

# Poverty reduction in Africa

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**Poverty in Africa has been rising for the last quarter-century, while it has been falling in the rest of the developing world. Africa's distinctive problem is that its economies have not been growing. This article attempts to synthesize a range of recent research to account for this failure of the growth process. I argue that the reasons lie not in African peculiarities but rather in geographic features that globally cause problems but that are disproportionately pronounced in Africa. These features interact to create three distinct challenges that are likely to require international interventions beyond the conventional reliance on aid.**

growth | geography | economic development

**G**lobally, the number of people in absolute poverty has been in decline for  $\approx 25$  years, yet in Africa it is still increasing. The challenge of poverty reduction in Africa is of a different order from that elsewhere and will require different strategies. Other low-income regions are growing rapidly, and there the issue is how to diffuse growth. In the middle-income regions, redistribution could radically reduce absolute poverty. Africa has not been growing, and its income level is too low for redistribution to resolve poverty.<sup>†</sup> Hence, Africa's problem is to break out of an economic stagnation that has persisted for three decades. This article deploys existing primary research into an integrated argument that accounts for Africa's economic distinctiveness and derives implications for international policies for poverty reduction.<sup>‡</sup>

During the present decade, African growth has accelerated, although not sufficiently rapidly to prevent continuing divergence. This may mark a decisive turnaround in the region's economic performance, but much of it is accounted for by the boom in the world prices of Africa's commodity exports, the scramble to extract its raw materials, and recent peace settlements. Each of these is a fragile basis for sustained growth. Hence, Africa's longer economic experience remains pertinent. On average, over the period 1960–2000 Africa's population-weighted per capita annual growth of gross domestic product (GDP) was a mere 0.1%. It stagnated, whereas other regions experienced accelerating growth. Indeed, between 1980 and 2000 the annual rate of divergence was an astounding 5%.

Africa's growth failure has attracted competing explanations. During the 1980s the World Bank diagnosed the problem as inappropriate economic policies with Berg (1) offering the first clear statement of this position. Bates (2) was the first to explain these dysfunctional policy choices in terms of the interests of powerful groups, notably the taxation of export agriculture. During the 1990s, the limited response to reform induced a broader search for explanations (3, 4). Recently, three further explanations have gained currency: institutions (5), leadership (6), and geography (7). In this article I emphasize geography, although not on the health aspects that have been the main recent concern of Sachs (7). I suggest that the role for institutions, and indeed for leadership, varies according to Africa's distinctive physical and human geography.

In the next section, I consider physical geography, showing how strategies will need to differ radically among Africa's countries. Then, I turn to human geography and the political problems that this has created. To an extent these problems have been surmounted: Africa's human geography may explain delayed take-off rather than predict persistent stagnation. Then, I consider three

interactions between physical geography and human geography that generate intractable problems, and I conclude with implications for international strategies.

## Physical Geography: Three Opportunity Groups

Africa's defining physical geography is of a massive land area divided into 44 countries, with a low population density. Because Africa is land-abundant, yet low-income, natural resource endowments loom large. However, they are unevenly distributed. Parts of Africa are abundant in natural resources, but others are resource-scarce. Further, because Africa is enormous and divided into many countries, many of them are landlocked. Potentially, these two distinctions create four possible categories. However, in growth regressions, the resource-rich coastal countries and the resource-rich landlocked countries are not significantly different. If the resources are sufficiently valuable, being landlocked is not a significant disadvantage to their extraction. Conversely, the coastal countries are generally not in a position to take advantage of nonresource exports because of the effects of Dutch disease on their export competitiveness. We thus have three categories: resource-rich, resource-scarce but coastal, and resource-scarce and landlocked. In growth regressions these three categories have had sharply distinct performances globally, and this has been mirrored in Africa. The best-performing category globally has been the coastal, resource-scarce countries of which there are many Asian examples. The worst-performing category globally has been the landlocked and resource-scarce. In between, the resource-rich countries have on average grown moderately but with large differences both between countries and time periods. Table 1 shows the growth rates for each category.

Africa broadly followed the global pattern, with three differences. The largest difference was in the category of countries that are resource-scarce and coastal: since around 1980 the non-African economies in this category have been outperforming their African counterparts by  $\approx 5\%$  per year. Nor is this confined to China and India. Even when these two are excluded, there is a severe divergence. The second difference was in the resource-rich category, although here the difference has persisted since the 1960s. Only in the category of landlocked and resource-scarce countries, which globally have been slow-growing, is the difference modest. The cumulative implications of these differences in growth rates for the path of GDP per capita have been dramatic. Essentially, outside Africa countries have on average decisively broken out of poverty, rising above \$5,000 per capita, as long as they are not landlocked and resource-scarce. Indeed, thanks to their fast growth they are converging on the developed countries. By contrast, in Africa on average countries in all three categories has stayed resolutely stuck

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Abbreviations: GDP, gross domestic product; OECD, Organization for Economic Cooperation and Development.

