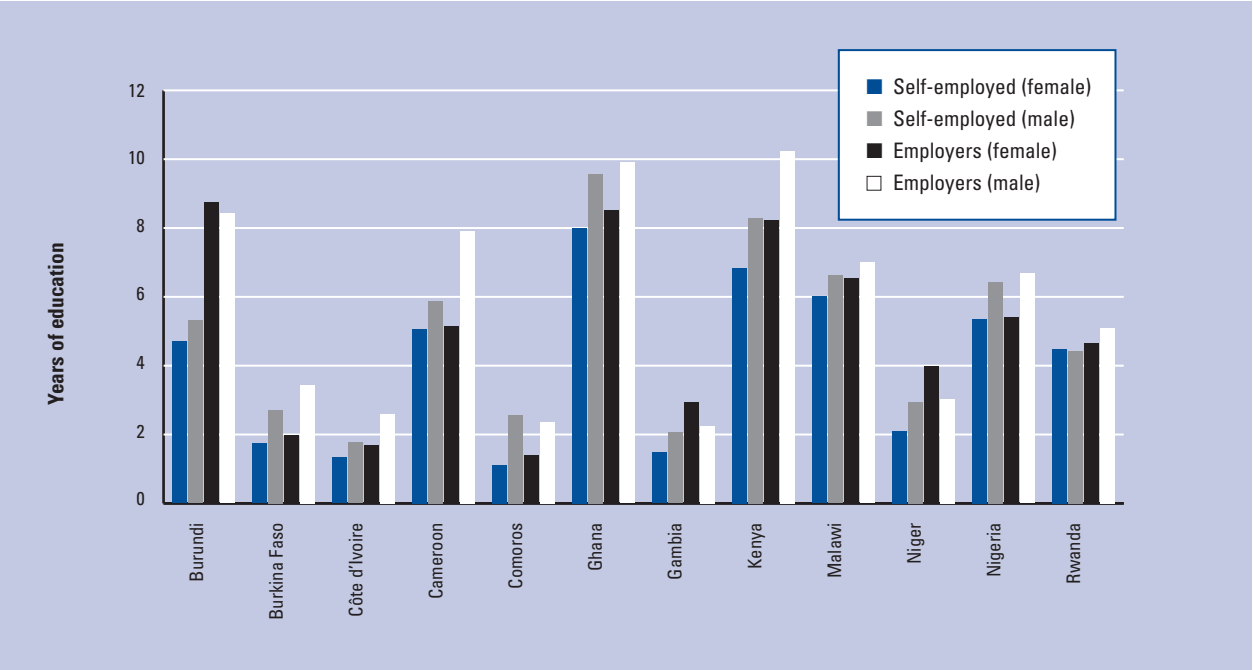
Source: Enterprise Surveys, World Bank, various years (2006–10).
Note: These are based on regression coefficients on a dummy for women entrepreneurs, with each regression controlling for different sets of enterprise characteristics.

Figure 12: Business environment conditions: Obstacles to doing business in Africa, by firm size



Source: Enterprise Surveys, World Bank, various years (2006–10).

Figure 13: Education by gender and employment, various years (2000–10)



Source: Hallward-Driemeier and Rasteletti, 2010.

Motivation

Are there differences between women and men in their motivation for being an entrepreneur? The desire for flexible hours or location is more often attributed to women. According to Hallward-Driemeier and Aterido's study of five sub-Saharan countries, women were somewhat more likely than men to report "remaining in business" as their measure of success, while men were more likely to report "expansion" and "growing profits" as their goal. However, the overall patterns are far more similar throughout the whole population than the minor differences across genders. Just over half of women and of men alike reported various reasons associated with following an opportunity (e.g., the chance to earn additional income, an identified business opportunity, and so on) than push factors that indicate few alternative options.

Strikingly, responses associated with "necessity" entrepreneurs and "opportunity" entrepreneurs are equally divided by both sector and gender. And the distinction between necessity and opportunity entrepreneurs is not a good predictor of performance.[15]

Family background

One dimension of background that did have a significant gender dimension concerns whether the entrepreneur's father was an entrepreneur. Entrepreneurship in the family is associated with having received mentoring and introductions to networks of business contacts, and has been found to be associated with higher rates of entrepreneurship and improved performance in other countries.[16] However, the five-country study showed that the benefits of this family background are present for men but not for women.[17] This underscores the importance of intangible dimensions of human capital that can matter. To the extent that women have not been as included in business networks in the past, this can make it all the harder for current female entrepreneurs to break into more profitable areas of entrepreneurship. However, this is not static. The rising rates of successful women can serve as important role models and mentors for expanding opportunities for the next generation.

Access to assets and finance

One dimension of potential constraints that gets particular attention as having a gender dimension, and affecting entry as well as performance, is access to finance. Much of the literature on access to finance has found that women face greater obstacles than men.[18] However, the gender gap often closes significantly when additional controls are included—that is, women may receive less finance because they are running a smaller firm and not because of their gender. Figure 12 shows that enterprise size rather than the gender of the entrepreneur is a better predictor of whether the enterprise receives bank financing. However, a bigger question is whether greater constraints to access to assets is itself an important

Box 1: Do women earn the same return?

De Mel, McKenzie, and Woodruff conducted an impact evaluation of randomized gifts of cash and/or capital to micro-entrepreneurs in Sri Lanka. They found a high average rate of return. However, there was also a significant gender gap in these results. Controlling for sector accounted for a large portion, but not all, of the gender gap. Women were also more likely to over- or underinvest, with results consistent with greater challenges in intra-household control over resources. Repeating a similar experiment in Ghana reinforces that sector selection matters: gender gaps in returns to capital within the same sectors are small. Male-dominated sectors have higher rates of investment as they are more capital-intensive manufacturing than female-dominated service sectors. They find that significant shares of both women and men have high rates of return and that there is scope for profitable extension of credit even to these micro-entrepreneurs. However, they also find that women are more sensitive to the nature of the positive shock they received, with greater returns when in-kind capital is given rather than cash.

Sources: de Mel et al., 2008; Fafchamps et al., 2010.

Box 2: Strengthening women's property rights affects opportunities pursued

Ethiopia changed its family law in 2000, raising the minimum age of marriage for women, removing the ability of the husband to deny permission for the wife to work outside the home, and requiring the consent of both spouses in the administration of marital property. While this reform now applies across the country, it was initially rolled out in three of the nine regions and two chartered cities. Using two nationally representative household surveys, one in 2000 just prior to the reform and one five years later, allows for a difference-in-difference estimation of the impact of the reform. Five years later, we find a significant shift in women's economic activities. In particular, women's relative participation in occupations that require work outside the home, full-time work, and higher skills rose relatively more where the reform had been enacted (controlling for time and location effects).

Source: Hallward-Driemeier and Gajigo, 2010.

determinant of why women enter in smaller, more informal, and less capital-intensive firms. Again, sufficient data are not available to answer this question within the region, but detailed cross-country data provide evidence that suggests this could be important.

Aterido and others, using FinMark's surveys of individuals in nine African countries, find that women receive less finance than men on average.[19] However, it is also the case that financial institutions favor those with higher education and higher incomes. As women have less education and lower incomes on average, controlling for these characteristics makes the gender gap in access to finance statistically insignificant. This reinforces the message that it is important to compare like individuals, and simple comparisons of women and men can distract attention from the particular steps that need to be taken to increase opportunities.

De Mel, McKenzie, and Woodruff's work points to the importance of intra-household bargaining as an area for fruitful future research (see Box 1).[20] This would be true not just for understanding re-investment rates and performance measures, but also for comprehending the actual decision itself to become an entrepreneur. This role of intra-household bargaining points to the broader importance of addressing gender gaps in property rights and of the ability to own and control resources in one's own name.

As discussed above, the new *Women LEED Africa* database exhibits several significant areas in countries across the region where women do not enjoy the same legal and economic rights as men. Having weaker property rights has a direct link to access to finance, because it undermines the ability to provide collateral for loans—as well as weakens control over the use of assets themselves (Box 2). As a key input into production, achieving control over assets remains an important part of the agenda for expanding economic opportunities for women in Africa.

Strengthening the business environment for female entrepreneurs

Beyond an entrepreneur's access to human and physical capital, there may still be constraints in the investment climate that serve to steer women into or away from certain activities. The analysis above shows that, within types of activities, there are not significant gender differences in constraints. However, what this analysis cannot provide is whether there are gender differences in constraints that underlie the different rates of entry into higher-value-added activities themselves. Thus, once women are running larger firms, they may not face greater constraints. But that does not mean that women do not face greater challenges in dealing with the regulations or accessing finance to run a large firm in the

first place. To examine the role of different dimensions of the investment climate as potential barriers to entry, additional data would need to be available. Individual data over multiple periods would be needed, including coverage of those who are not entrepreneurs. This would allow for the examination of the selection of who becomes an entrepreneur and why particular business activities are pursued by particular individuals.

What is clear from the pattern of enterprises where women are concentrated is that measures that target smaller firms and those in the informal sector would disproportionately help women entrepreneurs. This could include streamlining regulatory requirements, curbing corruption, and facilitating the formalization of small firms.

In addition, there may be more nuanced constraints that are not well captured in the Enterprise Survey, including those that make entry into entrepreneurship itself a challenge. Women entrepreneurs themselves are an important source of information—both in identifying constraints and in advocating for ways to address them. Taking advantage of this resource calls for expanding women's voices in policy reform surrounding issues relevant to entrepreneurship and business growth.

Expanding women's voices in business environment reform

Two distinct sets of issues are of importance with respect to strengthening women's voices in business policymaking. The first is having women at the table where decisions are made. While women operate a significant share of businesses, they are rarely included when business-related policies are discussed. The second concerns women's role in setting the agenda and in framing the policy debate. This in turn has two components—one relating to the extent to which issues specific to women in business (a gender perspective) are identified and addressed, and one relating to the ways in which women participate in, and contribute to, advocacy on issues that are not gender-specific but are of importance to business more generally.

There is an ongoing debate as to whether it is better for women to establish and work through parallel structures focused on women, or to seek stronger integration into, and engagement with, "mainstream" mechanisms of policy dialogue and business associations. The review of experience summarized here suggests a dual-track approach, involving both separate women's mechanisms and better integration into the mainstream, is required.

Strengthening women's involvement in improving the business environment

Women need to be active in business environment reform. This is important not only because they are themselves strongly engaged as entrepreneurs and employers, but also because the obstacles and constraints they face, and the perspectives they bring, can be quite different from those of their male counterparts. Women's greater engagement in business-climate reforms can be supported in four key ways.

1: Expand gender-disaggregated analyses of business opportunities and constraints

First, advocacy for policy reforms needs to be grounded in solid analysis of the opportunities and constraints in the business environment, and, specifically, of the ways in which these opportunities and constraints differ for men and women. Insufficient data have often been a constraint. Lack of sex-disaggregated data and gender analysis makes it difficult to identify and assess the nature and extent of gender-based barriers in the business environment, and to develop appropriate ways to address them.

International organizations have been filling the gap in recent years. The Organisation for Economic Co-operation and Development (OECD)'s *Social Institutions and Gender Index* (SIGI) database looks at how customary practices affect women's standing;[21] the World Bank's *Women, Business and the Law* provides indicators of where legal rights for women differ from those of men,[22] and its Enterprise Surveys provide gender-disaggregated data that can be used to examine the effects of the investment climate on male- and female-owned businesses; and the World Economic Forum publishes its *Global Gender Gap Report*.

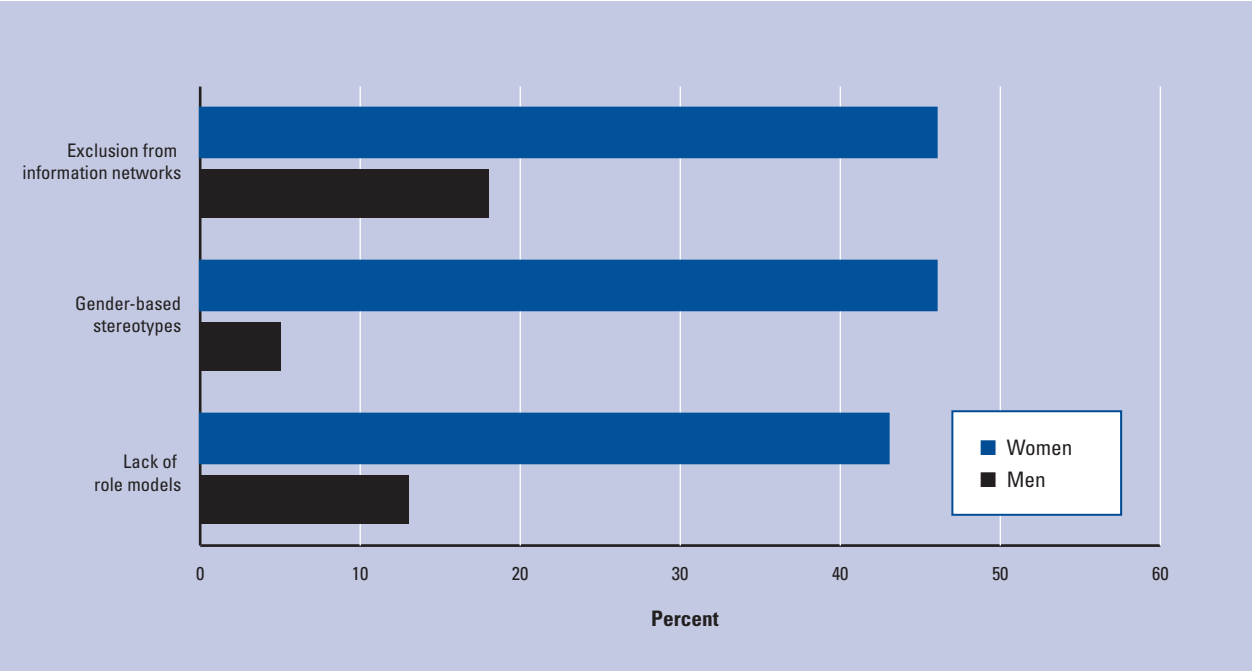
Country-specific analyses can also be important. Gender and Growth Assessments, such as those conducted in Tanzania, Kenya and Uganda, provide good examples.[23] These assessments provided a foundation for defining specific reforms that were responsive to women's concerns. In Uganda, a gender coalition was established to lobby for the implementation of the recommendations of the assessment. And, as a result, some success was achieved in relation to legal and regulatory reform aimed at benefiting women.

A lack of awareness of methodologies on how to conduct gender-disaggregated analyses of business environment reforms was also a constraint. The World Bank Group has recently published a practitioners' guide to addressing the gender dimensions of investment climate reform.[24] It includes detailed suggestions on data to collect as well as strategies for addressing the three approaches discussed below.

2: Strengthen women's involvement in business associations and networks

The advantages of business networking are clear. Developing a strong business network and participating in a formal business organization facilitates sharing of market information, helps members identify business opportunities, generates cross-referrals, and is a support mechanism for individual entrepreneurs who might otherwise feel isolated. However, women are often

Figure 14: Barriers: Women vs. men



Source: Catalyst, 2004.

excluded from formal or informal networks of communication. Gender-based stereotypes and lack of role models often serve as barriers to women's professional advancement and limit their voices both in business communities and policymaking. Indeed, women consistently raise as a challenge the lack of voice and networking opportunity and associated skills (Figure 14). In some countries, cultural and social imperatives discourage women from mixing freely with men, especially those from outside their families. In such circumstances, the presence of a specialized women's business association makes sense—such networks not only provide women business owners with the support they require, but it also helps spread new business ideas, facilitates making business contacts and cross-referrals, and can provide avenues for larger-scale marketing and distribution.

To address these issues, women's involvement in business associations, including women-focused associations, needs to be encouraged and strengthened. To date, participation has often been low. Part of the problem may be that many women are ambivalent about business associations (whether or not they are specifically geared for women). Some women entrepreneurs make extensive use of these organizations as part of their overall business development strategies, but many are either unaware of the existence of such associations or feel that they are not able to access them. Membership in these women's business associations seems to be relatively low, and this in turn results in the associations themselves struggling for sustainability and credibility.[25] Low levels of association membership also reflect unclear mandates and functions of associations, and therefore perceptions by businesswomen that there is little to be gained by membership.

3: Strengthen the capacity of business associations to engage in policy dialogue

Third, the capacity of business associations—particularly women's business associations—to engage in policy dialogue and advocacy for business environment reforms needs to be developed further. This should take place alongside efforts to improve the capacity of these associations to provide business-related services to their members.

Where there are women's business associations, these tend to be involved in activities that aim to support women's businesses through networking, developing market opportunities, improving business skills, and accessing finance. However, they tend not to see their mandate as getting involved at a more visible or policy level; they generally are not involved in lobbying or policy advocacy.[26]

4: Enable women to be more effective participants in public-private dialogue processes

Fourth, given the importance of dialogue between the public and private sectors in improving the business climate, enabling women to be more effective participants in this processes, where they have been largely absent to date, can make a critical contribution to making their voices heard as investment reform priorities are articulated and implemented.

However, even specific mechanisms that have been developed and promoted by international organizations

Box 3: The experience of developing a public-private dialogue mechanism

Public-private dialogue (PPD) is a mechanism developed by the International Finance Corporation (IFC) to facilitate interactions between private- and public-sector actors as they identify and address obstacles to an improved business environment. PPD programs are a structured mechanism, often anchored at the highest level of government, used to facilitate the business environment reform process and the implementation of specific investment climate reforms. PPDs have been undertaken in 30 countries worldwide,[1] and a wide array of tools and techniques for conducting PPDs has been developed.[2] Annual PPD workshops provide a forum for exchanges of global experience and practice by an expanding PPD community.

PPD is increasingly regarded as an essential component of effective private-sector policy reform. It can be seen as a core contributor to the diagnostic of investment climate issues, to the design of appropriate and feasible solutions, and to the effective implementation of specific investment-climate reform measures, which the PPD will have helped to identify, and for which it will have helped to build ownership.

PPD is regarded as an important means of "enlarging the reform space" by ensuring a greater inclusion of stakeholders in reform deliberations and by facilitating greater local ownership of reform measures (Figure 1). The potential for PPDs to promote gender-inclusion among stakeholders, and thereby to contribute additionally to enlarging the reform space, is therefore considerable.

Unfortunately, as it was launched, there was very little explicit focus on women as participants or on gender issues in the substantive discussions. For the most part, women's presence was either negligible or unspecified, and attention to gender differences in investment climate reform issues is correspondingly minimal. In many of the case materials and assessments of PPD, there is virtually no mention of women, though in some instances reference is made to women's groups or women's business associations.

Finally, in 2008, after several years of PPD experience, the lack of gender inclusion was recognized. Gender-specific conferences were held and more effort was put into including women as key participants. The IFC has also taken steps to promote a more gender-inclusive approach to reforming the investment climate, including providing toolkits and a handbook on how to do so effectively. But local female leaders and those in positions of power need also to be aware of and see the importance of bringing women into the decision-making process if it is to become an effective approach. Thus the potential is there for PPD to be a valuable tool for strengthening women's voices in policy debates of importance to business, but explicit efforts are still needed to make it more gender inclusive.

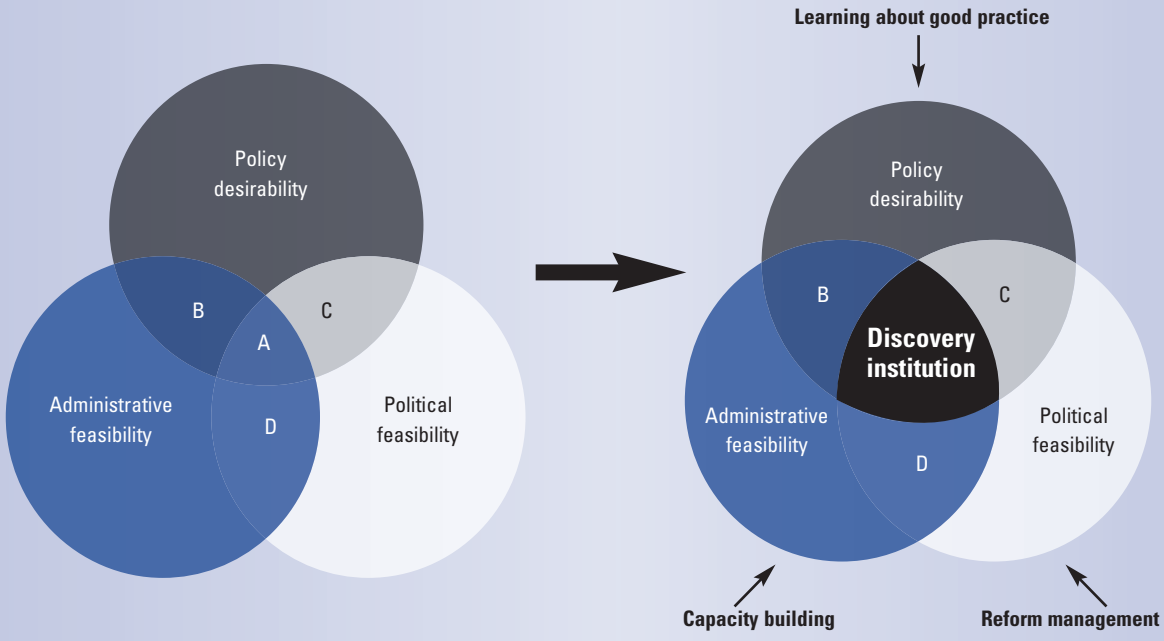
Notes

1 Toland 2009.

2 These tools and techniques are accessible at www.publicprivatedialogue.org.

Source: Herzberg and Wright, 2006.

Figure 1: PPD enlarging the reform space



Source: Herzberg, 2008.

(see Box 3) have been slow to recognize the importance and need to explicitly take gender into account. In the case of public-private dialogue, the last three years have seen a marked improvement in terms of gender inclusion. However, this was not an organic development and proactive leadership and commitments were needed.

This absence of women from investment-reform dialogue and programs is costly on many levels. Women in the private sector tend to have different experiences of legal, regulatory, and administrative barriers to business than their male counterparts. Women can be disadvantaged by barriers ranging from legal frameworks that deny them rights to land or property to sociocultural factors that prevent them from engaging in business without the consent of their husbands, which limits their mobility and capacity to network, or which subjects them disproportionately to sexual or other forms of harassment from public officials.

An important initiative in Africa is the recent establishment of the Africa Businesswomen's Network (ABWN) as an umbrella organization aimed at supporting various national hubs to develop women's business associations. A specific part of ABWN's mandate is to share their member organizations' experiences, to strengthen their capacity to provide better services for their members, and to lobby for policy changes in the business environment that would be favorable to female entrepreneurs. Their members have shown an interest in expanding their advocacy work to include reforming remaining gaps in women's economic rights. As such, ABWN is helping address all of the four approaches advocated here to improve the efficacy and authority of women's voices in shaping improvements in the business environment.

Conclusion

Women represent almost 40 percent of entrepreneurs in Africa. Yet they are disproportionately represented among the self-employed and in the informal sector and among those operating smaller firms. As such, women are often earning lower returns on their time and investment than men. However, with the same education, women in the same types of firms perform as well as men. The evidence suggests that where gender matters is much more in the selection of activities to pursue than in the performance within a certain type of enterprise. Women operating in the formal sector have far more in common with their male colleagues than they do with women in the informal sector. To expand opportunities for women entrepreneurs, the agenda should not be to increase entrepreneurship *per se,* but to enable women move into higher-value-added activities. Increasing women's human capital (education, management training, and business mentors/networks), removing gender-based barriers to accessing assets (including gender gaps in legal and economic rights), expanding awareness of women's success as entrepreneurs, and increasing women's voice in investment climate policy circles are important steps to achieve these results.

Notes

1 Economies are divided among income groups according to 2010 GNI per capita, calculated using the World Bank Atlas method. The groups are: low income, US$995 or less; lower-middle income, US$996–US$3,945; upper-middle income, US$3,946–US$12,195; and high income, US$12,196 or more.

2 Hallward-Driemeier et al. 2011.

3 See www.enterprisesurveys.org.

4 See, for example, Mead and Lindholm 1998; Minniti 2009.

5 World Bank 2001; Hallward-Driemeier et al. 2011.

6 Hallward-Driemeier and Rasteletti, 2010.

7 Hallward-Driemeier et al. 2011.

8 Hallward-Driemeier et al. 2011.

9 Hallward-Driemeier forthcoming.

10 Bloom et al. 2007.

11 Hallward-Driemeier and Aterido 2009.

12 Arrow 1962; Jones and Barr 1996.

13 Dessing 2002; Grossbard-Shechtman and Neuman 1998.

14 Gajigo and Hallward-Driemeier 2010.

15 Hallward-Driemeier and Aterido 2009.

16 Djankov et al. 2006.

17 Hallward-Driemeier and Aterido 2009.

18 See World Bank 2001, 2007; Klapper and Parker 2010 for reviews of the literature.

19 Aterido et al. 2010. FinMark Trust operates out of South Africa, primarily by the United Kingdom's Department for International Development (DFID), with the goal of making financial markets work for the poor. See www.finmark.org.za.

20 de Mel et al. 2008, 2009.

21 See http://www.oecd.org/dataoecd/52/33/42289479.pdf.

22 World Bank 2010, available at wbl.worldbank.org.

23 Ellis et al. 2006, 2007, 2009.

24 See Simavi et al. 2010.

25 Richardson et al. 2004, p. 23.

26 Richardson et al. 2004, p. 31.

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CHAPTER 2.3

Assessing Africa's Travel & Tourism Competitiveness in the Wake of the Global Economic Crisis

JENNIFER BLANKE, World Economic Forum
CIARA BROWNE, World Economic Forum
ANDRES F. GARCIA, World Bank
HANNAH R. MESSERLI, World Bank

The last two years have been difficult ones for the tourism industry as it has confronted shock after shock. These have ranged from the global economic crisis and volatile oil prices to specific climatic disturbances (the Icelandic volcanic ash cloud, extreme weather conditions on multiple continents), political instability, and health issues such as the H1N1 influenza pandemic. Tourism is often referred to as one of the most dynamic sectors. In its current performance, the sector continues to demonstrate the aptness of such a characterization.

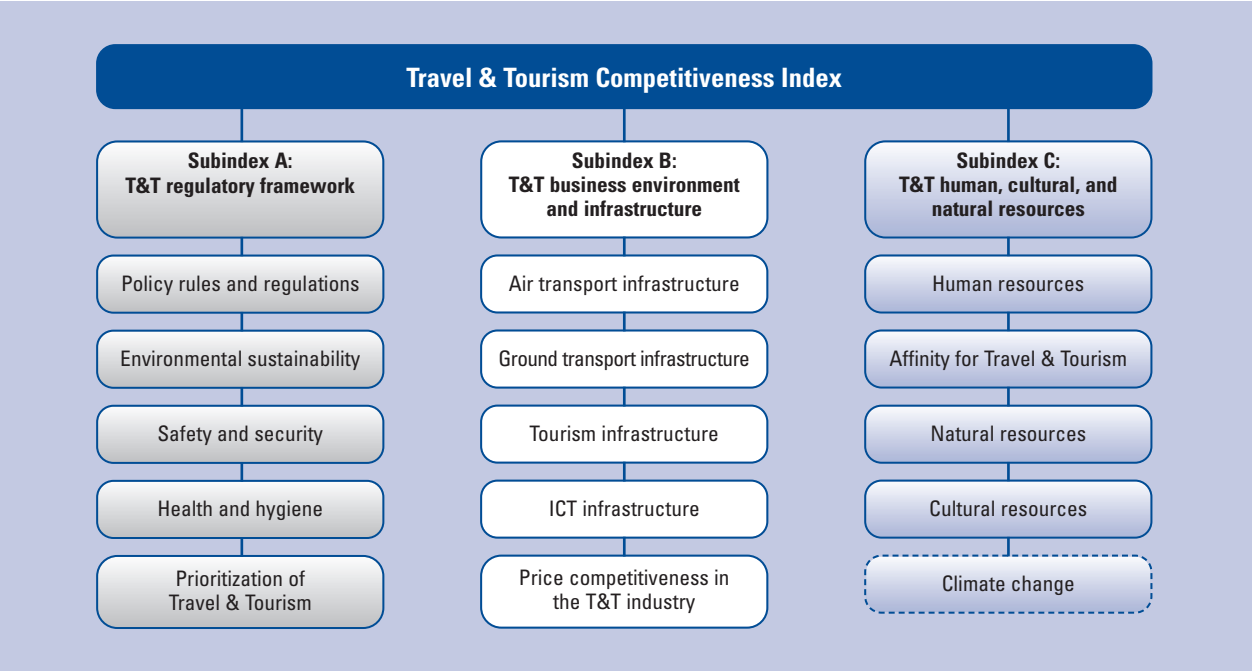
During the global economic turmoil, Africa's Travel & Tourism (T&T) industry was less hard hit than the world average with respect to international tourism receipts. Globally, emerging markets are now leading the way in the gradual recovery from the effects of the global economic crisis, while the traditional markets of Europe and North America are lagging behind.

The tourism sector across Africa is now experiencing uneven and fast-changing patterns of demand. Most recently, as civil unrest has spread across North Africa, international tourism to individual countries has dropped dramatically—in some cases it has nearly stopped. An impact on neighboring countries can be felt due to travelers expanding the boundaries of their security concerns. There are also signs that civil unrest in some destinations may lead to a windfall in others, as travelers previously planning to travel to Egypt or Tunisia are potentially rewriting their itineraries for Kenya and Morocco.

Africa's achievements in capturing tourism revenues and arrivals must be understood in the context of the continent's relatively unexploited tourism potential. Indeed, according to the United Nations World Tourism Organization (UNWTO), in 2010 Africa still accounted for only 3.4 percent of global tourism receipts and 5.2 percent of tourist arrivals, despite accounting for almost 15 percent of the world's population.[1] Given the well-understood potential for a growing national T&T sector to contribute to employment, raise national income, and reduce poverty, Africa still has ample opportunity to boost its ability to fully reap the benefits the sector offers. The rapidly unfolding changes in destinations, particularly across North Africa, may lead to new spurts of tourism demand as countries move from a focus on leadership changes to concerted efforts to strengthen economies. This arena is anticipated to provide abundant occasions for Travel & Tourism to demonstrate its resilience. As a growing component of the broad services sector, Travel & Tourism has a vital role to play in enabling export diversification and attracting foreign direct investment (FDI). What are the pillars that will contribute to the sector achieving its full potential?

This chapter brings together data from the World Economic Forum's Travel & Tourism Competitiveness Index (TTCI) with specific World Bank research on the drivers of Africa's T&T competitiveness. Specifically, the TTCI findings for 35 African countries are benchmarked

Figure 1: Composition of the three subindexes of the TTCI



Source: World Economic Forum, 2011.
Note: This figure shows a notional 15th pillar on climate change, depicted with a dotted line. Although this concept is not yet included in the calculation of the TTCI, given its importance to the future of the T&T sector the World Economic Forum intends to integrate the climate change pillar into that Index in the future as relevant data become available.

alongside the full set of 139 economies included in the Index. This provides practical insight into this sector's nuances, highlighting the factors critical for economically productive and sustainable tourism. Building on the TTCI, a number of brief cases are included on pressing issues pertinent to the industry in Africa including visa schemes, community-based tourism, tour operations, air transport, tapping natural resources to benefit the poor, and leveraging Africa's cultural heritage assets. This approach provides a sense of the opportunities offered by the tourism sector in the region as well as the obstacles that must be addressed in order to fully benefit from tourism.

Measuring T&T competitiveness

Although developing the T&T sector provides many benefits, numerous obstacles at the national level continue to hinder its development. The TTCI, developed by the World Economic Forum in collaboration with experts from the T&T sector, measures the many different regulatory and business-related issues that have been identified as levers for improving T&T competitiveness in countries around the world. Through a detailed analysis of each pillar and subpillar of the Index, businesses and governments can address national-level challenges to the sector's growth. Further, such analysis at a national level serves to better inform local, destination, and regional policies.

The TTCI is a comprehensive index that aims to measure *the factors and policies that make it attractive to develop the T&T sector in different countries.* The Index is based on three broad categories of variables that facilitate or drive T&T competitiveness. These categories are presented as three subindexes: (1) the T&T regulatory framework subindex; (2) the T&T business environment and infrastructure subindex; and (3) the T&T human, cultural, and natural resources subindex. The first subindex captures those elements that are policy related and generally under the purview of the government; the second subindex captures elements of the business environment and the "hard" infrastructure of each economy; and the third subindex captures the "softer" human, cultural, and natural elements of each country's resource endowments.

Each of these three subindexes is composed in turn by a number of pillars of T&T competitiveness, of which there are 14 in all.

Figure 1 summarizes the structure of the overall Index, showing how the 14 pillars are allocated within the three subindexes.[2]

Africa's comparative T&T competitiveness

Table 1 compares the performance of the 35 African countries in the 2009 and 2011 editions of the TTCI, as well as the averages for North Africa and sub-Saharan Africa. To put the analysis into an international context, the Index also includes a number of

comparator economies. These include the averages of two relevant developing regions—Latin America and the Caribbean and Southeast Asia[3]—as well as the ranks and scores of the four rapidly developing and large BRIC countries—Brazil, Russia, India, and China.

For each country, the table presents the rank out of the 139 economies covered in the 2011 TTCI (with 1 being the highest rank and 139 being the lowest), as well as the scores on a scale of 1 to 7 (with scores closer to 7 representing stronger performances). Country rankings from the TTCI 2009 are provided for comparison.

The table shows that the North African and sub-Saharan African averages are outperformed by the other two regional averages as well as by all four of the BRIC economies, although North Africa outperforms sub-Saharan Africa by a wide margin. Yet, as the table also shows, individual African countries perform comparatively well.

In the global rankings reflecting 2010 activity, Tunisia is the top-ranked African country at 47th position, followed closely by Mauritius at 53rd. They are outperformed in the TTCI only by China and Brazil among the comparators shown, and have scores not far behind that of Brazil. In addition, they outperform all other countries and regions shown in the table. Tunisia and Mauritius are joined in the top half of the overall rankings by only one other country, South Africa. Although South Africa is outperformed by Russia, it is ahead of India and all of the regional averages. These three countries thus clearly set themselves apart as the top African performers in T&T competitiveness.

Egypt, Morocco, and Namibia constitute a second cluster of African countries, which are below the Indian, Southeast Asian, and Latin American averages but ahead of the North African average and well ahead of the performance of most sub-Saharan African countries.

Three other African countries place within the top 100 of the rankings: Cape Verde, Botswana, and Gambia. These sub-Saharan African countries outperform the North African countries of Algeria and Libya, as well as the large majority of countries in their own region. Future review of the impact of recent events in countries across northern Africa will undoubtedly contribute to shifts in these rankings.

All other African countries in the table are below the 100 mark, and although several of them are above the sub-Saharan African average, it is important to note that this is a very low benchmark, with the average for all countries in this region placing somewhere between the 116th and 119th ranks out of 139 economies.

Africa has some strong performers. Yet most countries receive poor assessments according to the TTCI. It is critical to note that these aggregate numbers mask important strengths among individual economies within the individual pillars of the Index, and upon which they can build stronger T&T industries. It is to this analysis that we now turn.

Table 1: Travel & Tourism Competitiveness Index 2011 and 2009 comparison

	TTCI 2011		TTCI 2009
Country/Region	Rank*	Score	Rank†
China	39	4.5	47
Tunisia	47	4.4	44
Brazil	52	4.4	45
Mauritius	53	4.4	40
Russian Federation	59	4.2	59
Southeast Asian average		*4.2*	
South Africa	66	4.1	61
India	68	4.1	62
Latin American & Caribbean average		*4.0*	
Egypt	75	4.0	64
Morocco	78	3.9	75
Namibia	84	3.8	82
North African average		*3.8*	
Cape Verde	89	3.8	n/a
Botswana	91	3.7	79
Gambia, The	92	3.7	87
Rwanda	102	3.5	n/a
Kenya	103	3.5	97
Senegal	104	3.5	101
Ghana	108	3.4	110
Tanzania	110	3.4	98
Zambia	111	3.4	100
Algeria	113	3.4	115
Uganda	115	3.4	111
Swaziland	116	3.4	n/a
Sub-Saharan African average		*3.3*	
Zimbabwe	119	3.3	121
Benin	120	3.3	120
Malawi	121	3.3	117
Ethiopia	122	3.3	123
Libya	124	3.2	112
Cameroon	126	3.2	125
Madagascar	127	3.2	116
Mozambique	128	3.2	124
Nigeria	130	3.1	128
Côte d'Ivoire	131	3.1	130
Burkina Faso	132	3.1	126
Mali	133	3.0	119
Lesotho	135	3.0	132
Mauritania	136	2.8	127
Burundi	137	2.8	131
Angola	138	2.8	n/a
Chad	139	2.6	133

Sources: World Economic Forum, 2009, 2011; authors' calculations.
* Out of 139 economies
† Out of 133 economies

Africa's performance in 14 pillars of T&T competitiveness

The ranks and scores of the 35 African countries in each of the three subindexes and the 14 pillars, as well as those of the comparator countries and regions, are shown in Tables 2 through 5. This provides a sense of the strengths and weaknesses of African countries at a more detailed level. In order to get a good sense of the strengths upon which African countries can build their T&T competitiveness, Table 6 shows the rankings for the 35 African countries in all 14 pillars, specifically highlighting those cases in which African countries are among the top 50 countries in these pillars, or areas

where they perform relatively well on an global basis. The table also notes the global top performer for comparison, in the bottom section of the table. Detailed profiles for all 139 economies, showing their performances in all of the individual variables included in the analysis, can be found in *The Travel & Tourism Competitiveness Report 2011,* available online at www.weforum.org/ttcr.

Policy rules and regulations

This pillar captures the extent to which the policy environment is conducive to developing the T&T sector in each country. Governments can have an important impact on the attractiveness of developing the T&T sector, depending on whether the policies that they create and perpetuate support or hinder the sector's development. Sometimes well-intentioned policies can end up creating red tape or obstacles that have the opposite effect from that which was intended. This pillar accounts for the extent to which foreign ownership and FDI are welcomed and facilitated by the country, how well property rights are protected, the time and cost required for setting up a business, the extent to which visa requirements make it complicated for visitors to enter the country, and the openness of the bilateral Air Service Agreements into which the government has entered with other countries. This year a new variable is included in the TTCI that measures the commitments made within the international trade regime to opening tourism and travel services (under GATS).

As Table 3 shows, North Africa and sub-Saharan Africa are outperformed by the averages from both Latin America and the Caribbean and Southeast Asia, as well as China. However, it is notable that both African regions outperform the BRICs' average and indeed the performances of Brazil, India, and Russia individually. This is thus an area where some African countries are performing relatively well.

Indeed, looking at Table 6, we see that seven African countries are among the top 50 in this pillar. The best performer is Tunisia at 23rd place, followed by Mauritius and South Africa at 27th and 31st ranks, respectively. These are countries with business-enabling environments that facilitate well-protected property rights, ensure that the process of starting a business is not very costly, and with visa requirements that are not very onerous. With respect to the enabling environment for attracting tourism, Box 1 looks at the importance of streamlining visas in Africa to foster tourism.

Other relatively strong performers are Rwanda, Zambia, Morocco, and Egypt, ranked 40th, 44th, 48th, and 49th, respectively, showing that this is an area where individual countries throughout Africa do relatively well.

Yet most African countries are assessed as having regulatory environments that are not sufficiently supportive of the development of the T&T sector. Indeed, 20 African countries are ranked at 100th or below on this pillar, and 7 of the 10 lowest-ranked countries are in the Africa region. These countries would be well served by creating policy environments that are more supportive of developing the T&T sector. Given that policies can be changed by adopting proven practices, improvements in this area can lead changes in other areas measured by the Index, such as building infrastructure and improving human resources.

Environmental sustainability

The importance of the natural environment for providing an attractive location for tourism in Africa cannot be overstated. It is clear that policies and factors enhancing environmental sustainability are crucial for ensuring that a country will continue to be an attractive destination going into the future. This pillar measures the stringency of the government's environmental regulations in each country as well as the extent to which they are actually enforced. Given the environmental impacts that tourism can sometimes bring about, the pillar also takes into account the extent to which governments prioritize the sustainable development of the T&T industry in their respective economies. In addition to policy inputs, this pillar includes some of the related environmental outputs, including carbon dioxide emissions and the country's percentage of endangered species.

As shown by Table 3, African countries perform comparatively well in this pillar. North African countries, with an average score of 4.4 out of 7, outperform Southeast Asia (4.2) and are on a par with the BRIC average (4.4). Perhaps more strikingly, this is an area where the sub-Saharan African countries, with an average of 4.6, outperform all regions shown in the table, including North Africa.

Turning to Table 6, we see that 14 African countries are indeed among the top 50 in this pillar, and very few of them are at the bottom of the rankings. Top-performing countries are Rwanda, Tunisia, Namibia, and Kenya, ranked 8th, 18th, 22nd, and 26th, respectively. These are countries that are making efforts to develop their T&T sectors in a sustainable manner and that, for the most part, have stringent environmental legislation to ensure that this happens.

Three of the weakest performers in this pillar are from North Africa (Egypt, Algeria, and Libya), lending to the subregion's lower average ranking. They are joined in the lower part of the rankings by Angola and Mauritania. These are countries that will need to step up sustainability efforts to buttress their T&T competitiveness going forward. In doing so, it is encouraging they have a number of good examples in the region to follow, such as Namibia, as presented in Box 2.

Table 2: Travel & Tourism Competitiveness Index 2011 and subindexes: Africa and comparators

	OVERALL INDEX		SUBINDEXES					
			T&T regulatory framework		T&T business environment and infrastructure		T&T human, cultural, and natural resources	
Country/Region	Rank	Score	Rank	Score	Rank	Score	Rank	Score
NORTH AFRICA								
Algeria	113	3.4	112	3.9	110	2.9	116	3.4
Egypt	75	4.0	70	4.5	74	3.6	71	3.8
Libya	124	3.2	122	3.6	107	2.9	125	3.2
Morocco	78	3.9	69	4.5	77	3.5	73	3.7
Tunisia	47	4.4	31	5.2	54	4.0	59	3.9
North African average		3.8		4.4		3.4		3.6
SUB-SAHARAN AFRICA								
Angola	138	2.8	138	3.1	121	2.7	139	2.6
Benin	120	3.3	119	3.7	117	2.8	106	3.5
Botswana	91	3.7	86	4.3	85	3.3	98	3.6
Burkina Faso	132	3.1	117	3.7	135	2.5	132	3.0
Burundi	137	2.8	137	3.1	134	2.5	135	2.8
Cameroon	126	3.2	127	3.5	129	2.6	108	3.5
Cape Verde	89	3.8	85	4.3	73	3.6	114	3.4
Chad	139	2.6	139	2.9	139	2.1	137	2.7
Côte d'Ivoire	131	3.1	135	3.2	124	2.7	115	3.4
Ethiopia	122	3.3	132	3.4	114	2.8	97	3.6
Gambia, The	92	3.7	76	4.5	90	3.3	117	3.3
Ghana	108	3.4	115	3.8	105	3.0	104	3.5
Kenya	103	3.5	113	3.9	106	2.9	72	3.7
Lesotho	135	3.0	125	3.5	123	2.7	138	2.6
Madagascar	127	3.2	126	3.5	116	2.8	120	3.3
Malawi	121	3.3	109	3.9	133	2.5	112	3.4
Mali	133	3.0	128	3.5	137	2.4	121	3.3
Mauritania	136	2.8	136	3.2	136	2.4	133	2.9
Mauritius	53	4.4	28	5.2	48	4.2	79	3.7
Mozambique	128	3.2	124	3.6	119	2.7	127	3.2
Namibia	84	3.8	83	4.4	67	3.7	109	3.4
Nigeria	130	3.1	134	3.2	115	2.8	119	3.3
Rwanda	102	3.5	75	4.5	120	2.7	110	3.4
Senegal	104	3.5	111	3.9	108	2.9	82	3.7
South Africa	66	4.1	82	4.4	62	3.9	49	4.1
Swaziland	116	3.4	99	4.2	101	3.1	136	2.8
Tanzania	110	3.4	121	3.7	127	2.6	56	4.0
Uganda	115	3.4	116	3.7	125	2.6	80	3.7
Zambia	111	3.4	104	4.0	131	2.6	95	3.6
Zimbabwe	119	3.3	118	3.7	126	2.6	96	3.6
Sub-Saharan African average		3.3		3.8		2.9		3.3
BRICs								
Brazil	52	4.4	80	4.4	75	3.6	11	5.1
China	39	4.5	71	4.5	64	3.8	12	5.1
India	68	4.1	114	3.8	68	3.7	19	4.7
Russian Federation	59	4.2	73	4.5	53	4.1	45	4.1
BRICs average		4.3		4.3		3.8		4.7
Latin American & Caribbean average		4.0		4.4		3.6		3.9
Southeast Asian average		4.0		4.4		3.7		4.1

Source: World Economic Forum, 2011; authors' calculations.

Table 3: Ranks and scores of African countries and selected comparator countries: Regulatory framework

	T&T REGULATORY FRAMEWORK		PILLARS									
			1. Policy rules and regulations		2. Environmental sustainability		3. Safety and security		4. Health and hygiene		5. Prioritization of Travel & Tourism	
Country/Region	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score
NORTH AFRICA												
Algeria	112	3.9	118	3.7	120	4.0	95	4.4	84	4.2	130	3.1
Egypt	70	4.5	49	4.6	113	4.1	135	3.3	56	5.2	22	5.5
Libya	122	3.6	135	3.0	134	3.7	100	4.2	83	4.3	132	3.1
Morocco	69	4.5	48	4.6	36	5.0	84	4.5	104	3.2	23	5.4
Tunisia	31	5.2	23	5.0	18	5.3	56	5.1	79	4.4	8	6.0
North African average		**4.4**		**4.2**		**4.4**		**4.3**		**4.3**		**4.6**
SUB-SAHARAN AFRICA												
Angola	138	3.1	137	2.8	119	4.0	111	4.1	129	1.8	136	2.6
Benin	119	3.7	117	3.7	39	4.9	101	4.2	128	1.9	113	3.7
Botswana	86	4.3	64	4.4	58	4.7	87	4.5	100	3.5	73	4.5
Burkina Faso	117	3.7	104	3.8	80	4.4	93	4.4	127	2.0	104	4.0
Burundi	137	3.1	133	3.1	91	4.2	132	3.4	120	2.2	138	2.5
Cameroon	127	3.5	125	3.6	96	4.2	99	4.3	116	2.5	135	2.9
Cape Verde	85	4.3	73	4.4	56	4.7	85	4.5	105	3.2	45	4.8
Chad	139	2.9	139	2.7	89	4.2	136	3.3	138	1.1	129	3.1
Côte d'Ivoire	135	3.2	122	3.6	104	4.2	122	3.8	126	2.0	139	2.5
Ethiopia	132	3.4	93	4.1	87	4.3	102	4.2	139	1.0	119	3.5
Gambia, The	76	4.5	86	4.3	44	4.9	88	4.4	103	3.3	26	5.4
Ghana	115	3.8	72	4.4	47	4.9	98	4.3	123	2.2	123	3.4
Kenya	113	3.9	103	3.8	26	5.1	139	3.2	130	1.6	18	5.6
Lesotho	125	3.5	121	3.6	106	4.1	114	4.0	118	2.4	120	3.5
Madagascar	126	3.5	101	3.9	103	4.2	137	3.3	135	1.2	41	4.9
Malawi	109	3.9	102	3.8	42	4.9	74	4.7	111	2.7	117	3.5
Mali	128	3.5	130	3.5	102	4.2	107	4.1	132	1.5	100	4.1
Mauritania	136	3.2	113	3.7	110	4.1	130	3.5	137	1.1	125	3.3
Mauritius	28	5.2	27	5.0	62	4.6	45	5.3	68	4.8	1	6.4
Mozambique	124	3.6	109	3.8	32	5.0	125	3.8	136	1.1	63	4.5
Namibia	83	4.4	55	4.6	22	5.2	86	4.5	106	3.1	62	4.6
Nigeria	134	3.2	131	3.5	61	4.7	133	3.4	131	1.6	134	3.0
Rwanda	75	4.5	40	4.7	8	5.7	39	5.4	119	2.4	95	4.2
Senegal	111	3.9	108	3.8	86	4.3	70	4.7	124	2.1	59	4.6
South Africa	82	4.4	31	4.8	48	4.9	129	3.5	88	4.1	64	4.5
Swaziland	99	4.2	90	4.2	57	4.7	76	4.7	113	2.6	52	4.7
Tanzania	121	3.7	97	3.9	43	4.9	115	4.0	134	1.3	90	4.3
Uganda	116	3.7	100	3.9	40	4.9	117	3.9	125	2.1	110	3.9
Zambia	104	4.0	44	4.7	49	4.8	80	4.6	122	2.2	111	3.8
Zimbabwe	118	3.7	136	2.9	71	4.5	96	4.4	108	3.0	114	3.7
Sub-Saharan African average		**3.8**		**3.9**		**4.6**		**4.1**		**2.3**		**4.0**
BRICs												
Brazil	80	4.4	114	3.7	29	5.1	75	4.7	73	4.6	108	3.9
China	71	4.5	80	4.3	95	4.2	58	5.1	96	3.9	35	5.1
India	114	3.8	128	3.6	107	4.1	78	4.6	112	2.6	91	4.2
Russian Federation	73	4.5	126	3.6	98	4.2	113	4.0	11	6.6	102	4.0
BRICs average		**4.3**		**3.8**		**4.4**		**4.6**		**4.4**		**4.3**
Latin American & Caribbean average		**4.4**		**4.3**		**4.5**		**4.3**		**4.3**		**4.7**
Southeast Asian average		**4.4**		**4.4**		**4.2**		**4.8**		**3.7**		**4.8**

Source: World Economic Forum, 2011; authors' calculations.

Table 4: Ranks and scores of African countries and selected comparator countries: Business environment and infrastructure

	T&T BUSINESS ENVIRONMENT AND INFRASTRUCTURE		PILLARS									
			6. Air transport infrastructure		7. Ground transport infrastructure		8. Tourism infrastructure		9. ICT infrastructure		10. Price competitiveness in T&T industry	
Country/Region	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score
NORTH AFRICA												
Algeria	110	2.9	103	2.4	105	3.0	122	1.7	107	2.3	35	5.0
Egypt	74	3.6	55	3.5	76	3.4	88	2.9	93	2.7	5	5.6
Libya	107	2.9	99	2.5	127	2.6	107	2.2	101	2.4	39	4.9
Morocco	77	3.5	68	3.0	72	3.5	71	3.7	79	2.9	83	4.4
Tunisia	54	4.0	65	3.2	48	4.2	51	4.5	76	3.0	9	5.3
North African average		**3.4**		**2.9**		**3.3**		**3.0**		**2.7**		**5.1**
SUB-SAHARAN AFRICA												
Angola	121	2.7	126	2.1	139	2.0	103	2.3	126	1.9	13	5.2
Benin	117	2.8	124	2.2	99	3.1	112	2.1	118	2.0	68	4.5
Botswana	85	3.3	91	2.6	73	3.4	90	2.9	104	2.3	8	5.4
Burkina Faso	135	2.5	135	1.8	110	2.9	120	1.9	134	1.7	112	4.1
Burundi	134	2.5	129	2.1	84	3.2	134	1.3	137	1.6	78	4.5
Cameroon	129	2.6	130	2.1	111	2.9	114	2.0	121	2.0	110	4.2
Cape Verde	73	3.6	48	3.7	64	3.8	63	4.1	90	2.7	126	3.7
Chad	139	2.1	137	1.8	132	2.4	133	1.3	139	1.5	133	3.5
Côte d'Ivoire	124	2.7	114	2.3	80	3.3	106	2.2	117	2.0	131	3.6
Ethiopia	114	2.8	87	2.7	98	3.1	128	1.6	138	1.5	23	5.1
Gambia, The	90	3.3	82	2.7	52	4.2	127	1.6	108	2.3	2	5.7
Ghana	105	3.0	101	2.5	94	3.1	102	2.3	114	2.0	26	5.1
Kenya	106	2.9	72	2.9	87	3.2	111	2.1	112	2.1	93	4.3
Lesotho	123	2.7	139	1.7	112	2.9	113	2.0	132	1.7	22	5.2
Madagascar	116	2.8	106	2.4	126	2.6	100	2.5	131	1.8	79	4.5
Malawi	133	2.5	133	1.9	91	3.1	129	1.5	128	1.8	95	4.3
Mali	137	2.4	131	2.0	113	2.8	117	1.9	135	1.7	130	3.6
Mauritania	136	2.4	138	1.7	125	2.6	124	1.7	119	2.0	107	4.2
Mauritius	48	4.2	61	3.3	41	4.5	47	4.5	66	3.3	18	5.2
Mozambique	119	2.7	112	2.3	128	2.6	99	2.6	127	1.9	89	4.4
Namibia	67	3.7	59	3.3	44	4.3	67	3.8	109	2.2	47	4.8
Nigeria	115	2.8	102	2.5	131	2.5	105	2.3	105	2.3	98	4.3
Rwanda	120	2.7	109	2.3	67	3.7	139	1.0	120	2.0	63	4.6
Senegal	108	2.9	92	2.6	89	3.2	94	2.7	103	2.4	124	3.8
South Africa	62	3.9	43	3.9	66	3.7	57	4.3	95	2.6	37	4.9
Swaziland	101	3.1	123	2.2	65	3.8	108	2.1	115	2.0	14	5.2
Tanzania	127	2.6	121	2.2	123	2.7	125	1.7	130	1.8	56	4.8
Uganda	125	2.6	119	2.2	119	2.7	126	1.7	125	1.9	57	4.7
Zambia	131	2.6	118	2.3	108	2.9	123	1.7	122	1.9	104	4.2
Zimbabwe	126	2.6	125	2.2	83	3.2	118	1.9	124	1.9	117	4.0
Sub-Saharan African average		**2.9**		**2.4**		**3.1**		**2.3**		**2.0**		**4.5**
BRICs												
Brazil	75	3.6	42	3.9	116	2.8	76	3.5	56	3.5	114	4.1
China	64	3.8	35	4.2	59	4.0	95	2.6	73	3.1	24	5.1
India	68	3.7	39	4.1	43	4.3	89	2.9	111	2.2	28	5.1
Russian Federation	53	4.1	31	4.3	95	3.1	45	4.6	46	3.9	75	4.5
BRICs average		**3.8**		**4.1**		**3.6**		**3.4**		**3.2**		**4.7**
Latin American & Caribbean average		**3.6**		**3.2**		**3.5**		**3.6**		**3.2**		**4.7**
Southeast Asian average		**3.7**		**3.5**		**3.8**		**2.8**		**3.1**		**5.2**

Source: World Economic Forum, 2011; authors' calculations.

Table 5: Ranks and scores of African countries and selected comparator countries: Human, cultural, and natural resources

	T&T HUMAN, CULTURAL, AND NATURAL RESOURCES		PILLARS							
			11. Human capital		12. Affinity for Travel & Tourism		13. Natural resources		14. Cultural resources	
Country/Region	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score
NORTH AFRICA										
Algeria	116	3.4	91	4.6	129	4.0	99	2.6	72	2.2
Egypt	71	3.8	93	4.6	29	5.1	85	2.9	65	2.5
Libya	125	3.2	115	4.2	122	4.2	134	1.9	66	2.5
Morocco	73	3.7	90	4.6	22	5.3	126	2.1	54	2.9
Tunisia	59	3.9	27	5.4	19	5.3	95	2.6	69	2.4
North African average		**3.6**		**4.7**		**4.8**		**2.4**		**2.5**
SUB-SAHARAN AFRICA										
Angola	139	2.6	138	3.1	139	2.9	58	3.4	135	1.0
Benin	106	3.5	104	4.4	61	4.7	62	3.4	122	1.4
Botswana	98	3.6	119	3.9	85	4.5	33	4.2	106	1.6
Burkina Faso	132	3.0	133	3.4	77	4.5	91	2.7	128	1.3
Burundi	135	2.8	131	3.6	103	4.3	118	2.3	138	1.0
Cameroon	108	3.5	112	4.2	82	4.5	42	3.9	131	1.2
Cape Verde	114	3.4	98	4.6	5	6.0	136	1.8	133	1.1
Chad	137	2.7	136	3.2	125	4.0	105	2.5	136	1.0
Côte d'Ivoire	115	3.4	127	3.7	114	4.3	32	4.2	130	1.2
Ethiopia	97	3.6	123	3.9	107	4.3	37	4.1	84	2.0
Gambia, The	117	3.3	107	4.3	30	5.1	106	2.5	116	1.5
Ghana	104	3.5	114	4.2	45	4.9	57	3.4	115	1.5
Kenya	72	3.7	106	4.4	70	4.6	28	4.4	107	1.6
Lesotho	138	2.6	137	3.2	106	4.3	135	1.9	132	1.1
Madagascar	120	3.3	110	4.3	62	4.7	82	2.9	126	1.3
Malawi	112	3.4	121	3.9	92	4.4	46	3.8	112	1.6
Mali	121	3.3	130	3.6	59	4.7	104	2.5	78	2.2
Mauritania	133	2.9	132	3.5	76	4.5	108	2.5	129	1.3
Mauritius	79	3.7	53	5.0	4	6.1	131	2.0	110	1.6
Mozambique	127	3.2	135	3.2	94	4.4	55	3.5	117	1.5
Namibia	109	3.4	124	3.8	50	4.8	47	3.8	123	1.4
Nigeria	119	3.3	126	3.8	123	4.1	52	3.5	89	1.8
Rwanda	110	3.4	100	4.5	60	4.7	56	3.4	134	1.1
Senegal	82	3.7	117	4.0	39	4.9	40	4.0	95	1.8
South Africa	49	4.1	128	3.7	43	4.9	14	4.8	55	2.9
Swaziland	136	2.8	139	2.9	69	4.6	90	2.7	137	1.0
Tanzania	56	4.0	125	3.8	80	4.5	2	5.9	101	1.7
Uganda	80	3.7	113	4.2	57	4.7	29	4.4	125	1.3
Zambia	95	3.6	120	3.9	113	4.3	15	4.7	119	1.5
Zimbabwe	96	3.6	134	3.4	90	4.5	13	4.8	102	1.7
Sub-Saharan African average		**3.3**		**3.9**		**4.6**		**3.5**		**1.5**
BRICs										
Brazil	11	5.1	70	4.9	97	4.4	1	6.4	23	4.9
China	12	5.1	39	5.2	124	4.1	5	5.5	16	5.5
India	19	4.7	96	4.6	116	4.2	8	4.9	24	4.9
Russian Federation	45	4.1	78	4.8	136	3.6	27	4.4	35	3.7
BRICs average		**4.7**		**4.9**		**4.1**		**5.3**		**4.7**
Latin American & Caribbean average		**3.9**		**4.8**		**4.6**		**3.8**		**2.4**
Southeast Asian average		**4.1**		**4.9**		**4.9**		**3.7**		**2.8**

Source: World Economic Forum, 2011; authors' calculations.

Table 6: Africa's performance in the 14 pillars of the TTCI

Economy	Overall	Policy rules and regulations	Environmental sustainability	Safety and security	Health and hygiene	Prioritization of Travel & Tourism	Air transport infrastructure	Ground transport infrastructure	Tourism infrastructure	ICT infrastructure	Price competitiveness in the T&T industry	Human resources	Affinity for Travel & Tourism	Natural resources	Cultural resources
Algeria	113	118	120	95	84	130	103	105	122	107	**35**	91	129	99	72
Angola	138	137	119	111	129	136	126	139	103	126	**13**	138	139	58	135
Benin	120	117	**39**	101	128	113	124	99	112	118	68	104	61	62	122
Botswana	91	64	58	87	100	73	91	73	90	104	**8**	119	85	**33**	106
Burkina Faso	132	104	80	93	127	104	135	110	120	134	112	133	77	91	128
Burundi	137	133	91	132	120	138	129	84	134	137	78	131	103	118	138
Cameroon	126	125	96	99	116	135	130	111	114	121	110	112	82	**42**	131
Cape Verde	89	73	56	85	105	**45**	**48**	64	63	90	126	98	**5**	136	133
Chad	139	139	89	136	138	129	137	132	133	139	133	136	125	105	136
Côte d'Ivoire	131	122	104	122	126	139	114	80	106	117	131	127	114	**32**	130
Egypt	75	**49**	113	135	56	**22**	55	76	88	93	**5**	93	**29**	85	65
Ethiopia	122	93	87	102	139	119	87	98	128	138	**23**	123	107	**37**	84
Gambia, The	92	86	**44**	88	103	**26**	82	52	127	108	**2**	107	**30**	106	116
Ghana	108	72	**47**	98	123	123	101	94	102	114	**26**	114	**45**	57	115
Kenya	103	103	**26**	139	130	**18**	72	87	111	112	93	106	70	**28**	107
Lesotho	135	121	106	114	118	120	139	112	113	132	**22**	137	106	135	132
Libya	124	135	134	100	83	132	99	127	107	101	**39**	115	122	134	66
Madagascar	127	101	103	137	135	**41**	106	126	100	131	79	110	62	82	126
Malawi	121	102	**42**	74	111	117	133	91	129	128	95	121	92	**46**	112
Mali	133	130	102	107	132	100	131	113	117	135	130	130	59	104	78
Mauritania	136	113	110	130	137	125	138	125	124	119	107	132	76	108	129
Mauritius	53	27	62	**45**	68	**1**	61	**41**	**47**	66	**18**	53	**4**	131	110
Morocco	78	**48**	**36**	84	104	**23**	68	72	71	79	83	90	**22**	126	54
Mozambique	128	109	**32**	125	136	63	112	128	99	127	89	135	94	55	117
Namibia	84	55	**22**	86	106	62	59	**44**	67	109	**47**	124	**50**	**47**	123
Nigeria	130	131	61	133	131	134	102	131	105	105	98	126	123	52	89
Rwanda	102	**40**	**8**	**39**	119	95	109	67	139	120	63	100	60	56	134
Senegal	104	108	86	70	124	59	92	89	94	103	124	117	**39**	**40**	95
South Africa	66	**31**	**48**	129	88	64	**43**	66	57	95	**37**	128	**43**	**14**	55
Swaziland	116	90	57	76	113	52	123	65	108	115	**14**	139	69	90	137
Tanzania	110	97	**43**	115	134	90	121	123	125	130	56	125	80	**2**	101
Tunisia	47	**23**	**18**	56	79	**8**	65	**48**	51	76	**9**	**27**	**19**	95	69
Uganda	115	100	**40**	117	125	110	119	119	126	125	57	113	57	**29**	125
Zambia	111	**44**	**49**	80	122	111	118	108	123	122	104	120	113	**15**	119
Zimbabwe	119	136	71	96	108	114	125	83	118	124	117	134	90	**13**	102
Global leader	**CHE**	**SGP**	**SWE**	**FIN**	**HKG**	**MUS**	**CAN**	**HKG**	**AUT**	**SWE**	**BRN**	**CHE**	**LBN**	**BRA**	**SWE**

Source: World Economic Forum, 2011.

Notes: Ranks among the top 50 are highlighted in blue. *AUT* = Austria, *BRA* = Brazil, *BRN* = Brunei Darussalam, *CAN* = Canada, *FIN* = Finland, *HKG* = Hong Kong SAR, *LBN* = Lebanon, *MUS* = Mauritius, *SGP* = Singapore, *SWE* = Sweden, and *CHE* = Switzerland.

Box 1: Streamlining visas: Opportunities for reducing travel impediments

The first pillar of the Travel & Tourism Competitiveness Index shows that many African countries have not yet put in place policy environments that are sufficiently supportive of their Travel & Tourism (T&T) competitiveness. Visas are a form of policy regulation that can generate either incentives or disincentives to attract tourism. Countries across Africa have diverse visa policies and several nations implement restrictive entry/visa policies, which can deter travel to the region. In comparison, destinations focused on encouraging arrivals can adopt policies requiring visas for only a few countries. For example, Tanzania allows visa-free travel for visitors from 14 countries: Botswana, Gambia, Ghana, Hong Kong, Kenya, Lesotho, Malawi, Malaysia, Mozambique, Namibia, Swaziland, Uganda, Zambia, and Zimbabwe. In contrast, Costa Rica, another popular tourist destination, has visa exemptions extended to citizens from 74 countries, and 10 additional countries have visa-free access if the traveler possesses a valid visa from the United States, Canada, or a Schengen member country.

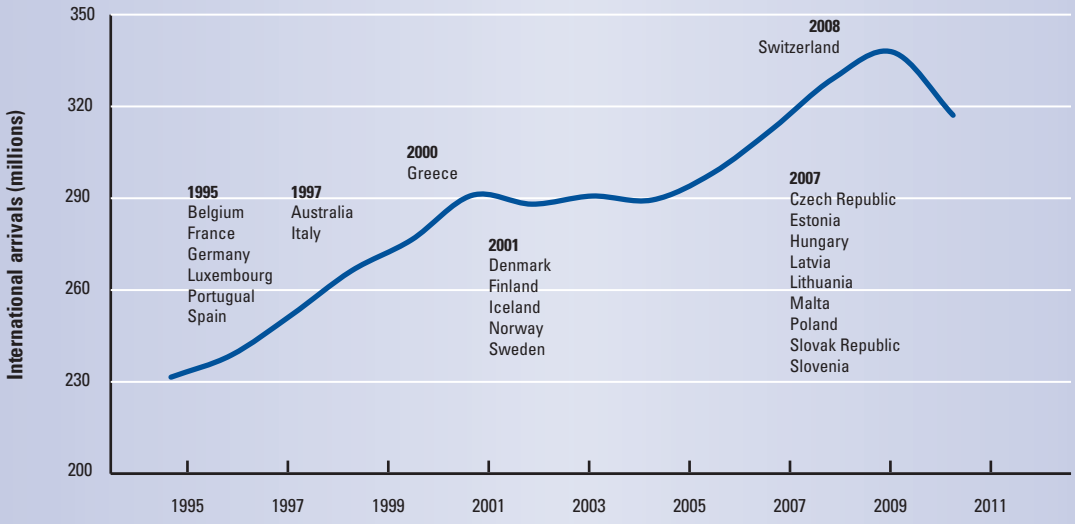
In addition to having to obtain a visa, its cost can be a deterrent to tourists who want to visit multiple countries. For example, a Swedish family of three, whose nationality allows them visa-free access to 163 countries,[1] would incur nearly US$550 in visa fees to visit the neighboring East African nations of Tanzania, Zambia, and Kenya.

Common visas

While visas are normally valid for entry into the country that issues them, the East African Community (EAC) is taking measures to ease travel and is currently considering an *East African Single Tourist Visa.* A single visa would allow access to five nations: Burundi, Kenya, Rwanda, Tanzania, and Uganda. The Southern Africa Development Community (SADC) is also considering the implementation of a *Univisa* and has identified two countries willing to pilot the scheme.

Common visas can promote tourism and bring economic development to the region. Currently, two common visas have been successfully implemented: the *CA-4 Visa Unica Centroamericana* for El Salvador, Guatemala, Honduras, and Nicaragua; and the more widely known *Schengen Visa* for 25 countries (Austria, Belgium, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, the Slovak Republic, Slovenia, Spain, Sweden, and Switzerland).

Figure 1: International arrivals and the implementation of the Schengen Visa agreement, 1994–2010



Source: Authors, based on data from http://data.worldbank.org.

(Cont'd.)

Box 1: Streamlining visas: Opportunities for reducing travel impediments *(cont'd.)*

The Schengen Visa is a result of an agreement signed by the European Union (EU) in 1985 to facilitate the free movement of persons within the EU area. The agreement came into force in 1995 and now includes non-EU countries. With the Schengen Visa system, international arrivals may enter any participating country and travel freely within the Schengen zone. Internal border controls for all travelers have disappeared, and travel within the Schengen zone is handled as domestic travel.

Based on available data from the United Nations World Tourism Organization (UNWTO), since 1995 there has been an increase in international tourist arrivals to the 25 Schengen member countries (Figure 1). The trend slowed but continued to increase despite the events of 9/11 and the global economic crisis.

In order to show the potential benefits that a common visa can bring to both the EAC and the SADC regions, we analyzed the impact that the implementation of the Schengen agreement has had on international tourist arrivals. When controlling for the nation's income per capita, total population, and trends over time, our analysis finds a significant increase in the number of international arrivals across countries that have implemented the Schengen agreement. This is corroborated by a recent analysis of Chinese tourists by *The Economist*,[2] which finds that once Switzerland implemented the Schengen agreement in 2008 the number of Chinese visitors instantly soared.

While the socioeconomic conditions and attractions differ between Europe and Africa, the current plans to implement a common visa scheme in East Africa could enable a significant increase in tourist arrivals as has been the case for the Schengen member countries.

Notes

1 This information is based on the Henley Visa Restrictions Index. This index is a global ranking of countries according to freedom enjoyed by their citizens. In 2010, citizens of the United Kingdom had visa-free access to 166 countries, followed by those from Denmark with 164 and those from Sweden with 163.

2 *The Economist* 2010.

Safety and security

The importance of safety and security conditions is a well-understood determinant of the competitiveness of a country's T&T industry. Tourists are deterred from traveling to dangerous countries or regions, making it less attractive to develop the T&T sector in those places. This pillar takes into account security issues such as the costliness of common crime, violence, and potential terrorism, as well as the extent to which police services can be relied upon to provide protection from crime. The pillar also takes into account an important measure of safety, namely the incidence of road traffic accidents in the country.

Table 3 shows that safety and security is not an area of strength among African countries. While North Africa (4.4) outperforms Russia (4.0) and is on a par with the Latin American and Caribbean region in this pillar, it is outperformed by all other regions and comparators shown in the table. Sub-Saharan Africa (with a score of 4.1) is outperformed by all regions and comparators with the exception of Russia, not a country known for high levels of safety and security.

Table 6 reinforces the view that this is not an area of significant strength for the continent. Only two countries, Rwanda (39th) and Mauritius (45th), are in the top 50 in this pillar, with only Tunisia (56th) joining them within the top half of the overall rankings. While these countries have comparatively low crime and dependable police forces, most of the other African countries show weaknesses across all areas measured. Indeed, 18 of the 35 African countries are ranked lower than 100 in this area, reinforcing the importance of improving safety and security in the region to further enhance the tourism industry's development.

Health and hygiene

Levels of health and hygiene provided by countries are also essential for T&T competitiveness. For example, access within the country to improved drinking water and sanitation is important for the comfort and health of travelers. And in the event that tourists do become ill, the country's health sector must be able to ensure they are properly cared for, as measured by the availability of physicians and hospital beds.

In this area, we see that there is a significant difference between the assessment of North African countries on average (score of 4.3) and sub-Saharan Africa (2.3), despite the fact that the North African average is quite middling. North Africa is on a par with the Latin American and Caribbean average and outperforms the Southeast Asian average, while sub-Saharan Africa is outperformed by all relevant comparators, and by a wide margin.

Box 2: Namibia's wildlife conservancy program

Environmental sustainability is one of the pillars of strength for sub-Saharan Africa. Namibia's ranking in this pillar (22nd) reflects the effectiveness of the government's efforts to ensure that the Travel & Tourism sector is being developed in a sustainable way. An example of these efforts is the country's wildlife conservancy program.

The conservancy program uses land tenure and responsibility for wildlife as a mechanism to promote financial and economic growth.[1] This program has led to the sustainable use of wildlife resources, stable land tenure for rural Namibians, and improved livelihoods. It has also provided the basis for communities to develop tourism enterprises within conservancies through joint ventures with the private sector or through community-based tourism operations.

Since 1996, legislation has made it possible for indigenous populations living on communal lands to acquire common property rights to manage and use their wildlife resources. Its success has led to a new policy to develop conservancies across the country. Its implementation incorporates shared decision making with farmers and defines rights, roles, and responsibilities as well as extension and capacity building for conservancies.[2]

Many actors have been involved in the conservancy processes in Namibia, including:[3]

- The Ministry of Environment and Tourism (MET), which carried out the initial participatory socioecological surveys in 1990–02 that identified key issues and problems concerning wildlife and conservation from a community perspective. The MET, in collaboration with nongovernmental organizations (NGOs), has been instrumental in tracking the impact of the conservancy program.

- The MET's Integrated Community-based Ecosystem Management, a World Bank–funded project to promote community-based ecotourism management that accrues socioeconomic benefits including strengthening conservancies.

- The MET's Strengthening the Protected Area Network, a project funded by the United Nations Development Program (UNDP), supporting concessions, as well as co-funding a tourism plan in the Kunene Region.

- The MET's Bwabwata, Mudumu and Mamili Parks Project (co-financed by the Federal Republic of Germany through the KfW German development bank), preparing a tourism development plan for the Kavango and Caprivi Parks.

- The World Wildlife Foundation's Living in a Finite Environment (WWF-LIFE) project, providing assistance to comprehensive community-based natural resource management programs through the technical support, training, grants, and regional coordination and information dissemination to government agencies, NGOs, and communities.

- The Namibian Association of Community Based Natural Resource Management Support Organizations (NACSO), which is an association comprising 15 NGOs and the University of Namibia. NACSO provides assistance to rural communities seeking to manage and utilize their natural resources in a sustainable manner.

- The Namibia Community Based Tourism Assistance Trust (NACOBTA), a nonprofit membership organization that supports communities in their efforts to develop and operate tourism enterprises profitably and sustainably.

