two

The Business Environment in Sub-Saharan Africa

We have had no significant capital injection into generation and transmission, from either the private or public sectors, for fifteen, maybe twenty years.

Lawrence Musaba, *Southern Africa Power Pool*[1]

How do firms see their business environment in Africa, and how does business climate affect productivity? The data presented in this chapter summarize key aspects of the business environment and the kinds of burdens that firms face in their day-to-day operations. As shown below, there are many similarities in the business environments across low-income countries in Africa. We begin by looking at firms' subjective perceptions of their operating environment and then move on to more objective measures of the business environment.

What Matters Most to African Businesses?

What factors are most constraining to firms in Africa? Do the worst constraints vary systematically by country or by groups of countries? One way to answer those questions is to ask the firms themselves. Ratings of the severity

1. Quoted in Wines (2007).

of constraints are provided by businesses' *perceptions* of constraints, as documented separately from the objective indicators in the Enterprise Survey data. The surveys identify seventeen common constraints. Each constraint is considered to be a perceived impediment if a firm rates it as "major" or "severe." The percentage of firms rating constraints in either of the two categories is considered to be the indicator of severity for a country.

Are these ratings really rankings? Experience suggests that they are a mix. Faced with an especially serious constraint, firms are less likely to emphasize other constraints, even if the latter are serious; to some degree the ranking will affect ratings. On the other hand, firms in countries that have a business climate that is relatively good are also less likely to rate obstacles as major or severe, suggesting that the responses are not simply rankings.

Figures 2-1, 2-2, and 2-3 illustrate the responses for constraints of several types across countries, ordered in terms of rising level of income per capita. In the least developed countries in our sample—Burundi, the Democratic Republic of Congo, Malawi, Guinea-Bissau, Rwanda, Niger, Uganda, the Gambia, and Madagascar—manufacturing firms are most likely to be concerned about the most fundamental constraints to doing business. Is there a reliable power supply? Can financing be secured? Is it possible to obtain serviced land? Can the firm plan ahead, or does macroeconomic instability make that impossible?

In some of these countries, individual constraints can be serious enough to be considered truly binding. For example, electricity tariffs in Uganda would have to increase to almost US$0.29 per kilowatt hour (kWh) if the consumer were to bear the full cost of electricity, including the expensive thermal generation used in attempts to plug capacity gaps. The cost of load shedding to the economy is significant, and expensive back-up generation has affected the competitiveness of industrial production. The cost of additional energy to address unmet demand has been estimated at about US$0.39 per kWh, excluding multiplier effects (Power Planning Associates 2007). Not surprisingly, 87 percent of Ugandan firms considered electricity a major or severe constraint in 2006. Even in South Africa, which has long enjoyed a power surplus, things started to change dramatically toward the end of the survey period, as several cities began to experience rolling blackouts. The losses associated with power outages, as estimated by the firms, can amount to more than 10 percent of sales in some countries. As discussed later, such losses tend to be reflected in a similar loss in overall productivity.

Access to finance remains problematic even after the power situation improves, and other constraints do not die away completely as the business

environment improves. In South Africa, for example, macroeconomic instability is rated a serious problem by many exporters concerned about the volatility of the rand.

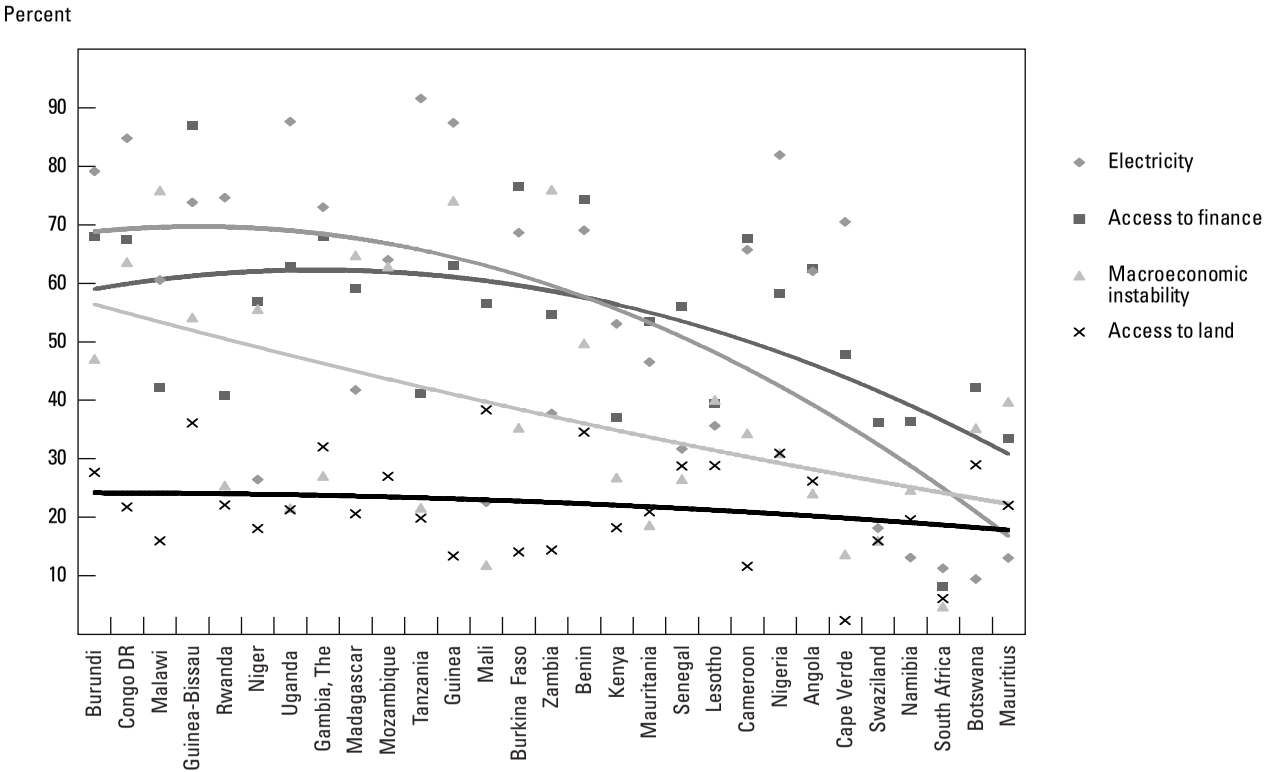
A second set of problems tends to become more serious than basic business constraints as countries move up the ladder toward lower-middle-income status. In countries such as Tanzania, Guinea, Mali, Burkina Faso, Zambia, Benin, Kenya, Mauritania, Senegal, Lesotho, and Cameroon, weak governance and low administrative and bureaucratic capacity are serious concerns, evident in the tax system (rates and especially tax administration), in government corruption, and in the control of crime and violence, which, as shown below, imposes high costs on many firms. Poor governance, of course, may also be responsible for some of the elemental constraints (for example, corruption can mean that investments in power generation do not go ahead or are not effectual), but firms may not experience the effects of poor governance directly. Some aspects of regulation will be less troubling to firms in environments in which governance is weak. Even if labor laws are stringent, the weak capacity of the state to enforce them means that they are less likely to be perceived as a serious problem, certainly relative to other factors.