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<sup>†</sup>Indeed, although income inequality in Africa has been rising, this may be necessary to retain skilled labor in the face of its increasing international mobility, given the stagnation of average income.

<sup>‡</sup>For a fuller version see ref. 8.

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**Table 1. Growth per capita, by opportunity category and decade**

Decade	Overall			Coastal			Landlocked			Resource-rich		
	43 SSA	56 Other	Difference	43 SSA	56 Other	Difference	43 SSA	56 Other	Difference	43 SSA	56 Other	Difference
1960s	1.04	2.29	1.25	1.36	2.25	0.89	0.16	0.74	0.58	2.08	3.85	1.77
1970s	0.86	3.23	2.37	1.32	3.18	1.86	-0.31	1.26	1.57	1.42	3.89	2.47
1980s	-0.79	4.32	5.11	-0.85	4.68	5.53	0.14	1.56	1.42	-1.67	1.50	3.17
1990-2000	-0.46	4.46	4.91	0.27	4.74	4.47	-1.30	1.91	3.21	-0.42	2.47	2.89
Total	0.13	3.63	3.50	0.50	3.79	3.29	-0.36	1.40	1.76	0.29	2.89	2.60

The sample includes all developing countries with full availability of data. Growth rates are population-weighted. The annual growth rates are population-weighted. Note that the country composition of the group averages changes as the group composition evolves. SSA, Sub-Saharan Africa.

below \$2,000 per capita. As a result, Africa has been diverging from the rest of mankind. The third difference between Africa and the other developing regions is in the distribution of population between the three categories. In the developing world other than Africa some 88% of the population lives in coastal, resource-scarce countries, 11% in resource-rich countries, and a mere 1% in landlocked resource-scarce countries. In Africa the population is approximately evenly spread between the three groups. Thus, the African population is heavily skewed toward the globally slow-growing category of landlocked, resource-scarce, and away from the globally fast-growing category of coastal, resource-scarce. This unfortunate distribution accounts for around one percentage point of growth: even if African countries grew at the mean of their category, the distinctive distribution of the population would imply slower overall growth. However, the key importance of distinguishing between the three geographic categories is that their opportunities are sufficiently different that strategies for accelerated growth are likely to differ. I now turn to the opportunities and constraints characteristic of each category.

**Landlocked and Resource-Scarce.** The most striking difference between Africa and other developing regions is in the proportion of the population in landlocked, resource-scarce countries. Outside of Africa areas with these poor endowments seldom became independent countries: they became the hinterlands of countries that are more fortunately endowed. Nevertheless, being landlocked and resource-scarce does not necessarily lock a country into poverty: there are some obvious examples of success such as Switzerland. However, Switzerland has benefited from its neighborhood. In effect, being landlocked has not cut it off from international markets but rather placed it at the heart of a regional market. More generally, the most promising strategy for such countries has been to orient their economies toward trade with their neighbors. As the barriers to international trade have come down this has become easier, and indeed outside of Africa the growth of landlocked, resource-scarce countries have accelerated. Collier and O’Connell (9) estimate growth spillovers from neighbors, attempting to control for the coincidence of growth rates in a neighborhood caused by common shocks. Globally, on average if neighbors grow at an additional one percentage point that raises the growth of the country itself by 0.4%. Outside of Africa the landlocked, resource-scarce economies on average gain larger spillovers, at 0.7%: they orient their economies toward making the most of these spillovers. By contrast, in Africa the growth spillover for the landlocked, resource-scarce economies is a mere 0.2%. Paradoxically, to date this failure of regional integration has not really mattered. Until recently even the more fortunately located African countries have largely failed to grow. Hence, there has been very little growth to spill over, which suggests that the critical path for the landlocked, resource-scarce countries to succeed is first that their more fortunate neighbors need to harness their opportunities, and only then that the subregional economies need to become radically more integrated.

Overall, the landlocked, resource-scarce countries triply depend

on their neighbors. Most obviously, they depend on their coastal neighbors for access to the sea. This is an unreciprocated dependence: Uganda depends on Kenya for access, but Kenya does not depend on Uganda. Coastal countries differ in how seriously they prioritize the interests of their landlocked neighbors. Nuno and Venables (10) investigated the international transport costs faced by landlocked countries in importing a standard container from the United States. They found that while the average landlocked country indeed faced radically higher transport costs than coastal countries, the costs differed enormously. They were able to trace these differences to expenditures on transport infrastructure in the coastal neighbors: where the neighbor had prioritized investment in transport infrastructure the landlocked country faced substantially lower transport costs.

