Africa’s Development in 3D

Key findings and policy advice from
World Development Report 2009

Reshaping Economic Geography
This booklet is a product of the staff of the International Bank for Reconstruction and Development / The World Bank. It draws on the 2009 *World Development Report*, which was prepared by the staff of the World Bank. The findings, interpretations, and conclusions expressed in these pages do not necessarily reflect the views of the Executive Directors of The World Bank or the governments they represent.

**Acknowledgments**

This booklet was edited by Kavita Watsa and designed and desktopted by Roula Yazigi of the World Bank's Development Economics Vice Presidency, under the supervision of Indermit S. Gill, Director, *World Development Report 2009: Reshaping Economic Geography*.

**Photos**

A billion slum dwellers in the developing world’s cities, a billion people in fragile lagging areas within countries, a billion at the bottom of the global hierarchy of nations—these overlapping populations pose today’s biggest development challenges.

Concern for these intersecting 3 billion sometimes comes with the prescription that economic growth must be made more spatially balanced.

World Development Report 2009 has a different message: economic growth is seldom balanced. Efforts to spread it prematurely will jeopardize progress.
In November 1884, 14 European colonizers met in Berlin, Germany to negotiate and settle territorial claims, after four centuries of hostilities. No Africans were invited. Four months later, the borders of African nations had been charted, in a pattern that is still recognizable today.

In April 2005, the Second Asia-Africa Summit was held in Jakarta, Indonesia, to discuss the establishment of a stronger economic partnership between the two continents. China and India, with a combined GDP of $4,451 billion, were each represented by one head of state. Africa, with a regional GDP of $845 billion, was represented by 48.

In December 2008, Paul Krugman received the Nobel Prize in Stockholm, Sweden for a new theory that explains the effects of free trade and globalization and driving forces behind worldwide urbanization.

These three events have one thing in common: each illustrates the importance of economic geography for development. Bismark’s Berlin conference shaped Africa’s political and economic landscape, the Jakarta summit shone a floodlight on its result, and the Stockholm ceremony recognized the ideas that can help developing nations reshape their economic geography.

The World Bank’s World Development Report 2009: Reshaping Economic Geography demonstrates the usefulness of these ideas for the people and policymakers of Africa, by showing how growing cities, ever more mobile people, and increasingly specialized products are integral to development.

These changes have been most noticeable in North America, Western Europe, and Northeast Asia. But countries in East and South Asia and Eastern Europe are now experiencing changes that are similar in their scope and speed. The report concludes that such transformations will remain essential for economic success in other parts of the developing world and should be encouraged.

Density

Visitors to Tokyo—the largest city in the world, where a quarter of Japan’s population is packed into less than 4 percent of its land—can see people being crushed into trains by professional train-packers. Millions of people willingly subject themselves to the unpleasantness of such a crush. A map of

Japan’s economic density shows why. Tokyo generates a big part of Japan’s wealth—to get a share of it, people have to live close by. The most striking feature of the map on the left is density—the concentration of wealth in Tokyo and Osaka.

**Distance**

In the United States, each November in the days before the Thanksgiving holiday, about 35 million people try to get back to their families and friends. It is the start of winter in some parts of the country, so flights are often canceled.

But Americans put up with the pain of leaving friends and family, because economic activity is concentrated in a few parts of the country.

The map below shows the concentration of economic activity in some parts of the United States. To get a part of this wealth, Americans have to get closer to it. That is why 8 million people change states every year in the United States, migrating to reduce their distance to economic opportunity. The most striking feature of the map below is distance.

**Division—what prevents progress in Africa does not in Western Europe**

Border restrictions to flows of goods, capital, people, and ideas

Across the Atlantic, in Western Europe, another massive movement takes place every day—not of people but of products. One example is Airbus, which makes parts of planes and assembles them in France, Germany, Spain, the United Kingdom, and other countries. Huge sections of aircraft are loaded onto ships and planes, as places specialize in making different parts and producing them in scale. Countries in a region that was recently divided now trade with former enemies to become an ever-more-integrated European Union. As this integration has increased, economic divisions have decreased, making specialization and scale possible.
How Markets View the World

The map of economic geography below, which resizes the area of a country to reflect its GDP, shows the benefits of big cities, mobile people, and connected countries. The United States, Western Europe, and Japan dominate the world’s economy. Cities, migration, and trade have been the main catalysts of progress in the developed world over the past two centuries. These stories are now being repeated in the developing world’s most dynamic economies.

