The Countries and the Surveys

Over the last decade, Africa's economic performance has improved markedly. Gross domestic product per capita has risen since 1994, relieving some of the pessimism about the future that had been so prevalent before. No longer is Africa seen as a "Hopeless Continent."[1] Oil exporters have been boosted by large terms-of-trade gains, and with better macroeconomic management, an opening to trade, and increased private sector activity, some eleven low-income countries (which are not exporters of oil) have been growing at an average rate of 5 percent, reversing the twenty-five-year trend of falling real incomes and rising poverty (Gelb, Ramachandran, and Turner 2007). Foreign direct investment (FDI) in many of these countries has expanded fourfold since the early 1990s and has begun to diversify, including investments in a widening range of goods and services as well as traditional investments in natural resources. Moreover, the sources of FDI have diversified. While South Africa was the initial source of most such investment, sources today increasingly include Asian countries.

These favorable economic trends have developed in a generally improving political context. While there have been notable setbacks, many former autocracies have moved toward multi-party elections, with indicators of civil rights and political liberties showing substantial gains since the early 1990s, partic-

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1. "Hopeless Africa," *Economist*, May 11, 2000.

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ularly in the better-performing countries (Radelet 2008). While not always fully free or fair, elections have provided an opportunity for local voices to be heard and, in some cases, for greater accountability of governments and stronger pressure on governments for more effective service delivery. Several countries have seen peaceful transitions of government, in some cases more than once. Seen in the context of new states—and considering the experience of Latin America in the last century or the trials of Indonesia, now generally considered a relatively successful case of development during its nation-building period—Africa's political trajectory is perhaps not as exceptional as often supposed.

These factors augur well for Africa's future. Yet there is still concern over the sustainability of Africa's economic gains, over the fact that they have not been shared by all countries, and over the possibility that at least part of the improved performance has been encouraged by exceptionally favorable trends in terms of trade. Unlike the rapidly growing Asian economies, whose rising incomes have been associated with structural shifts from agriculture to industry, even the better-performing low-income African economies have tended to move from agriculture toward the tertiary sector, with relatively slow growth in industry and sluggish industrial employment growth (figure 1-1). In addition, total investment has often grown less than might be expected given the substantial gains in FDI, suggesting that domestic processes of accumulation and investment are still weak (Gelb, Ramachandran, and Turner 2007). Moreover, because of low incomes in Africa, the gap with other regions continues to widen in absolute terms even if there is a slow convergence in percentage terms. This is very different from the picture in China and other countries in Asia, where rapid growth and penetration of world markets with manufactured exports are driving the economic and social transformation of those countries.

Central to the issue of growth in Africa is the viability and vigor of its private sector. Increased productivity is the driving factor of economic growth—without it, there is no real chance for Africans to raise their standard of living and quality of life. The private sector generates jobs and incomes and sustains a middle class, which leads in turn to an increase in political accountability and the strengthening of democratic institutions and processes. Many factors can underlie global differences in productivity, not all of them well understood. They can include, for example, demographics, human capital effects, spatial factors associated with neighborhood effects, or technological breakthroughs, such as the Green Revolution, that favor one type of physical

Figure 1-1. Sector Shares of GDP in Africa, 1990 and 2005

Percentage of GDP
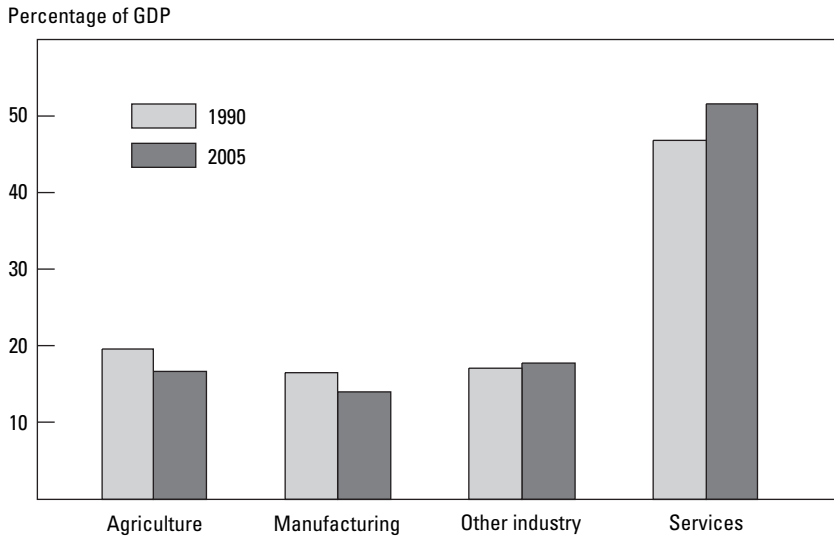
Source: World Bank (2007).

environment over another. This book does not seek to be an exhaustive study of all possible causes; it focuses instead on a set of factors related to the business environment in Africa.

