

# **Africa: Geography and Growth**

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July 2006

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## 1. Introduction

Currently, many African economies are growing more rapidly than for three decades. This is partly the result of high prices for commodity exports but also reflects deeper changes. The last time Africa enjoyed a commodity boom was in the mid-1970s: it was followed by a decade of unparalleled economic disaster. It is vital that Africa's current opportunities for growth are not dissipated in the same way. On average over the period 1960-2000 Africa's population-weighted per capita annual growth of GDP was a mere 0.1%. In effect it stagnated while other regions experienced accelerating growth. Indeed, between 1980 and 2000 the annual rate of divergence was an astounding 5%. To understand both why this happened and whether it is likely to recur a geographic perspective is essential. Africa's geography has shaped its economic opportunities. Africa is distinctive both in its physical geography and its human geography. In Section 2 I consider the implications of Africa's distinctive physical geography. It accounts for some of Africa's slow growth and suggests how strategies will need to differ radically among Africa's countries. In Section 3 I turn to its distinctive human geography and the political problems that this has created. To a considerable extent these problems have recently been surmounted: Africa's human geography may explain delayed take-off rather than predict persistent stagnation. Finally, in Section 4 I consider two interactions between physical geography and human geography that generate intractable problems that likely to require international assistance.

## 2. Africa's distinctive physical geography

The aspect of Africa's physical geography that has recently received most emphasis is its climate and disease vectors. I will emphasize two other features that I suspect may be more important for economic performance. Both of these features divide rather than unify Africa: it is an enormous region and cannot sensibly be analyzed as a single entity. Because Africa is land-abundant yet low-income, natural resource endowments loom much larger in its fortunes than for any other region except the Middle East. However, they are unevenly distributed. Considerable parts of Africa are abundant in natural resources, but other parts are resource-scarce. The other feature of physical geography follows from the fact that Africa is enormous and divided into many countries. As a result, many of its countries are landlocked.

Potentially, these two distinctions create four possible categories: resource-rich, landlocked; resource-rich coastal; resource-scarce, landlocked; and resource-scarce, coastal.<sup>1</sup> However, the resource-rich coastal countries and the resource-rich landlocked countries can be re-aggregated into a single group. If the resources are sufficiently valuable, being landlocked is not a significant disadvantage to their extraction, and conversely, the coastal countries are generally not in a position to take advantage of non-resource exports because of the effects of Dutch disease on their export competitiveness. Empirically, even at a global level, there is no significant difference between the growth performance of resource-rich countries whether they are landlocked or coastal.

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<sup>1</sup> This discussion is based on Collier (2007) and Collier and O'Connell, (forthcoming).

By contrast, the remaining three categories have had sharply divergent growth 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, resource-scarce countries. In between, the resource-rich countries have on average grown moderately but with massive differences both between countries and time periods. Whereas Africa broadly follows this global pattern, one respect in which it is sharply distinctive is in the distribution of its population as between the three categories. In the developing world other than Africa some 88% of the population lives in the coastal, resource-scarce countries, around 11% in the resource-rich countries, and a mere 1% in the landlocked resource-scarce countries. In Africa the population is approximately evenly spread between the three groups. Thus, the African population is heavily skewed towards 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: that is, if African countries grew at the mean of their group, the different distribution would leave the region with substantially slower growth than other regions. The growth strategies for these three categories of country differ markedly. I take them in turn giving illustrative examples.

### ***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. Put another way, outside Africa areas with these poor endowments seldom became independent countries: rather they became the hinterlands of countries that are overall more fortunately endowed. With hindsight, the creation of so many such countries in Africa may have been a mistake, but it is now difficult to change. Indeed, recent political secessions are adding to the number of such countries. The secession of Eritrea turned Ethiopia into a landlocked, resource-scarce country and if Southern Sudan secedes it might join this category.