Since the conservancy program started in 1995, private benefits to communities have increased annually from less than N$600,000 in 1998 to N$41.9 million in 2008, with the primary growth coming from the tourism industry. Tourism joint-venture conservancies now represent 856 tourist beds, 789 full-time jobs, and over 250 seasonal positions. In addition, the private sector has invested more than N$145 million (US$19 million) in tourism in communal conservancies since 1998.[4] The conservancy process has also been successful in extending the protected areas to a significant 19 percent of the country's area (over 130,000 square kilometers).

The conservancy approach applied in Namibia can be replicated in countries that have a communal land tenure model and policy frameworks that allow the devolution of responsibility for the management and use of wildlife to residents. The approach has demonstrated that using wildlife this way can generate sustained benefits for both wildlife and livelihoods, especially through tourism.

Notes

1 Spenceley 2010a.

2 Jones 2008.

3 ASLF 2010; Jones and Weaver 2009.

4 MET Republic of Namibia undated.

Table 6 demonstrates this clearly at the country level. No African countries are ranked in the top 50 within this pillar, and only two countries—Egypt (56th) and Mauritius (68th)—are even among the top half. In fact, only six African countries are above the 100 mark in this area, and twelve countries are below India, a country with notoriously low standards in health and hygiene. This highlights the great importance of improving health and hygiene standards in Africa for the benefit of the tourism industry, and simultaneously improving the living standards of the region's citizens.

Prioritization of the T&T sector

The extent to which the government prioritizes the T&T sector also has an important impact on T&T competitiveness. By making clear that T&T is a sector of primary concern, and by reflecting this in its budget priorities, a government can channel needed funds to essential development projects. It also signals its intentions, which can have positive spillover effects such as attracting further private investment into the sector. Prioritization of the sector can be reflected in a variety of other ways, such as government efforts to collect and make available T&T data on a timely basis and commissioning high-quality destination-marketing campaigns.

Table 3 shows that North African countries on average outperform all of the BRICs bar China in this sphere, and are very close to the Latin American and Caribbean and Southeast Asian averages. The sub-Saharan African countries are, on average, on a par with Brazil and Russia, although they are outperformed by all other comparators.

Yet this is an area where the regional averages mask significant differences within Africa. As shown by Table 6, eight African countries are ranked among the top 50, including countries from both North Africa and sub-Saharan Africa. Indeed, two countries are ranked among the top 10, with Mauritius placed 1st and Tunisia 8th. They are joined in the top 25 by Kenya (18th), Egypt (22nd), and Morocco (23rd). These are countries where the governments have clearly understood the importance of the tourism sector for their economies, ensuring effective destination-marketing campaigns, and making certain that data collection is a priority in order to have an ongoing profile of the sector's activity.

It is also notable that, despite the clear potential of the T&T industry for boosting Africa's economic development, several countries fare poorly in this area. Of the ten bottom-ranked countries in this pillar, seven are African countries, with Burundi and Côte d'Ivoire ranked the lowest two of all 139 economies. Efforts to educate the public and governments about the benefits of tourism would be important for increasing awareness in these countries. Tour operators' businesses are directly affected by the nation's prioritization, as shown in Box 3.

Air transport infrastructure

Quality air transport infrastructure provides ease of access to and from countries, as well as movement to destinations within countries. This pillar measures both the *quantity* of air transport, as measured by the available seat kilometers, the number of departures, airport density, and the number of operating airlines, as well as the *quality* of the air transport infrastructure both for domestic and international flights.

Table 4 shows that, on average, this is not an area of strength for either North Africa or sub-Saharan Africa. Although the North African average score of 2.9 is somewhat better than that of sub-Saharan Africa (2.4), it lags behind all other country and regional comparators, in some cases by a significant margin. The comparison is all the more stark with regard to the state of air transport infrastructure in sub-Saharan Africa.

Table 6 shows clearly that few countries in Africa have well-developed air transport infrastructures. Only South Africa and Cape Verde are among the top 50 ranked countries in this pillar; they are ranked 43rd and 48th, respectively. They are joined in the top half of the rankings by Egypt (55th), Namibia (59th), Mauritius (61st), Tunisia (65th), and Morocco (68th). These are countries that have managed to build reasonably well-functioning and developed air transport infrastructures by international standards. Yet the table also shows that most African countries place much lower in the rankings, with severely underdeveloped infrastructures.

Given the poor showing of most other African countries in this area, and given also their significant distance from many of their key tourist markets, investment in air transport represents a valuable opportunity throughout much of Africa. Box 4 explores the importance of air transport for African tourism in some detail.

Ground transport infrastructure

Vital for the ease of movement within the country is the extensiveness and quality of the country's ground transport infrastructure. This pillar takes into account the quality of roads, railroads, and ports, as well as the extent to which the national transport network as a whole offers efficient, accessible transportation to key business centers and tourist attractions within the country.

This is an area where African countries outperform some of the comparators shown in Table 4. North Africa's score of 3.3 for ground transport infrastructure, while behind that of most comparators, is ahead of Brazil (2.8) and Russia (3.1) among the BRICs. Similarly, sub-Saharan Africa's score of 3.1 is on a par with that of Russia, and ahead of Brazil.

Yet overall these are all very low scores and clearly much needs to be done in most African countries to improve the ground transport infrastructure. Table 6 shows that just three African countries are in the top 50 of the rankings in this pillar: Mauritius, Namibia, and

Box 3: Tour operators: Tourism's great connectors

Sub-Saharan Africa's tourism offerings are particularly fertile for tour operators. This is because, unlike a simple beach resort holiday that can now be booked online, most Africa leisure itineraries involve multiple experiences in remote locations with complex logistics. Consider a safari, for example. Typically this involves many different components such as guides, transport, internal flights, eating arrangements, and different types of accommodation that are difficult to arrange independently. Booking with an operator also helps allay visitors' safety and security concerns. A well-developed and organized tour operations sector can provide the critical connections to strengthen a fragmented tourism product offering across countries and regions. For tour operators to be effective, both the public and private sectors have a role to play. The experience of sub-Saharan Africa illustrates the challenges and potential.

Tour operators can clearly see the impact that the prioritization of Travel & Tourism (T&T) by governments can have in their ground operations. For example, arranging a trip to Mauritius, the top-ranked country worldwide in the pillar measuring the prioritization of Travel & Tourism, is straightforward because the government has made substantial efforts to promote the tourism sector and ease the operations related to Travel & Tourism in the country. On the other hand, for other African nations where the sector is not seen as a priority, tour operators can face significant challenges. A recent study conducted for the World Bank analyzed the tour operator sector and created a profile of the sector, documenting its challenges, highlighting potential, and defining the building blocks for success.[1]

Profile

Current estimates suggest there are between 2,500 and 3,000 ground operators in sub-Saharan Africa. Destinations offering more complex products, such as safari and adventure, have a larger number of ground operators than those with simpler tour itineraries. The countries with the most tour operators are South Africa, Kenya, Tanzania, Ethiopia, and Madagascar.

On an annual basis, tour operators are responsible for 10 to 15 percent of tourist spending in sub-Saharan Africa. This is equivalent to between US$2 billion and US$3 billion. Because of their tendency to visit isolated, rural locations, tour operators can have a significant pro-poor economic impact. For example, tour operators are estimated to provide direct employment for 30,000 to 45,000 people in the region annually. Employment includes jobs for drivers, guides, porters, mechanics, naturalists, reservation agents, accountants, and managers.

Challenges

There is some consensus on the key challenges facing the tour operations sector in sub-Saharan Africa. These are cost, security, access, business environment, service standards, and market image. The limited frequency and the high cost of flights reduce the ability of ground operators to access mid-end and low-end travelers. Poor roads constrain the development of new destinations and cause considerable wear and tear to vehicles. The high cost of vehicles and vehicle parts and the lack of maintenance skills make it expensive to operate ground transfers. High interest rates make it hard for operators to borrow money to grow their businesses. Continual increases in park fees and the high cost of utilities put a strain on business operations. Low service quality results in poor value for money in many sub-Saharan African destinations. Those surveyed also stressed the need for more reliable ground operators and a more professional approach to destination marketing.

Building blocks

Successful destinations for tours tend to have a stable government, airports serving key markets, an attractive investment climate, modern communication and transportation infrastructure, a wide range of products, and a professional tourism board. The most successful international operators were found to have knowledgeable, well-paid staff, good customer feedback systems, strong relationships with their ground operators, and a high percentage of repeat clients. Successful ground operators had good relationships with international operators, a deep understanding of the market, operations in a number of countries, online booking capability, accommodation or transport ownership, and business approaches that value conservation and sustainability. These are many of the aspects that we measure in the Travel & Tourism Competitiveness Index.

Guidelines for success

Tour operators enable diverse tourism product offerings ranging from niche experiences to popular, high-volume packages. Their efforts contribute to economic impact directly and indirectly as they attract new clientele and also continue to develop new offerings. To improve performance and economic impact, a variety of guidelines can be followed by destination governments and ground operators.

Guidelines for destination governments

1. **Make improvements to air connections and road infrastructure.** Airline cost, frequency, and routing are key issues for every part of the sub-Saharan African tourism industry. Good, all-weather roads are also essential for effective ground operators. Further liberalization of internal, inter-regional, and international flights will improve the accessibility of the region for tour operations.

2. **Create a supportive ground operator–enabling environment.** The tour operations sector can flourish only in a supportive business environment. A ground operator–enabling environment facilitates small business development through an efficient and responsive banking sector, competitive utility prices, soft loans, and duty-free purchases of vehicles and other equipment not available locally.

(Cont'd.)

Box 3: Tour operators: Tourism's great connectors *(cont"d.)*

3. **Streamline visa applications and processing.** As inter-regional travel becomes increasingly popular, streamlining visa requirements would be a significant benefit to tour operators. Developing regional visas and making visas readily available at border control posts, as discussed in Box 1, would facilitate further development of regional tours.

4. **Develop effective marketing campaigns.** Building market awareness is crucial for the development of destinations. Few travelers will pay hard-earned money to visit a destination for which they do not have a clear image. Destinations need to develop "trophy value" through effective national marketing campaigns, source-market awareness building, and positive image enhancement.

5. **Offer ground operator business and service training.** International operators rely on ground operators for the quality of their clients' experience. Ground operators need to be reliable, responsive, understanding of tourists' needs and expectations, and financially solvent. Destinations can leverage public-private partnerships to offer improved ground operator–focused training, both on and off the job.

Guidelines for ground operators

1. **Build strong relationships with international operators.** International operators stressed the need for improved ground operator professionalism, trust, and efficiency. Ground operators need to be good communicators, collect and listen to customer and operator feedback, and promptly respond to international operator enquiries.

2. **Improve professionalism and upgrade customer-service training.** Service quality was frequently mentioned by tour operators in the source markets. Many sub-Saharan African destinations have the attractions and facilities to warrant high prices, but lack the service quality. The result is that guests did not get the feeling of value for money during their vacation. Service training is urgently needed across sub-Saharan Africa.

3. **Enhance product development and innovation.** Tour operators noted that a number of destinations needed improved product development and that others were behind in product innovation. Product development and innovation are vital to tour operator competitiveness. A tour product that is constantly being renewed and improved will attract repeat visitors, will continue to generate word-of-mouth recommendations, and will be able to compete with new and emerging neighboring destinations.

4. **Improve sustainability outcomes.** Nature and culture are core components of the sub-Saharan African tour product. Tourism in the region is also an opportunity to facilitate pro-poor development, but this does not always occur without facilitation. A number of destinations are already facing severe environmental and social challenges as a result of tourism development. Careful planning and management are needed to ensure sustainable outcomes for all stakeholders and to avoid destroying the valuable assets the tourists are coming to see.

As the number and types of tourism offerings around the world multiply, travelers look for tailored products that meet their diverse needs, from transport to lodging to attractions. In this dynamic and competitive business marketplace, tour operators are crucial connectors linking the many components of the tourism experience. As learned from sub-Saharan African tour operations, the collaboration of public- and private-sector players is integral to achieving success.

Note

1 Twinning-Ward 2010.

Tunisia, which are ranked 41st, 44th, and 48th, respectively. These are countries with notably good roads and ports by international standards. Several other African countries have developed some aspects of their ground transport infrastructure, with several showing relative strengths in particular modes.

On the whole, however, it is clear that this is an area requiring attention not only for the development of the T&T industry, but also for the efficient movement of people and goods so important to the proper functioning of market economies.

Tourism infrastructure

Also important for T&T competitiveness is the general level of tourism services and the quality of hard infrastructure, as distinct from the general transport infrastructure, in each country. This includes the accommodation infrastructure and the presence of major car rental companies, as well as a measure of the financial infrastructure for tourists in the country (ability to use credit cards, the availability of automated teller machines, etc.).

Box 4: Air transport access: Expanding Africa's skies

Sub-Saharan African aviation has suffered over the years from a lack of indigenous demand, caused initially by the region's low GDP and disposable income growth, and then by infrastructure inadequate to facilitate a stronger aviation industry and broader collective route network. Traditional sub-Saharan African traffic flows have hardened around a set of air service offerings, which are frequently governed by powerful foreign incumbent airlines, restrictive Air Service Agreements, and diseconomies of scale that discourage smaller local airlines and deter initiation of new routes. Consequently, even some of the growing hubs of travel in sub-Saharan Africa, namely Kenya (ranked 72nd) in the air transport infrastructure pillar of the Travel & Tourism Competitiveness Index) and Ethiopia (87th), are still lagging behind.

Regional comparisons

Economic and institutional factors have contributed to Africa's low level of aviation development to date. Of the world's population, 15 percent reside in Africa, yet they are serviced by only 3.9 percent of all scheduled air service seats in the world. Consequently, there is an immense potential to provide expanded air traffic to the region, such as has been successfully established in North America and Europe. The population of these two regions combined is roughly equal to that of Africa, but they have access to around 54.6 percent of global seat capacity (Figure 1).

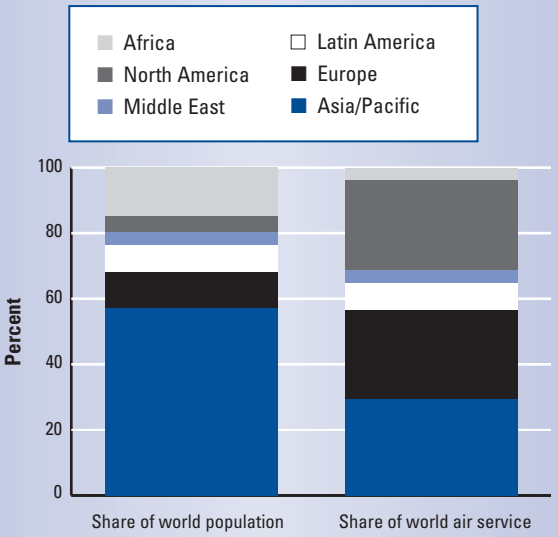
A comparison of the annual available seat kilometers (ASKs) per person by the various regions of the world shows that while each North American has access to around 5,083 ASKs, each African has access to only 154 ASKs—a factor of 33. Even when compared with other emerging regions of the world, the lack of air service stands out. For example, a consumer in Latin America or in Asia has nearly four times as much access to air service than consumers in Africa.

Africa's air transport networks and routes

The growth in air transport in Africa is expected to come from demand for intra-African connectivity, as the region's economies become even more intertwined. According to the International Civil Aviation Organization, the forecasted growth rate for the intra-African aviation market is projected to be around 10 percent in the near future, and over 8.5 percent in the medium term. Also in the medium term, strong traffic growth is anticipated on Africa–Middle East routes (over 6.5 percent) and on Africa–North America routes (around 6 percent), while comparatively "mature" routes to Europe will see the least increase in African passenger demand.

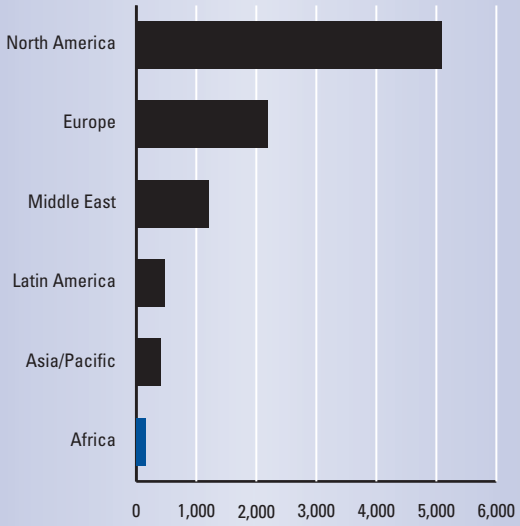
Although from a small base, and still relatively immature by global standards, African aviation has seen impressive growth

Figure 1: World population share vs. scheduled air service, 2010



Source: SH&E, 2010.

Figure 2: Annual available seat kilometers per person, 2010



Source: SH&E, 2010.
Note: Includes scheduled services only.

(Cont'd.)

Box 4: Air transport access: Expanding Africa's skies *(cont'd.)*

over the last decade. According to Airports Council International, between 1998 and 2009 the compound annual growth rate for Africa was 6.5 percent, and more than 136 million passengers passed through the top African airports in 2009. The global economic slowdown in late 2008 and most of 2009 was the reason that this number was slightly down from its peak in 2008, when a record 146 million passengers flew through African airports.

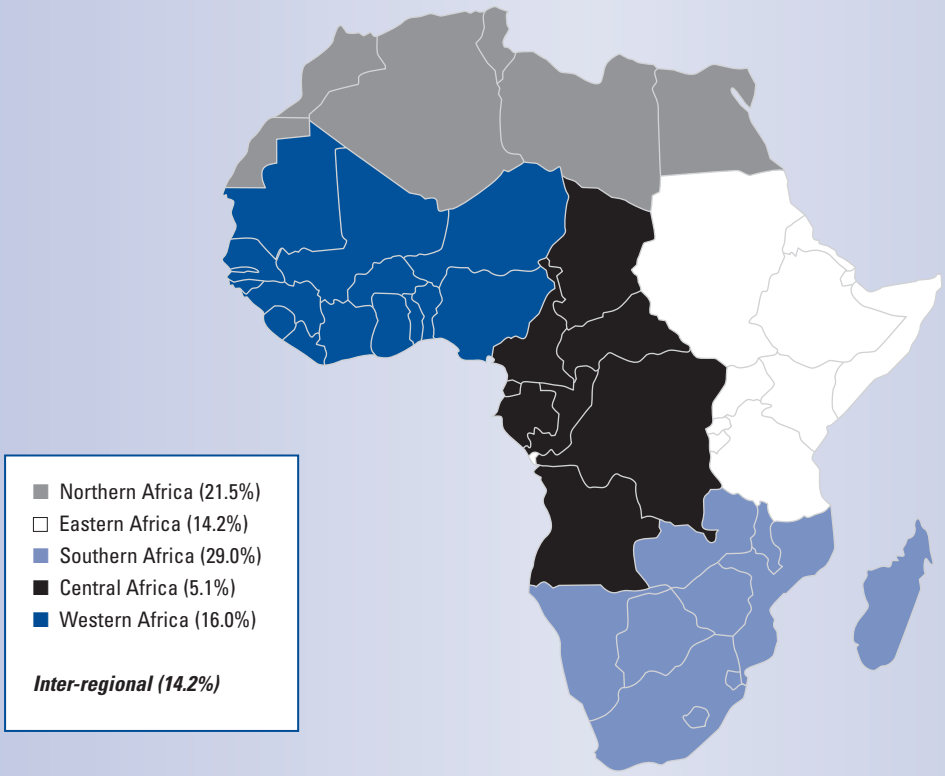
Air service in Africa is geographically segmented. The presence of four major hub cities in the peripheral areas of the continent has ensured that no airlines have developed a continental hub-and-spoke system that is characteristic of many large countries or continents. Supply has developed primarily along a grid network, where major airlines provide distinct connections to surrounding cities from their hubs, supplemented by some intra-hub connectivity.

Today, there is very limited capacity between the various regions and within Central Africa. Less than 15 percent of total intra-African seat capacity is devoted to flights that connect the various African regions. Central Africa stands out in this regard as it is very poorly served overall. This expansive region, which encompasses countries such as Angola, Cameroon, Congo, and Gabon, accounts for only around 5 percent of total intra-African capacity. In addition, air service within the continents' regions, particularly in West Africa, is characterized by infrequent service and multi-stop itineraries.

Several of the most frequently served African routes connect the continent with outside regions. Of the top 75 routes in sub-Saharan Africa, only four have a capacity of over 1,000 seats per day. This translates to roughly three flights a day using large Boeing 777/Airbus 330–type aircraft. This is in striking contrast to Asia, where more than 300 intra-Asian routes feature more than 1,000 seats per day. Of these four sub-Saharan Africa routes, three connect Johannesburg with Dubai, Harare, and London. In fact, Johannesburg continues to receive significant service in the region: over one-third of the top 75 served routes in sub-Saharan Africa involve Johannesburg.

While growth in Africa's airline service and capacity has historically been slower than it has in other developing markets, the outlook for future growth appears quite strong. Based on current order books for aircraft, which serve as a good proxy for long-term capacity growth, African airline capacity can potentially double over the next 20 years. A significant portion of African carriers' new capacity will come from wide-body aircraft, indicating that these carriers intend to expand their presence in long-haul international markets. Established

Figure 3: Nonstop daily seats within Africa by region, percent (August 2010)



Source: SH&E, 2010.
Note: Includes scheduled services only.

(Cont'd.)

Box 4: Air transport access: Expanding Africa's skies *(cont'd.)*

network carriers—such as Ethiopian Airlines, Kenya Airways, and South African Airways—are positioned to provide considerable additional capacity, while Nigeria-based Arik Air is anticipated to join the top five largest carriers on the continent.

A significant amount of the demand is for flights within the region. In 2010, over 30 percent of passenger demand was for flights within each region, according to the Official Airline Guide (OAG). Of this, 14 percent are to or from Southern Africa. Numbers of passengers who have flown are especially high in intra-Eastern African and intra-Southern African markets.

While the list of gaps for intercontinental flying is relatively short, current airlines have not been able to satisfy market demand for intra-Africa routes and in some near intercontinental travel, primarily to the Middle East. A study for the World Bank finds that six long-haul markets are underserved.[1] Market pairs such as Paris-Dakar, London-Accra, and London–Cape Town could potentially operate additional wide-body aircraft.[2] Additionally, three smaller market pairs could utilize narrow-body aircraft. These include Milan-Dakar, Paris-Antananarivo, and Luanda–Rio de Janeiro. Each of these three market pairs currently has service. Yet, since most narrow-body aircraft do not have the range to make city pairs such as Paris-Antananarivo and Luanda–Rio de Janeiro work, analysis points to the potential of these routings being served by less than daily wide-body service. As these markets mature, additional flights to provide more frequency can be introduced, based on individual route performances.

A recent study prepared for the World Bank also identified 44 markets where demand is not being met by supply. Of these, 6 markets could benefit from a daily narrow-body service.[3] Not surprisingly, all these markets have short-hop flights connecting to larger cities that in turn connect to major cities across the region. The analysis also identified 18 markets where a regional jet could offer nonstop service on a near-daily basis.[4] These markets could also be served by additional weekly flights by larger aircraft. Of course, a select few of these markets are not within regional jet range and would be ideally served by less-than-daily service using bigger jets. These include connecting important trans-African city pairs such as Cairo-Lagos and Nairobi-Sharjah.

Further opportunities are found in 20 destinations that could support a turboprop operation of between 35 and 50 seats, depending on distance and economics. Interestingly, while some of these destinations are intra-regional markets in each of the four regions, several connect points across Africa. Routes such as Abidjan-Tunis, Bamako-Tunis, Harare-Kinshasa, Maputo-Mombasa, Johannesburg-Zanzibar, and Cape Town–Mauritius all present challenges for turboprop operations but are optimal for the introduction of a less-than-daily flight with a longer-range narrow-body or other suitable regional jet aircraft.

Expanding Africa's aviation

The benefits of a strong aviation industry are well known. They stretch from a foundation role in tourism to the cultivation of service management capability, aerospace maintenance and engineering, trade enablement, and national recognition. These may seem like lofty goals, but consider the success of Singapore Airlines or Emirates, all in the space of one generation. Pursuing aviation, from policy initiatives to investment dollars, represents an important opportunity in Africa that would reinforce the region's development.

Past growth in air transport networks, routes, and capacity in other regions around the world—such as East Asia and South America—provide examples of the vital role air transport can play. The African continent, with its growing demand and potential, has the opportunity to benefit from an expanded network and capacity with increased supply. Investing in a comprehensive and harmonized approach to economic development, aviation, and tourism is vital if Africa is to reap the full potential benefits of the tourism sector.

Notes

1 SH&E 2010.

2 Wide-body aircraft are twin-aisle aircraft, typically Boeing 747/767/777 and Airbus A300/330/340/380. Narrow-body aircraft are single-aisle aircraft, typically Boeing 717/737/757, the Airbus A320 family, McDonnell-Douglas MD-80 family, and Fokker F100.

3 SH&E 2010.

4 Regional jets are small turbofan-jet aircraft seating 30 to 115 passengers. Primary current regional jet manufacturers include Embraer and Bombardier/Canadair, with other new and older offerings also available.

Table 4 shows that, on average, African countries have so far developed less tourism services infrastructure than other key emerging tourism markets. North Africa's infrastructure, with a score of 3.0, is less developed than that of all comparators shown in the table except for China (2.6), India (2.9), and Southeast Asia (2.8). Sub-Saharan Africa's low score of 2.3 lags behind that of all comparators.

Indeed, as shown by Table 6, only Mauritius places among the top 50 economies in this pillar at 47th place, with many hotel rooms and well-developed rental car facilities in particular. Only four other countries are in the top half of the rankings, namely Tunisia (51st), South Africa (57th), Cape Verde (63rd), and Namibia (67th), with moderately developed tourism infrastructures.

The table shows that a striking 25 out of the 35 African countries covered by the TTCI are below the 100 mark in this pillar. This provides a sense of the investments that will be required to bring the tourism infrastructure in the region up to international standards. It can also be seen as a clear opportunity for those looking to develop the T&T sector in the region.

ICT infrastructure

Given the increasing importance of the online environment for the modern T&T industry—for planning itineraries and purchasing travel and accommodations for consumers and suppliers—the quality of the information and communication technologies (ICT) infrastructure in each economy is also critical. To capture this concept, this pillar measures ICT penetration rates (Internet, telephone lines, and broadband), which provide a sense of the society's online activity. It also includes a specific measure of the extent to which the Internet is used by businesses in carrying out transactions in the economy, to get a sense of the extent to which these tools are in fact being used for business (including T&T) transactions, and in day-to-day operations.

This is an area where African countries—despite much progress in recent years, notably in the uptake of mobile technologies—still trail the rest of the world by a large margin. As shown by Table 5, both North Africa and sub-Saharan Africa receive scores that are among the lowest out of all pillars, at 2.7 and 2.0, respectively. Indeed, sub-Saharan Africa is outperformed by all comparators, and North Africa outperforms only India, which, given its large size and stage of development, faces significant challenges in increasing ICT penetration.

Table 6 shows that this is an area where not one African country places among the top 50. The highest-ranked country is Mauritius at 66th, the only country in the top half of the rankings, and it is 10 places ahead of the next-highest-ranked Tunisia at 76th. Only four other African countries are ranked higher than 100, namely Morocco (79th), Cape Verde (90th), Egypt (93rd), and South Africa (95th), and eight of the bottom ten ranked countries are from Africa.

Given ICT's importance for significant productivity enhancements for the T&T industry, as well as across the entire economy, increasing penetration rates and usage across the continent should be a priority going forward. The successful introduction of ICT innovations, such as M-Pesa in Kenya, suggests a responsive environment for ICT enhancements.

Price competitiveness in the T&T industry

Price competitiveness is an additional important element in assessing T&T competitiveness, with lower costs increasing the attractiveness of some countries for many travelers. To measure countries' price competitiveness, this pillar takes into account factors such as the extent to which goods and services in the country are more or less expensive than elsewhere (purchasing power parity); airfare ticket taxes and airport charges (which can make flight tickets much more expensive); fuel price levels compared with those of other countries; and taxation in the country (which can be passed on to travelers) as well as the relative cost of hotel accommodations.

Table 4 shows that, as one might expect, African countries on average are better assessed in this category than in many others. Indeed, North Africa with its average score of 5.1 is on a par or better assessed than all comparators except for Southeast Asia, which does slightly better with an average score of 5.2. Sub-Saharan Africa's score is lower than that of North Africa at 4.5, but is ahead of Brazil and on a par with Russia.

Table 6 shows how several African countries are highly price competitive. Indeed, 14 of them are among the top 50 in this area, with Gambia, Egypt, Botswana, and Tunisia among the top 10 at 2nd, 5th, 8th, and 9th ranks, respectively. These are countries that provide good value for money.

Also notable is the divide between the countries with strong price competitiveness and those that are in fact among the most price uncompetitive in the world. Indeed, at the unfavorable end of the spectrum are countries such as Mali, Côte d'Ivoire, and Chad, which are among the most expensive for travelers despite having comparatively low or moderate overall price levels. These countries have notably excessive ticket taxes and airport charges, raising the overall cost of travel.

Human resources

Quality human resources in the economy ensure that the industry has access to the collaborators it needs to develop and grow. This pillar takes into account the health and education and training levels in each economy, and is made up of two specific subpillars. The *education and training* subpillar measures educational attainment rates (primary and secondary), as well as the overall quality of the educational system in each

country, as assessed by the business community. Besides the formal educational system, the pillar also takes into account private-sector involvement in upgrading human resources, including the availability of specialized training services and the extent of staff training by companies in the country. The subpillar measuring the *availability of qualified labor* further takes into account the extent to which hiring and firing is impeded by regulations, and whether labor regulations make it easy or difficult to hire foreign labor. The health of the workforce is also included here, as measured by the overall life expectancy of the country as well as the specific costliness of HIV/AIDS to businesses.

Table 5 shows that North Africa, with a score of 4.7, outperforms sub-Saharan Africa (with a score of 3.9) by a significant margin. Yet both subregions are assessed less well than almost all comparators, the only exception being North Africa's slightly better score than that of India (at 4.6).

Turning to Table 6 we see that only one country, Tunisia, is among the top 50 (ranked 27th), well ahead of the next-best-ranked Mauritius (53rd). The quality of these countries' educational systems is better than those of most African countries, and companies offer comparatively more on-the-job training. In addition, they boast healthier workforces than in the rest of Africa, particularly than most of sub-Saharan Africa. Indeed, it is notable that the third-best-ranked country is Morocco at a very low 90th place, and the great majority of African countries populate the bottom of the rankings. Indeed, all of the bottom 10 ranked countries in this pillar are from Africa.

The importance of addressing health and education issues in Africa is not new. Yet these numbers remain striking in their message. It is clear that improving the human resources available to work in the T&T sector (and indeed in all sectors) in Africa must be a priority going forward.

Affinity for Travel & Tourism

The TTCI also takes into account each country's affinity for Travel & Tourism, which measures the extent to which the country and society demonstrate their openness to tourism and foreign visitors. The general openness of the population to travel and to foreign visitors has an important impact on T&T competitiveness. In particular, this pillar provides a measure of the national population's attitude toward foreign travelers; a measure of the extent to which business leaders are willing to recommend leisure travel in their countries to important business contacts; and a measure of tourism openness (tourism expenditures and receipts as a percentage of GDP), which provides a sense of the importance of tourism in the economy.

Table 5 shows that this is an area of strength for African countries, with the North African average of 4.8 ahead of all comparators except for Southeast Asia. Sub-Saharan Africa's score of 4.6 is also ahead of most comparators and on a par with the Latin American and Caribbean average, although it too is behind the Southeast Asian average.

Table 6 shows the extent to which this is a comparative strength for several African countries. Ten of them are among the top 50 in this pillar, and two of them—Mauritius (4th) and Cape Verde (5th)—are among the top 10. It is thus clear that an understanding of the importance of tourism and the openness to foreign travelers is prevalent in much of Africa.

Indeed, only one African country is among the bottom 10 countries in this pillar, although it must be noted that this country, Angola, does hold the last spot of all countries (139th). However, the general picture is that Africans are for the most part quite open to tourism, which bodes well for developing the other critical areas going forward.

Natural resources

It is also clear that natural resources are an important factor underlying national T&T competitiveness. Countries that are able to offer travelers access to natural assets clearly have a competitive advantage. This pillar includes a number of environmental attractiveness measures, including the number of UNESCO natural World Heritage sites, a measure of the quality of the natural environment, the richness of the fauna in the country as measured by the total known species of animals, and the percentage of nationally protected areas.

This is an area where, as shown by Table 5, sub-Saharan Africa, with its score of 3.5, outperforms North Africa (2.4). And while it is true that both sub-Saharan Africa and North Africa are, on average, ranked lower in this area than the comparators in the table, it is important to note that these are somewhat rigorous benchmarks, as the comparator countries and regions have rich natural resources. Further, the overall averages, as we have seen in the discussion several times above, often mask significant differences among individual African countries.

Table 6 shows that a remarkable 13 African countries are among the top 50 in this pillar, with Tanzania ranked a very high 2nd, behind only Brazil out of all 139 economies assessed. Although some African countries do not benefit from this natural richness, it is clear that for many of them this constitutes a critical selling point in attracting tourists and developing their tourism industries. Many successful efforts already exist in fostering natural attributes; Box 5 considers one of Africa's most well-known World Heritage natural sites, Mount Kilimanjaro.

Cultural resources

Finally, cultural resources are also an important driver of T&T competitiveness. This pillar takes into account the number of UNESCO cultural World Heritage sites,

Box 5: Harnessing natural resources: Mount Kilimanjaro, Tanzania

A clear indicator of Tanzania's commitment to its natural resources is the designation of more than 25 percent of its land as Wildlife National Parks and protected areas.[1] It is not a surprise that Tanzania ranks 2nd out of 139 economies on the natural resources pillar. Transforming parks and protected areas into sustainable and economically productive destinations is an ongoing challenge, however.

An example of a destination continuously striving to achieve such a balance is one of Tanzania's World Heritage natural sites: Mount Kilimanjaro, the highest free-standing mountain mass in the world and a habitat for rare endemic plants and animals.[2]

Over 35,000 tourists visit annually, making Mount Kilimanjaro National Park the second-highest earner of all Tanzania's National Parks after Serengeti.[3] The park is capably managed by the Kilimanjaro National Park Authority, which reports directly to the Tanzania National Parks Authority. Management practices include the zoning of development and activities (i.e., from intensive-use hiking zones to wilderness zones), the banning of the collection and burning of firewood, the requirement of trash removal, and trail changes.

Pro-poor impact

Tourism in Mount Kilimanjaro National Park has been successful, generating high-value seasonal employment among the local people. A recent study by the World Bank analyzed the pro-poor impact of tourism in the Mount Kilimanjaro area.[4] The study finds that revenue from hiking generates an estimated US$50 million per year, of which 28 percent reaches the local poor. Environmental impacts are dynamic, reflecting the type of use and volume from season to season.

A typical climb package is sold by local tour operators for US$1,205. This is an all-inclusive arrangement and includes five days on the mountain with a night in a hotel before and after the climb. In addition to the package, visitors spend an average of US$171 during the climb (Figure 1). The labor-intensive nature of climbing leads to tips that increase earners' income by over 50 percent, and, as a result, climbing staff receive nearly US$250 on a trip. Moreover, climbing Mount Kilimanjaro is extremely labor intensive, with a typical group of 10 climbers supported by 2 guides, 40 porters, and 2 cooks. It is estimated that 35,000 tourists each spending a week on the mountain seasonally generate jobs for about 400 guides, 10,000 porters, and 500 cooks.[5]

Mount Kilimanjaro National Park is a clear example of how well-managed natural resources can generate benefits to the local community. Apart from the economic benefits brought by tourism, the region has some of the highest school enrolments (100 percent), life expectancies (59 years), and adult literacy rates (85 percent) in Tanzania. In the coming years, continued balancing of economic productivity and environmental sustainability will be the goal of residents and visitors alike.

Notes

1 Tanzania Tourist Board 2009.

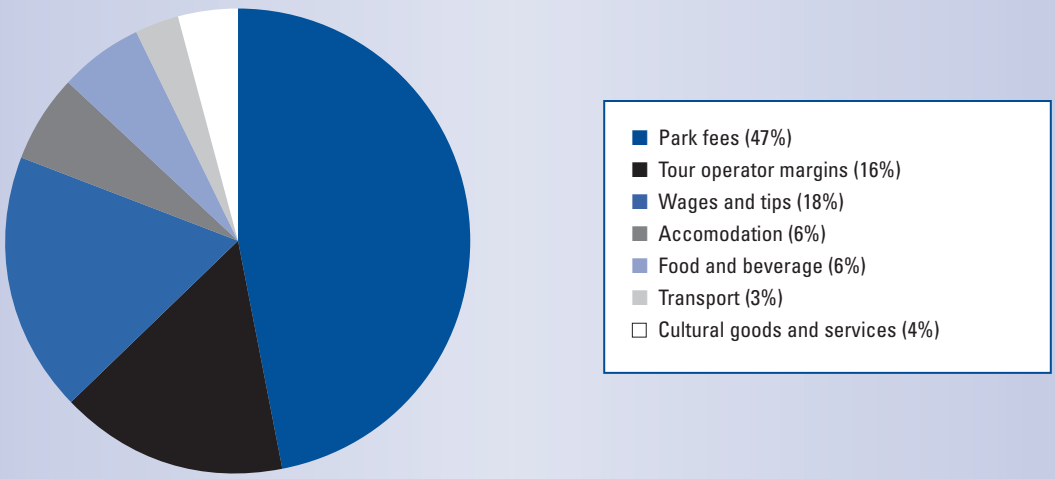
2 UNESCO 2000.

3 Mitchell et al. 2009.

4 Spenceley 2010b.

5 Mitchell et al. 2008.

Figure 1: Cost components of a typical mountain-climbing holiday (US$1,376)



Source: Mitchell et al., 2009.

Box 6: Cultural tourism in Zanzibar

In the midst of a region of poor performers in the cultural resources pillar, Zanzibar stands out with Stone Town, a World Heritage site; the Zanzibar International Film Festival; and the Sauti za Busara Music Festival. In Zanzibar, a range of stakeholders work together to promote tourism while preserving heritage.[1] Stakeholders and their exemplary projects include the following:

- The Revolutionary Government of Zanzibar is developing policies to provide an enabling environment for tourism investment, including Zanzibar's Strategy for Growth and Poverty Reduction (MKUZA).
- The United Nations Educational, Scientific and Cultural Organization is working alongside partners such as the Aga Khan Trust for Culture and the Revolutionary Government of Zanzibar on the rehabilitation of Stone Town and Forodhani Park.
- The Aga Khan Development Network is sponsoring a number of initiatives, such as enabling young people to find employment in the tourism industry.
- A Tourism Cluster Competitiveness Program is financed by the World Bank and the British Department for International Development to create sustainable conditions for enterprise creation and growth.
- The Zanzibar Association of Tourism Investors is promoting responsible and sustainable tourism development in Zanzibar through their operations and advocacy activities.
- The Zanzibar Enterprise and Sustainable Tourism initiative organized by Voluntary Services Overseas (VSO) is working on a market-based approach to livelihood development as a means of poverty alleviation.
- The Netherlands Development Organization (SNV) is facilitating inputs to the MKUZA update for the tourism and related sectors. Since 2010, the SNV has convened a group called Development Partners in Tourism to coordinate interventions in the sector.
- The United States Agency for International Development (USAID)'s Tanzania Agriculture Productivity Program links small-scale farmers to markets (hotels) and processing companies.

Note

1 Spenceley 2010c.

sports stadium seat capacity, and the number of international fairs and exhibitions in the country, as well as a measure of creative industries exports, which provides an additional indication of cultural richness.

Unlike natural resources discussed above, based on the measures used in the TTCI this is not presently an area of comparative strength for African countries, particularly those of sub-Saharan Africa. Table 5 shows that, with an average score of 2.5, North Africa is outperformed by all comparators from outside of Africa, with the exception of the slightly lower score of Latin America and the Caribbean (2.4). This is all the more striking for sub-Saharan Africa, with its very low average score of 1.5, well below all of the comparators shown in the table. Africa's rich mix of cultures and centuries of history are an undeniable resource for expanded tourism. Yet this indicator points to African countries' limited success to date in leveraging these resources. The pillar focuses on developed cultural assets—rather than gauging raw cultural resources. It is with this distinction in mind that the relatively low rankings of African countries compared with the rankings of other countries can also be viewed as a compelling reminder of the potential for further developing Africa's cultural heritage resources into economically productive tourism assets.

Table 6 shows that no African countries are in the top 50 in this pillar, although five are in the top half of the rankings, namely Morocco (54th), South Africa (55th), Egypt (65th), Libya (66th), and Tunisia (69th). It is notable that all but one of these countries is from North Africa. Overall, it is clear that cultural resources, as broadly defined through this pillar, are not a strength for African countries, especially those of sub-Saharan Africa. Efforts in this area could boost the region's T&T competitiveness. Box 6 highlights how Africa could make better use of its cultural assets, learning from Zanzibar.

Conclusions

The development of the T&T sector offers significant opportunities for Africa to move up the value chain, fostering growth and development in the region. This chapter has explored the many strengths Africa has to build upon, including price competitiveness, a strong affinity for tourism, and rich natural resources supported by environmental sustainability efforts. However, the analysis also shows that a number of obstacles remain to improving the region's competitiveness, which can be tackled notably by improving safety and security, upgrading health and hygiene levels, developing various forms of infrastructure, and fostering the region's human capital. To fully tap this potential, Africa can expand by growing its offerings in combination with capturing a higher percentage of global market share. Given Africa's many strengths, improvements in these areas will greatly

enhance its ability to reap the enormous potential benefits of tourism.

Notes

1 UNWTO 2010.

2 Each of the pillars is, in turn, made up of a number of individual variables. The dataset includes both Survey data from the World Economic Forum's annual Executive Opinion Survey, and quantitative data from publicly available sources, international organizations, and T&T institutions and experts—for example, International Air Transport Association (IATA), the International Union for Conservation of Nature (IUCN), the UNWTO, the World Travel and Tourism Council (WTTC), the United Nations Conference on Trade and Development (UNCTAD), and the United Nations Educational, Scientific and Cultural Organization (UNESCO). The Survey is carried out among chief executive officers (CEOs) and top business leaders in all economies covered by our research; these are the people making the investment decisions in their respective economies. The Survey provides unique data on many qualitative institutional and business environment issues as well as on specific issues related to the T&T industry and the quality of the natural environment.

3 The Southeast Asian average includes Brunei Darussalam, Cambodia, Indonesia, Malaysia, the Philippines, Singapore, Thailand, Timor-Leste, and Vietnam.

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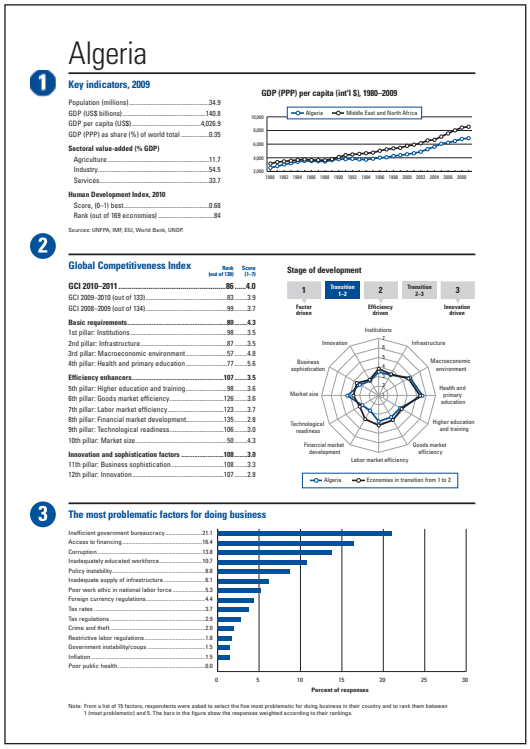
Part 3

Competitiveness Profiles

How to Read the Competitiveness Profiles

The Competitiveness Profiles section of *The Africa Competitiveness Report 2011* presents details of the performance in the Global Competitiveness Index (GCI) discussed in Chapter 1.1 for each of the 35 African countries covered.



Page 1

1 Key indicators

The first section presents a selection of key indicators. Population figures come from the United Nations Population Fund (UNFPA)'s *State of World Population 2009*, available at www.unfpa.org/swp. GDP figures come from the April 2010 edition of the International Monetary Fund (IMF)'s *World Economic Outlook*, available at www.imf.org/weo. The structure of GDP was obtained from the World Bank's *World Development Indicators Online Database* (December 1st, 2010 edition). The Human Development Index (HDI) ranking is computed by the United Nations Development Programme (UNDP) and is presented in the *Human Development Indices: Statistical Update 2010*. On the right-hand side of the section, a chart shows the evolution of GDP per capita valued at power purchasing parity (PPP) over the period 1980–2009. Note that for Namibia, data are available only from 1990 on; Zimbabwe data are available only from 2005 on.

2 Global Competitiveness Index

This section details the country's performance on the GCI. In the table on the left-hand side, the first column shows its ranks among the 139 economies covered by the GCI and the second column presents its scores. On the right-hand side, the figure shows the country's performance on the 12 pillars of the GCI (blue line) measured against the average scores across all the countries in the same stage of development (black line).

3 The most problematic factors for doing business

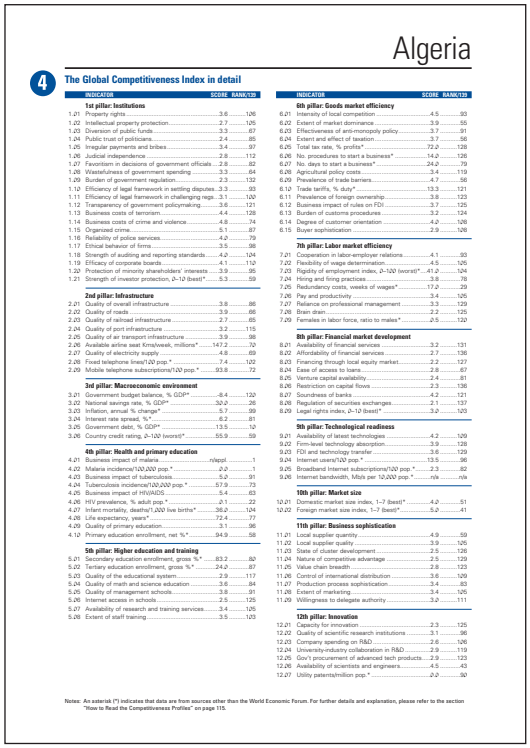
This figure summarizes those factors seen by business executives as the most problematic for doing business in their economy. The information is drawn from the World Economic Forum's Executive Opinion Survey 2009 and 2010. From a list of 15 factors, respondents were asked to select the 5 most problematic, and to rank those from 1 (most problematic) to 5. The results were then tabulated and weighted according to the ranking assigned by respondents.[1]

1 For more information regarding the Executive Opinion Survey, see World Economic Forum, *The Global Competitiveness Report 2010–2011*. Geneva: World Economic Forum.

Page 2

4 The Global Competitiveness Index in detail

This page presents the score and rank achieved by a country on each of the indicators entering the composition of the GCI. The following pages provide additional information and definitions on each of these indicators.



Algeria

4 The Global Competitiveness Index in detail

INDICATOR	SCORE	RANK/139
1st pillar: Institutions		
1.01 Property rights	3.6	126
1.02 Intellectual property protection	2.7	125
1.03 Diversion of public funds	3.3	87
1.04 Public trust of politicians	2.4	85
1.05 Irregular payments and bribes	3.4	97
1.06 Judicial independence	2.8	112
1.07 Favoritism in decisions of government officials	2.8	82
1.08 Wastefulness of government spending	3.3	64
1.09 Burden of government regulation	2.3	132
1.10 Efficiency of legal framework in settling disputes	3.3	93
1.11 Efficiency of legal framework in challenging regs	3.1	120
1.12 Transparency of government policymaking	3.6	121
1.13 Business costs of terrorism	4.4	128
1.14 Business costs of crime and violence	4.8	74
1.15 Organized crime	5.1	87
1.16 Reliability of police services	4.2	79
1.17 Ethical behavior of firms	3.5	98
1.18 Strength of auditing and reporting standards	4.2	124
1.19 Efficacy of corporate boards	4.1	112
1.20 Protection of minority shareholders' interests	3.9	95
1.21 Strength of investor protection, 0–10 (best)*	5.3	59
2nd pillar: Infrastructure		
2.01 Quality of overall infrastructure	3.8	86
2.02 Quality of roads	3.9	66
2.03 Quality of railroad infrastructure	2.7	65
2.04 Quality of port infrastructure	3.2	115
2.05 Quality of air transport infrastructure	3.9	98
2.06 Available airline seat kms/week, millions*	147.2	70
2.07 Quality of electricity supply	4.8	69
2.08 Fixed telephone lines/100 pop.*	7.4	102
2.09 Mobile telephone subscriptions/100 pop.*	93.8	72
3rd pillar: Macroeconomic environment		
3.01 Government budget balance, % GDP*	-8.4	129
3.02 National savings rate, % GDP*	32.0	26
3.03 Inflation, annual % change*	5.7	99
3.04 Interest rate spread, %*	6.2	81
3.05 Government debt, % GDP*	13.5	10
3.06 Country credit rating, 0–100 (worst)*	55.9	59
4th pillar: Health and primary education		
4.01 Business impact of malaria	n/appl.	1
4.02 Malaria incidence/100,000 pop.*	2.0	1
4.03 Business impact of tuberculosis	5.2	91
4.04 Tuberculosis incidence/100,000 pop.*	57.9	73
4.05 Business impact of HIV/AIDS	5.4	63
4.06 HIV prevalence, % adult pop.*	0.1	22
4.07 Infant mortality, deaths/1,000 live births*	36.2	104
4.08 Life expectancy, years*	72.4	77
4.09 Quality of primary education	3.1	96
4.10 Primary education enrollment, net %*	94.9	58
5th pillar: Higher education and training		
5.01 Secondary education enrollment, gross %*	83.2	82
5.02 Tertiary education enrollment, gross %*	24.0	87
5.03 Quality of the educational system	2.9	117
5.04 Quality of math and science education	3.6	84
5.05 Quality of management schools	3.8	91
5.06 Internet access in schools	2.5	125
5.07 Availability of research and training services	3.4	126
5.08 Extent of staff training	3.5	103
6th pillar: Goods market efficiency		
6.01 Intensity of local competition	4.5	93
6.02 Extent of market dominance	3.9	55
6.03 Effectiveness of anti-monopoly policy	3.7	91
6.04 Extent and effect of taxation	3.7	56
6.05 Total tax rate, % profits*	72.0	128
6.06 No. procedures to start a business*	14.0	126
6.07 No. days to start a business*	24.0	79
6.08 Agricultural policy costs	3.4	119
6.09 Prevalence of trade barriers	4.7	56
6.10 Trade tariffs, % duty*	13.3	121
6.11 Prevalence of foreign ownership	3.8	123
6.12 Business impact of rules on FDI	3.7	125
6.13 Burden of customs procedures	3.2	124
6.14 Degree of customer orientation	4.2	126
6.15 Buyer sophistication	2.9	126
7th pillar: Labor market efficiency		
7.01 Cooperation in labor-employer relations	4.1	93
7.02 Flexibility of wage determination	4.5	126
7.03 Rigidity of employment index, 0–100 (worst)*	41.0	124
7.04 Hiring and firing practices	3.8	78
7.05 Redundancy costs, weeks of wages*	17.0	29
7.06 Pay and productivity	3.4	126
7.07 Reliance on professional management	3.3	129
7.08 Brain drain	2.2	125
7.09 Females in labor force, ratio to males*	0.5	120
8th pillar: Financial market development		
8.01 Availability of financial services	3.2	131
8.02 Affordability of financial services	2.7	136
8.03 Financing through local equity market	2.2	127
8.04 Ease of access to loans	2.8	67
8.05 Venture capital availability	2.4	81
8.06 Restriction on capital flows	2.3	136
8.07 Soundness of banks	4.2	121
8.08 Regulation of securities exchanges	2.1	137
8.09 Legal rights index, 0–10 (best)*	3.0	120
9th pillar: Technological readiness		
9.01 Availability of latest technologies	4.2	129
9.02 Firm-level technology absorption	3.9	128
9.03 FDI and technology transfer	3.6	129
9.04 Internet users/100 pop.*	13.5	96
9.05 Broadband Internet subscriptions/100 pop.*	2.3	82
9.06 Internet bandwidth, Mb/s per 10,000 pop.*	n/a	n/a
10th pillar: Market size		
10.01 Domestic market size index, 1–7 (best)*	4.2	51
10.02 Foreign market size index, 1–7 (best)*	5.2	41
11th pillar: Business sophistication		
11.01 Local supplier quantity	4.9	59
11.02 Local supplier quality	3.9	126
11.03 State of cluster development	2.5	126
11.04 Nature of competitive advantage	2.5	129
11.05 Value chain breadth	2.8	123
11.06 Control of international distribution	3.6	129
11.07 Production process sophistication	3.4	83
11.08 Extent of marketing	3.4	126
11.09 Willingness to delegate authority	3.2	111
12th pillar: Innovation		
12.01 Capacity for innovation	2.5	125
12.02 Quality of scientific research institutions	3.1	96
12.03 Company spending on R&D	2.6	126
12.04 University-industry collaboration in R&D	2.9	119
12.05 Gov't procurement of advanced tech products	2.9	123
12.06 Availability of scientists and engineers	4.5	43
12.07 Utility patents/million pop.*	2.2	30

Notes: An asterisk (*) indicates that data are from sources other than the World Economic Forum. For further details and explanation, please refer to the section "How to Read the Competitiveness Profiles" on page 115.

TECHNICAL NOTES AND SOURCES

This section provides detailed definitions and sources for all the indicators that enter the Global Competitiveness Index 2010–2011 (GCI).

Two types of data are used in the GCI: Executive Opinion Survey data and data from sources other than the World Economic Forum (national authorities, international agencies, and private sources). The latter were updated at the time *The Global Competitiveness Report 2010–2011* was prepared.

For each indicator, the title appears on the fist line, preceded by its number to allow for quick reference. The numbering refs to the data tables section in *The Global Competitiveness Report 2010–2011*. Underneath is a description of the indicator or, in the case of the Executive Opinion Survey data, the full question and the associated responses.

1st Pillar: Institutions

1.01 Property rights

How would you rate the protection of property rights, including financial assets, in your country? [1 = very weak; 7 = very strong] | 2009–10 weighted average

Source : World Economic Forum, Executive Opinion Survey 2009, 2010

1.02 Intellectual property protection

How would you rate intellectual property protection, including anti-counterfeiting measures, in your country? [1 = very weak; 7 = very strong] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

1.03 Diversion of public funds

In your country, how common is diversion of public funds to companies, individuals, or groups due to corruption? [1 = very common; 7 = never occurs] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

1.04 Public trust of politicians

How would you rate the level of public trust in the ethical standards of politicians in your country? [1 = very low; 7 = very high] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

1.05 Irregular payments and bribes

This indicator represents the average score across the five components of the following Executive Opinion Survey question: In your country, how common is it for firms to make undocumented extra payments or bribes connected with (a) imports and exports; (b) public utilities; (c) annual tax payments; (d) awarding of public contracts and licenses; (e) obtaining favorable judicial decisions. The answer to each question ranges from 1 (very common) to 7 (never occurs). | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

1.06 Judicial independence

To what extent is the judiciary in your country independent from influences of members of government, citizens, or firms? [1 = heavily influenced; 7 = entirely independent] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

1.07 Favoritism in decisions of government officials

To what extent do government officials in your country show favoritism to well-connected firms and individuals when deciding upon policies and contracts? [1 = always show favoritism; 7 = never show favoritism] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

1.08 Wastefulness of government spending

How would you rate the composition of public spending in your country? [1 = extremely wasteful; 7 = highly efficient in providing necessary goods and services] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

1.09 Burden of government regulation

How burdensome is it for businesses in your country to comply with governmental administrative requirements (e.g., permits, regulations, reporting)? [1 = extremely burdensome; 7 = not burdensome at all] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

1.10 Efficiency of legal framework in settling disputes

How efficient is the legal framework in your country for private businesses in settling disputes? [1 = extremely inefficient; 7 = highly efficient] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

1.11 Efficiency of legal framework in challenging regulations

How efficient is the legal framework in your country for private businesses in challenging the legality of government actions and/or regulations? [1 = extremely inefficient; 7 = highly efficient] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

1.12 Transparency of government policymaking

How easy is it for businesses in your country to obtain information about changes in government policies and regulations affecting their activities? [1 = impossible; 7 = extremely easy] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

1.13 Business costs of terrorism

To what extent does the threat of terrorism impose costs on businesses in your country? [1 = significant costs; 7 = no costs] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

1.14 Business costs of crime and violence

To what extent does the incidence of crime and violence impose costs on businesses in your country? [1 = significant costs; 7 = no costs] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

1.15 Organized crime

To what extent does organized crime (mafia-oriented racketeering, extortion) impose costs on businesses in your country? [1 = significant costs; 7 = no costs] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

1.16 Reliability of police services

To what extent can police services be relied upon to enforce law and order in your country? [1 = cannot be relied upon at all; 7 = can always be relied upon] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

1.17 Ethical behavior of firms

How would you compare the corporate ethics (ethical behavior in interactions with public officials, politicians, and other enterprises) of firms in your country with those of other countries in the world? [1 = among the worst in the world; 7 = among the best in the world] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

1.18 Strength of auditing and reporting standards

In your country, how would you assess financial auditing and reporting standards regarding company financial performance? [1 = extremely weak; 7 = extremely strong] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

1.19 Efficacy of corporate boards

How would you characterize corporate governance by investors and boards of directors in your country? [1 = management has little accountability to investors and boards; 7 = investors and boards exert strong supervision of management decisions] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

1.20 Protection of minority shareholders' interests

In your country, to what extent are the interests of minority shareholders protected by the legal system? [1 = not protected at all; 7 = fully protected] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

1.21 Strength of investor protection

Strength of Investor Protection Index on a 0–10 (best) scale | 2009

Source: The World Bank, Doing Business 2010

2nd Pillar: Infrastructure

2.01 Quality of overall infrastructure

How would you assess general infrastructure (e.g., transport, telephony, and energy) in your country? [1 = extremely underdeveloped; 7 = extensive and efficient by international standards] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

2.02 Quality of roads

How would you assess roads in your country? [1 = extremely underdeveloped; 7 = extensive and efficient by international standards] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

2.03 Quality of railroad infrastructure

How would you assess the railroad system in your country? [1 = extremely underdeveloped; 7 = extensive and efficient by international standards] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

2.04 Quality of port infrastructure

How would you assess port facilities in your country? [1 = extremely underdeveloped; 7 = well developed and efficient by international standards]
For landlocked countries, the question is as follows: How accessible are port facilities? [1 = extremely inaccessible; 7 = extremely accessible] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

2.05 Quality of air transport infrastructure

How would you assess passenger air transport infrastructure in your country? [1 = extremely underdeveloped; 7 = extensive and efficient by international standards] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

2.06 Available airline seat kilometers

Scheduled available airline seat kilometers per week originating in country (in millions) | January 2010 and July 2010 average

Sources: International Air Transport Association, SRS Analyser; national sources

2.07 Quality of electricity supply

How would you assess the quality of the electricity supply in your country (lack of interruptions and lack of voltage fluctuations)? [1 = insufficient and suffers frequent interruptions; 7 = sufficient and reliable] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

2.08 Fixed telephone lines

Number of active fixed telephone lines per 100 population | 2009

Sources: International Telecommunication Union, World Telecommunication/ICT Indicators 2010 (June 2010 edition); national sources

2.09 Mobile telephone subscriptions

Number of mobile cellular telephone subscriptions per 100 population | 2009

Sources: International Telecommunication Union, World Telecommunication/ICT Indicators 2010 (June 2010 edition); national sources

3rd Pillar: Macroeconomic environment

3.01 Government budget balance

Government budget balance as a percentage of GDP | 2009

Sources: African Development Bank; European Bank for Reconstruction and Development; Inter-American Development Bank; International Monetary Fund; Organisation for Economic Co-operation and Development; Economist Intelligence Unit, CountryData Database (July 2010); national sources

3.02 National savings rate

National savings rate as a percentage of GDP | 2009

Sources: Economist Intelligence Unit, CountryData Database (June/July 2010); International Monetary Fund; The World Bank Group, World dataBank (July 2010); national sources

3.03 Inflation

Annual percent change in consumer price index (year average) | 2009

Sources: International Monetary Fund, World Economic Outlook Database (April 2010); national sources
Notes: Economies are ranked in ascending order for presentation purposes only. See Appendix of Chapter 1 for details about the treatment of deflationary countries in the Global Competitiveness Index.

3.04 Interest rate spread

Average interest rate spread between typical lending and deposit rates | 2009

Sources: Economist Intelligence Unit, CountryData Database (July 2010); International Monetary Fund, International Financial Statistics (July 2010); national sources

3.05 Government debt

General government gross debt as a percentage of GDP | 2009

Sources: African Development Bank; African Development Bank and OECD Development Centre, Africa Economic Outlook (retrieved July 6, 2010); European Bank for Reconstruction and Development; International Monetary Fund; Economist Intelligence Unit, CountryData Database (July 2010); national sources

3.06 Country credit rating

Expert assessment of the probability of sovereign debt default on a 0–100 (lowest probability) scale | September 2009

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4th Pillar: Health and primary education

4.01 Business impact of malaria

How serious an impact do you consider malaria will have on your company in the next five years (e.g., death, disability, medical and funeral expenses, productivity and absenteeism, recruitment and training expenses, revenues)? [1 = a serious impact; 7 = no impact at all] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

4.02 Malaria incidence

Number of malaria cases per 100,000 population | 2006

Sources: World Health Organization, World Malaria Report 2008; national sources
Note: (NE) indicates that malaria is not endemic.

4.03 Business impact of tuberculosis

How serious an impact do you consider tuberculosis will have on your company in the next five years (e.g., death, disability, medical and funeral expenses, productivity and absenteeism, recruitment and training expenses, revenues)? [1 = a serious impact; 7 = no impact at all] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

4.04 Tuberculosis incidence

Number of tuberculosis cases per 100,000 population | 2008

Source: The World Bank, Data Catalog (retrieved July 27, 2010)

4.05 Business impact of HIV/AIDS

How serious an impact do you consider HIV/AIDS will have on your company in the next five years (e.g., death, disability, medical and funeral expenses, productivity and absenteeism, recruitment and training expenses, revenues)? [1 = a serious impact; 7 = no impact at all] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

4.06 HIV prevalence

HIV prevalence as a percentage of adults aged 15–49 years | 2007

Sources: UNAIDS/World Health Organization, 2008 Report on the Global AIDS Epidemic; United Nations Development Programme, Human Development Report 2007/2008; national sources

4.07 Infant mortality

Infant (children aged 0–12 months) mortality per 1,000 live births | 2008

Sources: The World Bank, Data Catalog (retrieved June 23, 2010); national sources

4.08 Life expectancy

Life expectancy at birth (years) | 2008

Source: The World Bank, Data Catalog (retrieved July 27, 2010); national source

4.09 Quality of primary education

How would you assess the quality of primary schools in your country? [1 = poor; 7 = excellent — among the best in the world] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

4.10 Primary education enrollment rate

Net primary education enrollment rate | 2008

Sources: UNESCO Institute for Statistics (retrieved July 16, 2010); The World Bank, EdStats query (retrieved July 16, 2010); national sources

5th Pillar: Higher education and training

5.01 Secondary education enrollment rate

Gross secondary education enrollment rate | 2008

Sources: UNESCO Institute for Statistics (retrieved July 16, 2010); national sources

5.02 Tertiary education enrollment rate

Gross tertiary education enrollment rate | 2008

Sources: UNESCO Institute for Statistics (retrieved July 16, 2010); national sources

5.03 Quality of the educational system

How well does the educational system in your country meet the needs of a competitive economy? [1 = not well at all; 7 = very well] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

5.04 Quality of math and science education

How would you assess the quality of math and science education in your country's schools? [1 = poor; 7 = excellent — among the best in the world] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

5.05 Quality of management schools

How would you assess the quality of management or business schools in your country? [1 = poor; 7 = excellent — among the best in the world] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

5.06 Internet access in schools

How would you rate the level of access to the Internet in schools in your country? [1 = very limited; 7 = extensive] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

5.07 Local availability of specialized research and training services

In your country, to what extent are high-quality, specialized training services available? [1 = not available; 7 = widely available] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

5.08 Extent of staff training

To what extent do companies in your country invest in training and employee development? [1 = hardly at all; 7 = to a great extent] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

6th Pillar: Goods market efficiency

6.01 Intensity of local competition

How would you assess the intensity of competition in the local markets in your country? [1 = limited in most industries; 7 = intense in most industries] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

6.02 Extent of market dominance

How would you characterize corporate activity in your country? [1 = dominated by a few business groups; 7 = spread among many firms] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

6.03 Effectiveness of anti-monopoly policy

To what extent does anti-monopoly policy promote competition in your country? [1 = does not promote competition; 7 = effectively promotes competition] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

6.04 Extent and effect of taxation

What impact does the level of taxes in your country have on incentives to work or invest? [1 = significantly limits incentives to work or invest; 7 = has no impact on incentives to work or invest] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

6.05 Total tax rate

This variable is a combination of profit tax (% of profits), labor tax and contribution (% of profits), and other taxes (% of profits) | 2009

Source: The World Bank, Doing Business 2010

6.06 Number of procedures required to start a business

Number of procedures required to start a business | 2009

Source: The World Bank, Doing Business 2010

6.07 Time required to start a business

Number of days required to start a business | 2009

Source: The World Bank, Doing Business 2010

6.08 Agricultural policy costs

How would you assess the agricultural policy in your country? [1 = excessively burdensome for the economy; 7 = balances the interests of taxpayers, consumers, and producers] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

6.09 Prevalence of trade barriers

In your country, to what extent do tariff and non-tariff barriers limit the ability of imported goods to compete in the domestic market? [1 = strongly limit; 7 = do not limit] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

6.10 Trade tariffs

Trade-weighted average tariff rate | 2009

Source: International Trade Centre

6.11 Prevalence of foreign ownership

How prevalent is foreign ownership of companies in your country? [1 = very rare; 7 = highly prevalent] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

6.12 Business impact of rules on FDI

To what extent do rules governing foreign direct investment (FDI) encourage or discourage it? [1 = strongly discourage FDI; 7 = strongly encourage FDI] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

6.13 Burden of customs procedures

How would you rate the level of efficiency of customs procedures (related to the entry and exit of merchandise) in your country? [1 = extremely inefficient; 7 = extremely efficient] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

6.14 Degree of customer orientation

How well do companies in your country treat customers? [1 = generally treat their customers badly; 7 = are highly responsive to customers and customer retention] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

6.15 Buyer sophistication

In your country, how do buyers make purchasing decisions? [1 = based solely on the lowest price; 7 = based on a sophisticated analysis of performance attributes] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

10.04 Imports as a percentage of GDP

Imports of goods and services as a percentage of gross domestic product | 2009

Sources: Economist Intelligence Unit, CountryData Database (retrieved July 1, 2010); The World Bank, Data Catalog (retrieved July 13, 2010); national sources

7th Pillar: Labor market efficiency

7.01 Cooperation in labor-employer relations

How would you characterize labor-employer relations in your country? [1 = generally confrontational; 7 = generally cooperative] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

7.02 Flexibility of wage determination

How are wages generally set in your country? [1 = by a centralized bargaining process; 7 = up to each individual company] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

7.03 Rigidity of employment

Rigidity of Employment Index on a 0–100 (worst) scale | 2009

Source: The World Bank, Doing Business 2010

7.04 Hiring and firing practices

How would you characterize the hiring and firing of workers in your country? [1 = impeded by regulations; 7 = flexibly determined by employers] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

7.05 Redundancy costs

Redundancy costs in weeks of salary | 2009

Source: The World Bank, Doing Business 2010

7.06 Pay and productivity

To what extent is pay in your country related to productivity? [1 = not related to worker productivity; 7 = strongly related to worker productivity] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

7.07 Reliance on professional management

In your country, who holds senior management positions? [1 = usually relatives or friends without regard to merit; 7 = mostly professional managers chosen for merit and qualifications] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

7.08 Brain drain

Does your country retain and attract talented people? [1 = no, the best and brightest normally leave to pursue opportunities in other countries; 7 = yes, there are many opportunities for talented people within the country] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

7.09 Female participation in labor force

Female-to-male participation ratio in the labor force | 2008

Source: International Labour Organization, KIILM Net (retrieved June 28, 2010)

8th Pillar: Financial market development

8.01 Availability of financial services

To what extent does competition among providers of financial services in your country ensure the provision of financial services at affordable prices? [1 = not at all; 7 = extremely well] | 2010

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

8.02 Affordability of financial services

To what extent does competition among providers of financial services in your country ensure the provision of financial services at affordable prices? [1 = not at all; 7 = extremely well] | 2010

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

8.03 Financing through local equity market

How easy is it to raise money by issuing shares on the stock market in your country? [1 = very difficult; 7 = very easy] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

8.04 Ease of access to loans

How easy is it to obtain a bank loan in your country with only a good business plan and no collateral? [1 = very difficult; 7 = very easy] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

8.05 Venture capital availability

In your country, how easy is it for entrepreneurs with innovative but risky projects to find venture capital? [1 = very difficult; 7 = very easy] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

8.06 Restriction on capital flows

How restrictive are regulations in your country related to international capital flows? [1 = highly restrictive; 7 = not restrictive at all] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

8.07 Soundness of banks

How would you assess the soundness of banks in your country? [1 = insolvent and may require a government bailout; 7 = generally healthy with sound balance sheets] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

8.08 Regulation of securities exchanges

How would you assess the regulation and supervision of securities exchanges in your country? [1 = ineffective; 7 = effective] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

8.09 Legal rights index

Degree of legal protection of borrowers and lenders' rights on a 0–10 (best) scale | 2009

Source: The World Bank, Doing Business 2010

9th Pillar: Technological readiness

9.01 Availability of latest technologies

To what extent are the latest technologies available in your country? [1 = not available; 7 = widely available] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

9.02 Firm-level technology absorption

To what extent do businesses in your country absorb new technology? [1 = not at all; 7 = aggressively absorb] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

9.03 FDI and technology transfer

To what extent does foreign direct investment (FDI) bring new technology into your country? [1 = not at all; 7 = FDI is a key source of new technology] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

9.04 Internet users

Number of estimated Internet users per 100 population | 2009

Sources: International Telecommunication Union, World Telecommunication/ICT Indicators (June 2010 edition); The World Bank, Data Catalog (retrieved July 19, 2010); national sources

9.05 Broadband Internet subscriptions

Number of fixed broadband Internet subscriptions per 100 population | 2009

Source: International Telecommunication Union, World Telecommunication/ICT Indicators (June 2010 edition)

9.06 Internet bandwidth

International Internet bandwidth (Mb/s) per 10,000 population | 2007

Sources: International Telecommunication Union, World Telecommunication/ICT Indicators (June 2010 edition); national sources

10th Pillar: Market size

10.01 Domestic market size index

Sum of gross domestic product plus value of imports of goods and services, minus value of exports of goods and services, normalized on a 1–7 (best) scale | 2009

Source: Authors' calculation. For more details please refer to Appendix A in Chapter 1.1 of this Report

10.02 Foreign market size index

Value of exports of goods and services, normalized on a 1–7 (best) scale | 2009

Source: Authors' calculation. For more details please refer to Appendix A in Chapter 1.1 of this Report

11th Pillar: Business sophistication

11.01 Local supplier quantity

How numerous are local suppliers in your country? [1 = largely nonexistent; 7 = very numerous] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

11.02 Local supplier quality

How would you assess the quality of local suppliers in your country? [1 = very poor; 7 = very good] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

11.03 State of cluster development

In your country's economy, how prevalent are well-developed and deep clusters? [1 = nonexistent; 7 = widespread in many fields] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

11.04 Nature of competitive advantage

What is the nature of competitive advantage of your country's companies in international markets based upon? [1 = low-cost or natural resources; 7 = unique products and processes] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

11.05 Value chain breadth

In your country, do exporting companies have a narrow or broad presence in the value chain? [1 = narrow, primarily involved in individual steps of the value chain (e.g., resource extraction or production); 7 = broad, present across the entire value chain (i.e., do not only produce but also perform product design, marketing sales, logistics, and after-sales services)] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

11.06 Control of international distribution

To what extent are international distribution and marketing from your country owned and controlled by domestic companies? [1 = not at all, they take place through foreign companies; 7 = extensively, they are primarily owned and controlled by domestic companies] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

11.07 Production process sophistication

In your country, how sophisticated are production processes? [1 = not at all—labor-intensive methods or previous generations of process technology prevail; 7 = highly—the world's best and most efficient process technology prevails] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

11.08 Extent of marketing

In your country, to what extent do companies use sophisticated marketing tools and techniques? [1 = very little; 7 = extensively] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

11.09 Willingness to delegate authority

In your country, how do you assess the willingness to delegate authority to subordinates? [1 = low—top management controls all important decisions; 7 = high—authority is mostly delegated to business unit heads and other lower-level managers] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

12th Pillar: Innovation

12.01 Capacity for innovation

In your country, how do companies obtain technology? [1 = exclusively from licensing or imitating foreign companies; 7 = by conducting formal research and pioneering their own new products and processes] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

12.02 Quality of scientific research institutions

How would you assess the quality of scientific research institutions in your country? [1 = very poor; 7 = the best in their field internationally] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

12.03 Company spending on R&D

To what extent do companies in your country spend on R&D? [1 = do not spend on R&D; 7 = spend heavily on R&D] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

12.04 University-industry collaboration in R&D

To what extent do business and universities collaborate on research and development (R&D) in your country? [1 = do not collaborate at all; 7 = collaborate extensively] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

12.05 Government procurement of advanced technology products

Do government procurement decisions foster technological innovation in your country? [1 = no, not at all; 7 = yes, extremely effectively] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

12.06 Availability of scientists and engineers

To what extent are scientists and engineers available in your country? [1 = not at all; 7 = widely available] | 2009–10 weighted average

Source: World Economic Forum, Executive Opinion Survey 2009, 2010

12.07 Utility patents per million population

Number of utility patents (i.e., patents for invention) granted in 2009, per million population | 2009

Source: The United States Patent and Trademark Office

List of Countries

Country	Page
Algeria	124
Angola	126
Benin	128
Botswana	130
Burkina Faso	132
Burundi	134
Cameroon	136
Cape Verde	138
Chad	140
Côte d'Ivoire	142
Egypt	144
Ethiopia	146
Gambia, The	148
Ghana	150
Kenya	152
Lesotho	154
Libya	156
Madagascar	158
Malawi	160
Mali	162
Mauritania	164
Mauritius	166
Morocco	168
Mozambique	170
Namibia	172
Nigeria	174
Rwanda	176
Senegal	178
South Africa	180
Swaziland	182
Tanzania	184
Tunisia	186
Uganda	188
Zambia	190
Zimbabwe	192

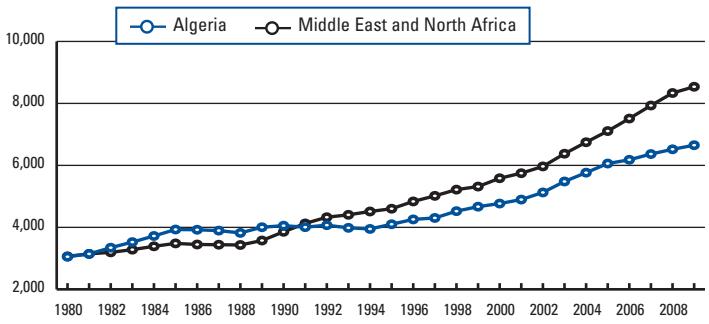
Algeria

Key indicators, 2009

Population (millions)	34.9
GDP (US$ billions)	140.8
GDP per capita (US$)	4,026.9
GDP (PPP) as share (%) of world total	0.35
Sectoral value-added (% GDP)	
Agriculture	11.7
Industry	54.5
Services	33.7
Human Development Index, 2010	
Score, (0–1) best	0.68
Rank (out of 169 economies)	84

Sources: UNFPA, IMF, EIU, World Bank, UNDP.