A third set of factors tends to be most problematic for firms in the more developed, highest-income group, including Cape Verde, Swaziland, Namibia, South Africa, Botswana, and Mauritius. Figure 2-3 sketches their perceptions of labor policies and shortages of skilled labor. It is notable that in most countries, even those that are more sophisticated and have higher incomes, concern about the latter exceeds concern about the former. Why might labor regulation be seen as a more serious problem at higher levels of development? Unless higher income is due to exogenous factors such as large hydrocarbon deposits, institutions tend to become stronger and the state tends to become more capable at higher levels of income. Concerns about infrastructure, access to finance, corruption, and access to land decrease considerably; even concerns about crime fall relative to perceived difficulties in the low-middle-income category. But business is not the only constituency in such countries—labor also exercises its voice, and regulations need to balance the interests of employers and employees.[2]

These data on firms' perceptions suggest at least three areas for us to investigate in greater detail—infrastructure, governance and the regulatory

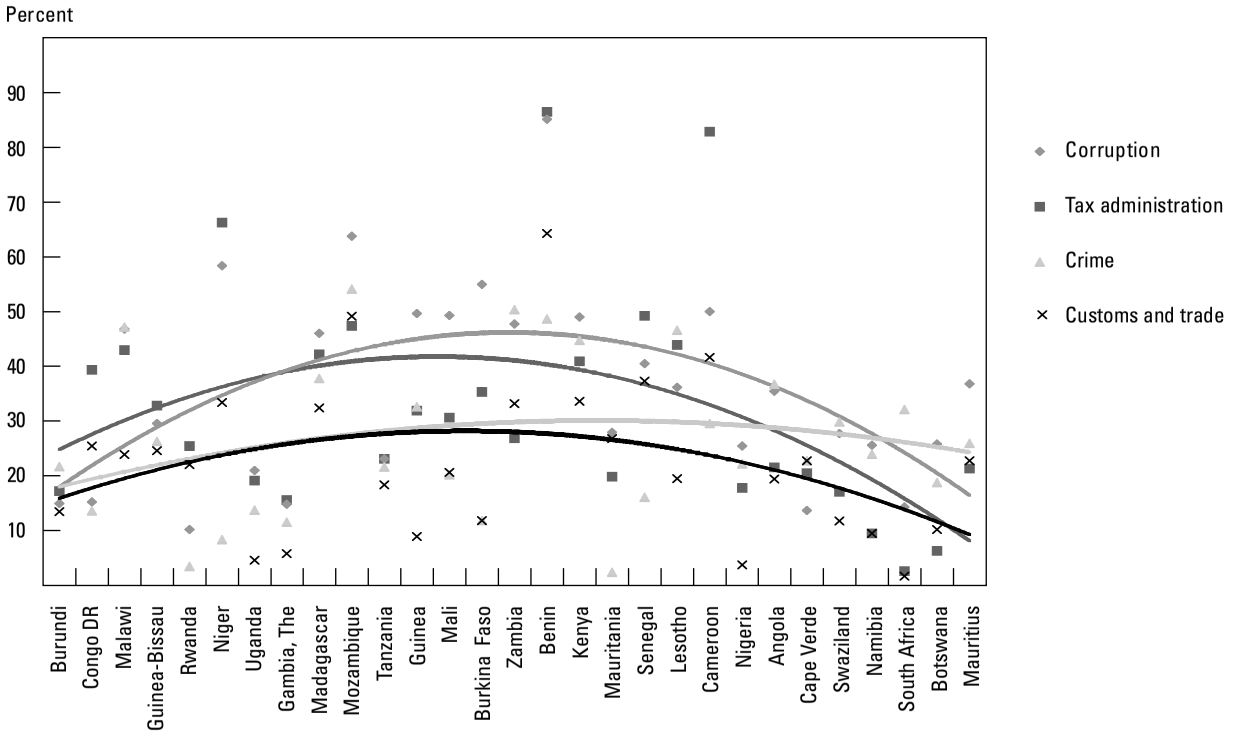
2. Given that the emphasis of this book is on low-income Africa, we do not focus on labor policy here, but we do explore these results in other work (Gelb and others 2007).

Figure 2-1. Firms Ranking an Elemental Constraint as Major or Severe, ordered by GDP per Capita[a]



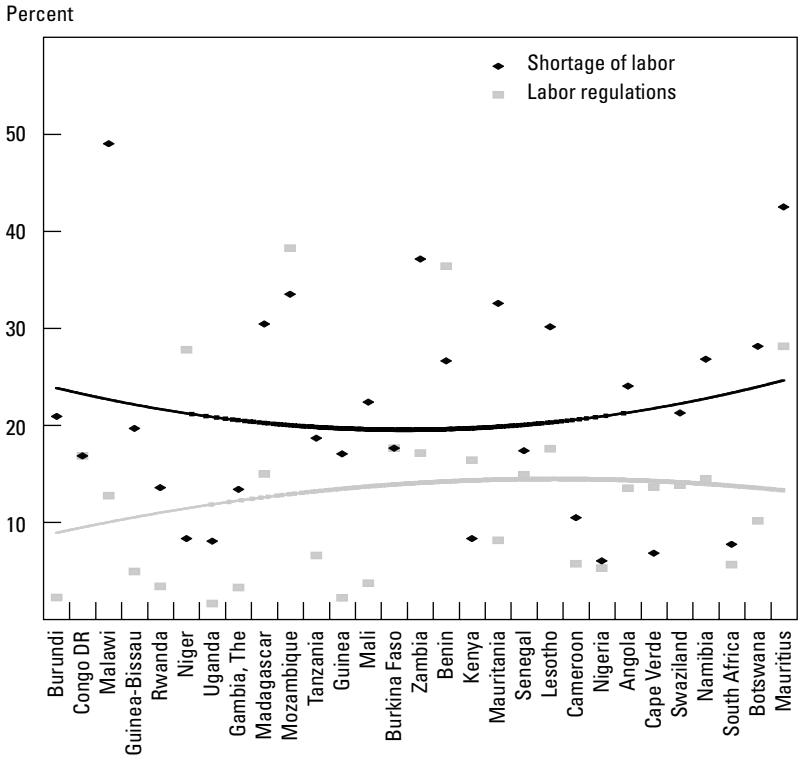
Source: World Bank Enterprise Surveys (www.enterprisesurveys.org).
a. The relative importance of elemental constraints tends to decline as income increases.

Figure 2-2. Firms Ranking a Governance Constraint as Major or Severe, ordered by GDP per Capita[a]



Source: World Bank Enterprise Surveys (www.enterprisesurveys.org).
a. Governance constraints tend to peak in the middle of the income range.

Figure 2-3. Firms Ranking a Labor Constraint as Major or Severe, ordered by GDP per Capita[a]



Source: World Bank Enterprise Surveys (www.enterprisesurveys.org).
a. Concerns about labor policy and worker skills tend to peak at the high end of the income range.

environment, and access to finance. We focus our analysis in these areas, using more objective measures provided by the Enterprise Surveys, to complement the data on perceptions described above. In the area of access to finance, we consider the situation of smaller, black-owned firms specifically. That is not to say that other areas of the business environment are not important for specific countries or even for the region as a whole. Our approach here is to look at what emerges as a key constraint from the point of view of the business sector to try to understand why the manufacturing sector in Africa is growing so slowly.

