





Why an African Growth Miracle Is Unlikely

BY DANI RODRIK

Africa's recent economic performance has been widely celebrated in the media. Sub-Saharan Africa's inflation-adjusted growth rate, after having spent much of the 1980s and 1990s in negative territory, has averaged nearly 3 percent annually in per capita terms since 2000. This wasn't as stellar as East Asia's and South Asia's performances, but was decidedly better than what Latin America, undergoing its own renaissance of sorts, was able to achieve. Moreover, the growth isn't simply the result of a revival in foreign investment: The region has been experiencing positive productivity growth for the first time since the early

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1970s. It should not be entirely surprising, then, that the traditional pessimism about the continent's economic prospects has been replaced by rosy scenarios focusing on African entrepreneurship, expanding Chinese investment and a growing middle class.

But a reality check is in order here. As welcome as this economic upturn has been, the decline prior to the last decade was so deep that many African countries still have not caught up with post-independence levels of per capita income. If the World Bank's figures are to be believed, the Central African Republic, the Democratic Republic of Congo, Ivory Coast, Liberia, Niger, Senegal, Zambia and Zimbabwe are all poorer now than they were in 1960. Furthermore, the slowing of emerging-market growth elsewhere in the world and China's troubles in rebalancing its own growth have led many to look more closely at the sustainability of the revival.

It's clear that Africa has benefited from a particularly favorable external environment during the last two decades. Global commodity prices have been high and interest rates low. Private capital flows have supplemented increased official assistance from foreign donors and multilateral lenders. China's rapid growth has fueled demand for the region's natural resources and has stimulated direct investment in African economies. The global financial crisis, meanwhile, had little direct impact, given African countries' weak financial links with the rest of the world and their limited dependence on formal capital markets.

Still, my prognosis for sub-Saharan Africa is on the pessimistic side, due to what I think

are poor prospects for structural change and industrialization. Perhaps Africa will prove the skeptics wrong. But if so, my guess is that it will be because these countries have devised an alternative to the engine that propelled rapid growth in Asia.

THE ECONOMICS OF CONVERGENCE

Neoclassical growth theory establishes a presumption that poor countries should grow faster than rich ones. After all, they have the ironic advantage of economic backwardness: low capital-labor ratios, which should raise the rate of return to investment, everything else being the same. Further, they have access to foreign capital to supplement domestic saving, so the latter should not act as a constraint on the pace of investment. Finally, they are part of the global trading economy, so they can expand output more rapidly than domestic demand in goods in which they have a comparative advantage.

That said, convergence has, in fact, been the exception rather than the rule since the great divergence spawned by the Industrial Revolution and the division of the world into a rich core and a poor margin. Except for the European periphery and East Asia, sustained rapid growth in the lagging regions has been rare.

Growth theory has accommodated this empirical reality by distinguishing between unconditional and conditional convergence. Growth in developing nations is held back by a variety of country-specific obstacles. Accordingly, developing nations' convergence to rich-country income levels is conditional on these disadvantages being overcome.

The factors that determine long-run income levels are growth theory's fundamentals. These include levels of investment, human capital and the impact of public policy on incentives for work, innovation, savings and the like. They might be all viewed as being ulti-

DANI RODRIK is the Albert O. Hirschman professor of economics at the Institute for Advanced Study in Princeton, N.J. This article draws from Prof. Rodrik's Richard H. Sabot lecture at the Center for Global Development in Washington.

mately determined by a country's quality of institutions (as has been argued forcefully by MIT's Daron Acemoglu and Harvard's James Robinson in *Why Nations Fail*). Or they may be determined by geography and ecology (as has been argued by Columbia's Jeffrey Sachs). The quality of institutions themselves may be tied to initial levels of the human capital brought in by colonizers (as has been argued by Harvard's Edward Glaeser and Andrei Shleifer). For the purposes of the present discussion, I do not need to take a strong stand among these contending perspectives on the true growth fundamentals. As long as we leave room for human capital and institutions, I am happy to accept the argument that geography matters.