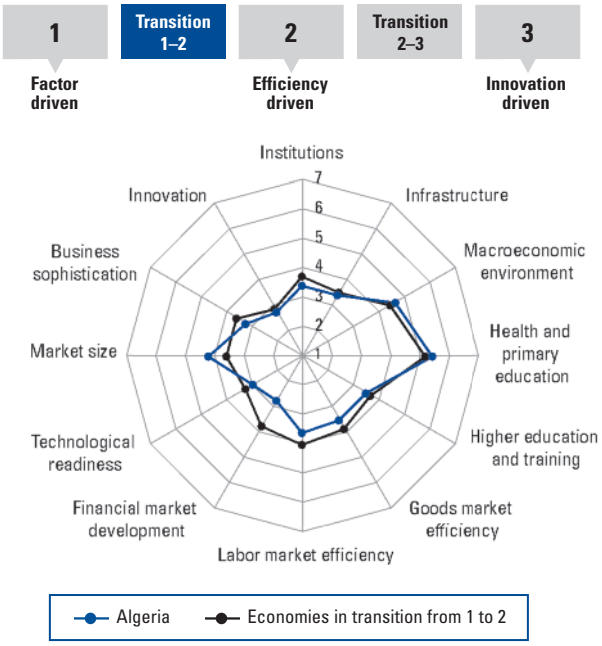
GDP (PPP) per capita (int'l $), 1980–2009



Global Competitiveness Index

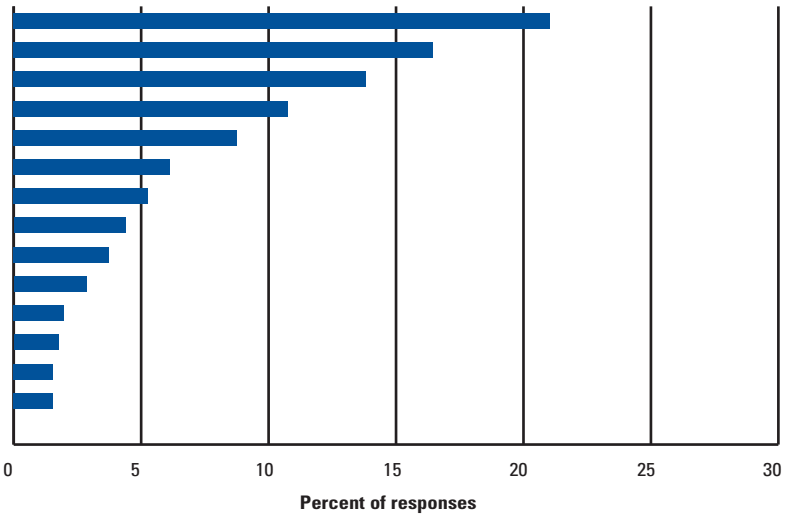
	Rank (out of 139)	Score (1–7)
GCI 2010–2011	**86**	**4.0**
GCI 2009–2010 (out of 133)	83	3.9
GCI 2008–2009 (out of 134)	99	3.7
Basic requirements	**80**	**4.3**
1st pillar: Institutions	98	3.5
2nd pillar: Infrastructure	87	3.5
3rd pillar: Macroeconomic environment	57	4.8
4th pillar: Health and primary education	77	5.6
Efficiency enhancers	**107**	**3.5**
5th pillar: Higher education and training	98	3.6
6th pillar: Goods market efficiency	126	3.6
7th pillar: Labor market efficiency	123	3.7
8th pillar: Financial market development	135	2.8
9th pillar: Technological readiness	106	3.0
10th pillar: Market size	50	4.3
Innovation and sophistication factors	**108**	**3.0**
11th pillar: Business sophistication	108	3.3
12th pillar: Innovation	107	2.8

Stage of development



The most problematic factors for doing business

Inefficient government bureaucracy	21.1
Access to financing	16.4
Corruption	13.8
Inadequately educated workforce	10.7
Policy instability	8.8
Inadequate supply of infrastructure	6.1
Poor work ethic in national labor force	5.3
Foreign currency regulations	4.4
Tax rates	3.7
Tax regulations	2.9
Crime and theft	2.0
Restrictive labor regulations	1.8
Government instability/coups	1.5
Inflation	1.5
Poor public health	0.0



Note: From a list of 15 factors, respondents were asked to select the five most problematic for doing business in their country and to rank them between 1 (most problematic) and 5. The bars in the figure show the responses weighted according to their rankings.

Algeria

The Global Competitiveness Index in detail

	INDICATOR	SCORE	RANK/139
	1st pillar: Institutions		
1.01	Property rights	3.6	106
1.02	Intellectual property protection	2.7	105
1.03	Diversion of public funds	3.3	67
1.04	Public trust of politicians	2.4	85
1.05	Irregular payments and bribes	3.4	97
1.06	Judicial independence	2.8	112
1.07	Favoritism in decisions of government officials	2.8	82
1.08	Wastefulness of government spending	3.3	64
1.09	Burden of government regulation	2.3	132
1.10	Efficiency of legal framework in settling disputes	3.3	93
1.11	Efficiency of legal framework in challenging regs	3.1	100
1.12	Transparency of government policymaking	3.6	121
1.13	Business costs of terrorism	4.4	128
1.14	Business costs of crime and violence	4.8	74
1.15	Organized crime	5.1	87
1.16	Reliability of police services	4.0	79
1.17	Ethical behavior of firms	3.5	98
1.18	Strength of auditing and reporting standards	4.0	104
1.19	Efficacy of corporate boards	4.1	110
1.20	Protection of minority shareholders' interests	3.9	95
1.21	Strength of investor protection, 0–10 (best)*	5.3	59
	2nd pillar: Infrastructure		
2.01	Quality of overall infrastructure	3.8	86
2.02	Quality of roads	3.9	66
2.03	Quality of railroad infrastructure	2.7	65
2.04	Quality of port infrastructure	3.2	115
2.05	Quality of air transport infrastructure	3.9	98
2.06	Available airline seat Kms/week, millions*	147.2	70
2.07	Quality of electricity supply	4.8	69
2.08	Fixed telephone lines/100 pop.*	7.4	102
2.09	Mobile telephone subscriptions/100 pop.*	93.8	72
	3rd pillar: Macroeconomic environment		
3.01	Government budget balance, % GDP*	-8.4	120
3.02	National savings rate, % GDP*	30.0	26
3.03	Inflation, annual % change*	5.7	99
3.04	Interest rate spread, %*	6.2	81
3.05	Government debt, % GDP*	13.5	10
3.06	Country credit rating, 0–100 (worst)*	55.9	59
	4th pillar: Health and primary education		
4.01	Business impact of malaria	n/appl.	1
4.02	Malaria incidence/100,000 pop.*	0.0	1
4.03	Business impact of tuberculosis	5.0	91
4.04	Tuberculosis incidence/100,000 pop.*	57.9	73
4.05	Business impact of HIV/AIDS	5.4	63
4.06	HIV prevalence, % adult pop.*	0.1	22
4.07	Infant mortality, deaths/1,000 live births*	36.0	104
4.08	Life expectancy, years*	72.4	77
4.09	Quality of primary education	3.1	96
4.10	Primary education enrollment, net %*	94.9	58
	5th pillar: Higher education and training		
5.01	Secondary education enrollment, gross %*	83.2	80
5.02	Tertiary education enrollment, gross %*	24.0	87
5.03	Quality of the educational system	2.9	117
5.04	Quality of math and science education	3.6	84
5.05	Quality of management schools	3.8	91
5.06	Internet access in schools	2.5	125
5.07	Availability of research and training services	3.4	105
5.08	Extent of staff training	3.5	103

	INDICATOR	SCORE	RANK/139
	6th pillar: Goods market efficiency		
6.01	Intensity of local competition	4.5	93
6.02	Extent of market dominance	3.9	55
6.03	Effectiveness of anti-monopoly policy	3.7	91
6.04	Extent and effect of taxation	3.7	56
6.05	Total tax rate, % profits*	72.0	128
6.06	No. procedures to start a business*	14.0	126
6.07	No. days to start a business*	24.0	79
6.08	Agricultural policy costs	3.4	119
6.09	Prevalence of trade barriers	4.7	56
6.10	Trade tariffs, % duty*	13.3	121
6.11	Prevalence of foreign ownership	3.8	123
6.12	Business impact of rules on FDI	3.7	125
6.13	Burden of customs procedures	3.2	124
6.14	Degree of customer orientation	4.0	108
6.15	Buyer sophistication	2.9	108
	7th pillar: Labor market efficiency		
7.01	Cooperation in labor-employer relations	4.1	93
7.02	Flexibility of wage determination	4.5	105
7.03	Rigidity of employment index, 0–100 (worst)*	41.0	104
7.04	Hiring and firing practices	3.8	78
7.05	Redundancy costs, weeks of wages*	17.0	29
7.06	Pay and productivity	3.4	105
7.07	Reliance on professional management	3.3	129
7.08	Brain drain	2.2	125
7.09	Females in labor force, ratio to males*	0.5	120
	8th pillar: Financial market development		
8.01	Availability of financial services	3.2	131
8.02	Affordability of financial services	2.7	136
8.03	Financing through local equity market	2.2	127
8.04	Ease of access to loans	2.8	67
8.05	Venture capital availability	2.4	81
8.06	Restriction on capital flows	2.3	136
8.07	Soundness of banks	4.2	121
8.08	Regulation of securities exchanges	2.1	137
8.09	Legal rights index, 0–10 (best)*	3.0	103
	9th pillar: Technological readiness		
9.01	Availability of latest technologies	4.2	109
9.02	Firm-level technology absorption	3.9	128
9.03	FDI and technology transfer	3.6	129
9.04	Internet users/100 pop.*	13.5	96
9.05	Broadband Internet subscriptions/100 pop.*	2.3	82
9.06	Internet bandwidth, Mb/s per 10,000 pop.*	n/a	n/a
	10th pillar: Market size		
10.01	Domestic market size index, 1–7 (best)*	4.0	51
10.02	Foreign market size index, 1–7 (best)*	5.0	41
	11th pillar: Business sophistication		
11.01	Local supplier quantity	4.9	59
11.02	Local supplier quality	3.9	105
11.03	State of cluster development	2.5	126
11.04	Nature of competitive advantage	2.5	129
11.05	Value chain breadth	2.8	123
11.06	Control of international distribution	3.6	109
11.07	Production process sophistication	3.4	83
11.08	Extent of marketing	3.4	105
11.09	Willingness to delegate authority	3.0	111
	12th pillar: Innovation		
12.01	Capacity for innovation	2.3	125
12.02	Quality of scientific research institutions	3.1	96
12.03	Company spending on R&D	2.6	106
12.04	University-industry collaboration in R&D	2.9	119
12.05	Gov't procurement of advanced tech products	2.9	123
12.06	Availability of scientists and engineers	4.5	43
12.07	Utility patents/million pop.*	0.0	90

Notes: An asterisk (*) indicates that data are from sources other than the World Economic Forum. For further details and explanation, please refer to the section "How to Read the Competitiveness Profiles" on page 115.

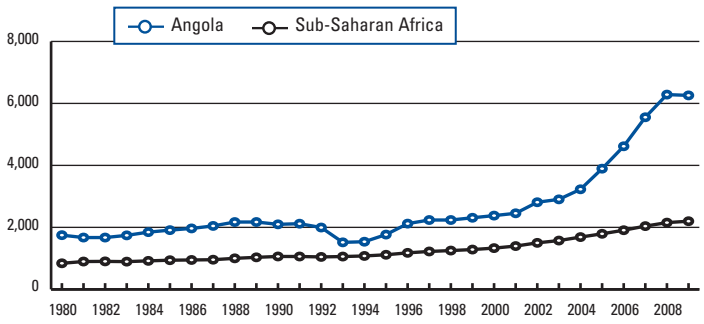
Angola

Key indicators, 2009

Population (millions)	18.5
GDP (US$ billions)	68.8
GDP per capita (US$)	3,971.6
GDP (PPP) as share (%) of world total	0.15
Sectoral value-added (% GDP)	
Agriculture	9.7
Industry	54.0
Services	36.3
Human Development Index, 2010	
Score, (0–1) best	0.40
Rank (out of 169 economies)	146

Sources: UNFPA, IMF, EIU, World Bank, UNDP.

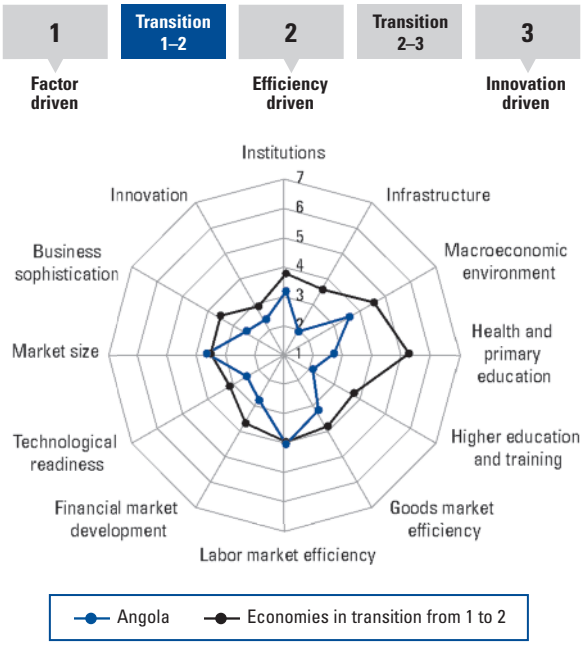
GDP (PPP) per capita (int'l $), 1980–2009



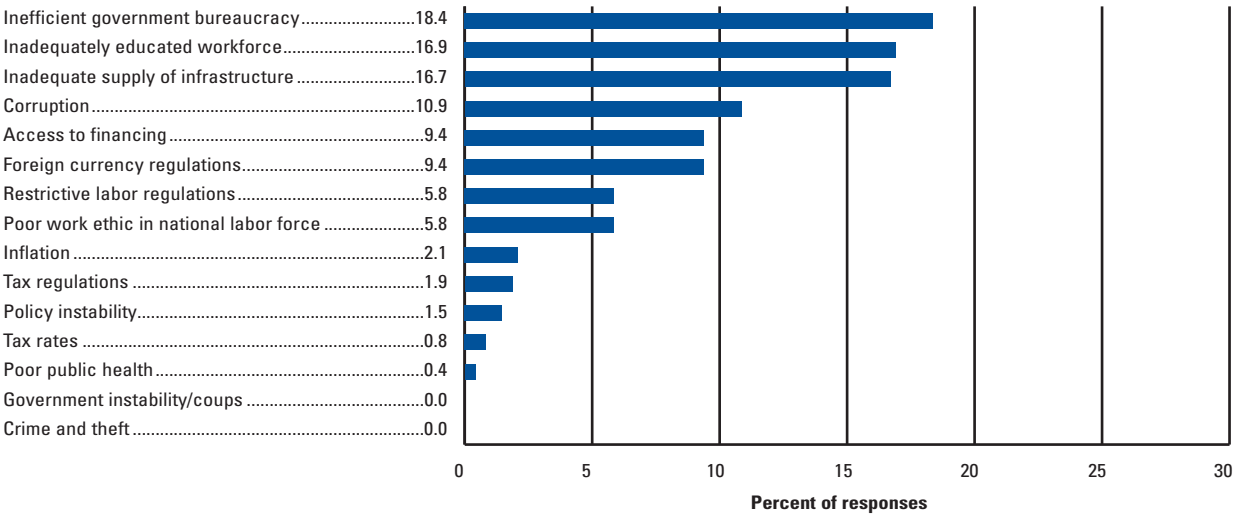
Global Competitiveness Index

	Rank (out of 139)	Score (1–7)
GCI 2010–2011	**138**	**2.9**
GCI 2009–2010 (out of 133)	n/a	n/a
GCI 2008–2009 (out of 134)	n/a	n/a
Basic requirements	**138**	**2.8**
1st pillar: Institutions	119	3.2
2nd pillar: Infrastructure	136	1.9
3rd pillar: Macroeconomic environment	122	3.6
4th pillar: Health and primary education	139	2.7
Efficiency enhancers	**130**	**3.2**
5th pillar: Higher education and training	138	2.1
6th pillar: Goods market efficiency	133	3.3
7th pillar: Labor market efficiency	87	4.2
8th pillar: Financial market development	134	2.9
9th pillar: Technological readiness	130	2.6
10th pillar: Market size	64	3.8
Innovation and sophistication factors	**139**	**2.5**
11th pillar: Business sophistication	139	2.6
12th pillar: Innovation	133	2.4

Stage of development



The most problematic factors for doing business



Note: From a list of 15 factors, respondents were asked to select the five most problematic for doing business in their country and to rank them between 1 (most problematic) and 5. The bars in the figure show the responses weighted according to their rankings.

Angola

The Global Competitiveness Index in detail

	INDICATOR	SCORE	RANK/139
	1st pillar: Institutions		
1.01	Property rights	2.9	130
1.02	Intellectual property protection	2.6	120
1.03	Diversion of public funds	2.3	122
1.04	Public trust of politicians	3.0	66
1.05	Irregular payments and bribes	3.2	110
1.06	Judicial independence	3.0	102
1.07	Favoritism in decisions of government officials	2.2	132
1.08	Wastefulness of government spending	2.4	116
1.09	Burden of government regulation	2.0	137
1.10	Efficiency of legal framework in settling disputes	2.9	120
1.11	Efficiency of legal framework in challenging regs	3.2	90
1.12	Transparency of government policymaking	3.5	127
1.13	Business costs of terrorism	6.5	17
1.14	Business costs of crime and violence	4.2	98
1.15	Organized crime	6.0	36
1.16	Reliability of police services	3.8	83
1.17	Ethical behavior of firms	2.7	138
1.18	Strength of auditing and reporting standards	3.4	132
1.19	Efficacy of corporate boards	3.6	137
1.20	Protection of minority shareholders' interests	3.6	115
1.21	Strength of investor protection, 0–10 (best)*	5.7	45
	2nd pillar: Infrastructure		
2.01	Quality of overall infrastructure	2.2	138
2.02	Quality of roads	2.8	115
2.03	Quality of railroad infrastructure	1.4	107
2.04	Quality of port infrastructure	2.1	136
2.05	Quality of air transport infrastructure	3.0	128
2.06	Available airline seat Kms/week, millions*	93.4	80
2.07	Quality of electricity supply	1.5	135
2.08	Fixed telephone lines/100 pop.*	1.6	120
2.09	Mobile telephone subscriptions/100 pop.*	43.8	117
	3rd pillar: Macroeconomic environment		
3.01	Government budget balance, % GDP*	-7.7	115
3.02	National savings rate, % GDP*	13.8	105
3.03	Inflation, annual % change*	14.0	132
3.04	Interest rate spread, %*	8.1	99
3.05	Government debt, % GDP*	22.8	35
3.06	Country credit rating, 0–100 (worst)*	36.4	90
	4th pillar: Health and primary education		
4.01	Business impact of malaria	2.1	139
4.02	Malaria incidence/100,000 pop.*	21,470.7	121
4.03	Business impact of tuberculosis	3.9	123
4.04	Tuberculosis incidence/100,000 pop.*	292.1	119
4.05	Business impact of HIV/AIDS	3.3	126
4.06	HIV prevalence, % adult pop.*	2.1	120
4.07	Infant mortality, deaths/1,000 live births*	130.3	139
4.08	Life expectancy, years*	47.0	135
4.09	Quality of primary education	1.5	139
4.10	Primary education enrollment, net %*	n/a	n/a
	5th pillar: Higher education and training		
5.01	Secondary education enrollment, gross %*	17.3	139
5.02	Tertiary education enrollment, gross %*	2.8	132
5.03	Quality of the educational system	2.0	139
5.04	Quality of math and science education	1.6	139
5.05	Quality of management schools	1.8	139
5.06	Internet access in schools	1.8	137
5.07	Availability of research and training services	2.7	133
5.08	Extent of staff training	4.4	39

	INDICATOR	SCORE	RANK/139
	6th pillar: Goods market efficiency		
6.01	Intensity of local competition	3.9	127
6.02	Extent of market dominance	2.8	130
6.03	Effectiveness of anti-monopoly policy	3.1	128
6.04	Extent and effect of taxation	4.1	30
6.05	Total tax rate, % profits*	53.2	107
6.06	No. procedures to start a business*	8.0	73
6.07	No. days to start a business*	68.0	129
6.08	Agricultural policy costs	3.9	61
6.09	Prevalence of trade barriers	3.7	123
6.10	Trade tariffs, % duty*	8.6	93
6.11	Prevalence of foreign ownership	4.6	83
6.12	Business impact of rules on FDI	3.8	120
6.13	Burden of customs procedures	2.8	133
6.14	Degree of customer orientation	2.9	139
6.15	Buyer sophistication	2.7	119
	7th pillar: Labor market efficiency		
7.01	Cooperation in labor-employer relations	4.2	78
7.02	Flexibility of wage determination	4.8	89
7.03	Rigidity of employment index, 0–100 (worst)*	66.0	133
7.04	Hiring and firing practices	3.8	81
7.05	Redundancy costs, weeks of wages*	58.0	93
7.06	Pay and productivity	3.9	68
7.07	Reliance on professional management	3.2	132
7.08	Brain drain	3.9	47
7.09	Females in labor force, ratio to males*	0.9	43
	8th pillar: Financial market development		
8.01	Availability of financial services	3.3	129
8.02	Affordability of financial services	2.9	132
8.03	Financing through local equity market	1.5	139
8.04	Ease of access to loans	2.2	111
8.05	Venture capital availability	1.8	129
8.06	Restriction on capital flows	1.9	138
8.07	Soundness of banks	4.6	102
8.08	Regulation of securities exchanges	2.5	133
8.09	Legal rights index, 0–10 (best)*	4.0	86
	9th pillar: Technological readiness		
9.01	Availability of latest technologies	3.4	138
9.02	Firm-level technology absorption	3.7	130
9.03	FDI and technology transfer	4.7	72
9.04	Internet users/100 pop.*	3.3	125
9.05	Broadband Internet subscriptions/100 pop.*	0.1	114
9.06	Internet bandwidth, Mb/s per 10,000 pop.*	0.2	125
	10th pillar: Market size		
10.01	Domestic market size index, 1–7 (best)*	3.4	72
10.02	Foreign market size index, 1–7 (best)*	4.7	51
	11th pillar: Business sophistication		
11.01	Local supplier quantity	2.5	139
11.02	Local supplier quality	2.7	139
11.03	State of cluster development	2.2	137
11.04	Nature of competitive advantage	2.7	115
11.05	Value chain breadth	1.7	139
11.06	Control of international distribution	2.9	137
11.07	Production process sophistication	3.1	102
11.08	Extent of marketing	3.1	121
11.09	Willingness to delegate authority	2.7	129
	12th pillar: Innovation		
12.01	Capacity for innovation	1.7	139
12.02	Quality of scientific research institutions	1.5	139
12.03	Company spending on R&D	2.7	89
12.04	University-industry collaboration in R&D	2.4	136
12.05	Gov't procurement of advanced tech products	4.2	35
12.06	Availability of scientists and engineers	2.9	134
12.07	Utility patents/million pop.*	0.0	90

Notes: An asterisk (*) indicates that data are from sources other than the World Economic Forum. For further details and explanation, please refer to the section "How to Read the Competitiveness Profiles" on page 115.

Benin

Key indicators, 2009

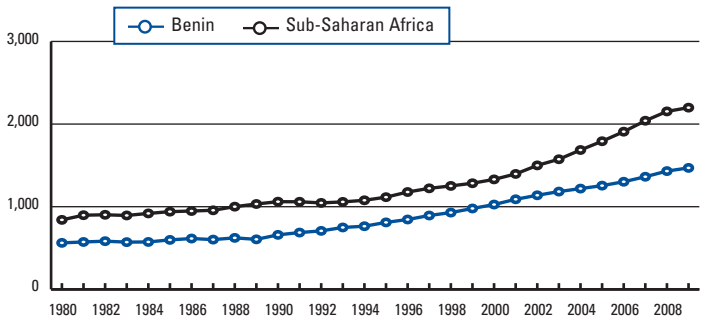
Population (millions) 8.9
GDP (US$ billions) 6.7
GDP per capita (US$) 711.3
GDP (PPP) as share (%) of world total 0.02

Sectoral value-added (% GDP)
Agriculture 32.2
Industry 13.4
Services 54.4

Human Development Index, 2010
Score, (0–1) best 0.44
Rank (out of 169 economies) 134

Sources: UNFPA, IMF, EIU, World Bank, UNDP.

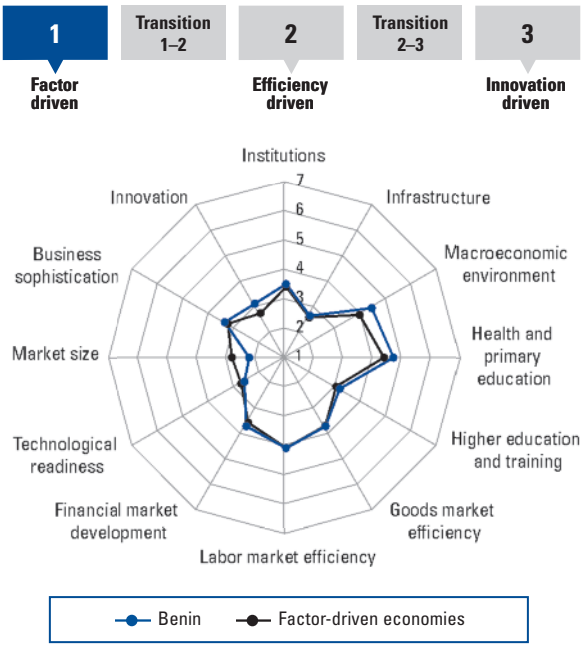
GDP (PPP) per capita (int'l $), 1980–2009



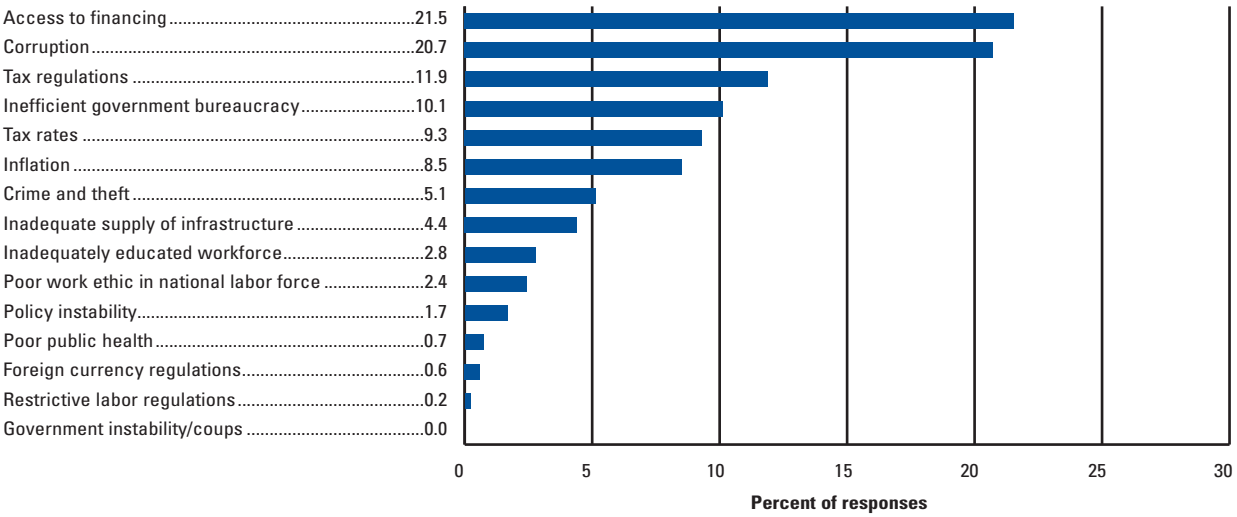
Global Competitiveness Index

	Rank (out of 139)	Score (1–7)
GCI 2010–2011	**103**	**3.7**
GCI 2009–2010 (out of 133)	103	3.6
GCI 2008–2009 (out of 134)	106	3.6
Basic requirements	**104**	**3.9**
1st pillar: Institutions	87	3.6
2nd pillar: Infrastructure	113	2.7
3rd pillar: Macroeconomic environment	82	4.5
4th pillar: Health and primary education	108	4.8
Efficiency enhancers	**120**	**3.4**
5th pillar: Higher education and training	112	3.2
6th pillar: Goods market efficiency	100	3.8
7th pillar: Labor market efficiency	85	4.2
8th pillar: Financial market development	95	3.8
9th pillar: Technological readiness	122	2.7
10th pillar: Market size	124	2.3
Innovation and sophistication factors	**81**	**3.3**
11th pillar: Business sophistication	99	3.5
12th pillar: Innovation	60	3.2

Stage of development



The most problematic factors for doing business



Note: From a list of 15 factors, respondents were asked to select the five most problematic for doing business in their country and to rank them between 1 (most problematic) and 5. The bars in the figure show the responses weighted according to their rankings.

Benin

The Global Competitiveness Index in detail

	INDICATOR	SCORE	RANK/139
	1st pillar: Institutions		
1.01	Property rights	4.7	55
1.02	Intellectual property protection	3.0	91
1.03	Diversion of public funds	2.4	117
1.04	Public trust of politicians	2.5	80
1.05	Irregular payments and bribes	2.8	125
1.06	Judicial independence	3.3	90
1.07	Favoritism in decisions of government officials	2.9	75
1.08	Wastefulness of government spending	3.7	40
1.09	Burden of government regulation	3.7	34
1.10	Efficiency of legal framework in settling disputes	3.7	66
1.11	Efficiency of legal framework in challenging regs	3.4	75
1.12	Transparency of government policymaking	4.6	44
1.13	Business costs of terrorism	5.5	78
1.14	Business costs of crime and violence	4.2	99
1.15	Organized crime	3.8	128
1.16	Reliability of police services	4.5	55
1.17	Ethical behavior of firms	3.5	96
1.18	Strength of auditing and reporting standards	3.5	127
1.19	Efficacy of corporate boards	4.9	37
1.20	Protection of minority shareholders' interests	4.3	67
1.21	Strength of investor protection, 0–10 (best)*	3.3	123
	2nd pillar: Infrastructure		
2.01	Quality of overall infrastructure	2.9	125
2.02	Quality of roads	2.9	107
2.03	Quality of railroad infrastructure	1.9	88
2.04	Quality of port infrastructure	4.0	76
2.05	Quality of air transport infrastructure	3.9	96
2.06	Available airline seat Kms/week, millions*	18.7	118
2.07	Quality of electricity supply	3.3	108
2.08	Fixed telephone lines/100 pop.*	1.4	121
2.09	Mobile telephone subscriptions/100 pop.*	56.3	108
	3rd pillar: Macroeconomic environment		
3.01	Government budget balance, % GDP*	-3.6	59
3.02	National savings rate, % GDP*	10.5	121
3.03	Inflation, annual % change*	2.2	53
3.04	Interest rate spread, %*	n/a	n/a
3.05	Government debt, % GDP*	14.5	12
3.06	Country credit rating, 0–100 (worst)*	28.6	112
	4th pillar: Health and primary education		
4.01	Business impact of malaria	3.7	120
4.02	Malaria incidence/100,000 pop.*	36,976.0	134
4.03	Business impact of tuberculosis	4.3	112
4.04	Tuberculosis incidence/100,000 pop.*	91.8	85
4.05	Business impact of HIV/AIDS	4.2	111
4.06	HIV prevalence, % adult pop.*	1.2	108
4.07	Infant mortality, deaths/1,000 live births*	76.3	126
4.08	Life expectancy, years*	61.4	110
4.09	Quality of primary education	3.5	80
4.10	Primary education enrollment, net %*	92.8	77
	5th pillar: Higher education and training		
5.01	Secondary education enrollment, gross %*	36.3	122
5.02	Tertiary education enrollment, gross %*	5.8	118
5.03	Quality of the educational system	4.2	45
5.04	Quality of math and science education	4.2	60
5.05	Quality of management schools	4.5	50
5.06	Internet access in schools	3.1	101
5.07	Availability of research and training services	3.9	82
5.08	Extent of staff training	3.5	104

	INDICATOR	SCORE	RANK/139
	6th pillar: Goods market efficiency		
6.01	Intensity of local competition	4.8	74
6.02	Extent of market dominance	4.8	24
6.03	Effectiveness of anti-monopoly policy	4.3	55
6.04	Extent and effect of taxation	3.2	91
6.05	Total tax rate, % profits*	73.3	129
6.06	No. procedures to start a business*	7.0	57
6.07	No. days to start a business*	31.0	95
6.08	Agricultural policy costs	3.6	93
6.09	Prevalence of trade barriers	4.2	102
6.10	Trade tariffs, % duty*	7.8	87
6.11	Prevalence of foreign ownership	4.5	90
6.12	Business impact of rules on FDI	4.4	93
6.13	Burden of customs procedures	4.2	72
6.14	Degree of customer orientation	4.1	106
6.15	Buyer sophistication	3.1	90
	7th pillar: Labor market efficiency		
7.01	Cooperation in labor-employer relations	4.6	44
7.02	Flexibility of wage determination	5.3	58
7.03	Rigidity of employment index, 0–100 (worst)*	40.0	100
7.04	Hiring and firing practices	4.5	35
7.05	Redundancy costs, weeks of wages*	36.0	70
7.06	Pay and productivity	3.1	114
7.07	Reliance on professional management	4.0	89
7.08	Brain drain	3.3	69
7.09	Females in labor force, ratio to males*	0.7	98
	8th pillar: Financial market development		
8.01	Availability of financial services	4.3	84
8.02	Affordability of financial services	4.1	77
8.03	Financing through local equity market	3.7	62
8.04	Ease of access to loans	2.9	57
8.05	Venture capital availability	2.6	62
8.06	Restriction on capital flows	4.0	92
8.07	Soundness of banks	5.1	76
8.08	Regulation of securities exchanges	4.3	62
8.09	Legal rights index, 0–10 (best)*	3.0	103
	9th pillar: Technological readiness		
9.01	Availability of latest technologies	4.2	110
9.02	Firm-level technology absorption	4.1	115
9.03	FDI and technology transfer	4.1	103
9.04	Internet users/100 pop.*	2.2	128
9.05	Broadband Internet subscriptions/100 pop.*	0.0	128
9.06	Internet bandwidth, Mb/s per 10,000 pop.*	0.3	118
	10th pillar: Market size		
10.01	Domestic market size index, 1–7 (best)*	2.3	121
10.02	Foreign market size index, 1–7 (best)*	2.4	130
	11th pillar: Business sophistication		
11.01	Local supplier quantity	4.2	106
11.02	Local supplier quality	4.3	81
11.03	State of cluster development	2.4	130
11.04	Nature of competitive advantage	3.0	91
11.05	Value chain breadth	3.7	57
11.06	Control of international distribution	4.0	73
11.07	Production process sophistication	3.0	110
11.08	Extent of marketing	3.1	118
11.09	Willingness to delegate authority	3.4	82
	12th pillar: Innovation		
12.01	Capacity for innovation	3.1	60
12.02	Quality of scientific research institutions	3.3	85
12.03	Company spending on R&D	3.4	42
12.04	University-industry collaboration in R&D	3.1	106
12.05	Gov't procurement of advanced tech products	4.4	21
12.06	Availability of scientists and engineers	4.2	59
12.07	Utility patents/million pop.*	0.0	90

Notes: An asterisk (*) indicates that data are from sources other than the World Economic Forum. For further details and explanation, please refer to the section "How to Read the Competitiveness Profiles" on page 115.

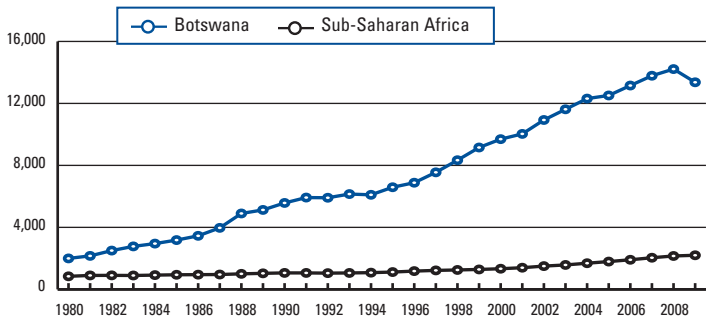
Botswana

Key indicators, 2009

Population (millions)	2.0
GDP (US$ billions)	11.6
GDP per capita (US$)	6,406.9
GDP (PPP) as share (%) of world total	0.04
Sectoral value-added (% GDP)	
Agriculture	3.1
Industry	39.6
Services	57.3
Human Development Index, 2010	
Score, (0–1) best	0.63
Rank (out of 169 economies)	98

Sources: UNFPA, IMF, EIU, World Bank, UNDP.

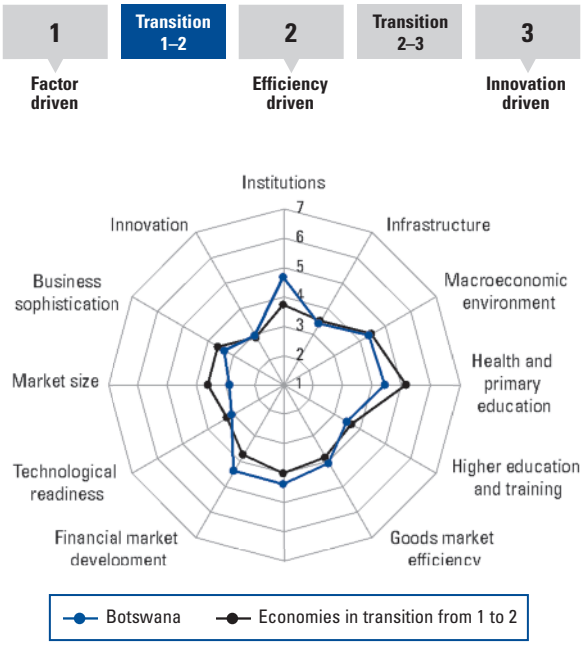
GDP (PPP) per capita (int'l $), 1980–2009



Global Competitiveness Index

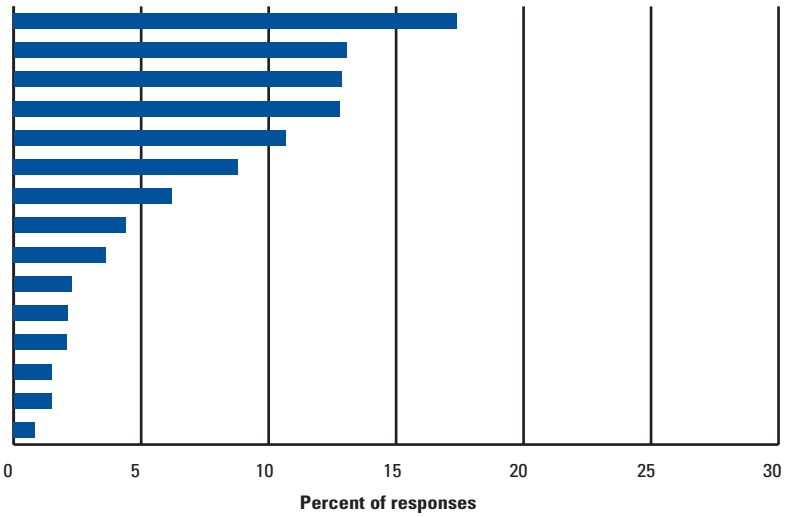
	Rank (out of 139)	Score (1–7)
GCI 2010–2011	**76**	**4.1**
GCI 2009–2010 (out of 133)	66	4.1
GCI 2008–2009 (out of 134)	56	4.2
Basic requirements	**76**	**4.4**
1st pillar: Institutions	32	4.8
2nd pillar: Infrastructure	84	3.5
3rd pillar: Macroeconomic environment	74	4.5
4th pillar: Health and primary education	114	4.6
Efficiency enhancers	**85**	**3.8**
5th pillar: Higher education and training	94	3.6
6th pillar: Goods market efficiency	58	4.2
7th pillar: Labor market efficiency	61	4.5
8th pillar: Financial market development	47	4.5
9th pillar: Technological readiness	99	3.1
10th pillar: Market size	102	2.9
Innovation and sophistication factors	**93**	**3.2**
11th pillar: Business sophistication	104	3.4
12th pillar: Innovation	74	3.0

Stage of development



The most problematic factors for doing business

Poor work ethic in national labor force	17.4
Inadequately educated workforce	13.0
Inefficient government bureaucracy	12.9
Access to financing	12.8
Inadequate supply of infrastructure	10.7
Restrictive labor regulations	8.8
Inflation	6.2
Corruption	4.4
Crime and theft	3.6
Poor public health	2.3
Policy instability	2.1
Tax rates	2.1
Foreign currency regulations	1.5
Tax regulations	1.5
Government instability/coups	0.8



Note: From a list of 15 factors, respondents were asked to select the five most problematic for doing business in their country and to rank them between 1 (most problematic) and 5. The bars in the figure show the responses weighted according to their rankings.

Botswana

The Global Competitiveness Index in detail

	INDICATOR	SCORE	RANK/139
	1st pillar: Institutions		
1.01	Property rights	5.3	35
1.02	Intellectual property protection	4.1	45
1.03	Diversion of public funds	4.8	33
1.04	Public trust of politicians	4.4	21
1.05	Irregular payments and bribes	5.1	38
1.06	Judicial independence	5.2	30
1.07	Favoritism in decisions of government officials	4.2	22
1.08	Wastefulness of government spending	4.7	15
1.09	Burden of government regulation	3.6	44
1.10	Efficiency of legal framework in settling disputes	4.6	32
1.11	Efficiency of legal framework in challenging regs	4.5	26
1.12	Transparency of government policymaking	5.0	26
1.13	Business costs of terrorism	6.2	46
1.14	Business costs of crime and violence	4.6	83
1.15	Organized crime	5.7	52
1.16	Reliability of police services	4.8	43
1.17	Ethical behavior of firms	5.0	36
1.18	Strength of auditing and reporting standards	5.0	51
1.19	Efficacy of corporate boards	4.6	65
1.20	Protection of minority shareholders' interests	4.8	37
1.21	Strength of investor protection, 0–10 (best)*	6.0	33
	2nd pillar: Infrastructure		
2.01	Quality of overall infrastructure	4.7	54
2.02	Quality of roads	4.6	47
2.03	Quality of railroad infrastructure	3.5	44
2.04	Quality of port infrastructure	3.8	86
2.05	Quality of air transport infrastructure	4.0	94
2.06	Available airline seat Kms/week, millions*	3.5	136
2.07	Quality of electricity supply	4.1	88
2.08	Fixed telephone lines/100 pop.*	7.4	101
2.09	Mobile telephone subscriptions/100 pop.*	96.1	65
	3rd pillar: Macroeconomic environment		
3.01	Government budget balance, % GDP*	-11.1	133
3.02	National savings rate, % GDP*	28.5	33
3.03	Inflation, annual % change*	8.1	114
3.04	Interest rate spread, %*	6.3	83
3.05	Government debt, % GDP*	6.8	4
3.06	Country credit rating, 0–100 (worst)*	64.7	47
	4th pillar: Health and primary education		
4.01	Business impact of malaria	4.8	107
4.02	Malaria incidence/100,000 pop.*	361.8	100
4.03	Business impact of tuberculosis	3.6	131
4.04	Tuberculosis incidence/100,000 pop.*	712.4	135
4.05	Business impact of HIV/AIDS	2.9	132
4.06	HIV prevalence, % adult pop.*	23.9	138
4.07	Infant mortality, deaths/1,000 live births*	26.0	90
4.08	Life expectancy, years*	54.2	122
4.09	Quality of primary education	4.1	57
4.10	Primary education enrollment, net %*	85.6	111
	5th pillar: Higher education and training		
5.01	Secondary education enrollment, gross %*	80.2	88
5.02	Tertiary education enrollment, gross %*	7.6	114
5.03	Quality of the educational system	4.1	48
5.04	Quality of math and science education	3.7	79
5.05	Quality of management schools	3.5	113
5.06	Internet access in schools	3.3	94
5.07	Availability of research and training services	3.4	108
5.08	Extent of staff training	4.2	54

	INDICATOR	SCORE	RANK/139
	6th pillar: Goods market efficiency		
6.01	Intensity of local competition	4.6	89
6.02	Extent of market dominance	3.4	83
6.03	Effectiveness of anti-monopoly policy	3.8	83
6.04	Extent and effect of taxation	4.6	13
6.05	Total tax rate, % profits*	17.1	11
6.06	No. procedures to start a business*	10.0	99
6.07	No. days to start a business*	61.0	124
6.08	Agricultural policy costs	4.3	36
6.09	Prevalence of trade barriers	4.8	53
6.10	Trade tariffs, % duty*	6.1	75
6.11	Prevalence of foreign ownership	5.4	29
6.12	Business impact of rules on FDI	5.3	25
6.13	Burden of customs procedures	4.7	37
6.14	Degree of customer orientation	4.0	112
6.15	Buyer sophistication	3.4	70
	7th pillar: Labor market efficiency		
7.01	Cooperation in labor-employer relations	4.6	48
7.02	Flexibility of wage determination	4.7	94
7.03	Rigidity of employment index, 0–100 (worst)*	13.0	27
7.04	Hiring and firing practices	3.9	67
7.05	Redundancy costs, weeks of wages*	90.0	111
7.06	Pay and productivity	3.9	73
7.07	Reliance on professional management	4.7	46
7.08	Brain drain	3.9	46
7.09	Females in labor force, ratio to males*	0.8	73
	8th pillar: Financial market development		
8.01	Availability of financial services	4.5	73
8.02	Affordability of financial services	3.9	86
8.03	Financing through local equity market	3.6	69
8.04	Ease of access to loans	3.5	29
8.05	Venture capital availability	2.9	47
8.06	Restriction on capital flows	5.2	27
8.07	Soundness of banks	5.6	39
8.08	Regulation of securities exchanges	4.4	60
8.09	Legal rights index, 0–10 (best)*	7.0	39
	9th pillar: Technological readiness		
9.01	Availability of latest technologies	4.8	78
9.02	Firm-level technology absorption	4.6	81
9.03	FDI and technology transfer	4.6	81
9.04	Internet users/100 pop.*	6.2	114
9.05	Broadband Internet subscriptions/100 pop.*	0.8	98
9.06	Internet bandwidth, Mb/s per 10,000 pop.*	2.2	95
	10th pillar: Market size		
10.01	Domestic market size index, 1–7 (best)*	2.7	101
10.02	Foreign market size index, 1–7 (best)*	3.4	102
	11th pillar: Business sophistication		
11.01	Local supplier quantity	4.1	119
11.02	Local supplier quality	3.9	108
11.03	State of cluster development	2.9	109
11.04	Nature of competitive advantage	3.4	63
11.05	Value chain breadth	2.8	125
11.06	Control of international distribution	3.6	107
11.07	Production process sophistication	3.1	99
11.08	Extent of marketing	3.1	117
11.09	Willingness to delegate authority	3.4	84
	12th pillar: Innovation		
12.01	Capacity for innovation	2.5	103
12.02	Quality of scientific research institutions	3.3	82
12.03	Company spending on R&D	3.0	70
12.04	University-industry collaboration in R&D	3.5	69
12.05	Gov't procurement of advanced tech products	3.9	52
12.06	Availability of scientists and engineers	3.5	105
12.07	Utility patents/million pop.*	0.0	90

Notes: An asterisk (*) indicates that data are from sources other than the World Economic Forum. For further details and explanation, please refer to the section "How to Read the Competitiveness Profiles" on page 115.

Burkina Faso

Key indicators, 2009

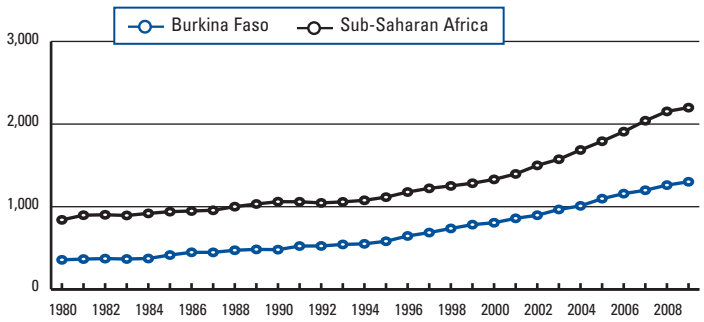
Population (millions) 15.8
GDP (US$ billions) 8.1
GDP per capita (US$) 564.2
GDP (PPP) as share (%) of world total 0.03

Sectoral value-added (% GDP)
Agriculture 33.3
Industry 22.4
Services 44.4

Human Development Index, 2010
Score, (0–1) best 0.31
Rank (out of 169 economies) 161

Sources: UNFPA, IMF, EIU, World Bank, UNDP.

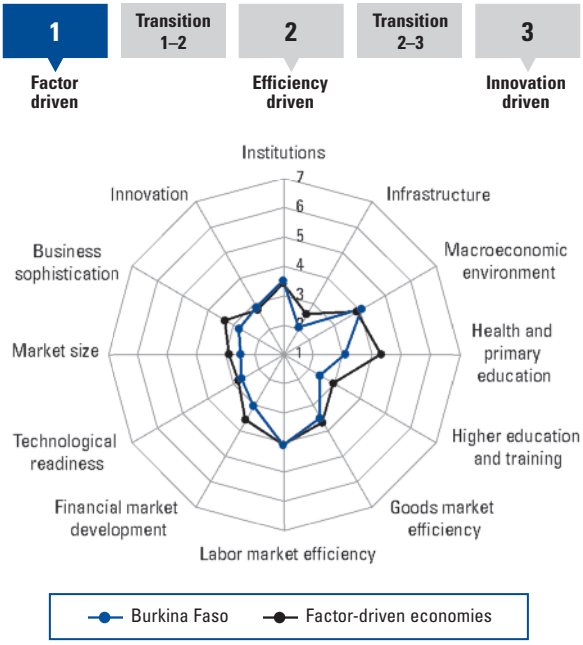
GDP (PPP) per capita (int'l $), 1980–2009



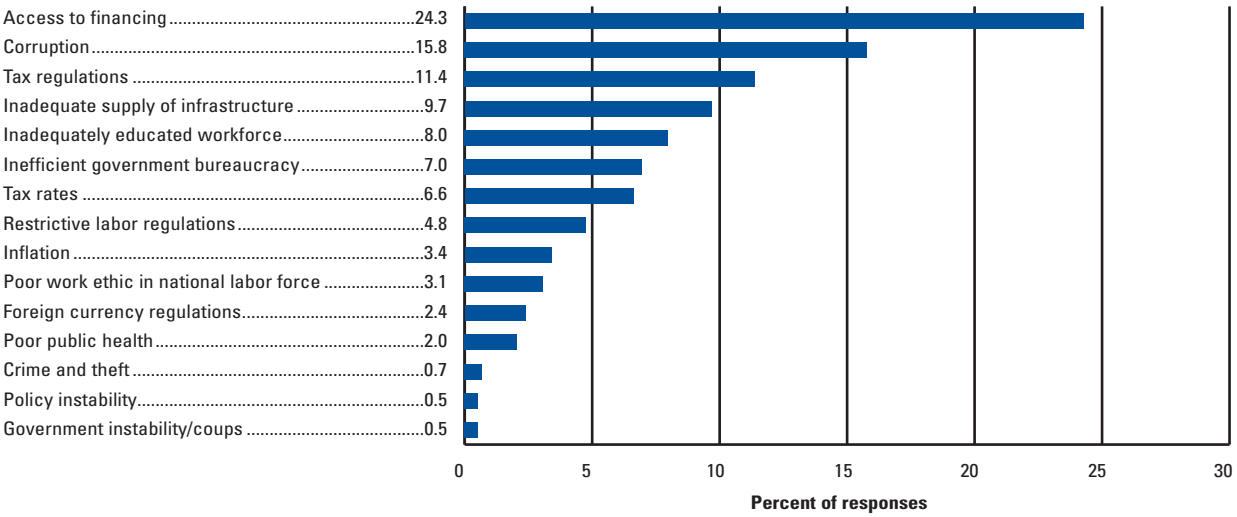
Global Competitiveness Index

	Rank (out of 139)	Score (1–7)
GCI 2010–2011	**134**	**3.2**
GCI 2009–2010 (out of 133)	128	3.2
GCI 2008–2009 (out of 134)	127	3.4
Basic requirements	**134**	**3.3**
1st pillar: Institutions	90	3.6
2nd pillar: Infrastructure	134	2.1
3rd pillar: Macroeconomic environment	98	4.2
4th pillar: Health and primary education	135	3.2
Efficiency enhancers	**133**	**3.1**
5th pillar: Higher education and training	135	2.5
6th pillar: Goods market efficiency	120	3.6
7th pillar: Labor market efficiency	91	4.2
8th pillar: Financial market development	128	3.1
9th pillar: Technological readiness	124	2.7
10th pillar: Market size	119	2.5
Innovation and sophistication factors	**127**	**2.9**
11th pillar: Business sophistication	137	2.8
12th pillar: Innovation	90	2.9

Stage of development



The most problematic factors for doing business



Note: From a list of 15 factors, respondents were asked to select the five most problematic for doing business in their country and to rank them between 1 (most problematic) and 5. The bars in the figure show the responses weighted according to their rankings.

Burkina Faso

The Global Competitiveness Index in detail

	INDICATOR	SCORE	RANK/139
	1st pillar: Institutions		
1.01	Property rights	4.2	78
1.02	Intellectual property protection	3.3	77
1.03	Diversion of public funds	2.5	115
1.04	Public trust of politicians	2.4	87
1.05	Irregular payments and bribes	3.1	114
1.06	Judicial independence	2.5	127
1.07	Favoritism in decisions of government officials	3.0	67
1.08	Wastefulness of government spending	3.1	77
1.09	Burden of government regulation	3.3	65
1.10	Efficiency of legal framework in settling disputes	3.7	69
1.11	Efficiency of legal framework in challenging regs	3.2	92
1.12	Transparency of government policymaking	4.1	86
1.13	Business costs of terrorism	6.1	52
1.14	Business costs of crime and violence	5.0	63
1.15	Organized crime	5.2	81
1.16	Reliability of police services	3.8	85
1.17	Ethical behavior of firms	3.5	97
1.18	Strength of auditing and reporting standards	4.0	110
1.19	Efficacy of corporate boards	4.5	71
1.20	Protection of minority shareholders' interests	4.1	77
1.21	Strength of investor protection, 0–10 (best)*	3.7	119
	2nd pillar: Infrastructure		
2.01	Quality of overall infrastructure	2.8	128
2.02	Quality of roads	2.6	122
2.03	Quality of railroad infrastructure	1.8	92
2.04	Quality of port infrastructure	3.9	80
2.05	Quality of air transport infrastructure	3.0	131
2.06	Available airline seat Kms/week, millions*	13.3	126
2.07	Quality of electricity supply	2.2	127
2.08	Fixed telephone lines/100 pop.*	1.1	126
2.09	Mobile telephone subscriptions/100 pop.*	20.9	135
	3rd pillar: Macroeconomic environment		
3.01	Government budget balance, % GDP*	-5.6	98
3.02	National savings rate, % GDP*	11.9	114
3.03	Inflation, annual % change*	2.6	66
3.04	Interest rate spread, %*	n/a	n/a
3.05	Government debt, % GDP*	21.0	26
3.06	Country credit rating, 0–100 (worst)*	26.9	118
	4th pillar: Health and primary education		
4.01	Business impact of malaria	3.3	127
4.02	Malaria incidence/100,000 pop.*	43,365.7	138
4.03	Business impact of tuberculosis	4.2	115
4.04	Tuberculosis incidence/100,000 pop.*	220.3	111
4.05	Business impact of HIV/AIDS	3.9	113
4.06	HIV prevalence, % adult pop.*	1.6	114
4.07	Infant mortality, deaths/1,000 live births*	92.1	134
4.08	Life expectancy, years*	53.0	125
4.09	Quality of primary education	2.9	108
4.10	Primary education enrollment, net %*	60.1	135
	5th pillar: Higher education and training		
5.01	Secondary education enrollment, gross %*	18.4	137
5.02	Tertiary education enrollment, gross %*	3.1	131
5.03	Quality of the educational system	2.5	129
5.04	Quality of math and science education	3.6	87
5.05	Quality of management schools	3.8	89
5.06	Internet access in schools	1.9	136
5.07	Availability of research and training services	3.7	91
5.08	Extent of staff training	2.9	134

	INDICATOR	SCORE	RANK/139
	6th pillar: Goods market efficiency		
6.01	Intensity of local competition	3.9	128
6.02	Extent of market dominance	3.1	118
6.03	Effectiveness of anti-monopoly policy	3.8	88
6.04	Extent and effect of taxation	3.3	86
6.05	Total tax rate, % profits*	44.9	84
6.06	No. procedures to start a business*	4.0	14
6.07	No. days to start a business*	14.0	52
6.08	Agricultural policy costs	3.8	72
6.09	Prevalence of trade barriers	4.9	44
6.10	Trade tariffs, % duty*	9.8	97
6.11	Prevalence of foreign ownership	4.4	101
6.12	Business impact of rules on FDI	4.8	68
6.13	Burden of customs procedures	4.4	56
6.14	Degree of customer orientation	3.9	113
6.15	Buyer sophistication	1.8	139
	7th pillar: Labor market efficiency		
7.01	Cooperation in labor-employer relations	3.7	124
7.02	Flexibility of wage determination	4.7	93
7.03	Rigidity of employment index, 0–100 (worst)*	21.0	50
7.04	Hiring and firing practices	4.1	55
7.05	Redundancy costs, weeks of wages*	34.0	67
7.06	Pay and productivity	2.6	138
7.07	Reliance on professional management	3.6	114
7.08	Brain drain	2.7	106
7.09	Females in labor force, ratio to males*	0.9	30
	8th pillar: Financial market development		
8.01	Availability of financial services	3.1	132
8.02	Affordability of financial services	2.7	135
8.03	Financing through local equity market	3.1	87
8.04	Ease of access to loans	1.6	137
8.05	Venture capital availability	1.5	138
8.06	Restriction on capital flows	3.2	126
8.07	Soundness of banks	4.8	86
8.08	Regulation of securities exchanges	3.4	117
8.09	Legal rights index, 0–10 (best)*	3.0	103
	9th pillar: Technological readiness		
9.01	Availability of latest technologies	4.2	113
9.02	Firm-level technology absorption	4.3	101
9.03	FDI and technology transfer	4.1	104
9.04	Internet users/100 pop.*	1.1	134
9.05	Broadband Internet subscriptions/100 pop.*	0.0	123
9.06	Internet bandwidth, Mb/s per 10,000 pop.*	0.1	126
	10th pillar: Market size		
10.01	Domestic market size index, 1–7 (best)*	2.5	112
10.02	Foreign market size index, 1–7 (best)*	2.4	131
	11th pillar: Business sophistication		
11.01	Local supplier quantity	4.4	96
11.02	Local supplier quality	3.9	110
11.03	State of cluster development	1.9	139
11.04	Nature of competitive advantage	2.6	125
11.05	Value chain breadth	2.4	136
11.06	Control of international distribution	2.5	139
11.07	Production process sophistication	2.3	137
11.08	Extent of marketing	2.5	135
11.09	Willingness to delegate authority	2.4	138
	12th pillar: Innovation		
12.01	Capacity for innovation	2.2	128
12.02	Quality of scientific research institutions	3.8	58
12.03	Company spending on R&D	2.6	109
12.04	University-industry collaboration in R&D	3.3	83
12.05	Gov't procurement of advanced tech products	3.6	70
12.06	Availability of scientists and engineers	3.7	94
12.07	Utility patents/million pop.*	0.1	82

Notes: An asterisk (*) indicates that data are from sources other than the World Economic Forum. For further details and explanation, please refer to the section "How to Read the Competitiveness Profiles" on page 115.

Burundi

Key indicators, 2009

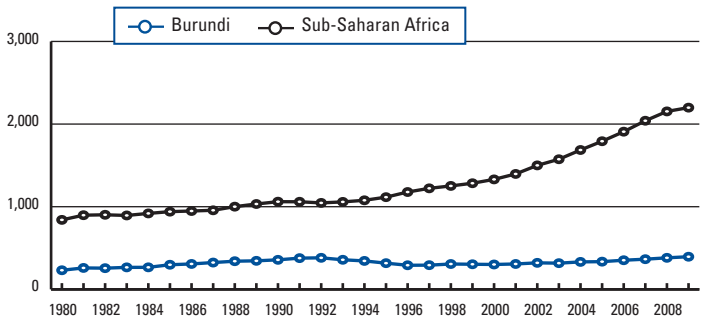
Population (millions) 8.3
GDP (US$ billions) 1.3
GDP per capita (US$) 162.9
GDP (PPP) as share (%) of world total 0.01

Sectoral value-added (% GDP)
Agriculture 34.8
Industry 20.0
Services 45.1

Human Development Index, 2010
Score, (0–1) best 0.28
Rank (out of 169 economies) 166

Sources: UNFPA, IMF, EIU, World Bank, UNDP.

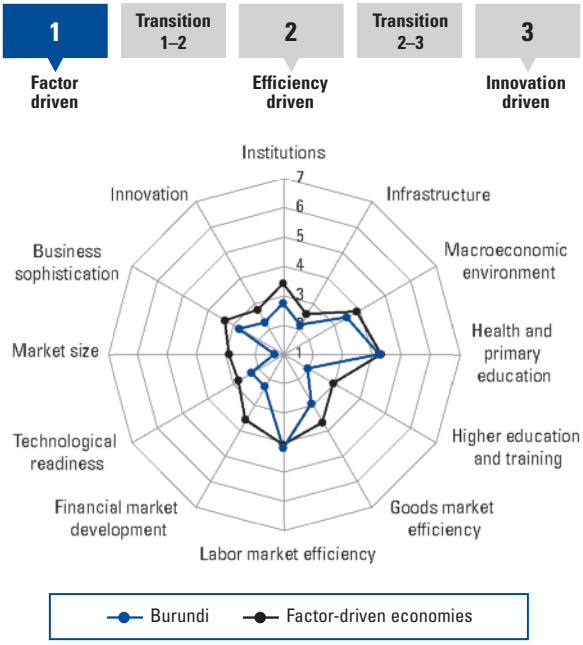
GDP (PPP) per capita (int'l $), 1980–2009



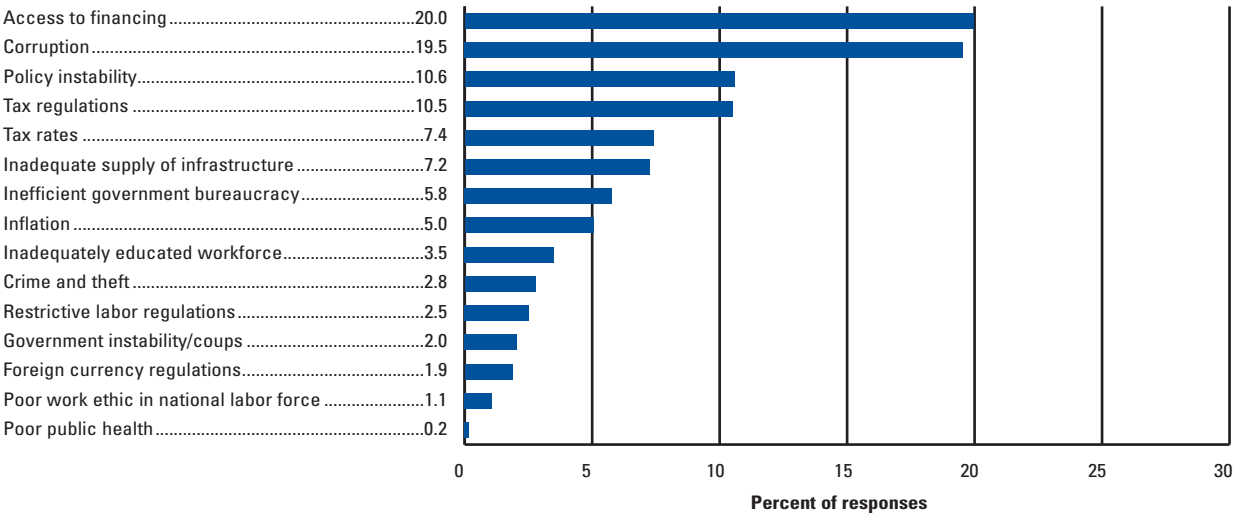
Global Competitiveness Index

	Rank (out of 139)	Score (1–7)
GCI 2010–2011	**137**	**3.0**
GCI 2009–2010 (out of 133)	133	2.6
GCI 2008–2009 (out of 134)	132	3.0
Basic requirements	**135**	**3.2**
1st pillar: Institutions	138	2.8
2nd pillar: Infrastructure	132	2.2
3rd pillar: Macroeconomic environment	121	3.6
4th pillar: Health and primary education	120	4.4
Efficiency enhancers	**139**	**2.5**
5th pillar: Higher education and training	139	2.0
6th pillar: Goods market efficiency	137	3.0
7th pillar: Labor market efficiency	81	4.3
8th pillar: Financial market development	139	2.3
9th pillar: Technological readiness	137	2.3
10th pillar: Market size	137	1.3
Innovation and sophistication factors	**138**	**2.6**
11th pillar: Business sophistication	138	2.8
12th pillar: Innovation	134	2.3

Stage of development



The most problematic factors for doing business



Note: From a list of 15 factors, respondents were asked to select the five most problematic for doing business in their country and to rank them between 1 (most problematic) and 5. The bars in the figure show the responses weighted according to their rankings.

Burundi

The Global Competitiveness Index in detail

	INDICATOR	SCORE	RANK/139
	1st pillar: Institutions		
1.01	Property rights	3.0	127
1.02	Intellectual property protection	1.9	138
1.03	Diversion of public funds	1.8	139
1.04	Public trust of politicians	1.9	123
1.05	Irregular payments and bribes	2.6	135
1.06	Judicial independence	1.9	136
1.07	Favoritism in decisions of government officials	2.5	113
1.08	Wastefulness of government spending	2.3	125
1.09	Burden of government regulation	3.2	75
1.10	Efficiency of legal framework in settling disputes	2.9	116
1.11	Efficiency of legal framework in challenging regs	2.6	128
1.12	Transparency of government policymaking	3.3	134
1.13	Business costs of terrorism	4.3	130
1.14	Business costs of crime and violence	3.1	129
1.15	Organized crime	3.9	126
1.16	Reliability of police services	2.3	135
1.17	Ethical behavior of firms	2.9	132
1.18	Strength of auditing and reporting standards	2.9	139
1.19	Efficacy of corporate boards	4.5	69
1.20	Protection of minority shareholders' interests	3.3	129
1.21	Strength of investor protection, 0–10 (best)*	3.3	123
	2nd pillar: Infrastructure		
2.01	Quality of overall infrastructure	2.8	126
2.02	Quality of roads	2.7	120
2.03	Quality of railroad infrastructure	n/a	n/a
2.04	Quality of port infrastructure	3.0	120
2.05	Quality of air transport infrastructure	3.3	121
2.06	Available airline seat Kms/week, millions*	2.1	137
2.07	Quality of electricity supply	2.5	123
2.08	Fixed telephone lines/100 pop.*	0.4	134
2.09	Mobile telephone subscriptions/100 pop.*	10.1	138
	3rd pillar: Macroeconomic environment		
3.01	Government budget balance, % GDP*	-4.0	69
3.02	National savings rate, % GDP*	8.5	129
3.03	Inflation, annual % change*	11.3	124
3.04	Interest rate spread, %*	8.9	108
3.05	Government debt, % GDP*	28.3	43
3.06	Country credit rating, 0–100 (worst)*	14.1	136
	4th pillar: Health and primary education		
4.01	Business impact of malaria	3.3	125
4.02	Malaria incidence/100,000 pop.*	27,784.8	122
4.03	Business impact of tuberculosis	4.1	120
4.04	Tuberculosis incidence/100,000 pop.*	357.5	126
4.05	Business impact of HIV/AIDS	3.1	129
4.06	HIV prevalence, % adult pop.*	2.0	119
4.07	Infant mortality, deaths/1,000 live births*	101.9	136
4.08	Life expectancy, years*	50.4	129
4.09	Quality of primary education	2.3	132
4.10	Primary education enrollment, net %*	99.4	12
	5th pillar: Higher education and training		
5.01	Secondary education enrollment, gross %*	17.9	138
5.02	Tertiary education enrollment, gross %*	2.5	133
5.03	Quality of the educational system	2.3	134
5.04	Quality of math and science education	3.1	110
5.05	Quality of management schools	2.9	131
5.06	Internet access in schools	1.6	139
5.07	Availability of research and training services	2.2	138
5.08	Extent of staff training	2.9	133

	–INDICATOR	SCORE	RANK/139
	6th pillar: Goods market efficiency		
6.01	Intensity of local competition	3.6	135
6.02	Extent of market dominance	4.0	50
6.03	Effectiveness of anti-monopoly policy	2.9	134
6.04	Extent and effect of taxation	2.7	127
6.05	Total tax rate, % profits*	278.6	135
6.06	No. procedures to start a business*	11.0	110
6.07	No. days to start a business*	32.0	98
6.08	Agricultural policy costs	3.5	111
6.09	Prevalence of trade barriers	3.6	129
6.10	Trade tariffs, % duty*	11.6	112
6.11	Prevalence of foreign ownership	2.9	138
6.12	Business impact of rules on FDI	3.8	117
6.13	Burden of customs procedures	3.0	130
6.14	Degree of customer orientation	3.4	135
6.15	Buyer sophistication	1.9	138
	7th pillar: Labor market efficiency		
7.01	Cooperation in labor-employer relations	3.6	125
7.02	Flexibility of wage determination	5.7	16
7.03	Rigidity of employment index, 0–100 (worst)*	28.0	71
7.04	Hiring and firing practices	3.7	86
7.05	Redundancy costs, weeks of wages*	26.0	48
7.06	Pay and productivity	3.0	128
7.07	Reliance on professional management	3.0	136
7.08	Brain drain	2.1	132
7.09	Females in labor force, ratio to males*	1.0	5
	8th pillar: Financial market development		
8.01	Availability of financial services	2.9	135
8.02	Affordability of financial services	2.8	134
8.03	Financing through local equity market	1.5	138
8.04	Ease of access to loans	1.6	135
8.05	Venture capital availability	1.5	139
8.06	Restriction on capital flows	2.7	135
8.07	Soundness of banks	3.5	134
8.08	Regulation of securities exchanges	1.9	139
8.09	Legal rights index, 0–10 (best)*	2.0	129
	9th pillar: Technological readiness		
9.01	Availability of latest technologies	3.5	137
9.02	Firm-level technology absorption	3.6	136
9.03	FDI and technology transfer	3.7	126
9.04	Internet users/100 pop.*	0.8	135
9.05	Broadband Internet subscriptions/100 pop.*	0.0	137
9.06	Internet bandwidth, Mb/s per 10,000 pop.*	0.0	137
	10th pillar: Market size		
10.01	Domestic market size index, 1–7 (best)*	1.4	137
10.02	Foreign market size index, 1–7 (best)*	1.1	138
	11th pillar: Business sophistication		
11.01	Local supplier quantity	4.3	102
11.02	Local supplier quality	3.6	128
11.03	State of cluster development	2.2	138
11.04	Nature of competitive advantage	2.6	127
11.05	Value chain breadth	2.5	133
11.06	Control of international distribution	2.9	136
11.07	Production process sophistication	2.2	139
11.08	Extent of marketing	2.3	138
11.09	Willingness to delegate authority	2.4	136
	12th pillar: Innovation		
12.01	Capacity for innovation	2.0	137
12.02	Quality of scientific research institutions	2.5	129
12.03	Company spending on R&D	2.3	134
12.04	University-industry collaboration in R&D	2.8	127
12.05	Gov't procurement of advanced tech products	2.7	128
12.06	Availability of scientists and engineers	3.5	106
12.07	Utility patents/million pop.*	0.0	90

Notes: An asterisk (*) indicates that data are from sources other than the World Economic Forum. For further details and explanation, please refer to the section "How to Read the Competitiveness Profiles" on page 115.