The second dependence is less obvious. The landlocked have an interest in the economic governance of neighboring countries because if their neighbors continue to forego opportunities this closes off their own opportunities. Again, this is not a reciprocated dependence: the prospects for Niger critically depend on whether Nigeria harnesses its opportunities: a buoyant Nigerian economy would provide the natural market for livestock reared in Niger. By contrast, economic governance in Niger is of virtually no consequence for Nigeria. The third dependence is that it takes two to integrate: the landlocked cannot integrate unless their neighbors implement policies that enable it to happen. The integration agenda is partly a matter of practical policy such as the removal of road blocks and harassment by customs officials. To continue with the Nigerian example, there are more official road blocks per kilometer of transport arteries to neighbors in Nigeria than anywhere else in West Africa (11). It is partly a matter of trade policies: until 2005 Nigeria refused to implement the Economic Community of West African States free-trade area agreement, and in the mid-1990s Kenya, without warning, banned the import of maize from Uganda. Finally, it is a matter of infrastructure: more roads need to be built and maintained, not just for access to the coast but for access to the regional market. Again, this dependence is not fully reciprocal. The potential for integration into the regional market matters more for the landlocked than for their neighbors.

Between them, these three unreciprocated dependencies create a question mark over national sovereignty. If the viability of the landlocked, resource-scarce nations depends on the decisions of their more fortunate neighbors, they need to have some right of voice in those decisions. This suggests that Africa has a much greater need for political architecture above the level of the nation than do other regions.

It is possible that developments such as e-trade and air freight that do not disadvantage landlocked countries might offer a new route to global integration. Clearly, the landlocked countries should push these opportunities to the hilt. Being landlocked is not a choice, but being airlocked is largely a matter of airline regulation and competition policy. The policies that produced high-cost monopolies such as Air Afrique were mistaken. Similarly, the twin pillars of e-trade are telecoms and education. Policies that raise the cost of international telecoms, or make access unreliable, and the

neglect of tertiary education that was an unfortunate by-product of the education for all policies pursued during the 1990s, are thus costly for landlocked, resource-scarce countries. Although these countries are the core of Africa's poverty problem, I am going to focus on the other two opportunity categories. It is the inability of the African countries in these categories to harness opportunities that has been decisive.

**Resource-Rich.** Now consider the resource-rich countries. These are increasingly important in Africa, partly as a result of higher commodity prices and partly as a result of resource discoveries. Globally, high commodity prices are a mixed blessing for resource-exporting countries. Consider the consequences for growth in a country where commodity exports are 35% of GDP if the prices of its exports double. Collier and Goderis (12) find that for the first 5 years growth is significantly higher. By the fifth year this faster growth has cumulatively raised constant-price GDP by  $\approx 4\%$  compared with what would have happened with lower prices. This increase in the quantity of output is additional to the direct income effect of the improvement in the terms of trade: with exports initially 35% of GDP, the doubling of price directly raises income by 35%. Thus, by the fifth year the economy is in the midst of a bonanza in which real income has risen by  $\approx 39\%$ . However, from then on things typically go badly wrong. The full effects take a long time to work their way through: only  $\approx 7\%$  of the initial disequilibrium is eliminated each year. However, after 25 years, the doubling of export prices has actually reduced constant-price GDP relative to its counterfactual. The effect is substantial, with constant-price GDP lowered by 26%. The effect on income is much smaller because the decline in output is mitigated by the fact that the terms of trade improvement are still directly raising income by 35%. Hence, the net effect on income is modest. The massive decline in output is, however, astonishing. The sustained windfall obviously creates the potential for radically higher investment and so, cumulatively over 25 years there should be large increases in output. What goes wrong?

Three processes generate this long-term adverse effect. One is Dutch disease, which makes nonresource exports uncompetitive: in Nigeria oil exports led to the rapid collapse of agricultural exports. Dutch disease can indeed foreclose other export opportunities. In a study that focuses on growth rates industry-by-industry, Rajan and Subramanian (13) show that exchange rate appreciation reduces the growth rates of labor-intensive industries. However, Collier and Goderis (12) control for Dutch disease and find that although it has an effect it is only a minor part of the explanation. They find that a more important factor is macroeconomic volatility. For example, as Addison (14) shows, since the discovery of oil Nigeria has been among the 10 most volatile economies in the world. Volatility can be detrimental to growth in several respects. It makes investment more risky and so tends to discourage it. Further, public-spending decisions tend to become compromised, with extravagant commitments being made during booms that then force drastic cuts in vital expenditures during troughs. However, between them, Dutch disease and volatility account for less than half of the overall adverse long-term effects. The remaining process is caused by misgovernance. Countries in which governance is initially poor face a substantial risk of turning resource windfalls into catastrophe.