Globally, there are some obvious examples of success such as Switzerland and Austria. However, these countries have benefited enormously from their neighbourhood. In effect, being landlocked has not cut them off from international markets but rather placed them at the heart of a regional market. More generally, historically the most promising strategy for such countries has been to orient their economies towards trade with their more fortunately endowed neighbours. This shows up in the growth spillovers. Globally, on average if neighbours grow at an additional one percentage point, that raises the growth of the country itself by 0.4 percent. Outside Africa the landlocked, resource-scarce economies on average gain larger spillovers, at 0.7%. Thus, they are consciously orienting their economies towards making the most of these growth spillovers. In Africa, the growth spillover for the landlocked, resource-scarce economies is a mere 0.2%. In other words, they are not orienting their economies towards their neighbours. To date this has not really mattered. As I will discuss below, for various reasons the more fortunately

endowed countries of Africa have not made the most of their opportunities and so have largely failed to grow. Hence, there was very little growth to spill over.

This suggests that the critical path for the landlocked, resource-scarce countries to succeed is first that their more fortunate neighbours need to harness their opportunities, and then that the sub-regional economies need to become radically more integrated. The integration agenda is partly a matter of practical trade policy such as the removal of road blocks and harassment by customs officials. It is also a matter of infrastructure: roads need to be built and above all maintained.

It is just 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 evidently mistaken. Similarly, the twin pillars of e-trade are international telecoms and higher education. Policies that raise the cost of international telecoms, or make access unreliable, and the neglect of tertiary education are thus costly for landlocked, resource-scarce Africa.

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 failure of the African countries in these categories to harness their opportunities that has been decisive.

### ***Resource-rich***

First, 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. Such economies will inevitably have large public sectors. The resource rents must be taxed in order for them to accrue to the nation, and the revenues from these taxes will then be spent by the government.

Effective public spending requires accountable government. It might be hoped that this would be promoted by democracy. Unfortunately, the statistical evidence suggests that globally resource rents make democracy function radically less well on the criterion of economic growth.<sup>2</sup> In the absence of natural resource rents democracies tend to grow significantly faster than autocracies, whereas with large resource rents autocracies outperform democracies. Evidently, democracy is corrupted by resource rents. The explanation is that because resource rents substitute for taxation they gradually undermine checks and balances. In turn, this enables politicians to divert public revenues from the provision of public services to the finance of private patronage: votes are bought instead of won. A mature democracy has two distinct aspects, electoral competition, which constrains how power is achieved, and checks and balances, which constrain how power is used. Uniquely in the resource-rich societies checks and balances are significantly beneficial for growth, whereas the remaining aspects of democracy are

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<sup>2</sup> The following discussion is based on Collier and Hoeffler, (2005).

detrimental. Thus, those resource-rich countries that are democratic need a rather distinctive type of democracy. They need strong checks and balances rather than fierce electoral competition. Africa indeed has such a country, namely Botswana. With due respect to the government of Botswana, it has not faced severe electoral competition: despite continuous democracy since independence it has never actually lost power. It does, however, have strong checks and balances, notably rules for public spending. All public spending projects had to pass a dual hurdle of honesty and efficiency. Honesty was maintained by rules of competitive tendering. Efficiency was maintained by careful technical scrutiny of the rate of return on each proposed project, with the political support to block all projects that failed to meet a critical minimum return. 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 virtually any conditions, but it is far harder to establish effective checks and balances because nobody has the incentive to enforce them. Nigeria under President Shagari displayed the classic patronage politics of resource rents in the context of intense electoral competition without effective checks and balances. The regime of President Shagari, though democratic, wasted the previous Nigerian oil bonanza.

I have emphasized the importance of effective public spending. Usually, most emphasis is put on the savings decision. The central bank indeed has a critical role in smoothing fluctuations in revenue to avoid peaks in expenditure. However, it is important to make a sharp distinction between arrangements for medium-term revenue smoothing and 'future generations' funds. The latter are, I think, completely inappropriate for Africa in two respects. First, in low-income countries there is a need to build up domestic capital: these countries are not capital-rich like Norway, and so there is a reasonable presumption that if spending can be managed well productive absorption can be quite high. Secondly, Africa does not have the long stability of political institutions necessary to make the credible commitments involved in future generation funds. The most likely scenario for such a fund is that it is a transfer from a prudent minister of finance to an imprudent minister a few years later. Hence, the centrepiece of policy towards resource wealth is not the savings decision but the spending decision. Africa's one remarkable success in managing resource wealth, Botswana, indeed focused on the rules for spending rather than rules for saving. Because Botswana is a landlocked desert it was not possible to spend all the revenues productively and so, under the spending rules, the balance was saved abroad. The savings decision was a by-product of the application of effective spending processes.

