



Density, Distance, and Division in Sub-Saharan Africa

In November 1884, Chancellor Otto von Bismarck of Germany convened a meeting of 14 European colonial powers in Berlin. After four centuries of competition and hostility, the time had come to negotiate and settle territorial claims. Britain, France, Germany, and Portugal were the main players; no Africans were invited. Four months later, the borders of African countries had been charted in a pattern still recognizable today (see map G4.1). Bismarck's disciplined solution remained until the end of World War I, when the League of Nations confiscated Germany's four colonies and gave other colonizers the mandate of governing them. At independence in the 1950s and 1960s, Sub-Saharan Africa had almost 50 countries, many of them called "artificial states," with borders cutting across physical geographic features and partitioning ethnic groups into more than one country.¹

For Sub-Saharan Africa, the Berlin conference was just the last in a long line of what geographers have termed "formative disasters," unfavorably altering the human, physical, and political geography of the continent, creating continentwide problems of low density, long distances, and divided countries.

- *Low density.* 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. But 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 eighteenth century. A rapacious trade in men 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.
- *Long distances.* 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 again displaced by colonial settlers. Since the 1950s armed conflicts in pre- and postindependence 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.

- *Deep divisions.* The partitioning of Africa 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

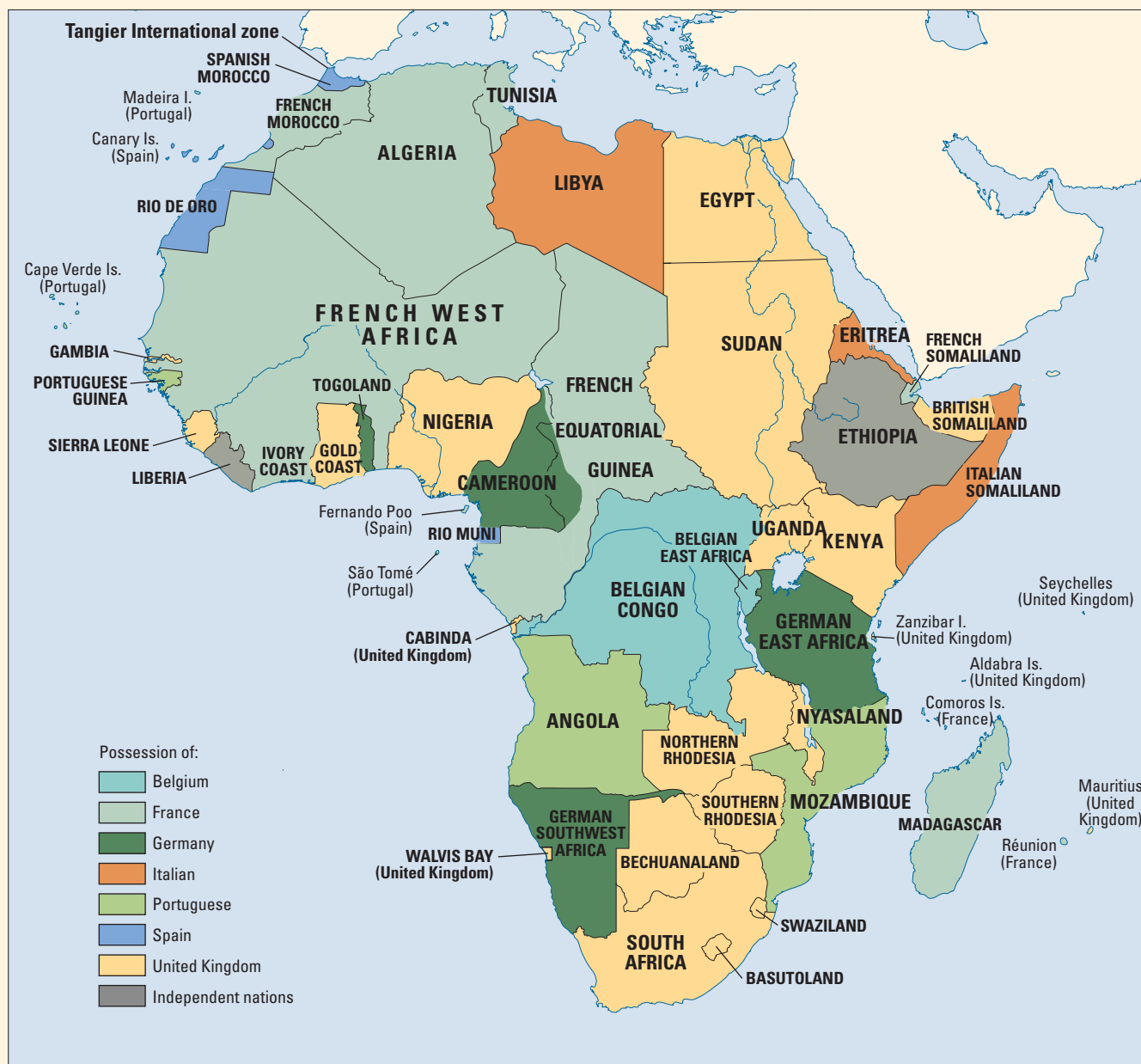
countries. Chad, Côte d'Ivoire, Ethiopia, Nigeria, Somalia, and Sudan, for example, are fragmented into Islamic and non-Islamic parts. Islam came from the Middle East into North and West Africa by land and into East Africa by sea. Later, European colonialists brought Christianity. The superimposition of these great world religions on top of traditional beliefs reinforced the continent's divide and may have added to conflict.²