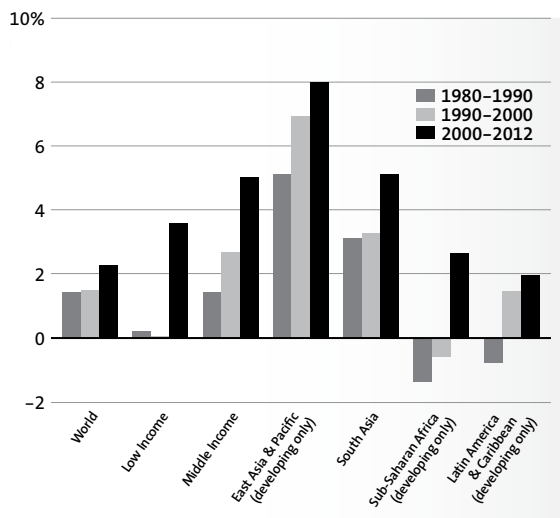
African countries cannot do much about their geography, but there is little doubt that their growth fundamentals on all other dimensions have improved significantly. Agricultural markets have been liberalized, domestic markets have been opened to international trade, state-owned or controlled enterprises have been disciplined by market forces or closed down, macroeconomic stability has been established and exchange-rate management is infinitely better than in the past. Political institutions have improved significantly as well, with democracy and electoral competition becoming the norm rather than the exception throughout the continent. Finally, some of the worst military conflicts have ended, reducing the number of civil war casualties in recent years to historic lows for the region.

That's all good news, but how much growth should we expect from these positive changes? Improvement in the policy and institutional environment can be expected to generate greater economic stability and prevent deep crises arising from mismanagement. But it is not clear that these changes alone will serve as the engine for a growth miracle. My work and that of NYU's William Easterly and others has

shown that the relationship between standard measures of good policy (such as trade liberalization and low inflation) and economic growth is not particularly strong. A huge black-market premium for foreign currency and hyperinflation can drive an economy to ruin, but there is no significant, predictable difference in growth between an economy suffering inflation of 5 percent rather than 15

GROWTH PERFORMANCE OF COUNTRY GROUPS SINCE 1980

AVERAGE ANNUAL PER CAPITA GDP GROWTH



SOURCE: World Bank World Development Indicators

percent, or an average tariff rate of 10 percent rather than 25 percent. As economists, we have a pretty good idea of what can cause economic collapse, but not so much about what can produce a miracle. As a result, the upside potential of Africa's progress on policy remains uncertain.

What about institutions, which have received so much attention in the development literature? Isn't it the case that high quality institutions make a huge difference to long-run income levels, and hence convergence patterns? Some studies (in particular, those by



Bridge infrastructure, Ivory Coast into Liberia

Acemoglu and Robinson and their colleagues) attribute the bulk of country variation in long-run income levels to differences in institutional quality. But even if they are correct, this long-run relationship tells us rather less about growth prospects over the next decade or two. Empirically, the correlation between institutions (or the change in the quality thereof) and growth rates – as opposed to income levels – is not strong.

Few would deny that Latin America's political and economic institutions improved significantly over the late 1980s and 1990s. Yet the growth payoff has been meager at best. Con-

versely, high-performing Asian economies such as South Korea (until the late 1990s) and China (presently) have been rife with institutional shortcomings, including cronyism and corruption, yet have done exceedingly well.

The empirical literature that finds the strongest results for institutions relies on concepts such as the rule of law or expropriation risk. An important problem here is that these are outcomes: They tell us something about investors' evaluation of the economic environment, but not so much about how to get there. It remains unclear which policy levers have to be pulled to get those outcomes.

As I have argued elsewhere, the function that good institutions fulfill (about which we have a fairly good idea) does not lead to unique *forms* (about which we know a lot less). That depends on local context and opportunities, and figuring it out can be quite hard. Thus, one lesson for Africa is that we should not be overly confident about the growth payoffs when countries adopt the formal trappings of “good institutions.”

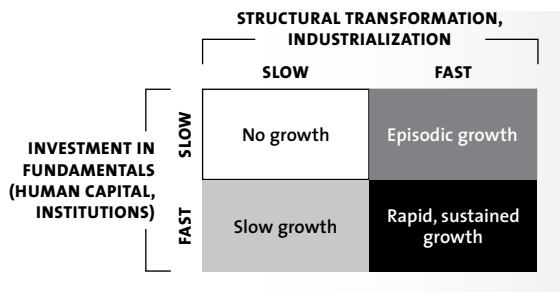
A STRUCTURAL TRANSFORMATION PERSPECTIVE

So standard growth theory, with its focus on long-run fundamentals, does not do a very good job in describing growth miracles. A complementary perspective is provided by the tradition of dual-economy models – models in which sub-economies operating at very different levels of development coexist in one economy – which have long been a staple of development economics. The birth of modern growth economics pushed aside this tradition, but it is clear that the heterogeneity in productive structures, which dual-economy models capture, continues to have great relevance to low-income economies such as those in sub-Saharan Africa. Indeed, a hallmark of developing countries is the wide dispersion in productivity across economic activities – modern versus traditional, formal versus informal, traded versus non-traded, cash crops versus subsistence crops. And as recent research has shown, these divergences even exist within individual sectors.