Before we move to our analysis, let us take a quick look at the twenty-nine African countries covered in this book. Table 1-1 describes the gross domestic product per capita of the countries in the sample. The first point to note is the very small size of African economies. At barely $3 billion, the median economy is a fraction the size of any of the comparator economies. With the exception of a few middle-income countries, almost all have a per capita GDP of less than $500 a year. The data on economic density provide additional perspective. Most African countries are very sparsely populated in comparison with India, China, and Indonesia. Of the twenty-seven countries, only seven have more than 100 people per square kilometer. Many are well below fifty people per square kilometer—a density that is one-seventh that of India and one-third that of China. The combination of low population density and low incomes compounds economic sparseness. Africa's GDP per square kilometer is far below that of China, India, Indonesia, and the United States. With the exception of Mauritius (a real outlier), South Africa, Cape Verde, and

(marginally) Rwanda, every country produces less than $100,000 per square kilometer. Some countries are in the range of $10,000 to $20,000. Nine countries—the Democratic Republic of Congo, Guinea-Bissau, Madagascar, Mali, Mauritania, Mozambique, Namibia, Niger, and Zambia, produce less than $10,000 per square kilometer, and some are relatively large. It is interesting to note that some of these countries have had high growth rates in the past. Nonetheless, sparseness of population has led to a low spatial density of economic activity in comparison with density in India and China, which is more than $200,000 per square kilometer in both.

Road density also is very low in Africa relative to density elsewhere. Most African countries have less than 10 kilometers of roads per 100 square kilometers of land, while there are 20 kilometers of roads in China, 70 kilometers in the United States, and 113 kilometers in very dense India. Equally relevant is another measure of economic density, GDP per kilometer of road. Most countries in Africa produce less than $1,000 per kilometer of road, while the figure is about $18,000 per kilometer in the United States and $11,000 in China. This sparseness suggests the difficulty of connecting producers and consumers in Africa, as well as the costs of maintaining roads and utilities relative to available resources.

Table 1-1 also describes the share of the manufacturing sector in GDP and the importance of manufactured exports as a share of total exports. Manufacturing as a share of total economic activity, which is about 30 percent in China and Indonesia, is still relatively low in most African countries, around 10 to 20 percent of total GDP. Manufactured exports as a share of total exports is high for a few countries—Senegal, South Africa, Mauritius, Swaziland, and Mali—but in most cases their exports represent early-stage processed primary products, and the share is low elsewhere. In contrast, diversified manufactures comprise a large part of comparators' exports.

Africa's low population density and low level of education suggest that it is resource rich and skills poor. A cross-country study by Wood and Mayer (1998) confirms that assessment and also suggests that such factor proportions are strongly associated with a primary products-based export structure. However, traditional comparative advantage based on factor proportions does not provide a complete explanation of Africa's low income level, its dynamic path of factor accumulation (which has been fraught with the flight of financial and human capital, despite the assumption that both are "scarce" factors), or the fact that wages are lower in some African countries than in manufacturing powerhouses like China, which often are assumed to compete on the basis of cheap labor. Factor endowments are not the only driver