In extreme cases such as Botswana the revenues are so large that they should indeed not all be spent by the government even allowing for smoothing. However, rather than the government undertake custodial savings it may be better to redistribute some revenue directly to citizens. This is evidently the situation in a tiny country such as Sao Tome, Principe, but it is also going to be true of Angola which will have per capita resource revenues far higher than non-resource per capita income. The most credible mechanism by which low-income countries can redistribute income directly to households is through the schooling system: children could receive bursaries as is already done through the

*Progres*a system in Mexico. Studies have shown this to be highly effective both in increasing school attendance and in directly reducing poverty.

### ***Resource-scarce and coastal***

I now turn to the resource-scarce, coastal economies. These are the category that globally has had the fastest growth, but also the category in which African performance has been least encouraging relative to the global norm. 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.

Prior to 1980 manufacturing and services were concentrated in the OECD economies, locked in partly by trade restrictions but mainly by the agglomeration economies the analysis of which has been pioneered by Antony Venables. Around 1980 a combination of trade liberalization and the widening gap in labour costs began to make it profitable for industry to relocate to low-income countries. As Venables has shown, this process is explosive: as firms relocate agglomeration economies build up in the new location and make it progressively more competitive. The chosen locations were in Asia not in Africa. 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 labour costs while having large disadvantages in terms of agglomeration economies.

### **3. Human geography**

Now consider 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 other regions which are more populous, so that the average population of its countries is radically smaller. But Africa's social geography is also unmistakable: despite the division into tiny countries the typical country is ethnically far more diverse than countries in other regions. Hence, small population and ethnic diversity are the two distinctive socio-political features of African geography. Each of these creates problems.

Globally, being small is no impediment to being rich: Luxembourg is as rich as the USA. But in the context of development being small poses substantial 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. The first problem of being small is that statistically, having a small population makes it less likely that change will be achieved.<sup>3</sup> Probably this is because the process of formulating a critique of past failure and implementing a strategy for change is helped by scale. For example, scale enables a

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<sup>3</sup> The following discussion is based on Chauvet and Collier, (2006).

society to have a specialist financial press which can conduct economic discussion. Thus, China and India were able to diagnose failure and implement change, whereas a tiny society such as the Central African Republic has an acute dearth of resident 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. Fortunately, in the past decade many African societies have succeeded in designing and implementing a measure of economic reform, helped by substantial international technical assistance. Improved macroeconomic indicators are the clearest evidence of this process. Hence, to an extent, the greater difficulty of reform in small countries may account for why Africa persisted with poor policies for longer than other regions rather than be a prognosis for the future. It may take longer to learn from failure if the society is small, but learning nevertheless happens.

Not only are the ladders of economic development more difficult to mount if population is small, but the snakes of economic collapse are more prominent.<sup>4</sup> The major risk of development in reverse comes from civil war: the typical civil war costs around four times annual GDP. The risk that a region will experience civil war increases considerably the more countries into which it is divided. This is primarily because the provision of security is subject to strong scale economies: the typical African nation is simply too small for its government to provide effective internal security. This is a major reason why Africa has a much higher incidence of civil war than South Asia. Further, the costs of civil war are not confined to the country at war. More than half the costs typically accrue to neighbours. An analogy is to imagine a city in which each street was autonomous and so could not afford an adequate fire service. Not only would there be a lot of fires, but when one house caught fire a whole district might burn. This suggests that international actors are needed to enhance African security. Belatedly, the international community has responded to this need and the results have been very hopeful. External participation in negotiations has helped achieve settlement in southern Sudan. UN peacekeeping has stabilized the DRC. British military intervention established peace in Sierra Leone. The intensified scrutiny of diamond transactions in the build-up to the Kimberley Process starved UNITA into defeat bringing peace to Angola.