There is also evidence that governance is likely to deteriorate as a result of the windfalls. Resource-rich societies will inevitably have large public sectors: the resource rents are taxed for them to accrue to the nation, and the revenues from these taxes will then be spent by the government. Effective public spending is thus critical for both living standards and private activity, and, because the public sector is a large part of the economy, its own productivity growth is a key component of overall growth. In turn, this requires either that government should aspire to national goals or that it is accountable to citizens and so required to achieve national goals regardless of its aspirations. Until recently, Africa was ruled by narrow ethnic

autocracies that lacked national aspirations. Since the 1990s the spread of democracy across much of resource-rich Africa might potentially provide accountability to citizens. Unfortunately, the statistical evidence suggests that instead of democracy improving the way in which resource revenues are used, resource revenues undermine how democracy works. Collier and Hoeffler (15) find that globally over the period 1970–2002 in the absence of natural resource rents democracies tend to grow significantly faster than autocracies but that the opposite holds when resource rents are large. They suggest that in resource-rich countries democracy tends to get corrupted into patronage politics as resource rents substitute for taxation. With low taxation citizens are not “provoked” into scrutinizing government, which weakens the checks and balances upon the use of power. This produces an unbalanced form of democracy in which electoral competition, which constrains how power is achieved, is not matched by checks and balances that constrain how power is used. Without strong checks and balances electoral competition drives political parties to resort to patronage: votes are bought instead of won. They introduce a quantitative measure of checks and balances developed by Beck *et al.* (16) and find that distinctively in the resource-rich societies these checks and balances are significantly beneficial for growth, whereas electoral competition is highly detrimental. Further, they find that over time checks and balances are gradually eroded by resource rents. An implication appears to be that those resource-rich countries that are democratic need a distinctive democracy with strong checks and balances rather than fierce electoral competition. Africa has such a country, namely Botswana. The government of Botswana has not faced severe electoral competition: despite continuous democracy it has never lost power. It does, however, have impressively strong checks and balances, notably rules for public spending. Unfortunately, Botswana is exceptional. Other resource-rich African countries are now democratic, but they are “instant democracies.” As demonstrated by Afghanistan and Iraq, it is possible to establish electoral competition in any conditions, but it is harder to establish effective checks and balances. Nigeria under President Shehu Shagari (1979–1983) displayed the classic patronage politics of resource rents in the context of intense electoral competition without effective checks and balances. Although democratic, it failed to harness the Nigerian oil bonanza for sustained growth. In summary, resource-rich countries need a form of democracy with unusually strong checks and balances, but typically get a form in which they are unusually weak. Here leadership can make a difference and did so in Botswana.

**Resource-Scarce and Coastal.** I now turn to the resource-scarce, coastal economies. These are in the category that globally has had the fastest growth, but in which African performance has been least encouraging. It might be argued that none of Africa's economies are truly resource-scarce because even those without valuable natural resources have large endowments of land relative to population and so have a comparative advantage in agriculture (17). However, Africa's exceptionally rapid population growth is changing even this advantage. Countries such as Kenya and Senegal face sufficient pressure on land that continuation in their traditional specialization will condemn them to slow growth, with agricultural technical progress offset by diminishing returns to labor. The only African country to succeed in this category has been Mauritius, which followed the Asian pattern in transforming itself through exports of manufactures from an impoverished sugar economy into an upper-middle income country and by far Africa's richest economy.

Whereas in resource-rich countries the state has to be large, in the coastal, resource-scarce economies the state need not be central to development. The core growth process in these economies is to break into global markets for some labor-intensive product. This is fundamentally a matter for the private sector. The state may, as in parts of East Asia, actively help in this process, but it is by no means



necessary. Indeed, the essential aspect of government behavior is that it should not actively inhibit the emergence of a new export sector by burdensome regulation, taxation, or predation. Before 1980 manufacturing and services were concentrated in the Organization for Economic Cooperation and Development (OECD) economies, locked in partly by trade restrictions but mainly by economies of agglomeration. The concept of economies of agglomeration is that when many firms in the same activity are clustered in the same city their costs of production are lower. For example, because there is a large pool of skilled labor and suppliers of inputs, individual firms do not need to hoard skilled labor or carry high inventories. Around 1980 a combination of trade liberalization and the widening gap in labor costs between the OECD and developing countries began to make it profitable for industry to relocate to low-income countries. This process is explosive: as firms relocate agglomeration economies build up in the new location and make it progressively more competitive. The chosen locations where these new agglomerations became established were in Asia. The factors that determined this choice need only have been temporary and need not have been massive. However, once Asia got ahead of Africa, the forces of agglomeration made it progressively harder for Africa to break in. Currently, Africa has no significant advantage over Asia in terms of labor costs while having large disadvantages in terms of agglomeration economies.