Table 1-1. Economic Density and Exports in Africa

Country	GDP (PPP in billions of dollars)[a]	2005 GDP per capita[a] (PPP in dollars)	Population density[a] (people per square kilometer)	GDP per square kilometer[a] ($1,000s)	Road density[a] (kilometers of road per 100 square kilometers)	GDP per kilometer of road ($10,000s)	Percentage of manufactures in total exports	Adult literacy
Angola	33.1	2,077	13	27	4.1	64	...	67
Benin	8.6	1,015	76	77	17.2	45	6.8	35
Botswana	19.5	11,021	3	34	4.3	80	71.2[b]	81
Burkina Faso	14.3	1,079	48	52	5.6	93	14.7[c]	22
Burundi	4.7	622	294	183	48.0	38	3.9	59
Cameroon	33.4	2,045	35	72	10.7	67	2.6[d]	68
Cape Verde	2.6	5,162	126	649	33.5	194[e]	8.8[f]	...
Congo DR	36.6	635	25	16	6.8	24	...	67
Gambia, The	2.6	1,709	152	259	37.4	69	7.6[f]	...
Guinea	19.4	2,060	38	79	18.1	44[b]	22.4[g]	29
Guinea-Bissau	1.2	736	56	42	12.3	34[g]	...	...
Kenya	37.8	1,103	60	66	11.1	60	16.3[d]	74
Lesotho	5.3	2,967	59	175	19.6	90[h]	79.6[g]	82
Madagascar	15.3	821	32	26	8.6	31[h]	29.5	71
Malawi	7.6	593	137	81	16.4	49[b]	10.6[g]	64
Mali	12.4	919	11	10	1.5	66	8.3[d]	19
Mauritania	6.1	1,988	3	6	0.8	80[h]	...	51

Mauritius	14.1	11,312	612	6,928	99.3	698	35.8	84
Mozambique	21.9	1,105	25	28	3.9	72[h]	4.3[f]	..
Namibia	13.7	6,749	2	17	5.1	32[g]	45.7	85
Niger	9.7	695	11	8	1.2	67	12.3	29
Nigeria	131.9	1,003	144	145	21.0	68[d]	2[b]	..
Rwanda	9.7	1,073	366	393	56.8	69	4.7[b]	65
Senegal	18.6	1,594	61	97	7.1	137[b]	26.7[d]	39
South Africa	463.5	9,884	39	382	30.0	127[c]	47.1	82
Swaziland	4.9	4,292	66	282	20.9	135[g]	64.5	80
Tanzania	25.4	662	43	29	8.9	32[b]	8	69
Uganda	37.3	1,293	146	189	35.9	53[b]	7.3	67
Zambia	10.6	910	16	14	12.3	12[c]	7.8	68
China	7,842.2	6,012	140	841	20.1	406	84.4[f]	91
India	3,362.1	3,072	368	1,131	76.8	99[g]	45.5	61
Indonesia	754.1	3,419	122	416	20.3	205[g]	40.2[e]	90
United States	11,046.4	37,267	32	1,206	70.2	172	56.2[f]	..

Source: World Bank (2007).

a = data from 2005.
b = data from 2003.
c = data from 2001.
d = data from 2004.
e = data from 2000.
f = data from 2006.
g = data from 2002.
h = data from 1999.

of costs and factor prices. Two other theories, ably surveyed by Burgess and Venables (2004), suggest other critical factors.

The first theory stresses an economy's ability to provide non-traded producer goods and services to underpin secondary sectors that typically are more "transaction-intensive" than the primary products and subsistence agriculture sectors (Collier 2000). Various problems, such as poor business services, including macroeconomic management and governance; policy instability; and inadequate infrastructure, regulation, security, and logistics, create high costs and high risks (Moss 2007). They squeeze out potential investments across a wide range of sectors that include not only manufacturing but also resource processing and tourism. The second theory (Krugman 1980, 1991a, 1991b) stresses producer externalities and learning created by "thick" markets and a critical mass of producers. Both theories are highly relevant for Africa's very small and very sparse economies. The small GDP of the median country is likely to reduce the incentives for new entry and to limit innovative pressure due to domestic competition. The sparseness of Africa's economies means that there are few significant industrial clusters. Kenya's horticulture-floriculture complex offers one example; another is Madagascar's zones for processing textile and garment exports. There are some signs of "thickening," including through developing tourism circuits, mostly in the south and east of the continent. But relative to business in other regions, business in Africa is sparse and has a relatively low connectivity.

This discussion leads to a question—is Africa "different" from other developing regions? The question is difficult to answer, but the data presented above point us toward some of the differences that can be investigated using Enterprise Survey data—notably the high cost of doing business and the interaction between low economic density and the political economy of regulation.

The Surveys and Data

Before proceeding any further, we want to say a few words about our data. The analysis presented in this book is based largely on the World Bank's database of Enterprise Surveys. These are door-to-door surveys of businesses, and they cover the manufacturing sector as well as other sectors such as services, tourism, and so forth. The survey data reflect the views of the business sector itself—how businesses view their own environment. This is a unique perspective and one not often found in the literature on Africa's growth, much of which relies on macroeconomic data or secondary sources of information.