The other socio-political aspect of African geography is the high ethnic diversity of the typical country: considerably greater than any other region. Ethnic diversity is not a decisive impediment to development, but it does require distinctive political architecture. Democracy is evidently not always necessary for growth: China shows that amazing success is possible without it. However, statistically, democracy is important for growth if the society is ethnically diverse.<sup>5</sup> China can grow under autocracy because it is ethnically unified, but in Africa autocracy has proved disastrous. The explanation 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 economic

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<sup>4</sup> The following discussion is based on Collier and Hoeffler, (2004), Collier, Hoeffler and Rohner, (2006) and Collier, Hoeffler and Soderbom, (2006).

<sup>5</sup> The following discussion is based on Collier (2001) and Alesina and La Ferrara (2005).

growth. Ethnically diverse democracies may be messy, but they do force the coalition in power to be large and increase the attraction of broad-based growth relative to redistribution. Hence, Africa needs democracy more than other developing regions.

A second aspect of ethnic diversity is that it makes collective action for public service provision more difficult in the society. Inter-group trust is normally limited. A corollary is that the boundaries between public and private provision should be drawn more in favour of private provision in societies that are more diverse. This is, indeed, often the case. Thus, the USA, being a diverse society, has a smaller public sector than France, a more unified society. 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.

#### **4. Physical and human geography interacted: Africa's dilemma**

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

##### ***Resource-rich and ethnically diverse societies***

Africa's big economic opportunity is its natural resource rents. Not only does a disproportionate share of Africa's population live in resource-rich countries, but for the foreseeable future commodity prices are going to be high and discoveries will be skewed towards the region. As set out in Section 2, large resource rents imply a large state and hence the central importance of effective public spending, but also make democracy radically less effective in the growth process. Sadly, it seems that the typical resource-rich country might grow faster under autocracy. However, as set out in Section 2, Africa's high ethnic diversity makes autocracy radically damaging. Africa's resource-rich countries do not have the option of growth through autocracy. Further, ethnic diversity weakens the ability of the society to hold public services accountable. 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 and ethnically diverse country such as is commonly found in Africa? Autocracy is unredeemably dysfunctional in the context of ethnic diversity, but democracy is not unredeemably 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 heavily constrained, rather than simply how it *attains* power. Botswana demonstrates both that this combination is possible in Africa and that it is massively 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, not unusually strong ones. The key challenge currently facing Africa's resource-rich societies is to build such polities. Heroically, during his second term President Obasanjo has attempted precisely

this: a system with strong checks and balances and decentralized public spending. It is too early to judge how successful he has been, but it is precisely the right political design for resource-rich Africa.

Independent central banks are themselves one of the critical checks and balances that a resource-rich society needs. However, the key role of central banks in resource-rich Africa is currently to advance this agenda by informing the society. In the absence of a financial press central banks are the main independent institution of professional economic authority within the society able to command public attention. Central banks cannot afford to retreat into technocratic isolation. Electorates must be educated so that the mistakes of Africa's past are not to be repeated during the present natural resource boom.

International actors also 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. While 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. The time is ripe for an expanded and fully internationalized EITI<sup>2</sup>. Another area for potential international action that is particularly pertinent for central banks is the reporting and repatriation of corruptly acquired natural resource revenues. The clearest example of the inadequacies of present practice was the extreme difficulty faced by the Nigerian government in repatriating oil revenues embezzled by former President Abacha to Swiss banks. The efforts that the international banks have made to curtail finance for terrorism need to be applied to the problem of embezzlement.

### ***Resource-scarce societies with small, diverse populations***

Finally, I turn to a second problem generated by the interaction of physical geography and human geography: coastal, resource-scarce Africa has missed the globalization boat.