### Human Geography

I now turn to the other important distinctive aspect of Africa's geography: human geography, both political and social. Africa's political geography is unmistakably striking: it is divided into far more countries than any other region, despite being less populous than either South or East Asia. As a result, the average population of its countries is radically smaller than that of other regions. Africa's social geography is also unmistakable: despite the division into tiny countries the typical country is ethnically more diverse. Small population and ethnic diversity are the two distinctive socio-political features of African geography: each creates problems.

Globally, being small is no impediment to being rich: Luxembourg is as rich as the United States. But in the context of development being small poses problems. After independence, Africa, like other developing regions, plunged into a range of bad economic policies and governance. The process of achieving a sustained and decisive turnaround from such configurations is difficult: despite being economically dysfunctional they were politically rather stable. Collier and Chauvet (18) investigate such turnarounds on global data for 1974–2004 and find that having a small population makes change less likely. They suggest that the process of critiquing past failure and implementing a strategy for change is helped by scale. For example, scale enables a society to have a specialist press that can conduct economic discussion. Chinese and Indian society were each able to diagnose failure and implement radical change purely through internal debates, whereas a small society such as the Central African Republic has a dearth of skills. Thus, Africa's political geography has made economic reform more difficult and helps to account for the greater persistence of poor policies in Africa than in other regions. In the past decade many African societies have succeeded in designing and implementing a measure of economic reform. Hence, the greater difficulty of reform in small countries may account for why reform was slower in Africa rather than be a prognosis.

Not only is reform more difficult if population is small, but the risk of state collapse into violence is greater.<sup>5</sup> The typical civil war is enormously costly for both the economy and its neighbors and lasts a long time. Even once the war is over, the society has a high

risk of reversion to conflict. Although the risk that a country has a civil war increases with population size, the elasticity is far less than unity. Thus, a territory divided into two countries faces a higher risk of civil war in at least one of its countries than if it is unified. The likely explanation is that the provision of security is subject to scale economies: the typical African nation is too small for its government to provide effective internal security unless other conditions are benign. This is a major reason Africa has a higher incidence of civil war than South Asia. Further, the costs of civil war are not confined to the country at war: around half the economic costs accrue to neighbors. Regional and international actors thus have a role in enhancing African security.

The other socio-political aspect of African geography is the high ethnic diversity of the typical country. Ethnic diversity need not be a decisive impediment to development, but it does have implications for political architecture. Specifically, the more diverse is the society the more beneficial is democracy for growth.<sup>6</sup> A possible explanation for this statistical relationship is that in an ethnically diverse society an autocracy usually rests on the military power of a single ethnic group. The more diverse is the society the smaller is likely to be the share of the population constituted by the ethnic group in power. A minority in power has an incentive to redistribute to itself at the expense of the public good of national growth. Ethnically diverse democracies may be messy, but they force the coalition in power to be large. This increases the attraction of broad-based growth relative to redistribution to the groups in power. However, an alternative explanation is that those diverse societies that manage to maintain democracy have exceptional characteristics such as tolerance, and it is these rather than democracy that is decisive. To date, attempts to address this ambiguity in causation point to the former explanation. A second aspect of ethnic diversity is that it makes collective action for public-service provision more difficult: intergroup trust is limited. A corollary is that the boundaries between public and private provision should be drawn more in favor of private provision in societies that are more diverse. Another corollary is that public spending may be more effective if it is decentralized: at the local level Africa is much less ethnically diverse than at the national level. A third aspect of diversity is that it makes a society more prone to violent conflict.

### Physical and Human Geography Interacted: Africa's Dilemma

Finally, I bring together physical geography with human geography. The interaction of the two creates three acutely difficult problems for African economic development.

**Resource-Rich and Ethnically Diverse Societies.** Africa's current economic opportunity is its natural resource rents. A disproportionate share of Africa's population lives in resource-rich countries, and for the foreseeable future commodity prices are going to be high with discoveries skewed toward the region. As set out in *Physical Geography: Three Opportunity Groups*, large resource rents imply a large state and hence the central importance of effective public spending, but also make democracy detrimental to the growth process. It seems that the typical resource-rich country might grow faster under autocracy. However, as set out in *Human Geography*, Africa's high ethnic diversity makes autocracy damaging: Africa's resource-rich countries may not have the option of growth through autocracy. Further, ethnic diversity weakens the ability of the society to hold public services accountable. Because such collective action is more difficult, an ethnically diverse society is best-suited to a relatively small domain of the state. However, resource-rich Africa does not have the option of a small public sector: resource rents inevitably accrue to the government and will largely be spent by it.