- Mumbai is not the largest city in the world, but it is the most densely populated. And it keeps growing.
- China is not the largest economy in the world, but it is the fastest growing and may be among the most mobile.
- Southeast Asia is not a political union, but it trades parts of goods back and forth as the EU does.

Despite the crush among commuters and in slums such as Dharavi, Mumbai’s population has doubled since the 1970s. Since the 1990s, millions of Chinese workers have migrated to get closer to economic opportunity concentrated along the coast. Regional production networks in East Asia are spread far wider than Airbus sites in Western Europe. East Asian countries may not trade airplane parts, but nations that once were enemies now trade parts of cars and computers with the same frequency and speed.

And what is the payoff? We can also recognize the shapes of China, India, and Southeast Asian countries on the map of the world’s economic geography. Contrast these shapes with that of the mighty continent of Africa, which shows up as a slender peninsula.

How markets view the world
A country’s size shows the proportion of global gross domestic product found there

Note: The cartogram was created using the method developed by Gastner and Newman (2004). This map shows the countries that have the most wealth when GDP is compared using currency exchange rates. This indicates international purchasing power—what someone’s money is worth if spent in another country.
Reshaping Africa’s economic geography will require countries in the region to address the continent’s extreme fragmentation. This is what lies at the heart of Africa’s development problem today, affecting governance, cities, infrastructure and trade.

- Good governance requires a cohort of qualified and devoted civil servants, and a well-informed and empowered electorate. As Sub-Saharan Africa is made up of many small countries, the share of the population necessary to fulfill these administrative duties is beyond the capacity of a typical African country.

- Bustling cities like Shanghai and Mumbai are needed to serve as connectors to the rest of the world. In Africa, economic divisions limit the benefits that can come from an urbanization driven by economic forces instead of being limited by political boundaries.

- What is a national infrastructure in China or India has to be provided as regional infrastructure in Africa. Such connections with world markets and within Africa would have facilitated trade and brought about greater scale and specialization.

African countries are tiny markets—19 of the 48 African countries have less than 5 million inhabitants—and their borders are the thickest in the world, impeding the movement of goods, services, capital, ideas and people. Given Africa’s fragmentation, more than 48 international airports compete for relatively thin air traffic, and 33 small ports located along African coasts fight to capture the meager freight exiting and entering Sub-Saharan Africa. At the regional level, transiting through a neighboring country can be more costly and time-consuming than shipping cargo to even Japan, the farthest developed country.

For Africa to fully participate in the global economy, scale economies in production and transport must be boldly exploited. Such a scale-centered strategy would benefit the relatively better-off countries in the short term. The others can take some comfort from the Asian experiences, which show that neighboring nations will soon benefit.

*World Development Report 2009* discusses the policies to help reconcile such unbalanced growth with a more inclusive development. The principle: economic integration of places that are not doing well with places that are doing better. The instruments: common institutions that unify, well-placed infrastructure, and coordinated interventions to compensate the least fortunate and strengthen the incentives for regional cooperation. These principles and instruments are critical in Africa, where low economic densities, long distances and deep divisions come together to make the continent’s economic geography the most difficult development challenge of them all.

**Stories of economic geography**

Al Haji Kamilu Ila, a leather manufacturer in Kano, northern Nigeria, is lucky if his goods reach the southern port of Lagos in a week, what with roadblocks, tax collectors, and accidents. At the port, there are many divisions—more bureaucracy, more corruption, and more delay.

You can hear the voices of Kamilu and others from around the world in a documentary film, viewable at: [www.worldbank.org/wdr2009](http://www.worldbank.org/wdr2009)
Density, Distance and Division in Sub-Saharan Africa

For Sub-Saharan Africa, the Berlin conference of 1884—at which 14 European colonial powers convened by German Chancellor Bismarck charted the borders of African countries in patterns still recognizable today—was just the last in a long line of what geographers have termed “formative disasters”. These have unfortunately altered the human, physical, and political geography of the continent, creating continentwide problems of low density, long distances, and divided countries. Understanding Africa’s economic geography is a first step towards delivering transformative solutions.

Low density weakens agglomeration forces

Sub-Saharan Africa has long been a continent where people are scarce. Its population in the eighteenth century was about 90 million. Eurasia, with an area about twice that of Africa, had more than five times as many people.