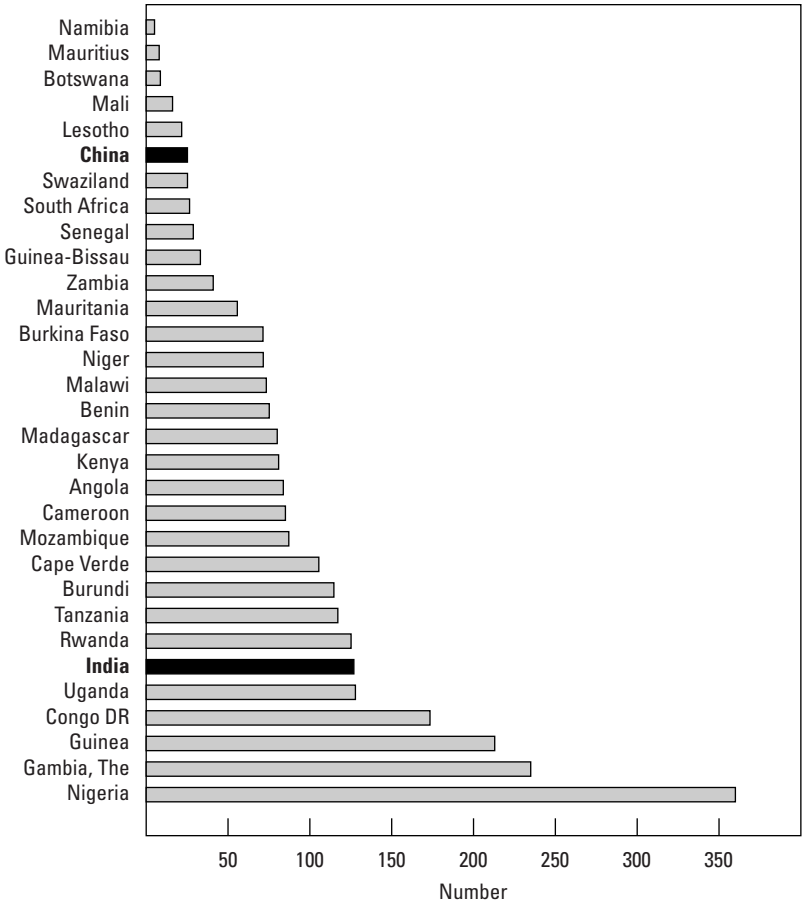
Infrastructure: Power and Transport

There is perhaps no greater burden on African firms than the lack of a reliable supply of electric power. Figure 2-4 shows the number of days on which a power outage was reported across countries. A handful of countries—Namibia, South Africa, Mauritius, and Botswana—reported outages on fewer than ten days in the year. Firms in six countries—Mali, Lesotho, Swaziland, Senegal, Guinea-Bissau, and Zambia—reported outages on between ten and fifty days. Firms located in the remaining countries experienced outages on more than fifty days in the year. The worst cases were the Gambia, Guinea, and the Democratic Republic of Congo (each with more than 150 days of outages); Uganda, Rwanda, and Tanzania were not far behind. It is fair to say that an outage occurs almost every working day in these countries, excluding weekends and holidays. It is worth noting that power outages are not just frequent but also lengthy. The average length of an outage in Africa is five hours; in some countries, the average length is more than twelve hours.

How do firms cope? Not very well and at high cost. In Cameroon, Rwanda, Guinea, Senegal, the Gambia, Angola, Guinea-Bissau, and Kenya, more than 50 percent of firms own generators to offset the load shedding and erratic supply provided by the public grid. Even in very low-income countries such as Madagascar, Niger, Benin, and Mauritania, about 20 to 30 percent of firms own generators. Kenya, where 70 percent of firms own generators, tops the list; electricity is now an even greater constraint than corruption, about which Kenyan firms have long complained. The ability of enterprises to offset power fluctuations varies greatly by enterprise size. Figure 2-5 shows that for the most part, only larger firms (those with 100 or more employees) are able to cope with Africa's power crisis. In Zambia, for example, large enterprises are twenty times more likely to own a generator than small and medium-size enterprises (SMEs). In Mauritania, 100 percent of large firms own generators, as they do in Niger, the Gambia, and Cape Verde. That figure is anywhere from two and a half to five times the rate of generator ownership among SMEs in these countries.

Perhaps no country in Africa suffers more from power outages than Nigeria. Data from surveys and other sources show that almost 40 percent of electricity is privately provided through generators. In 2005, researchers in Nigeria found that the cost of electricity from generators was three times the cost of electricity from the public grid—5 versus 15 naira per kWh (Adenikinju 2005). Almost all firms owned generators, of varying quality and vintage,

Figure 2-4. Number of Days on which Power Outages Occurred

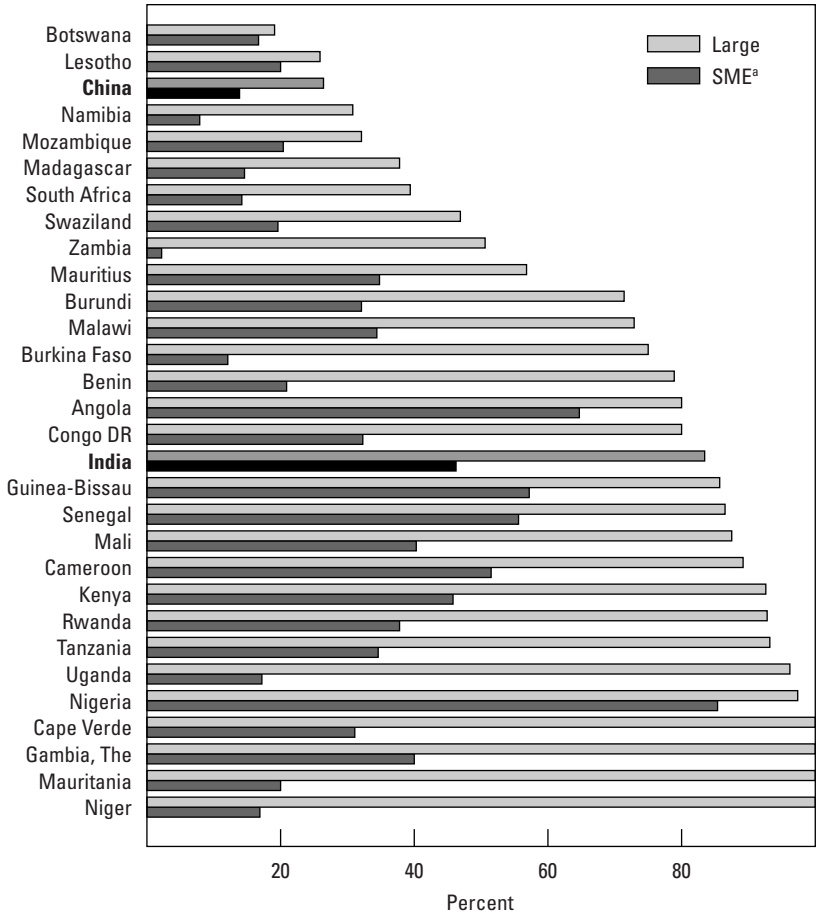


Source: World Bank Enterprise Surveys (www.enterprisesurveys.org).

in an attempt to offset the load shedding and erratic supply provided by the Nigerian Electric Power Authority (NEPA—often referred to by the citizenry as "No Electricity Presently Available"). Fuel is sometimes hard to find in this oil-exporting country, and maintenance of generator equipment imposes further costs on firms (World Bank 2001).

Frequent outages impose a substantial loss in terms of sales (figure 2-6). For those countries in which a question about the impact of outages was

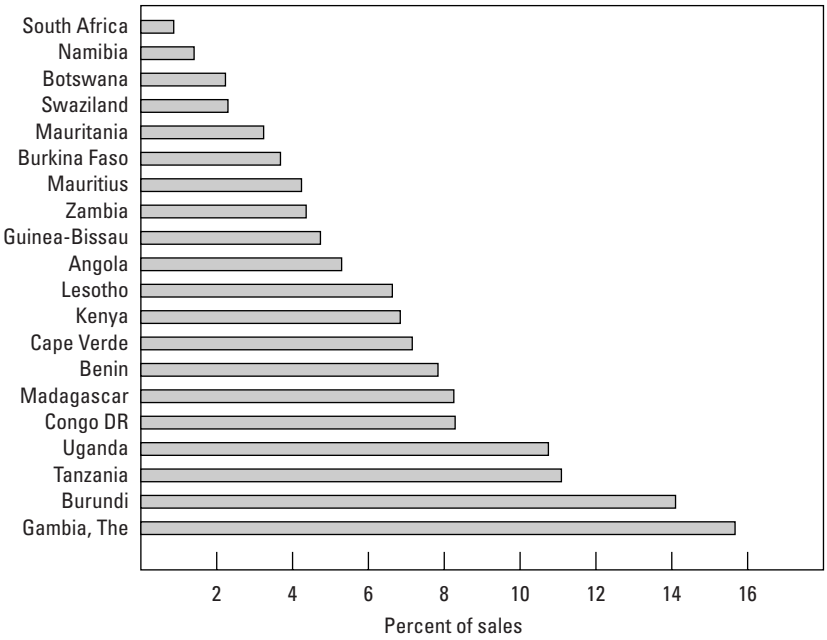
Figure 2-5. Firms Owning Generators



Source: World Bank Enterprise Surveys (www.enterprisesurveys.org).
a. SME = small and medium-size enterprises (less than 100 workers).