So what sort of political system would best serve a resource-rich

<sup>5</sup>The following discussion is based on Collier and Hoeffler (19); Collier, Hoeffler, and Rohner (20); and Collier, Hoeffler, and Soderbom (21).

<sup>6</sup>The following discussion is based on Collier (22) and Alesina and La Ferrara (23).

and ethnically diverse country such as is commonly found in Africa? Autocracy may be irredeemably dysfunctional in the context of ethnic diversity, but democracy is not irredeemably dysfunctional in the context of resource rents. The form of polity that appears to be best suited to ethnically diverse societies with resource rents is a democracy with unusually strong checks and balances and decentralized public spending. How the government can use power needs to be constrained, rather than simply how it attains power. Botswana demonstrates both that this combination is possible in Africa and that it is effective in delivering development in resource-rich societies. For many years Botswana was the fastest growing economy in the world. Yet currently Botswana is exceptional: most resource-rich states have unusually weak checks and balances. The key challenge currently facing Africa's resource-rich societies is to build such polities.

International actors have a role to play in supporting the struggle to build effective checks and balances. To date, the clearest example of such assistance is the Extractive Industries Transparency Initiative (EITI), launched by the British government in 2002 and promptly adopted by the Nigerian reform team that entered government in 2003. Although the EITI demonstrates how useful international "templates" can be in the management of resource rents, in its present form it covers only a small part of the vital issues. Unfortunately, there is a danger that far from the EITI constituting a modest first step, even the present version will be eroded by the reluctance of the Chinese authorities to adopt the new international standards of conduct.

Resource-rich societies face a further difficulty during export booms. Globally, during these booms the pace of policy reform slows (18). Hence, societies that have painfully realized that rapid reform is necessary, such as has been the case in Nigeria since 2003, may find that boom conditions remove the sense of urgency from the reform agenda and divert political attention to the contest for spending. Thus, the very conditions in which good policies have their highest pay-off tend to undermine the political process of achieving them.

**Resource-Scarce Societies with Small, Diverse Populations.** The second problem caused by the interaction of physical geography and human geography is that coastal, resource-scarce Africa has missed its opportunity to break into global markets for labor-intensive goods and services. What were the critical factors that decided firms against an African location in the 1980s? In Francophone Africa the overvaluation of the *Communauté Financière d'Afrique* franc precluded export diversification. Lusophone Africa was beset by civil war. South Africa was in the late stages of the apartheid regime. Among the other coastal, resource-scarce countries, Ghana, Tanzania, and Madagascar were in crises as a result of experiments with socialism, and Kenya was beset by the ethnic politics of redistribution. Mauritius was the only coastal, resource-scarce country not precluded from manufactured exports by such misfortunes. However, as discussed above, Africa was prone to these disparate syndromes because of the problems generated by its distinctive human geography. Its societies were too small and diverse to provide the public goods of security and good economic policy. Africa has substantially succeeded in surmounting these problems: its human geography inflicted prolonged but not permanent disadvantages. Although on average African economic governance remains significantly weaker than other regions, there are now several coastal, resource-scarce countries where governance has improved, notably Ghana, Kenya, Tanzania, Senegal, and Madagascar. Yet even these countries have still not decisively broken into global markets.

The most probable explanation for the slow pace of export penetration is that Africa missed the boat. The policy mistakes happened to occur at precisely the critical time when Africa could otherwise have broken in on level terms with Asia. Now, Asia has huge agglomeration advantages and so reasonable policies are not

enough. The logic of the new economic geography is that Africa will have to wait until the wage gap between Africa and Asia is approximately as wide as that between the OECD and Asia at the time when Asia broke into OECD markets, a process that would take decades.

What Africa needs is temporary protection from Asia in OECD markets. It was critical to the success of Mauritius that benefited from the now-expired MultiFiber Agreement. Currently, the United States gives Africa such preferences through the Africa Growth and Opportunity Act (AGOA) and the European Union through Everything but Arms (EBA). Indeed, a variant of this special protection was part of the failed Hong Kong offer for least-developed countries. The principle has thus already been conceded. However, as with all trade policy the devil is in the detail. All these schemes fail because, for different reasons, the details of the schemes limit their effectiveness. Until extended in December 2006, AGOA offered too short a period of committed market access; EBA applies to the wrong African countries and its rules of origin are too restrictive; and the Hong Kong offer compounded the weaknesses of EBA with limitations on product coverage. The most successful of the three is AGOA: Collier and Venables (24) show that its "special rule" relaxing rules of origin for apparel imports has increased Africa's apparel exports to the American market 7-fold in 5 years, whereas EBA has been completely ineffective. Just as the economies of scale generated by clusters have shut Africa out of manufacturing markets, any breakthrough is likely to be concentrated in a few countries. However, this concentration of success might itself be advantageous. Were Kenya, Ghana, and Senegal to start growing at Asian rates there would be competitive pressure on other governments to reform.