What was explicit in those old dual-economy models was the difference in the dynamic properties of productivity across the modern-traditional divide. Traditional sectors were stagnant, while modern sectors exhibited returns to scale, generated technological spillovers and experienced rapid productivity growth. This picture has been

refined over time, and we no longer think of traditional sectors – such as agriculture – as necessarily stagnant. But in one important respect, recent findings reinforce the relevance of the dual-economy perspective. Modern, manufacturing industries *are* different: They do exhibit unconditional convergence, unlike the rest of the economy. Moreover, the estimated convergence rate is quite rapid, with a half-life of 40 to 50 years.

A TYPOLOGY OF GROWTH PROCESSES/OUTCOMES



This is a rather remarkable result. It says that modern manufacturing industries converge to the global productivity frontier regardless of geographical disadvantages, lousy institutions or bad policies. Under better conditions, convergence is likely to be faster, of course. But what is striking is the presence of convergence in at least certain parts of the economy, even in the absence of good fundamentals. This result is fairly general, regardless of time period, region or level of aggregation. In particular, the dozen or so African countries that produce data adequate to track change follow the same pattern as the rest of the world.

So can Africa generate a growth miracle based on the performance of manufacturing? The answer depends on the rate at which African economies can move their labor into modern manufacturing (and related) industries. The dual-economy-augmented version

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of growth theory produces the following typology of growth patterns.

As the diagram makes clear, long-term convergence requires both structural change and fundamentals. Rapid industrialization without the accumulation of fundamental capabilities (institutions, human capital) produces spurts of growth that eventually run out of steam. But in the absence of rapid structural change, investment in fundamentals on its own produces moderate growth at best.

THE AFRICAN CONTEXT

So where does Africa stand in structural change? Here, the picture is not bright. While farmers have moved out of rural areas and the share of agriculture in employment and value added has dropped significantly since the 1960s, the primary beneficiary has been urban services rather than manufactures. In fact, industrialization seems to have lost ground since the mid-1970s, and not much of a recovery appears to have taken place in recent decades. According to the best data we have at the moment, manufacturing's share of employment stands well below 8 percent, and its share of GDP is around 10 percent, down from almost 15 percent in 1975. Most countries in Africa are too poor to be experiencing deindustrialization, but that is precisely what seems to be taking place in too many places! Compared to Asian countries, African countries at all levels of income remain under-industrialized.

Moreover, few African countries are experiencing the classic growth-promoting structural change that East Asia underwent as part of the growth process. To take one recent example: In Vietnam, labor has moved rapidly from agriculture to more productive urban occupations. Manufacturing employment as a portion of total employment expanded by

eight percentage points from 1990 to 2008. But so has employment in many services, which are also more productive. This pattern of structural change accounts for around half of Vietnam's impressive growth over the period.

The pattern in Africa, exemplified by Ethiopia and Kenya, is more mixed. In each, there has been outmigration from agriculture, but the consequences have been less salutary. In Ethiopia, where there has been some growth-promoting structural change, its magnitude is much smaller than in Vietnam. Manufacturing, in particular, has expanded much less. In Kenya, meanwhile, structural change has contributed little to growth. That's because the large number of workers leaving agriculture have mainly been absorbed by services, where productivity is apparently not much higher than in traditional agriculture.

The even worse news for African manufacturing is the degree to which it is dominated by small, informal (i.e., underground) firms that are not particularly productive. The share of formal employment in overall manufacturing employment appears to run as low as 6 percent in Ethiopia and Senegal. And there is little reason to believe that informal firms are on the same escalator as modern firms with access to technology, markets and finance. Indeed, the evidence suggests that few small, informal firms ever grow out of informality. So informality is a drag on overall productivity. And that plays a large part in explaining why not just services but also manufacturing in Africa have been falling behind the productivity frontier, even in recent years with brisk growth.

HIGH-GROWTH SCENARIOS

To generate sustained, rapid growth, Africa has essentially four options. The first is to revive manufacturing and put industrialization back on track, so as to replicate as much as



Freelance miners dig in an open-pit mine just outside the southern Democratic Republic of Congo copper town of Lubumbashi

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possible the now-traditional route to economic convergence. The second is to generate agriculture-led growth, based on diversification into non-traditional agricultural products. The third is to kindle rapid growth in productivity in services, where most people

will end up working in any case. The fourth is growth based on natural resources, in which many African countries are amply endowed. Let me offer a few words about each.