What were the critical factors that decided firms against an African location in the 1980s? Proximately, the factors differed among countries. In Francophone Africa the growing overvaluation of the CFA franc effectively excluded the sub-region from exporting. For example, an incipient garment export sector in Cote d'Ivoire was wiped out. 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 country not precluded from manufactured exports by such misfortunes. However, as discussed above, Africa was prone to these disparate syndromes due to 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. I noted that Africa has substantially succeeded in surmounting these problems: its human geography inflicted prolonged but not permanent disadvantages. Indeed, *all of the specific misfortunes that impeded coastal Africa from*

*entering global markets are now over.* The CFA Franc was sharply devalued, Lusophone Africa is now at peace, South Africa had a successful regime change, socialist policies were abandoned, and the Kenyan regime of ethnic patronage was finally defeated in elections. Yet Africa has still not decisively broken into global markets. This is in part just a matter of time: statistically, the longer a coastal African country has been free of any of these policy syndromes the higher are its non-traditional exports as a share of GDP. However, 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 freedom from the policy syndromes is not enough. When will Africa be able to repeat Asia's success? I fear that 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. If this is approximately right then Africa will have to wait for several decades.

I think that international action is needed to bring the boat back sooner.<sup>6</sup> The difficulties of the Doha Round are, in fact, an opportunity to pump-prime African export diversification. What Africa needs is temporary protection from Asia in OECD markets. While this might sound radical, in fact Africa already has such protection. It was critical to the success of Mauritius which benefited from the Multi-Fibre Agreement. Currently, the USA gives Africa such preferences through the Africa Growth and Opportunity Act (AGOA) and the EU through Everything but Arms (EBA). Indeed, a variant of this special protection was part of the failed Hong Kong offer for LDCs. The principle of protection 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. The most successful of the three is AGOA. A recent study shows that it has increased Africa's apparel exports by 50%. The weakness of AGOA is partly that it only applies to the US market, but mainly that its time horizon is too short: a mere three years. Evidently, this is insufficient for investment. For example, apparel firms in Madagascar are profitable but dare not risk expansion. EBA has had no discernable effect on African exports. Its rules of origin are far more restrictive than those of AGOA and it applies only to the LDCs which are precisely the countries least in a position to diversify their exports. EBA's good features are its much longer time frame, and its coverage of the EU market which is probably the critical market for Africa. The Hong Kong offer had a number of weaknesses. However, its key strength was that it applied across the OECD. What is needed is to combine the best features from each of these schemes: an *Integrated Approach to African Opportunities* (IAAO). It would seek to generalize the demonstrated effects of AGOA to other OECD markets. An IAAO would have the generous rules of origin and country coverage of AGOA, but the time frame of EBA, and the market coverage of the Hong Kong offer. Such an initiative in global trade policy would complement and encourage reform agendas within Africa and would stand a good chance of creating some African export transformations analogous to Asian experience. Such success would transform how the region perceives itself and how it is perceived.

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<sup>6</sup> The following discussion is based on Collier, (2006).

## 5. Conclusion

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 far worse than that of any other region. The explanation for this is not that African economic behaviour is fundamentally different from elsewhere, but rather that African geographic endowments are distinctive. Considerable attention has been given to the climatic aspects of African geography and the consequent hazards for health. While not wishing to question this analysis I think that the emphasis upon health has underplayed other features of African geography that may be both more important and more amenable to policy.

Both Africa's physical geography and its human geography 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 regional growth rate compared to 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: pan-African strategies will fail. In respect of human geography Africa is distinctive but not so differentiated. Almost all 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 maintenance of 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 than other regions, and that the domain of the public sector should probably be kept small and decentralized. Again, these may be problems of the past. The region has substantially democratized over the past decade, and also 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 two intractable and important problems that have yet to be addressed and which probably need 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 societies and one in which African central banks can play a prominent role. 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 by reform of banking secrecy to make the embezzlement of resource rents more difficult.

The other is how to compete with Asia despite having let Asia get decisively ahead. It seems likely that international action will be needed to give coastal, resource-scarce Africa a second chance by temporarily levelling the playing field through preferential market access that offsets Asian economies of agglomeration.

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