**Slow-Growing Economies with Small, Diverse Populations.** The final problem generated by the interaction of human and physical geography is a heightened risk of violent internal conflict. African countries have characteristics that globally make a country prone to such conflict. As discussed above, the key consequence of Africa's distinctive geography has been slow growth and hence the perpetuation of low income. Yet globally, slow growth and low income are both important risk factors making violent conflict more likely. This is compounded by dependence on natural resource exports, which again globally makes violent conflict more likely. The core social characteristics of the typical African country, a small but ethnically diverse population, are also globally important risk factors. Finally, globally civil war tends to be recurrent: postconflict situations are fragile. Africa's tendency toward these risk factors accounts for why the region has had so much civil war.

There is evidence that international security interventions can be effective in these environments. Collier, Hoeffler, and Soderbom (25) analyze 66 postconflict situations and find that international peacekeeping substantially and significantly brings down the risks of reversion to conflict. Similarly, Doyle and Sambanis (26) find that while United Nations operations are not able to end wars, they are effective at maintaining postconflict peace. Yet postconflict situations in Africa have typically attracted far fewer international peacekeepers than those of other regions for obvious reasons of geo-political interest. Collier, Hoeffler, and Rohner (20) analyze globally the characteristics that make a country prone to the initial onset of conflict. They find that for the 30 years 1965–1995 during which France provided informal security guarantees to Francophone Africa these countries had an incidence of civil war onset only one-third of that which would otherwise have been predicted. After the Rwandan atrocities of 1994, France abandoned this policy of guarantees. Hence, neither peacekeeping nor guarantees are currently being deployed to a degree that seem commensurate with their effectiveness.

## Conclusion: Four Implications for Policies to Reduce African Poverty

Primarily, although not exclusively, African poverty reduction depends on raising African growth. Africa currently faces its best opportunity for growth since the commodity boom of the mid-1970s. In the intervening period, African economic performance has been worse than that of any other region. The explanation for this is not that African economic behavior is fundamentally different from elsewhere, but rather that African geographic endowments are distinctive.

In respect of physical geography Africa is not only distinctive but its countries are differentiated. The greater share of Africa's population in landlocked, resource-scarce countries as opposed to coastal, resource-scarce countries alone accounts for one percentage point off Africa's growth rate compared with other regions. Further, because opportunities differ across the region strategies need to be differentiated. This applies both to what African governments should see as critical priorities and to what external actors can do to assist. In respect of human geography Africa is distinctive but not so differentiated. Most African countries have small populations and yet are ethnically diverse. A corollary of small countries is that Africa has found both policy reform and the internal security more difficult than other regions. Fortunately, Africa has made progress on both of these problems: hopefully, the small-country problem merely helps to account for Africa's troubled recent past, not its future. A corollary of ethnic diversity is that democracy is more important for economic performance, and that the domain of the public sector should be kept small and decentralized. Again, these may be problems of the past: the region has partially democratized, reduced the size of the state and decentralized spending. Hence, recent developments are hopeful: in some respects Africa's distinctive geography may be more important in explaining its past than in predicting its future. However, the interactions of physical and human geography have created intractable and important problems that have yet to be addressed and that probably need both regional and international action.

One is how to manage resource rents in the context of ethnic diversity. The most appropriate polity is a design that such countries tend not to have: strong checks and balances on how governments can use power and decentralized public spending. This is a political challenge for the resource-rich African states. The international community can also do much to assist African societies to build the

necessary checks and balances by setting out templates such as the Extractive Industries Transparency Initiative and reforming banking secrecy to make the embezzlement of resource rents more difficult. In these resource-rich states the international community may have more scope for poverty reduction through such governance policies than through its traditional reliance on aid.

The second problem is how to compete with Asia despite having let Asia get decisively ahead. International action will be needed to give coastal, resource-scarce Africa a second chance by temporary preferential market access that offsets Asian economies of agglomeration. For these countries international trade policies may be more important for poverty reduction than additional aid, or at least be a useful complement to aid.