What are the prospects for a renewed industrialization drive in Africa? While the bulk



of Chinese investment has gone to natural resources, there have been some hopeful signs of greenfield investments in manufacturing as well in many countries of the region – notably, in Ethiopia, Ghana, Nigeria and Tanzania. Looking at some of these green shoots, one can perhaps convince oneself that Africa is well poised to take advantage of rising costs in Asia and turn itself into the world's next manufacturing hub. Yet, as we have seen, the aggregate data do not yet show something

like this happening.

There is almost universal consensus on what holds manufacturing back in Africa. It is called “poor business climate,” a term that is sufficiently broad to offer room for virtually anything under its rubric. The list includes the high costs of power and transportation, corruption, inefficient regulation, poor security, contract enforcement and uncertainty about government policy.

If the problem is that such costs act as a tax on tradable industries, there is a relatively easy remedy that could compensate for them: the currency-exchange rate. A real exchange rate depreciation of, say, 20 percent, is effectively a 20 percent subsidy on all tradable industries. It is a way of undoing the costs imposed by the business environment in a relatively quick and easy manner. At the right exchange rate, many African manufacturers could compete with Chinese and Vietnamese exporters, both externally and in the home market. An undervalued real exchange rate may thus be the most effective tool available for spurring industrialization and hence growth.

Of course, achieving and sustaining a competitive undervalued exchange rate requires an appropriate monetary and fiscal policy framework. In particular, it requires managing or discouraging capital and aid inflows and a tighter fiscal policy than would otherwise exist. These steps may not be easy, but may well be considerably easier to implement than the endless policy reforms needed to fix the myriad problems associated with the poor business climate. And once the economy is on a higher growth path, it may become easier to deal with those business-climate problems, thereby reducing reliance on the exchange rate.

On the other hand, the obstacles to industrialization in Africa may be deeper, and go beyond specific African circumstances. For

various reasons we do not fully understand, industrialization has become really hard for all countries of the world. The advanced countries are, of course, deindustrializing, which is not a big surprise and can be ascribed to both import competition and a shift in demand to services. But middle-income countries in Latin America are doing the same. And industrialization in low-income countries is running out of steam considerably earlier than was the case before. This is the phenomenon that I have called premature deindustrialization.

The first wave of industrializers, notably Britain and Germany, put more than 30 percent of their labor force in manufacturing before they began to deindustrialize. Among Asian exporters, the most successful, such as Korea, reached a peak well below 30 percent. Today, countries such as India, along with many Latin American countries, are deindustrializing from peaks that do not exceed the mid-teens. Even Vietnam, which is one of the most successful recent industrializers, shows signs of having peaked at 14 percent of employment. Yet Vietnam is still a poor country, and in an earlier period would have had many more years of advancing industrialization.

The reasons for this common pattern of premature deindustrialization are probably a combination of global demand shifts, global competition and technological change. Whatever the reason, Africa finds itself in an environment where it is facing much stronger headwinds. Countries with a head start in manufacturing, having developed a large manufacturing base behind protective walls as occurred in both Europe and Asia, make it difficult for Africa to carve a space for itself – especially as global demand shifts from manufacturing to services. Having liberalized trade, African countries have to compete today with Asian and other exporters not

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only on world markets but also in their domestic markets. Earlier industrializers were the product of not just export booms, but also a considerable amount of substitution of domestically made goods for imports. Africa is likely to find both processes very difficult, even under the best of circumstances.

What about the second scenario, agriculture-based growth? Since so much of Africa's workforce is still in agriculture, does it not make sense to prioritize development of this sector? Without question there are many unexploited opportunities in African agriculture, whether in perishable, non-traditional products such as fruits and vegetables or perishable cash crops such as coffee.

Yet, agricultural diversification seems to be hindered by many of the same obstacles as manufacturing – the term “poor business climate” applies equally well here. In addition, agriculture has special problems that governments need to fix, including poorly defined and enforced land rights, weak standard-setting, and uncertain input provision. That's not to say the obstacles are insurmountable. Once again, the exchange rate could prove an important compensatory tool. The main argument against this scenario is that it is very difficult to find examples of countries that have pulled off such a strategy. Agriculture-led growth implies that countries would sell their surplus on world markets, and that their export baskets would remain heavily biased toward farm products. Yet one of the strongest

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correlates of economic development is export diversification away from agriculture. It is true that Asian countries, including China and Vietnam, have benefited greatly from early spurts in agricultural productivity – something that is particularly helpful for poverty reduction. But in all cases, the subsequent and more durable boost came from the development of urban manufacturing.