asked, losses were estimated to be up to one-third of the wage bill. Moreover, the percentage of sales losses is mirrored in productivity losses. Energy as a share of total costs also is high for African firms (figure 2-7). Firms in Mozambique, Benin, Burkina Faso, Senegal, the Gambia, Madagascar, and Niger spend more than 10 percent of their total costs on energy. In China, the cost of energy is only 3 percent of total costs. As mentioned previously, much of

Figure 2-6. Estimated Sales Lost Due to Power Outages

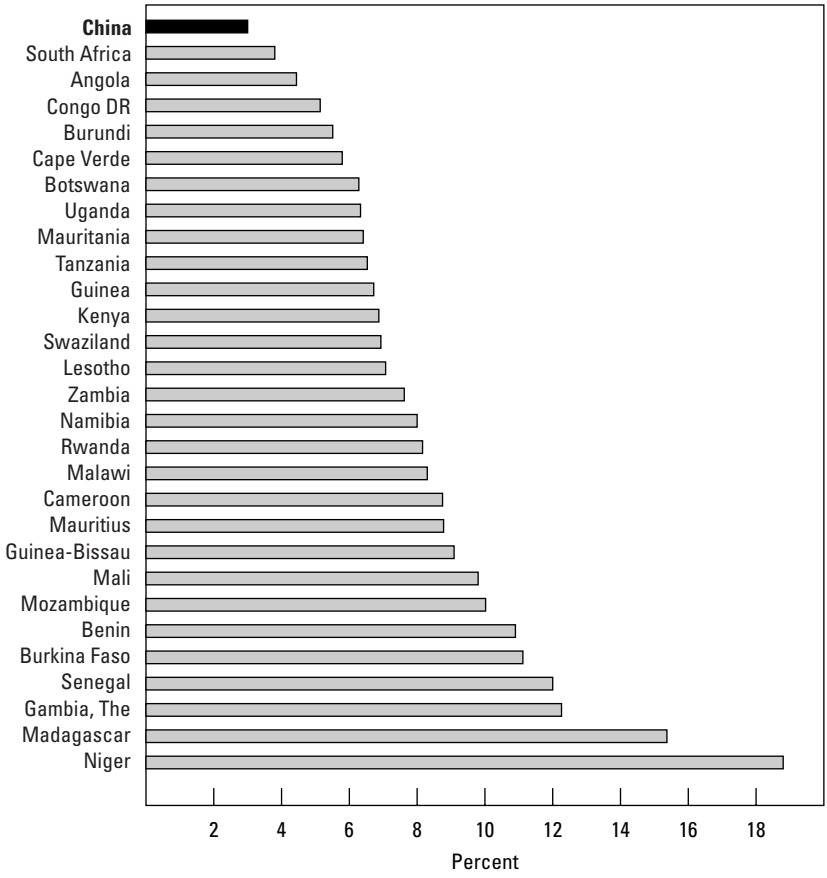


Source: World Bank Enterprise Surveys (www.enterprisesurveys.org).

South Africa currently experiences rolling blackouts. Additional data on the cost of energy for selected countries (not reported here) show that the median number of hours of each outage is anywhere from two hours a day to almost nineteen hours a day across the continent!

Given such data, it is not surprising that the responses of businesses to the question regarding their *most* severe constraint overwhelmingly indicate that lack of a reliable supply of electrical power is the key constraint in much of sub-Saharan Africa. Almost half of all businesses surveyed indicated that it was their worst problem. In late July 2007, twenty-five of the forty-four countries in sub-Saharan Africa were experiencing crippling power shortages (Wines 2007). Currently, several major cities experience daily blackouts. More recently, power outages of several hours a day led opposition parties in South Africa to call for the termination of power supply arrangements with other countries, and outraged commuters in Pretoria set fire to trains in early

Figure 2-7. Energy as a Share of Total Cost



Source: World Bank Enterprise Surveys (www.enterprisesurveys.org).

January 2008 when the power went out for several hours and shut down parts of the transit system (Shaw 2008).

Transport is almost as serious a problem as power. The limited availability and high cost of physical infrastructure in sub-Saharan Africa—including roads, railways, and air transport—also put a brake on private sector competitiveness. The low-income economies of sub-Saharan Africa lag far behind those in developing countries in other parts of the world in terms of paved

roads and modern freight and passenger transport systems. The lack of adequate transportation has a direct impact on the level of business activity because it lowers productivity and limits the entry of new firms. Poor transport affects firms in two ways—poor-quality roads cause loss of goods and trading opportunities, while delays and losses in transit, including those due to roadblocks, relate to poor governance. Firms in Africa either supply only fragmented regional markets or restrict themselves to market opportunities in which profits are high enough to cover high transport costs.

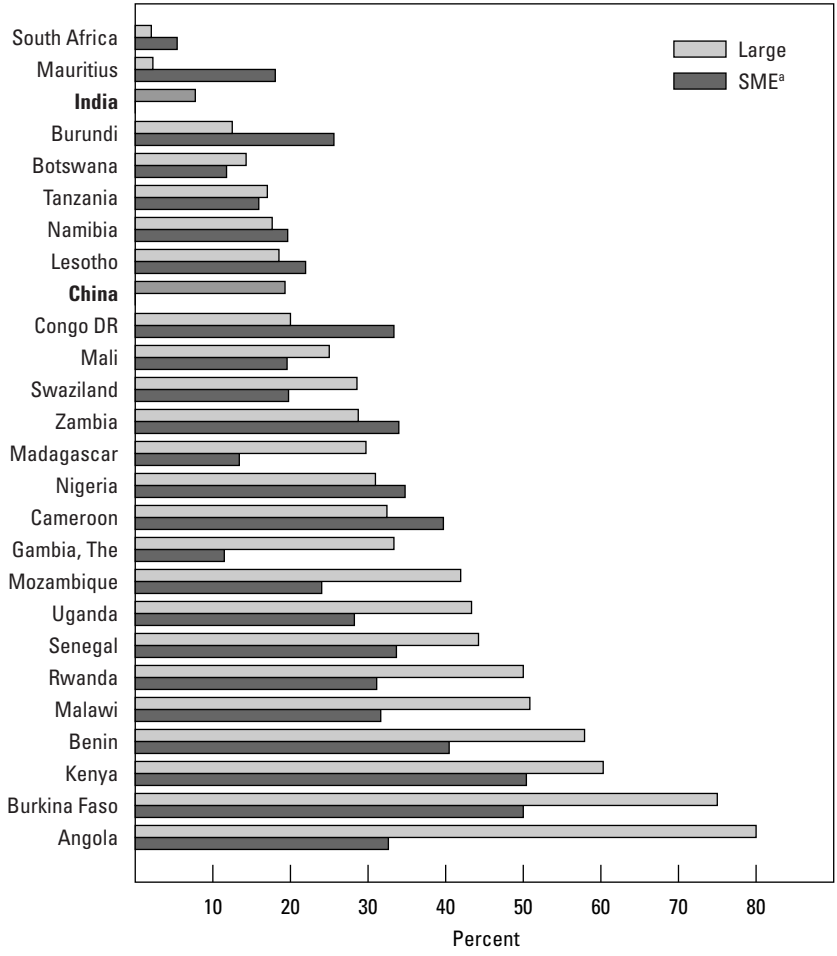
Transport bottlenecks typically are a long-term problem, unlike the power supply, which can improve or deteriorate rapidly. Bad roads and limited transnational links usually are well known to the private sector, and they lead to self-selection of markets and activities. This geographical sparseness of economic activity, as described in the previous chapter, means that production technologies are likely to be exogenously transport-intensive.

Keeping these problems in mind, we look at the ranking of transport bottlenecks by firms that are in the market. In the Enterprise Surveys, firms were asked whether transport problems present an obstacle to firm operation and growth, and the rankings show large differences across countries that are correlated with overall level of economic development and infrastructure. In middle-income countries such as Botswana, South Africa, Mauritius, Swaziland, and Namibia, less that 20 percent of firms complain about transport problems, whereas in Kenya, 53 percent of firms consider transport to be a major obstacle. In very-low-income countries in Africa, the camels-hippo effect comes in—the vast majority of firms sell their goods only in the local market and do not even consider selling their goods anywhere else. Survey results therefore *underestimate* the problem of transport bottlenecks.