The surveys, which were conducted between 2001 and 2008, cover a stratified, random sample of firms in each country. They focus on the measurement of enterprise-level productivity and the characteristics of the investment climate in which the firms operate.[2] A standardized core questionnaire was used in all countries, enabling benchmarking of the crucial variables of investment, employment growth, and productivity for firms in the formal sector. While the surveys cover a range of sectors, we focus on manufacturing and on formal firms only, generally those with five or more employees, to ensure strict comparability. Our analysis draws on studies already completed and also uses new measurements, including dimensions of ethnicity and ownership, when a more precise formulation of the relevant questions in recent surveys enables a more focused analysis for a number of the countries. Finally, although we do present country-level data in various sections of the book, our analysis focuses more on *intra-country* variation in performance than on inter-country differences.

The total sample includes some 5,000 observations from the following countries: Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cape Verde, the Democratic Republic of Congo, the Gambia, Guinea-Bissau, Guinea, Kenya, Lesotho, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mozambique, Namibia, Niger, Rwanda, Senegal, South Africa, Swaziland, Tanzania, Uganda, and Zambia. Appropriate statistical tests were applied to determine the adequacy of the sample size relative to the population; particularly in small African economies, the population of formal firms can be small enough, relative to the surveys, to require use of sampling statistics without replacement.[3] Figure 1-2 shows the size distribution of firms in the data. Small firms are defined as having between five and fifty employees, medium firms as having between fifty-one and ninety-nine, and large firms as having 100 or more.

The analysis below has a number of limitations. It does not cover agriculture or other natural resource sectors, such as mining and forestry, although agribusiness, food processing, and wood processing are included. Neither does it cover informal firms or those with less than five employees. It also does not take as core countries middle-income countries such as South Africa, Botswana, or Mauritius, although survey results from these countries

2. Data are collected at the establishment level for each plant or operation rather than for the company as a whole. For a company with operations in multiple locations, each location is treated as a separate observation.

3. Full details of the sampling strategy for the Enterprise Surveys, along with the methodology for replacement sampling, is available at www.enterprisesurveys.org.

Figure 1-2. Size Distribution of Firms in the Sample
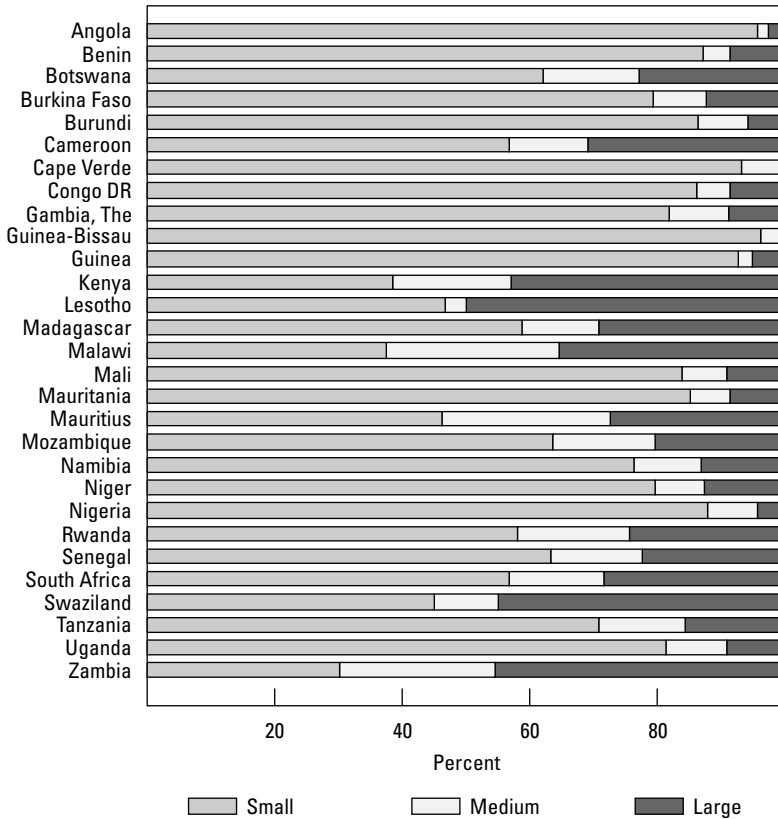
Source: World Bank Enterprise Surveys (www.enterprisesurveys.org).

are noted where relevant. As pointed out above, formal manufacturing is not a high share of GDP in most low-income African countries. Yet it is a critical sector, and it is one that experiences most of the constraints that all firms in the African private sector face. While manufacturing may not be the natural path for all countries, the investment climate constraints identified by firms in this sector will be largely the same for firms in other sectors. Also, many countries will need to move into manufacturing—including resource processing—as they transition out of agriculture in order to supply the domestic market, markets in neighboring countries, or international markets.