These initial conditions were tragically worsened by the slave trade. Between 1700 and 1810, an estimated 15 million Africans—one of every six—were taken to the Americas. Some areas were depopulated, and many more mired in devastating conflict as the price put on humans turned Africans against each other. Europe finally put an end to the slave trade, and replaced it with colonialism in the 18th century. A rapacious trade in people was then replaced by a plundering of the continent for minerals. But even with new settlers, the continent still suffered from low density in most places.

The average population density on the continent (77 people per square kilometer) is among the lowest in the world. A sparsely inhabited continent can overcome this by using its land and people well and by concentrating resources in urban agglomerations. But Sub-Saharan Africa is the world’s least urbanized continent, with only one-third of the population living in urban areas in 2000, according to the UN’s World Urbanization Prospects. Due to the lack of regular and recent censuses, even this may overstate the urbanization in Africa. Africa’s agglomeration index score is 30 percent, compared with about 50 percent for the rest of the world.

Divisions between countries in Africa can distort the pattern of urbanization. One simulation suggests that if Africa’s 50 countries were 50 states in one country, like the United States, the largest cities would be bigger than they are today, capable of sustaining diversified economies and incubating entrepreneurship, skills, and innovation. Without such prospects, Africa’s skilled labor has migrated to other continents.

Long distances reduce mobility

Since the Holocene Age that began about 18,000 years ago, the Sahara has been an inhospitable desert, separating northern Africa from what we now call “Sub-Saharan” Africa.

The global warming of that period had other major consequences. It cut contact between most of Africa and the emerging civilizations in the Arab Republic of Egypt and the Middle East. It turned Equatorial Africa from a temperate savannah into a hot and humid place where malaria and yellow fever thrived. Proximity to wild animals and the absence of frost—a natural disinfectant—increased human vulnerability to diseases. And when Africans settled in healthy, fertile places, they were displaced by colonial settlers.

Since the 1950s, armed conflicts in pre- and post-independence movements have aggravated the problem of refugees. The result: movements of people that have left many in remote areas far from the centers of economic activity. The long distance to density still affects the growth potential of a large part of the African population.
Distance reinforces the effects of low population density on productivity in Africa. While much is made of Africa's distance from world markets, the primary problem is domestic—long distances within countries. The table on the next page indicates that Africa has one of the lowest road densities in the world, second only to Latin America. But unlike Latin America—where the population lives largely along the coast, making it unnecessary to build roads into the interior—Africa

Africa's borders were charted before World War I

has a third of its population in landlocked countries and even further from access to global markets. Economic distance in Africa—in the sense of market access—is further lengthened by armed conflicts and linguistic diversity. Economic distance has isolated a large proportion of Africans from access to domestic and global markets. Physical factors, such as the relative absence of navigable rivers and natural harbors, have been serious barriers to trade. Low levels of domestic and international trade, in turn, limit the potential for growth.

**Deep divisions impede specialization**

Africa’s partitioning in 1884 left the continent with the most countries per square kilometer of any region in the world. Each African country has an average of four neighbors; in Latin America the average is 2.3. There are also religious divisions, between and within countries. Chad, Côte d’Ivoire, Ethiopia, Nigeria, Somalia, and Sudan, for example, are fragmented into Islamic and non-Islamic parts. Islam came from the Middle East into Africa by both land and sea. Later, European colonialists brought Christianity. The superimposition of these great world religions on top of traditional beliefs reinforced the continent’s divide and may have added to conflict.

The continent today suffers from the triple disadvantages of low density, long distance, and deep division that put it at a developmental disadvantage. These spatial dimensions reduce proximity between economic agents within Sub-Saharan Africa, and between Africa and the rest of the world.

Sub-Saharan Africa is a highly fragmented continent with many borders, many neighbors, and high transport costs. Africa is as physically close to global markets as is East Asia—about 7,500 kilometers—and closer than Latin America (9,000 kilometers). But it still costs almost twice as much to ship a container to the east coast of the United States from Africa as from other regions (see table below).

Compounding expensive access to global markets is costly access to regional markets. It takes an African exporter about 40 days to cross the border into a neighboring country, compared with 22 days for a Latin American counterpart.