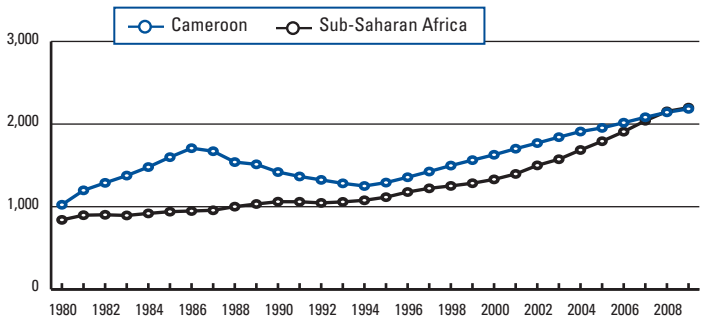
Cameroon

Key indicators, 2009

Population (millions)	19.5
GDP (US$ billions)	22.2
GDP per capita (US$)	1,115.3
GDP (PPP) as share (%) of world total	0.06
Sectoral value-added (% GDP)	
Agriculture	19.5
Industry	30.6
Services	49.9
Human Development Index, 2010	
Score, (0–1) best	0.46
Rank (out of 169 economies)	131

Sources: UNFPA, IMF, EIU, World Bank, UNDP.

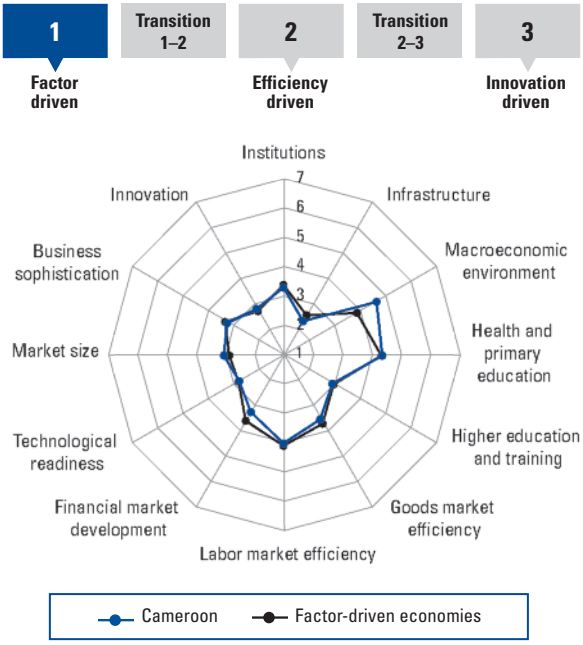
GDP (PPP) per capita (int'l $), 1980–2009



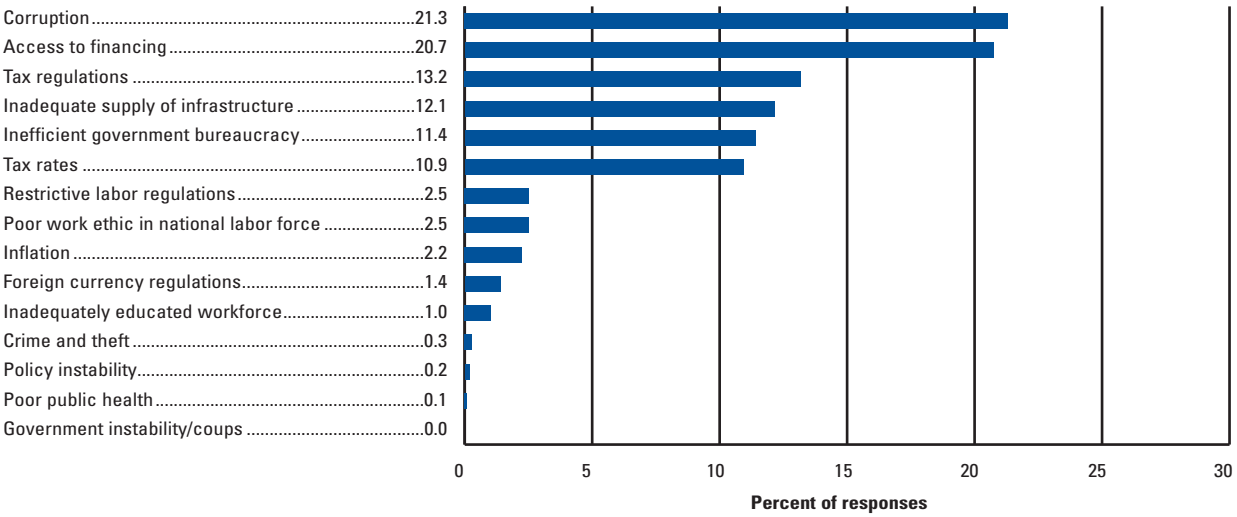
Global Competitiveness Index

	Rank (out of 139)	Score (1–7)
GCI 2010–2011	**111**	**3.6**
GCI 2009–2010 (out of 133)	111	3.5
GCI 2008–2009 (out of 134)	114	3.5
Basic requirements	**111**	**3.8**
1st pillar: Institutions	107	3.4
2nd pillar: Infrastructure	126	2.4
3rd pillar: Macroeconomic environment	53	4.8
4th pillar: Health and primary education	116	4.5
Efficiency enhancers	**121**	**3.3**
5th pillar: Higher education and training	117	3.0
6th pillar: Goods market efficiency	119	3.6
7th pillar: Labor market efficiency	99	4.1
8th pillar: Financial market development	123	3.3
9th pillar: Technological readiness	118	2.8
10th pillar: Market size	91	3.1
Innovation and sophistication factors	**105**	**3.1**
11th pillar: Business sophistication	116	3.3
12th pillar: Innovation	95	2.9

Stage of development



The most problematic factors for doing business



Note: From a list of 15 factors, respondents were asked to select the five most problematic for doing business in their country and to rank them between 1 (most problematic) and 5. The bars in the figure show the responses weighted according to their rankings.

Cameroon

The Global Competitiveness Index in detail

	INDICATOR	SCORE	RANK/139
	1st pillar: Institutions		
1.01	Property rights	3.7	96
1.02	Intellectual property protection	2.7	106
1.03	Diversion of public funds	2.3	124
1.04	Public trust of politicians	2.1	101
1.05	Irregular payments and bribes	2.9	123
1.06	Judicial independence	2.6	117
1.07	Favoritism in decisions of government officials	2.8	80
1.08	Wastefulness of government spending	2.8	100
1.09	Burden of government regulation	2.9	101
1.10	Efficiency of legal framework in settling disputes	3.3	90
1.11	Efficiency of legal framework in challenging regs	3.1	97
1.12	Transparency of government policymaking	3.7	117
1.13	Business costs of terrorism	5.8	70
1.14	Business costs of crime and violence	4.6	81
1.15	Organized crime	5.2	80
1.16	Reliability of police services	3.5	103
1.17	Ethical behavior of firms	3.2	121
1.18	Strength of auditing and reporting standards	3.8	123
1.19	Efficacy of corporate boards	4.8	48
1.20	Protection of minority shareholders' interests	4.4	65
1.21	Strength of investor protection, 0–10 (best)*	4.3	99
	2nd pillar: Infrastructure		
2.01	Quality of overall infrastructure	3.1	121
2.02	Quality of roads	2.8	116
2.03	Quality of railroad infrastructure	2.3	75
2.04	Quality of port infrastructure	3.3	110
2.05	Quality of air transport infrastructure	3.3	122
2.06	Available airline seat Kms/week, millions*	39.7	102
2.07	Quality of electricity supply	2.8	118
2.08	Fixed telephone lines/100 pop.*	1.7	119
2.09	Mobile telephone subscriptions/100 pop.*	37.9	121
	3rd pillar: Macroeconomic environment		
3.01	Government budget balance, % GDP*	0.4	11
3.02	National savings rate, % GDP*	18.2	81
3.03	Inflation, annual % change*	3.0	72
3.04	Interest rate spread, %*	10.7	115
3.05	Government debt, % GDP*	14.9	14
3.06	Country credit rating, 0–100 (worst)*	28.2	115
	4th pillar: Health and primary education		
4.01	Business impact of malaria	3.2	129
4.02	Malaria incidence/100,000 pop.*	28,013.1	123
4.03	Business impact of tuberculosis	4.2	119
4.04	Tuberculosis incidence/100,000 pop.*	186.7	104
4.05	Business impact of HIV/AIDS	3.8	117
4.06	HIV prevalence, % adult pop.*	5.1	127
4.07	Infant mortality, deaths/1,000 live births*	82.3	130
4.08	Life expectancy, years*	51.1	128
4.09	Quality of primary education	3.6	77
4.10	Primary education enrollment, net %*	88.3	106
	5th pillar: Higher education and training		
5.01	Secondary education enrollment, gross %*	37.3	121
5.02	Tertiary education enrollment, gross %*	7.8	113
5.03	Quality of the educational system	3.5	79
5.04	Quality of math and science education	3.7	81
5.05	Quality of management schools	4.0	74
5.06	Internet access in schools	2.6	122
5.07	Availability of research and training services	3.5	96
5.08	Extent of staff training	3.7	93

	INDICATOR	SCORE	RANK/139
	6th pillar: Goods market efficiency		
6.01	Intensity of local competition	5.0	57
6.02	Extent of market dominance	3.6	75
6.03	Effectiveness of anti-monopoly policy	3.9	77
6.04	Extent and effect of taxation	2.9	119
6.05	Total tax rate, % profits*	50.5	103
6.06	No. procedures to start a business*	12.0	114
6.07	No. days to start a business*	34.0	102
6.08	Agricultural policy costs	4.0	55
6.09	Prevalence of trade barriers	5.0	32
6.10	Trade tariffs, % duty*	14.7	125
6.11	Prevalence of foreign ownership	5.2	41
6.12	Business impact of rules on FDI	4.1	108
6.13	Burden of customs procedures	3.8	90
6.14	Degree of customer orientation	4.3	88
6.15	Buyer sophistication	2.3	133
	7th pillar: Labor market efficiency		
7.01	Cooperation in labor-employer relations	4.0	98
7.02	Flexibility of wage determination	5.0	74
7.03	Rigidity of employment index, 0–100 (worst)*	39.0	96
7.04	Hiring and firing practices	4.7	16
7.05	Redundancy costs, weeks of wages*	33.0	66
7.06	Pay and productivity	3.3	108
7.07	Reliance on professional management	4.1	85
7.08	Brain drain	2.4	117
7.09	Females in labor force, ratio to males*	0.7	95
	8th pillar: Financial market development		
8.01	Availability of financial services	3.3	127
8.02	Affordability of financial services	3.1	127
8.03	Financing through local equity market	3.1	88
8.04	Ease of access to loans	1.9	132
8.05	Venture capital availability	1.8	128
8.06	Restriction on capital flows	3.9	100
8.07	Soundness of banks	4.9	84
8.08	Regulation of securities exchanges	3.2	120
8.09	Legal rights index, 0–10 (best)*	3.0	103
	9th pillar: Technological readiness		
9.01	Availability of latest technologies	4.2	114
9.02	Firm-level technology absorption	4.4	95
9.03	FDI and technology transfer	4.2	99
9.04	Internet users/100 pop.*	3.8	122
9.05	Broadband Internet subscriptions/100 pop.*	0.0	135
9.06	Internet bandwidth, Mb/s per 10,000 pop.*	0.2	121
	10th pillar: Market size		
10.01	Domestic market size index, 1–7 (best)*	3.0	88
10.02	Foreign market size index, 1–7 (best)*	3.4	101
	11th pillar: Business sophistication		
11.01	Local supplier quantity	4.5	88
11.02	Local supplier quality	4.0	99
11.03	State of cluster development	2.4	131
11.04	Nature of competitive advantage	2.5	131
11.05	Value chain breadth	3.1	99
11.06	Control of international distribution	3.2	127
11.07	Production process sophistication	3.0	107
11.08	Extent of marketing	3.4	101
11.09	Willingness to delegate authority	3.0	113
	12th pillar: Innovation		
12.01	Capacity for innovation	2.6	102
12.02	Quality of scientific research institutions	3.1	97
12.03	Company spending on R&D	3.0	63
12.04	University-industry collaboration in R&D	3.0	113
12.05	Gov't procurement of advanced tech products	3.1	109
12.06	Availability of scientists and engineers	4.5	39
12.07	Utility patents/million pop.*	0.1	83

Notes: An asterisk (*) indicates that data are from sources other than the World Economic Forum. For further details and explanation, please refer to the section "How to Read the Competitiveness Profiles" on page 115.

Cape Verde

Key indicators, 2009

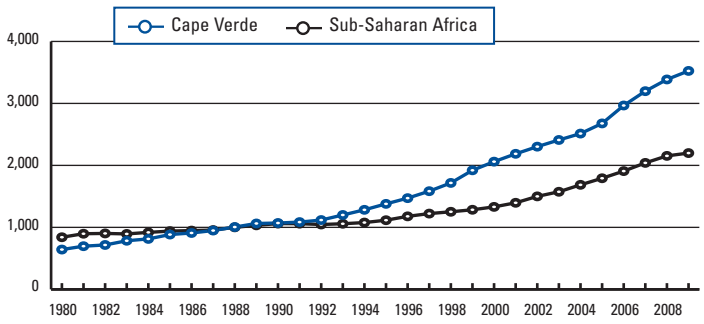
Population (millions) 0.5
GDP (US$ billions) 1.8
GDP per capita (US$) 3,444.7
GDP (PPP) as share (%) of world total 0.00

Sectoral value-added (% GDP)
Agriculture 9.2
Industry 20.1
Services 70.7

Human Development Index, 2010
Score, (0–1) best 0.53
Rank (out of 169 economies) 118

Sources: UNFPA, IMF, EIU, World Bank, UNDP.

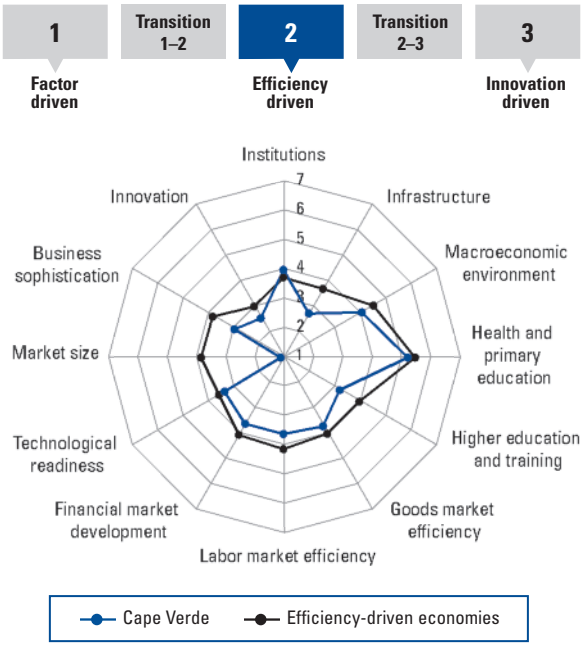
GDP (PPP) per capita (int'l $), 1980–2009



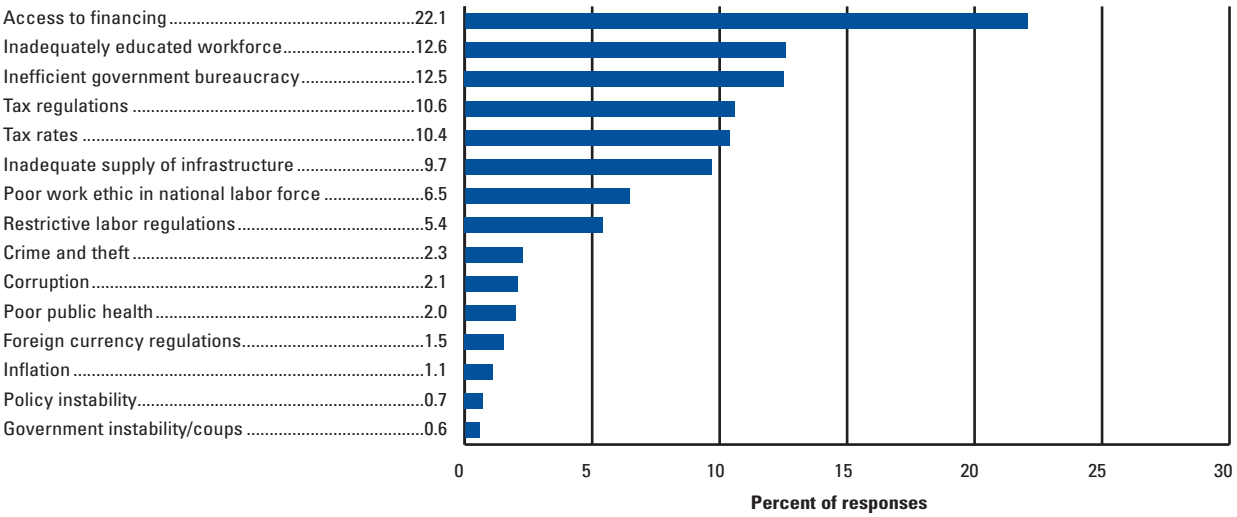
Global Competitiveness Index

	Rank (out of 139)	Score (1–7)
GCI 2010–2011	**117**	**3.5**
GCI 2009–2010 (out of 133)	n/a	n/a
GCI 2008–2009 (out of 134)	n/a	n/a
Basic requirements	**96**	**4.1**
1st pillar: Institutions	56	4.1
2nd pillar: Infrastructure	109	2.8
3rd pillar: Macroeconomic environment	102	4.2
4th pillar: Health and primary education	88	5.4
Efficiency enhancers	**129**	**3.2**
5th pillar: Higher education and training	109	3.3
6th pillar: Goods market efficiency	111	3.8
7th pillar: Labor market efficiency	122	3.7
8th pillar: Financial market development	104	3.7
9th pillar: Technological readiness	79	3.4
10th pillar: Market size	139	1.1
Innovation and sophistication factors	**128**	**2.8**
11th pillar: Business sophistication	131	3.0
12th pillar: Innovation	117	2.6

Stage of development



The most problematic factors for doing business



Note: From a list of 15 factors, respondents were asked to select the five most problematic for doing business in their country and to rank them between 1 (most problematic) and 5. The bars in the figure show the responses weighted according to their rankings.

Cape Verde

The Global Competitiveness Index in detail

	INDICATOR	SCORE	RANK/139
	1st pillar: Institutions		
1.01	Property rights	3.7	100
1.02	Intellectual property protection	2.5	127
1.03	Diversion of public funds	4.5	39
1.04	Public trust of politicians	4.2	24
1.05	Irregular payments and bribes	4.8	45
1.06	Judicial independence	4.1	58
1.07	Favoritism in decisions of government officials	3.5	43
1.08	Wastefulness of government spending	3.6	43
1.09	Burden of government regulation	3.3	67
1.10	Efficiency of legal framework in settling disputes	3.4	82
1.11	Efficiency of legal framework in challenging regs	3.2	88
1.12	Transparency of government policymaking	4.6	50
1.13	Business costs of terrorism	5.7	72
1.14	Business costs of crime and violence	4.3	96
1.15	Organized crime	4.8	93
1.16	Reliability of police services	4.3	63
1.17	Ethical behavior of firms	4.6	44
1.18	Strength of auditing and reporting standards	4.2	99
1.19	Efficacy of corporate boards	4.1	116
1.20	Protection of minority shareholders' interests	4.1	75
1.21	Strength of investor protection, 0–10 (best)*	4.0	109
	2nd pillar: Infrastructure		
2.01	Quality of overall infrastructure	3.5	99
2.02	Quality of roads	3.9	68
2.03	Quality of railroad infrastructure	n/a	n/a
2.04	Quality of port infrastructure	3.5	102
2.05	Quality of air transport infrastructure	4.3	82
2.06	Available airline seat Kms/week, millions*	28.9	107
2.07	Quality of electricity supply	1.8	131
2.08	Fixed telephone lines/100 pop.*	14.3	85
2.09	Mobile telephone subscriptions/100 pop.*	77.5	91
	3rd pillar: Macroeconomic environment		
3.01	Government budget balance, % GDP*	-6.0	103
3.02	National savings rate, % GDP*	18.1	82
3.03	Inflation, annual % change*	1.2	39
3.04	Interest rate spread, %*	7.0	89
3.05	Government debt, % GDP*	60.5	104
3.06	Country credit rating, 0–100 (worst)*	33.8	94
	4th pillar: Health and primary education		
4.01	Business impact of malaria	5.1	100
4.02	Malaria incidence/100,000 pop.*	11.8	82
4.03	Business impact of tuberculosis	5.0	92
4.04	Tuberculosis incidence/100,000 pop.*	149.2	98
4.05	Business impact of HIV/AIDS	5.0	85
4.06	HIV prevalence, % adult pop.*	0.8	97
4.07	Infant mortality, deaths/1,000 live births*	24.2	87
4.08	Life expectancy, years*	71.0	90
4.09	Quality of primary education	3.9	69
4.10	Primary education enrollment, net %*	84.4	114
	5th pillar: Higher education and training		
5.01	Secondary education enrollment, gross %*	67.7	101
5.02	Tertiary education enrollment, gross %*	11.9	103
5.03	Quality of the educational system	3.8	65
5.04	Quality of math and science education	3.4	97
5.05	Quality of management schools	3.3	121
5.06	Internet access in schools	3.4	90
5.07	Availability of research and training services	2.9	129
5.08	Extent of staff training	3.3	120

	INDICATOR	SCORE	RANK/139
	6th pillar: Goods market efficiency		
6.01	Intensity of local competition	4.0	121
6.02	Extent of market dominance	3.4	84
6.03	Effectiveness of anti-monopoly policy	3.9	74
6.04	Extent and effect of taxation	3.2	94
6.05	Total tax rate, % profits*	49.7	100
6.06	No. procedures to start a business*	9.0	88
6.07	No. days to start a business*	24.0	79
6.08	Agricultural policy costs	3.8	66
6.09	Prevalence of trade barriers	3.7	125
6.10	Trade tariffs, % duty*	10.6	103
6.11	Prevalence of foreign ownership	4.8	67
6.12	Business impact of rules on FDI	4.7	72
6.13	Burden of customs procedures	3.1	127
6.14	Degree of customer orientation	3.4	136
6.15	Buyer sophistication	3.0	100
	7th pillar: Labor market efficiency		
7.01	Cooperation in labor-employer relations	4.1	92
7.02	Flexibility of wage determination	5.4	46
7.03	Rigidity of employment index, 0–100 (worst)*	46.0	114
7.04	Hiring and firing practices	3.3	109
7.05	Redundancy costs, weeks of wages*	93.0	119
7.06	Pay and productivity	3.1	117
7.07	Reliance on professional management	3.6	109
7.08	Brain drain	3.2	75
7.09	Females in labor force, ratio to males*	0.7	102
	8th pillar: Financial market development		
8.01	Availability of financial services	3.7	113
8.02	Affordability of financial services	3.7	98
8.03	Financing through local equity market	3.8	55
8.04	Ease of access to loans	2.3	103
8.05	Venture capital availability	2.1	115
8.06	Restriction on capital flows	4.3	78
8.07	Soundness of banks	5.4	54
8.08	Regulation of securities exchanges	4.5	51
8.09	Legal rights index, 0–10 (best)*	2.0	129
	9th pillar: Technological readiness		
9.01	Availability of latest technologies	5.0	72
9.02	Firm-level technology absorption	4.9	63
9.03	FDI and technology transfer	4.7	69
9.04	Internet users/100 pop.*	29.7	75
9.05	Broadband Internet subscriptions/100 pop.*	1.4	90
9.06	Internet bandwidth, Mb/s per 10,000 pop.*	3.1	88
	10th pillar: Market size		
10.01	Domestic market size index, 1–7 (best)*	1.0	139
10.02	Foreign market size index, 1–7 (best)*	1.3	137
	11th pillar: Business sophistication		
11.01	Local supplier quantity	3.9	128
11.02	Local supplier quality	3.5	130
11.03	State of cluster development	2.3	134
11.04	Nature of competitive advantage	3.4	62
11.05	Value chain breadth	2.2	137
11.06	Control of international distribution	3.0	134
11.07	Production process sophistication	2.9	113
11.08	Extent of marketing	3.2	113
11.09	Willingness to delegate authority	2.7	132
	12th pillar: Innovation		
12.01	Capacity for innovation	2.0	135
12.02	Quality of scientific research institutions	2.6	121
12.03	Company spending on R&D	2.1	136
12.04	University-industry collaboration in R&D	3.3	89
12.05	Gov't procurement of advanced tech products	4.0	46
12.06	Availability of scientists and engineers	3.5	107
12.07	Utility patents/million pop.*	0.0	90

Notes: An asterisk (*) indicates that data are from sources other than the World Economic Forum. For further details and explanation, please refer to the section "How to Read the Competitiveness Profiles" on page 115.

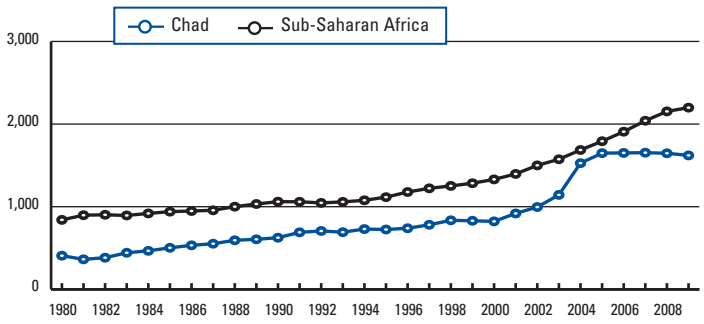
Chad

Key indicators, 2009

Population (millions)	11.2
GDP (US$ billions)	6.9
GDP per capita (US$)	687.2
GDP (PPP) as share (%) of world total	0.02
Sectoral value-added (% GDP)	
Agriculture	24.2
Industry	36.2
Services	39.6
Human Development Index, 2010	
Score, (0–1) best	0.29
Rank (out of 169 economies)	163

Sources: UNFPA, IMF, EIU, World Bank, UNDP.

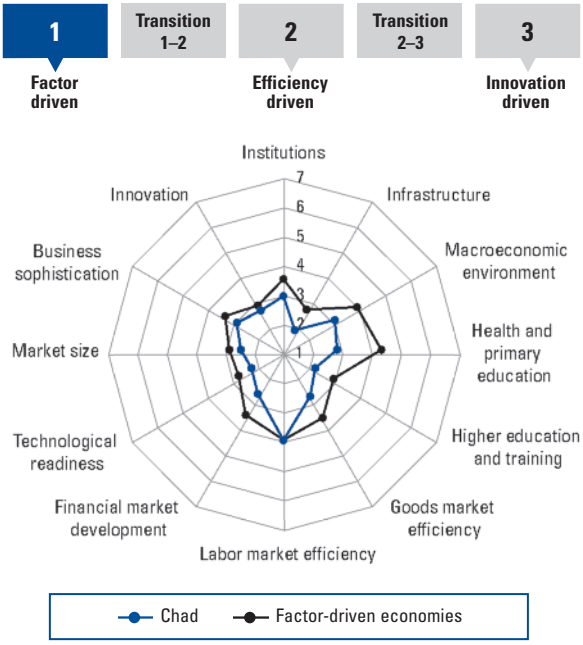
GDP (PPP) per capita (int'l $), 1980–2009



Global Competitiveness Index

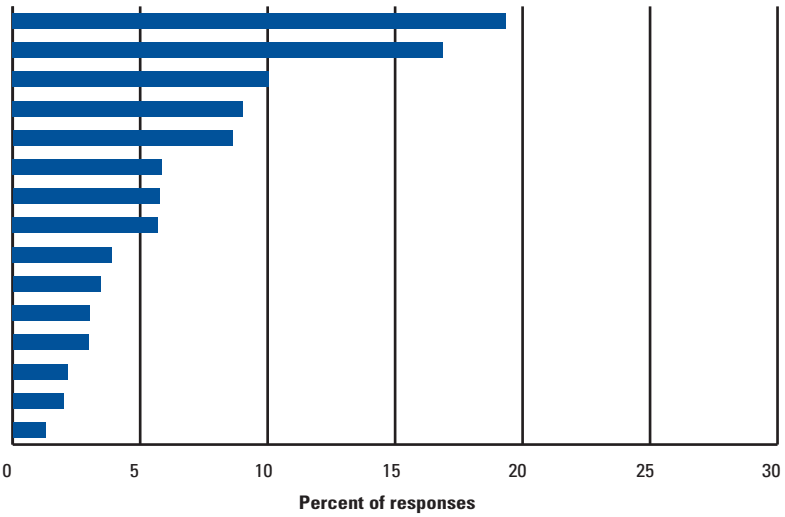
	Rank (out of 139)	Score (1–7)
GCI 2010–2011	**139**	**2.7**
GCI 2009–2010 (out of 133)	131	2.9
GCI 2008–2009 (out of 134)	134	2.8
Basic requirements	**139**	**2.7**
1st pillar: Institutions	135	2.9
2nd pillar: Infrastructure	137	1.8
3rd pillar: Macroeconomic environment	134	3.1
4th pillar: Health and primary education	138	2.9
Efficiency enhancers	**137**	**2.8**
5th pillar: Higher education and training	136	2.3
6th pillar: Goods market efficiency	138	2.9
7th pillar: Labor market efficiency	95	4.2
8th pillar: Financial market development	137	2.8
9th pillar: Technological readiness	138	2.3
10th pillar: Market size	120	2.5
Innovation and sophistication factors	**130**	**2.8**
11th pillar: Business sophistication	133	2.9
12th pillar: Innovation	115	2.6

Stage of development



The most problematic factors for doing business

Corruption	19.3
Access to financing	16.9
Tax regulations	10.1
Tax rates	9.0
Inadequate supply of infrastructure	8.6
Government instability/coups	5.8
Policy instability	5.7
Inadequately educated workforce	5.7
Inefficient government bureaucracy	3.9
Crime and theft	3.4
Poor work ethic in national labor force	3.0
Inflation	3.0
Poor public health	2.2
Restrictive labor regulations	2.0
Foreign currency regulations	1.3



Note: From a list of 15 factors, respondents were asked to select the five most problematic for doing business in their country and to rank them between 1 (most problematic) and 5. The bars in the figure show the responses weighted according to their rankings.

Chad

The Global Competitiveness Index in detail

	INDICATOR	SCORE	RANK/139
	1st pillar: Institutions		
1.01	Property rights	2.4	136
1.02	Intellectual property protection	2.3	131
1.03	Diversion of public funds	2.0	133
1.04	Public trust of politicians	1.9	117
1.05	Irregular payments and bribes	2.5	138
1.06	Judicial independence	2.7	116
1.07	Favoritism in decisions of government officials	2.7	97
1.08	Wastefulness of government spending	2.5	111
1.09	Burden of government regulation	2.9	100
1.10	Efficiency of legal framework in settling disputes	2.9	119
1.11	Efficiency of legal framework in challenging regs	3.0	105
1.12	Transparency of government policymaking	2.8	138
1.13	Business costs of terrorism	4.8	114
1.14	Business costs of crime and violence	3.8	114
1.15	Organized crime	3.8	129
1.16	Reliability of police services	2.6	131
1.17	Ethical behavior of firms	3.1	128
1.18	Strength of auditing and reporting standards	3.4	134
1.19	Efficacy of corporate boards	3.8	132
1.20	Protection of minority shareholders' interests	3.7	110
1.21	Strength of investor protection, 0–10 (best)*	4.0	109
	2nd pillar: Infrastructure		
2.01	Quality of overall infrastructure	2.5	131
2.02	Quality of roads	2.4	126
2.03	Quality of railroad infrastructure	n/a	n/a
2.04	Quality of port infrastructure	2.6	133
2.05	Quality of air transport infrastructure	2.8	136
2.06	Available airline seat Kms/week, millions*	7.7	129
2.07	Quality of electricity supply	1.5	137
2.08	Fixed telephone lines/100 pop.*	0.1	139
2.09	Mobile telephone subscriptions/100 pop.*	24.0	133
	3rd pillar: Macroeconomic environment		
3.01	Government budget balance, % GDP*	-10.8	131
3.02	National savings rate, % GDP*	9.2	125
3.03	Inflation, annual % change*	10.1	120
3.04	Interest rate spread, %*	11.7	119
3.05	Government debt, % GDP*	22.3	31
3.06	Country credit rating, 0–100 (worst)*	12.8	137
	4th pillar: Health and primary education		
4.01	Business impact of malaria	2.6	137
4.02	Malaria incidence/100,000 pop.*	39,920.4	137
4.03	Business impact of tuberculosis	3.2	134
4.04	Tuberculosis incidence/100,000 pop.*	291.0	118
4.05	Business impact of HIV/AIDS	2.7	133
4.06	HIV prevalence, % adult pop.*	3.5	125
4.07	Infant mortality, deaths/1,000 live births*	124.0	138
4.08	Life expectancy, years*	48.7	131
4.09	Quality of primary education	2.9	112
4.10	Primary education enrollment, net %*	61.0	134
	5th pillar: Higher education and training		
5.01	Secondary education enrollment, gross %*	19.0	136
5.02	Tertiary education enrollment, gross %*	1.9	135
5.03	Quality of the educational system	3.2	97
5.04	Quality of math and science education	3.3	103
5.05	Quality of management schools	3.3	120
5.06	Internet access in schools	1.6	138
5.07	Availability of research and training services	2.9	131
5.08	Extent of staff training	3.2	125

	INDICATOR	SCORE	RANK/139
	6th pillar: Goods market efficiency		
6.01	Intensity of local competition	3.1	139
6.02	Extent of market dominance	3.5	81
6.03	Effectiveness of anti-monopoly policy	3.2	121
6.04	Extent and effect of taxation	2.6	129
6.05	Total tax rate, % profits*	60.9	117
6.06	No. procedures to start a business*	19.0	136
6.07	No. days to start a business*	75.0	130
6.08	Agricultural policy costs	3.6	96
6.09	Prevalence of trade barriers	3.4	136
6.10	Trade tariffs, % duty*	14.7	126
6.11	Prevalence of foreign ownership	3.1	134
6.12	Business impact of rules on FDI	3.3	132
6.13	Burden of customs procedures	2.7	137
6.14	Degree of customer orientation	3.4	137
6.15	Buyer sophistication	2.0	137
	7th pillar: Labor market efficiency		
7.01	Cooperation in labor-employer relations	3.5	133
7.02	Flexibility of wage determination	5.0	75
7.03	Rigidity of employment index, 0–100 (worst)*	33.0	82
7.04	Hiring and firing practices	3.9	72
7.05	Redundancy costs, weeks of wages*	36.0	70
7.06	Pay and productivity	3.2	113
7.07	Reliance on professional management	2.6	138
7.08	Brain drain	2.7	105
7.09	Females in labor force, ratio to males*	0.9	12
	8th pillar: Financial market development		
8.01	Availability of financial services	2.5	138
8.02	Affordability of financial services	2.8	133
8.03	Financing through local equity market	2.4	119
8.04	Ease of access to loans	2.1	115
8.05	Venture capital availability	2.3	92
8.06	Restriction on capital flows	3.0	130
8.07	Soundness of banks	3.6	132
8.08	Regulation of securities exchanges	2.5	134
8.09	Legal rights index, 0–10 (best)*	3.0	103
	9th pillar: Technological readiness		
9.01	Availability of latest technologies	3.3	139
9.02	Firm-level technology absorption	3.5	138
9.03	FDI and technology transfer	3.5	132
9.04	Internet users/100 pop.*	1.7	131
9.05	Broadband Internet subscriptions/100 pop.*	0.0	138
9.06	Internet bandwidth, Mb/s per 10,000 pop.*	0.0	138
	10th pillar: Market size		
10.01	Domestic market size index, 1–7 (best)*	2.2	123
10.02	Foreign market size index, 1–7 (best)*	3.3	108
	11th pillar: Business sophistication		
11.01	Local supplier quantity	4.3	100
11.02	Local supplier quality	3.3	135
11.03	State of cluster development	2.7	119
11.04	Nature of competitive advantage	2.8	103
11.05	Value chain breadth	2.8	122
11.06	Control of international distribution	2.8	138
11.07	Production process sophistication	2.6	128
11.08	Extent of marketing	2.4	136
11.09	Willingness to delegate authority	2.8	124
	12th pillar: Innovation		
12.01	Capacity for innovation	2.4	118
12.02	Quality of scientific research institutions	2.6	124
12.03	Company spending on R&D	3.0	66
12.04	University-industry collaboration in R&D	3.0	116
12.05	Gov't procurement of advanced tech products	3.0	114
12.06	Availability of scientists and engineers	3.6	97
12.07	Utility patents/million pop.*	0.0	90

Notes: An asterisk (*) indicates that data are from sources other than the World Economic Forum. For further details and explanation, please refer to the section "How to Read the Competitiveness Profiles" on page 115.

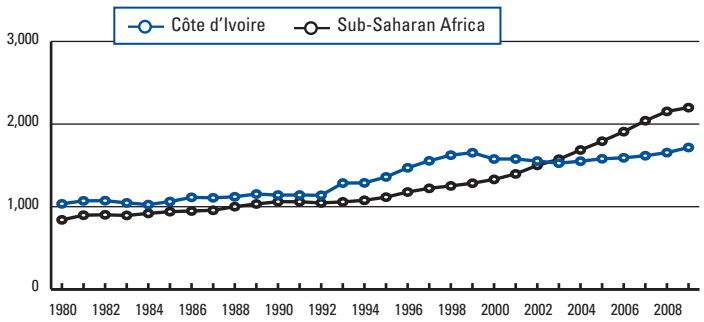
Côte d'Ivoire

Key indicators, 2009

Population (millions)	21.1
GDP (US$ billions)	22.5
GDP per capita (US$)	1,052.0
GDP (PPP) as share (%) of world total	0.05
Sectoral value-added (% GDP)	
Agriculture	24.7
Industry	25.5
Services	49.9
Human Development Index, 2010	
Score, (0–1) best	0.40
Rank (out of 169 economies)	149

Sources: UNFPA, IMF, EIU, World Bank, UNDP.

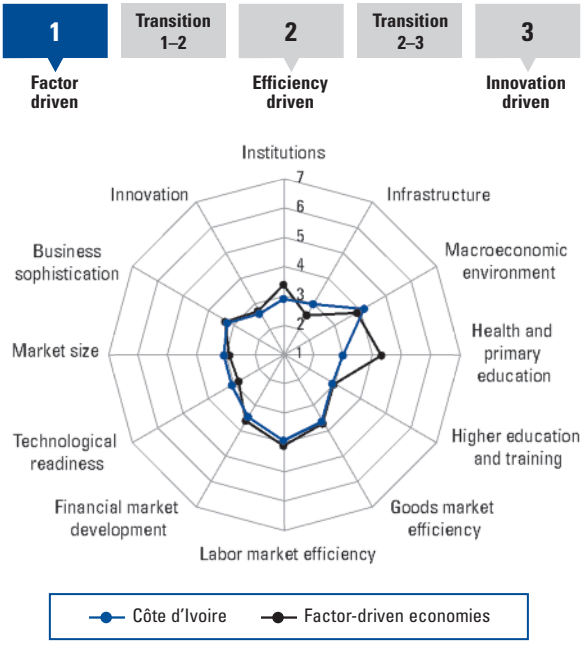
GDP (PPP) per capita (int'l $), 1980–2009



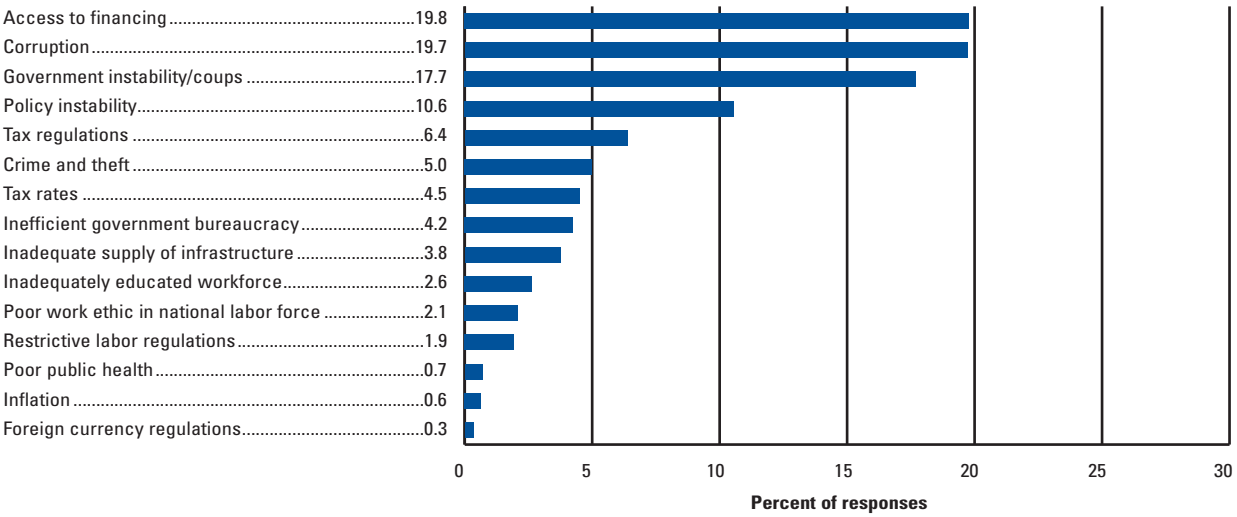
Global Competitiveness Index

	Rank (out of 139)	Score (1–7)
GCI 2010–2011	**129**	**3.3**
GCI 2009–2010 (out of 133)	116	3.4
GCI 2008–2009 (out of 134)	110	3.5
Basic requirements	**133**	**3.4**
1st pillar: Institutions	133	3.0
2nd pillar: Infrastructure	99	3.1
3rd pillar: Macroeconomic environment	94	4.3
4th pillar: Health and primary education	136	3.1
Efficiency enhancers	**116**	**3.4**
5th pillar: Higher education and training	116	3.0
6th pillar: Goods market efficiency	118	3.7
7th pillar: Labor market efficiency	105	4.0
8th pillar: Financial market development	112	3.5
9th pillar: Technological readiness	102	3.1
10th pillar: Market size	94	3.1
Innovation and sophistication factors	**110**	**3.0**
11th pillar: Business sophistication	112	3.3
12th pillar: Innovation	109	2.7

Stage of development



The most problematic factors for doing business



Note: From a list of 15 factors, respondents were asked to select the five most problematic for doing business in their country and to rank them between 1 (most problematic) and 5. The bars in the figure show the responses weighted according to their rankings.

Côte d'Ivoire

The Global Competitiveness Index in detail

	INDICATOR	SCORE	RANK/139
	1st pillar: Institutions		
1.01	Property rights	3.4	114
1.02	Intellectual property protection	2.2	136
1.03	Diversion of public funds	2.0	132
1.04	Public trust of politicians	1.6	137
1.05	Irregular payments and bribes	2.6	136
1.06	Judicial independence	1.9	137
1.07	Favoritism in decisions of government officials	2.3	129
1.08	Wastefulness of government spending	2.1	132
1.09	Burden of government regulation	2.9	103
1.10	Efficiency of legal framework in settling disputes	3.0	112
1.11	Efficiency of legal framework in challenging regs	2.8	117
1.12	Transparency of government policymaking	3.8	110
1.13	Business costs of terrorism	6.1	54
1.14	Business costs of crime and violence	3.1	128
1.15	Organized crime	3.4	132
1.16	Reliability of police services	2.3	137
1.17	Ethical behavior of firms	3.3	114
1.18	Strength of auditing and reporting standards	3.8	118
1.19	Efficacy of corporate boards	5.0	22
1.20	Protection of minority shareholders' interests	3.9	99
1.21	Strength of investor protection, 0–10 (best)*	3.3	123
	2nd pillar: Infrastructure		
2.01	Quality of overall infrastructure	3.9	80
2.02	Quality of roads	3.2	93
2.03	Quality of railroad infrastructure	2.1	80
2.04	Quality of port infrastructure	5.0	42
2.05	Quality of air transport infrastructure	4.5	75
2.06	Available airline seat Kms/week, millions*	34.5	104
2.07	Quality of electricity supply	3.5	100
2.08	Fixed telephone lines/100 pop.*	1.3	122
2.09	Mobile telephone subscriptions/100 pop.*	63.3	106
	3rd pillar: Macroeconomic environment		
3.01	Government budget balance, % GDP*	1.1	7
3.02	National savings rate, % GDP*	12.2	112
3.03	Inflation, annual % change*	1.0	36
3.04	Interest rate spread, %*	7.5	92
3.05	Government debt, % GDP*	82.1	121
3.06	Country credit rating, 0–100 (worst)*	20.4	128
	4th pillar: Health and primary education		
4.01	Business impact of malaria	3.1	130
4.02	Malaria incidence/100,000 pop.*	37,162.0	135
4.03	Business impact of tuberculosis	4.0	122
4.04	Tuberculosis incidence/100,000 pop.*	409.6	129
4.05	Business impact of HIV/AIDS	3.6	123
4.06	HIV prevalence, % adult pop.*	3.9	126
4.07	Infant mortality, deaths/1,000 live births*	80.9	129
4.08	Life expectancy, years*	57.4	115
4.09	Quality of primary education	3.1	97
4.10	Primary education enrollment, net %*	56.0	136
	5th pillar: Higher education and training		
5.01	Secondary education enrollment, gross %*	26.3	130
5.02	Tertiary education enrollment, gross %*	8.4	111
5.03	Quality of the educational system	3.1	106
5.04	Quality of math and science education	3.6	83
5.05	Quality of management schools	3.7	100
5.06	Internet access in schools	2.6	124
5.07	Availability of research and training services	4.2	63
5.08	Extent of staff training	4.3	44

	INDICATOR	SCORE	RANK/139
	6th pillar: Goods market efficiency		
6.01	Intensity of local competition	4.8	76
6.02	Extent of market dominance	3.2	108
6.03	Effectiveness of anti-monopoly policy	3.8	89
6.04	Extent and effect of taxation	3.1	103
6.05	Total tax rate, % profits*	44.7	83
6.06	No. procedures to start a business*	10.0	99
6.07	No. days to start a business*	40.0	112
6.08	Agricultural policy costs	3.8	76
6.09	Prevalence of trade barriers	4.6	71
6.10	Trade tariffs, % duty*	10.6	102
6.11	Prevalence of foreign ownership	5.5	26
6.12	Business impact of rules on FDI	4.8	67
6.13	Burden of customs procedures	3.8	94
6.14	Degree of customer orientation	4.4	80
6.15	Buyer sophistication	2.1	136
	7th pillar: Labor market efficiency		
7.01	Cooperation in labor-employer relations	4.3	69
7.02	Flexibility of wage determination	5.4	43
7.03	Rigidity of employment index, 0–100 (worst)*	33.0	82
7.04	Hiring and firing practices	4.5	27
7.05	Redundancy costs, weeks of wages*	49.0	83
7.06	Pay and productivity	3.5	95
7.07	Reliance on professional management	4.2	75
7.08	Brain drain	3.2	78
7.09	Females in labor force, ratio to males*	0.5	122
	8th pillar: Financial market development		
8.01	Availability of financial services	3.9	105
8.02	Affordability of financial services	3.6	101
8.03	Financing through local equity market	4.1	34
8.04	Ease of access to loans	1.5	138
8.05	Venture capital availability	1.6	137
8.06	Restriction on capital flows	3.7	107
8.07	Soundness of banks	4.7	98
8.08	Regulation of securities exchanges	4.3	63
8.09	Legal rights index, 0–10 (best)*	3.0	103
	9th pillar: Technological readiness		
9.01	Availability of latest technologies	4.8	79
9.02	Firm-level technology absorption	4.9	64
9.03	FDI and technology transfer	4.6	78
9.04	Internet users/100 pop.*	4.6	120
9.05	Broadband Internet subscriptions/100 pop.*	0.0	122
9.06	Internet bandwidth, Mb/s per 10,000 pop.*	0.4	112
	10th pillar: Market size		
10.01	Domestic market size index, 1–7 (best)*	2.8	94
10.02	Foreign market size index, 1–7 (best)*	3.8	86
	11th pillar: Business sophistication		
11.01	Local supplier quantity	4.6	81
11.02	Local supplier quality	4.3	79
11.03	State of cluster development	2.4	133
11.04	Nature of competitive advantage	2.6	123
11.05	Value chain breadth	2.9	114
11.06	Control of international distribution	3.2	128
11.07	Production process sophistication	2.8	119
11.08	Extent of marketing	3.7	89
11.09	Willingness to delegate authority	2.5	134
	12th pillar: Innovation		
12.01	Capacity for innovation	2.2	132
12.02	Quality of scientific research institutions	3.2	92
12.03	Company spending on R&D	2.7	93
12.04	University-industry collaboration in R&D	2.6	130
12.05	Gov't procurement of advanced tech products	3.2	100
12.06	Availability of scientists and engineers	4.5	42
12.07	Utility patents/million pop.*	0.0	90

Notes: An asterisk (*) indicates that data are from sources other than the World Economic Forum. For further details and explanation, please refer to the section "How to Read the Competitiveness Profiles" on page 115.

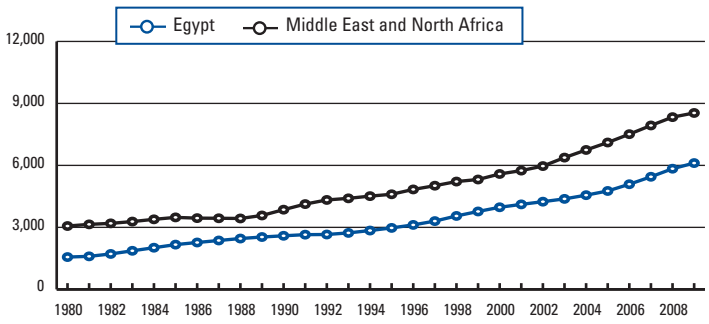
Egypt

Key indicators, 2009

Population (millions)	83.0
GDP (US$ billions)	188.0
GDP per capita (US$)	2,450.4
GDP (PPP) as share (%) of world total	0.68
Sectoral value-added (% GDP)	
Agriculture	11.5
Industry	35.1
Services	53.4
Human Development Index, 2010	
Score, (0–1) best	0.62
Rank (out of 169 economies)	101

Sources: UNFPA, IMF, EIU, World Bank, UNDP.

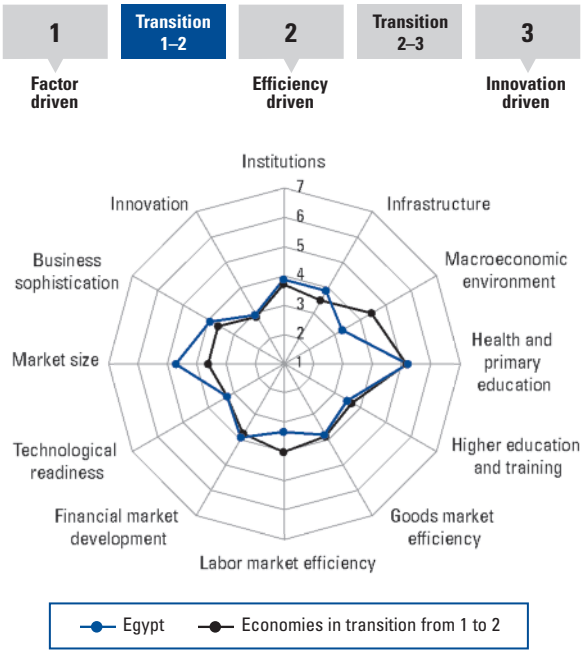
GDP (PPP) per capita (int'l $), 1980–2009



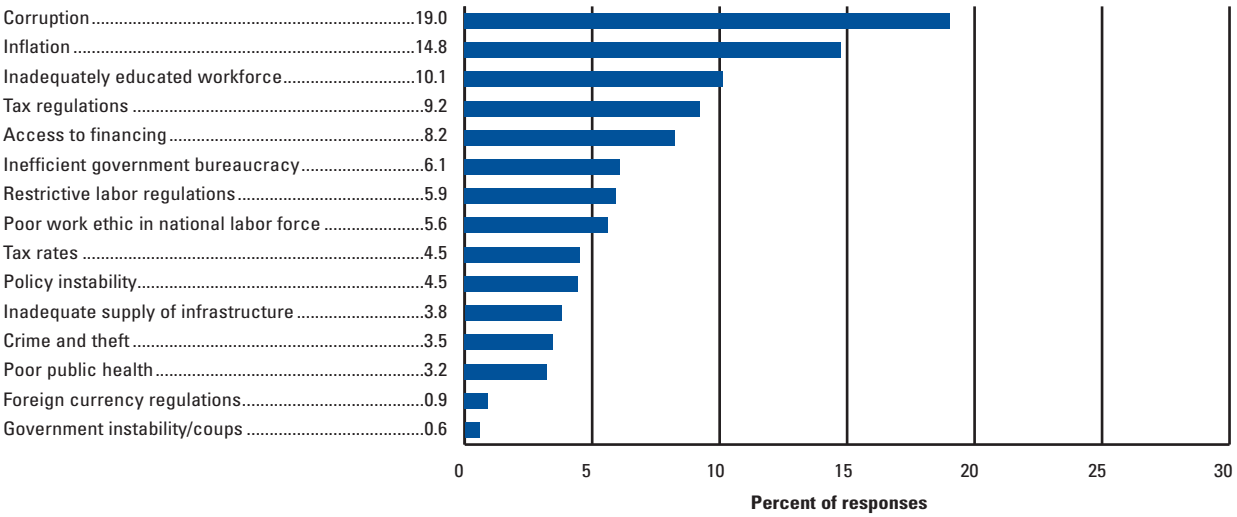
Global Competitiveness Index

	Rank (out of 139)	Score (1–7)
GCI 2010–2011	**81**	**4.0**
GCI 2009–2010 (out of 133)	70	4.0
GCI 2008–2009 (out of 134)	81	4.0
Basic requirements	**89**	**4.2**
1st pillar: Institutions	57	4.0
2nd pillar: Infrastructure	64	4.0
3rd pillar: Macroeconomic environment	129	3.4
4th pillar: Health and primary education	91	5.4
Efficiency enhancers	**82**	**3.8**
5th pillar: Higher education and training	97	3.6
6th pillar: Goods market efficiency	90	3.9
7th pillar: Labor market efficiency	133	3.4
8th pillar: Financial market development	82	4.0
9th pillar: Technological readiness	87	3.3
10th pillar: Market size	26	4.8
Innovation and sophistication factors	**68**	**3.5**
11th pillar: Business sophistication	63	4.0
12th pillar: Innovation	83	3.0

Stage of development



The most problematic factors for doing business



Note: From a list of 15 factors, respondents were asked to select the five most problematic for doing business in their country and to rank them between 1 (most problematic) and 5. The bars in the figure show the responses weighted according to their rankings.

The Global Competitiveness Index in detail

	INDICATOR	SCORE	RANK/139
	1st pillar: Institutions		
1.01	Property rights	4.6	56
1.02	Intellectual property protection	3.6	67
1.03	Diversion of public funds	3.1	83
1.04	Public trust of politicians	3.6	40
1.05	Irregular payments and bribes	4.1	64
1.06	Judicial independence	3.9	63
1.07	Favoritism in decisions of government officials	2.7	95
1.08	Wastefulness of government spending	3.5	51
1.09	Burden of government regulation	3.1	79
1.10	Efficiency of legal framework in settling disputes	4.3	40
1.11	Efficiency of legal framework in challenging regs	3.5	69
1.12	Transparency of government policymaking	4.3	68
1.13	Business costs of terrorism	4.1	132
1.14	Business costs of crime and violence	4.3	97
1.15	Organized crime	6.6	14
1.16	Reliability of police services	4.0	81
1.17	Ethical behavior of firms	4.1	59
1.18	Strength of auditing and reporting standards	4.8	58
1.19	Efficacy of corporate boards	4.4	82
1.20	Protection of minority shareholders' interests	4.6	46
1.21	Strength of investor protection, 0–10 (best)*	5.3	59
	2nd pillar: Infrastructure		
2.01	Quality of overall infrastructure	4.3	68
2.02	Quality of roads	3.7	75
2.03	Quality of railroad infrastructure	3.4	46
2.04	Quality of port infrastructure	4.2	69
2.05	Quality of air transport infrastructure	5.5	39
2.06	Available airline seat Kms/week, millions*	658.6	33
2.07	Quality of electricity supply	5.3	53
2.08	Fixed telephone lines/100 pop.*	12.4	87
2.09	Mobile telephone subscriptions/100 pop.*	66.7	102
	3rd pillar: Macroeconomic environment		
3.01	Government budget balance, % GDP*	-6.6	107
3.02	National savings rate, % GDP*	12.5	108
3.03	Inflation, annual % change*	16.2	135
3.04	Interest rate spread, %*	5.5	69
3.05	Government debt, % GDP*	80.1	119
3.06	Country credit rating, 0–100 (worst)*	51.4	69
	4th pillar: Health and primary education		
4.01	Business impact of malaria	n/appl.	1
4.02	Malaria incidence/100,000 pop.*	0.0	1
4.03	Business impact of tuberculosis	6.4	32
4.04	Tuberculosis incidence/100,000 pop.*	20.3	44
4.05	Business impact of HIV/AIDS	6.1	29
4.06	HIV prevalence, % adult pop.*	<0.1	1
4.07	Infant mortality, deaths/1,000 live births*	19.8	80
4.08	Life expectancy, years*	70.1	94
4.09	Quality of primary education	2.5	126
4.10	Primary education enrollment, net %*	93.6	73
	5th pillar: Higher education and training		
5.01	Secondary education enrollment, gross %*	79.3	90
5.02	Tertiary education enrollment, gross %*	28.5	78
5.03	Quality of the educational system	2.5	131
5.04	Quality of math and science education	2.7	125
5.05	Quality of management schools	3.3	122
5.06	Internet access in schools	3.3	96
5.07	Availability of research and training services	4.1	64
5.08	Extent of staff training	3.3	112

	INDICATOR	SCORE	RANK/139
	6th pillar: Goods market efficiency		
6.01	Intensity of local competition	4.6	91
6.02	Extent of market dominance	3.3	95
6.03	Effectiveness of anti-monopoly policy	3.5	106
6.04	Extent and effect of taxation	3.5	75
6.05	Total tax rate, % profits*	43.0	78
6.06	No. procedures to start a business*	6.0	34
6.07	No. days to start a business*	7.0	21
6.08	Agricultural policy costs	3.7	84
6.09	Prevalence of trade barriers	4.0	114
6.10	Trade tariffs, % duty*	13.8	123
6.11	Prevalence of foreign ownership	4.5	100
6.12	Business impact of rules on FDI	4.6	75
6.13	Burden of customs procedures	4.5	50
6.14	Degree of customer orientation	4.7	63
6.15	Buyer sophistication	2.6	126
	7th pillar: Labor market efficiency		
7.01	Cooperation in labor-employer relations	4.0	99
7.02	Flexibility of wage determination	5.2	60
7.03	Rigidity of employment index, 0–100 (worst)*	27.0	67
7.04	Hiring and firing practices	3.9	76
7.05	Redundancy costs, weeks of wages*	132.0	128
7.06	Pay and productivity	3.9	76
7.07	Reliance on professional management	4.1	86
7.08	Brain drain	2.5	114
7.09	Females in labor force, ratio to males*	0.4	130
	8th pillar: Financial market development		
8.01	Availability of financial services	4.8	60
8.02	Affordability of financial services	4.2	69
8.03	Financing through local equity market	4.2	29
8.04	Ease of access to loans	3.0	49
8.05	Venture capital availability	3.0	41
8.06	Restriction on capital flows	4.1	84
8.07	Soundness of banks	5.3	61
8.08	Regulation of securities exchanges	4.3	67
8.09	Legal rights index, 0–10 (best)*	3.0	103
	9th pillar: Technological readiness		
9.01	Availability of latest technologies	4.6	91
9.02	Firm-level technology absorption	5.0	58
9.03	FDI and technology transfer	4.9	53
9.04	Internet users/100 pop.*	20.0	90
9.05	Broadband Internet subscriptions/100 pop.*	1.3	91
9.06	Internet bandwidth, Mb/s per 10,000 pop.*	11.7	72
	10th pillar: Market size		
10.01	Domestic market size index, 1–7 (best)*	4.6	27
10.02	Foreign market size index, 1–7 (best)*	5.3	27
	11th pillar: Business sophistication		
11.01	Local supplier quantity	5.1	36
11.02	Local supplier quality	4.2	89
11.03	State of cluster development	3.5	66
11.04	Nature of competitive advantage	4.0	35
11.05	Value chain breadth	3.6	67
11.06	Control of international distribution	3.7	94
11.07	Production process sophistication	4.1	46
11.08	Extent of marketing	3.9	79
11.09	Willingness to delegate authority	3.7	57
	12th pillar: Innovation		
12.01	Capacity for innovation	2.5	109
12.02	Quality of scientific research institutions	2.9	110
12.03	Company spending on R&D	3.0	74
12.04	University-industry collaboration in R&D	2.8	120
12.05	Gov't procurement of advanced tech products	3.4	86
12.06	Availability of scientists and engineers	4.9	25
12.07	Utility patents/million pop.*	0.0	84

Notes: An asterisk (*) indicates that data are from sources other than the World Economic Forum. For further details and explanation, please refer to the section "How to Read the Competitiveness Profiles" on page 115.

Ethiopia

Key indicators, 2009

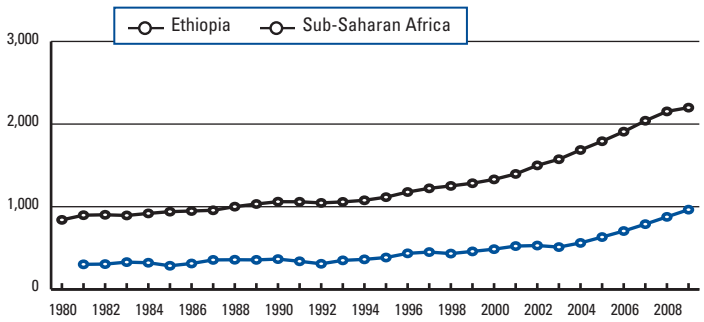
Population (millions) 82.8
GDP (US$ billions) 32.3
GDP per capita (US$) 390.3
GDP (PPP) as share (%) of world total 0.11

Sectoral value-added (% GDP)
Agriculture 47.3
Industry 14.1
Services 38.6

Human Development Index, 2010
Score, (0–1) best 0.33
Rank (out of 169 economies) 157

Sources: UNFPA, IMF, EIU, World Bank, UNDP.

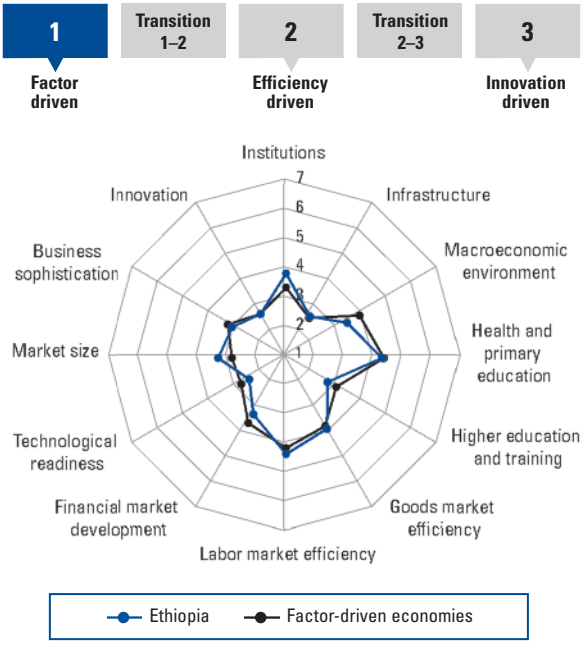
GDP (PPP) per capita (int'l $), 1980–2009



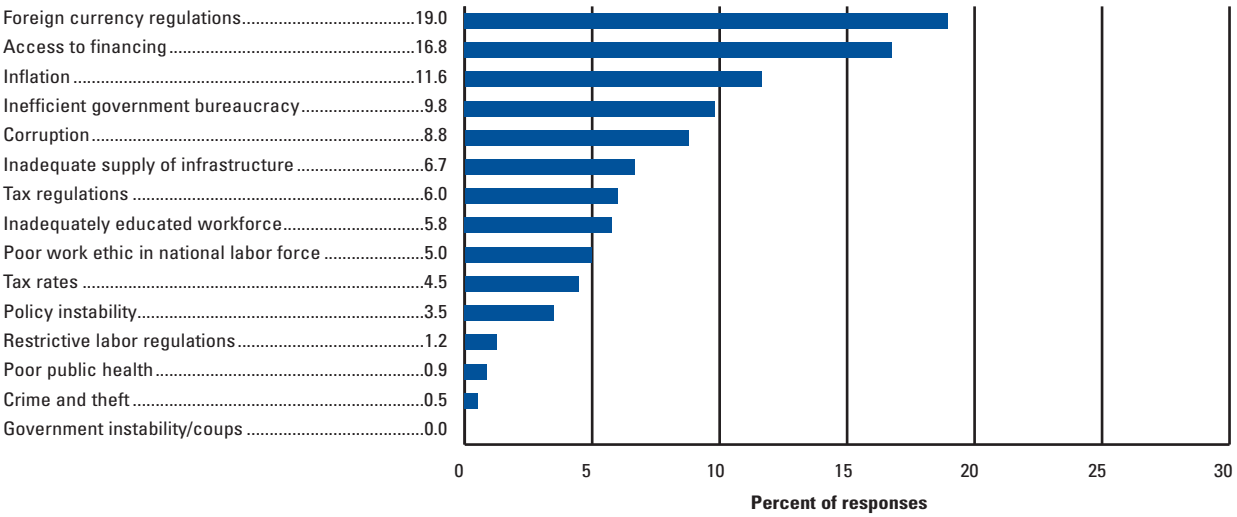
Global Competitiveness Index

	Rank (out of 139)	Score (1–7)
GCI 2010–2011	**119**	**3.5**
GCI 2009–2010 (out of 133)	118	3.4
GCI 2008–2009 (out of 134)	121	3.4
Basic requirements	**119**	**3.6**
1st pillar: Institutions	59	4.0
2nd pillar: Infrastructure	115	2.7
3rd pillar: Macroeconomic environment	127	3.5
4th pillar: Health and primary education	119	4.4
Efficiency enhancers	**118**	**3.4**
5th pillar: Higher education and training	129	2.7
6th pillar: Goods market efficiency	92	3.9
7th pillar: Labor market efficiency	72	4.4
8th pillar: Financial market development	121	3.3
9th pillar: Technological readiness	133	2.5
10th pillar: Market size	79	3.4
Innovation and sophistication factors	**117**	**3.0**
11th pillar: Business sophistication	123	3.2
12th pillar: Innovation	105	2.8

Stage of development



The most problematic factors for doing business



Note: From a list of 15 factors, respondents were asked to select the five most problematic for doing business in their country and to rank them between 1 (most problematic) and 5. The bars in the figure show the responses weighted according to their rankings.

Ethiopia

The Global Competitiveness Index in detail

	INDICATOR	SCORE	RANK/139
	1st pillar: Institutions		
1.01	Property rights	4.5	60
1.02	Intellectual property protection	3.4	71
1.03	Diversion of public funds	3.9	54
1.04	Public trust of politicians	3.2	56
1.05	Irregular payments and bribes	3.6	88
1.06	Judicial independence	3.3	89
1.07	Favoritism in decisions of government officials	3.3	51
1.08	Wastefulness of government spending	4.1	31
1.09	Burden of government regulation	3.8	27
1.10	Efficiency of legal framework in settling disputes	3.7	67
1.11	Efficiency of legal framework in challenging regs	3.5	70
1.12	Transparency of government policymaking	3.9	100
1.13	Business costs of terrorism	5.2	100
1.14	Business costs of crime and violence	5.2	54
1.15	Organized crime	5.7	51
1.16	Reliability of police services	4.4	59
1.17	Ethical behavior of firms	3.9	65
1.18	Strength of auditing and reporting standards	4.3	90
1.19	Efficacy of corporate boards	4.4	80
1.20	Protection of minority shareholders' interests	4.9	28
1.21	Strength of investor protection, 0–10 (best)*	4.3	99
	2nd pillar: Infrastructure		
2.01	Quality of overall infrastructure	3.8	87
2.02	Quality of roads	4.1	60
2.03	Quality of railroad infrastructure	1.5	103
2.04	Quality of port infrastructure	4.4	60
2.05	Quality of air transport infrastructure	5.4	48
2.06	Available airline seat Kms/week, millions*	152.3	68
2.07	Quality of electricity supply	2.7	119
2.08	Fixed telephone lines/100 pop.*	1.1	125
2.09	Mobile telephone subscriptions/100 pop.*	4.9	139
	3rd pillar: Macroeconomic environment		
3.01	Government budget balance, % GDP*	-3.7	60
3.02	National savings rate, % GDP*	15.8	94
3.03	Inflation, annual % change*	36.4	139
3.04	Interest rate spread, %*	5.0	59
3.05	Government debt, % GDP*	36.8	65
3.06	Country credit rating, 0–100 (worst)*	19.7	132
	4th pillar: Health and primary education		
4.01	Business impact of malaria	4.1	117
4.02	Malaria incidence/100,000 pop.*	15,311.1	118
4.03	Business impact of tuberculosis	3.8	125
4.04	Tuberculosis incidence/100,000 pop.*	368.4	127
4.05	Business impact of HIV/AIDS	3.4	124
4.06	HIV prevalence, % adult pop.*	2.1	120
4.07	Infant mortality, deaths/1,000 live births*	69.4	121
4.08	Life expectancy, years*	55.2	121
4.09	Quality of primary education	3.3	91
4.10	Primary education enrollment, net %*	78.2	123
	5th pillar: Higher education and training		
5.01	Secondary education enrollment, gross %*	33.4	124
5.02	Tertiary education enrollment, gross %*	3.6	129
5.03	Quality of the educational system	3.8	60
5.04	Quality of math and science education	3.5	94
5.05	Quality of management schools	3.6	106
5.06	Internet access in schools	2.4	127
5.07	Availability of research and training services	3.1	122
5.08	Extent of staff training	3.2	122

	INDICATOR	SCORE	RANK/139
	6th pillar: Goods market efficiency		
6.01	Intensity of local competition	4.2	111
6.02	Extent of market dominance	3.5	82
6.03	Effectiveness of anti-monopoly policy	3.6	103
6.04	Extent and effect of taxation	3.7	62
6.05	Total tax rate, % profits*	31.1	32
6.06	No. procedures to start a business*	5.0	23
6.07	No. days to start a business*	9.0	30
6.08	Agricultural policy costs	4.2	39
6.09	Prevalence of trade barriers	4.0	108
6.10	Trade tariffs, % duty*	12.7	118
6.11	Prevalence of foreign ownership	3.6	125
6.12	Business impact of rules on FDI	4.6	79
6.13	Burden of customs procedures	3.6	100
6.14	Degree of customer orientation	4.2	100
6.15	Buyer sophistication	3.0	102
	7th pillar: Labor market efficiency		
7.01	Cooperation in labor-employer relations	4.0	105
7.02	Flexibility of wage determination	5.4	48
7.03	Rigidity of employment index, 0–100 (worst)*	28.0	71
7.04	Hiring and firing practices	3.7	84
7.05	Redundancy costs, weeks of wages*	40.0	77
7.06	Pay and productivity	3.7	90
7.07	Reliance on professional management	3.6	110
7.08	Brain drain	2.8	96
7.09	Females in labor force, ratio to males*	0.9	26
	8th pillar: Financial market development		
8.01	Availability of financial services	3.4	124
8.02	Affordability of financial services	3.3	119
8.03	Financing through local equity market	2.8	100
8.04	Ease of access to loans	2.1	120
8.05	Venture capital availability	2.1	114
8.06	Restriction on capital flows	3.1	129
8.07	Soundness of banks	4.7	91
8.08	Regulation of securities exchanges	3.1	123
8.09	Legal rights index, 0–10 (best)*	4.0	86
	9th pillar: Technological readiness		
9.01	Availability of latest technologies	3.9	129
9.02	Firm-level technology absorption	4.0	124
9.03	FDI and technology transfer	4.1	107
9.04	Internet users/100 pop.*	0.5	136
9.05	Broadband Internet subscriptions/100 pop.*	0.0	136
9.06	Internet bandwidth, Mb/s per 10,000 pop.*	0.0	135
	10th pillar: Market size		
10.01	Domestic market size index, 1–7 (best)*	3.5	68
10.02	Foreign market size index, 1–7 (best)*	3.3	107
	11th pillar: Business sophistication		
11.01	Local supplier quantity	4.1	118
11.02	Local supplier quality	3.7	123
11.03	State of cluster development	2.8	114
11.04	Nature of competitive advantage	2.5	132
11.05	Value chain breadth	2.9	115
11.06	Control of international distribution	3.9	77
11.07	Production process sophistication	2.5	129
11.08	Extent of marketing	2.7	132
11.09	Willingness to delegate authority	3.2	98
	12th pillar: Innovation		
12.01	Capacity for innovation	2.5	106
12.02	Quality of scientific research institutions	3.0	102
12.03	Company spending on R&D	2.5	123
12.04	University-industry collaboration in R&D	3.1	101
12.05	Gov't procurement of advanced tech products	3.8	54
12.06	Availability of scientists and engineers	3.0	129
12.07	Utility patents/million pop.*	0.0	90

Notes: An asterisk (*) indicates that data are from sources other than the World Economic Forum. For further details and explanation, please refer to the section "How to Read the Competitiveness Profiles" on page 115.