Sub-Saharan Africa today suffers from the triple disadvantages of low density, long distance, and deep division that put the continent 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. "Cumulative causation" between these forces catches many countries in Sub-Saharan Africa in a "proximity trap."³

Low density is linked to weak agglomeration forces

The average population density on the continent (77 people per square kilometer) is among the lowest in the world.⁴ A sparsely inhabited continent can overcome this by using its land and people well and by concentrating resources in urban agglomerations. But Sub-Saharan

Map G4.1 Africa's borders were charted before World War I



Source: WDR 2009 team, based on Pakenham 1992.

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.⁵ The agglomeration index in chapter 1 gives Africa a score of 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 even 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 raise transport costs and reduce factor mobility

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.⁶ Table G4.1 indicates that Africa has one of the lowest road densities in the world, second only

Table G4.1 The most distant and divided regions—trading and transport are expensive

Region	Trading time across borders for exports (days) ^a	Average transport costs (\$ per container to Baltimore) ^b	Population in landlocked countries (%) ^b	Ratio of number countries to surface area ^b	Road density (km ² of road per surface area) (1999) ^c	Estimated number of civil conflicts, (1940–2000) ^d
East Asia & Pacific	24	3,900	0.42	1.44	0.72	8
Europe & Central Asia	29	–	23.00	1.17	–	13
Latin America & Caribbean	22	4,600	2.77	1.52	0.12	15
Middle East & North Africa	27	2,100	0	1.60	0.33	17
South Asia	34	3,900	3.78	1.67	0.85	24
Sub-Saharan Africa	40	7,600	40.20	2.00	0.13	34

Sources: a. World Bank 2006b, p. 44; b. Ndulu and others 2007, p. 101; c. Ndulu and others 2007, p. 29; d. Fearon and Laitin 2003, pp. 7–10.
 Note: – = not available

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 has a third of its population in landlocked countries and even more far from access to global markets. Economic distance in Africa—in the sense of market access (see chapter 2)—is further lengthened by armed conflicts and linguistic diversity (see map G4.1). 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 raise transport costs

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).⁷ 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 G4.1). 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.⁸ And landlocked countries must rely on the goodwill (and efficient investment) of neighbors for access to ports and markets.

Meeting the challenge—better urbanization, more domestic specialization, and more regional integration

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. Regional integration, labor mobility, investments in trade, communication and transport infrastructure, and peace and stability should remain high on the agenda. They 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 *more* in Africa than elsewhere. 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, along the lines proposed in chapter 7,

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. Chapter 8 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, political regionalism may have to take the lead in African regional integration. The experience of Western Europe summarized earlier in this Report spotlights the importance of starting small and keeping expectations realistic. Regional integration takes time and will not happen in all parts of Africa at once. Infrastructure projects are a good place to start. But through regional integration, Africa can undo some of what Bismarck and his guests did in 1884. Chapter 9 showed that many African countries have taken the first steps, outlining what the rest of the world can do to help.

Based on a contribution by Wim Naudé.