Camels versus Hippos

Do the data reflect the complete picture? Or are they badly contaminated by self-selection—do they miss the real story because they do not consider information from firms that have chosen *not* to locate in Africa or from firms that simply do not exist? That question is raised in Hausmann and Velasco (2005) in an anecdote about camels and hippos. If you interviewed some camels about living and working in a desert, you would get a very different idea of the main problems involved (perhaps heavy loads and mean camel drivers) than you would if you interviewed some hippos, which live in rivers, lakes, and wetlands. That implies that the really interesting thing to look at is the underlying industrial structure (the camel-to-hippo ratio in the desert), from which you can infer what other major problems might exist (for hippos and humans, no water).[4]

It is certainly true that the mix of firms surveyed will reflect a degree of self-selection, whether because of regulatory and governance issues or other country characteristics. One would not expect to find many high-tech computer firms in Burundi or a vibrant shipbuilding industry in Botswana.[5] Further, as discussed below, there are indications in the survey results that severe infrastructure constraints in some countries force firms to self-limit their operations and markets. However, there also are several indications that suggest that in practice, sorting effects do not dominate the firms' responses.

First, within countries, responses are relatively uniform across types of firm, including foreign-owned firms, whose managers presumably are better able to compare the quality of business environments across countries. In fact, major deviations in responses across types of firm occur only where expected (for example, foreign firms are less constrained and small firms are more constrained by finance).

Second, across countries, the intensity of complaints often correlates with macro-level country indicators. For example, complaints about finance are far more prevalent in countries with low financial depth. Using the camels-

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4. We are grateful to George Clarke for discussions on this subject.

5. The approach taken by the World Economic Forum to construct its annual competitiveness report adjusts for country differences by weighting different constraints differently at different levels of development. The proposition that firms self-select is also implicit in theories of comparative advantage, which can be shaped by costs of non-traded goods and services as well as factor proportions. In extreme cases, the economy will consist of only subsistence farming and offshore oil rigs or, as in rural Niger, cattle farming.

and-hippos argument, firms in countries with low financial depth should be self-selected and not see low financial depth as an especially severe constraint.

Third, perhaps the most convincing evidence is generated by looking at firms that have actually adjusted to a constraint. Firms are not passive in the face of constraints. When possible they will adjust to them, giving rise to the question of whether the ability to adjust (presumably at some cost) means that the constraint is no longer considered serious. To answer that question, we ask another—whether perceptions about the electric power constraint are affected by ownership of a generator (figure 1-3). The results show that firms do not identify absent or unreliable power as less constraining when they own a generator. Firms with generators actually complain slightly more about electricity in many countries, perhaps because they tend to be more dependent on electricity and because generator power costs about three times more than power from the grid.

Evidence that generator ownership has no impact on a firm's perception of lack of power as a severe constraint suggests that firms recognize a constraint even when they can adapt to it. It suggests, for example, that firms that are able to secure services by paying large and costly bribes will nevertheless recognize the need to pay bribes as a constraint. Indeed, the camels-and-hippos argument can be turned around. If the self-selection process for firms is incomplete (as suggested above), the constraints identified by those present will likely be seen as *even more serious* by those firms that have *not* chosen to enter. If even camels would like to have more water in the desert (as we suspect that they generally would), the data suggest that a host of other animals would come in if the water constraint was alleviated. Alleviating Uganda's severe power constraint, for example, could bring in a multitude of new firms as well as improve conditions for established firms.

Another important issue to consider up front is whether much of the private sector's performance can simply be attributed to overvaluation of exchange rates in Africa. African countries do tend to have higher price levels than those predicted by the Balassa-Samuelson rule, which holds that lower relative price levels for non-tradables in poorer countries translate into lower overall price levels. Earlier rounds of purchasing power parity (PPP) data, admittedly rough, indicated that prices in Africa's low-income countries were higher in absolute terms than prices in China and South Asia and about 30 percent above the level predicted by per capita income; in comparison, prices in Asia were 13 to 20 percent below predictions (Eifert, Gelb, and Ramachandran 2008). Our analysis confirms the tendency for African prices to be higher than expected and for Asian prices to be lower.