Gambia, The

Key indicators, 2009

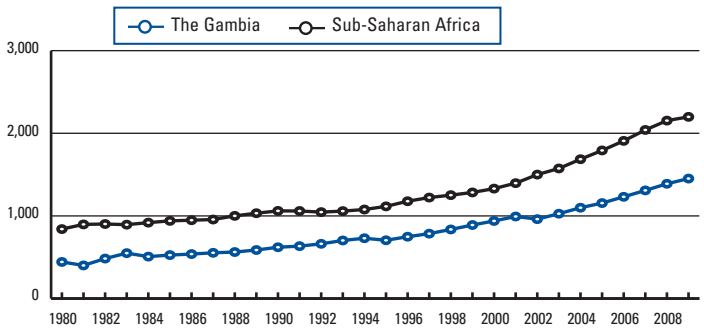
Population (millions) 1.7
GDP (US$ billions) 0.7
GDP per capita (US$) 440.0
GDP (PPP) as share (%) of world total 0.00

Sectoral value-added (% GDP)
Agriculture 27.5
Industry 15.5
Services 57.1

Human Development Index, 2010
Score, (0–1) best 0.39
Rank (out of 169 economies) 151

Sources: UNFPA, IMF, EIU, World Bank, UNDP.

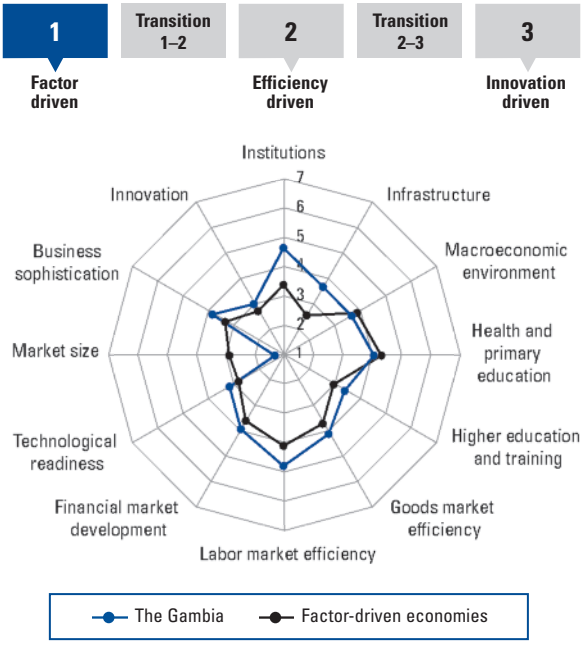
GDP (PPP) per capita (int'l $), 1980–2009



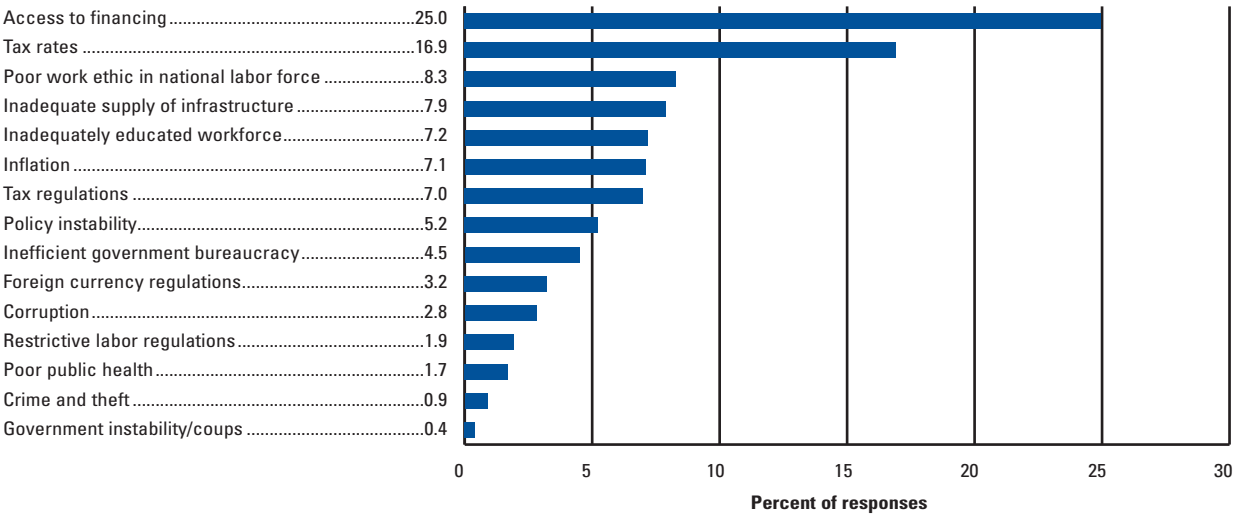
Global Competitiveness Index

	Rank (out of 139)	Score (1–7)
GCI 2010–2011	**90**	**3.9**
GCI 2009–2010 (out of 133)	81	4.0
GCI 2008–2009 (out of 134)	87	3.9
Basic requirements	**90**	**4.2**
1st pillar: Institutions	37	4.8
2nd pillar: Infrastructure	69	3.8
3rd pillar: Macroeconomic environment	117	3.8
4th pillar: Health and primary education	124	4.2
Efficiency enhancers	**105**	**3.5**
5th pillar: Higher education and training	103	3.5
6th pillar: Goods market efficiency	66	4.2
7th pillar: Labor market efficiency	16	4.9
8th pillar: Financial market development	76	4.0
9th pillar: Technological readiness	97	3.2
10th pillar: Market size	138	1.3
Innovation and sophistication factors	**64**	**3.5**
11th pillar: Business sophistication	65	3.9
12th pillar: Innovation	62	3.1

Stage of development



The most problematic factors for doing business



Note: From a list of 15 factors, respondents were asked to select the five most problematic for doing business in their country and to rank them between 1 (most problematic) and 5. The bars in the figure show the responses weighted according to their rankings.

Gambia, The

The Global Competitiveness Index in detail

	INDICATOR	SCORE	RANK/139
	1st pillar: Institutions		
1.01	Property rights	5.1	39
1.02	Intellectual property protection	4.6	35
1.03	Diversion of public funds	4.5	40
1.04	Public trust of politicians	4.4	20
1.05	Irregular payments and bribes	4.5	54
1.06	Judicial independence	4.6	50
1.07	Favoritism in decisions of government officials	4.6	18
1.08	Wastefulness of government spending	5.0	10
1.09	Burden of government regulation	4.6	5
1.10	Efficiency of legal framework in settling disputes	4.9	25
1.11	Efficiency of legal framework in challenging regs	4.2	36
1.12	Transparency of government policymaking	4.9	30
1.13	Business costs of terrorism	5.7	71
1.14	Business costs of crime and violence	5.3	51
1.15	Organized crime	5.8	47
1.16	Reliability of police services	5.1	38
1.17	Ethical behavior of firms	4.7	43
1.18	Strength of auditing and reporting standards	5.2	41
1.19	Efficacy of corporate boards	4.9	38
1.20	Protection of minority shareholders' interests	5.1	22
1.21	Strength of investor protection, 0–10 (best)*	2.7	133
	2nd pillar: Infrastructure		
2.01	Quality of overall infrastructure	4.7	52
2.02	Quality of roads	4.3	51
2.03	Quality of railroad infrastructure	n/a	n/a
2.04	Quality of port infrastructure	5.1	40
2.05	Quality of air transport infrastructure	4.8	61
2.06	Available airline seat Kms/week, millions*	8.0	128
2.07	Quality of electricity supply	4.8	67
2.08	Fixed telephone lines/100 pop.*	2.9	112
2.09	Mobile telephone subscriptions/100 pop.*	84.0	85
	3rd pillar: Macroeconomic environment		
3.01	Government budget balance, % GDP*	-4.4	76
3.02	National savings rate, % GDP*	11.9	114
3.03	Inflation, annual % change*	4.6	90
3.04	Interest rate spread, %*	14.6	126
3.05	Government debt, % GDP*	33.3	56
3.06	Country credit rating, 0–100 (worst)*	18.4	134
	4th pillar: Health and primary education		
4.01	Business impact of malaria	4.1	116
4.02	Malaria incidence/100,000 pop.*	28,224.5	124
4.03	Business impact of tuberculosis	4.7	101
4.04	Tuberculosis incidence/100,000 pop.*	263.4	115
4.05	Business impact of HIV/AIDS	4.9	90
4.06	HIV prevalence, % adult pop.*	0.9	103
4.07	Infant mortality, deaths/1,000 live births*	79.9	127
4.08	Life expectancy, years*	55.9	118
4.09	Quality of primary education	4.4	46
4.10	Primary education enrollment, net %*	68.7	130
	5th pillar: Higher education and training		
5.01	Secondary education enrollment, gross %*	50.8	114
5.02	Tertiary education enrollment, gross %*	1.2	138
5.03	Quality of the educational system	4.5	33
5.04	Quality of math and science education	3.6	86
5.05	Quality of management schools	4.5	53
5.06	Internet access in schools	3.7	78
5.07	Availability of research and training services	4.0	72
5.08	Extent of staff training	4.4	32

	INDICATOR	SCORE	RANK/139
	6th pillar: Goods market efficiency		
6.01	Intensity of local competition	4.6	90
6.02	Extent of market dominance	4.4	35
6.03	Effectiveness of anti-monopoly policy	4.5	42
6.04	Extent and effect of taxation	3.7	60
6.05	Total tax rate, % profits*	292.4	136
6.06	No. procedures to start a business*	8.0	73
6.07	No. days to start a business*	27.0	86
6.08	Agricultural policy costs	5.2	3
6.09	Prevalence of trade barriers	4.8	50
6.10	Trade tariffs, % duty*	15.8	129
6.11	Prevalence of foreign ownership	5.4	31
6.12	Business impact of rules on FDI	5.3	24
6.13	Burden of customs procedures	5.4	10
6.14	Degree of customer orientation	5.0	45
6.15	Buyer sophistication	3.1	89
	7th pillar: Labor market efficiency		
7.01	Cooperation in labor-employer relations	5.0	27
7.02	Flexibility of wage determination	5.4	42
7.03	Rigidity of employment index, 0–100 (worst)*	27.0	67
7.04	Hiring and firing practices	4.5	28
7.05	Redundancy costs, weeks of wages*	26.0	48
7.06	Pay and productivity	4.3	36
7.07	Reliance on professional management	5.2	27
7.08	Brain drain	4.0	45
7.09	Females in labor force, ratio to males*	0.9	45
	8th pillar: Financial market development		
8.01	Availability of financial services	4.6	72
8.02	Affordability of financial services	4.4	61
8.03	Financing through local equity market	3.1	91
8.04	Ease of access to loans	2.9	60
8.05	Venture capital availability	2.5	73
8.06	Restriction on capital flows	4.5	65
8.07	Soundness of banks	5.1	75
8.08	Regulation of securities exchanges	4.0	80
8.09	Legal rights index, 0–10 (best)*	5.0	75
	9th pillar: Technological readiness		
9.01	Availability of latest technologies	4.9	76
9.02	Firm-level technology absorption	4.8	69
9.03	FDI and technology transfer	4.7	66
9.04	Internet users/100 pop.*	7.6	108
9.05	Broadband Internet subscriptions/100 pop.*	0.0	132
9.06	Internet bandwidth, Mb/s per 10,000 pop.*	0.4	113
	10th pillar: Market size		
10.01	Domestic market size index, 1–7 (best)*	1.1	138
10.02	Foreign market size index, 1–7 (best)*	1.8	136
	11th pillar: Business sophistication		
11.01	Local supplier quantity	4.8	65
11.02	Local supplier quality	4.7	58
11.03	State of cluster development	3.4	74
11.04	Nature of competitive advantage	3.6	55
11.05	Value chain breadth	3.6	66
11.06	Control of international distribution	4.1	63
11.07	Production process sophistication	3.0	108
11.08	Extent of marketing	3.5	95
11.09	Willingness to delegate authority	4.1	35
	12th pillar: Innovation		
12.01	Capacity for innovation	3.0	63
12.02	Quality of scientific research institutions	3.4	78
12.03	Company spending on R&D	2.8	86
12.04	University-industry collaboration in R&D	3.6	63
12.05	Gov't procurement of advanced tech products	4.3	23
12.06	Availability of scientists and engineers	3.0	128
12.07	Utility patents/million pop.*	0.0	90

Notes: An asterisk (*) indicates that data are from sources other than the World Economic Forum. For further details and explanation, please refer to the section "How to Read the Competitiveness Profiles" on page 115.

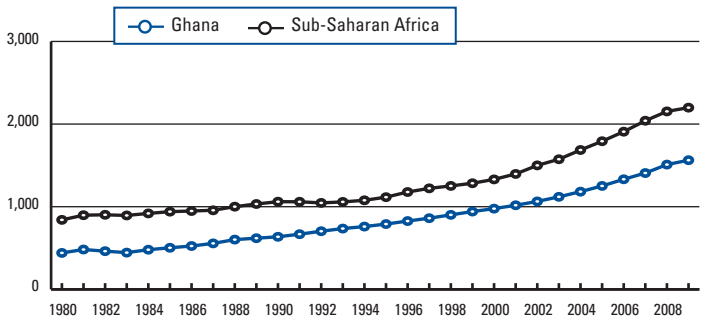
Ghana

Key indicators, 2009

Population (millions)	23.8
GDP (US$ billions)	15.5
GDP per capita (US$)	671.3
GDP (PPP) as share (%) of world total	0.05
Sectoral value-added (% GDP)	
Agriculture	33.1
Industry	24.7
Services	42.2
Human Development Index, 2010	
Score, (0–1) best	0.47
Rank (out of 169 economies)	130

Sources: UNFPA, IMF, EIU, World Bank, UNDP.

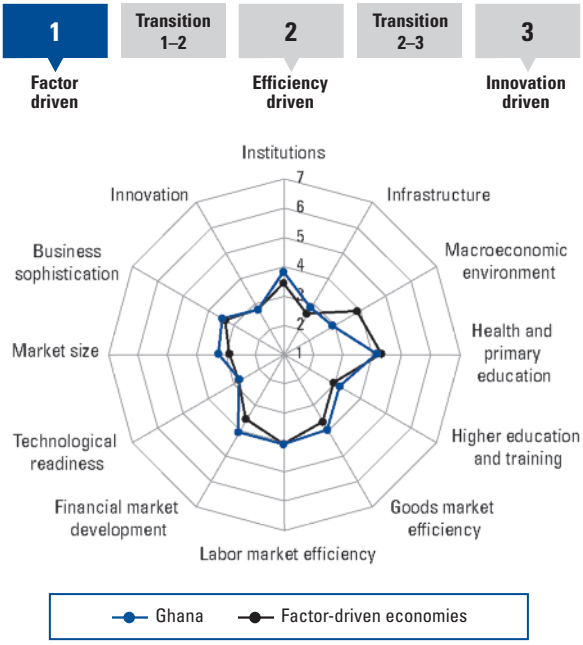
GDP (PPP) per capita (int'l $), 1980–2009



Global Competitiveness Index

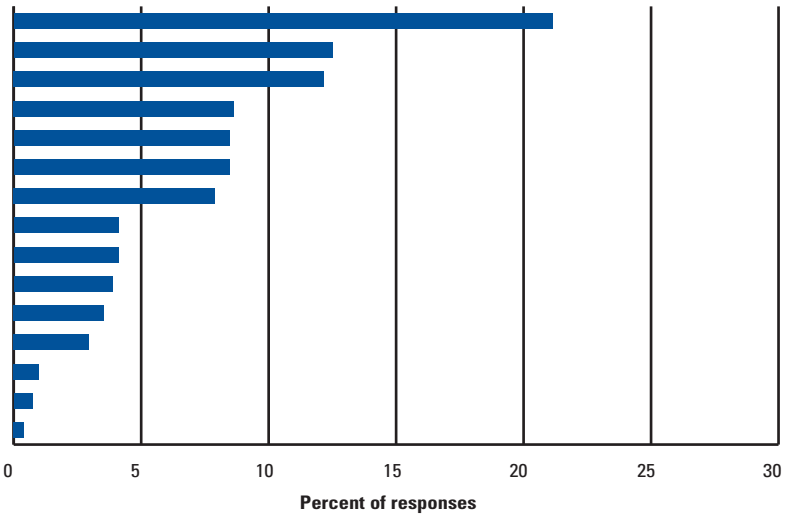
	Rank (out of 139)	Score (1–7)
GCI 2010–2011	**114**	**3.6**
GCI 2009–2010 (out of 133)	114	3.4
GCI 2008–2009 (out of 134)	102	3.6
Basic requirements	**122**	**3.5**
1st pillar: Institutions	67	3.9
2nd pillar: Infrastructure	106	2.9
3rd pillar: Macroeconomic environment	136	3.0
4th pillar: Health and primary education	122	4.3
Efficiency enhancers	**96**	**3.6**
5th pillar: Higher education and training	108	3.3
6th pillar: Goods market efficiency	75	4.1
7th pillar: Labor market efficiency	93	4.2
8th pillar: Financial market development	60	4.2
9th pillar: Technological readiness	117	2.8
10th pillar: Market size	83	3.3
Innovation and sophistication factors	**100**	**3.2**
11th pillar: Business sophistication	97	3.5
12th pillar: Innovation	99	2.8

Stage of development



The most problematic factors for doing business

Access to financing	21.1
Inadequate supply of infrastructure	12.5
Inflation	12.2
Inefficient government bureaucracy	8.6
Corruption	8.5
Tax rates	8.5
Poor work ethic in national labor force	7.9
Policy instability	4.1
Tax regulations	4.1
Inadequately educated workforce	3.9
Crime and theft	3.5
Foreign currency regulations	3.0
Restrictive labor regulations	1.0
Poor public health	0.7
Government instability/coups	0.4



Note: From a list of 15 factors, respondents were asked to select the five most problematic for doing business in their country and to rank them between 1 (most problematic) and 5. The bars in the figure show the responses weighted according to their rankings.

Ghana

The Global Competitiveness Index in detail

	INDICATOR	SCORE	RANK/139
	1st pillar: Institutions		
1.01	Property rights	4.2	76
1.02	Intellectual property protection	3.3	76
1.03	Diversion of public funds	3.3	68
1.04	Public trust of politicians	2.9	67
1.05	Irregular payments and bribes	3.5	92
1.06	Judicial independence	3.8	68
1.07	Favoritism in decisions of government officials	2.8	79
1.08	Wastefulness of government spending	3.3	67
1.09	Burden of government regulation	3.5	47
1.10	Efficiency of legal framework in settling disputes	4.0	50
1.11	Efficiency of legal framework in challenging regs	3.8	57
1.12	Transparency of government policymaking	3.9	99
1.13	Business costs of terrorism	6.0	60
1.14	Business costs of crime and violence	4.2	102
1.15	Organized crime	5.3	70
1.16	Reliability of police services	4.2	70
1.17	Ethical behavior of firms	3.9	66
1.18	Strength of auditing and reporting standards	4.7	73
1.19	Efficacy of corporate boards	4.7	53
1.20	Protection of minority shareholders' interests	4.6	49
1.21	Strength of investor protection, 0–10 (best)*	6.0	33
	2nd pillar: Infrastructure		
2.01	Quality of overall infrastructure	3.8	85
2.02	Quality of roads	3.4	86
2.03	Quality of railroad infrastructure	1.4	106
2.04	Quality of port infrastructure	4.5	59
2.05	Quality of air transport infrastructure	4.2	85
2.06	Available airline seat Kms/week, millions*	96.1	79
2.07	Quality of electricity supply	3.2	109
2.08	Fixed telephone lines/100 pop.*	1.1	124
2.09	Mobile telephone subscriptions/100 pop.*	63.4	105
	3rd pillar: Macroeconomic environment		
3.01	Government budget balance, % GDP*	-10.0	129
3.02	National savings rate, % GDP*	27.5	34
3.03	Inflation, annual % change*	19.3	136
3.04	Interest rate spread, %*	11.7	120
3.05	Government debt, % GDP*	49.8	88
3.06	Country credit rating, 0–100 (worst)*	33.8	94
	4th pillar: Health and primary education		
4.01	Business impact of malaria	3.3	126
4.02	Malaria incidence/100,000 pop.*	31,650.9	128
4.03	Business impact of tuberculosis	4.7	103
4.04	Tuberculosis incidence/100,000 pop.*	201.8	109
4.05	Business impact of HIV/AIDS	4.4	109
4.06	HIV prevalence, % adult pop.*	1.9	118
4.07	Infant mortality, deaths/1,000 live births*	51.0	110
4.08	Life expectancy, years*	56.6	117
4.09	Quality of primary education	3.4	82
4.10	Primary education enrollment, net %*	76.5	125
	5th pillar: Higher education and training		
5.01	Secondary education enrollment, gross %*	55.2	111
5.02	Tertiary education enrollment, gross %*	6.2	117
5.03	Quality of the educational system	3.7	71
5.04	Quality of math and science education	3.4	98
5.05	Quality of management schools	4.2	64
5.06	Internet access in schools	3.1	104
5.07	Availability of research and training services	3.5	98
5.08	Extent of staff training	3.8	77

	INDICATOR	SCORE	RANK/139
	6th pillar: Goods market efficiency		
6.01	Intensity of local competition	4.8	71
6.02	Extent of market dominance	4.2	44
6.03	Effectiveness of anti-monopoly policy	4.0	65
6.04	Extent and effect of taxation	3.8	40
6.05	Total tax rate, % profits*	32.7	42
6.06	No. procedures to start a business*	8.0	73
6.07	No. days to start a business*	33.0	101
6.08	Agricultural policy costs	3.8	71
6.09	Prevalence of trade barriers	4.9	40
6.10	Trade tariffs, % duty*	10.0	100
6.11	Prevalence of foreign ownership	4.9	55
6.12	Business impact of rules on FDI	4.9	56
6.13	Burden of customs procedures	3.8	95
6.14	Degree of customer orientation	4.0	111
6.15	Buyer sophistication	3.1	91
	7th pillar: Labor market efficiency		
7.01	Cooperation in labor-employer relations	4.4	61
7.02	Flexibility of wage determination	4.2	118
7.03	Rigidity of employment index, 0–100 (worst)*	27.0	67
7.04	Hiring and firing practices	4.1	57
7.05	Redundancy costs, weeks of wages*	178.0	131
7.06	Pay and productivity	3.1	119
7.07	Reliance on professional management	4.7	51
7.08	Brain drain	3.4	64
7.09	Females in labor force, ratio to males*	1.0	3
	8th pillar: Financial market development		
8.01	Availability of financial services	4.3	78
8.02	Affordability of financial services	3.9	89
8.03	Financing through local equity market	4.0	38
8.04	Ease of access to loans	2.3	105
8.05	Venture capital availability	2.1	111
8.06	Restriction on capital flows	4.5	70
8.07	Soundness of banks	5.3	65
8.08	Regulation of securities exchanges	4.5	55
8.09	Legal rights index, 0–10 (best)*	7.0	39
	9th pillar: Technological readiness		
9.01	Availability of latest technologies	4.4	95
9.02	Firm-level technology absorption	4.1	112
9.03	FDI and technology transfer	4.5	83
9.04	Internet users/100 pop.*	5.4	117
9.05	Broadband Internet subscriptions/100 pop.*	0.1	113
9.06	Internet bandwidth, Mb/s per 10,000 pop.*	1.0	104
	10th pillar: Market size		
10.01	Domestic market size index, 1–7 (best)*	3.1	83
10.02	Foreign market size index, 1–7 (best)*	3.8	88
	11th pillar: Business sophistication		
11.01	Local supplier quantity	4.6	83
11.02	Local supplier quality	3.9	106
11.03	State of cluster development	3.1	90
11.04	Nature of competitive advantage	2.8	105
11.05	Value chain breadth	3.0	108
11.06	Control of international distribution	3.7	99
11.07	Production process sophistication	3.1	104
11.08	Extent of marketing	3.5	96
11.09	Willingness to delegate authority	3.2	91
	12th pillar: Innovation		
12.01	Capacity for innovation	2.5	110
12.02	Quality of scientific research institutions	3.8	64
12.03	Company spending on R&D	2.3	133
12.04	University-industry collaboration in R&D	3.1	98
12.05	Gov't procurement of advanced tech products	3.2	101
12.06	Availability of scientists and engineers	3.7	90
12.07	Utility patents/million pop.*	0.0	90

Notes: An asterisk (*) indicates that data are from sources other than the World Economic Forum. For further details and explanation, please refer to the section "How to Read the Competitiveness Profiles" on page 115.

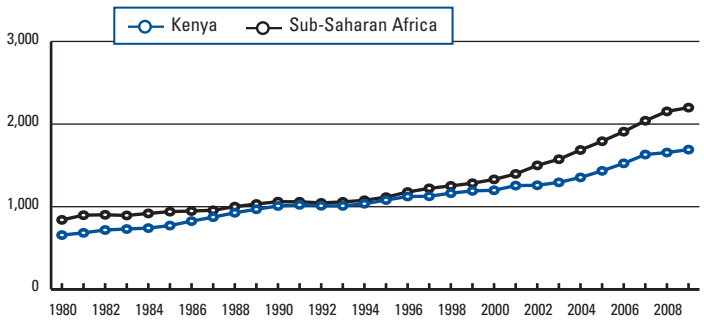
Kenya

Key indicators, 2009

Population (millions)	39.8
GDP (US$ billions)	32.7
GDP per capita (US$)	911.9
GDP (PPP) as share (%) of world total	0.09
Sectoral value-added (% GDP)	
Agriculture	28.1
Industry	20.0
Services	51.8
Human Development Index, 2010	
Score, (0–1) best	0.47
Rank (out of 169 economies)	128

Sources: UNFPA, IMF, EIU, World Bank, UNDP.

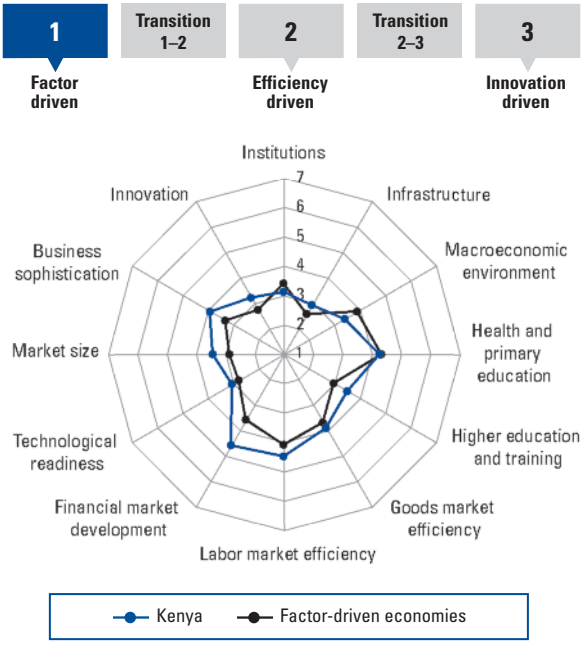
GDP (PPP) per capita (int'l $), 1980–2009



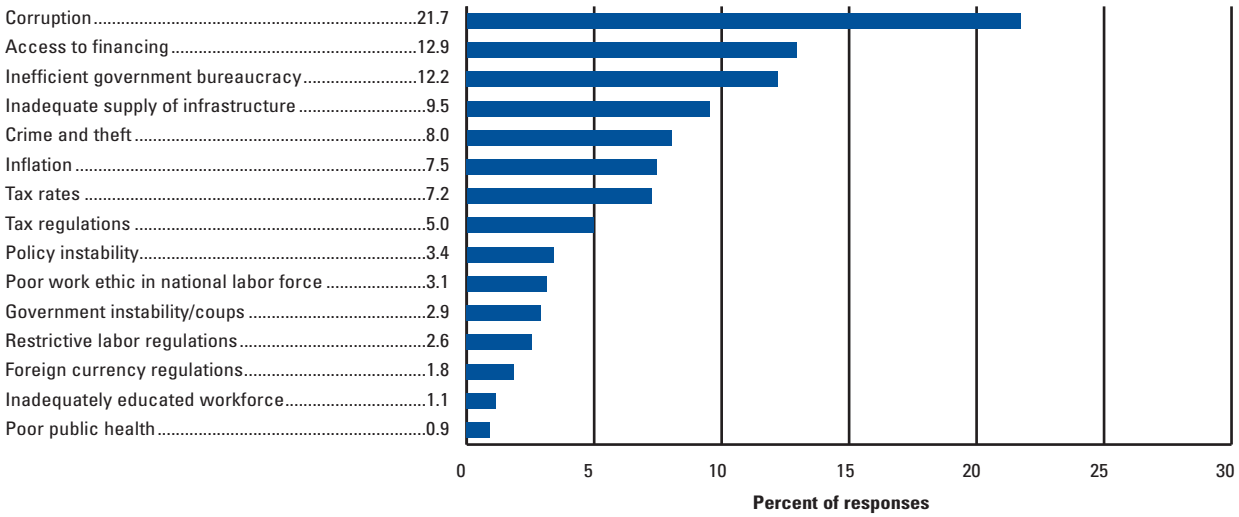
Global Competitiveness Index

	Rank (out of 139)	Score (1–7)
GCI 2010–2011	**106**	**3.6**
GCI 2009–2010 (out of 133)	98	3.7
GCI 2008–2009 (out of 134)	93	3.8
Basic requirements	**126**	**3.5**
1st pillar: Institutions	123	3.2
2nd pillar: Infrastructure	102	3.0
3rd pillar: Macroeconomic environment	128	3.5
4th pillar: Health and primary education	121	4.4
Efficiency enhancers	**79**	**3.9**
5th pillar: Higher education and training	96	3.6
6th pillar: Goods market efficiency	88	4.0
7th pillar: Labor market efficiency	46	4.6
8th pillar: Financial market development	27	4.7
9th pillar: Technological readiness	101	3.1
10th pillar: Market size	74	3.5
Innovation and sophistication factors	**58**	**3.6**
11th pillar: Business sophistication	62	4.0
12th pillar: Innovation	56	3.3

Stage of development



The most problematic factors for doing business



Note: From a list of 15 factors, respondents were asked to select the five most problematic for doing business in their country and to rank them between 1 (most problematic) and 5. The bars in the figure show the responses weighted according to their rankings.

Kenya

The Global Competitiveness Index in detail

	INDICATOR	SCORE	RANK/139
	1st pillar: Institutions		
1.01	Property rights	3.7	103
1.02	Intellectual property protection	2.9	94
1.03	Diversion of public funds	2.2	127
1.04	Public trust of politicians	1.7	129
1.05	Irregular payments and bribes	2.6	134
1.06	Judicial independence	2.6	121
1.07	Favoritism in decisions of government officials	2.4	121
1.08	Wastefulness of government spending	2.7	103
1.09	Burden of government regulation	2.8	106
1.10	Efficiency of legal framework in settling disputes	3.1	100
1.11	Efficiency of legal framework in challenging regs	3.0	108
1.12	Transparency of government policymaking	3.8	109
1.13	Business costs of terrorism	4.1	133
1.14	Business costs of crime and violence	3.3	124
1.15	Organized crime	4.0	123
1.16	Reliability of police services	3.1	117
1.17	Ethical behavior of firms	3.3	117
1.18	Strength of auditing and reporting standards	4.7	66
1.19	Efficacy of corporate boards	4.3	92
1.20	Protection of minority shareholders' interests	3.9	100
1.21	Strength of investor protection, 0–10 (best)*	5.0	77
	2nd pillar: Infrastructure		
2.01	Quality of overall infrastructure	3.8	88
2.02	Quality of roads	3.6	77
2.03	Quality of railroad infrastructure	2.3	74
2.04	Quality of port infrastructure	3.8	85
2.05	Quality of air transport infrastructure	5.0	57
2.06	Available airline seat Kms/week, millions*	257.5	54
2.07	Quality of electricity supply	3.4	103
2.08	Fixed telephone lines/100 pop.*	1.7	118
2.09	Mobile telephone subscriptions/100 pop.*	48.7	114
	3rd pillar: Macroeconomic environment		
3.01	Government budget balance, % GDP*	-5.4	91
3.02	National savings rate, % GDP*	15.2	100
3.03	Inflation, annual % change*	11.8	126
3.04	Interest rate spread, %*	8.8	107
3.05	Government debt, % GDP*	66.7	107
3.06	Country credit rating, 0–100 (worst)*	28.6	112
	4th pillar: Health and primary education		
4.01	Business impact of malaria	3.9	119
4.02	Malaria incidence/100,000 pop.*	31,027.8	126
4.03	Business impact of tuberculosis	3.8	126
4.04	Tuberculosis incidence/100,000 pop.*	327.6	125
4.05	Business impact of HIV/AIDS	3.3	127
4.06	HIV prevalence, % adult pop.*	7.1	130
4.07	Infant mortality, deaths/1,000 live births*	80.5	128
4.08	Life expectancy, years*	54.2	123
4.09	Quality of primary education	4.0	61
4.10	Primary education enrollment, net %*	81.5	118
	5th pillar: Higher education and training		
5.01	Secondary education enrollment, gross %*	58.3	107
5.02	Tertiary education enrollment, gross %*	4.1	123
5.03	Quality of the educational system	4.5	32
5.04	Quality of math and science education	4.2	63
5.05	Quality of management schools	4.5	51
5.06	Internet access in schools	3.4	91
5.07	Availability of research and training services	4.3	56
5.08	Extent of staff training	3.9	70

	INDICATOR	SCORE	RANK/139
	6th pillar: Goods market efficiency		
6.01	Intensity of local competition	5.1	55
6.02	Extent of market dominance	4.0	49
6.03	Effectiveness of anti-monopoly policy	4.3	54
6.04	Extent and effect of taxation	2.8	122
6.05	Total tax rate, % profits*	49.7	100
6.06	No. procedures to start a business*	12.0	114
6.07	No. days to start a business*	34.0	102
6.08	Agricultural policy costs	3.7	80
6.09	Prevalence of trade barriers	4.3	87
6.10	Trade tariffs, % duty*	7.7	85
6.11	Prevalence of foreign ownership	4.7	69
6.12	Business impact of rules on FDI	4.5	84
6.13	Burden of customs procedures	3.3	120
6.14	Degree of customer orientation	4.9	48
6.15	Buyer sophistication	3.2	88
	7th pillar: Labor market efficiency		
7.01	Cooperation in labor-employer relations	4.2	83
7.02	Flexibility of wage determination	5.0	81
7.03	Rigidity of employment index, 0–100 (worst)*	17.0	37
7.04	Hiring and firing practices	4.9	12
7.05	Redundancy costs, weeks of wages*	47.0	81
7.06	Pay and productivity	4.0	67
7.07	Reliance on professional management	4.2	79
7.08	Brain drain	3.6	56
7.09	Females in labor force, ratio to males*	0.9	39
	8th pillar: Financial market development		
8.01	Availability of financial services	5.0	53
8.02	Affordability of financial services	4.3	67
8.03	Financing through local equity market	4.4	21
8.04	Ease of access to loans	3.7	21
8.05	Venture capital availability	3.1	35
8.06	Restriction on capital flows	4.2	82
8.07	Soundness of banks	5.1	74
8.08	Regulation of securities exchanges	3.7	98
8.09	Legal rights index, 0–10 (best)*	10.0	1
	9th pillar: Technological readiness		
9.01	Availability of latest technologies	4.7	82
9.02	Firm-level technology absorption	4.9	67
9.03	FDI and technology transfer	4.6	77
9.04	Internet users/100 pop.*	10.0	103
9.05	Broadband Internet subscriptions/100 pop.*	0.0	127
9.06	Internet bandwidth, Mb/s per 10,000 pop.*	4.8	85
	10th pillar: Market size		
10.01	Domestic market size index, 1–7 (best)*	3.4	74
10.02	Foreign market size index, 1–7 (best)*	3.9	83
	11th pillar: Business sophistication		
11.01	Local supplier quantity	4.9	57
11.02	Local supplier quality	4.4	69
11.03	State of cluster development	4.0	43
11.04	Nature of competitive advantage	3.3	65
11.05	Value chain breadth	3.6	63
11.06	Control of international distribution	4.2	53
11.07	Production process sophistication	3.7	66
11.08	Extent of marketing	4.0	73
11.09	Willingness to delegate authority	3.6	63
	12th pillar: Innovation		
12.01	Capacity for innovation	3.2	52
12.02	Quality of scientific research institutions	3.9	54
12.03	Company spending on R&D	3.6	34
12.04	University-industry collaboration in R&D	3.8	55
12.05	Gov't procurement of advanced tech products	3.5	81
12.06	Availability of scientists and engineers	4.0	70
12.07	Utility patents/million pop.*	0.2	75

Notes: An asterisk (*) indicates that data are from sources other than the World Economic Forum. For further details and explanation, please refer to the section "How to Read the Competitiveness Profiles" on page 115.

Lesotho

Key indicators, 2009

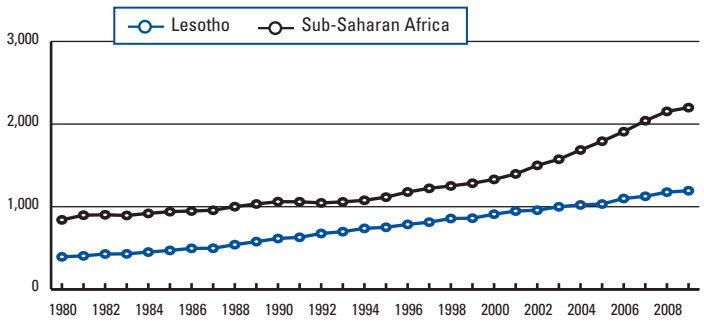
Population (millions) 2.1
GDP (US$ billions) 1.6
GDP per capita (US$) 641.7
GDP (PPP) as share (%) of world total 0.01

Sectoral value-added (% GDP)
Agriculture 7.7
Industry 32.1
Services 60.2

Human Development Index, 2010
Score, (0–1) best 0.43
Rank (out of 169 economies) 141

Sources: UNFPA, IMF, EIU, World Bank, UNDP.

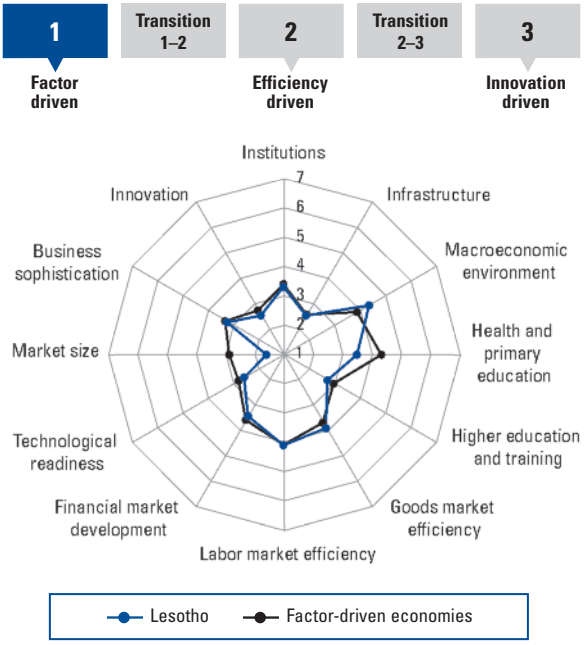
GDP (PPP) per capita (int'l $), 1980–2009



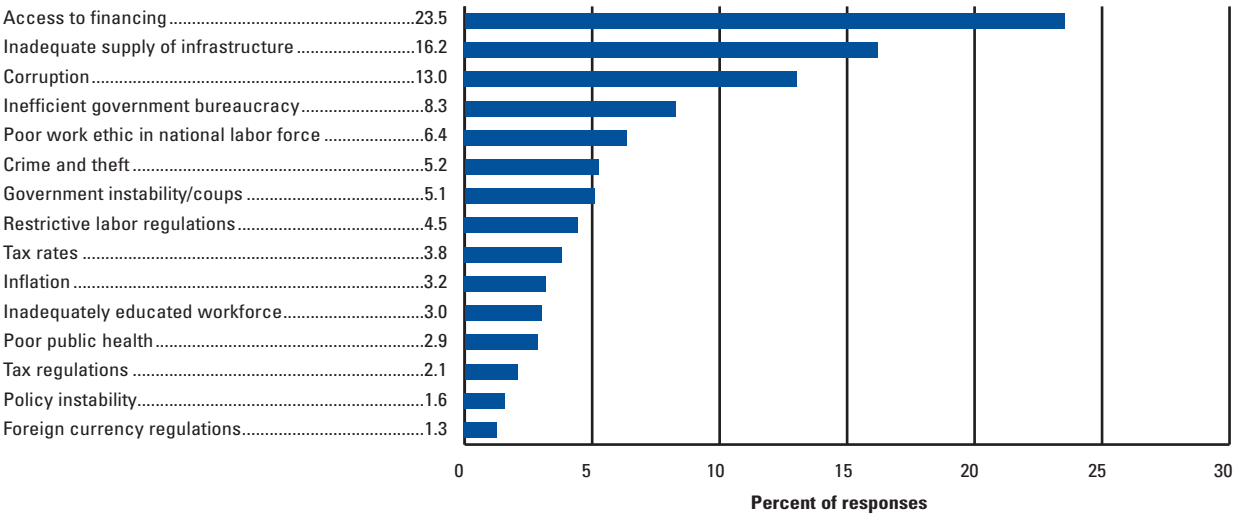
Global Competitiveness Index

	Rank (out of 139)	Score (1–7)
GCI 2010–2011	**128**	**3.4**
GCI 2009–2010 (out of 133)	107	3.5
GCI 2008–2009 (out of 134)	123	3.4
Basic requirements	**124**	**3.5**
1st pillar: Institutions	100	3.4
2nd pillar: Infrastructure	120	2.6
3rd pillar: Macroeconomic environment	77	4.5
4th pillar: Health and primary education	131	3.6
Efficiency enhancers	**132**	**3.1**
5th pillar: Higher education and training	124	2.8
6th pillar: Goods market efficiency	84	4.0
7th pillar: Labor market efficiency	86	4.2
8th pillar: Financial market development	114	3.5
9th pillar: Technological readiness	129	2.6
10th pillar: Market size	135	1.6
Innovation and sophistication factors	**116**	**3.0**
11th pillar: Business sophistication	114	3.3
12th pillar: Innovation	113	2.6

Stage of development



The most problematic factors for doing business



Note: From a list of 15 factors, respondents were asked to select the five most problematic for doing business in their country and to rank them between 1 (most problematic) and 5. The bars in the figure show the responses weighted according to their rankings.

Lesotho

The Global Competitiveness Index in detail

	INDICATOR	SCORE	RANK/139
	1st pillar: Institutions		
1.01	Property rights	3.7	101
1.02	Intellectual property protection	3.0	92
1.03	Diversion of public funds	3.2	73
1.04	Public trust of politicians	2.8	71
1.05	Irregular payments and bribes	3.4	98
1.06	Judicial independence	3.2	91
1.07	Favoritism in decisions of government officials	2.7	90
1.08	Wastefulness of government spending	3.1	78
1.09	Burden of government regulation	3.4	62
1.10	Efficiency of legal framework in settling disputes	3.0	110
1.11	Efficiency of legal framework in challenging regs	2.7	124
1.12	Transparency of government policymaking	3.6	122
1.13	Business costs of terrorism	5.3	90
1.14	Business costs of crime and violence	3.9	111
1.15	Organized crime	4.9	91
1.16	Reliability of police services	3.5	102
1.17	Ethical behavior of firms	3.2	119
1.18	Strength of auditing and reporting standards	3.9	114
1.19	Efficacy of corporate boards	4.5	70
1.20	Protection of minority shareholders' interests	3.6	114
1.21	Strength of investor protection, 0–10 (best)*	3.7	119
	2nd pillar: Infrastructure		
2.01	Quality of overall infrastructure	3.4	104
2.02	Quality of roads	2.9	109
2.03	Quality of railroad infrastructure	n/a	n/a
2.04	Quality of port infrastructure	3.1	118
2.05	Quality of air transport infrastructure	2.3	139
2.06	Available airline seat Kms/week, millions*	0.3	139
2.07	Quality of electricity supply	3.6	99
2.08	Fixed telephone lines/100 pop.*	1.9	117
2.09	Mobile telephone subscriptions/100 pop.*	32.0	125
	3rd pillar: Macroeconomic environment		
3.01	Government budget balance, % GDP*	-4.1	75
3.02	National savings rate, % GDP*	33.0	15
3.03	Inflation, annual % change*	7.7	112
3.04	Interest rate spread, %*	8.1	100
3.05	Government debt, % GDP*	41.4	72
3.06	Country credit rating, 0–100 (worst)*	35.3	92
	4th pillar: Health and primary education		
4.01	Business impact of malaria	n/appl.	1
4.02	Malaria incidence/100,000 pop.*	(NE)	1
4.03	Business impact of tuberculosis	3.0	137
4.04	Tuberculosis incidence/100,000 pop.*	635.4	134
4.05	Business impact of HIV/AIDS	2.5	137
4.06	HIV prevalence, % adult pop.*	23.2	137
4.07	Infant mortality, deaths/1,000 live births*	63.1	116
4.08	Life expectancy, years*	45.0	138
4.09	Quality of primary education	3.2	95
4.10	Primary education enrollment, net %*	72.7	128
	5th pillar: Higher education and training		
5.01	Secondary education enrollment, gross %*	39.9	120
5.02	Tertiary education enrollment, gross %*	3.6	128
5.03	Quality of the educational system	3.6	77
5.04	Quality of math and science education	3.4	100
5.05	Quality of management schools	3.5	111
5.06	Internet access in schools	2.1	132
5.07	Availability of research and training services	3.2	117
5.08	Extent of staff training	3.8	83

	INDICATOR	SCORE	RANK/139
	6th pillar: Goods market efficiency		
6.01	Intensity of local competition	4.2	110
6.02	Extent of market dominance	3.3	103
6.03	Effectiveness of anti-monopoly policy	3.6	99
6.04	Extent and effect of taxation	3.4	80
6.05	Total tax rate, % profits*	18.5	12
6.06	No. procedures to start a business*	7.0	57
6.07	No. days to start a business*	40.0	112
6.08	Agricultural policy costs	3.2	128
6.09	Prevalence of trade barriers	3.9	115
6.10	Trade tariffs, % duty*	6.1	74
6.11	Prevalence of foreign ownership	4.8	61
6.12	Business impact of rules on FDI	4.6	80
6.13	Burden of customs procedures	3.8	92
6.14	Degree of customer orientation	4.3	85
6.15	Buyer sophistication	2.7	122
	7th pillar: Labor market efficiency		
7.01	Cooperation in labor-employer relations	4.0	102
7.02	Flexibility of wage determination	4.5	109
7.03	Rigidity of employment index, 0–100 (worst)*	14.0	33
7.04	Hiring and firing practices	3.9	68
7.05	Redundancy costs, weeks of wages*	44.0	78
7.06	Pay and productivity	3.1	123
7.07	Reliance on professional management	3.9	92
7.08	Brain drain	2.0	133
7.09	Females in labor force, ratio to males*	0.9	21
	8th pillar: Financial market development		
8.01	Availability of financial services	3.0	134
8.02	Affordability of financial services	3.1	130
8.03	Financing through local equity market	2.1	130
8.04	Ease of access to loans	2.3	101
8.05	Venture capital availability	2.1	116
8.06	Restriction on capital flows	3.7	108
8.07	Soundness of banks	4.5	108
8.08	Regulation of securities exchanges	2.9	125
8.09	Legal rights index, 0–10 (best)*	7.0	39
	9th pillar: Technological readiness		
9.01	Availability of latest technologies	4.1	125
9.02	Firm-level technology absorption	4.1	114
9.03	FDI and technology transfer	3.8	122
9.04	Internet users/100 pop.*	3.7	123
9.05	Broadband Internet subscriptions/100 pop.*	0.0	130
9.06	Internet bandwidth, Mb/s per 10,000 pop.*	0.0	131
	10th pillar: Market size		
10.01	Domestic market size index, 1–7 (best)*	1.4	136
10.02	Foreign market size index, 1–7 (best)*	2.1	133
	11th pillar: Business sophistication		
11.01	Local supplier quantity	3.6	135
11.02	Local supplier quality	3.4	133
11.03	State of cluster development	3.4	72
11.04	Nature of competitive advantage	3.2	75
11.05	Value chain breadth	3.1	95
11.06	Control of international distribution	3.1	129
11.07	Production process sophistication	2.6	127
11.08	Extent of marketing	3.0	125
11.09	Willingness to delegate authority	3.5	74
	12th pillar: Innovation		
12.01	Capacity for innovation	2.2	133
12.02	Quality of scientific research institutions	2.7	118
12.03	Company spending on R&D	3.1	59
12.04	University-industry collaboration in R&D	3.1	107
12.05	Gov't procurement of advanced tech products	3.2	99
12.06	Availability of scientists and engineers	3.1	127
12.07	Utility patents/million pop.*	0.0	90

Notes: An asterisk (*) indicates that data are from sources other than the World Economic Forum. For further details and explanation, please refer to the section "How to Read the Competitiveness Profiles" on page 115.

Libya

Key indicators, 2009

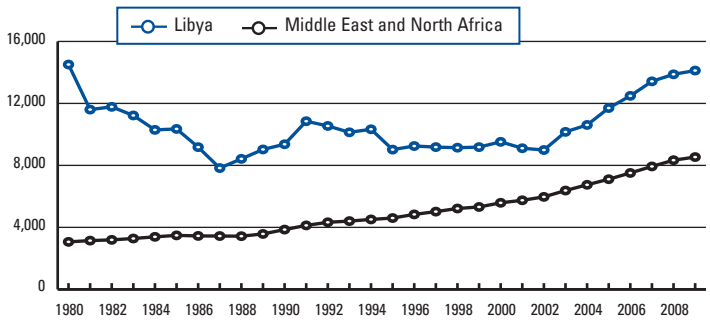
Population (millions) 6.4
GDP (US$ billions) 60.4
GDP per capita (US$) 9,529.3
GDP (PPP) as share (%) of world total 0.13

Sectoral value-added (% GDP)
Agriculture 1.9
Industry 78.2
Services 19.9

Human Development Index, 2010
Score, (0–1) best 0.75
Rank (out of 169 economies) 53

Sources: UNFPA, IMF, EIU, World Bank, UNDP.

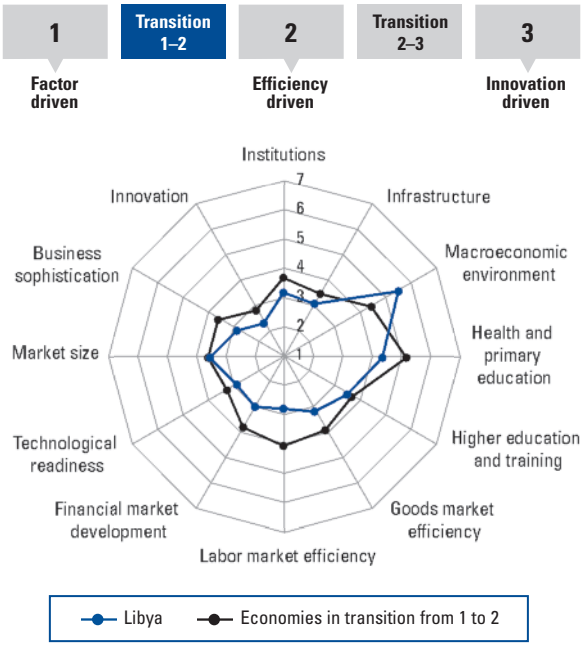
GDP (PPP) per capita (int'l $), 1980–2009



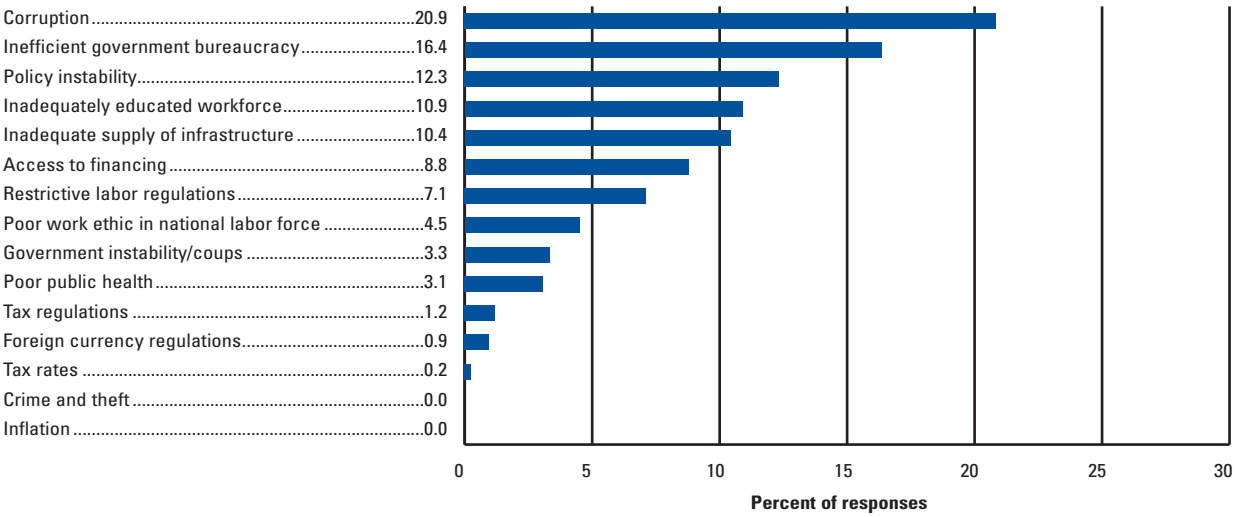
Global Competitiveness Index

	Rank (out of 139)	Score (1–7)
GCI 2010–2011	**100**	**3.7**
GCI 2009–2010 (out of 133)	88	3.9
GCI 2008–2009 (out of 134)	91	3.9
Basic requirements	**88**	**4.2**
1st pillar: Institutions	111	3.3
2nd pillar: Infrastructure	95	3.2
3rd pillar: Macroeconomic environment	7	5.7
4th pillar: Health and primary education	115	4.5
Efficiency enhancers	**127**	**3.2**
5th pillar: Higher education and training	95	3.6
6th pillar: Goods market efficiency	134	3.2
7th pillar: Labor market efficiency	139	2.8
8th pillar: Financial market development	130	3.0
9th pillar: Technological readiness	114	2.9
10th pillar: Market size	69	3.6
Innovation and sophistication factors	**135**	**2.6**
11th pillar: Business sophistication	136	2.9
12th pillar: Innovation	131	2.4

Stage of development



The most problematic factors for doing business



Note: From a list of 15 factors, respondents were asked to select the five most problematic for doing business in their country and to rank them between 1 (most problematic) and 5. The bars in the figure show the responses weighted according to their rankings.

Libya

The Global Competitiveness Index in detail

	INDICATOR	SCORE	RANK/139
	1st pillar: Institutions		
1.01	Property rights	3.5	111
1.02	Intellectual property protection	2.8	102
1.03	Diversion of public funds	2.3	123
1.04	Public trust of politicians	2.8	73
1.05	Irregular payments and bribes	2.8	126
1.06	Judicial independence	3.1	95
1.07	Favoritism in decisions of government officials	2.4	122
1.08	Wastefulness of government spending	3.3	65
1.09	Burden of government regulation	2.8	109
1.10	Efficiency of legal framework in settling disputes	3.7	70
1.11	Efficiency of legal framework in challenging regs	3.5	68
1.12	Transparency of government policymaking	3.0	135
1.13	Business costs of terrorism	6.3	39
1.14	Business costs of crime and violence	5.9	24
1.15	Organized crime	5.8	48
1.16	Reliability of police services	3.5	100
1.17	Ethical behavior of firms	2.8	137
1.18	Strength of auditing and reporting standards	3.4	135
1.19	Efficacy of corporate boards	2.8	139
1.20	Protection of minority shareholders' interests	3.6	118
1.21	Strength of investor protection, 0–10 (best)*	n/a	n/a
	2nd pillar: Infrastructure		
2.01	Quality of overall infrastructure	3.2	115
2.02	Quality of roads	3.1	97
2.03	Quality of railroad infrastructure	n/a	n/a
2.04	Quality of port infrastructure	3.2	116
2.05	Quality of air transport infrastructure	2.9	133
2.06	Available airline seat Kms/week, millions*	123.6	77
2.07	Quality of electricity supply	4.3	81
2.08	Fixed telephone lines/100 pop.*	17.1	74
2.09	Mobile telephone subscriptions/100 pop.*	77.9	90
	3rd pillar: Macroeconomic environment		
3.01	Government budget balance, % GDP*	9.6	3
3.02	National savings rate, % GDP*	26.5	39
3.03	Inflation, annual % change*	2.7	67
3.04	Interest rate spread, %*	3.5	42
3.05	Government debt, % GDP*	3.9	2
3.06	Country credit rating, 0–100 (worst)*	50.9	70
	4th pillar: Health and primary education		
4.01	Business impact of malaria	n/appl.	1
4.02	Malaria incidence/100,000 pop.*	(NE)	1
4.03	Business impact of tuberculosis	5.8	62
4.04	Tuberculosis incidence/100,000 pop.*	16.7	38
4.05	Business impact of HIV/AIDS	4.9	89
4.06	HIV prevalence, % adult pop.*	<0.2	47
4.07	Infant mortality, deaths/1,000 live births*	15.3	69
4.08	Life expectancy, years*	74.3	55
4.09	Quality of primary education	2.5	128
4.10	Primary education enrollment, net %*	n/a	n/a
	5th pillar: Higher education and training		
5.01	Secondary education enrollment, gross %*	93.5	48
5.02	Tertiary education enrollment, gross %*	55.7	37
5.03	Quality of the educational system	2.0	138
5.04	Quality of math and science education	3.1	113
5.05	Quality of management schools	2.2	137
5.06	Internet access in schools	2.3	129
5.07	Availability of research and training services	2.7	134
5.08	Extent of staff training	3.4	110

	INDICATOR	SCORE	RANK/139
	6th pillar: Goods market efficiency		
6.01	Intensity of local competition	3.8	130
6.02	Extent of market dominance	2.7	134
6.03	Effectiveness of anti-monopoly policy	2.8	136
6.04	Extent and effect of taxation	4.0	34
6.05	Total tax rate, % profits*	n/a	n/a
6.06	No. procedures to start a business*	n/a	n/a
6.07	No. days to start a business*	n/a	n/a
6.08	Agricultural policy costs	3.8	74
6.09	Prevalence of trade barriers	4.3	92
6.10	Trade tariffs, % duty*	n/a	n/a
6.11	Prevalence of foreign ownership	3.3	130
6.12	Business impact of rules on FDI	3.8	121
6.13	Burden of customs procedures	3.5	109
6.14	Degree of customer orientation	3.6	131
6.15	Buyer sophistication	2.7	121
	7th pillar: Labor market efficiency		
7.01	Cooperation in labor-employer relations	3.8	117
7.02	Flexibility of wage determination	3.7	123
7.03	Rigidity of employment index, 0–100 (worst)*	n/a	n/a
7.04	Hiring and firing practices	2.8	130
7.05	Redundancy costs, weeks of wages*	n/a	n/a
7.06	Pay and productivity	2.1	139
7.07	Reliance on professional management	2.5	139
7.08	Brain drain	2.0	134
7.09	Females in labor force, ratio to males*	0.3	133
	8th pillar: Financial market development		
8.01	Availability of financial services	2.7	136
8.02	Affordability of financial services	2.4	139
8.03	Financing through local equity market	2.3	122
8.04	Ease of access to loans	2.5	87
8.05	Venture capital availability	2.7	55
8.06	Restriction on capital flows	2.9	134
8.07	Soundness of banks	4.4	116
8.08	Regulation of securities exchanges	2.4	135
8.09	Legal rights index, 0–10 (best)*	n/a	n/a
	9th pillar: Technological readiness		
9.01	Availability of latest technologies	4.4	96
9.02	Firm-level technology absorption	4.4	99
9.03	FDI and technology transfer	3.7	127
9.04	Internet users/100 pop.*	5.5	116
9.05	Broadband Internet subscriptions/100 pop.*	0.2	110
9.06	Internet bandwidth, Mb/s per 10,000 pop.*	0.5	109
	10th pillar: Market size		
10.01	Domestic market size index, 1–7 (best)*	3.4	75
10.02	Foreign market size index, 1–7 (best)*	4.5	63
	11th pillar: Business sophistication		
11.01	Local supplier quantity	4.3	105
11.02	Local supplier quality	3.3	136
11.03	State of cluster development	2.3	136
11.04	Nature of competitive advantage	2.1	139
11.05	Value chain breadth	2.5	132
11.06	Control of international distribution	3.5	116
11.07	Production process sophistication	2.9	117
11.08	Extent of marketing	2.9	129
11.09	Willingness to delegate authority	2.3	139
	12th pillar: Innovation		
12.01	Capacity for innovation	2.0	136
12.02	Quality of scientific research institutions	2.6	125
12.03	Company spending on R&D	2.0	139
12.04	University-industry collaboration in R&D	2.6	131
12.05	Gov't procurement of advanced tech products	2.8	126
12.06	Availability of scientists and engineers	3.5	104
12.07	Utility patents/million pop.*	0.0	90

Notes: An asterisk (*) indicates that data are from sources other than the World Economic Forum. For further details and explanation, please refer to the section "How to Read the Competitiveness Profiles" on page 115.

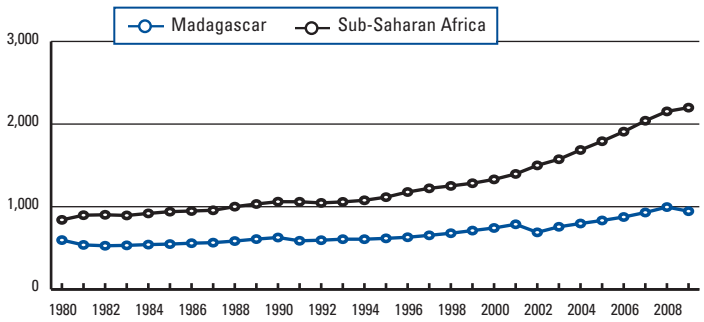
Madagascar

Key indicators, 2009

Population (millions)	19.6
GDP (US$ billions)	8.6
GDP per capita (US$)	412.0
GDP (PPP) as share (%) of world total	0.03
Sectoral value-added (% GDP)	
Agriculture	23.9
Industry	17.6
Services	58.5
Human Development Index, 2010	
Score, (0–1) best	0.43
Rank (out of 169 economies)	135

Sources: UNFPA, IMF, EIU, World Bank, UNDP.

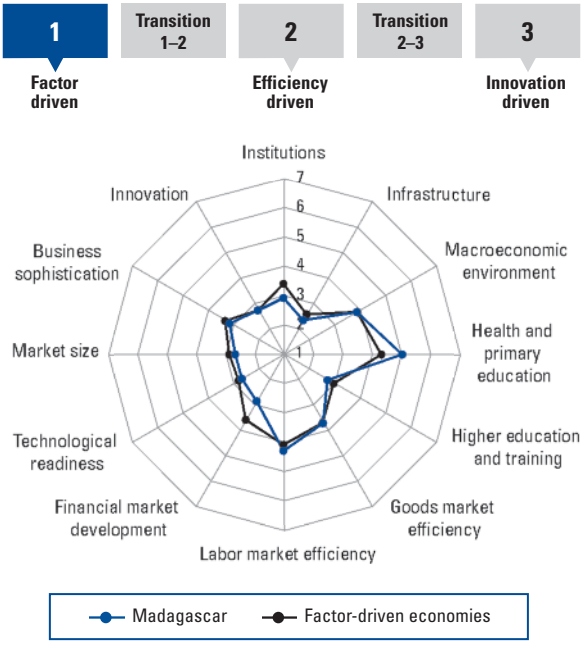
GDP (PPP) per capita (int'l $), 1980–2009



Global Competitiveness Index

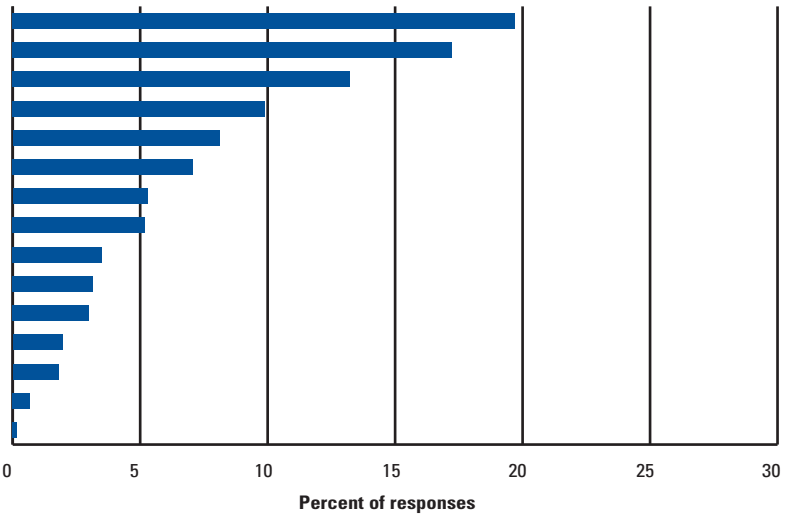
	Rank (out of 139)	Score (1–7)
GCI 2010–2011	**124**	**3.5**
GCI 2009–2010 (out of 133)	121	3.4
GCI 2008–2009 (out of 134)	125	3.4
Basic requirements	**118**	**3.6**
1st pillar: Institutions	129	3.0
2nd pillar: Infrastructure	130	2.4
3rd pillar: Macroeconomic environment	112	4.0
4th pillar: Health and primary education	103	5.2
Efficiency enhancers	**124**	**3.2**
5th pillar: Higher education and training	128	2.8
6th pillar: Goods market efficiency	107	3.8
7th pillar: Labor market efficiency	67	4.4
8th pillar: Financial market development	131	2.9
9th pillar: Technological readiness	123	2.7
10th pillar: Market size	110	2.7
Innovation and sophistication factors	**113**	**3.0**
11th pillar: Business sophistication	124	3.2
12th pillar: Innovation	102	2.8

Stage of development



The most problematic factors for doing business

Government instability/coups	19.7
Policy instability	17.2
Corruption	13.2
Access to financing	9.9
Crime and theft	8.1
Inflation	7.1
Tax regulations	5.3
Inadequate supply of infrastructure	5.2
Tax rates	3.5
Poor work ethic in national labor force	3.2
Inefficient government bureaucracy	3.0
Foreign currency regulations	2.0
Inadequately educated workforce	1.8
Restrictive labor regulations	0.7
Poor public health	0.2



Note: From a list of 15 factors, respondents were asked to select the five most problematic for doing business in their country and to rank them between 1 (most problematic) and 5. The bars in the figure show the responses weighted according to their rankings.

Madagascar

The Global Competitiveness Index in detail

	INDICATOR	SCORE	RANK/139
	1st pillar: Institutions		
1.01	Property rights	3.0	126
1.02	Intellectual property protection	2.2	134
1.03	Diversion of public funds	2.6	111
1.04	Public trust of politicians	1.6	135
1.05	Irregular payments and bribes	3.1	113
1.06	Judicial independence	2.5	126
1.07	Favoritism in decisions of government officials	2.6	100
1.08	Wastefulness of government spending	2.5	109
1.09	Burden of government regulation	3.0	93
1.10	Efficiency of legal framework in settling disputes	2.8	121
1.11	Efficiency of legal framework in challenging regs	3.0	106
1.12	Transparency of government policymaking	3.5	128
1.13	Business costs of terrorism	4.7	122
1.14	Business costs of crime and violence	3.4	122
1.15	Organized crime	4.3	110
1.16	Reliability of police services	2.7	127
1.17	Ethical behavior of firms	3.1	126
1.18	Strength of auditing and reporting standards	3.3	136
1.19	Efficacy of corporate boards	4.2	97
1.20	Protection of minority shareholders' interests	3.5	120
1.21	Strength of investor protection, 0–10 (best)*	5.7	45
	2nd pillar: Infrastructure		
2.01	Quality of overall infrastructure	3.2	112
2.02	Quality of roads	2.9	106
2.03	Quality of railroad infrastructure	1.7	96
2.04	Quality of port infrastructure	3.4	108
2.05	Quality of air transport infrastructure	3.8	106
2.06	Available airline seat Kms/week, millions*	37.6	103
2.07	Quality of electricity supply	2.6	121
2.08	Fixed telephone lines/100 pop.*	0.9	128
2.09	Mobile telephone subscriptions/100 pop.*	30.6	127
	3rd pillar: Macroeconomic environment		
3.01	Government budget balance, % GDP*	-2.3	36
3.02	National savings rate, % GDP*	33.1	14
3.03	Inflation, annual % change*	9.0	117
3.04	Interest rate spread, %*	33.2	135
3.05	Government debt, % GDP*	24.2	39
3.06	Country credit rating, 0–100 (worst)*	23.9	124
	4th pillar: Health and primary education		
4.01	Business impact of malaria	3.5	121
4.02	Malaria incidence/100,000 pop.*	3,355.9	115
4.03	Business impact of tuberculosis	4.5	105
4.04	Tuberculosis incidence/100,000 pop.*	255.9	114
4.05	Business impact of HIV/AIDS	4.7	97
4.06	HIV prevalence, % adult pop.*	0.1	22
4.07	Infant mortality, deaths/1,000 live births*	68.1	119
4.08	Life expectancy, years*	60.3	114
4.09	Quality of primary education	3.0	107
4.10	Primary education enrollment, net %*	98.5	23
	5th pillar: Higher education and training		
5.01	Secondary education enrollment, gross %*	30.1	128
5.02	Tertiary education enrollment, gross %*	3.4	130
5.03	Quality of the educational system	3.3	92
5.04	Quality of math and science education	3.6	85
5.05	Quality of management schools	4.0	77
5.06	Internet access in schools	2.7	118
5.07	Availability of research and training services	3.3	110
5.08	Extent of staff training	3.3	114

	INDICATOR	SCORE	RANK/139
	6th pillar: Goods market efficiency		
6.01	Intensity of local competition	4.3	103
6.02	Extent of market dominance	3.2	111
6.03	Effectiveness of anti-monopoly policy	3.2	122
6.04	Extent and effect of taxation	3.1	105
6.05	Total tax rate, % profits*	39.2	64
6.06	No. procedures to start a business*	2.0	3
6.07	No. days to start a business*	7.0	21
6.08	Agricultural policy costs	3.7	87
6.09	Prevalence of trade barriers	4.4	80
6.10	Trade tariffs, % duty*	9.0	94
6.11	Prevalence of foreign ownership	4.0	115
6.12	Business impact of rules on FDI	3.9	111
6.13	Burden of customs procedures	3.9	88
6.14	Degree of customer orientation	4.4	83
6.15	Buyer sophistication	2.3	134
	7th pillar: Labor market efficiency		
7.01	Cooperation in labor-employer relations	4.2	76
7.02	Flexibility of wage determination	5.1	68
7.03	Rigidity of employment index, 0–100 (worst)*	56.0	127
7.04	Hiring and firing practices	4.5	30
7.05	Redundancy costs, weeks of wages*	30.0	58
7.06	Pay and productivity	3.8	84
7.07	Reliance on professional management	4.1	83
7.08	Brain drain	2.8	95
7.09	Females in labor force, ratio to males*	0.9	10
	8th pillar: Financial market development		
8.01	Availability of financial services	3.6	117
8.02	Affordability of financial services	2.9	131
8.03	Financing through local equity market	1.8	136
8.04	Ease of access to loans	2.9	58
8.05	Venture capital availability	2.5	70
8.06	Restriction on capital flows	3.0	131
8.07	Soundness of banks	4.8	89
8.08	Regulation of securities exchanges	2.2	136
8.09	Legal rights index, 0–10 (best)*	2.0	129
	9th pillar: Technological readiness		
9.01	Availability of latest technologies	4.3	105
9.02	Firm-level technology absorption	4.2	107
9.03	FDI and technology transfer	4.2	97
9.04	Internet users/100 pop.*	1.6	132
9.05	Broadband Internet subscriptions/100 pop.*	0.0	126
9.06	Internet bandwidth, Mb/s per 10,000 pop.*	0.1	127
	10th pillar: Market size		
10.01	Domestic market size index, 1–7 (best)*	2.6	105
10.02	Foreign market size index, 1–7 (best)*	2.9	121
	11th pillar: Business sophistication		
11.01	Local supplier quantity	4.6	78
11.02	Local supplier quality	3.9	111
11.03	State of cluster development	2.6	125
11.04	Nature of competitive advantage	2.6	121
11.05	Value chain breadth	2.9	113
11.06	Control of international distribution	3.1	131
11.07	Production process sophistication	2.5	131
11.08	Extent of marketing	2.8	130
11.09	Willingness to delegate authority	2.9	118
	12th pillar: Innovation		
12.01	Capacity for innovation	2.6	98
12.02	Quality of scientific research institutions	2.8	115
12.03	Company spending on R&D	2.6	115
12.04	University-industry collaboration in R&D	3.1	100
12.05	Gov't procurement of advanced tech products	3.5	79
12.06	Availability of scientists and engineers	4.4	52
12.07	Utility patents/million pop.*	0.0	90

Notes: An asterisk (*) indicates that data are from sources other than the World Economic Forum. For further details and explanation, please refer to the section "How to Read the Competitiveness Profiles" on page 115.