Moreover, even if modern, non-traditional agriculture succeeds on a large scale in Africa, it would be unlikely to reverse the process of migration from the countryside. More capital and technology-intensive farming may even accelerate this process. So in one way or another, sub-Saharan African countries will need to develop an array of high-productivity sectors outside agriculture.

The third scenario for growth, gains in service-sector productivity, is one that perhaps raises the largest number of questions. When I lay out my pessimism on industrialization to audiences familiar with Africa, I invariably hear back a litany of success stories in services – mobile telephony and mobile banking are the most common – that seemingly lead to a more optimistic prognosis.

With few exceptions, though, services have not acted as an escalator sector like manufac-

turing. The essential problem is that the services that play this role tend to require relatively high skills. The classic case is information technology, which is a modern, tradable service. Long years of education and institution-building are required before farm workers can be transformed into software programmers, or even call-center operators. Contrast this with manufacturing, where little more than manual dexterity is required to turn a farmer into a production worker in garments or shoes, raising his or her productivity by a factor of two or three.

So raising productivity in services has typically required steady, broad-based accumulation of capabilities in human capital, institutions and governance. Unlike the case of manufacturing, technologies in most services seem less tradable and more context-specific (again with some exceptions such as cell-phones). And achieving significant productivity gains seems to depend on complementarities across different policy domains. For example, gains in a narrow segment of retailing can be accomplished relatively easily by letting foreign firms such as Walmart or Carrefour come in. But achieving productivity gains across the entire retail sector is extremely difficult in view of the heterogeneity of organizational forms and the range of prerequisites across product lines.

None of this is to say that the past must necessarily look like the future. Perhaps Africa will be the breeding ground for new technologies that revolutionize services for broad masses, and do so in a way that creates high-wage jobs for all. But that is hardly a sure thing.

Finally, there's natural-resource-based growth. Once again, the primary argument against this scenario is the paucity of relevant examples in history. Almost all of the countries that have grown rapidly over a period of three decades or more have done so by indus-



A bus driver navigates the congested streets of Freetown, Sierra Leone

trializing. In the post-World War II period, there were two such waves – one on the European periphery (Spain, Portugal and Italy), the other in Asia (Korea, Taiwan and China). Very few countries have enjoyed rapid, sustained growth based on natural resources, and those that did were typically very small countries in unusual circumstances. Three of these countries were in sub-Saharan Africa: Botswana, Cape Verde and Equatorial Guinea. These cases demonstrate that it is, indeed, possible to grow rapidly if you are exceptionally rich in hard-rock minerals or fuels. But it would be a stretch of the imagination to think that these countries set a relevant example for countries such as Nigeria and Zambia, let alone Ethiopia and Kenya.

Moreover, the downsides of natural-resource-based growth are well known. Resource sectors tend to be highly capital-intensive and absorb little labor, creating enclaves within economies. Resource booms tend to crowd out other tradable goods, preventing industries with escalator properties from getting off the ground. Then, too, resource-rich economies experience substantial volatility in their international terms of trade as global commodity prices bounce around. And they have great difficulty in managing and sharing the windfall gains – the sometimes very large differences between extraction costs and world prices. Note, moreover, that institutional underdevelopment is often the price paid for resource riches. All these factors help



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account for why resource-based growth has not paid off for most countries.

IS A GROWTH MIRACLE POSSIBLE?

The balance of the evidence I've reviewed here suggests caution on the prospects for high growth in Africa. Much of the recent performance seems to be due to temporary boosts: an advantageous external context and making up of lost ground after a long period of economic decline. While the region's fundamentals have improved, the payoffs to macroeconomic stability and improved governance are mainly to foster resilience and to lay the groundwork for growth, rather than to ignite and sustain it. The traditional engines behind rapid growth and convergence – structural change and industrialization – are operating at less than full power.

So my baseline expectation would be moderate, steady growth, perhaps as high as 2 percent per capita annually, as long as the ex-

ternal environment does not deteriorate significantly and China manages its own substantial macroeconomic challenges well. I hasten to point out that a growth rate of 2 percent on a sustained basis is not bad. In all likelihood, this would narrow the gap with the more-advanced economies, because the latter will not do very well in the decades ahead.

I can make one other prediction, one that I feel even more confident about. If African countries do achieve growth rates substantially higher than I have suggested is likely, they will do so by pursuing a growth model that is different from earlier miracles, which were based on industrialization. Perhaps it will be agriculture-led growth. Perhaps it will be services. But it will look quite different than scenarios we have seen before. 