Figure 1-3. Firms Ranking the Electricity Constraint as Major or Severe, Disaggregated by Generator Ownership
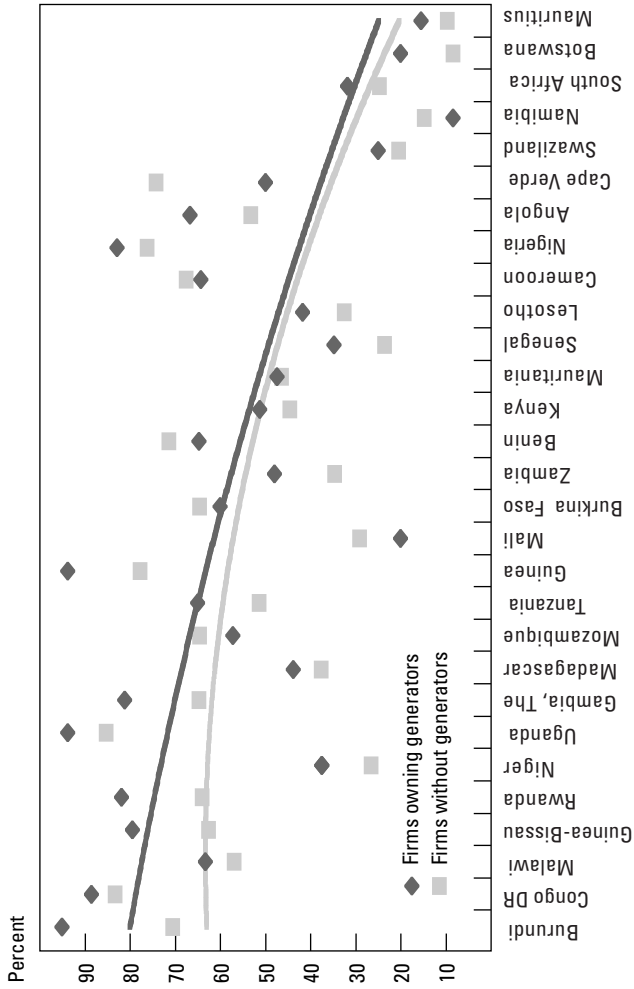
Source: World Bank Enterprise Surveys (www.enterprisesurveys.org).

High costs may also be associated with export structure. Eifert, Gelb, and Ramachandran (2008) considered forty-two low-income countries and found that price levels in those countries, where manufactures comprised a major share of exports, were typically below those predicted by the Balassa curve, while price levels in countries exporting fewer manufactured goods were above predicted levels. Repeating this analysis with new PPP data released at the end of 2007, we again find that to be the case: many countries in Africa are above the trend line in terms of their price levels relative to their levels of income. More recently, Johnson, Ostry, and Subramanian (2007), which found a similar result, argues that overvaluation of the exchange rate is problematic in several African countries.

While prices are indeed high, we do not believe that exchange rate misalignment is the main explanation. It is not unreasonable to think that African exchange rates continue to be modestly overvalued because of large-scale aid flows and resulting Dutch disease effects. It may be that overvaluation raises the prices of inputs by about 20 percent or so. But when African firms were asked about the prices that they paid for raw materials, the responses that they provided indicate that prices were *two to three times* what firms in China paid (Eifert, Gelb, and Ramachandran 2008). That cannot be due entirely to exchange rate overvaluation.

The data do show that in Africa, the price of capital goods is very high relative to the price of consumption goods. But they also show that there is a fair bit of variation across sectors and firms. Exchange rate overvaluation cannot generate price imbalances within countries between different sectors—the imbalances must be driven by other factors.

Finally, exchange rate overvaluation should affect the cost of domestic inputs relative to imported inputs rather than the total cost of inputs. That is, it should be relatively cheap for African firms to import capital and inputs from abroad and relatively expensive to use domestic inputs. For example, aid-related Dutch disease makes it difficult for a country to compete in tradable goods by lowering the relative price of imports and raising the relative price of exports. But we observe very high costs for imported inputs (including capital) and often low quality as well—neither of which seems to be explained very well by exchange rate overvaluation.