Figure 2-8 shows that transport also is a very real constraint for larger businesses (those of 100 or more employees). In most countries large firms are more likely to complain about transport than smaller businesses. They account for a large share of manufacturing employment and industrial value added, and they are most likely to expand beyond local markets. Yet, in a region with few navigable waterways, in all but the richest countries in our sample, less than half of inputs were delivered by road. Many firms rely on costly air shipments to meet their needs. A manager of a large cement manufacturing company commented that he occasionally airlifts cement across countries—probably an unheard of method of delivery in any other part of the world.

Finally, firms were asked about losses due to transport failures—the percentage of consignment value lost due to theft or breakage in transit. These

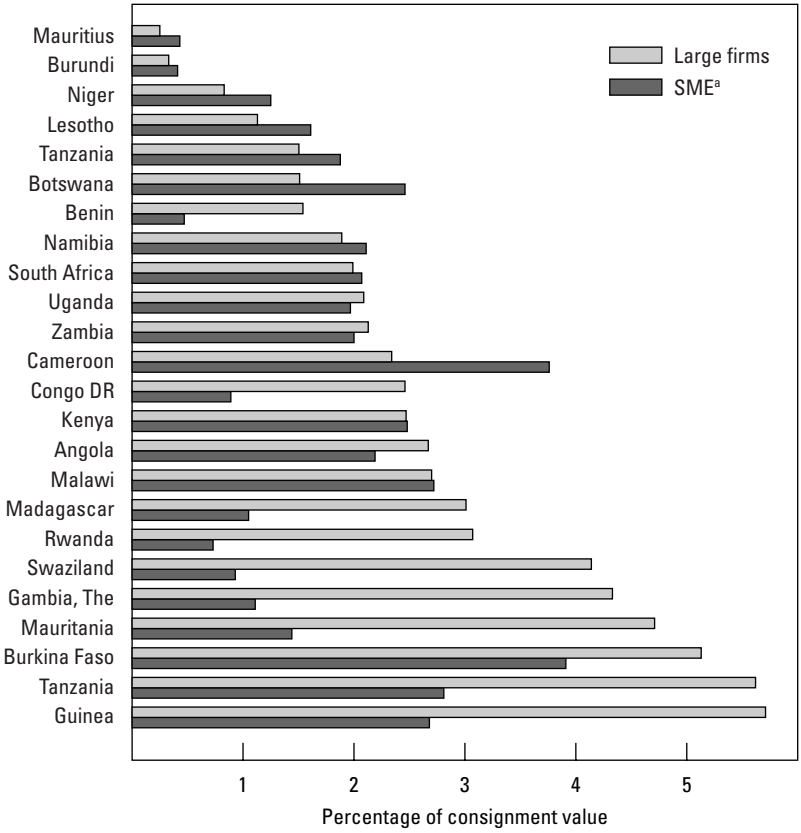
Figure 2-8. Businesses Ranking Transport as a Major or Severe Obstacle, Disaggregated by Size



Source: World Bank Enterprise Surveys (www.enterprisesurveys.org).
a. SME = small and medium-size enterprises (less than 100 workers).

losses are presented in figure 2-9. Firms in the low-income economies of sub-Saharan Africa suffer the most, and larger firms suffer greater losses than smaller ones. The losses incurred are much higher than those in China or India, where the average loss for large firms is just 1.3 percent of consignment value. Of course, lack of roads and power does not affect just manufacturing

Figure 2-9. Estimated Losses from Breakage, Theft, and Delays in Transport



Source: World Bank Enterprise Surveys (www.enterprisesurveys.org).
a. SME = small and medium-size enterprises (less than 100 workers).

but agriculture as well—the lack of infrastructure has meant that farmers often are unable to increase value added through processing or to transport their goods overland to domestic markets or international ports.

The Regulatory Environment

The regulatory burden on African firms has been the focus of much attention in recent years, due at least in part to the World Bank's *Doing Business* reports. According to *Doing Business* data, African firms suffer some of the most bur-

Table 2-1. Days to Get Utility Connections and Permits

Country	*Telephone*	*Electricity*	*Water*	*Construction permit*	*Import license*
Angola	265.1	79.1	81.3	50.8	20.5
Benin	159.7	70.4	62.0	125.3	38.2
Botswana	25.8	32.7	14.1	79.5	26.5
Burkina Faso	44.8	22.3	24.0	45.0	2.1
Burundi	34.6	51.8	30.0	152.3	6.6
Cameroon	73.1	62.9	84.2	109.4	17.2
Congo DR	16.9	47.6	21.9	29.0	11.7
Gambia, The	15.8	76.5	11.1	47.7	7.4
Guinea	115.4	30.9	22.2	36.3	13.9
Guinea-Bissau	25.9	25.6	80.0	38.1	27.5
Kenya	34.2	52.1	25.9	34.0	13.4
Lesotho	101.8	43.3	57.3	141.1	7.3
Madagascar	60.4	47.3	n/a	n/a	17.9
Malawi	100.7	100.5	71.6	72.6	26.2
Mali	70.6	35.3	32.4	69.0	32.7
Mauritania	12.0	20.9	27.8	22.2	1.6
Mauritius	25.3	22.3	27.5	113.0	8.5
Mozambique	29.2	n/a	n/a	n/a	n/a
Namibia	8.5	13.2	18.8	11.5	8.4
Niger	24.7	40.6	116.8	4.8	13.1
Nigeria	8.3	8.2	12.5	12.8	25.4
Rwanda	n/a	n/a	25.4	5.0	6.1
South Africa	6.5	4.6	8.3	8.0	5.9
Senegal	17.0	13.2	9.4	57.4	18.2
Swaziland	20.5	11.7	n/a	29.9	9.2
Tanzania	22.6	52.8	28.0	47.9	16.8
Uganda	15.1	41.4	22.7	15.6	18.9
Zambia	88.5	184.1	26.8	34.3	11.4
China	6.8	18.5	n/a	n/a	n/a
India	12.0	26.1	17.7	n/a	n/a

Source: World Bank Enterprise Surveys (www.enterprisesurveys.org).

densome regulations in the world. In the "ease of doing business" rankings of 178 countries provided in these reports, only two African countries (Mauritius and South Africa) are in the top fifty; another two countries—Kenya and Ghana—are in the top 100. The remaining countries are mostly at the bottom (World Bank 2001–07). Despite various reform efforts and decades of technical assistance, government responsiveness and delivery of basic services remain problematic in many countries. Regulatory weaknesses exacerbate the problems caused by a lack of physical infrastructure.

The number of days to get other utility connections is shown in table 2-1. Obtaining water, telephone, and electric services is not easy—apart from a handful of countries, firms in much of Africa must wait several days and