For the third of Africans who live in landlocked countries, the costs of division are even greater. They must move goods long distances over land—expensive, because each 1 percent increase in distance increases transport costs by approximately 0.25 percent. And landlocked countries must rely on the goodwill (and efficient investment) of neighbors for access to ports and markets.

**The most distant and divided regions—trading and transport are expensive**

<table>
<thead>
<tr>
<th>Region</th>
<th>Trading time across borders for exports (days)</th>
<th>Average transport costs ($ per container to Baltimore)</th>
<th>Population in landlocked countries (%)</th>
<th>Ratio of number countries to surface area</th>
<th>Road density (km² of road per surface area) (1999)</th>
<th>Estimated number of civil conflicts, (1940–2000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Asia &amp; Pacific</td>
<td>24</td>
<td>3,900</td>
<td>0.42</td>
<td>1.44</td>
<td>0.72</td>
<td>8</td>
</tr>
<tr>
<td>Europe &amp; Central Asia</td>
<td>29</td>
<td>—</td>
<td>23.00</td>
<td>1.17</td>
<td>–</td>
<td>13</td>
</tr>
<tr>
<td>Latin America &amp; Caribbean</td>
<td>22</td>
<td>4,600</td>
<td>2.77</td>
<td>1.52</td>
<td>0.12</td>
<td>15</td>
</tr>
<tr>
<td>Middle East &amp; North Africa</td>
<td>27</td>
<td>2,100</td>
<td>0</td>
<td>1.60</td>
<td>0.33</td>
<td>17</td>
</tr>
<tr>
<td>South Asia</td>
<td>34</td>
<td>3,900</td>
<td>3.37</td>
<td>1.67</td>
<td>0.85</td>
<td>24</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>40</td>
<td>7,600</td>
<td>40.20</td>
<td>2.00</td>
<td>0.13</td>
<td>34</td>
</tr>
</tbody>
</table>


Note: = not available
Meeting the Challenge

Africa can reduce the limitations of its poor economic geography. Better urban agglomerations can deliver scale efficiencies. Transport links can help domestic markets grow. And regional and global integration can promote trade. These improvements can create good neighborhoods, and better neighborhoods will facilitate investment, trade, and factor mobility in a cycle of prosperity.

Urbanization

Contrary to some thinking, urbanization, done right, can help development in a sparsely populated Africa even more than it is helping Asia. Despite five decades of low-quality urbanization, living standards in Africa’s cities are much higher than in the countryside. If urbanization can be managed better, significant gains can be expected in productivity and poverty reduction.

Territorial development

The guidance from economic geography is unambiguous: firms and workers seek agglomeration, and migration is a natural way to increase density and reduce distance to markets. Policies to help people access economic opportunities wherever they arise should replace the failed efforts to spread economic growth to remote areas.

The report proposes some principles and priorities for countries where lagging areas are sparsely populated and divided along ethnic, linguistic, or religious lines. Agriculture is one priority, but policies to help leading areas exploit scale economies may be especially important in Africa as a latecomer to economic development.

Regional integration

Given its history, consensus will be needed for African regional integration. The experience of Western Europe spotlights the importance of starting small and keeping expectations realistic. In fact, by starting small, thinking global, and compensating the least fortunate, Africa can begin to chart out a clear way forward and undo some of what Bismarck and his cohorts did in 1884.

- Starting small. In “natural neighborhoods,” cultural, historical, and economic ties can be strong. The European integration started with France and Germany deciding to cooperate over coal and steel production in the 1950s. East African countries share Swahili, which has facilitated trade for centuries. Kenya and Uganda had free trade during colonial times. West African countries share the Dioula, Peuhl, and Haoussa cultures that had developed impressive trade networks.
Thinking global. For the foreseeable future, markets in North America, Western Europe and East Asia will dominate the world's economy. Poor countries in East Asia have shown that these markets can be penetrated.

Compensating the least fortunate. The international community can help to build trust by providing incentives to compensate the members most likely to lose in the immediate future. By helping “natural neighborhoods” succeed in their regional endeavors, the international community can unleash positive spillover effects. Leaders such as Nigeria and South Africa will have more attractive regional economic partners, and lead Africa’s integration into the world economy.

Reducing distance and division

The Maputo Development Corridor between South Africa and Mozambique was initiated in 1995 to rehabilitate primary infrastructure; attract investment; and provide employment opportunities for disadvantaged populations. It promotes fast-track design and implementation of bankable private investment projects and public-private partnerships. But it risks failing to address local social service needs. Some ongoing evaluations show that border costs and delays are common impediments, possibly diverting freight to domestic corridors. More formal institutional cooperation between the countries could generate additional benefits.