The third problem is proneness to violent internal conflict. Because of the large regional economic spillovers, this is a regional issue. However, there may be scope for expanding international peacekeeping and security guarantees, a recent model being the military support for Sierra Leone provided by Britain. Such security interventions may need to become integral to international strategy for African poverty reduction.

The fourth, and perhaps least tractable problem, is that so much of Africa's population lives in landlocked, resource-scarce states. I have discussed how, because these states have multiple forms of dependency on neighbors, Africa needs a strong regional political architecture that can internalize these externalities. Despite a plethora of regional and subregional institutions, African states have to date been unwilling to cede sufficient sovereignty to make them effective (27). In the absence of a regional political solution, the international community will need to rethink its aid strategy. These countries currently lack realistic opportunities to reach middle-income levels of development. They are thus the epicenter of the future poverty problem. Hence, poverty reduction in these societies is likely to need large and sustained aid inflows, not so much for investment in economic development, but rather for the direct raising of consumption levels. At present there is no such category of aid, nor a mechanism for sustained delivery to poor people. Humanitarian aid, which indeed is intended directly to raise consumption, is designed only to meet short-term emergencies. Long-term aid, while targeted toward low-income countries, is currently intended to raise income. The international community has not yet faced the prospect that even with our best efforts these societies are likely to remain low income for a long time.

1. Berg E (1981) *Accelerated Development in Sub-Saharan Africa* (World Bank, Washington, DC).
2. Bates R (1981) *Markets and States in Tropical Africa* (California Univ Press, Berkeley, CA).
3. Collier P, Gunning JW (1999) *J Econ Literature* 37:64–111.
4. Collier P, Gunning JW (1999) *J Econ Perspect* 13:3–22.
5. Acemoglu D, Johnson S, Robinson J (2001) *Am Econ Rev* 91:1369–1401.
6. Jones BF, Olken BA (2005) *Q J Econ* 120:835–864.
7. Sachs JF (2003) *Institutions Don't Rule: The Direct Effects of Geography on Per Capita Income* (National Bureau of Economic Research, Cambridge, UK).
8. Collier P (2007) *The Bottom Billion* (Oxford Univ Press, New York).
9. Collier P, O'Connell S (2007) in *The Political Economy of Economic Growth in Africa: 1960–2000*, eds Ndulu BJ, O'Connell SA, Bates R, Collier P, Soludo CC (Cambridge Univ Press, Cambridge, UK), pp 76–136.
10. Nuno L, Venables A (2001) *World Bank Econ Rev* 15:451–479.
11. Alaba O, Adenikinju A, Collier P (2007) in *Economic Policy Options for a Prosperous Nigeria*, eds Collier P, Soludo C, Pattillo C (Palgrave MacMillan, Basingstoke, UK), in press.
12. Collier P, Goderis B (2007) *World Econ* 8:1–15.
13. Rajan RG, Subramanian A (2005) *What Undermines Aid's Impact on Growth?* (International Monetary Fund, Washington, DC), IMF Working Paper 05/126.
14. Addison D (2007) in *Economic Policy Options for a Prosperous Nigeria*, eds Collier P, Soludo C, Pattillo C (Palgrave MacMillan, Basingstoke, UK), in press.
15. Collier P, Hoeffler A (2006) *Testing the Neocon Agenda: Democracy and Resource Rents* (Centre for the Study of African Economies, Oxford, UK).
16. Beck T, Clarke G, Groff A, Keefer P, Walsh P (2001) *World Bank Econ Rev* 15:165–176.
17. Wood A, Mayer J (2001) *Cambridge J Econ* 25:369–394.
18. Chauvet L, Collier P (2006) *Helping Hand?* (Centre for the Study of African Economies, Oxford, UK).
19. Collier P, Hoeffler A (2004) in *Global Crises: Global Solutions*, ed Lomberg B (Cambridge Univ Press, Cambridge, UK), pp 129–156.
20. Collier P, Hoeffler A, Rohner D (2006) *Beyond Greed and Grievance: Feasibility and Civil War* (Centre for the Study of African Economies, Oxford, UK).
21. Collier P, Hoeffler A, Soderbom M (2007) *J Peace Res*, in press.
22. Collier P (2001) *Econ Policy* 32:127–166.
23. Alesina A, La Ferrara E (2005) *J Econ Literature* 63:762–800.
24. Collier P, Venables A (2007) *World Econ* 30:1467–1497.
25. Collier P, Hoeffler A, Soderbom M (2007) *J Peace Res*, in press.
26. Doyle MW, Sambanis N (2006) *Making War and Building Peace: United Nations Peacekeeping Operations* (Princeton Univ Press, Princeton).
27. Collier P (2007) *J Afr Econ*, in press.