Table 2-2. Trade Indicators

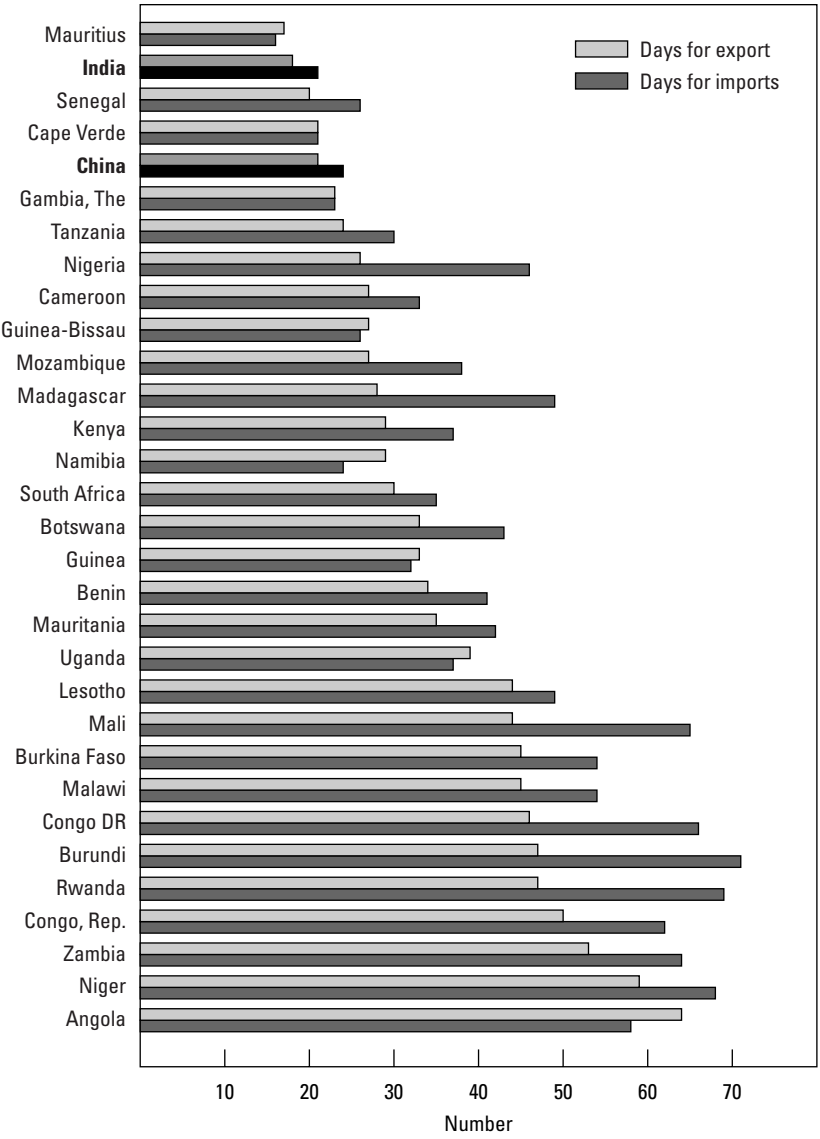
Country	*Cost to export (US$ per container)*	*Cost to import (US$ per container)*	*Trade integration (trade as percent of GDP)*
Angola	1850	2325	97.2
Benin	1167	1202	48.1
Botswana	2328	2595	87.6
Burkina Faso	2096	3522	32.5
Burundi	2147	3705	63.6
Cameroon	907	1529	50.3
Cape Verde	1024	1024	110.2
Congo, Dem. Rep.	2307	2183	92.8
Congo, Rep.	2201	2201	122.6
Eritrea	1331	1581	56.4
Ethiopia	1617	2793	50.0
Gabon	1510	1600	94.2
Gambia, The	809	869	95.1
Ghana	895	895	105.5
Guinea	570	995	75.6
Guinea-Bissau	1445	1749	80.9
Kenya	1955	1995	55.9
Lesotho	1188	1210	158.1
Madagascar	1182	1282	66.3
Malawi	1623	2500	70.8
Mali	1752	2680	66.6
Mauritania	1360	1363	125.4
Mauritius	728	673	131.1
Mozambique	1155	1185	95.7
Namibia	1539	1550	102.4
Niger	2945	2946	46.8
Nigeria	1026	1047	76.4
Rwanda	2975	4970	39.2
Senegal	828	1720	77.9
South Africa	1087	1195	67.1
Tanzania	1212	1425	60.8
Uganda	2940	2990	47.1
Zambia	2098	2840	74.6
China	390	430	75.6
India	820	910	45.2
Indonesia	623	667	56.7
United States	1160	960	28.6

Source: World Trade Indicators 2008 (www.worldbank.org/wti2008).

sometimes months to get connections. Construction permits and import licenses also are fairly hard to come by. China does very well in comparison with almost every African country in the table.

Table 2-2 and figure 2-10 show that the cost in terms of money and time of importing and exporting goods in Africa is high compared with costs in India and China. The cost of exporting or importing a container of goods is

Figure 2-10. Days to Comply with Trade-Related Regulations



Source: World Bank (2001–07).

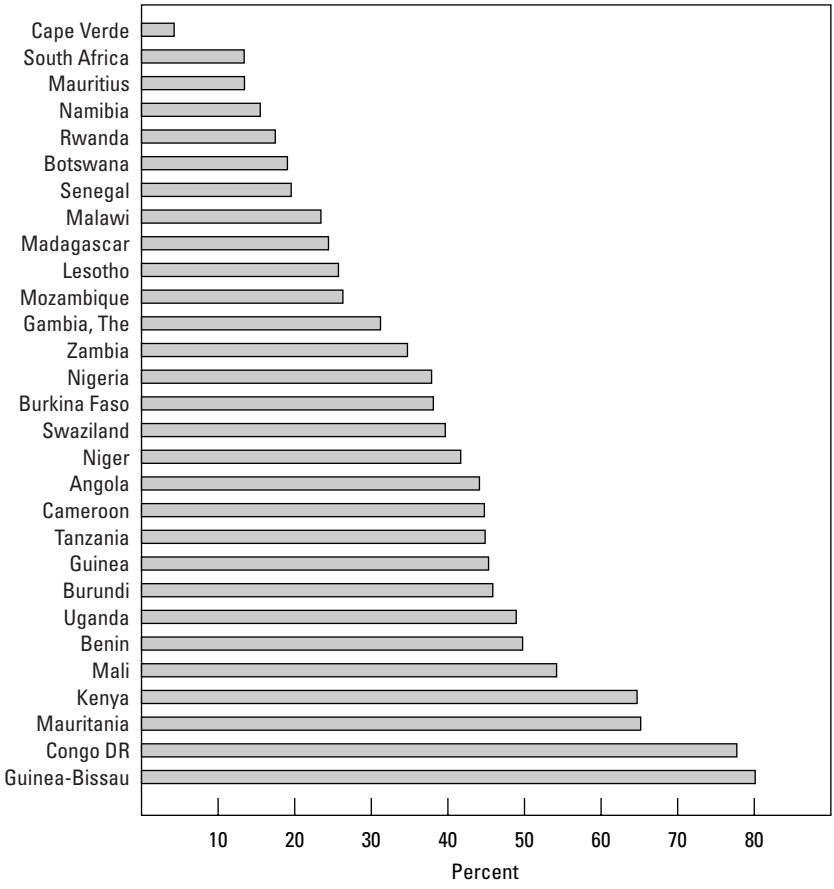
as much as four or five times the cost in China and two or three times that in India. In much of sub-Saharan Africa, it takes weeks to comply with trade-related regulations in order to ship goods in and out of ports. If the goods being exported are perishable or are otherwise of a time-sensitive nature, such shipping times are a great burden to export businesses; a useful rule of thumb is that for time-sensitive products, a one-day delay is equivalent to a 1 percent drop in sales price. That does not compare well with shipping times in China, where it takes only a few days to comply with regulations to turn goods around at port and the process is nowhere near as expensive as it is in Africa. India's times are good but financial costs are high; however, it is worth remembering that India has a far larger economy and its share of trade in GDP is far lower than the share in many countries in Africa.

The survey data also show that managers spend between 5 and 10 percent of their time dealing with regulators. However, in about nine countries, managers spend well over that amount of time; in Lesotho and Madagascar, for example, managers spend almost 20 percent of their time dealing with the government.

Firms in most African countries also need to pay bribes to get things done, whether to obtain a utility connection, a license, or an evaluation from an inspector that allows the firm to continue operations (figure 2-11). Due to the sensitive nature of the questions and the fact that firms often fear retaliation, they were not asked whether they paid bribes but rather whether bribes "are necessary in their industry." The responses were used to infer what percentage of firms paid bribes. Data from a small number of countries in our sample—South Africa, Cape Verde, Namibia, Mauritius, Rwanda, Botswana, and Senegal—show that not more than 20 percent of firms paid bribes. With the exception of Rwanda, they are some of the higher-income countries in our sample. Between 20 and 50 percent of firms in a large group of countries indicated that bribes were necessary. In our final group—Mali, Kenya, Mauritania, Democratic Republic of Congo, and Guinea-Bissau—the vast majority of firms appear to pay bribes. The percentage of sales estimated to be lost in paying bribes also varies across countries—from much less than 1 percent in the higher-income countries to well over 3 percent in several other countries in our sample. It is useful to think about bribes as an additional burden to firms, besides the high cost of energy, other indirect costs, and energy-related and transport losses.