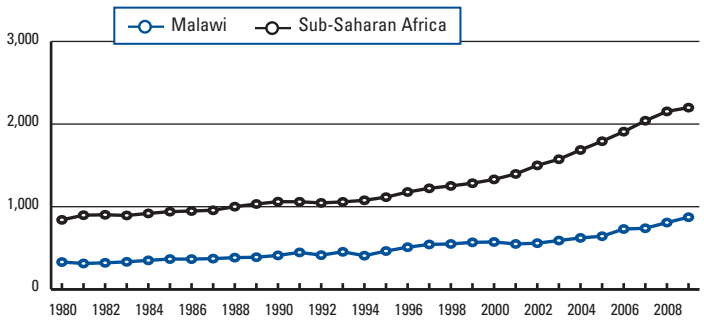
Malawi

Key indicators, 2009

Population (millions)	15.3
GDP (US$ billions)	4.6
GDP per capita (US$)	328.1
GDP (PPP) as share (%) of world total	0.02
Sectoral value-added (% GDP)	
Agriculture	35.9
Industry	20.5
Services	43.5
Human Development Index, 2010	
Score, (0–1) best	0.38
Rank (out of 169 economies)	153

Sources: UNFPA, IMF, EIU, World Bank, UNDP.

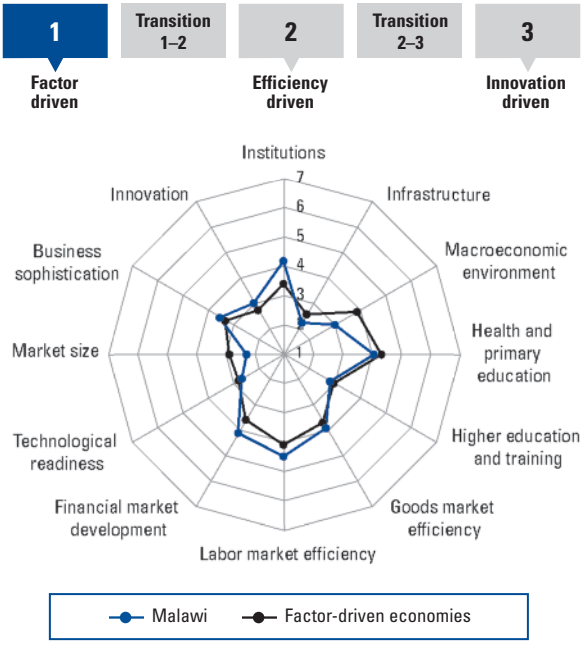
GDP (PPP) per capita (int'l $), 1980–2009



Global Competitiveness Index

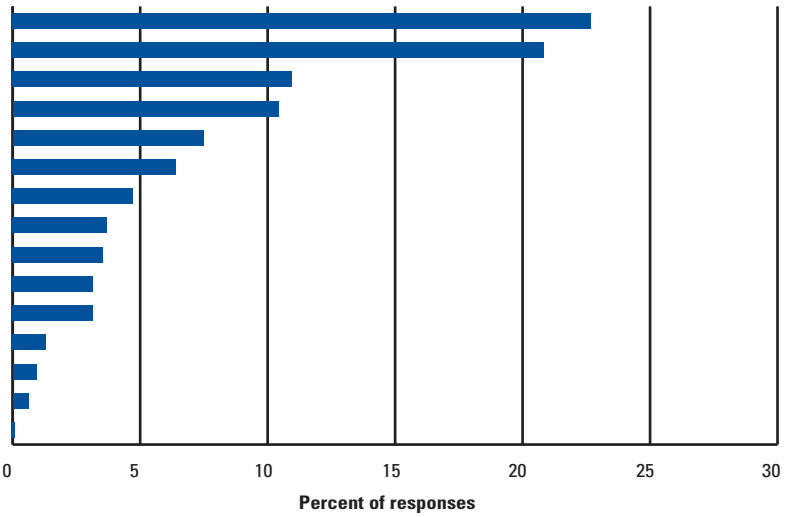
	Rank (out of 139)	Score (1–7)
GCI 2010–2011	**125**	**3.4**
GCI 2009–2010 (out of 133)	119	3.4
GCI 2008–2009 (out of 134)	119	3.4
Basic requirements	**129**	**3.5**
1st pillar: Institutions	52	4.3
2nd pillar: Infrastructure	131	2.3
3rd pillar: Macroeconomic environment	135	3.1
4th pillar: Health and primary education	125	4.2
Efficiency enhancers	**110**	**3.4**
5th pillar: Higher education and training	120	2.9
6th pillar: Goods market efficiency	85	4.0
7th pillar: Labor market efficiency	50	4.6
8th pillar: Financial market development	64	4.2
9th pillar: Technological readiness	121	2.7
10th pillar: Market size	127	2.3
Innovation and sophistication factors	**84**	**3.3**
11th pillar: Business sophistication	89	3.6
12th pillar: Innovation	72	3.1

Stage of development



The most problematic factors for doing business

Access to financing	22.7
Foreign currency regulations	20.8
Inadequate supply of infrastructure	11.0
Tax rates	10.4
Tax regulations	7.5
Corruption	6.4
Inadequately educated workforce	4.7
Poor work ethic in national labor force	3.7
Crime and theft	3.5
Inefficient government bureaucracy	3.2
Inflation	3.2
Policy instability	1.3
Restrictive labor regulations	0.9
Poor public health	0.6
Government instability/coups	0.1



Note: From a list of 15 factors, respondents were asked to select the five most problematic for doing business in their country and to rank them between 1 (most problematic) and 5. The bars in the figure show the responses weighted according to their rankings.

The Global Competitiveness Index in detail

	INDICATOR	SCORE	RANK/139
	1st pillar: Institutions		
1.01	Property rights	4.2	77
1.02	Intellectual property protection	3.8	56
1.03	Diversion of public funds	3.9	53
1.04	Public trust of politicians	3.1	61
1.05	Irregular payments and bribes	4.2	59
1.06	Judicial independence	4.6	47
1.07	Favoritism in decisions of government officials	3.3	53
1.08	Wastefulness of government spending	4.0	34
1.09	Burden of government regulation	3.7	37
1.10	Efficiency of legal framework in settling disputes	3.9	56
1.11	Efficiency of legal framework in challenging regs	3.9	52
1.12	Transparency of government policymaking	4.5	57
1.13	Business costs of terrorism	6.2	45
1.14	Business costs of crime and violence	4.5	91
1.15	Organized crime	5.9	44
1.16	Reliability of police services	4.6	52
1.17	Ethical behavior of firms	4.3	53
1.18	Strength of auditing and reporting standards	5.1	50
1.19	Efficacy of corporate boards	4.7	57
1.20	Protection of minority shareholders' interests	4.4	61
1.21	Strength of investor protection, 0–10 (best)*	5.3	59
	2nd pillar: Infrastructure		
2.01	Quality of overall infrastructure	3.4	106
2.02	Quality of roads	3.6	76
2.03	Quality of railroad infrastructure	2.2	78
2.04	Quality of port infrastructure	3.6	99
2.05	Quality of air transport infrastructure	3.3	119
2.06	Available airline seat Kms/week, millions*	7.3	131
2.07	Quality of electricity supply	2.0	129
2.08	Fixed telephone lines/100 pop.*	1.1	123
2.09	Mobile telephone subscriptions/100 pop.*	15.7	136
	3rd pillar: Macroeconomic environment		
3.01	Government budget balance, % GDP*	-5.4	91
3.02	National savings rate, % GDP*	0.6	136
3.03	Inflation, annual % change*	8.4	116
3.04	Interest rate spread, %*	21.8	133
3.05	Government debt, % GDP*	39.5	69
3.06	Country credit rating, 0–100 (worst)*	21.4	127
	4th pillar: Health and primary education		
4.01	Business impact of malaria	2.8	133
4.02	Malaria incidence/100,000 pop.*	33,363.4	129
4.03	Business impact of tuberculosis	3.3	133
4.04	Tuberculosis incidence/100,000 pop.*	324.5	124
4.05	Business impact of HIV/AIDS	2.7	135
4.06	HIV prevalence, % adult pop.*	11.9	131
4.07	Infant mortality, deaths/1,000 live births*	64.7	117
4.08	Life expectancy, years*	53.1	124
4.09	Quality of primary education	3.0	104
4.10	Primary education enrollment, net %*	90.6	86
	5th pillar: Higher education and training		
5.01	Secondary education enrollment, gross %*	29.4	129
5.02	Tertiary education enrollment, gross %*	0.5	139
5.03	Quality of the educational system	4.0	49
5.04	Quality of math and science education	3.7	80
5.05	Quality of management schools	3.7	96
5.06	Internet access in schools	2.5	126
5.07	Availability of research and training services	3.7	92
5.08	Extent of staff training	4.0	67

	INDICATOR	SCORE	RANK/139
	6th pillar: Goods market efficiency		
6.01	Intensity of local competition	4.7	83
6.02	Extent of market dominance	3.3	100
6.03	Effectiveness of anti-monopoly policy	4.2	57
6.04	Extent and effect of taxation	3.2	96
6.05	Total tax rate, % profits*	25.8	21
6.06	No. procedures to start a business*	10.0	99
6.07	No. days to start a business*	39.0	110
6.08	Agricultural policy costs	4.4	30
6.09	Prevalence of trade barriers	3.8	120
6.10	Trade tariffs, % duty*	12.9	119
6.11	Prevalence of foreign ownership	4.8	64
6.12	Business impact of rules on FDI	4.5	87
6.13	Burden of customs procedures	3.9	86
6.14	Degree of customer orientation	4.8	61
6.15	Buyer sophistication	2.6	124
	7th pillar: Labor market efficiency		
7.01	Cooperation in labor-employer relations	4.4	63
7.02	Flexibility of wage determination	5.8	11
7.03	Rigidity of employment index, 0–100 (worst)*	21.0	50
7.04	Hiring and firing practices	4.5	32
7.05	Redundancy costs, weeks of wages*	84.0	104
7.06	Pay and productivity	3.7	87
7.07	Reliance on professional management	4.7	45
7.08	Brain drain	3.2	71
7.09	Females in labor force, ratio to males*	1.0	8
	8th pillar: Financial market development		
8.01	Availability of financial services	4.0	99
8.02	Affordability of financial services	3.5	107
8.03	Financing through local equity market	3.9	41
8.04	Ease of access to loans	2.2	114
8.05	Venture capital availability	1.8	132
8.06	Restriction on capital flows	3.7	110
8.07	Soundness of banks	5.7	29
8.08	Regulation of securities exchanges	4.2	70
8.09	Legal rights index, 0–10 (best)*	8.0	20
	9th pillar: Technological readiness		
9.01	Availability of latest technologies	4.3	108
9.02	Firm-level technology absorption	4.3	103
9.03	FDI and technology transfer	4.3	91
9.04	Internet users/100 pop.*	4.7	119
9.05	Broadband Internet subscriptions/100 pop.*	0.0	125
9.06	Internet bandwidth, Mb/s per 10,000 pop.*	0.0	133
	10th pillar: Market size		
10.01	Domestic market size index, 1–7 (best)*	2.3	119
10.02	Foreign market size index, 1–7 (best)*	2.2	132
	11th pillar: Business sophistication		
11.01	Local supplier quantity	4.6	84
11.02	Local supplier quality	4.1	93
11.03	State of cluster development	3.7	57
11.04	Nature of competitive advantage	2.8	104
11.05	Value chain breadth	3.2	89
11.06	Control of international distribution	3.8	87
11.07	Production process sophistication	2.8	123
11.08	Extent of marketing	3.0	124
11.09	Willingness to delegate authority	3.7	55
	12th pillar: Innovation		
12.01	Capacity for innovation	2.7	84
12.02	Quality of scientific research institutions	3.4	76
12.03	Company spending on R&D	3.0	76
12.04	University-industry collaboration in R&D	3.4	79
12.05	Gov't procurement of advanced tech products	3.7	68
12.06	Availability of scientists and engineers	3.9	83
12.07	Utility patents/million pop.*	0.0	90

Notes: An asterisk (*) indicates that data are from sources other than the World Economic Forum. For further details and explanation, please refer to the section "How to Read the Competitiveness Profiles" on page 115.

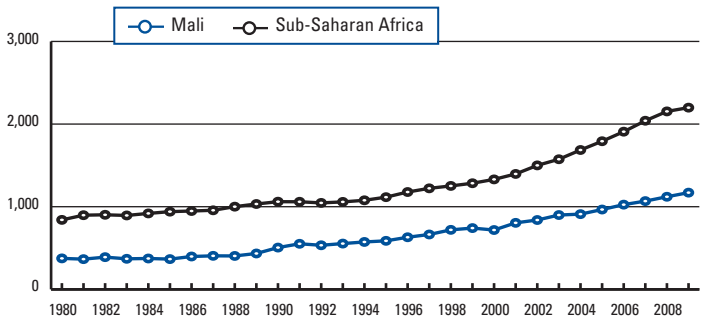
Mali

Key indicators, 2009

Population (millions)	13.0
GDP (US$ billions)	9.0
GDP per capita (US$)	655.9
GDP (PPP) as share (%) of world total	0.02
Sectoral value-added (% GDP)	
Agriculture	36.9
Industry	24.0
Services	39.1
Human Development Index, 2010	
Score, (0–1) best	0.31
Rank (out of 169 economies)	160

Sources: UNFPA, IMF, EIU, World Bank, UNDP.

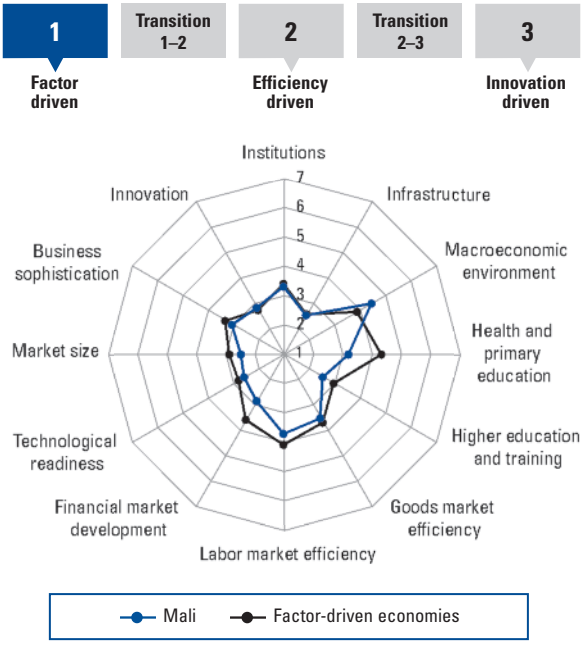
GDP (PPP) per capita (int'l $), 1980–2009



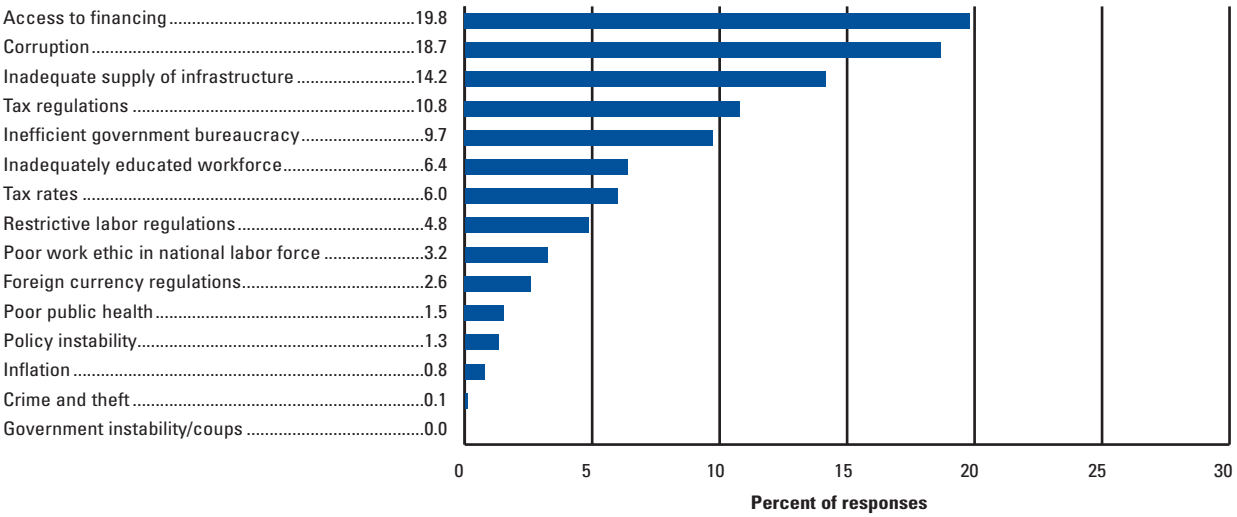
Global Competitiveness Index

	Rank (out of 139)	Score (1–7)
GCI 2010–2011	**132**	**3.3**
GCI 2009–2010 (out of 133)	130	3.2
GCI 2008–2009 (out of 134)	117	3.4
Basic requirements	**128**	**3.5**
1st pillar: Institutions	109	3.4
2nd pillar: Infrastructure	121	2.6
3rd pillar: Macroeconomic environment	65	4.6
4th pillar: Health and primary education	134	3.3
Efficiency enhancers	**135**	**3.0**
5th pillar: Higher education and training	132	2.6
6th pillar: Goods market efficiency	124	3.6
7th pillar: Labor market efficiency	121	3.8
8th pillar: Financial market development	133	2.9
9th pillar: Technological readiness	128	2.6
10th pillar: Market size	117	2.5
Innovation and sophistication factors	**112**	**3.0**
11th pillar: Business sophistication	128	3.1
12th pillar: Innovation	91	2.9

Stage of development



The most problematic factors for doing business



Note: From a list of 15 factors, respondents were asked to select the five most problematic for doing business in their country and to rank them between 1 (most problematic) and 5. The bars in the figure show the responses weighted according to their rankings.

Mali

The Global Competitiveness Index in detail

	INDICATOR	SCORE	RANK/139
	1st pillar: Institutions		
1.01	Property rights	3.5	109
1.02	Intellectual property protection	2.7	108
1.03	Diversion of public funds	2.6	108
1.04	Public trust of politicians	2.2	95
1.05	Irregular payments and bribes	2.5	139
1.06	Judicial independence	2.8	110
1.07	Favoritism in decisions of government officials	2.5	114
1.08	Wastefulness of government spending	2.9	94
1.09	Burden of government regulation	3.4	54
1.10	Efficiency of legal framework in settling disputes	3.4	80
1.11	Efficiency of legal framework in challenging regs	3.6	67
1.12	Transparency of government policymaking	4.2	78
1.13	Business costs of terrorism	5.4	83
1.14	Business costs of crime and violence	5.1	58
1.15	Organized crime	5.2	78
1.16	Reliability of police services	3.3	110
1.17	Ethical behavior of firms	3.3	111
1.18	Strength of auditing and reporting standards	3.6	126
1.19	Efficacy of corporate boards	4.0	124
1.20	Protection of minority shareholders' interests	3.8	101
1.21	Strength of investor protection, 0–10 (best)*	3.7	119
	2nd pillar: Infrastructure		
2.01	Quality of overall infrastructure	3.4	107
2.02	Quality of roads	2.9	103
2.03	Quality of railroad infrastructure	2.0	85
2.04	Quality of port infrastructure	3.7	91
2.05	Quality of air transport infrastructure	3.2	123
2.06	Available airline seat Kms/week, millions*	26.6	108
2.07	Quality of electricity supply	3.3	104
2.08	Fixed telephone lines/100 pop.*	0.6	132
2.09	Mobile telephone subscriptions/100 pop.*	28.8	128
	3rd pillar: Macroeconomic environment		
3.01	Government budget balance, % GDP*	-4.7	83
3.02	National savings rate, % GDP*	20.2	67
3.03	Inflation, annual % change*	2.2	56
3.04	Interest rate spread, %*	6.0	78
3.05	Government debt, % GDP*	22.4	32
3.06	Country credit rating, 0–100 (worst)*	26.5	119
	4th pillar: Health and primary education		
4.01	Business impact of malaria	2.7	134
4.02	Malaria incidence/100,000 pop.*	36,074.1	133
4.03	Business impact of tuberculosis	4.2	117
4.04	Tuberculosis incidence/100,000 pop.*	321.7	122
4.05	Business impact of HIV/AIDS	3.7	121
4.06	HIV prevalence, % adult pop.*	1.5	112
4.07	Infant mortality, deaths/1,000 live births*	102.5	137
4.08	Life expectancy, years*	48.4	132
4.09	Quality of primary education	2.1	136
4.10	Primary education enrollment, net %*	71.5	129
	5th pillar: Higher education and training		
5.01	Secondary education enrollment, gross %*	34.8	123
5.02	Tertiary education enrollment, gross %*	5.4	120
5.03	Quality of the educational system	2.7	125
5.04	Quality of math and science education	2.4	134
5.05	Quality of management schools	3.1	126
5.06	Internet access in schools	2.8	117
5.07	Availability of research and training services	3.3	113
5.08	Extent of staff training	3.0	131

	INDICATOR	SCORE	RANK/139
	6th pillar: Goods market efficiency		
6.01	Intensity of local competition	4.8	73
6.02	Extent of market dominance	3.5	76
6.03	Effectiveness of anti-monopoly policy	3.4	112
6.04	Extent and effect of taxation	2.9	116
6.05	Total tax rate, % profits*	52.1	106
6.06	No. procedures to start a business*	7.0	57
6.07	No. days to start a business*	15.0	56
6.08	Agricultural policy costs	3.7	78
6.09	Prevalence of trade barriers	4.0	110
6.10	Trade tariffs, % duty*	9.8	96
6.11	Prevalence of foreign ownership	3.4	129
6.12	Business impact of rules on FDI	3.9	112
6.13	Burden of customs procedures	4.1	79
6.14	Degree of customer orientation	4.0	109
6.15	Buyer sophistication	2.2	135
	7th pillar: Labor market efficiency		
7.01	Cooperation in labor-employer relations	3.9	111
7.02	Flexibility of wage determination	4.6	102
7.03	Rigidity of employment index, 0–100 (worst)*	31.0	78
7.04	Hiring and firing practices	4.1	58
7.05	Redundancy costs, weeks of wages*	31.0	61
7.06	Pay and productivity	2.9	131
7.07	Reliance on professional management	3.3	131
7.08	Brain drain	2.4	120
7.09	Females in labor force, ratio to males*	0.6	112
	8th pillar: Financial market development		
8.01	Availability of financial services	3.7	112
8.02	Affordability of financial services	3.2	123
8.03	Financing through local equity market	2.5	113
8.04	Ease of access to loans	1.9	131
8.05	Venture capital availability	1.7	135
8.06	Restriction on capital flows	3.3	122
8.07	Soundness of banks	3.9	128
8.08	Regulation of securities exchanges	2.6	130
8.09	Legal rights index, 0–10 (best)*	3.0	103
	9th pillar: Technological readiness		
9.01	Availability of latest technologies	4.1	124
9.02	Firm-level technology absorption	4.3	100
9.03	FDI and technology transfer	3.9	119
9.04	Internet users/100 pop.*	1.9	130
9.05	Broadband Internet subscriptions/100 pop.*	0.1	117
9.06	Internet bandwidth, Mb/s per 10,000 pop.*	0.5	108
	10th pillar: Market size		
10.01	Domestic market size index, 1–7 (best)*	2.4	117
10.02	Foreign market size index, 1–7 (best)*	2.9	118
	11th pillar: Business sophistication		
11.01	Local supplier quantity	4.3	104
11.02	Local supplier quality	3.7	120
11.03	State of cluster development	3.0	97
11.04	Nature of competitive advantage	2.5	128
11.05	Value chain breadth	2.9	120
11.06	Control of international distribution	3.4	122
11.07	Production process sophistication	2.4	133
11.08	Extent of marketing	2.7	133
11.09	Willingness to delegate authority	2.8	125
	12th pillar: Innovation		
12.01	Capacity for innovation	2.5	111
12.02	Quality of scientific research institutions	3.5	72
12.03	Company spending on R&D	2.9	78
12.04	University-industry collaboration in R&D	3.2	90
12.05	Gov't procurement of advanced tech products	3.8	58
12.06	Availability of scientists and engineers	3.6	100
12.07	Utility patents/million pop.*	0.0	90

Notes: An asterisk (*) indicates that data are from sources other than the World Economic Forum. For further details and explanation, please refer to the section "How to Read the Competitiveness Profiles" on page 115.

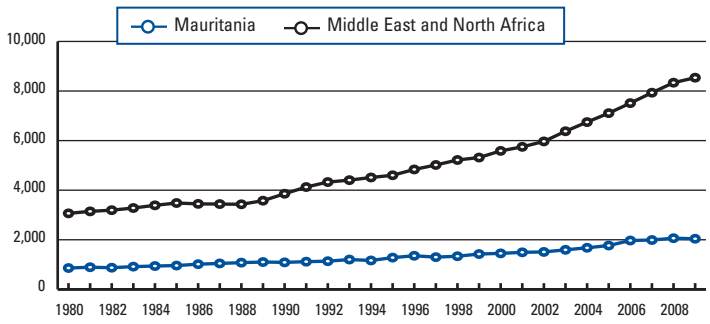
Mauritania

Key indicators, 2009

Population (millions)	3.3
GDP (US$ billions)	3.0
GDP per capita (US$)	975.4
GDP (PPP) as share (%) of world total	0.01
Sectoral value-added (% GDP)	
Agriculture	12.5
Industry	46.7
Services	40.7
Human Development Index, 2010	
Score, (0–1) best	0.43
Rank (out of 169 economies)	136

Sources: UNFPA, IMF, EIU, World Bank, UNDP.

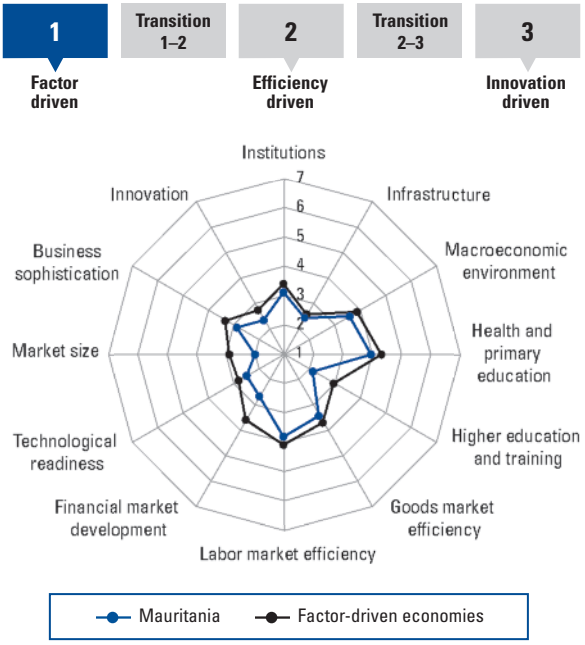
GDP (PPP) per capita (int'l $), 1980–2009



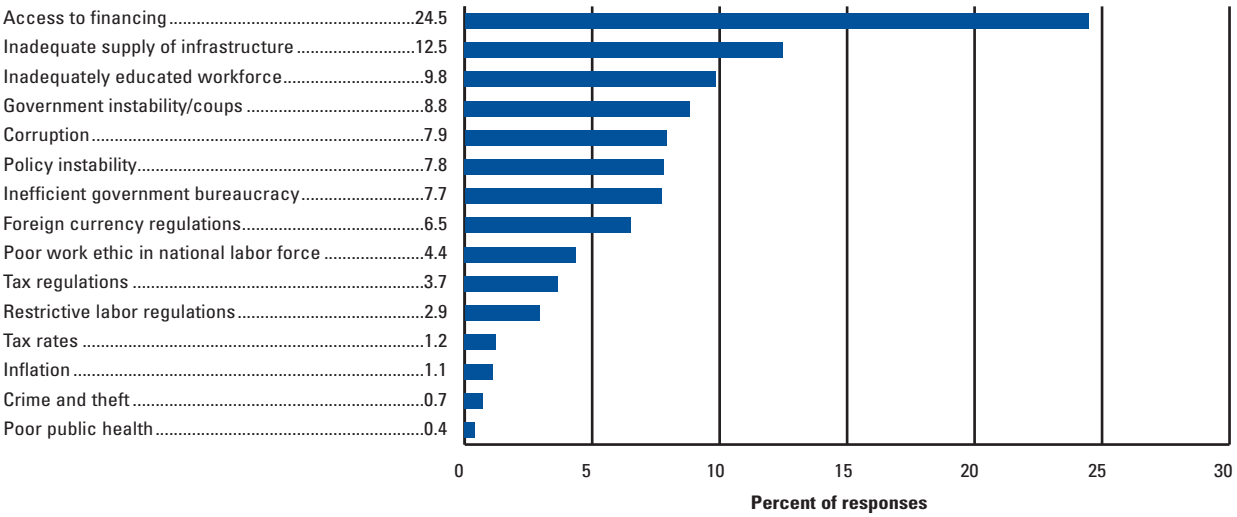
Global Competitiveness Index

	Rank (out of 139)	Score (1–7)
GCI 2010–2011	**135**	**3.1**
GCI 2009–2010 (out of 133)	127	3.3
GCI 2008–2009 (out of 134)	131	3.1
Basic requirements	**131**	**3.4**
1st pillar: Institutions	116	3.2
2nd pillar: Infrastructure	122	2.5
3rd pillar: Macroeconomic environment	118	3.7
4th pillar: Health and primary education	127	4.1
Efficiency enhancers	**138**	**2.8**
5th pillar: Higher education and training	137	2.2
6th pillar: Goods market efficiency	131	3.5
7th pillar: Labor market efficiency	114	3.9
8th pillar: Financial market development	138	2.7
9th pillar: Technological readiness	132	2.5
10th pillar: Market size	130	2.0
Innovation and sophistication factors	**134**	**2.6**
11th pillar: Business sophistication	134	2.9
12th pillar: Innovation	132	2.4

Stage of development



The most problematic factors for doing business



Note: From a list of 15 factors, respondents were asked to select the five most problematic for doing business in their country and to rank them between 1 (most problematic) and 5. The bars in the figure show the responses weighted according to their rankings.

Mauritania

The Global Competitiveness Index in detail

	INDICATOR	SCORE	RANK/139
	1st pillar: Institutions		
1.01	Property rights	3.5	108
1.02	Intellectual property protection	2.5	125
1.03	Diversion of public funds	2.7	105
1.04	Public trust of politicians	2.0	112
1.05	Irregular payments and bribes	2.6	133
1.06	Judicial independence	2.4	128
1.07	Favoritism in decisions of government officials	2.6	101
1.08	Wastefulness of government spending	3.3	70
1.09	Burden of government regulation	4.3	9
1.10	Efficiency of legal framework in settling disputes	3.4	84
1.11	Efficiency of legal framework in challenging regs	3.3	83
1.12	Transparency of government policymaking	4.1	92
1.13	Business costs of terrorism	4.4	129
1.14	Business costs of crime and violence	4.9	68
1.15	Organized crime	5.4	65
1.16	Reliability of police services	2.7	129
1.17	Ethical behavior of firms	2.9	131
1.18	Strength of auditing and reporting standards	3.1	138
1.19	Efficacy of corporate boards	3.5	138
1.20	Protection of minority shareholders' interests	4.3	71
1.21	Strength of investor protection, 0–10 (best)*	3.7	119
	2nd pillar: Infrastructure		
2.01	Quality of overall infrastructure	2.8	127
2.02	Quality of roads	2.4	127
2.03	Quality of railroad infrastructure	2.0	86
2.04	Quality of port infrastructure	3.6	98
2.05	Quality of air transport infrastructure	2.9	135
2.06	Available airline seat Kms/week, millions*	7.2	132
2.07	Quality of electricity supply	3.0	114
2.08	Fixed telephone lines/100 pop.*	2.3	114
2.09	Mobile telephone subscriptions/100 pop.*	66.3	104
	3rd pillar: Macroeconomic environment		
3.01	Government budget balance, % GDP*	1.1	7
3.02	National savings rate, % GDP*	12.4	109
3.03	Inflation, annual % change*	2.2	58
3.04	Interest rate spread, %*	15.5	129
3.05	Government debt, % GDP*	103.1	128
3.06	Country credit rating, 0–100 (worst)*	19.9	131
	4th pillar: Health and primary education		
4.01	Business impact of malaria	3.5	124
4.02	Malaria incidence/100,000 pop.*	18,382.1	119
4.03	Business impact of tuberculosis	3.7	127
4.04	Tuberculosis incidence/100,000 pop.*	323.9	123
4.05	Business impact of HIV/AIDS	3.7	120
4.06	HIV prevalence, % adult pop.*	0.8	97
4.07	Infant mortality, deaths/1,000 live births*	74.6	125
4.08	Life expectancy, years*	56.7	116
4.09	Quality of primary education	2.5	124
4.10	Primary education enrollment, net %*	76.5	124
	5th pillar: Higher education and training		
5.01	Secondary education enrollment, gross %*	24.5	133
5.02	Tertiary education enrollment, gross %*	3.8	125
5.03	Quality of the educational system	2.3	135
5.04	Quality of math and science education	3.2	107
5.05	Quality of management schools	2.4	136
5.06	Internet access in schools	2.2	130
5.07	Availability of research and training services	2.6	135
5.08	Extent of staff training	2.6	138

	INDICATOR	SCORE	RANK/139
	6th pillar: Goods market efficiency		
6.01	Intensity of local competition	3.8	132
6.02	Extent of market dominance	3.0	122
6.03	Effectiveness of anti-monopoly policy	3.8	82
6.04	Extent and effect of taxation	3.3	87
6.05	Total tax rate, % profits*	86.1	133
6.06	No. procedures to start a business*	9.0	88
6.07	No. days to start a business*	19.0	68
6.08	Agricultural policy costs	3.2	129
6.09	Prevalence of trade barriers	4.2	95
6.10	Trade tariffs, % duty*	8.0	88
6.11	Prevalence of foreign ownership	3.1	133
6.12	Business impact of rules on FDI	4.1	109
6.13	Burden of customs procedures	4.5	52
6.14	Degree of customer orientation	3.8	121
6.15	Buyer sophistication	2.4	130
	7th pillar: Labor market efficiency		
7.01	Cooperation in labor-employer relations	3.5	130
7.02	Flexibility of wage determination	5.2	62
7.03	Rigidity of employment index, 0–100 (worst)*	39.0	96
7.04	Hiring and firing practices	4.2	46
7.05	Redundancy costs, weeks of wages*	31.0	61
7.06	Pay and productivity	2.6	137
7.07	Reliance on professional management	2.9	137
7.08	Brain drain	2.0	135
7.09	Females in labor force, ratio to males*	0.8	75
	8th pillar: Financial market development		
8.01	Availability of financial services	2.6	137
8.02	Affordability of financial services	2.6	138
8.03	Financing through local equity market	2.0	133
8.04	Ease of access to loans	1.8	133
8.05	Venture capital availability	1.9	123
8.06	Restriction on capital flows	3.1	128
8.07	Soundness of banks	4.1	124
8.08	Regulation of securities exchanges	2.1	138
8.09	Legal rights index, 0–10 (best)*	3.0	103
	9th pillar: Technological readiness		
9.01	Availability of latest technologies	4.2	118
9.02	Firm-level technology absorption	3.7	131
9.03	FDI and technology transfer	3.3	137
9.04	Internet users/100 pop.*	2.3	127
9.05	Broadband Internet subscriptions/100 pop.*	0.3	104
9.06	Internet bandwidth, Mb/s per 10,000 pop.*	0.8	105
	10th pillar: Market size		
10.01	Domestic market size index, 1–7 (best)*	1.8	130
10.02	Foreign market size index, 1–7 (best)*	2.8	125
	11th pillar: Business sophistication		
11.01	Local supplier quantity	5.0	42
11.02	Local supplier quality	3.2	137
11.03	State of cluster development	2.4	129
11.04	Nature of competitive advantage	2.6	120
11.05	Value chain breadth	2.8	126
11.06	Control of international distribution	3.5	112
11.07	Production process sophistication	2.3	138
11.08	Extent of marketing	1.8	139
11.09	Willingness to delegate authority	2.5	135
	12th pillar: Innovation		
12.01	Capacity for innovation	2.3	123
12.02	Quality of scientific research institutions	2.0	137
12.03	Company spending on R&D	2.6	105
12.04	University-industry collaboration in R&D	2.4	135
12.05	Gov't procurement of advanced tech products	2.6	136
12.06	Availability of scientists and engineers	3.5	103
12.07	Utility patents/million pop.*	0.0	90

Notes: An asterisk (*) indicates that data are from sources other than the World Economic Forum. For further details and explanation, please refer to the section "How to Read the Competitiveness Profiles" on page 115.

Mauritius

Key indicators, 2009

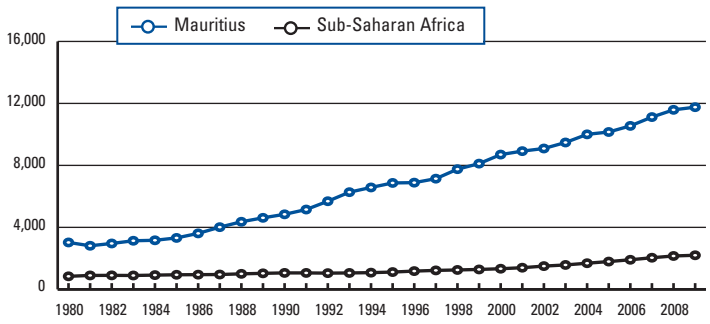
Population (millions) 1.3
GDP (US$ billions) 8.8
GDP per capita (US$) 6,838.1
GDP (PPP) as share (%) of world total 0.02

Sectoral value-added (% GDP)
Agriculture 4.2
Industry 28.7
Services 67.1

Human Development Index, 2010
Score, (0–1) best 0.70
Rank (out of 169 economies) 72

Sources: UNFPA, IMF, EIU, World Bank, UNDP.

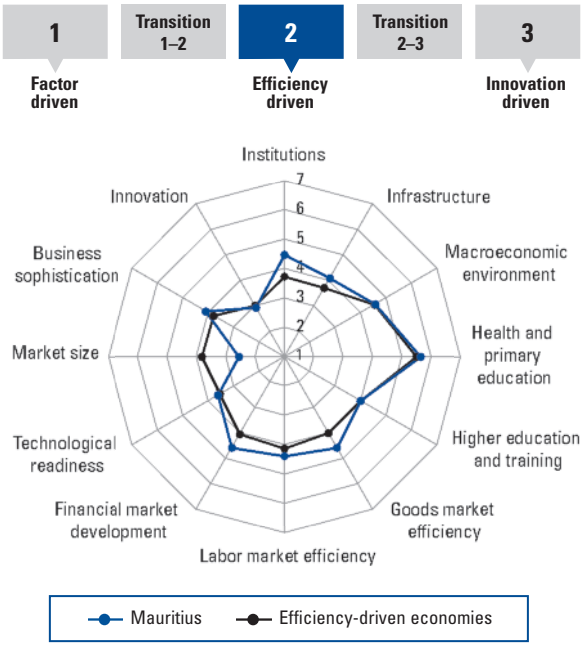
GDP (PPP) per capita (int'l $), 1980–2009



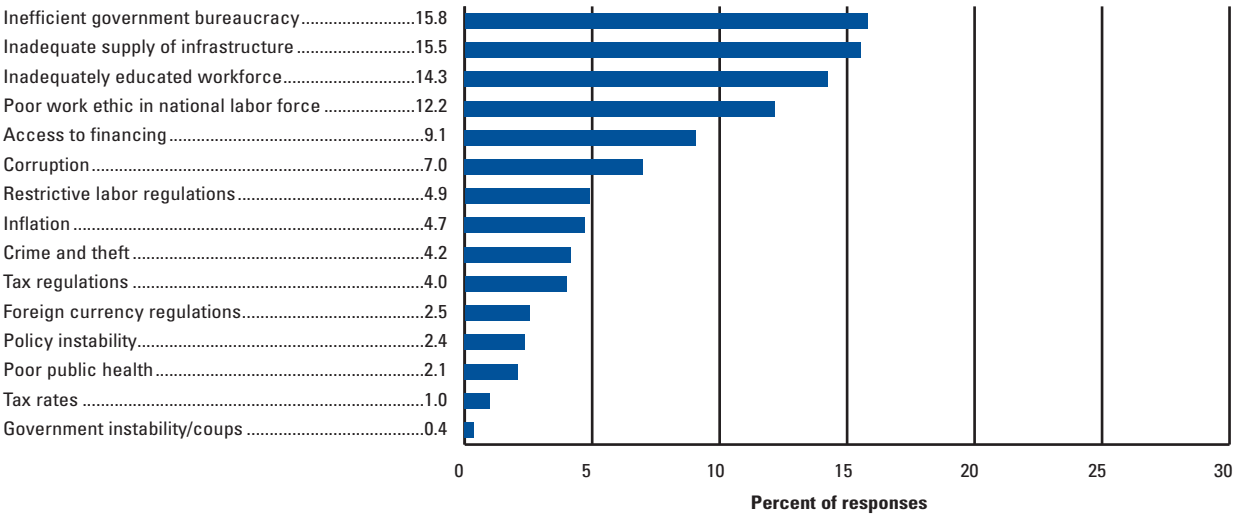
Global Competitiveness Index

	Rank (out of 139)	Score (1–7)
GCI 2010–2011	**55**	**4.3**
GCI 2009–2010 (out of 133)	57	4.2
GCI 2008–2009 (out of 134)	57	4.2
Basic requirements	**47**	**4.8**
1st pillar: Institutions	43	4.6
2nd pillar: Infrastructure	58	4.2
3rd pillar: Macroeconomic environment	62	4.7
4th pillar: Health and primary education	59	5.8
Efficiency enhancers	**66**	**4.1**
5th pillar: Higher education and training	70	4.1
6th pillar: Goods market efficiency	31	4.7
7th pillar: Labor market efficiency	59	4.5
8th pillar: Financial market development	29	4.7
9th pillar: Technological readiness	61	3.7
10th pillar: Market size	112	2.6
Innovation and sophistication factors	**59**	**3.6**
11th pillar: Business sophistication	47	4.2
12th pillar: Innovation	82	3.0

Stage of development



The most problematic factors for doing business



Note: From a list of 15 factors, respondents were asked to select the five most problematic for doing business in their country and to rank them between 1 (most problematic) and 5. The bars in the figure show the responses weighted according to their rankings.

Mauritius

The Global Competitiveness Index in detail

	INDICATOR	SCORE	RANK/139
	1st pillar: Institutions		
1.01	Property rights	5.3	36
1.02	Intellectual property protection	3.9	54
1.03	Diversion of public funds	4.1	48
1.04	Public trust of politicians	3.1	60
1.05	Irregular payments and bribes	4.8	46
1.06	Judicial independence	4.8	38
1.07	Favoritism in decisions of government officials	3.1	62
1.08	Wastefulness of government spending	3.9	36
1.09	Burden of government regulation	3.8	29
1.10	Efficiency of legal framework in settling disputes	4.7	29
1.11	Efficiency of legal framework in challenging regs	4.4	28
1.12	Transparency of government policymaking	5.1	24
1.13	Business costs of terrorism	6.1	49
1.14	Business costs of crime and violence	4.9	69
1.15	Organized crime	6.1	34
1.16	Reliability of police services	4.3	65
1.17	Ethical behavior of firms	4.6	46
1.18	Strength of auditing and reporting standards	5.5	29
1.19	Efficacy of corporate boards	4.8	42
1.20	Protection of minority shareholders' interests	5.2	16
1.21	Strength of investor protection, 0–10 (best)*	7.7	12
	2nd pillar: Infrastructure		
2.01	Quality of overall infrastructure	4.6	57
2.02	Quality of roads	4.1	58
2.03	Quality of railroad infrastructure	n/a	n/a
2.04	Quality of port infrastructure	4.5	56
2.05	Quality of air transport infrastructure	5.0	56
2.06	Available airline seat Kms/week, millions*	167.3	66
2.07	Quality of electricity supply	5.1	64
2.08	Fixed telephone lines/100 pop.*	29.4	44
2.09	Mobile telephone subscriptions/100 pop.*	84.4	83
	3rd pillar: Macroeconomic environment		
3.01	Government budget balance, % GDP*	-3.4	58
3.02	National savings rate, % GDP*	31.0	21
3.03	Inflation, annual % change*	2.5	63
3.04	Interest rate spread, %*	10.8	116
3.05	Government debt, % GDP*	59.7	103
3.06	Country credit rating, 0–100 (worst)*	54.3	61
	4th pillar: Health and primary education		
4.01	Business impact of malaria	n/appl.	1
4.02	Malaria incidence/100,000 pop.*	0.0	1
4.03	Business impact of tuberculosis	6.1	40
4.04	Tuberculosis incidence/100,000 pop.*	22.1	47
4.05	Business impact of HIV/AIDS	5.1	79
4.06	HIV prevalence, % adult pop.*	1.7	117
4.07	Infant mortality, deaths/1,000 live births*	15.1	67
4.08	Life expectancy, years*	72.6	75
4.09	Quality of primary education	3.9	66
4.10	Primary education enrollment, net %*	93.1	76
	5th pillar: Higher education and training		
5.01	Secondary education enrollment, gross %*	87.6	72
5.02	Tertiary education enrollment, gross %*	25.9	82
5.03	Quality of the educational system	4.0	50
5.04	Quality of math and science education	4.0	68
5.05	Quality of management schools	3.8	90
5.06	Internet access in schools	3.7	73
5.07	Availability of research and training services	3.8	87
5.08	Extent of staff training	4.4	41

	INDICATOR	SCORE	RANK/139
	6th pillar: Goods market efficiency		
6.01	Intensity of local competition	5.1	56
6.02	Extent of market dominance	3.1	116
6.03	Effectiveness of anti-monopoly policy	4.1	64
6.04	Extent and effect of taxation	5.4	8
6.05	Total tax rate, % profits*	22.9	17
6.06	No. procedures to start a business*	5.0	23
6.07	No. days to start a business*	6.0	13
6.08	Agricultural policy costs	4.7	16
6.09	Prevalence of trade barriers	5.0	39
6.10	Trade tariffs, % duty*	1.2	31
6.11	Prevalence of foreign ownership	4.7	72
6.12	Business impact of rules on FDI	5.7	8
6.13	Burden of customs procedures	4.6	42
6.14	Degree of customer orientation	5.1	38
6.15	Buyer sophistication	3.5	68
	7th pillar: Labor market efficiency		
7.01	Cooperation in labor-employer relations	4.8	36
7.02	Flexibility of wage determination	4.6	99
7.03	Rigidity of employment index, 0–100 (worst)*	18.0	42
7.04	Hiring and firing practices	3.9	74
7.05	Redundancy costs, weeks of wages*	4.0	6
7.06	Pay and productivity	4.0	60
7.07	Reliance on professional management	4.4	64
7.08	Brain drain	3.2	70
7.09	Females in labor force, ratio to males*	0.6	113
	8th pillar: Financial market development		
8.01	Availability of financial services	5.1	44
8.02	Affordability of financial services	4.8	41
8.03	Financing through local equity market	3.8	53
8.04	Ease of access to loans	3.4	32
8.05	Venture capital availability	2.8	50
8.06	Restriction on capital flows	5.7	8
8.07	Soundness of banks	6.1	16
8.08	Regulation of securities exchanges	5.1	28
8.09	Legal rights index, 0–10 (best)*	5.0	75
	9th pillar: Technological readiness		
9.01	Availability of latest technologies	5.4	54
9.02	Firm-level technology absorption	5.1	54
9.03	FDI and technology transfer	4.9	56
9.04	Internet users/100 pop.*	22.5	89
9.05	Broadband Internet subscriptions/100 pop.*	7.2	60
9.06	Internet bandwidth, Mb/s per 10,000 pop.*	3.6	87
	10th pillar: Market size		
10.01	Domestic market size index, 1–7 (best)*	2.4	116
10.02	Foreign market size index, 1–7 (best)*	3.3	105
	11th pillar: Business sophistication		
11.01	Local supplier quantity	4.7	75
11.02	Local supplier quality	4.5	66
11.03	State of cluster development	4.1	37
11.04	Nature of competitive advantage	3.9	37
11.05	Value chain breadth	4.4	27
11.06	Control of international distribution	4.7	21
11.07	Production process sophistication	4.0	50
11.08	Extent of marketing	4.2	65
11.09	Willingness to delegate authority	3.7	58
	12th pillar: Innovation		
12.01	Capacity for innovation	2.8	76
12.02	Quality of scientific research institutions	3.3	86
12.03	Company spending on R&D	3.0	64
12.04	University-industry collaboration in R&D	3.2	94
12.05	Gov't procurement of advanced tech products	3.7	67
12.06	Availability of scientists and engineers	3.4	112
12.07	Utility patents/million pop.*	0.0	90

Notes: An asterisk (*) indicates that data are from sources other than the World Economic Forum. For further details and explanation, please refer to the section "How to Read the Competitiveness Profiles" on page 115.

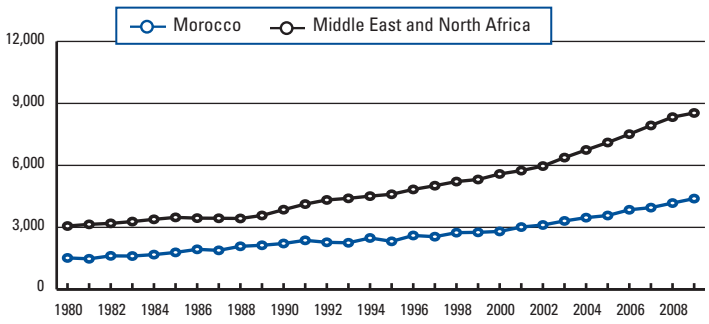
Morocco

Key indicators, 2009

Population (millions)	32.0
GDP (US$ billions)	90.8
GDP per capita (US$)	2,864.5
GDP (PPP) as share (%) of world total	0.21
Sectoral value-added (% GDP)	
Agriculture	19.9
Industry	27.3
Services	52.8
Human Development Index, 2010	
Score, (0–1) best	0.57
Rank (out of 169 economies)	114

Sources: UNFPA, IMF, EIU, World Bank, UNDP.

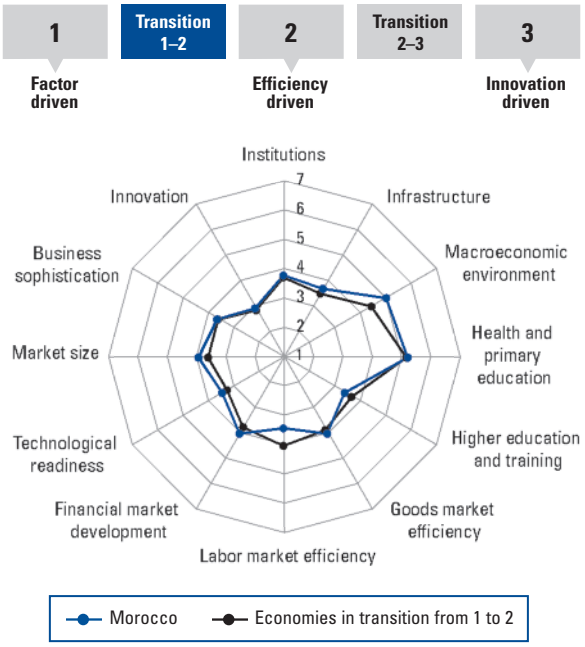
GDP (PPP) per capita (int'l $), 1980–2009



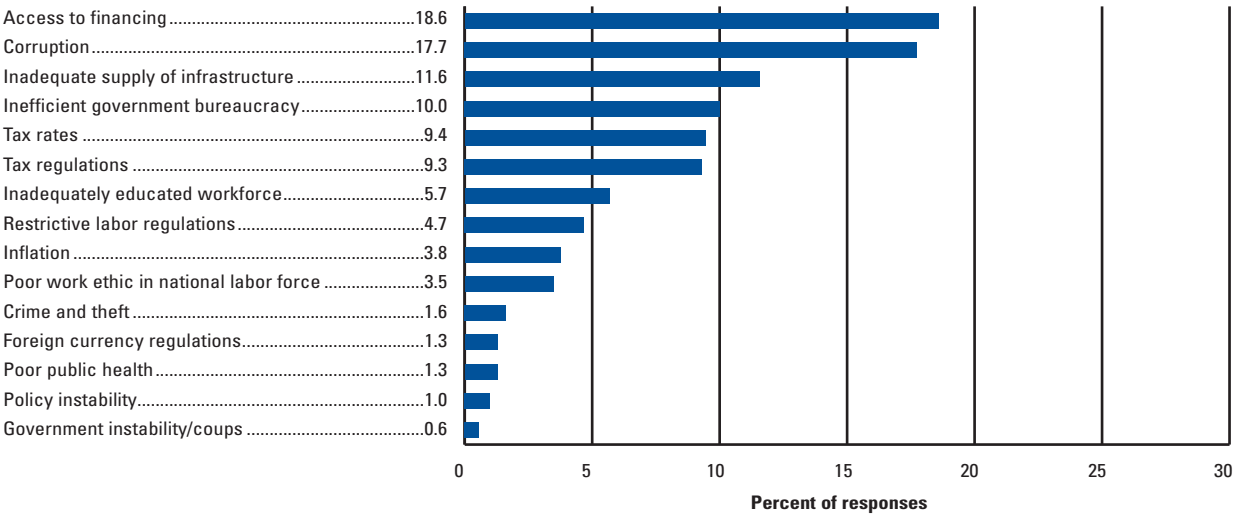
Global Competitiveness Index

	Rank (out of 139)	Score (1–7)
GCI 2010–2011	**75**	**4.1**
GCI 2009–2010 (out of 133)	73	4.0
GCI 2008–2009 (out of 134)	73	4.1
Basic requirements	**64**	**4.6**
1st pillar: Institutions	66	3.9
2nd pillar: Infrastructure	71	3.8
3rd pillar: Macroeconomic environment	31	5.2
4th pillar: Health and primary education	94	5.4
Efficiency enhancers	**88**	**3.8**
5th pillar: Higher education and training	102	3.5
6th pillar: Goods market efficiency	77	4.1
7th pillar: Labor market efficiency	130	3.5
8th pillar: Financial market development	74	4.1
9th pillar: Technological readiness	75	3.5
10th pillar: Market size	57	4.0
Innovation and sophistication factors	**79**	**3.4**
11th pillar: Business sophistication	78	3.7
12th pillar: Innovation	81	3.0

Stage of development



The most problematic factors for doing business



Note: From a list of 15 factors, respondents were asked to select the five most problematic for doing business in their country and to rank them between 1 (most problematic) and 5. The bars in the figure show the responses weighted according to their rankings.

Morocco

The Global Competitiveness Index in detail

	INDICATOR	SCORE	RANK/139
	1st pillar: Institutions		
1.01	Property rights	4.4	63
1.02	Intellectual property protection	3.4	72
1.03	Diversion of public funds	3.4	63
1.04	Public trust of politicians	3.1	59
1.05	Irregular payments and bribes	3.8	82
1.06	Judicial independence	3.5	79
1.07	Favoritism in decisions of government officials	3.3	52
1.08	Wastefulness of government spending	3.2	74
1.09	Burden of government regulation	3.4	61
1.10	Efficiency of legal framework in settling disputes	3.9	57
1.11	Efficiency of legal framework in challenging regs	3.9	53
1.12	Transparency of government policymaking	4.2	76
1.13	Business costs of terrorism	5.4	84
1.14	Business costs of crime and violence	5.2	57
1.15	Organized crime	5.6	58
1.16	Reliability of police services	4.3	62
1.17	Ethical behavior of firms	3.8	76
1.18	Strength of auditing and reporting standards	4.2	100
1.19	Efficacy of corporate boards	4.6	64
1.20	Protection of minority shareholders' interests	4.5	58
1.21	Strength of investor protection, 0–10 (best)*	3.0	127
	2nd pillar: Infrastructure		
2.01	Quality of overall infrastructure	4.1	71
2.02	Quality of roads	3.4	88
2.03	Quality of railroad infrastructure	3.7	37
2.04	Quality of port infrastructure	4.4	62
2.05	Quality of air transport infrastructure	4.7	67
2.06	Available airline seat Kms/week, millions*	364.8	46
2.07	Quality of electricity supply	4.9	66
2.08	Fixed telephone lines/100 pop.*	11.0	91
2.09	Mobile telephone subscriptions/100 pop.*	79.1	89
	3rd pillar: Macroeconomic environment		
3.01	Government budget balance, % GDP*	-2.5	40
3.02	National savings rate, % GDP*	31.0	21
3.03	Inflation, annual % change*	1.0	33
3.04	Interest rate spread, %*	2.4	21
3.05	Government debt, % GDP*	55.1	98
3.06	Country credit rating, 0–100 (worst)*	53.3	63
	4th pillar: Health and primary education		
4.01	Business impact of malaria	n/appl.	1
4.02	Malaria incidence/100,000 pop.*	0.0	1
4.03	Business impact of tuberculosis	4.7	99
4.04	Tuberculosis incidence/100,000 pop.*	116.3	93
4.05	Business impact of HIV/AIDS	4.5	105
4.06	HIV prevalence, % adult pop.*	0.1	22
4.07	Infant mortality, deaths/1,000 live births*	32.3	101
4.08	Life expectancy, years*	71.3	88
4.09	Quality of primary education	3.1	100
4.10	Primary education enrollment, net %*	89.5	99
	5th pillar: Higher education and training		
5.01	Secondary education enrollment, gross %*	55.8	110
5.02	Tertiary education enrollment, gross %*	12.3	102
5.03	Quality of the educational system	3.1	105
5.04	Quality of math and science education	4.0	67
5.05	Quality of management schools	4.5	49
5.06	Internet access in schools	3.6	83
5.07	Availability of research and training services	4.2	60
5.08	Extent of staff training	3.7	87

	INDICATOR	SCORE	RANK/139
	6th pillar: Goods market efficiency		
6.01	Intensity of local competition	4.9	69
6.02	Extent of market dominance	3.7	68
6.03	Effectiveness of anti-monopoly policy	4.0	71
6.04	Extent and effect of taxation	3.2	100
6.05	Total tax rate, % profits*	41.7	73
6.06	No. procedures to start a business*	6.0	34
6.07	No. days to start a business*	12.0	42
6.08	Agricultural policy costs	3.5	108
6.09	Prevalence of trade barriers	4.1	104
6.10	Trade tariffs, % duty*	15.4	128
6.11	Prevalence of foreign ownership	4.6	74
6.12	Business impact of rules on FDI	4.7	74
6.13	Burden of customs procedures	4.3	60
6.14	Degree of customer orientation	4.8	57
6.15	Buyer sophistication	3.1	95
	7th pillar: Labor market efficiency		
7.01	Cooperation in labor-employer relations	3.7	120
7.02	Flexibility of wage determination	5.1	71
7.03	Rigidity of employment index, 0–100 (worst)*	60.0	132
7.04	Hiring and firing practices	4.0	66
7.05	Redundancy costs, weeks of wages*	85.0	106
7.06	Pay and productivity	4.2	50
7.07	Reliance on professional management	3.7	105
7.08	Brain drain	3.2	76
7.09	Females in labor force, ratio to males*	0.3	135
	8th pillar: Financial market development		
8.01	Availability of financial services	4.8	61
8.02	Affordability of financial services	4.5	56
8.03	Financing through local equity market	4.2	31
8.04	Ease of access to loans	3.1	44
8.05	Venture capital availability	3.0	40
8.06	Restriction on capital flows	3.8	105
8.07	Soundness of banks	5.2	69
8.08	Regulation of securities exchanges	4.7	43
8.09	Legal rights index, 0–10 (best)*	3.0	103
	9th pillar: Technological readiness		
9.01	Availability of latest technologies	5.0	68
9.02	Firm-level technology absorption	4.8	74
9.03	FDI and technology transfer	5.0	45
9.04	Internet users/100 pop.*	32.2	71
9.05	Broadband Internet subscriptions/100 pop.*	1.5	87
9.06	Internet bandwidth, Mb/s per 10,000 pop.*	16.0	64
	10th pillar: Market size		
10.01	Domestic market size index, 1–7 (best)*	3.9	56
10.02	Foreign market size index, 1–7 (best)*	4.4	68
	11th pillar: Business sophistication		
11.01	Local supplier quantity	5.0	52
11.02	Local supplier quality	4.3	78
11.03	State of cluster development	3.4	69
11.04	Nature of competitive advantage	3.3	73
11.05	Value chain breadth	3.5	70
11.06	Control of international distribution	3.6	103
11.07	Production process sophistication	3.6	71
11.08	Extent of marketing	3.9	76
11.09	Willingness to delegate authority	3.2	96
	12th pillar: Innovation		
12.01	Capacity for innovation	2.7	94
12.02	Quality of scientific research institutions	3.1	93
12.03	Company spending on R&D	2.7	97
12.04	University-industry collaboration in R&D	3.1	104
12.05	Gov't procurement of advanced tech products	3.6	71
12.06	Availability of scientists and engineers	4.5	46
12.07	Utility patents/million pop.*	0.0	86

Notes: An asterisk (*) indicates that data are from sources other than the World Economic Forum. For further details and explanation, please refer to the section "How to Read the Competitiveness Profiles" on page 115.

Mozambique

Key indicators, 2009

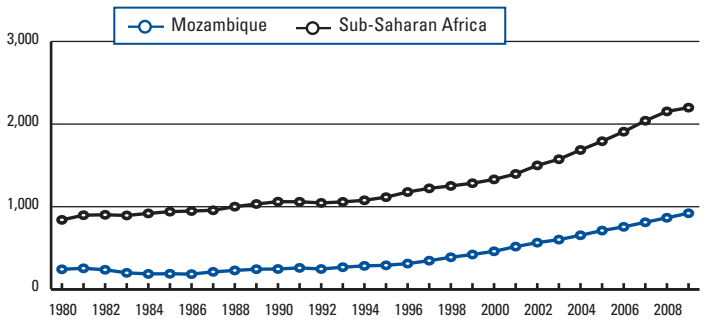
Population (millions) 22.9
GDP (US$ billions) 9.8
GDP per capita (US$) 464.5
GDP (PPP) as share (%) of world total 0.03

Sectoral value-added (% GDP)
Agriculture 29.2
Industry 23.6
Services 47.2

Human Development Index, 2010
Score, (0–1) best 0.28
Rank (out of 169 economies) 165

Sources: UNFPA, IMF, EIU, World Bank, UNDP.

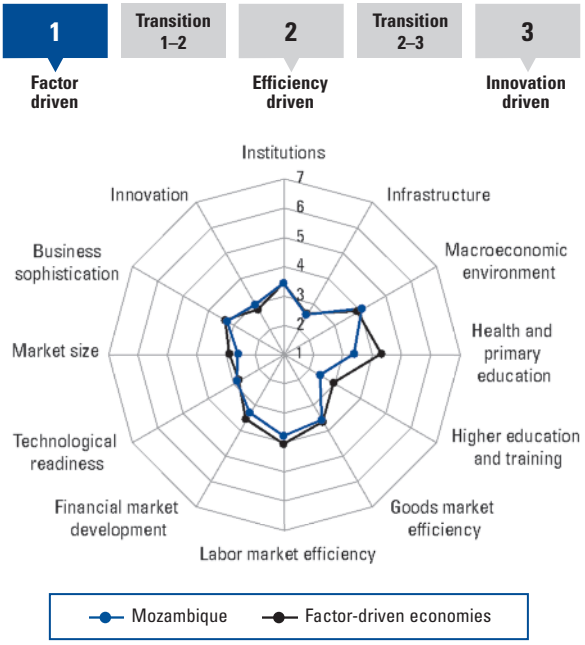
GDP (PPP) per capita (int'l $), 1980–2009



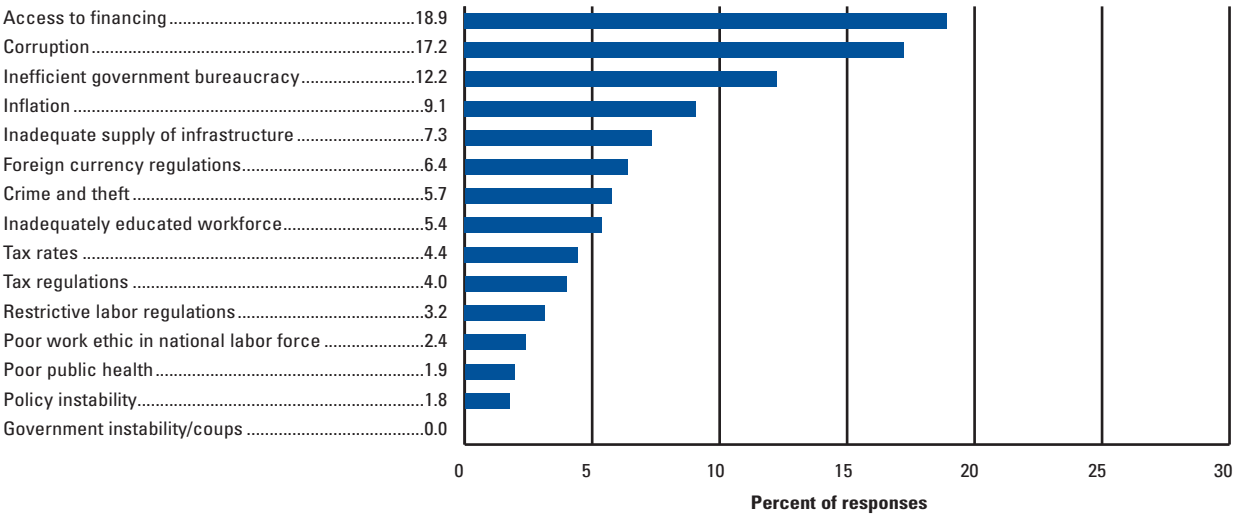
Global Competitiveness Index

	Rank (out of 139)	Score (1–7)
GCI 2010–2011	**131**	**3.3**
GCI 2009–2010 (out of 133)	129	3.2
GCI 2008–2009 (out of 134)	130	3.1
Basic requirements	**130**	**3.4**
1st pillar: Institutions	99	3.5
2nd pillar: Infrastructure	119	2.6
3rd pillar: Macroeconomic environment	104	4.2
4th pillar: Health and primary education	133	3.5
Efficiency enhancers	**128**	**3.2**
5th pillar: Higher education and training	134	2.5
6th pillar: Goods market efficiency	112	3.7
7th pillar: Labor market efficiency	116	3.9
8th pillar: Financial market development	116	3.4
9th pillar: Technological readiness	113	2.9
10th pillar: Market size	113	2.6
Innovation and sophistication factors	**101**	**3.1**
11th pillar: Business sophistication	110	3.3
12th pillar: Innovation	84	3.0

Stage of development



The most problematic factors for doing business



Note: From a list of 15 factors, respondents were asked to select the five most problematic for doing business in their country and to rank them between 1 (most problematic) and 5. The bars in the figure show the responses weighted according to their rankings.

Mozambique

The Global Competitiveness Index in detail

	INDICATOR	SCORE	RANK/139
	1st pillar: Institutions		
1.01	Property rights	3.3	117
1.02	Intellectual property protection	2.5	124
1.03	Diversion of public funds	2.5	114
1.04	Public trust of politicians	3.0	64
1.05	Irregular payments and bribes	3.7	84
1.06	Judicial independence	2.9	105
1.07	Favoritism in decisions of government officials	3.0	70
1.08	Wastefulness of government spending	3.1	80
1.09	Burden of government regulation	3.4	57
1.10	Efficiency of legal framework in settling disputes	3.5	76
1.11	Efficiency of legal framework in challenging regs	3.4	78
1.12	Transparency of government policymaking	4.3	66
1.13	Business costs of terrorism	5.2	97
1.14	Business costs of crime and violence	4.0	106
1.15	Organized crime	4.0	122
1.16	Reliability of police services	3.7	90
1.17	Ethical behavior of firms	3.3	108
1.18	Strength of auditing and reporting standards	4.1	103
1.19	Efficacy of corporate boards	4.0	125
1.20	Protection of minority shareholders' interests	3.9	92
1.21	Strength of investor protection, 0–10 (best)*	6.0	33
	2nd pillar: Infrastructure		
2.01	Quality of overall infrastructure	3.3	110
2.02	Quality of roads	2.4	129
2.03	Quality of railroad infrastructure	2.4	73
2.04	Quality of port infrastructure	3.5	104
2.05	Quality of air transport infrastructure	4.1	92
2.06	Available airline seat Kms/week, millions*	23.2	112
2.07	Quality of electricity supply	3.3	105
2.08	Fixed telephone lines/100 pop.*	0.4	136
2.09	Mobile telephone subscriptions/100 pop.*	26.1	130
	3rd pillar: Macroeconomic environment		
3.01	Government budget balance, % GDP*	-5.7	99
3.02	National savings rate, % GDP*	8.7	127
3.03	Inflation, annual % change*	3.3	74
3.04	Interest rate spread, %*	6.2	80
3.05	Government debt, % GDP*	38.1	67
3.06	Country credit rating, 0–100 (worst)*	27.4	116
	4th pillar: Health and primary education		
4.01	Business impact of malaria	3.2	128
4.02	Malaria incidence/100,000 pop.*	35,441.2	131
4.03	Business impact of tuberculosis	3.6	130
4.04	Tuberculosis incidence/100,000 pop.*	420.2	130
4.05	Business impact of HIV/AIDS	3.1	130
4.06	HIV prevalence, % adult pop.*	12.5	132
4.07	Infant mortality, deaths/1,000 live births*	90.4	132
4.08	Life expectancy, years*	47.9	134
4.09	Quality of primary education	2.4	130
4.10	Primary education enrollment, net %*	79.9	121
	5th pillar: Higher education and training		
5.01	Secondary education enrollment, gross %*	20.6	135
5.02	Tertiary education enrollment, gross %*	1.5	137
5.03	Quality of the educational system	3.5	81
5.04	Quality of math and science education	2.9	118
5.05	Quality of management schools	3.3	117
5.06	Internet access in schools	2.6	120
5.07	Availability of research and training services	3.0	126
5.08	Extent of staff training	3.4	111

	INDICATOR	SCORE	RANK/139
	6th pillar: Goods market efficiency		
6.01	Intensity of local competition	4.0	120
6.02	Extent of market dominance	3.1	114
6.03	Effectiveness of anti-monopoly policy	3.6	100
6.04	Extent and effect of taxation	3.3	88
6.05	Total tax rate, % profits*	34.3	48
6.06	No. procedures to start a business*	10.0	99
6.07	No. days to start a business*	26.0	84
6.08	Agricultural policy costs	3.5	109
6.09	Prevalence of trade barriers	3.9	117
6.10	Trade tariffs, % duty*	7.5	84
6.11	Prevalence of foreign ownership	4.7	71
6.12	Business impact of rules on FDI	4.7	69
6.13	Burden of customs procedures	3.7	97
6.14	Degree of customer orientation	4.0	110
6.15	Buyer sophistication	2.9	111
	7th pillar: Labor market efficiency		
7.01	Cooperation in labor-employer relations	3.8	114
7.02	Flexibility of wage determination	4.1	120
7.03	Rigidity of employment index, 0–100 (worst)*	40.0	100
7.04	Hiring and firing practices	3.3	110
7.05	Redundancy costs, weeks of wages*	134.0	129
7.06	Pay and productivity	3.0	126
7.07	Reliance on professional management	3.6	111
7.08	Brain drain	3.4	63
7.09	Females in labor force, ratio to males*	1.2	1
	8th pillar: Financial market development		
8.01	Availability of financial services	4.2	92
8.02	Affordability of financial services	3.8	93
8.03	Financing through local equity market	3.0	93
8.04	Ease of access to loans	2.0	123
8.05	Venture capital availability	2.1	110
8.06	Restriction on capital flows	3.4	121
8.07	Soundness of banks	5.2	71
8.08	Regulation of securities exchanges	3.7	101
8.09	Legal rights index, 0–10 (best)*	2.0	129
	9th pillar: Technological readiness		
9.01	Availability of latest technologies	4.3	104
9.02	Firm-level technology absorption	4.4	97
9.03	FDI and technology transfer	5.2	18
9.04	Internet users/100 pop.*	2.7	126
9.05	Broadband Internet subscriptions/100 pop.*	0.1	119
9.06	Internet bandwidth, Mb/s per 10,000 pop.*	0.6	107
	10th pillar: Market size		
10.01	Domestic market size index, 1–7 (best)*	2.5	109
10.02	Foreign market size index, 1–7 (best)*	2.9	119
	11th pillar: Business sophistication		
11.01	Local supplier quantity	4.1	120
11.02	Local supplier quality	3.6	127
11.03	State of cluster development	2.9	100
11.04	Nature of competitive advantage	2.8	107
11.05	Value chain breadth	3.1	96
11.06	Control of international distribution	3.6	106
11.07	Production process sophistication	3.0	112
11.08	Extent of marketing	3.6	92
11.09	Willingness to delegate authority	2.9	120
	12th pillar: Innovation		
12.01	Capacity for innovation	2.5	108
12.02	Quality of scientific research institutions	3.3	84
12.03	Company spending on R&D	2.8	81
12.04	University-industry collaboration in R&D	4.0	48
12.05	Gov't procurement of advanced tech products	4.1	42
12.06	Availability of scientists and engineers	3.2	119
12.07	Utility patents/million pop.*	0.0	90

Notes: An asterisk (*) indicates that data are from sources other than the World Economic Forum. For further details and explanation, please refer to the section "How to Read the Competitiveness Profiles" on page 115.