Building regional infrastructure in Southern Africa
The Maputo Development Corridor

Increasing density and reducing division

Interactions between neighboring areas or cities across countries can also provide the base for broader integration. Sub-Saharan Africa has many pairs of large cities that are near each other but separated by a national border. This carries hidden economic costs that can be overcome through cross-border agreements. Cameroon shares twin cities with West African neighbors, but none in its Central African neighborhood.

A succession of large coastal cities along the Gulf of Guinea spans from Abidjan in Côte d’Ivoire to Douala in Cameroon, and includes Accra, Cotonou, Lagos, and Lomé. When discussing “growth champions,” it may be worth keeping in mind the potential of such multicountry agglomerations, rather than thinking of some nations as regional growth leaders.

When seen through the lens of economic geography, the regional integration priorities change to prioritizing regional infrastructure investments in leading areas that span several countries.

City pairs in bordering regions within 150 kilometers and with more than 10,000 inhabitants

Source: WDR 2009 team.
A Contract with Africa?

To exaggerate somewhat, development strategies for leading areas should invest in places, and strategies for lagging areas should invest in people.

Seen through the lens of economic geography, the thrust of development assistance to Africa that focused on education, health, and other social infrastructure in the late 1990s seems correct for the lagging, landlocked countries. But this assistance appears to focus on the wrong priorities for coastal countries, which need physical infrastructure and better integration with global markets.

A better contract between donors and countries would be to differentiate approaches across countries depending on their potential market access. World Development Report 2009 proposes a tailored approach, which would lay out the rights and responsibilities of countries according to their potential regional role.

For each of Sub-Saharan Africa’s regions, the contract would include specific obligations and actions that encourage regional development. The governments of East, West, and Central Africa would commit to the following:

- Establishing “Regional Economic Areas” that tie the economic interests of leading and lagging countries in Africa’s regional neighborhoods tightly together and provide a framework to provide of regional public goods.
- Pursuing freer movements of labor, capital, goods, and services within these areas.
- Maintaining and protecting access routes between landlocked countries and outlets for trade.

The strategy would combine institutional cooperation, investment in regional infrastructure, and coordinated interventions that may require giving up some hard-won and jealously guarded attributes of national sovereignty.

In exchange for these actions, bilateral and multilateral development partners would commit to the following:

- A large increase in international financial assistance for improved social services and other life-sustaining infrastructure aimed at raising living standards and creating portable human capital in lagging countries.
- Increased financial support for growth-sustaining infrastructure—including ports, transport links, and information and communication technology—in the coastal countries, as well as corridor infrastructure to link coastal and interior markets.
- Preferential access for Sub-Saharan Africa’s exports, with liberalized rules of origin that encourage regional supply chains.

Things are already headed in this direction. In 2007 the Government of the United Kingdom, through its Department for International Development, allocated $1.4 billion over the coming decade to efforts by the governments of Burundi, Kenya, Rwanda, Tanzania, and Uganda and to revitalize the East African Economic Community. The European Commission is also adopting a regional approach with its economic partnership agreements. But all donors could be bolder in their approaches.

The experience of Europe after World War II illustrates how national determination to prioritize reconstruction coupled with international assistance can pay off. Regional integration in Europe did not go smoothly initially. But encouraged by the tough terms of cooperation in the Marshall Plan, a process of integration that would have been impossible a generation earlier, created the largest common market for capital, labor, and ideas today.
World Development Report 2009: Reshaping Economic Geography

This World Bank report includes chapters on:

- Density
- Distance
- Division
- Scale Economies and Agglomeration
- Factor Mobility and Migration
- Transport Costs and Specialization
- Concentration without Congestion: Policies for an inclusive urbanization
- Unity, Not Uniformity: Effective approaches to territorial development
- Winners without Borders: Integrating poor countries with world markets

The report can be ordered online or downloaded free of cost at:

“I expect that *Reshaping Economic Geography* will stimulate a much-needed discussion on the desirability of “balanced growth,” which has proved elusive. And by informing some important policy debates, it will point the way toward more inclusive and sustainable development.”

—Robert B. Zoellick

*President*

*The World Bank Group*