Since 2001, the World Bank's *Doing Business* database has provided information on the cost of setting up a business. The data are not based on surveys but on the costs faced by a "median firm" operating under the laws of the country in which it is located. Table 2-3 summarizes the cost and the days

Figure 2-11. Firms Paying Bribes



Source: World Bank Enterprise Surveys (www.enterprisesurveys.org).

required to register a firm in the twenty-seven African countries included in this analysis and gives the global ranking of each. The *Doing Business* data show that the cost of starting a business is generally very high. Of the 178 countries ranked in the ease of doing business index, only one African country (Mauritius) is in the top fifty and only a few more are in the top 100. Most African countries are ranked at or near the bottom of the list. While India does not do a whole lot better, China is ranked more highly than almost all the African countries on the list.

Table 2-3. The Time and Cost of Starting a Business

		Starting a business				
Country	*Ease of doing business rank*	*Rank*	*Procedures (number)*	*Time (days)*	*Cost (percentage of income per capita)*	*Minimum capital (percentage of income per capita)*
Angola	167	173	12	119	343.7	50.5
Benin	151	137	7	31	195	354.2
Botswana	51	99	11	108	9.9	0
Burkina Faso	161	105	6	18	82.1	415.7
Burundi	174	124	11	43	251	0
Cameroon	154	160	13	37	129.2	177.1
Cape Verde	132	156	12	52	40.1	53.4
Congo DR	178	146	13	155	487.2	0
Gambia, The	131	94	9	32	279	0
Guinea	166	171	13	41	138.3	466.5
Guinea-Bissau	176	178	17	233	255.5	1,006.6
Kenya	72	112	12	44	46.1	0
Lesotho	124	126	8	73	37.4	14.3
Madagascar	149	61	5	7	22.7	333.4
Malawi	127	108	10	37	188.7	0
Mali	158	149	11	26	132.1	434.6
Mauritania	157	167	11	65	56.2	503.1
Mauritius	27	8	6	7	5.3	0
Mozambique	134	125	10	29	21.6	115.8
Namibia	43	101	10	99	22.3	0
Niger	169	153	11	23	174.8	735.6
Rwanda	150	63	9	16	171.5	0
Senegal	162	159	10	58	107	255
South Africa	35	53	8	31	7.1	0
Swaziland	95	142	13	61	38.7	0.6
Tanzania	130	95	12	29	47.1	0
Uganda	118	114	18	28	92	0
Zambia	116	82	6	33	30.5	2.2
China	83	135	13	35	8.4	190.2
India	120	111	13	33	74.6	0

Source: World Bank (2001–07).

What are some of the factors underlying those numbers? It may well be that weak governance has led to firms that are exogenously intensive in their use of bribes, informal payments, and private security costs. In an analysis of the political economy of reform, Emery (2003) notes that the "overall complexity [of doing business] places a premium on means of circumventing, or speeding up the process, which creates a flourishing environment for corruption." Emery argues that most firms in Africa are operating outside the law in at least one or more respects and are vulnerable to government inspectors, no matter how minor the deviance. The survival of a business is conse-

quently heavily dependent on a personal relationship with a minister or other high government official that often is difficult to document or quantify. Such relationships are crucial to firms that need to anticipate ad hoc policy or regulatory changes. Emery concludes that "this vulnerability, combined with the arbitrary nature of enforcement arising from poor governance means that firms can be closed down or worse for operating in exactly the same way as their neighbors, their competitors, or their clients and suppliers."

Dismantling some of the key controls that governments continue to maintain is consequently difficult. Sources of both patronage and control can be used to penalize firms that represent a political threat. While the situation is changing, sometimes quite quickly, some governments still seem to fear a private sector that generates wealth independent of government control and makes its own, unfettered decisions. Reforms that target individual regulations are therefore less likely to succeed over the long term.

Finally, a word on how Africa's business environment compares with that of China and India. From the data presented above, it can be seen that the business environments in these two manufacturing giants are well ahead of Africa's in many respects. In many areas, China's business environment also appears to be better than that of India and well ahead of that in almost every African country, including the middle-income countries in the sample. The differences between Africa and India are less clear. Some aspects of India's regulatory costs and electricity problems seem to be comparable with Africa's, but it is useful to remember that India also lags China quite substantially in the manufacturing sector. Research by Lall and Mengistae shows that a significant part of India's productivity lag can be explained by the severity of its power shortages (Lall and Mengistae 2005a and 2005b). But certain costs are less critical for a large economy like India, especially those related to trade, and in a number of important areas, including security, it rates substantially better than Africa.

So why does Africa lag behind? To address that question, we turn to an analysis of business performance and market structure, which is followed by a discussion of political economy factors that determine the supply of entrepreneurs. While high costs themselves might not be a sufficient explanation for Africa's performance, the interaction of the high-cost business environment with political economy factors may help explain why growth has been so slow.

Is Access to Credit a Problem?

As noted, many African firms complain about lack of access to credit. There is a large literature that looks in depth at that issue in sub-Saharan Africa

(Ayyagari, Demirguc-Kunt, and Maksimovic 2006; Bigsten and others 2000; Raturi and Swamy 1999). The reasons for lack of access include the lack of depth in the formal banking sector (which limits access for all businesses), crowding out due to public sector debt (which also limits financial flows to the private sector), selective lending to establishments with connections to the banking authorities, and high collateral requirements and costs of capital that ration out all but the most profitable businesses. Others have argued that indigenous firms are at a special disadvantage—they are rationed out by the banking sector due to their lack of credit history. Supplier credit also is constrained for this group because of lack of information networks and reputation channels.[3] It is clear that firms rank access to finance as a very serious concern in many countries in Africa.

Figures 2-12 and 2-13 show the sources of finance used by firms in the entire sample, as well as the percentage whose accounts were audited. We see that most firms used internal sources of financing for their operations, which implies that access to finance might be problematic. But we also see that in many countries, a significant share of firms do not have their accounts audited, making it difficult for lenders to assess their creditworthiness.[4] Our data also show that small firms were far more likely to complain than larger firms. That raises the question of whether firms are truly credit constrained or whether it simply is not possible to assess their creditworthiness.