Namibia

Key indicators, 2009

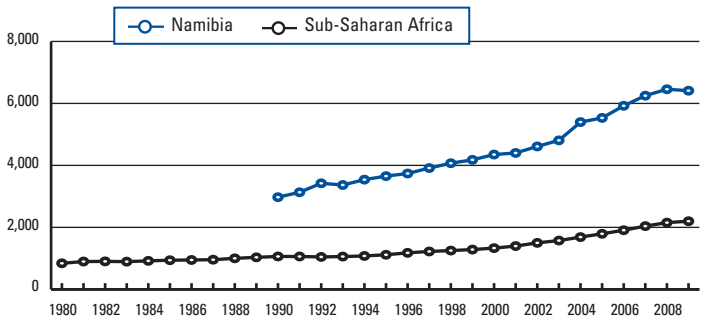
Population (millions) 2.2
GDP (US$ billions) 9.5
GDP per capita (US$) 4,542.9
GDP (PPP) as share (%) of world total 0.02

Sectoral value-added (% GDP)
Agriculture 7.7
Industry 20.5
Services 71.7

Human Development Index, 2010
Score, (0–1) best 0.61
Rank (out of 169 economies) 105

Sources: UNFPA, IMF, EIU, World Bank, UNDP.

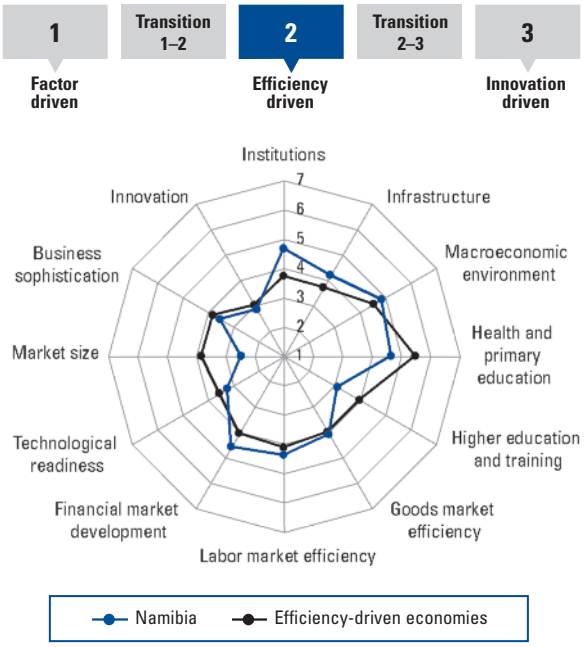
GDP (PPP) per capita (int'l $), 1980–2009



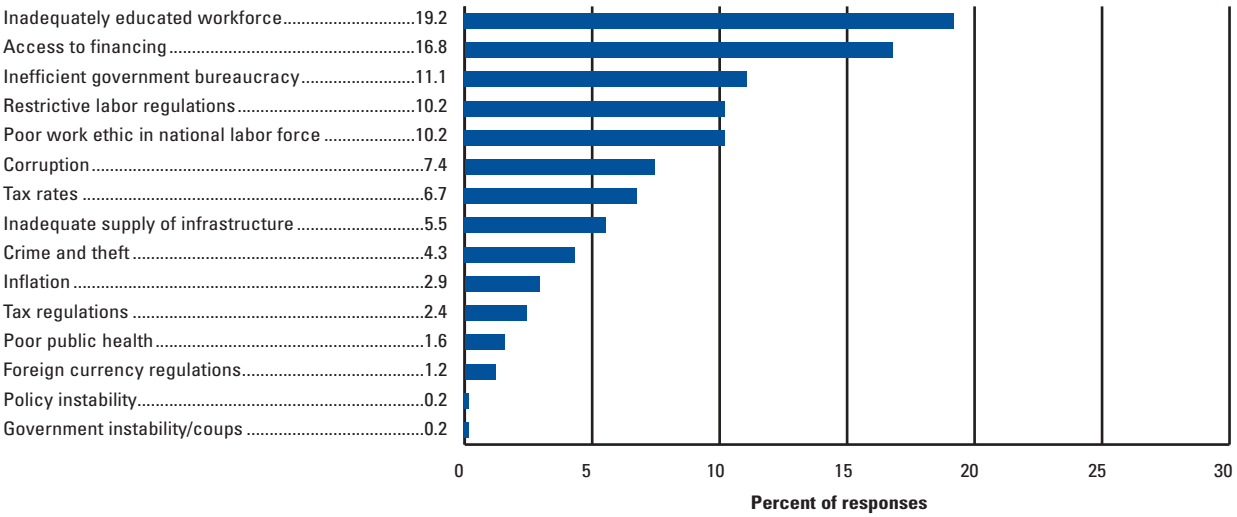
Global Competitiveness Index

	Rank (out of 139)	Score (1–7)
GCI 2010–2011	**74**	**4.1**
GCI 2009–2010 (out of 133)	74	4.0
GCI 2008–2009 (out of 134)	80	4.0
Basic requirements	**54**	**4.7**
1st pillar: Institutions	38	4.8
2nd pillar: Infrastructure	54	4.3
3rd pillar: Macroeconomic environment	40	5.0
4th pillar: Health and primary education	112	4.8
Efficiency enhancers	**91**	**3.8**
5th pillar: Higher education and training	111	3.2
6th pillar: Goods market efficiency	56	4.2
7th pillar: Labor market efficiency	55	4.5
8th pillar: Financial market development	24	4.7
9th pillar: Technological readiness	88	3.3
10th pillar: Market size	114	2.5
Innovation and sophistication factors	**92**	**3.2**
11th pillar: Business sophistication	88	3.6
12th pillar: Innovation	96	2.9

Stage of development



The most problematic factors for doing business



Note: From a list of 15 factors, respondents were asked to select the five most problematic for doing business in their country and to rank them between 1 (most problematic) and 5. The bars in the figure show the responses weighted according to their rankings.

Namibia

The Global Competitiveness Index in detail

	INDICATOR	SCORE	RANK/139
	1st pillar: Institutions		
1.01	Property rights	5.6	20
1.02	Intellectual property protection	4.8	31
1.03	Diversion of public funds	4.2	44
1.04	Public trust of politicians	4.0	30
1.05	Irregular payments and bribes	4.8	44
1.06	Judicial independence	5.5	23
1.07	Favoritism in decisions of government officials	3.5	45
1.08	Wastefulness of government spending	4.2	27
1.09	Burden of government regulation	3.6	38
1.10	Efficiency of legal framework in settling disputes	4.9	24
1.11	Efficiency of legal framework in challenging regs	4.9	15
1.12	Transparency of government policymaking	4.8	39
1.13	Business costs of terrorism	6.3	37
1.14	Business costs of crime and violence	4.0	107
1.15	Organized crime	5.3	75
1.16	Reliability of police services	4.5	54
1.17	Ethical behavior of firms	4.6	45
1.18	Strength of auditing and reporting standards	5.9	11
1.19	Efficacy of corporate boards	5.0	21
1.20	Protection of minority shareholders' interests	5.2	14
1.21	Strength of investor protection, 0–10 (best)*	5.3	59
	2nd pillar: Infrastructure		
2.01	Quality of overall infrastructure	5.6	25
2.02	Quality of roads	5.8	15
2.03	Quality of railroad infrastructure	4.1	30
2.04	Quality of port infrastructure	5.6	16
2.05	Quality of air transport infrastructure	5.1	55
2.06	Available airline seat Kms/week, millions*	30.5	106
2.07	Quality of electricity supply	5.7	41
2.08	Fixed telephone lines/100 pop.*	6.5	104
2.09	Mobile telephone subscriptions/100 pop.*	56.1	109
	3rd pillar: Macroeconomic environment		
3.01	Government budget balance, % GDP*	-2.0	31
3.02	National savings rate, % GDP*	29.7	29
3.03	Inflation, annual % change*	9.1	118
3.04	Interest rate spread, %*	4.9	56
3.05	Government debt, % GDP*	15.1	15
3.06	Country credit rating, 0–100 (worst)*	51.8	68
	4th pillar: Health and primary education		
4.01	Business impact of malaria	4.2	115
4.02	Malaria incidence/100,000 pop.*	1,698.5	112
4.03	Business impact of tuberculosis	4.0	121
4.04	Tuberculosis incidence/100,000 pop.*	746.9	136
4.05	Business impact of HIV/AIDS	3.2	128
4.06	HIV prevalence, % adult pop.*	15.3	134
4.07	Infant mortality, deaths/1,000 live births*	31.4	99
4.08	Life expectancy, years*	61.0	112
4.09	Quality of primary education	3.3	87
4.10	Primary education enrollment, net %*	89.0	101
	5th pillar: Higher education and training		
5.01	Secondary education enrollment, gross %*	65.8	103
5.02	Tertiary education enrollment, gross %*	8.9	110
5.03	Quality of the educational system	3.0	112
5.04	Quality of math and science education	2.8	120
5.05	Quality of management schools	3.1	127
5.06	Internet access in schools	3.1	103
5.07	Availability of research and training services	3.2	116
5.08	Extent of staff training	4.0	66

	INDICATOR	SCORE	RANK/139
	6th pillar: Goods market efficiency		
6.01	Intensity of local competition	4.6	88
6.02	Extent of market dominance	3.4	86
6.03	Effectiveness of anti-monopoly policy	4.2	60
6.04	Extent and effect of taxation	4.0	33
6.05	Total tax rate, % profits*	9.6	2
6.06	No. procedures to start a business*	10.0	99
6.07	No. days to start a business*	66.0	128
6.08	Agricultural policy costs	4.6	17
6.09	Prevalence of trade barriers	4.5	75
6.10	Trade tariffs, % duty*	6.1	77
6.11	Prevalence of foreign ownership	5.3	32
6.12	Business impact of rules on FDI	5.1	42
6.13	Burden of customs procedures	4.2	65
6.14	Degree of customer orientation	3.9	115
6.15	Buyer sophistication	3.5	61
	7th pillar: Labor market efficiency		
7.01	Cooperation in labor-employer relations	3.9	108
7.02	Flexibility of wage determination	5.0	83
7.03	Rigidity of employment index, 0–100 (worst)*	13.0	27
7.04	Hiring and firing practices	2.9	124
7.05	Redundancy costs, weeks of wages*	24.0	44
7.06	Pay and productivity	3.3	107
7.07	Reliance on professional management	4.9	39
7.08	Brain drain	3.6	54
7.09	Females in labor force, ratio to males*	0.8	53
	8th pillar: Financial market development		
8.01	Availability of financial services	5.2	36
8.02	Affordability of financial services	4.0	79
8.03	Financing through local equity market	3.8	57
8.04	Ease of access to loans	3.1	48
8.05	Venture capital availability	2.6	65
8.06	Restriction on capital flows	4.0	90
8.07	Soundness of banks	6.2	15
8.08	Regulation of securities exchanges	5.0	30
8.09	Legal rights index, 0–10 (best)*	8.0	20
	9th pillar: Technological readiness		
9.01	Availability of latest technologies	5.5	44
9.02	Firm-level technology absorption	5.2	45
9.03	FDI and technology transfer	5.0	47
9.04	Internet users/100 pop.*	5.9	115
9.05	Broadband Internet subscriptions/100 pop.*	0.0	129
9.06	Internet bandwidth, Mb/s per 10,000 pop.*	0.3	120
	10th pillar: Market size		
10.01	Domestic market size index, 1–7 (best)*	2.3	118
10.02	Foreign market size index, 1–7 (best)*	3.2	111
	11th pillar: Business sophistication		
11.01	Local supplier quantity	4.0	127
11.02	Local supplier quality	4.4	72
11.03	State of cluster development	3.3	81
11.04	Nature of competitive advantage	3.2	79
11.05	Value chain breadth	2.6	131
11.06	Control of international distribution	3.4	119
11.07	Production process sophistication	3.4	82
11.08	Extent of marketing	3.8	87
11.09	Willingness to delegate authority	3.7	56
	12th pillar: Innovation		
12.01	Capacity for innovation	2.4	113
12.02	Quality of scientific research institutions	3.4	80
12.03	Company spending on R&D	2.7	92
12.04	University-industry collaboration in R&D	3.4	80
12.05	Gov't procurement of advanced tech products	3.4	85
12.06	Availability of scientists and engineers	2.9	135
12.07	Utility patents/million pop.*	0.0	90

Notes: An asterisk (*) indicates that data are from sources other than the World Economic Forum. For further details and explanation, please refer to the section "How to Read the Competitiveness Profiles" on page 115.

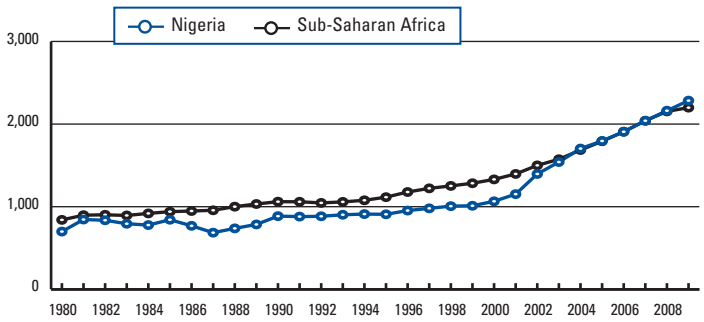
Nigeria

Key indicators, 2009

Population (millions)	154.7
GDP (US$ billions)	173.4
GDP per capita (US$)	1,141.9
GDP (PPP) as share (%) of world total	0.48
Sectoral value-added (% GDP)	
Agriculture	32.7
Industry	40.7
Services	26.6
Human Development Index, 2010	
Score, (0–1) best	0.42
Rank (out of 169 economies)	142

Sources: UNFPA, IMF, EIU, World Bank, UNDP.

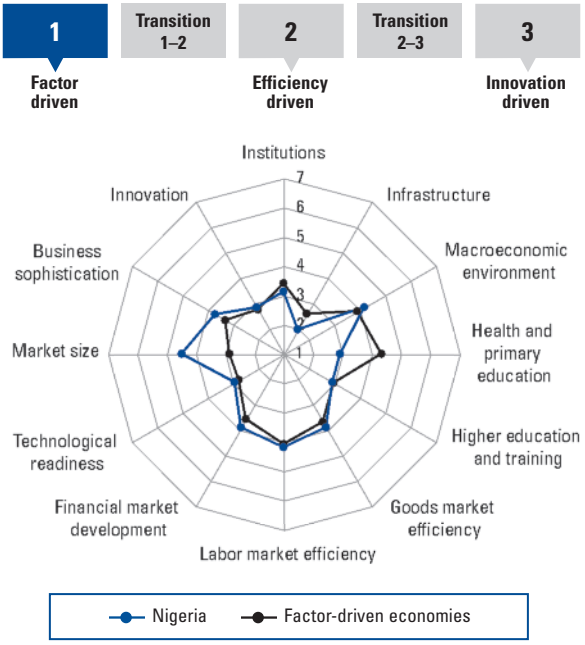
GDP (PPP) per capita (int'l $), 1980–2009



Global Competitiveness Index

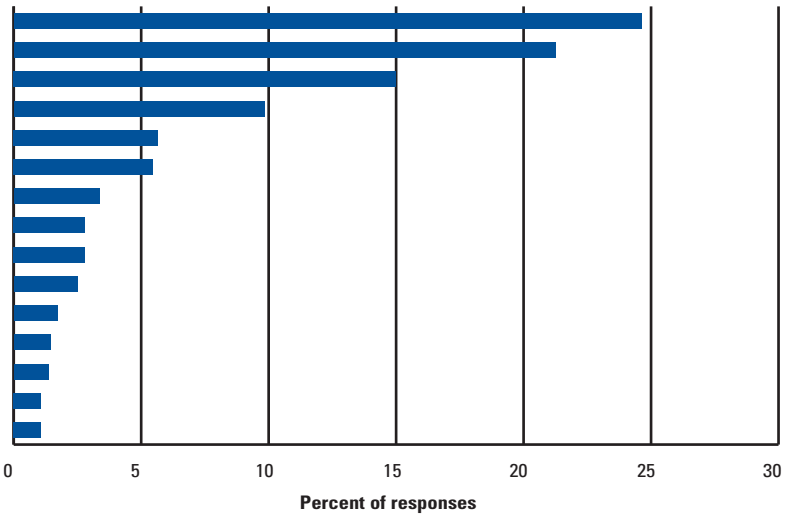
	Rank (out of 139)	Score (1–7)
GCI 2010–2011	**127**	**3.4**
GCI 2009–2010 (out of 133)	99	3.6
GCI 2008–2009 (out of 134)	94	3.8
Basic requirements	**136**	**3.1**
1st pillar: Institutions	121	3.2
2nd pillar: Infrastructure	135	2.0
3rd pillar: Macroeconomic environment	97	4.3
4th pillar: Health and primary education	137	3.0
Efficiency enhancers	**84**	**3.8**
5th pillar: Higher education and training	118	3.0
6th pillar: Goods market efficiency	87	4.0
7th pillar: Labor market efficiency	74	4.3
8th pillar: Financial market development	84	4.0
9th pillar: Technological readiness	104	3.0
10th pillar: Market size	30	4.6
Innovation and sophistication factors	**83**	**3.3**
11th pillar: Business sophistication	76	3.8
12th pillar: Innovation	98	2.9

Stage of development



The most problematic factors for doing business

Access to financing	24.6
Inadequate supply of infrastructure	21.2
Corruption	15.0
Policy instability	9.8
Government instability/coups	5.7
Inefficient government bureaucracy	5.5
Inflation	3.4
Inadequately educated workforce	2.8
Crime and theft	2.8
Poor work ethic in national labor force	2.5
Foreign currency regulations	1.7
Restrictive labor regulations	1.4
Poor public health	1.4
Tax regulations	1.1
Tax rates	1.1



Note: From a list of 15 factors, respondents were asked to select the five most problematic for doing business in their country and to rank them between 1 (most problematic) and 5. The bars in the figure show the responses weighted according to their rankings.

Nigeria

The Global Competitiveness Index in detail

	INDICATOR	SCORE	RANK/139
	1st pillar: Institutions		
1.01	Property rights	3.3	118
1.02	Intellectual property protection	2.9	95
1.03	Diversion of public funds	2.2	126
1.04	Public trust of politicians	1.8	125
1.05	Irregular payments and bribes	2.9	121
1.06	Judicial independence	3.5	80
1.07	Favoritism in decisions of government officials	2.4	124
1.08	Wastefulness of government spending	2.0	135
1.09	Burden of government regulation	3.1	86
1.10	Efficiency of legal framework in settling disputes	3.7	68
1.11	Efficiency of legal framework in challenging regs	3.3	80
1.12	Transparency of government policymaking	3.6	126
1.13	Business costs of terrorism	4.7	121
1.14	Business costs of crime and violence	3.5	120
1.15	Organized crime	4.2	119
1.16	Reliability of police services	2.8	125
1.17	Ethical behavior of firms	3.1	125
1.18	Strength of auditing and reporting standards	3.4	130
1.19	Efficacy of corporate boards	4.1	107
1.20	Protection of minority shareholders' interests	3.6	117
1.21	Strength of investor protection, 0–10 (best)*	5.7	45
	2nd pillar: Infrastructure		
2.01	Quality of overall infrastructure	2.4	134
2.02	Quality of roads	2.4	128
2.03	Quality of railroad infrastructure	1.5	104
2.04	Quality of port infrastructure	3.0	121
2.05	Quality of air transport infrastructure	3.9	101
2.06	Available airline seat Kms/week, millions*	276.6	53
2.07	Quality of electricity supply	1.3	138
2.08	Fixed telephone lines/100 pop.*	0.9	129
2.09	Mobile telephone subscriptions/100 pop.*	47.2	115
	3rd pillar: Macroeconomic environment		
3.01	Government budget balance, % GDP*	-5.2	90
3.02	National savings rate, % GDP*	22.1	56
3.03	Inflation, annual % change*	12.4	129
3.04	Interest rate spread, %*	5.8	74
3.05	Government debt, % GDP*	14.3	11
3.06	Country credit rating, 0–100 (worst)*	36.1	91
	4th pillar: Health and primary education		
4.01	Business impact of malaria	2.6	135
4.02	Malaria incidence/100,000 pop.*	39,736.4	136
4.03	Business impact of tuberculosis	3.9	124
4.04	Tuberculosis incidence/100,000 pop.*	302.7	120
4.05	Business impact of HIV/AIDS	3.7	118
4.06	HIV prevalence, % adult pop.*	3.1	124
4.07	Infant mortality, deaths/1,000 live births*	95.8	135
4.08	Life expectancy, years*	47.9	133
4.09	Quality of primary education	2.6	122
4.10	Primary education enrollment, net %*	61.4	133
	5th pillar: Higher education and training		
5.01	Secondary education enrollment, gross %*	30.5	127
5.02	Tertiary education enrollment, gross %*	10.1	107
5.03	Quality of the educational system	3.8	63
5.04	Quality of math and science education	2.9	119
5.05	Quality of management schools	3.7	99
5.06	Internet access in schools	3.2	99
5.07	Availability of research and training services	3.7	90
5.08	Extent of staff training	3.9	74

	INDICATOR	SCORE	RANK/139
	6th pillar: Goods market efficiency		
6.01	Intensity of local competition	5.0	62
6.02	Extent of market dominance	3.8	61
6.03	Effectiveness of anti-monopoly policy	4.0	68
6.04	Extent and effect of taxation	3.7	50
6.05	Total tax rate, % profits*	32.2	39
6.06	No. procedures to start a business*	8.0	73
6.07	No. days to start a business*	31.0	95
6.08	Agricultural policy costs	3.2	127
6.09	Prevalence of trade barriers	3.6	127
6.10	Trade tariffs, % duty*	11.2	108
6.11	Prevalence of foreign ownership	4.5	88
6.12	Business impact of rules on FDI	4.5	86
6.13	Burden of customs procedures	3.1	126
6.14	Degree of customer orientation	4.3	86
6.15	Buyer sophistication	3.3	80
	7th pillar: Labor market efficiency		
7.01	Cooperation in labor-employer relations	3.9	112
7.02	Flexibility of wage determination	5.4	41
7.03	Rigidity of employment index, 0–100 (worst)*	7.0	10
7.04	Hiring and firing practices	5.2	8
7.05	Redundancy costs, weeks of wages*	50.0	84
7.06	Pay and productivity	3.9	78
7.07	Reliance on professional management	4.3	70
7.08	Brain drain	3.2	77
7.09	Females in labor force, ratio to males*	0.6	115
	8th pillar: Financial market development		
8.01	Availability of financial services	4.2	90
8.02	Affordability of financial services	3.9	84
8.03	Financing through local equity market	4.0	40
8.04	Ease of access to loans	2.0	126
8.05	Venture capital availability	2.0	120
8.06	Restriction on capital flows	4.0	89
8.07	Soundness of banks	4.1	122
8.08	Regulation of securities exchanges	4.0	82
8.09	Legal rights index, 0–10 (best)*	8.0	20
	9th pillar: Technological readiness		
9.01	Availability of latest technologies	4.2	115
9.02	Firm-level technology absorption	4.7	77
9.03	FDI and technology transfer	4.4	89
9.04	Internet users/100 pop.*	28.4	78
9.05	Broadband Internet subscriptions/100 pop.*	0.1	121
9.06	Internet bandwidth, Mb/s per 10,000 pop.*	0.0	132
	10th pillar: Market size		
10.01	Domestic market size index, 1–7 (best)*	4.5	29
10.02	Foreign market size index, 1–7 (best)*	5.1	40
	11th pillar: Business sophistication		
11.01	Local supplier quantity	5.2	30
11.02	Local supplier quality	4.0	101
11.03	State of cluster development	3.8	48
11.04	Nature of competitive advantage	3.3	66
11.05	Value chain breadth	3.1	98
11.06	Control of international distribution	4.0	71
11.07	Production process sophistication	3.1	98
11.08	Extent of marketing	3.4	103
11.09	Willingness to delegate authority	4.0	42
	12th pillar: Innovation		
12.01	Capacity for innovation	2.9	73
12.02	Quality of scientific research institutions	2.8	113
12.03	Company spending on R&D	3.2	53
12.04	University-industry collaboration in R&D	3.1	102
12.05	Gov't procurement of advanced tech products	3.2	107
12.06	Availability of scientists and engineers	3.9	79
12.07	Utility patents/million pop.*	0.0	90

Notes: An asterisk (*) indicates that data are from sources other than the World Economic Forum. For further details and explanation, please refer to the section "How to Read the Competitiveness Profiles" on page 115.

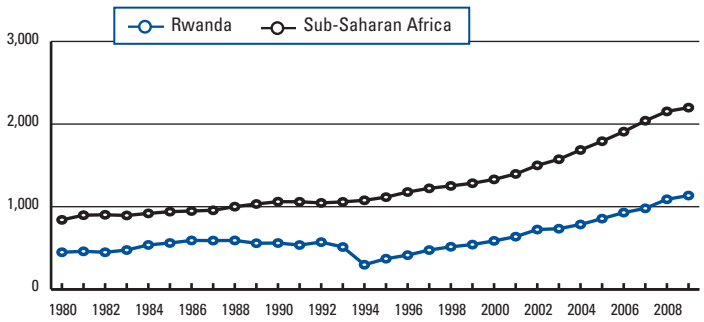
Rwanda

Key indicators, 2009

Population (millions)	10.0
GDP (US$ billions)	5.2
GDP per capita (US$)	535.7
GDP (PPP) as share (%) of world total	0.02
Sectoral value-added (% GDP)	
Agriculture	38.7
Industry	13.5
Services	47.8
Human Development Index, 2010	
Score, (0–1) best	0.39
Rank (out of 169 economies)	152

Sources: UNFPA, IMF, EIU, World Bank, UNDP.

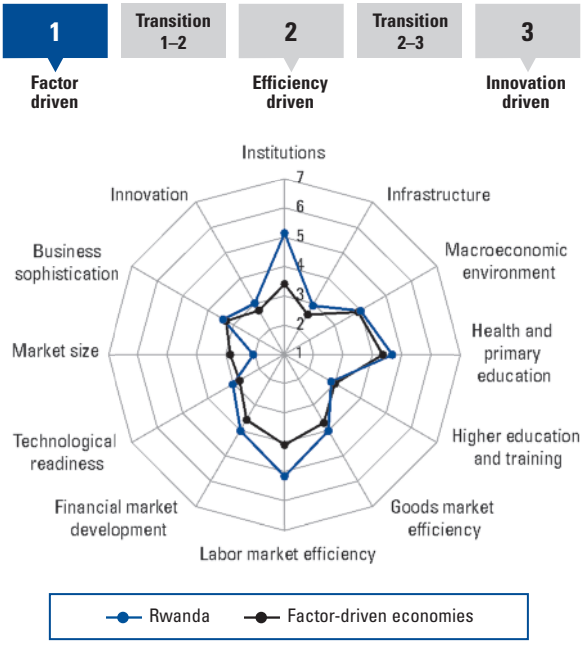
GDP (PPP) per capita (int'l $), 1980–2009



Global Competitiveness Index

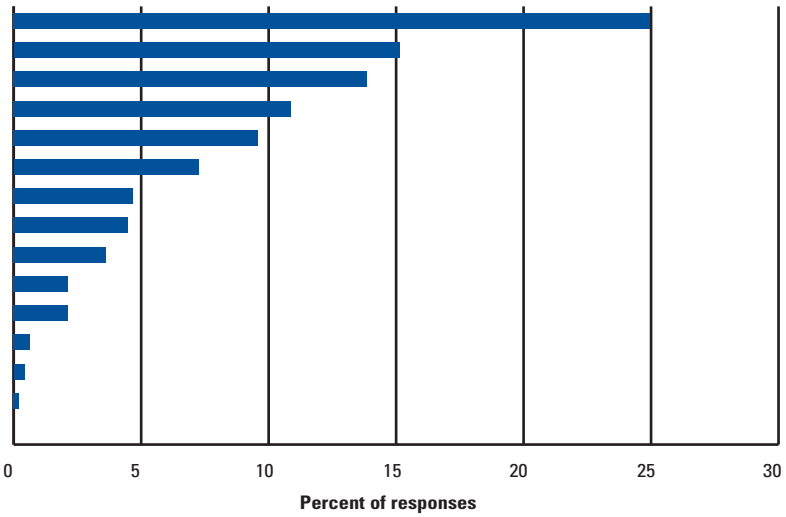
	Rank (out of 139)	Score (1–7)
GCI 2010–2011	**80**	**4.0**
GCI 2009–2010 (out of 133)	n/a	n/a
GCI 2008–2009 (out of 134)	n/a	n/a
Basic requirements	**83**	**4.3**
1st pillar: Institutions	19	5.3
2nd pillar: Infrastructure	101	3.0
3rd pillar: Macroeconomic environment	106	4.1
4th pillar: Health and primary education	111	4.8
Efficiency enhancers	**98**	**3.6**
5th pillar: Higher education and training	121	2.9
6th pillar: Goods market efficiency	70	4.1
7th pillar: Labor market efficiency	9	5.3
8th pillar: Financial market development	69	4.1
9th pillar: Technological readiness	100	3.1
10th pillar: Market size	128	2.1
Innovation and sophistication factors	**87**	**3.3**
11th pillar: Business sophistication	94	3.5
12th pillar: Innovation	71	3.1

Stage of development



The most problematic factors for doing business

Access to financing	24.9
Tax regulations	15.1
Tax rates	13.9
Inadequate supply of infrastructure	10.9
Inadequately educated workforce	9.6
Poor work ethic in national labor force	7.2
Inefficient government bureaucracy	4.7
Policy instability	4.5
Inflation	3.6
Foreign currency regulations	2.1
Poor public health	2.1
Corruption	0.6
Crime and theft	0.4
Restrictive labor regulations	0.2
Government instability/coups	0.0



Note: From a list of 15 factors, respondents were asked to select the five most problematic for doing business in their country and to rank them between 1 (most problematic) and 5. The bars in the figure show the responses weighted according to their rankings.

Rwanda

The Global Competitiveness Index in detail

	INDICATOR	SCORE	RANK/139
	1st pillar: Institutions		
1.01	Property rights	5.0	44
1.02	Intellectual property protection	4.4	41
1.03	Diversion of public funds	5.7	15
1.04	Public trust of politicians	5.4	8
1.05	Irregular payments and bribes	5.6	27
1.06	Judicial independence	5.1	32
1.07	Favoritism in decisions of government officials	5.1	8
1.08	Wastefulness of government spending	5.8	2
1.09	Burden of government regulation	5.0	3
1.10	Efficiency of legal framework in settling disputes	4.5	35
1.11	Efficiency of legal framework in challenging regs	4.2	42
1.12	Transparency of government policymaking	5.1	22
1.13	Business costs of terrorism	6.7	2
1.14	Business costs of crime and violence	6.4	6
1.15	Organized crime	6.9	1
1.16	Reliability of police services	5.8	21
1.17	Ethical behavior of firms	5.0	34
1.18	Strength of auditing and reporting standards	4.4	86
1.19	Efficacy of corporate boards	5.8	3
1.20	Protection of minority shareholders' interests	4.7	42
1.21	Strength of investor protection, 0–10 (best)*	6.3	27
	2nd pillar: Infrastructure		
2.01	Quality of overall infrastructure	4.3	67
2.02	Quality of roads	4.1	56
2.03	Quality of railroad infrastructure	n/a	n/a
2.04	Quality of port infrastructure	2.8	130
2.05	Quality of air transport infrastructure	3.9	97
2.06	Available airline seat Kms/week, millions*	4.1	135
2.07	Quality of electricity supply	4.1	85
2.08	Fixed telephone lines/100 pop.*	0.3	137
2.09	Mobile telephone subscriptions/100 pop.*	24.3	132
	3rd pillar: Macroeconomic environment		
3.01	Government budget balance, % GDP*	-1.9	30
3.02	National savings rate, % GDP*	11.9	114
3.03	Inflation, annual % change*	10.4	122
3.04	Interest rate spread, %*	7.9	96
3.05	Government debt, % GDP*	22.1	29
3.06	Country credit rating, 0–100 (worst)*	20.3	129
	4th pillar: Health and primary education		
4.01	Business impact of malaria	3.5	123
4.02	Malaria incidence/100,000 pop.*	34,352.0	130
4.03	Business impact of tuberculosis	4.5	110
4.04	Tuberculosis incidence/100,000 pop.*	386.7	128
4.05	Business impact of HIV/AIDS	3.8	116
4.06	HIV prevalence, % adult pop.*	2.8	123
4.07	Infant mortality, deaths/1,000 live births*	71.6	122
4.08	Life expectancy, years*	50.1	130
4.09	Quality of primary education	4.1	56
4.10	Primary education enrollment, net %*	95.9	50
	5th pillar: Higher education and training		
5.01	Secondary education enrollment, gross %*	21.9	134
5.02	Tertiary education enrollment, gross %*	4.0	124
5.03	Quality of the educational system	3.9	58
5.04	Quality of math and science education	4.1	66
5.05	Quality of management schools	3.6	102
5.06	Internet access in schools	3.3	93
5.07	Availability of research and training services	3.2	118
5.08	Extent of staff training	4.4	38

	INDICATOR	SCORE	RANK/139
	6th pillar: Goods market efficiency		
6.01	Intensity of local competition	4.3	100
6.02	Extent of market dominance	3.4	89
6.03	Effectiveness of anti-monopoly policy	4.4	47
6.04	Extent and effect of taxation	3.7	57
6.05	Total tax rate, % profits*	31.3	35
6.06	No. procedures to start a business*	2.0	3
6.07	No. days to start a business*	3.0	3
6.08	Agricultural policy costs	4.9	7
6.09	Prevalence of trade barriers	3.6	128
6.10	Trade tariffs, % duty*	16.3	130
6.11	Prevalence of foreign ownership	4.6	73
6.12	Business impact of rules on FDI	5.4	19
6.13	Burden of customs procedures	4.8	33
6.14	Degree of customer orientation	3.9	116
6.15	Buyer sophistication	2.6	125
	7th pillar: Labor market efficiency		
7.01	Cooperation in labor-employer relations	5.1	22
7.02	Flexibility of wage determination	5.8	12
7.03	Rigidity of employment index, 0–100 (worst)*	7.0	10
7.04	Hiring and firing practices	4.6	24
7.05	Redundancy costs, weeks of wages*	26.0	48
7.06	Pay and productivity	4.2	45
7.07	Reliance on professional management	5.0	32
7.08	Brain drain	4.3	35
7.09	Females in labor force, ratio to males*	1.0	2
	8th pillar: Financial market development		
8.01	Availability of financial services	4.0	100
8.02	Affordability of financial services	4.0	80
8.03	Financing through local equity market	3.1	92
8.04	Ease of access to loans	2.2	110
8.05	Venture capital availability	2.5	77
8.06	Restriction on capital flows	4.6	59
8.07	Soundness of banks	4.7	95
8.08	Regulation of securities exchanges	4.2	68
8.09	Legal rights index, 0–10 (best)*	8.0	20
	9th pillar: Technological readiness		
9.01	Availability of latest technologies	5.0	71
9.02	Firm-level technology absorption	5.1	53
9.03	FDI and technology transfer	5.0	48
9.04	Internet users/100 pop.*	4.5	121
9.05	Broadband Internet subscriptions/100 pop.*	0.1	116
9.06	Internet bandwidth, Mb/s per 10,000 pop.*	0.4	117
	10th pillar: Market size		
10.01	Domestic market size index, 1–7 (best)*	2.2	124
10.02	Foreign market size index, 1–7 (best)*	1.9	134
	11th pillar: Business sophistication		
11.01	Local supplier quantity	3.6	136
11.02	Local supplier quality	3.8	117
11.03	State of cluster development	3.6	65
11.04	Nature of competitive advantage	3.3	69
11.05	Value chain breadth	3.2	87
11.06	Control of international distribution	4.2	54
11.07	Production process sophistication	2.8	121
11.08	Extent of marketing	3.0	127
11.09	Willingness to delegate authority	3.6	70
	12th pillar: Innovation		
12.01	Capacity for innovation	2.3	119
12.02	Quality of scientific research institutions	3.1	95
12.03	Company spending on R&D	3.0	77
12.04	University-industry collaboration in R&D	3.6	65
12.05	Gov't procurement of advanced tech products	4.4	15
12.06	Availability of scientists and engineers	3.4	108
12.07	Utility patents/million pop.*	0.0	90

Notes: An asterisk (*) indicates that data are from sources other than the World Economic Forum. For further details and explanation, please refer to the section "How to Read the Competitiveness Profiles" on page 115.

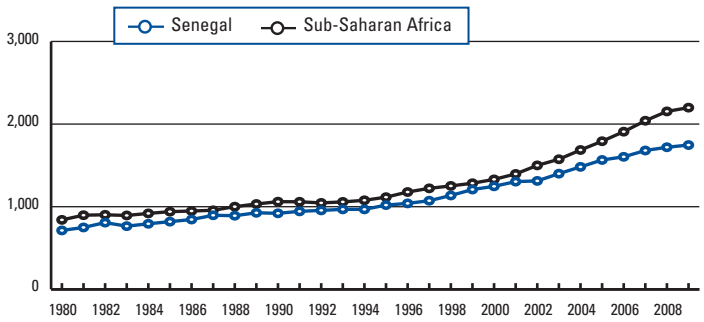
Senegal

Key indicators, 2009

Population (millions)	12.5
GDP (US$ billions)	12.7
GDP per capita (US$)	993.7
GDP (PPP) as share (%) of world total	0.03
Sectoral value-added (% GDP)	
Agriculture	16.1
Industry	21.0
Services	62.9
Human Development Index, 2010	
Score, (0–1) best	0.41
Rank (out of 169 economies)	144

Sources: UNFPA, IMF, EIU, World Bank, UNDP.

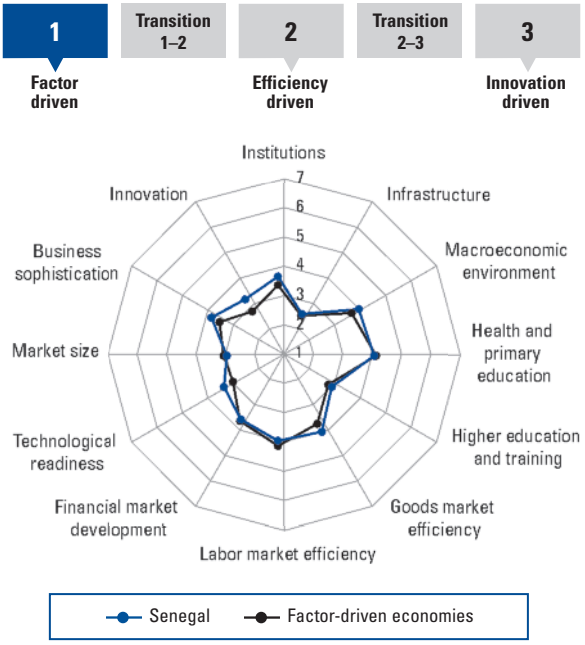
GDP (PPP) per capita (int'l $), 1980–2009



Global Competitiveness Index

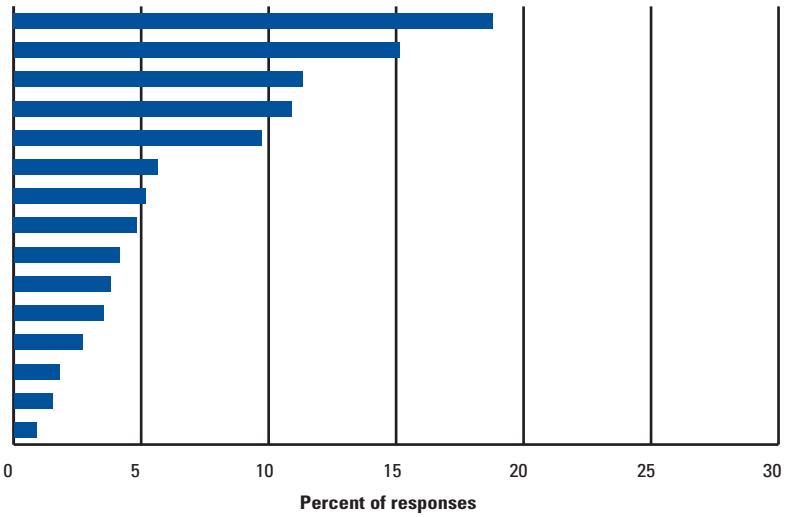
	Rank (out of 139)	Score (1–7)
GCI 2010–2011	**104**	**3.7**
GCI 2009–2010 (out of 133)	92	3.8
GCI 2008–2009 (out of 134)	96	3.7
Basic requirements	**108**	**3.8**
1st pillar: Institutions	76	3.8
2nd pillar: Infrastructure	112	2.7
3rd pillar: Macroeconomic environment	89	4.3
4th pillar: Health and primary education	118	4.4
Efficiency enhancers	**108**	**3.5**
5th pillar: Higher education and training	110	3.2
6th pillar: Goods market efficiency	79	4.1
7th pillar: Labor market efficiency	109	4.0
8th pillar: Financial market development	107	3.6
9th pillar: Technological readiness	93	3.2
10th pillar: Market size	105	2.8
Innovation and sophistication factors	**67**	**3.5**
11th pillar: Business sophistication	84	3.7
12th pillar: Innovation	55	3.3

Stage of development



The most problematic factors for doing business

Access to financing	18.8
Tax regulations	15.1
Corruption	11.3
Tax rates	10.9
Inadequate supply of infrastructure	9.7
Inflation	5.7
Restrictive labor regulations	5.2
Inefficient government bureaucracy	4.8
Foreign currency regulations	4.1
Inadequately educated workforce	3.8
Poor work ethic in national labor force	3.5
Policy instability	2.7
Crime and theft	1.8
Poor public health	1.5
Government instability/coups	0.9



Note: From a list of 15 factors, respondents were asked to select the five most problematic for doing business in their country and to rank them between 1 (most problematic) and 5. The bars in the figure show the responses weighted according to their rankings.

Senegal

The Global Competitiveness Index in detail

	INDICATOR	SCORE	RANK/139
	1st pillar: Institutions		
1.01	Property rights	4.0	85
1.02	Intellectual property protection	3.2	82
1.03	Diversion of public funds	2.8	99
1.04	Public trust of politicians	2.1	106
1.05	Irregular payments and bribes	3.7	86
1.06	Judicial independence	3.1	98
1.07	Favoritism in decisions of government officials	2.8	86
1.08	Wastefulness of government spending	2.7	104
1.09	Burden of government regulation	3.4	56
1.10	Efficiency of legal framework in settling disputes	3.6	71
1.11	Efficiency of legal framework in challenging regs	3.3	82
1.12	Transparency of government policymaking	3.9	103
1.13	Business costs of terrorism	6.4	31
1.14	Business costs of crime and violence	5.8	29
1.15	Organized crime	6.0	35
1.16	Reliability of police services	4.2	66
1.17	Ethical behavior of firms	3.8	74
1.18	Strength of auditing and reporting standards	4.7	74
1.19	Efficacy of corporate boards	4.7	61
1.20	Protection of minority shareholders' interests	4.5	53
1.21	Strength of investor protection, 0–10 (best)*	3.0	127
	2nd pillar: Infrastructure		
2.01	Quality of overall infrastructure	3.9	81
2.02	Quality of roads	3.3	91
2.03	Quality of railroad infrastructure	1.9	89
2.04	Quality of port infrastructure	4.7	51
2.05	Quality of air transport infrastructure	4.5	76
2.06	Available airline seat Kms/week, millions*	107.0	78
2.07	Quality of electricity supply	2.3	125
2.08	Fixed telephone lines/100 pop.*	2.2	116
2.09	Mobile telephone subscriptions/100 pop.*	55.1	113
	3rd pillar: Macroeconomic environment		
3.01	Government budget balance, % GDP*	-4.6	82
3.02	National savings rate, % GDP*	22.7	52
3.03	Inflation, annual % change*	-1.1	5
3.04	Interest rate spread, %*	11.0	117
3.05	Government debt, % GDP*	32.1	55
3.06	Country credit rating, 0–100 (worst)*	33.5	96
	4th pillar: Health and primary education		
4.01	Business impact of malaria	3.5	122
4.02	Malaria incidence/100,000 pop.*	12,063.3	117
4.03	Business impact of tuberculosis	4.5	109
4.04	Tuberculosis incidence/100,000 pop.*	276.9	116
4.05	Business impact of HIV/AIDS	4.8	92
4.06	HIV prevalence, % adult pop.*	1.0	104
4.07	Infant mortality, deaths/1,000 live births*	56.9	113
4.08	Life expectancy, years*	55.6	120
4.09	Quality of primary education	3.4	83
4.10	Primary education enrollment, net %*	72.9	127
	5th pillar: Higher education and training		
5.01	Secondary education enrollment, gross %*	30.6	126
5.02	Tertiary education enrollment, gross %*	8.0	112
5.03	Quality of the educational system	3.6	73
5.04	Quality of math and science education	3.9	72
5.05	Quality of management schools	4.6	40
5.06	Internet access in schools	4.2	60
5.07	Availability of research and training services	4.5	45
5.08	Extent of staff training	3.3	113

	INDICATOR	SCORE	RANK/139
	6th pillar: Goods market efficiency		
6.01	Intensity of local competition	5.1	49
6.02	Extent of market dominance	3.9	53
6.03	Effectiveness of anti-monopoly policy	4.0	70
6.04	Extent and effect of taxation	3.1	101
6.05	Total tax rate, % profits*	46.0	88
6.06	No. procedures to start a business*	4.0	14
6.07	No. days to start a business*	8.0	27
6.08	Agricultural policy costs	3.4	118
6.09	Prevalence of trade barriers	4.5	73
6.10	Trade tariffs, % duty*	9.8	99
6.11	Prevalence of foreign ownership	4.9	57
6.12	Business impact of rules on FDI	4.4	92
6.13	Burden of customs procedures	4.7	35
6.14	Degree of customer orientation	4.9	52
6.15	Buyer sophistication	2.3	132
	7th pillar: Labor market efficiency		
7.01	Cooperation in labor-employer relations	4.0	97
7.02	Flexibility of wage determination	4.6	101
7.03	Rigidity of employment index, 0–100 (worst)*	59.0	131
7.04	Hiring and firing practices	3.9	71
7.05	Redundancy costs, weeks of wages*	38.0	74
7.06	Pay and productivity	3.5	101
7.07	Reliance on professional management	3.9	93
7.08	Brain drain	3.0	89
7.09	Females in labor force, ratio to males*	0.7	92
	8th pillar: Financial market development		
8.01	Availability of financial services	4.3	85
8.02	Affordability of financial services	4.0	81
8.03	Financing through local equity market	3.3	80
8.04	Ease of access to loans	2.3	98
8.05	Venture capital availability	2.3	94
8.06	Restriction on capital flows	3.7	109
8.07	Soundness of banks	5.4	53
8.08	Regulation of securities exchanges	3.6	107
8.09	Legal rights index, 0–10 (best)*	3.0	103
	9th pillar: Technological readiness		
9.01	Availability of latest technologies	5.5	53
9.02	Firm-level technology absorption	5.3	40
9.03	FDI and technology transfer	4.5	84
9.04	Internet users/100 pop.*	7.4	110
9.05	Broadband Internet subscriptions/100 pop.*	0.5	102
9.06	Internet bandwidth, Mb/s per 10,000 pop.*	3.7	86
	10th pillar: Market size		
10.01	Domestic market size index, 1–7 (best)*	2.7	100
10.02	Foreign market size index, 1–7 (best)*	3.1	117
	11th pillar: Business sophistication		
11.01	Local supplier quantity	4.7	76
11.02	Local supplier quality	4.5	67
11.03	State of cluster development	2.8	117
11.04	Nature of competitive advantage	3.3	71
11.05	Value chain breadth	3.8	55
11.06	Control of international distribution	3.9	81
11.07	Production process sophistication	3.2	95
11.08	Extent of marketing	3.9	77
11.09	Willingness to delegate authority	2.9	117
	12th pillar: Innovation		
12.01	Capacity for innovation	2.8	77
12.02	Quality of scientific research institutions	4.1	48
12.03	Company spending on R&D	3.2	49
12.04	University-industry collaboration in R&D	3.9	51
12.05	Gov't procurement of advanced tech products	4.0	45
12.06	Availability of scientists and engineers	4.2	61
12.07	Utility patents/million pop.*	0.0	90

Notes: An asterisk (*) indicates that data are from sources other than the World Economic Forum. For further details and explanation, please refer to the section "How to Read the Competitiveness Profiles" on page 115.

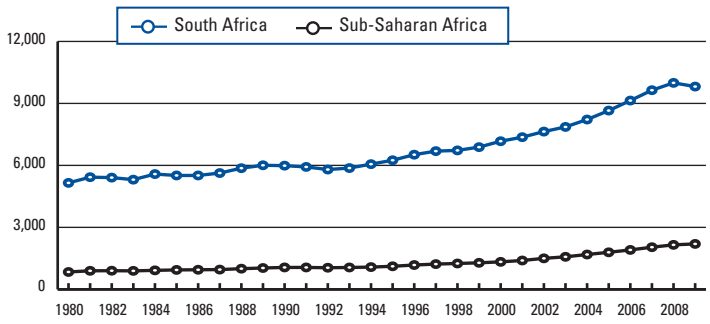
South Africa

Key indicators, 2009

Population (millions)	50.1
GDP (US$ billions)	287.2
GDP per capita (US$)	5,823.6
GDP (PPP) as share (%) of world total	0.70
Sectoral value-added (% GDP)	
Agriculture	3.0
Industry	31.1
Services	65.8
Human Development Index, 2010	
Score, (0–1) best	0.60
Rank (out of 169 economies)	110

Sources: UNFPA, IMF, EIU, World Bank, UNDP.

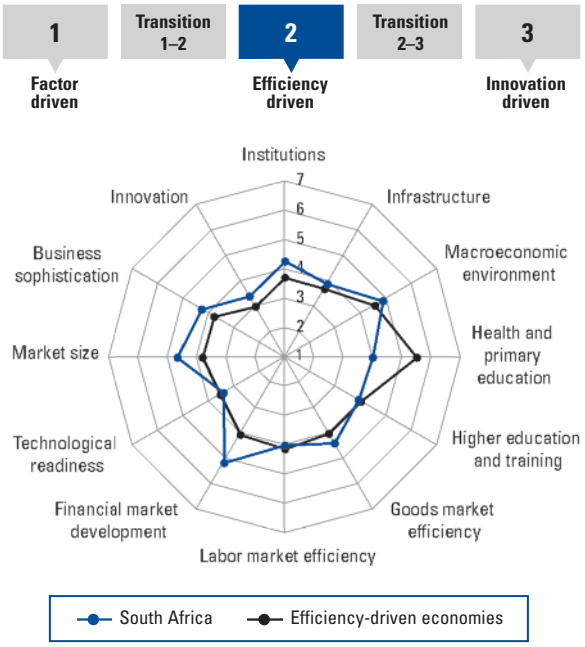
GDP (PPP) per capita (int'l $), 1980–2009



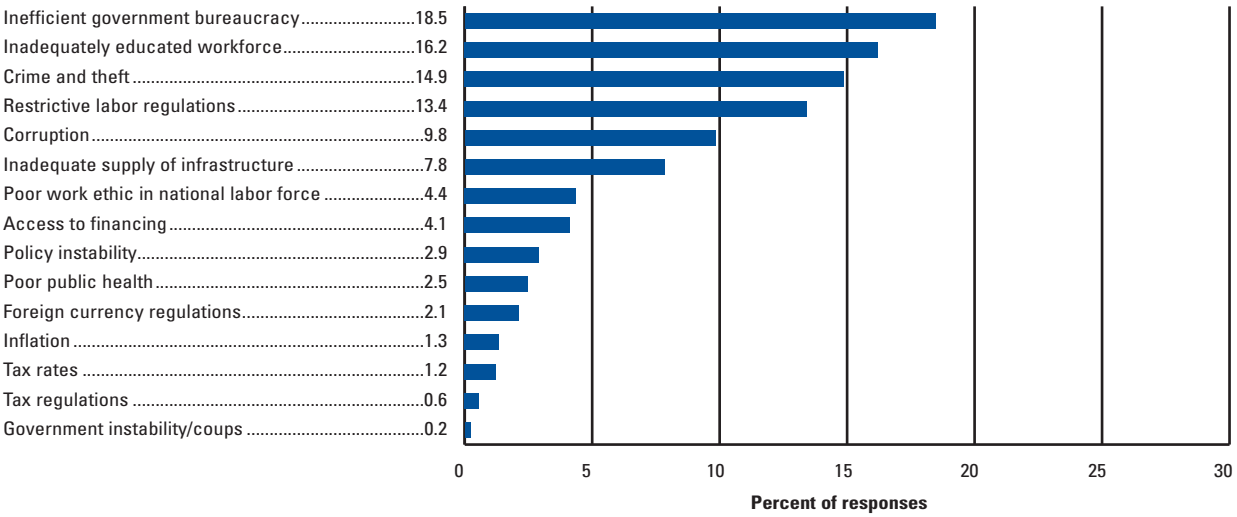
Global Competitiveness Index

	Rank (out of 139)	Score (1–7)
GCI 2010–2011	**54**	**4.3**
GCI 2009–2010 (out of 133)	45	4.3
GCI 2008–2009 (out of 134)	45	4.4
Basic requirements	**79**	**4.4**
1st pillar: Institutions	47	4.4
2nd pillar: Infrastructure	63	4.0
3rd pillar: Macroeconomic environment	43	5.0
4th pillar: Health and primary education	129	4.1
Efficiency enhancers	**42**	**4.4**
5th pillar: Higher education and training	75	4.0
6th pillar: Goods market efficiency	40	4.5
7th pillar: Labor market efficiency	97	4.1
8th pillar: Financial market development	9	5.3
9th pillar: Technological readiness	76	3.5
10th pillar: Market size	25	4.8
Innovation and sophistication factors	**43**	**3.9**
11th pillar: Business sophistication	38	4.4
12th pillar: Innovation	44	3.5

Stage of development



The most problematic factors for doing business



Note: From a list of 15 factors, respondents were asked to select the five most problematic for doing business in their country and to rank them between 1 (most problematic) and 5. The bars in the figure show the responses weighted according to their rankings.

South Africa

The Global Competitiveness Index in detail

	INDICATOR	SCORE	RANK/139
	1st pillar: Institutions		
1.01	Property rights	5.4	29
1.02	Intellectual property protection	4.9	27
1.03	Diversion of public funds	3.1	82
1.04	Public trust of politicians	2.4	86
1.05	Irregular payments and bribes	4.6	49
1.06	Judicial independence	4.7	44
1.07	Favoritism in decisions of government officials	2.6	102
1.08	Wastefulness of government spending	3.4	60
1.09	Burden of government regulation	3.0	94
1.10	Efficiency of legal framework in settling disputes	5.1	19
1.11	Efficiency of legal framework in challenging regs	4.7	20
1.12	Transparency of government policymaking	5.0	27
1.13	Business costs of terrorism	6.3	42
1.14	Business costs of crime and violence	2.1	137
1.15	Organized crime	4.3	114
1.16	Reliability of police services	3.4	104
1.17	Ethical behavior of firms	4.5	50
1.18	Strength of auditing and reporting standards	6.4	1
1.19	Efficacy of corporate boards	5.8	2
1.20	Protection of minority shareholders' interests	5.6	6
1.21	Strength of investor protection, 0–10 (best)*	8.0	10
	2nd pillar: Infrastructure		
2.01	Quality of overall infrastructure	4.6	56
2.02	Quality of roads	4.8	43
2.03	Quality of railroad infrastructure	3.3	47
2.04	Quality of port infrastructure	4.7	49
2.05	Quality of air transport infrastructure	6.1	18
2.06	Available airline seat Kms/week, millions*	1,139.4	24
2.07	Quality of electricity supply	3.8	94
2.08	Fixed telephone lines/100 pop.*	8.6	98
2.09	Mobile telephone subscriptions/100 pop.*	92.7	73
	3rd pillar: Macroeconomic environment		
3.01	Government budget balance, % GDP*	-1.2	27
3.02	National savings rate, % GDP*	15.5	98
3.03	Inflation, annual % change*	7.1	109
3.04	Interest rate spread, %*	3.2	34
3.05	Government debt, % GDP*	29.5	47
3.06	Country credit rating, 0–100 (worst)*	62.0	51
	4th pillar: Health and primary education		
4.01	Business impact of malaria	4.9	105
4.02	Malaria incidence/100,000 pop.*	67.4	91
4.03	Business impact of tuberculosis	3.2	135
4.04	Tuberculosis incidence/100,000 pop.*	959.8	138
4.05	Business impact of HIV/AIDS	2.5	138
4.06	HIV prevalence, % adult pop.*	18.1	136
4.07	Infant mortality, deaths/1,000 live births*	47.9	109
4.08	Life expectancy, years*	51.5	127
4.09	Quality of primary education	2.5	125
4.10	Primary education enrollment, net %*	87.5	109
	5th pillar: Higher education and training		
5.01	Secondary education enrollment, gross %*	95.1	41
5.02	Tertiary education enrollment, gross %*	15.4	99
5.03	Quality of the educational system	2.5	130
5.04	Quality of math and science education	2.0	137
5.05	Quality of management schools	5.1	21
5.06	Internet access in schools	3.2	100
5.07	Availability of research and training services	4.4	49
5.08	Extent of staff training	4.7	26

	INDICATOR	SCORE	RANK/139
	6th pillar: Goods market efficiency		
6.01	Intensity of local competition	5.0	63
6.02	Extent of market dominance	4.2	43
6.03	Effectiveness of anti-monopoly policy	5.2	12
6.04	Extent and effect of taxation	4.1	31
6.05	Total tax rate, % profits*	30.2	29
6.06	No. procedures to start a business*	6.0	34
6.07	No. days to start a business*	22.0	75
6.08	Agricultural policy costs	4.2	43
6.09	Prevalence of trade barriers	4.7	61
6.10	Trade tariffs, % duty*	5.9	71
6.11	Prevalence of foreign ownership	5.2	43
6.12	Business impact of rules on FDI	4.7	71
6.13	Burden of customs procedures	4.4	55
6.14	Degree of customer orientation	4.5	75
6.15	Buyer sophistication	4.1	29
	7th pillar: Labor market efficiency		
7.01	Cooperation in labor-employer relations	3.5	132
7.02	Flexibility of wage determination	3.1	131
7.03	Rigidity of employment index, 0–100 (worst)*	35.0	86
7.04	Hiring and firing practices	2.5	135
7.05	Redundancy costs, weeks of wages*	24.0	44
7.06	Pay and productivity	3.2	112
7.07	Reliance on professional management	5.5	19
7.08	Brain drain	3.5	62
7.09	Females in labor force, ratio to males*	0.8	64
	8th pillar: Financial market development		
8.01	Availability of financial services	6.2	7
8.02	Affordability of financial services	4.7	43
8.03	Financing through local equity market	4.7	7
8.04	Ease of access to loans	3.2	41
8.05	Venture capital availability	3.0	39
8.06	Restriction on capital flows	3.9	99
8.07	Soundness of banks	6.5	6
8.08	Regulation of securities exchanges	6.0	1
8.09	Legal rights index, 0–10 (best)*	9.0	6
	9th pillar: Technological readiness		
9.01	Availability of latest technologies	5.5	51
9.02	Firm-level technology absorption	5.4	35
9.03	FDI and technology transfer	5.0	37
9.04	Internet users/100 pop.*	8.8	105
9.05	Broadband Internet subscriptions/100 pop.*	1.0	93
9.06	Internet bandwidth, Mb/s per 10,000 pop.*	0.7	106
	10th pillar: Market size		
10.01	Domestic market size index, 1–7 (best)*	4.7	24
10.02	Foreign market size index, 1–7 (best)*	5.2	36
	11th pillar: Business sophistication		
11.01	Local supplier quantity	5.1	35
11.02	Local supplier quality	5.3	22
11.03	State of cluster development	4.0	39
11.04	Nature of competitive advantage	3.0	87
11.05	Value chain breadth	3.2	91
11.06	Control of international distribution	4.6	23
11.07	Production process sophistication	4.4	39
11.08	Extent of marketing	4.9	28
11.09	Willingness to delegate authority	4.1	31
	12th pillar: Innovation		
12.01	Capacity for innovation	3.4	47
12.02	Quality of scientific research institutions	4.7	29
12.03	Company spending on R&D	3.5	40
12.04	University-industry collaboration in R&D	4.6	24
12.05	Gov't procurement of advanced tech products	3.2	103
12.06	Availability of scientists and engineers	3.3	116
12.07	Utility patents/million pop.*	1.9	43

Notes: An asterisk (*) indicates that data are from sources other than the World Economic Forum. For further details and explanation, please refer to the section "How to Read the Competitiveness Profiles" on page 115.

Swaziland

Key indicators, 2009

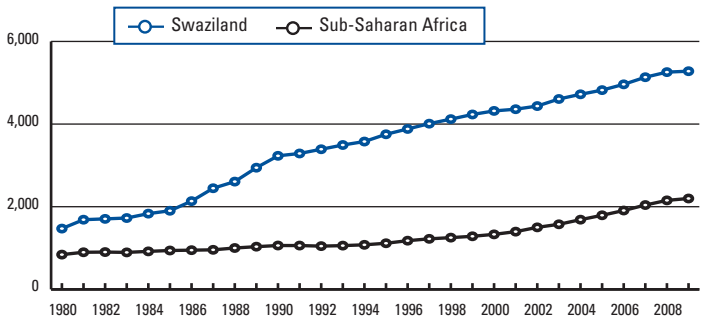
Population (millions) 1.2
GDP (US$ billions) 3.0
GDP per capita (US$) 2,906.9
GDP (PPP) as share (%) of world total 0.01

Sectoral value-added (% GDP)
Agriculture 7.3
Industry 49.4
Services 43.3

Human Development Index, 2010
Score, (0–1) best 0.50
Rank (out of 169 economies) 121

Sources: UNFPA, IMF, EIU, World Bank, UNDP.

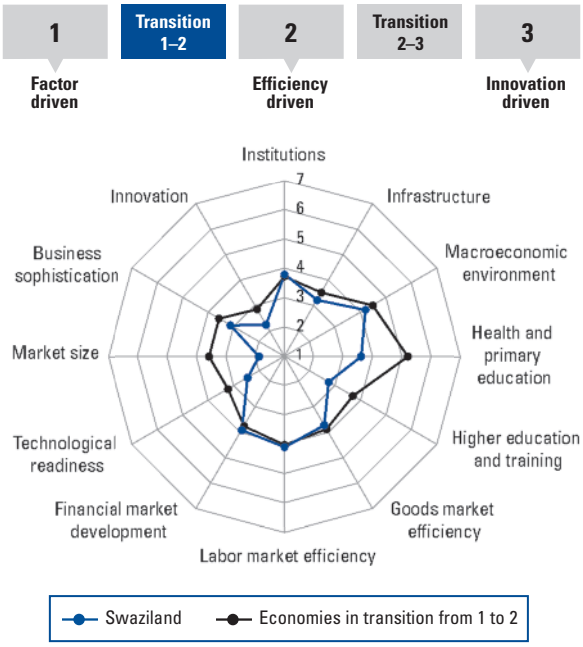
GDP (PPP) per capita (int'l $), 1980–2009



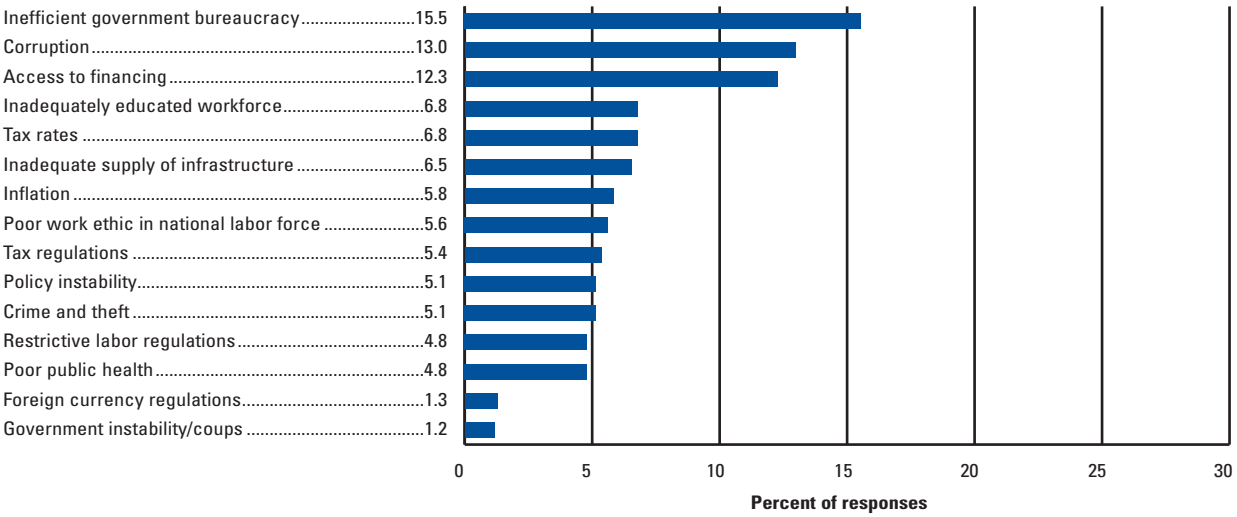
Global Competitiveness Index

	Rank (out of 139)	Score (1–7)
GCI 2010–2011	**126**	**3.4**
GCI 2009–2010 (out of 133)	n/a	n/a
GCI 2008–2009 (out of 134)	n/a	n/a
Basic requirements	**110**	**3.8**
1st pillar: Institutions	70	3.9
2nd pillar: Infrastructure	94	3.3
3rd pillar: Macroeconomic environment	92	4.3
4th pillar: Health and primary education	130	3.7
Efficiency enhancers	**126**	**3.2**
5th pillar: Higher education and training	125	2.8
6th pillar: Goods market efficiency	106	3.8
7th pillar: Labor market efficiency	90	4.2
8th pillar: Financial market development	80	4.0
9th pillar: Technological readiness	136	2.5
10th pillar: Market size	132	1.9
Innovation and sophistication factors	**131**	**2.8**
11th pillar: Business sophistication	121	3.2
12th pillar: Innovation	135	2.3

Stage of development



The most problematic factors for doing business



Note: From a list of 15 factors, respondents were asked to select the five most problematic for doing business in their country and to rank them between 1 (most problematic) and 5. The bars in the figure show the responses weighted according to their rankings.

Swaziland

The Global Competitiveness Index in detail

	INDICATOR	SCORE	RANK/139
	1st pillar: Institutions		
1.01	Property rights	4.9	47
1.02	Intellectual property protection	3.2	78
1.03	Diversion of public funds	3.0	91
1.04	Public trust of politicians	2.8	72
1.05	Irregular payments and bribes	4.1	61
1.06	Judicial independence	3.6	72
1.07	Favoritism in decisions of government officials	2.8	85
1.08	Wastefulness of government spending	2.6	106
1.09	Burden of government regulation	3.2	71
1.10	Efficiency of legal framework in settling disputes	4.0	49
1.11	Efficiency of legal framework in challenging regs	3.8	60
1.12	Transparency of government policymaking	4.1	93
1.13	Business costs of terrorism	6.2	44
1.14	Business costs of crime and violence	4.7	77
1.15	Organized crime	5.7	54
1.16	Reliability of police services	4.4	61
1.17	Ethical behavior of firms	3.4	102
1.18	Strength of auditing and reporting standards	5.1	44
1.19	Efficacy of corporate boards	4.4	87
1.20	Protection of minority shareholders' interests	4.3	69
1.21	Strength of investor protection, 0–10 (best)*	2.0	136
	2nd pillar: Infrastructure		
2.01	Quality of overall infrastructure	4.5	60
2.02	Quality of roads	5.1	39
2.03	Quality of railroad infrastructure	3.7	35
2.04	Quality of port infrastructure	4.2	68
2.05	Quality of air transport infrastructure	3.2	125
2.06	Available airline seat Kms/week, millions*	0.4	138
2.07	Quality of electricity supply	3.8	95
2.08	Fixed telephone lines/100 pop.*	3.7	109
2.09	Mobile telephone subscriptions/100 pop.*	55.4	112
	3rd pillar: Macroeconomic environment		
3.01	Government budget balance, % GDP*	-3.3	54
3.02	National savings rate, % GDP*	6.8	134
3.03	Inflation, annual % change*	7.6	111
3.04	Interest rate spread, %*	5.5	69
3.05	Government debt, % GDP*	17.3	19
3.06	Country credit rating, 0–100 (worst)*	30.4	105
	4th pillar: Health and primary education		
4.01	Business impact of malaria	4.4	112
4.02	Malaria incidence/100,000 pop.*	17.5	86
4.03	Business impact of tuberculosis	2.2	139
4.04	Tuberculosis incidence/100,000 pop.*	1,227.2	139
4.05	Business impact of HIV/AIDS	1.6	139
4.06	HIV prevalence, % adult pop.*	26.1	139
4.07	Infant mortality, deaths/1,000 live births*	58.8	114
4.08	Life expectancy, years*	45.8	136
4.09	Quality of primary education	4.1	59
4.10	Primary education enrollment, net %*	82.8	117
	5th pillar: Higher education and training		
5.01	Secondary education enrollment, gross %*	53.3	113
5.02	Tertiary education enrollment, gross %*	4.4	122
5.03	Quality of the educational system	3.2	101
5.04	Quality of math and science education	3.5	91
5.05	Quality of management schools	2.7	134
5.06	Internet access in schools	2.8	116
5.07	Availability of research and training services	2.3	137
5.08	Extent of staff training	3.6	97

	INDICATOR	SCORE	RANK/139
	6th pillar: Goods market efficiency		
6.01	Intensity of local competition	4.3	102
6.02	Extent of market dominance	3.3	92
6.03	Effectiveness of anti-monopoly policy	3.7	97
6.04	Extent and effect of taxation	3.5	73
6.05	Total tax rate, % profits*	36.6	57
6.06	No. procedures to start a business*	13.0	121
6.07	No. days to start a business*	61.0	124
6.08	Agricultural policy costs	3.8	67
6.09	Prevalence of trade barriers	3.8	122
6.10	Trade tariffs, % duty*	6.1	73
6.11	Prevalence of foreign ownership	4.6	82
6.12	Business impact of rules on FDI	4.3	99
6.13	Burden of customs procedures	3.5	113
6.14	Degree of customer orientation	4.3	95
6.15	Buyer sophistication	2.8	115
	7th pillar: Labor market efficiency		
7.01	Cooperation in labor-employer relations	4.4	68
7.02	Flexibility of wage determination	4.3	113
7.03	Rigidity of employment index, 0–100 (worst)*	10.0	18
7.04	Hiring and firing practices	3.5	96
7.05	Redundancy costs, weeks of wages*	53.0	87
7.06	Pay and productivity	2.9	132
7.07	Reliance on professional management	4.3	69
7.08	Brain drain	2.0	137
7.09	Females in labor force, ratio to males*	0.9	16
	8th pillar: Financial market development		
8.01	Availability of financial services	4.1	94
8.02	Affordability of financial services	3.6	103
8.03	Financing through local equity market	3.2	86
8.04	Ease of access to loans	2.8	68
8.05	Venture capital availability	2.3	90
8.06	Restriction on capital flows	4.0	93
8.07	Soundness of banks	5.5	44
8.08	Regulation of securities exchanges	3.9	83
8.09	Legal rights index, 0–10 (best)*	6.0	60
	9th pillar: Technological readiness		
9.01	Availability of latest technologies	3.6	134
9.02	Firm-level technology absorption	3.7	132
9.03	FDI and technology transfer	3.3	138
9.04	Internet users/100 pop.*	7.6	109
9.05	Broadband Internet subscriptions/100 pop.*	0.1	112
9.06	Internet bandwidth, Mb/s per 10,000 pop.*	0.4	116
	10th pillar: Market size		
10.01	Domestic market size index, 1–7 (best)*	1.6	133
10.02	Foreign market size index, 1–7 (best)*	2.9	120
	11th pillar: Business sophistication		
11.01	Local supplier quantity	4.0	125
11.02	Local supplier quality	4.1	92
11.03	State of cluster development	3.1	93
11.04	Nature of competitive advantage	2.7	116
11.05	Value chain breadth	2.4	135
11.06	Control of international distribution	3.3	123
11.07	Production process sophistication	2.7	124
11.08	Extent of marketing	3.0	126
11.09	Willingness to delegate authority	3.1	101
	12th pillar: Innovation		
12.01	Capacity for innovation	2.2	130
12.02	Quality of scientific research institutions	2.4	131
12.03	Company spending on R&D	2.4	131
12.04	University-industry collaboration in R&D	2.8	123
12.05	Gov't procurement of advanced tech products	2.7	131
12.06	Availability of scientists and engineers	2.4	139
12.07	Utility patents/million pop.*	0.0	90

Notes: An asterisk (*) indicates that data are from sources other than the World Economic Forum. For further details and explanation, please refer to the section "How to Read the Competitiveness Profiles" on page 115.

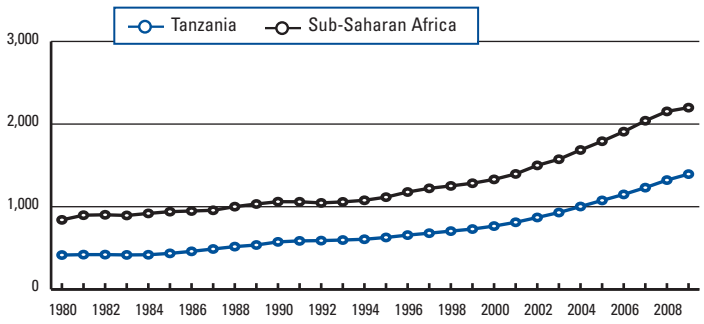
Tanzania

Key indicators, 2009

Population (millions)	43.7
GDP (US$ billions)	22.3
GDP per capita (US$)	550.5
GDP (PPP) as share (%) of world total	0.08
Sectoral value-added (% GDP)	
Agriculture	45.3
Industry	17.4
Services	37.3
Human Development Index, 2010	
Score, (0–1) best	0.40
Rank (out of 169 economies)	148

Sources: UNFPA, IMF, EIU, World Bank, UNDP.

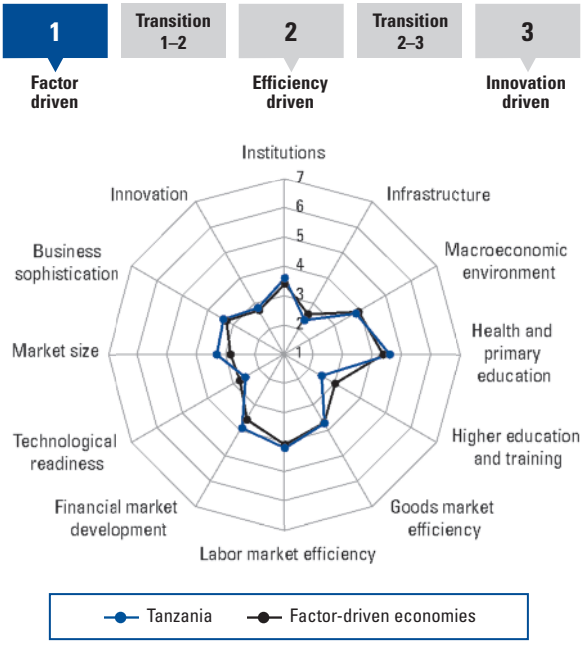
GDP (PPP) per capita (int'l $), 1980–2009



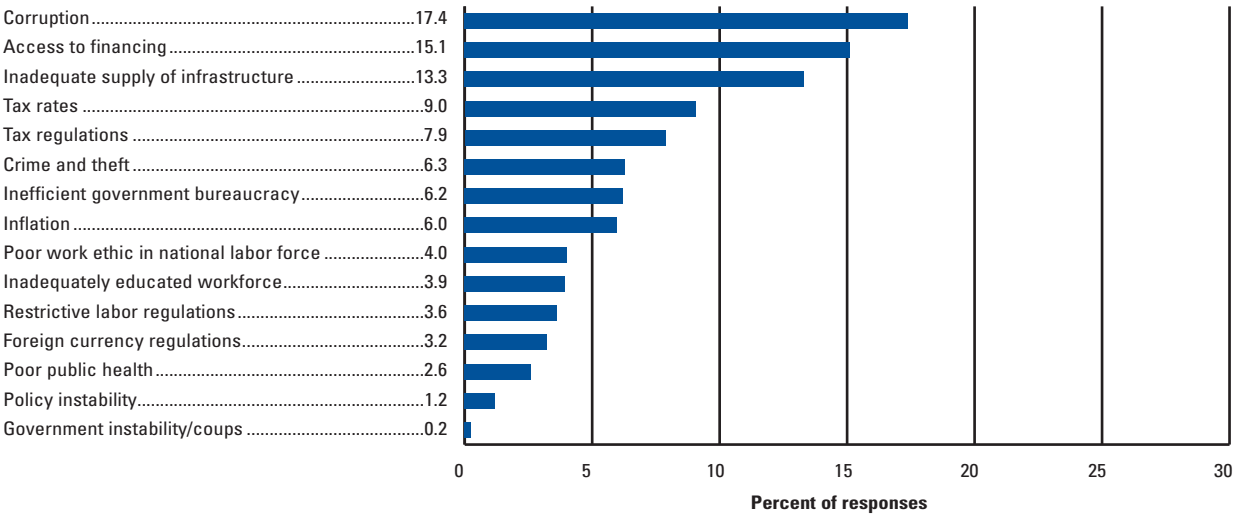
Global Competitiveness Index

	Rank (out of 139)	Score (1–7)
GCI 2010–2011	**113**	**3.6**
GCI 2009–2010 (out of 133)	100	3.6
GCI 2008–2009 (out of 134)	113	3.5
Basic requirements	**116**	**3.7**
1st pillar: Institutions	83	3.7
2nd pillar: Infrastructure	128	2.4
3rd pillar: Macroeconomic environment	115	3.9
4th pillar: Health and primary education	113	4.7
Efficiency enhancers	**114**	**3.4**
5th pillar: Higher education and training	133	2.5
6th pillar: Goods market efficiency	108	3.8
7th pillar: Labor market efficiency	77	4.3
8th pillar: Financial market development	90	4.0
9th pillar: Technological readiness	131	2.6
10th pillar: Market size	81	3.4
Innovation and sophistication factors	**94**	**3.2**
11th pillar: Business sophistication	98	3.5
12th pillar: Innovation	86	2.9

Stage of development



The most problematic factors for doing business



Note: From a list of 15 factors, respondents were asked to select the five most problematic for doing business in their country and to rank them between 1 (most problematic) and 5. The bars in the figure show the responses weighted according to their rankings.

Tanzania

The Global Competitiveness Index in detail

	INDICATOR	SCORE	RANK/139
	1st pillar: Institutions		
1.01	Property rights	3.7	104
1.02	Intellectual property protection	3.3	74
1.03	Diversion of public funds	3.1	85
1.04	Public trust of politicians	3.1	62
1.05	Irregular payments and bribes	3.1	112
1.06	Judicial independence	3.5	77
1.07	Favoritism in decisions of government officials	3.4	50
1.08	Wastefulness of government spending	3.3	63
1.09	Burden of government regulation	3.3	66
1.10	Efficiency of legal framework in settling disputes	3.7	65
1.11	Efficiency of legal framework in challenging regs	3.5	72
1.12	Transparency of government policymaking	4.1	85
1.13	Business costs of terrorism	5.4	85
1.14	Business costs of crime and violence	4.7	76
1.15	Organized crime	5.3	69
1.16	Reliability of police services	3.8	84
1.17	Ethical behavior of firms	3.6	89
1.18	Strength of auditing and reporting standards	4.3	94
1.19	Efficacy of corporate boards	4.2	100
1.20	Protection of minority shareholders' interests	4.0	91
1.21	Strength of investor protection, 0–10 (best)*	5.0	77
	2nd pillar: Infrastructure		
2.01	Quality of overall infrastructure	3.0	124
2.02	Quality of roads	2.9	104
2.03	Quality of railroad infrastructure	2.4	72
2.04	Quality of port infrastructure	3.0	119
2.05	Quality of air transport infrastructure	3.4	118
2.06	Available airline seat Kms/week, millions*	56.9	93
2.07	Quality of electricity supply	2.5	122
2.08	Fixed telephone lines/100 pop.*	0.4	133
2.09	Mobile telephone subscriptions/100 pop.*	39.9	120
	3rd pillar: Macroeconomic environment		
3.01	Government budget balance, % GDP*	-4.7	83
3.02	National savings rate, % GDP*	10.5	121
3.03	Inflation, annual % change*	12.1	128
3.04	Interest rate spread, %*	7.1	90
3.05	Government debt, % GDP*	21.4	28
3.06	Country credit rating, 0–100 (worst)*	29.5	106
	4th pillar: Health and primary education		
4.01	Business impact of malaria	3.0	131
4.02	Malaria incidence/100,000 pop.*	29,245.4	125
4.03	Business impact of tuberculosis	3.6	129
4.04	Tuberculosis incidence/100,000 pop.*	189.8	106
4.05	Business impact of HIV/AIDS	3.4	125
4.06	HIV prevalence, % adult pop.*	6.2	129
4.07	Infant mortality, deaths/1,000 live births*	66.8	118
4.08	Life expectancy, years*	55.6	119
4.09	Quality of primary education	2.7	115
4.10	Primary education enrollment, net %*	99.3	13
	5th pillar: Higher education and training		
5.01	Secondary education enrollment, gross %*	26.1	131
5.02	Tertiary education enrollment, gross %*	1.5	136
5.03	Quality of the educational system	3.2	99
5.04	Quality of math and science education	2.7	127
5.05	Quality of management schools	3.0	128
5.06	Internet access in schools	2.6	123
5.07	Availability of research and training services	3.4	107
5.08	Extent of staff training	3.4	106

	INDICATOR	SCORE	RANK/139
	6th pillar: Goods market efficiency		
6.01	Intensity of local competition	4.3	104
6.02	Extent of market dominance	3.6	73
6.03	Effectiveness of anti-monopoly policy	4.0	67
6.04	Extent and effect of taxation	3.6	65
6.05	Total tax rate, % profits*	45.2	87
6.06	No. procedures to start a business*	12.0	114
6.07	No. days to start a business*	29.0	91
6.08	Agricultural policy costs	3.5	110
6.09	Prevalence of trade barriers	4.2	97
6.10	Trade tariffs, % duty*	8.1	89
6.11	Prevalence of foreign ownership	4.5	95
6.12	Business impact of rules on FDI	4.5	89
6.13	Burden of customs procedures	3.4	116
6.14	Degree of customer orientation	4.3	94
6.15	Buyer sophistication	2.9	112
	7th pillar: Labor market efficiency		
7.01	Cooperation in labor-employer relations	4.0	100
7.02	Flexibility of wage determination	4.1	121
7.03	Rigidity of employment index, 0–100 (worst)*	54.0	125
7.04	Hiring and firing practices	3.7	88
7.05	Redundancy costs, weeks of wages*	18.0	38
7.06	Pay and productivity	3.0	127
7.07	Reliance on professional management	4.1	84
7.08	Brain drain	3.1	83
7.09	Females in labor force, ratio to males*	1.0	6
	8th pillar: Financial market development		
8.01	Availability of financial services	3.6	120
8.02	Affordability of financial services	3.4	115
8.03	Financing through local equity market	3.4	75
8.04	Ease of access to loans	2.8	64
8.05	Venture capital availability	2.6	64
8.06	Restriction on capital flows	3.9	95
8.07	Soundness of banks	4.3	119
8.08	Regulation of securities exchanges	3.8	93
8.09	Legal rights index, 0–10 (best)*	8.0	20
	9th pillar: Technological readiness		
9.01	Availability of latest technologies	3.8	132
9.02	Firm-level technology absorption	4.0	123
9.03	FDI and technology transfer	4.3	95
9.04	Internet users/100 pop.*	1.5	133
9.05	Broadband Internet subscriptions/100 pop.*	0.0	133
9.06	Internet bandwidth, Mb/s per 10,000 pop.*	0.0	136
	10th pillar: Market size		
10.01	Domestic market size index, 1–7 (best)*	3.2	78
10.02	Foreign market size index, 1–7 (best)*	3.8	89
	11th pillar: Business sophistication		
11.01	Local supplier quantity	4.2	109
11.02	Local supplier quality	3.8	115
11.03	State of cluster development	3.5	68
11.04	Nature of competitive advantage	3.0	93
11.05	Value chain breadth	3.0	105
11.06	Control of international distribution	3.7	93
11.07	Production process sophistication	3.0	111
11.08	Extent of marketing	3.4	104
11.09	Willingness to delegate authority	3.6	71
	12th pillar: Innovation		
12.01	Capacity for innovation	2.8	78
12.02	Quality of scientific research institutions	3.3	87
12.03	Company spending on R&D	3.0	71
12.04	University-industry collaboration in R&D	3.4	77
12.05	Gov't procurement of advanced tech products	3.6	74
12.06	Availability of scientists and engineers	3.4	113
12.07	Utility patents/million pop.*	0.0	90

Notes: An asterisk (*) indicates that data are from sources other than the World Economic Forum. For further details and explanation, please refer to the section "How to Read the Competitiveness Profiles" on page 115.

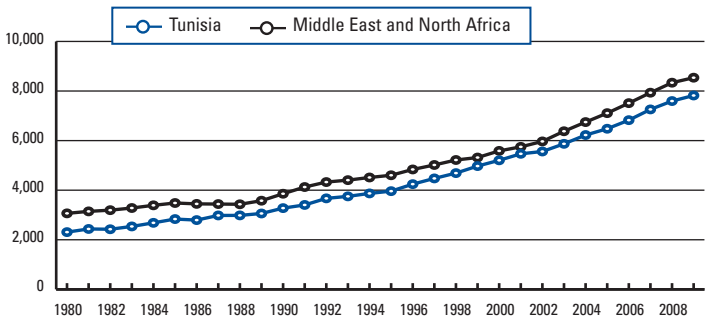
Tunisia

Key indicators, 2009

Population (millions)	10.3
GDP (US$ billions)	40.2
GDP per capita (US$)	3,851.6
GDP (PPP) as share (%) of world total	0.12
Sectoral value-added (% GDP)	
Agriculture	7.8
Industry	30.0
Services	62.3
Human Development Index, 2010	
Score, (0–1) best	0.68
Rank (out of 169 economies)	81

Sources: UNFPA, IMF, EIU, World Bank, UNDP.

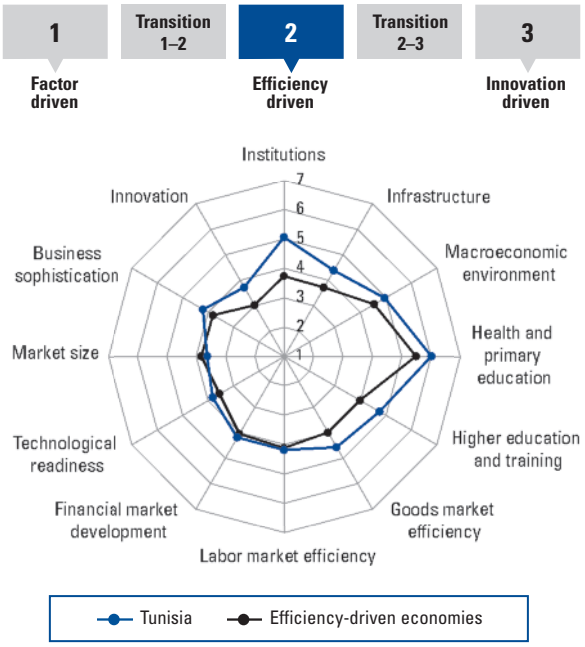
GDP (PPP) per capita (int'l $), 1980–2009



Global Competitiveness Index

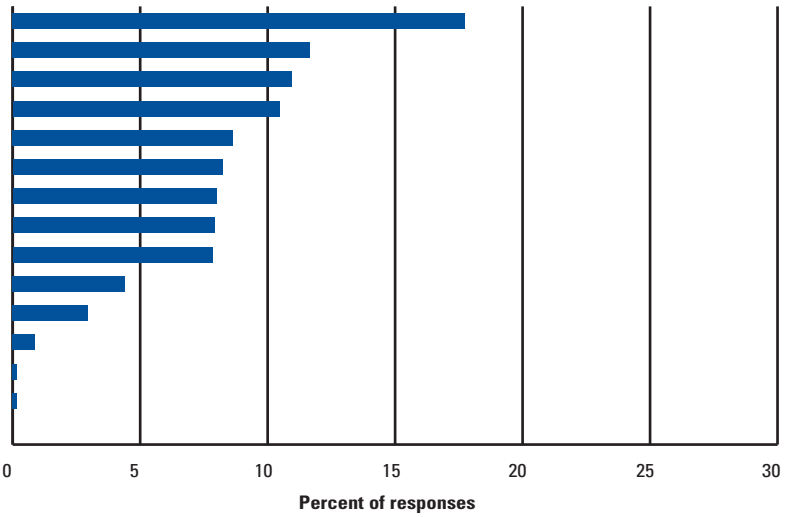
	Rank (out of 139)	Score (1–7)
GCI 2010–2011	**32**	**4.7**
GCI 2009–2010 (out of 133)	40	4.5
GCI 2008–2009 (out of 134)	36	4.6
Basic requirements	**31**	**5.3**
1st pillar: Institutions	23	5.2
2nd pillar: Infrastructure	46	4.5
3rd pillar: Macroeconomic environment	38	5.1
4th pillar: Health and primary education	31	6.2
Efficiency enhancers	**50**	**4.3**
5th pillar: Higher education and training	30	4.9
6th pillar: Goods market efficiency	33	4.7
7th pillar: Labor market efficiency	79	4.3
8th pillar: Financial market development	58	4.3
9th pillar: Technological readiness	55	3.9
10th pillar: Market size	67	3.7
Innovation and sophistication factors	**34**	**4.1**
11th pillar: Business sophistication	42	4.3
12th pillar: Innovation	31	3.8

Stage of development



The most problematic factors for doing business

Access to financing	17.7
Restrictive labor regulations	11.7
Inefficient government bureaucracy	11.0
Foreign currency regulations	10.5
Inadequately educated workforce	8.6
Poor work ethic in national labor force	8.2
Inadequate supply of infrastructure	8.0
Tax rates	7.9
Tax regulations	7.8
Inflation	4.4
Corruption	3.0
Policy instability	0.9
Government instability/coups	0.2
Crime and theft	0.2
Poor public health	0.0



Note: From a list of 15 factors, respondents were asked to select the five most problematic for doing business in their country and to rank them between 1 (most problematic) and 5. The bars in the figure show the responses weighted according to their rankings.

Tunisia

The Global Competitiveness Index in detail

	INDICATOR	SCORE	RANK/139
	1st pillar: Institutions		
1.01	Property rights	5.4	31
1.02	Intellectual property protection	4.4	37
1.03	Diversion of public funds	5.5	20
1.04	Public trust of politicians	5.0	15
1.05	Irregular payments and bribes	5.4	33
1.06	Judicial independence	4.8	40
1.07	Favoritism in decisions of government officials	4.7	12
1.08	Wastefulness of government spending	5.3	5
1.09	Burden of government regulation	4.2	15
1.10	Efficiency of legal framework in settling disputes	5.2	17
1.11	Efficiency of legal framework in challenging regs	4.8	19
1.12	Transparency of government policymaking	5.2	20
1.13	Business costs of terrorism	6.4	28
1.14	Business costs of crime and violence	6.4	5
1.15	Organized crime	6.6	17
1.16	Reliability of police services	5.5	29
1.17	Ethical behavior of firms	5.2	29
1.18	Strength of auditing and reporting standards	5.0	54
1.19	Efficacy of corporate boards	4.9	33
1.20	Protection of minority shareholders' interests	5.3	11
1.21	Strength of investor protection, 0–10 (best)*	5.3	59
	2nd pillar: Infrastructure		
2.01	Quality of overall infrastructure	5.5	30
2.02	Quality of roads	5.1	37
2.03	Quality of railroad infrastructure	4.2	29
2.04	Quality of port infrastructure	5.0	41
2.05	Quality of air transport infrastructure	5.6	38
2.06	Available airline seat Kms/week, millions*	129.4	74
2.07	Quality of electricity supply	5.9	35
2.08	Fixed telephone lines/100 pop.*	12.4	86
2.09	Mobile telephone subscriptions/100 pop.*	95.0	70
	3rd pillar: Macroeconomic environment		
3.01	Government budget balance, % GDP*	-2.9	46
3.02	National savings rate, % GDP*	26.9	38
3.03	Inflation, annual % change*	3.7	85
3.04	Interest rate spread, %*	2.9	30
3.05	Government debt, % GDP*	53.0	94
3.06	Country credit rating, 0–100 (worst)*	59.2	53
	4th pillar: Health and primary education		
4.01	Business impact of malaria	n/appl.	1
4.02	Malaria incidence/100,000 pop.*	(NE)	1
4.03	Business impact of tuberculosis	6.3	33
4.04	Tuberculosis incidence/100,000 pop.*	23.9	50
4.05	Business impact of HIV/AIDS	6.3	16
4.06	HIV prevalence, % adult pop.*	0.1	22
4.07	Infant mortality, deaths/1,000 live births*	18.3	76
4.08	Life expectancy, years*	74.3	56
4.09	Quality of primary education	5.0	22
4.10	Primary education enrollment, net %*	97.7	33
	5th pillar: Higher education and training		
5.01	Secondary education enrollment, gross %*	91.8	53
5.02	Tertiary education enrollment, gross %*	33.7	69
5.03	Quality of the educational system	5.0	20
5.04	Quality of math and science education	5.6	8
5.05	Quality of management schools	5.1	22
5.06	Internet access in schools	4.5	47
5.07	Availability of research and training services	5.0	27
5.08	Extent of staff training	4.8	18

	INDICATOR	SCORE	RANK/139
	6th pillar: Goods market efficiency		
6.01	Intensity of local competition	5.4	34
6.02	Extent of market dominance	4.9	17
6.03	Effectiveness of anti-monopoly policy	5.0	18
6.04	Extent and effect of taxation	4.5	14
6.05	Total tax rate, % profits*	62.8	119
6.06	No. procedures to start a business*	10.0	99
6.07	No. days to start a business*	11.0	39
6.08	Agricultural policy costs	4.9	8
6.09	Prevalence of trade barriers	4.7	57
6.10	Trade tariffs, % duty*	14.7	127
6.11	Prevalence of foreign ownership	5.1	45
6.12	Business impact of rules on FDI	5.8	6
6.13	Burden of customs procedures	4.7	38
6.14	Degree of customer orientation	5.1	36
6.15	Buyer sophistication	3.8	40
	7th pillar: Labor market efficiency		
7.01	Cooperation in labor-employer relations	4.9	32
7.02	Flexibility of wage determination	4.3	115
7.03	Rigidity of employment index, 0–100 (worst)*	40.0	100
7.04	Hiring and firing practices	4.2	52
7.05	Redundancy costs, weeks of wages*	17.0	29
7.06	Pay and productivity	4.2	52
7.07	Reliance on professional management	4.9	40
7.08	Brain drain	4.1	42
7.09	Females in labor force, ratio to males*	0.4	129
	8th pillar: Financial market development		
8.01	Availability of financial services	5.2	42
8.02	Affordability of financial services	5.0	31
8.03	Financing through local equity market	4.4	25
8.04	Ease of access to loans	3.5	30
8.05	Venture capital availability	3.5	21
8.06	Restriction on capital flows	4.1	88
8.07	Soundness of banks	5.3	59
8.08	Regulation of securities exchanges	4.8	38
8.09	Legal rights index, 0–10 (best)*	3.0	103
	9th pillar: Technological readiness		
9.01	Availability of latest technologies	5.6	42
9.02	Firm-level technology absorption	5.4	33
9.03	FDI and technology transfer	5.3	13
9.04	Internet users/100 pop.*	34.1	67
9.05	Broadband Internet subscriptions/100 pop.*	3.6	74
9.06	Internet bandwidth, Mb/s per 10,000 pop.*	27.4	52
	10th pillar: Market size		
10.01	Domestic market size index, 1–7 (best)*	3.5	69
10.02	Foreign market size index, 1–7 (best)*	4.4	67
	11th pillar: Business sophistication		
11.01	Local supplier quantity	5.5	14
11.02	Local supplier quality	4.9	45
11.03	State of cluster development	3.4	75
11.04	Nature of competitive advantage	3.8	44
11.05	Value chain breadth	4.5	24
11.06	Control of international distribution	4.5	29
11.07	Production process sophistication	4.1	49
11.08	Extent of marketing	4.4	55
11.09	Willingness to delegate authority	3.7	60
	12th pillar: Innovation		
12.01	Capacity for innovation	3.5	36
12.02	Quality of scientific research institutions	4.3	38
12.03	Company spending on R&D	3.6	35
12.04	University-industry collaboration in R&D	4.1	41
12.05	Gov't procurement of advanced tech products	4.5	14
12.06	Availability of scientists and engineers	5.6	7
12.07	Utility patents/million pop.*	0.0	90

Notes: An asterisk (*) indicates that data are from sources other than the World Economic Forum. For further details and explanation, please refer to the section "How to Read the Competitiveness Profiles" on page 115.

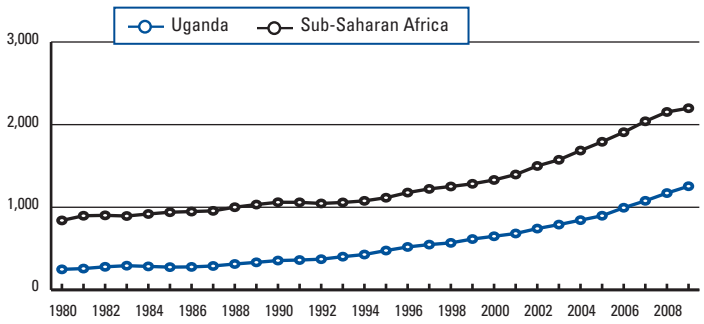
Uganda

Key indicators, 2009

Population (millions)	32.7
GDP (US$ billions)	15.7
GDP per capita (US$)	474.0
GDP (PPP) as share (%) of world total	0.06
Sectoral value-added (% GDP)	
Agriculture	37.7
Industry	29.9
Services	32.5
Human Development Index, 2010	
Score, (0–1) best	0.42
Rank (out of 169 economies)	143

Sources: UNFPA, IMF, EIU, World Bank, UNDP.

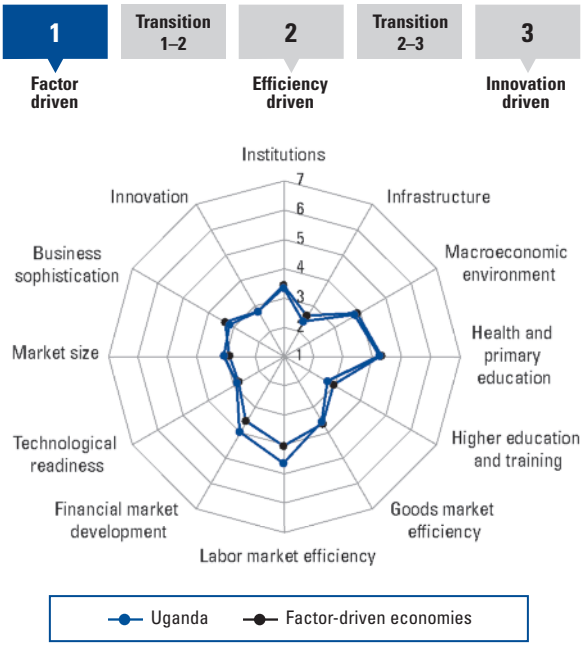
GDP (PPP) per capita (int'l $), 1980–2009



Global Competitiveness Index

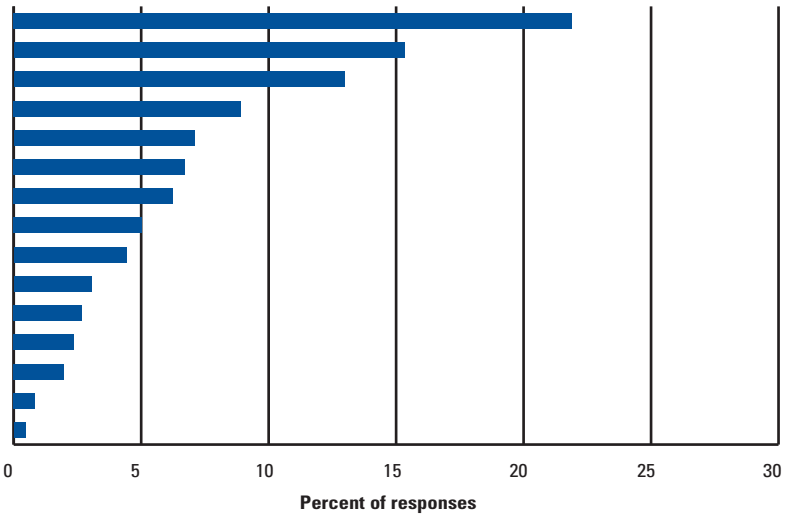
	Rank (out of 139)	Score (1–7)
GCI 2010–2011	**118**	**3.5**
GCI 2009–2010 (out of 133)	108	3.5
GCI 2008–2009 (out of 134)	128	3.3
Basic requirements	**123**	**3.5**
1st pillar: Institutions	104	3.4
2nd pillar: Infrastructure	127	2.4
3rd pillar: Macroeconomic environment	114	3.9
4th pillar: Health and primary education	117	4.4
Efficiency enhancers	**102**	**3.6**
5th pillar: Higher education and training	127	2.8
6th pillar: Goods market efficiency	117	3.7
7th pillar: Labor market efficiency	27	4.8
8th pillar: Financial market development	72	4.1
9th pillar: Technological readiness	112	2.9
10th pillar: Market size	92	3.1
Innovation and sophistication factors	**111**	**3.0**
11th pillar: Business sophistication	120	3.2
12th pillar: Innovation	104	2.8

Stage of development



The most problematic factors for doing business

Corruption	21.9
Access to financing	15.3
Inadequate supply of infrastructure	13.0
Tax rates	8.9
Poor work ethic in national labor force	7.1
Inefficient government bureaucracy	6.7
Inflation	6.3
Inadequately educated workforce	5.0
Tax regulations	4.4
Crime and theft	3.1
Poor public health	2.7
Policy instability	2.4
Foreign currency regulations	2.0
Restrictive labor regulations	0.8
Government instability/coups	0.5



Note: From a list of 15 factors, respondents were asked to select the five most problematic for doing business in their country and to rank them between 1 (most problematic) and 5. The bars in the figure show the responses weighted according to their rankings.

Uganda

The Global Competitiveness Index in detail

	INDICATOR	SCORE	RANK/139
	1st pillar: Institutions		
1.01	Property rights	3.8	94
1.02	Intellectual property protection	2.8	100
1.03	Diversion of public funds	2.0	136
1.04	Public trust of politicians	2.2	92
1.05	Irregular payments and bribes	2.9	122
1.06	Judicial independence	3.4	84
1.07	Favoritism in decisions of government officials	2.4	120
1.08	Wastefulness of government spending	2.5	112
1.09	Burden of government regulation	3.9	24
1.10	Efficiency of legal framework in settling disputes	3.7	63
1.11	Efficiency of legal framework in challenging regs	3.7	63
1.12	Transparency of government policymaking	4.3	69
1.13	Business costs of terrorism	4.2	131
1.14	Business costs of crime and violence	3.8	113
1.15	Organized crime	4.7	100
1.16	Reliability of police services	4.0	77
1.17	Ethical behavior of firms	3.4	104
1.18	Strength of auditing and reporting standards	4.0	105
1.19	Efficacy of corporate boards	4.7	52
1.20	Protection of minority shareholders' interests	4.0	86
1.21	Strength of investor protection, 0–10 (best)*	4.0	109
	2nd pillar: Infrastructure		
2.01	Quality of overall infrastructure	3.4	105
2.02	Quality of roads	2.7	119
2.03	Quality of railroad infrastructure	1.2	111
2.04	Quality of port infrastructure	3.5	101
2.05	Quality of air transport infrastructure	3.9	100
2.06	Available airline seat Kms/week, millions*	40.8	99
2.07	Quality of electricity supply	2.8	117
2.08	Fixed telephone lines/100 pop.*	0.7	130
2.09	Mobile telephone subscriptions/100 pop.*	28.7	129
	3rd pillar: Macroeconomic environment		
3.01	Government budget balance, % GDP*	-2.6	41
3.02	National savings rate, % GDP*	19.5	72
3.03	Inflation, annual % change*	14.2	133
3.04	Interest rate spread, %*	12.0	121
3.05	Government debt, % GDP*	19.7	24
3.06	Country credit rating, 0–100 (worst)*	31.9	100
	4th pillar: Health and primary education		
4.01	Business impact of malaria	2.6	136
4.02	Malaria incidence/100,000 pop.*	35,543.2	132
4.03	Business impact of tuberculosis	3.6	128
4.04	Tuberculosis incidence/100,000 pop.*	310.7	121
4.05	Business impact of HIV/AIDS	2.7	134
4.06	HIV prevalence, % adult pop.*	5.4	128
4.07	Infant mortality, deaths/1,000 live births*	84.5	131
4.08	Life expectancy, years*	52.7	126
4.09	Quality of primary education	3.0	102
4.10	Primary education enrollment, net %*	97.1	38
	5th pillar: Higher education and training		
5.01	Secondary education enrollment, gross %*	25.3	132
5.02	Tertiary education enrollment, gross %*	3.7	127
5.03	Quality of the educational system	3.6	72
5.04	Quality of math and science education	3.3	102
5.05	Quality of management schools	3.9	84
5.06	Internet access in schools	2.8	115
5.07	Availability of research and training services	3.4	101
5.08	Extent of staff training	3.6	100

	INDICATOR	SCORE	RANK/139
	6th pillar: Goods market efficiency		
6.01	Intensity of local competition	4.9	67
6.02	Extent of market dominance	3.0	125
6.03	Effectiveness of anti-monopoly policy	3.8	80
6.04	Extent and effect of taxation	3.3	85
6.05	Total tax rate, % profits*	35.7	53
6.06	No. procedures to start a business*	18.0	134
6.07	No. days to start a business*	25.0	82
6.08	Agricultural policy costs	3.8	75
6.09	Prevalence of trade barriers	4.6	72
6.10	Trade tariffs, % duty*	12.2	115
6.11	Prevalence of foreign ownership	5.3	35
6.12	Business impact of rules on FDI	5.3	27
6.13	Burden of customs procedures	4.1	77
6.14	Degree of customer orientation	4.3	90
6.15	Buyer sophistication	2.4	129
	7th pillar: Labor market efficiency		
7.01	Cooperation in labor-employer relations	4.4	60
7.02	Flexibility of wage determination	6.1	4
7.03	Rigidity of employment index, 0–100 (worst)*	0.0	1
7.04	Hiring and firing practices	5.2	7
7.05	Redundancy costs, weeks of wages*	13.0	21
7.06	Pay and productivity	3.0	130
7.07	Reliance on professional management	3.9	95
7.08	Brain drain	2.7	100
7.09	Females in labor force, ratio to males*	0.9	18
	8th pillar: Financial market development		
8.01	Availability of financial services	4.3	80
8.02	Affordability of financial services	3.8	90
8.03	Financing through local equity market	3.4	77
8.04	Ease of access to loans	2.3	99
8.05	Venture capital availability	1.9	122
8.06	Restriction on capital flows	4.8	45
8.07	Soundness of banks	5.2	68
8.08	Regulation of securities exchanges	3.9	84
8.09	Legal rights index, 0–10 (best)*	7.0	39
	9th pillar: Technological readiness		
9.01	Availability of latest technologies	4.4	93
9.02	Firm-level technology absorption	4.3	104
9.03	FDI and technology transfer	5.0	39
9.04	Internet users/100 pop.*	9.8	104
9.05	Broadband Internet subscriptions/100 pop.*	0.0	131
9.06	Internet bandwidth, Mb/s per 10,000 pop.*	0.4	115
	10th pillar: Market size		
10.01	Domestic market size index, 1–7 (best)*	3.0	87
10.02	Foreign market size index, 1–7 (best)*	3.4	103
	11th pillar: Business sophistication		
11.01	Local supplier quantity	5.0	49
11.02	Local supplier quality	4.1	90
11.03	State of cluster development	2.8	118
11.04	Nature of competitive advantage	2.8	108
11.05	Value chain breadth	2.9	119
11.06	Control of international distribution	3.2	126
11.07	Production process sophistication	2.4	134
11.08	Extent of marketing	2.7	131
11.09	Willingness to delegate authority	2.9	119
	12th pillar: Innovation		
12.01	Capacity for innovation	2.2	129
12.02	Quality of scientific research institutions	3.0	99
12.03	Company spending on R&D	2.7	95
12.04	University-industry collaboration in R&D	3.4	78
12.05	Gov't procurement of advanced tech products	3.4	91
12.06	Availability of scientists and engineers	3.6	102
12.07	Utility patents/million pop.*	0.0	90

Notes: An asterisk (*) indicates that data are from sources other than the World Economic Forum. For further details and explanation, please refer to the section "How to Read the Competitiveness Profiles" on page 115.

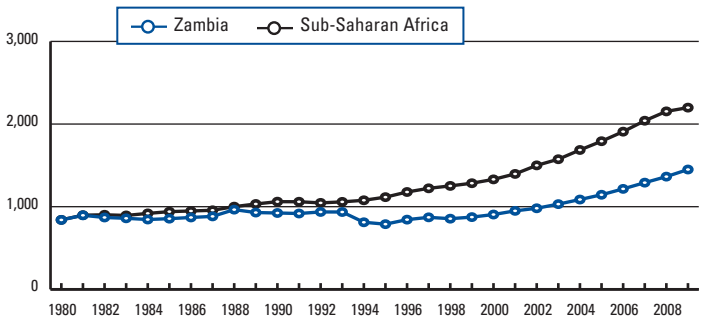
Zambia

Key indicators, 2009

Population (millions)	12.9
GDP (US$ billions)	13.0
GDP per capita (US$)	1,086.1
GDP (PPP) as share (%) of world total	0.03
Sectoral value-added (% GDP)	
Agriculture	20.8
Industry	57.9
Services	21.3
Human Development Index, 2010	
Score, (0–1) best	0.39
Rank (out of 169 economies)	150

Sources: UNFPA, IMF, EIU, World Bank, UNDP.

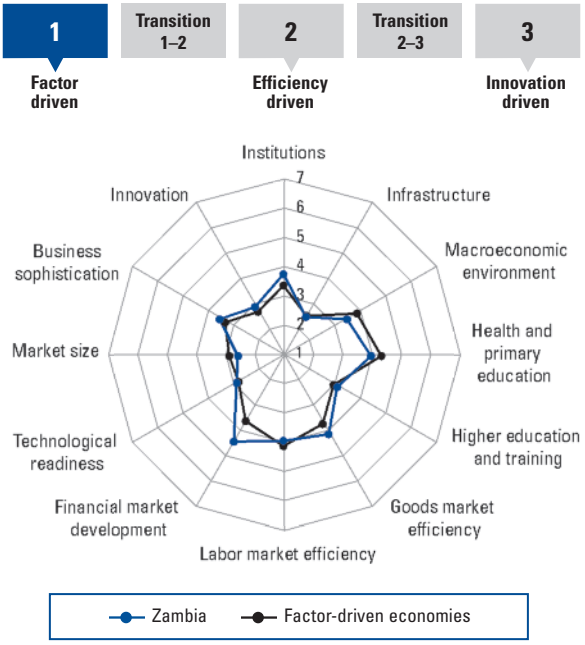
GDP (PPP) per capita (int'l $), 1980–2009



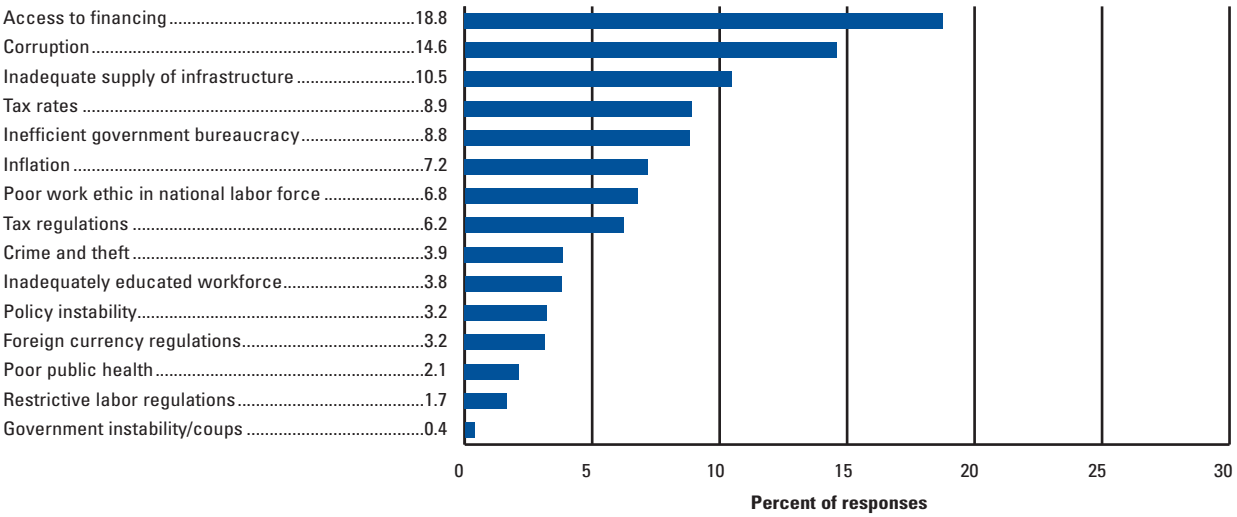
Global Competitiveness Index

	Rank (out of 139)	Score (1–7)
GCI 2010–2011	**115**	**3.5**
GCI 2009–2010 (out of 133)	112	3.5
GCI 2008–2009 (out of 134)	112	3.5
Basic requirements	**121**	**3.6**
1st pillar: Institutions	65	3.9
2nd pillar: Infrastructure	118	2.6
3rd pillar: Macroeconomic environment	120	3.6
4th pillar: Health and primary education	128	4.1
Efficiency enhancers	**101**	**3.6**
5th pillar: Higher education and training	114	3.2
6th pillar: Goods market efficiency	65	4.2
7th pillar: Labor market efficiency	107	4.0
8th pillar: Financial market development	49	4.5
9th pillar: Technological readiness	110	2.9
10th pillar: Market size	111	2.6
Innovation and sophistication factors	**90**	**3.3**
11th pillar: Business sophistication	90	3.6
12th pillar: Innovation	80	3.0

Stage of development



The most problematic factors for doing business



Note: From a list of 15 factors, respondents were asked to select the five most problematic for doing business in their country and to rank them between 1 (most problematic) and 5. The bars in the figure show the responses weighted according to their rankings.

Zambia

The Global Competitiveness Index in detail

	INDICATOR	SCORE	RANK/139
	1st pillar: Institutions		
1.01	Property rights	4.1	80
1.02	Intellectual property protection	3.6	65
1.03	Diversion of public funds	3.0	89
1.04	Public trust of politicians	2.4	84
1.05	Irregular payments and bribes	3.8	81
1.06	Judicial independence	3.8	69
1.07	Favoritism in decisions of government officials	3.2	59
1.08	Wastefulness of government spending	3.0	88
1.09	Burden of government regulation	3.8	28
1.10	Efficiency of legal framework in settling disputes	3.9	54
1.11	Efficiency of legal framework in challenging regs	3.6	66
1.12	Transparency of government policymaking	4.6	47
1.13	Business costs of terrorism	6.1	55
1.14	Business costs of crime and violence	4.5	87
1.15	Organized crime	5.4	64
1.16	Reliability of police services	4.2	71
1.17	Ethical behavior of firms	3.8	72
1.18	Strength of auditing and reporting standards	4.7	72
1.19	Efficacy of corporate boards	4.9	39
1.20	Protection of minority shareholders' interests	4.4	62
1.21	Strength of investor protection, 0–10 (best)*	5.3	59
	2nd pillar: Infrastructure		
2.01	Quality of overall infrastructure	3.4	103
2.02	Quality of roads	2.8	110
2.03	Quality of railroad infrastructure	2.0	84
2.04	Quality of port infrastructure	3.6	95
2.05	Quality of air transport infrastructure	3.6	111
2.06	Available airline seat Kms/week, millions*	25.5	109
2.07	Quality of electricity supply	3.3	106
2.08	Fixed telephone lines/100 pop.*	0.7	131
2.09	Mobile telephone subscriptions/100 pop.*	34.1	124
	3rd pillar: Macroeconomic environment		
3.01	Government budget balance, % GDP*	-4.4	76
3.02	National savings rate, % GDP*	21.3	62
3.03	Inflation, annual % change*	13.4	131
3.04	Interest rate spread, %*	15.0	127
3.05	Government debt, % GDP*	22.8	35
3.06	Country credit rating, 0–100 (worst)*	29.0	110
	4th pillar: Health and primary education		
4.01	Business impact of malaria	2.9	132
4.02	Malaria incidence/100,000 pop.*	31,251.3	127
4.03	Business impact of tuberculosis	3.1	136
4.04	Tuberculosis incidence/100,000 pop.*	468.4	131
4.05	Business impact of HIV/AIDS	2.7	136
4.06	HIV prevalence, % adult pop.*	15.2	133
4.07	Infant mortality, deaths/1,000 live births*	92.0	133
4.08	Life expectancy, years*	45.4	137
4.09	Quality of primary education	3.2	92
4.10	Primary education enrollment, net %*	95.2	56
	5th pillar: Higher education and training		
5.01	Secondary education enrollment, gross %*	45.6	115
5.02	Tertiary education enrollment, gross %*	2.3	134
5.03	Quality of the educational system	4.0	52
5.04	Quality of math and science education	3.8	77
5.05	Quality of management schools	4.0	78
5.06	Internet access in schools	2.8	113
5.07	Availability of research and training services	3.8	86
5.08	Extent of staff training	3.8	81

	INDICATOR	SCORE	RANK/139
	6th pillar: Goods market efficiency		
6.01	Intensity of local competition	4.6	85
6.02	Extent of market dominance	3.5	77
6.03	Effectiveness of anti-monopoly policy	4.3	53
6.04	Extent and effect of taxation	3.5	79
6.05	Total tax rate, % profits*	16.1	9
6.06	No. procedures to start a business*	6.0	34
6.07	No. days to start a business*	18.0	65
6.08	Agricultural policy costs	4.0	54
6.09	Prevalence of trade barriers	4.8	48
6.10	Trade tariffs, % duty*	11.0	106
6.11	Prevalence of foreign ownership	5.7	18
6.12	Business impact of rules on FDI	5.2	30
6.13	Burden of customs procedures	4.2	71
6.14	Degree of customer orientation	4.4	78
6.15	Buyer sophistication	2.9	107
	7th pillar: Labor market efficiency		
7.01	Cooperation in labor-employer relations	4.3	71
7.02	Flexibility of wage determination	4.7	91
7.03	Rigidity of employment index, 0–100 (worst)*	21.0	50
7.04	Hiring and firing practices	4.4	36
7.05	Redundancy costs, weeks of wages*	178.0	131
7.06	Pay and productivity	3.4	102
7.07	Reliance on professional management	4.7	48
7.08	Brain drain	3.1	81
7.09	Females in labor force, ratio to males*	0.8	82
	8th pillar: Financial market development		
8.01	Availability of financial services	4.7	69
8.02	Affordability of financial services	4.1	74
8.03	Financing through local equity market	3.8	54
8.04	Ease of access to loans	2.3	106
8.05	Venture capital availability	2.0	118
8.06	Restriction on capital flows	4.6	60
8.07	Soundness of banks	5.3	56
8.08	Regulation of securities exchanges	4.4	56
8.09	Legal rights index, 0–10 (best)*	9.0	6
	9th pillar: Technological readiness		
9.01	Availability of latest technologies	4.6	89
9.02	Firm-level technology absorption	4.5	86
9.03	FDI and technology transfer	4.7	71
9.04	Internet users/100 pop.*	6.3	113
9.05	Broadband Internet subscriptions/100 pop.*	0.1	118
9.06	Internet bandwidth, Mb/s per 10,000 pop.*	0.1	129
	10th pillar: Market size		
10.01	Domestic market size index, 1–7 (best)*	2.4	114
10.02	Foreign market size index, 1–7 (best)*	3.3	110
	11th pillar: Business sophistication		
11.01	Local supplier quantity	4.6	82
11.02	Local supplier quality	4.0	98
11.03	State of cluster development	3.4	70
11.04	Nature of competitive advantage	3.1	86
11.05	Value chain breadth	3.0	107
11.06	Control of international distribution	3.5	114
11.07	Production process sophistication	3.0	106
11.08	Extent of marketing	3.2	111
11.09	Willingness to delegate authority	3.6	66
	12th pillar: Innovation		
12.01	Capacity for innovation	2.5	104
12.02	Quality of scientific research institutions	3.5	74
12.03	Company spending on R&D	2.8	87
12.04	University-industry collaboration in R&D	3.5	67
12.05	Gov't procurement of advanced tech products	3.6	72
12.06	Availability of scientists and engineers	3.8	88
12.07	Utility patents/million pop.*	0.0	90

Notes: An asterisk (*) indicates that data are from sources other than the World Economic Forum. For further details and explanation, please refer to the section "How to Read the Competitiveness Profiles" on page 115.

Zimbabwe

Key indicators, 2009

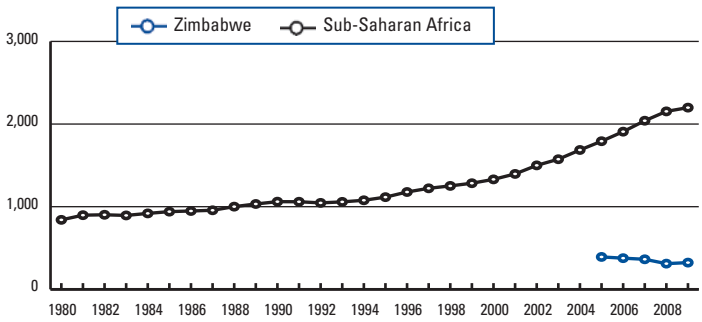
Population (millions) 12.5
GDP (US$ billions) 4.4
GDP per capita (US$) 374.8
GDP (PPP) as share (%) of world total 0.01

Sectoral value-added (% GDP)
Agriculture 19.1
Industry 23.9
Services 57.0

Human Development Index, 2010
Score, (0–1) best 0.14
Rank (out of 169 economies) 169

Sources: UNFPA, IMF, EIU, World Bank, UNDP.

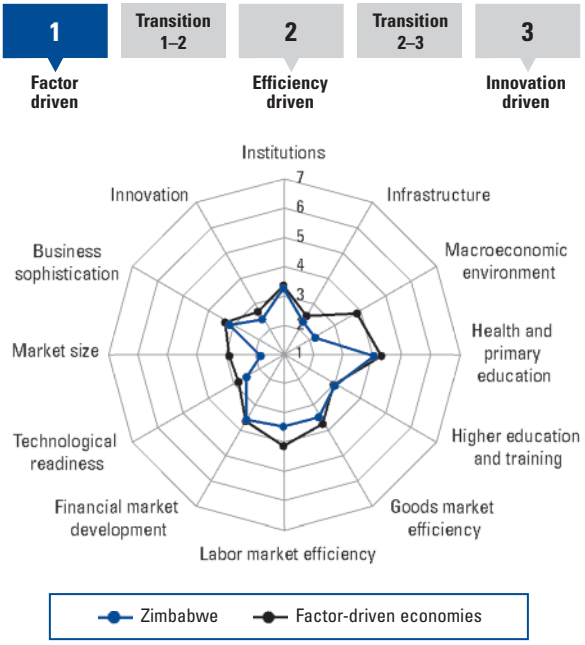
GDP (PPP) per capita (int'l $), 1980–2009



Global Competitiveness Index

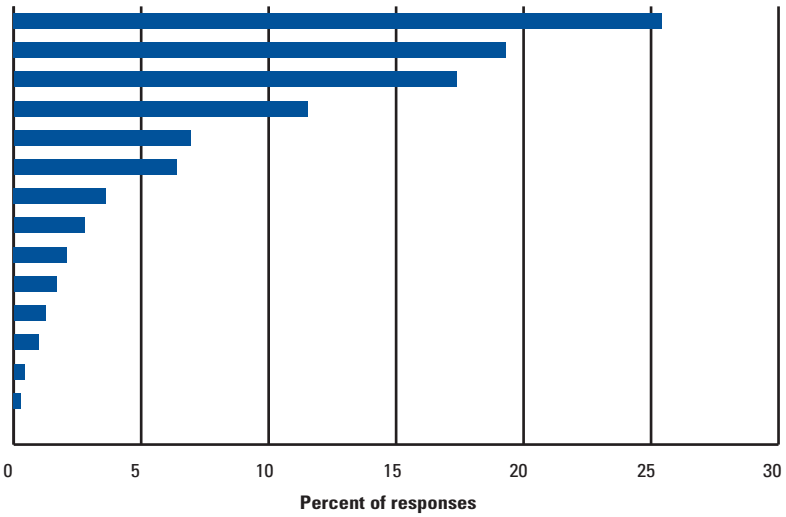
	Rank (out of 139)	Score (1–7)
GCI 2010–2011	**136**	**3.0**
GCI 2009–2010 (out of 133)	132	2.8
GCI 2008–2009 (out of 134)	133	2.9
Basic requirements	**137**	**3.0**
1st pillar: Institutions	105	3.4
2nd pillar: Infrastructure	129	2.4
3rd pillar: Macroeconomic environment	139	2.3
4th pillar: Health and primary education	126	4.2
Efficiency enhancers	**134**	**3.0**
5th pillar: Higher education and training	115	3.1
6th pillar: Goods market efficiency	130	3.5
7th pillar: Labor market efficiency	129	3.5
8th pillar: Financial market development	105	3.6
9th pillar: Technological readiness	135	2.5
10th pillar: Market size	134	1.8
Innovation and sophistication factors	**122**	**2.9**
11th pillar: Business sophistication	119	3.2
12th pillar: Innovation	122	2.5

Stage of development



The most problematic factors for doing business

Access to financing 25.4
Policy instability 19.3
Inadequate supply of infrastructure 17.4
Government instability/coups 11.5
Inefficient government bureaucracy 6.9
Corruption 6.4
Restrictive labor regulations 3.6
Crime and theft 2.8
Poor public health 2.1
Tax rates 1.7
Tax regulations 1.3
Poor work ethic in national labor force 1.0
Inadequately educated workforce 0.4
Foreign currency regulations 0.3
Inflation 0.0



Note: From a list of 15 factors, respondents were asked to select the five most problematic for doing business in their country and to rank them between 1 (most problematic) and 5. The bars in the figure show the responses weighted according to their rankings.

Zimbabwe

The Global Competitiveness Index in detail

	INDICATOR	SCORE	RANK/139
	1st pillar: Institutions		
1.01	Property rights	2.2	138
1.02	Intellectual property protection	3.1	88
1.03	Diversion of public funds	2.7	104
1.04	Public trust of politicians	2.0	114
1.05	Irregular payments and bribes	3.9	77
1.06	Judicial independence	2.3	131
1.07	Favoritism in decisions of government officials	2.6	110
1.08	Wastefulness of government spending	2.5	115
1.09	Burden of government regulation	3.1	80
1.10	Efficiency of legal framework in settling disputes	3.4	88
1.11	Efficiency of legal framework in challenging regs	2.4	130
1.12	Transparency of government policymaking	4.3	65
1.13	Business costs of terrorism	6.6	9
1.14	Business costs of crime and violence	4.9	71
1.15	Organized crime	6.1	33
1.16	Reliability of police services	2.8	126
1.17	Ethical behavior of firms	3.6	88
1.18	Strength of auditing and reporting standards	5.1	49
1.19	Efficacy of corporate boards	4.8	50
1.20	Protection of minority shareholders' interests	4.6	51
1.21	Strength of investor protection, 0–10 (best)*	4.3	99
	2nd pillar: Infrastructure		
2.01	Quality of overall infrastructure	3.2	116
2.02	Quality of roads	3.2	94
2.03	Quality of railroad infrastructure	2.8	61
2.04	Quality of port infrastructure	4.4	61
2.05	Quality of air transport infrastructure	3.9	99
2.06	Available airline seat Kms/week, millions*	22.7	114
2.07	Quality of electricity supply	1.8	130
2.08	Fixed telephone lines/100 pop.*	3.1	111
2.09	Mobile telephone subscriptions/100 pop.*	23.9	134
	3rd pillar: Macroeconomic environment		
3.01	Government budget balance, % GDP*	-3.3	54
3.02	National savings rate, % GDP*	1.0	135
3.03	Inflation, annual % change*	-7.7	1
3.04	Interest rate spread, %*	75.0	137
3.05	Government debt, % GDP*	162.5	136
3.06	Country credit rating, 0–100 (worst)*	6.7	138
	4th pillar: Health and primary education		
4.01	Business impact of malaria	4.4	114
4.02	Malaria incidence/100,000 pop.*	20,367.9	120
4.03	Business impact of tuberculosis	3.5	132
4.04	Tuberculosis incidence/100,000 pop.*	761.8	137
4.05	Business impact of HIV/AIDS	2.9	131
4.06	HIV prevalence, % adult pop.*	15.3	134
4.07	Infant mortality, deaths/1,000 live births*	61.5	115
4.08	Life expectancy, years*	44.2	139
4.09	Quality of primary education	3.3	85
4.10	Primary education enrollment, net %*	89.9	94
	5th pillar: Higher education and training		
5.01	Secondary education enrollment, gross %*	41.0	118
5.02	Tertiary education enrollment, gross %*	3.8	126
5.03	Quality of the educational system	4.2	46
5.04	Quality of math and science education	3.8	76
5.05	Quality of management schools	4.1	72
5.06	Internet access in schools	2.3	128
5.07	Availability of research and training services	3.3	109
5.08	Extent of staff training	3.9	71

	INDICATOR	SCORE	RANK/139
	6th pillar: Goods market efficiency		
6.01	Intensity of local competition	4.1	119
6.02	Extent of market dominance	3.7	64
6.03	Effectiveness of anti-monopoly policy	3.8	86
6.04	Extent and effect of taxation	3.2	93
6.05	Total tax rate, % profits*	39.4	66
6.06	No. procedures to start a business*	10.0	99
6.07	No. days to start a business*	96.0	133
6.08	Agricultural policy costs	2.2	139
6.09	Prevalence of trade barriers	4.4	79
6.10	Trade tariffs, % duty*	19.9	134
6.11	Prevalence of foreign ownership	4.2	108
6.12	Business impact of rules on FDI	2.8	136
6.13	Burden of customs procedures	3.6	99
6.14	Degree of customer orientation	3.7	124
6.15	Buyer sophistication	3.0	103
	7th pillar: Labor market efficiency		
7.01	Cooperation in labor-employer relations	4.2	79
7.02	Flexibility of wage determination	2.8	137
7.03	Rigidity of employment index, 0–100 (worst)*	33.0	82
7.04	Hiring and firing practices	3.0	122
7.05	Redundancy costs, weeks of wages*	446.0	134
7.06	Pay and productivity	3.1	120
7.07	Reliance on professional management	5.3	23
7.08	Brain drain	2.4	121
7.09	Females in labor force, ratio to males*	0.8	77
	8th pillar: Financial market development		
8.01	Availability of financial services	3.6	115
8.02	Affordability of financial services	3.7	97
8.03	Financing through local equity market	3.9	44
8.04	Ease of access to loans	2.0	127
8.05	Venture capital availability	1.7	134
8.06	Restriction on capital flows	3.6	113
8.07	Soundness of banks	3.4	135
8.08	Regulation of securities exchanges	3.9	85
8.09	Legal rights index, 0–10 (best)*	7.0	39
	9th pillar: Technological readiness		
9.01	Availability of latest technologies	3.6	133
9.02	Firm-level technology absorption	4.0	126
9.03	FDI and technology transfer	3.3	136
9.04	Internet users/100 pop.*	11.4	99
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9.06	Internet bandwidth, Mb/s per 10,000 pop.*	0.2	123
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10.01	Domestic market size index, 1–7 (best)*	1.5	134
10.02	Foreign market size index, 1–7 (best)*	2.7	126
	11th pillar: Business sophistication		
11.01	Local supplier quantity	4.0	123
11.02	Local supplier quality	3.7	119
11.03	State of cluster development	2.7	120
11.04	Nature of competitive advantage	2.3	136
11.05	Value chain breadth	2.4	134
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12.05	Gov't procurement of advanced tech products	2.8	124
12.06	Availability of scientists and engineers	2.9	131
12.07	Utility patents/million pop.*	0.3	66

Notes: An asterisk (*) indicates that data are from sources other than the World Economic Forum. For further details and explanation, please refer to the section "How to Read the Competitiveness Profiles" on page 115.

About the Authors

Jennifer Blanke

Jennifer Blanke is Director, Lead Economist, and Head of the Centre for Global Competitiveness and Performance at the World Economic Forum. Since joining the team in 2002, she has written and lectured extensively on issues related to national competitiveness and has edited a number of competitiveness reports, with a particular regional focus on Western Europe and sub-Saharan Africa. From 1998 to 2002, she was Senior Programme Manager responsible for developing the business, management, and technology section of the World Economic Forum's Annual Meeting in Davos. Before joining the Forum, Dr Blanke worked for a number of years as a management consultant for Eurogroup, Mazars Group in Paris, France, where she specialized in banking and financial market organization. Dr Blanke obtained a BA from Hamilton College, a Master of International Affairs from Columbia University, and an MA and a PhD in International Economics from the Graduate Institute of International Studies (Geneva).

Zuzana Brixiova

Zuzana Brixiova is a Principal Research Economist at the Development Research Department of the African Development Bank, where she currently researches the longer-term impact of the global financial crisis on Africa and the role of growth-supporting macroeconomic policies in the post-crisis global economy. She has authored or co-authored several studies and policy briefs in this area, some of which provided analytical background for discussions of the Committee of Ten (C-10). Before joining the African Development Bank, she worked in the Country Studies branch of the OECD's Economics Department, where she was the lead author of the first *OECD Economic Survey of Estonia.* As a Fulbright Scholar at the Addis Ababa University in 2007–08, she conducted research on entrepreneurship in Ethiopia and taught graduate courses on advanced macroeconomics. She has an extensive operational experience from the IMF in countries in Africa, Central Asia, and emerging Europe, including as the IMF resident representative for Lithuania and Belarus. She holds a PhD in Economics from the University of Minnesota.

Ciara Browne

Ciara Browne is Associate Director of the Centre for Global Competitiveness and Performance at the World Economic Forum, where her responsibilities include coordinating the Executive Opinion Survey process and managing the network of over 150 Partner Institutes worldwide, as well as providing input into *The Global Competitiveness Report* and several of the Forum's other benchmarking studies. She also works closely with the Forum's media team in articulating the findings of the various competitiveness reports to the media and the public. Before joining the Forum, she served for several years with the International Organization for Migration, where she worked for a mass claims processing program. She has a BA (Hons) from the University of Manchester.

Uri Dadush

Uri Dadush is Senior Associate and Director of Carnegie's International Economics Program. His work currently focuses on trends in the global economy and the global financial crisis. A French citizen, Dr Dadush previously served as the World Bank's Director of International Trade for six years and before that as Director of Economic Policy for three years. He has also served concurrently as the Director of the Bank's World Economy Group over the last eleven years, leading the preparation of the Bank's flagship reports on the international economy over that period. Prior to joining the World Bank, he was President and CEO of the Economist Intelligence Unit and Business International, part of the Economist Group. Dr Dadush received BA and MA degrees in Economics from Hebrew University and a PhD in Business Economics from Harvard University, where he specialized in International Trade.

Andres F. Garcia

Andres F. Garcia is an Economist in the Africa Financial and Private Sector Development Group. He joined the World Bank as part of the Young Professionals Program in 2009. His work at the Bank is mainly focused on strengthening the linkages along the tourism and agribusiness value chains in Africa. Before joining the World Bank, Dr Garcia was an Assistant Research Professor in Development Economics at the University of Copenhagen, working on issues related to poverty reduction and economic structure in Mozambique and Vietnam. He has published in the *Journal of Agricultural Economics,* authored a book chapter on "Agricultural Price Distortions and Stabilization," and worked together with the Honduran Ministry of Tourism to create the manual *How to Implement Ecotourism Projects.* He has a PhD in Agricultural Economics and an MS in Hospitality and Tourism Management from Purdue University, and a BS in Socioeconomic Development and Environment from the Pan-American School of Agriculture.

Tugba Gurcanlar

Tugba Gurcanlar is a Trade Consultant at the World Bank's Finance and Private Sector Development Unit for the Africa Region. Her current focus is on developing business clusters and enhancing the competitiveness of African firms in the global markets. Previously Ms Gurcanlar worked in the International Trade and International Finance Units of the World Bank on trade corridors, investment decisions of the global buyers, trade facilitation, export competitiveness, and south-south banking and investments. Prior to her work at the World Bank, she also focused on European trade and finance at the UN Economic Commission for Europe, the Turkish Prime Ministry, the General Secretariat for European Union Affairs, and the Economic Development Foundation. A Turkish national, Ms Gurcanlar holds an MPP in Global Economic Policy from Duke University.

Kwabena Gyimah-Brempong

Kwabena Gyimah-Brempong is Professor of Economics at the University of South Florida at Tampa, where he has been Department Chair since 2004. Dr Gyimah-Brempong has also held professorial positions at New College of Florida and Wright State University, Dayton, Ohio. He was an Economics Program Director at the National Science Foundation from 2002 to 2004 and a Senior Research Economist at Elliot Berg Associates in Alexandria, Virginia, between 1986 and 1987. He is a past Secretary/Treasurer and President of the African Finance and Economics Association (AFEA) as well as a past President of National Economics Association. He consults regularly for the African Development Bank, the United Nations' Economic Commission for Africa, the African Capacity Building Foundation, and the National Science Foundation, among others. His research focuses on the economics of crime, efficiency in public production, and the economic development of Africa. He has published several articles in refereed journals including the *American Economic Review,* the *Review of Economics and Statistics,* the *Journal of Business and Economics Statistics,* the *Journal of Development Economics, Economic Development and Cultural Change,* the *Economics of Education Review, Information Economics and Policy,* and the *Journal of African Economies.* He serves on the editorial boards of the *Southern Economic Journal* and the *Journal of African Development.* Dr Gyimah-Brempong has also contributed chapters to several books. He holds a BA (Honors) in Economics from the University of Cape Coast, Ghana, and a PhD in Economics from Wayne State University.

Mary Hallward-Driemeier

Mary Hallward-Driemeier is a Lead Economist in the Office of the Chief Economist of the Financial and Private Sector Development Network of the World Bank. Since joining the World Bank as a Young Professional in 1997, she has published articles on entrepreneurship, firm productivity, the impact of the investment climate on firm performance, the impact of financial crises, and determinants of foreign direct investment. She was the Deputy Director for the *World Development Report 2005: A Better Investment Climate for Everyone.* She helped establish the World Bank's Enterprise Surveys Program, which now covers over 100,000 enterprises in 100 countries. She is also a founding member of the Microeconomics of Growth Network. She is currently the Task Team Leader for the regional flagship report *Expanding Economic Opportunities for Women in Africa.* She received her MSc in Development Economics from Oxford University and her PhD in Economics from the Massachusetts Institute of Technology.

Giuseppe Iarossi

Giuseppe Iarossi is Senior Economist in the Regional Program for Enterprise Development of the Africa Finance and Private Sector Development Group of the World Bank. He joined the Bank in 1994 in the Research Department and worked on determinants of long-term growth with particular emphasis on ethnicity in Africa. Since 1997, he has been a core team member of the Investment Climate team, contributing to the establishment of the Enterprise Surveys Program throughout the World Bank. He has managed surveys in Africa, Latin America, South Asia, and East Asia and has written numerous *Investment Climate Assessment*s and research papers on firm productivity and the impact of the business environment on firm performance. He has managed the production on the World Bank side for a number of publications, including the flagship reports *The Africa Competitiveness Report 2007, 2009,* and *2011*, published jointly with the World Economic Forum and the African Development Bank. His interests include survey methodology and the effects of survey design on data accuracy. He is the author of *The Power of Survey Design: A User's Guide for Managing Surveys, Interpreting Results, and Influencing Respondents.* He holds a Master in Economics from the University of Maryland at College Park and a Master in International Affairs from the Johns Hopkins University, School of Advanced International Studies. He received an MBA from the University of Siena and a CPA certification from the University of Naples. He has taught Survey Methodology at the School of Advanced International Studies of the Johns Hopkins University and has led short courses on Survey Methodology and Survey Data Analysis in many countries around the world.

Hannah Messerli

Hannah Messerli is dedicated to utilizing tourism as an economic development tool for emerging economies. Currently a Senior Private Sector Development Specialist in Tourism for the Africa Region of the World Bank, Dr Messerli supports government initiatives to develop private-sector capacity in tourism across a region of 47 countries. With more than 15 years of experience in the public and private sectors focusing on tourism planning and development, she has worked in Asia, Africa, Europe, and the Americas. As an analyst and tourism product development specialist, she has focused on cultural heritage and nature-based tourism in emerging economies. Her professional background includes serving as a faculty member at New York University and operations consulting with hotel and tourism companies globally. Hannah has completed Masters in Hotel Administration at Cornell University and in Tourism Planning at the George Washington University. Her doctorate in Tourism Planning and Development was also completed at Cornell University.

Peter Ondiege

Peter Ondiege is Chief Research Economist at the Development Research Department (EDRE) of the African Development Bank (AfDB). He coordinates the production for the AfDB of the *Investment Climate Assessment*s and the *African Competitiveness Report*s jointly undertaken with the World Bank and World Economic Forum. Prior to joining EDRE in July 2006, He was in the Planning and Budgeting Department of the AfDB where he served as the Annual Report Coordinator, coordinating and playing lead roles in the preparation of the *Bank Group Annual Report*s of 2004 to 2007. Prior to joining the Bank in 2004, he was a Director of the Housing and Building Research Institute and an Associate Professor at the University of Nairobi, Kenya; he also held a position at the Ministry of Planning and National Development, Kenya. He has conducted and led a number of study teams mainly in the areas of macroeconomic and sectoral reforms and enterprise development, especially in the small- and medium-sized enterprises (SMEs) sector. He has published widely in the field of Urban and Regional Economics and in the private sector, focusing on SME development. He has also served as a consultant to a number of regional and international organizations and agencies. He holds a Master and a PhD in Economics from the University of Tsukuba, Japan.

The publication of this year's *Africa Competitiveness Report* comes out as the world emerges from its most significant financial and economic crisis in generations. While many advanced economies are still struggling to get their economies back on a solid footing, Africa has, for the most part, weathered the storm remarkably well.

However, although impressive growth rates and increasing levels of FDI supported an economic resurgence in Africa over the past decade, much remains to be done to ensure that it continues to grow rapidly into the future. Indeed, one of the reasons that Africa was less affected by the crisis than other regions was its limited integration into the global economy. Although this sheltered African economies over the shorter term, it holds them back in their development over the longer term. In this context, the goal of this *Report* is to highlight the areas most urgently requiring policy action and investment to ensure that Africa's growth will be sustainable into the future.

This is the third report on the region's business environment that leverages the knowledge and expertise of the African Development Bank, the World Bank, and the World Economic Forum. It presents a joint vision of the policy challenges that countries on the continent should address to establish a foundation for sustainable growth and prosperity. This year the Africa Commission and the Danish Government have also provided their support to this *Report*.

Much has been done in recent years to improve the business and economic environment in Africa. Continued policy and institutional reform remain central to ensuring that African countries remain on a higher growth trajectory. This year's *Report* places a particular focus on better harnessing the continent's resources by upgrading skills, encouraging female entrepreneurship, and making the most of its natural and cultural resources.

Also included are detailed competitiveness profiles for several African countries, providing a comprehensive summary of their competitive strengths and weaknesses. *The Africa Competitiveness Report 2011* is an invaluable tool for policymakers, business strategists, and other key stakeholders, as well as essential reading for all those with an interest in the region.

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