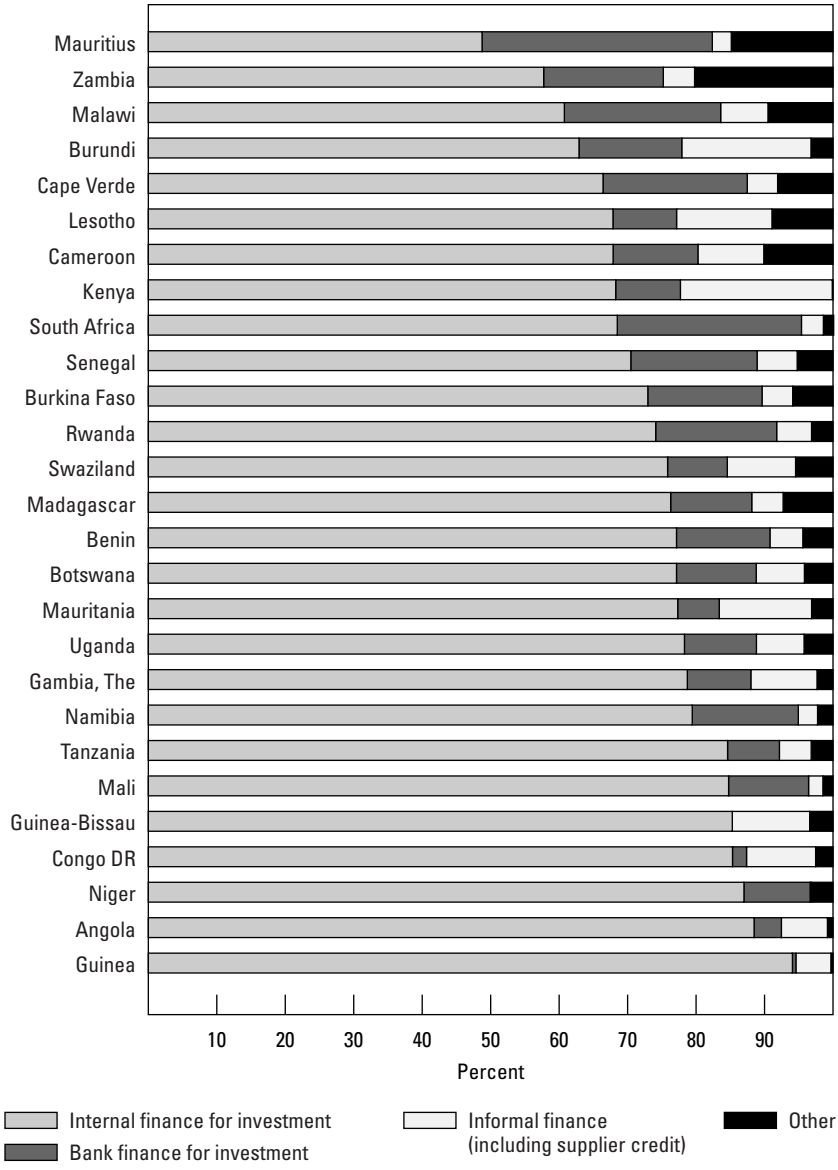
Learning Channels

Finally, a word on learning channels. In some surveys, firm owners are asked whether their firm has a website, whether it is ISO certified, and whether it offers a training program. We refer to these variables as "learning channels" because they likely represent means by which the firm can improve its productivity. Figure 2-14 shows that these variables generally are correlated with

3. The World Bank recently presented a comprehensive action plan for financial sector development in Africa in a report titled *Making Finance Work for Africa* (Honohan and Beck 2006). In it, the authors argued that the financial sector agenda needs to take a two-pronged approach—first, by focusing on the formal financial sector to improve access to finance for larger firms as well as for the housing and infrastructure sectors; second, by improving the access of low-income households and small entrepreneurs through microfinance and other mechanisms. Building on the momentum generated by the report, the G-8 summit in Heiligendamm, Germany, adopted the key message of the report in 2007.

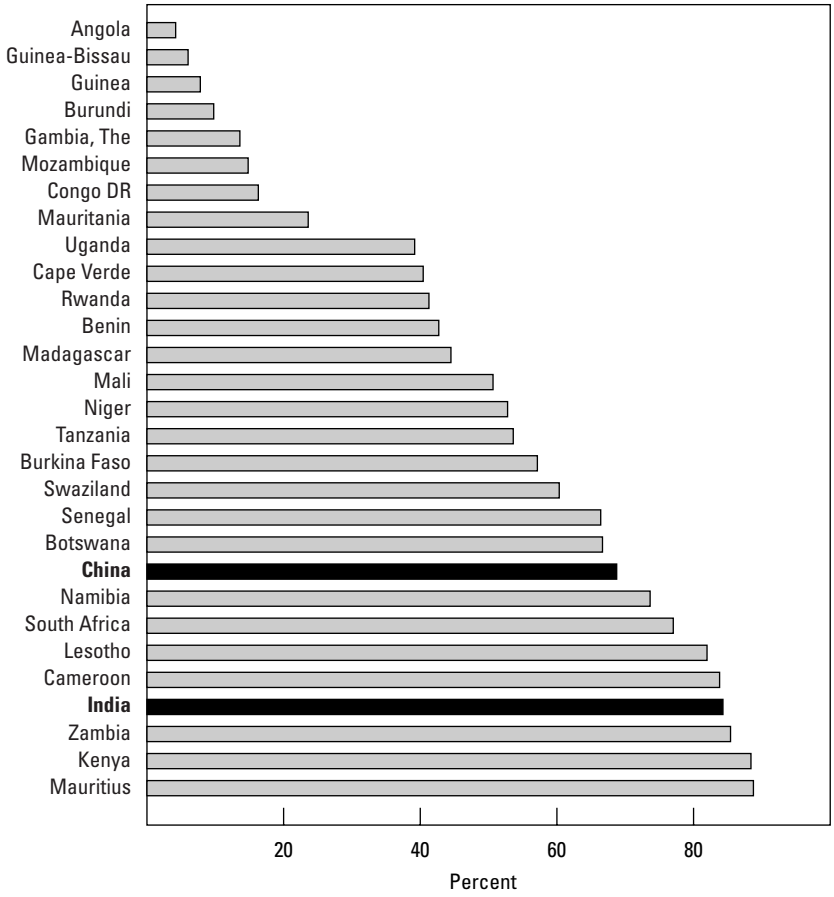
4. The data for China and India, while not strictly comparable, reveal that firms in these countries do not use bank financing very much either. Only 20 percent of surveyed Chinese firms reported having a bank loan; the number was 30 percent for Indian firms. Interestingly, Indian firms reported heavy reliance on internal sources of finance (50 percent said that they used this type of financing) while 50 percent of Chinese firms reported the use of informal sources of finance.

Figure 2-12. Sources of Finance



Source: World Bank Enterprise Surveys (www.enterprisesurveys.org).

Figure 2-13. Firms with Audited Accounts



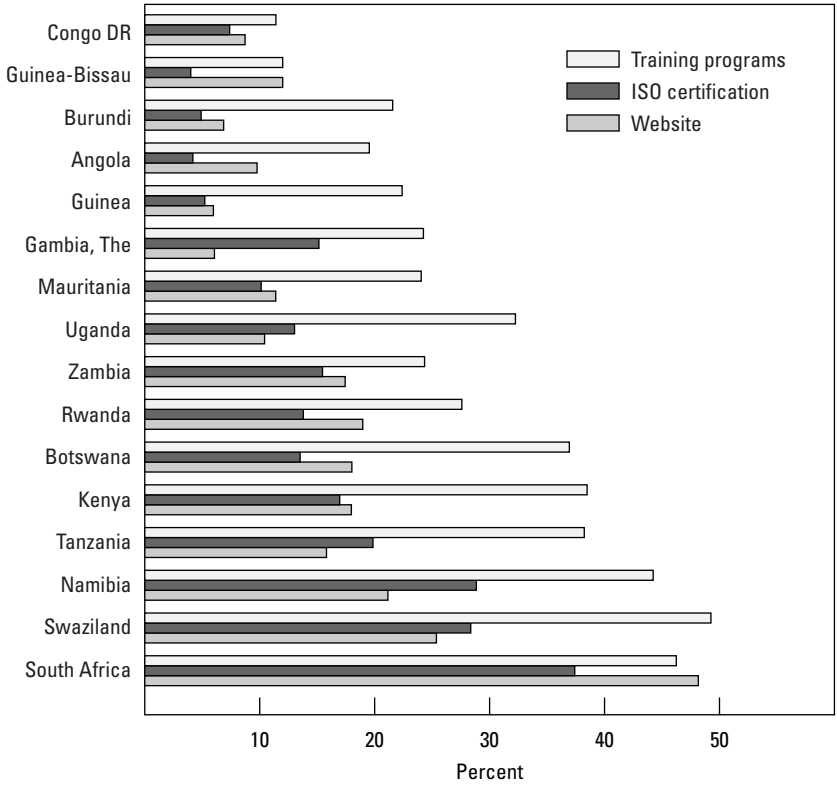
Source: World Bank Enterprise Surveys (www.enterprisesurveys.org).

income—firms in the richer countries in our survey were more likely to have a website or to be ISO certified.

The Performance of African Firms

How productive are African firms? How is their productivity affected by the adverse business environment? There is a considerable amount of research in this area that suggests that the productivity of firms in much of low-income

Figure 2-14. Share of Firms in Sample with Learning Channels



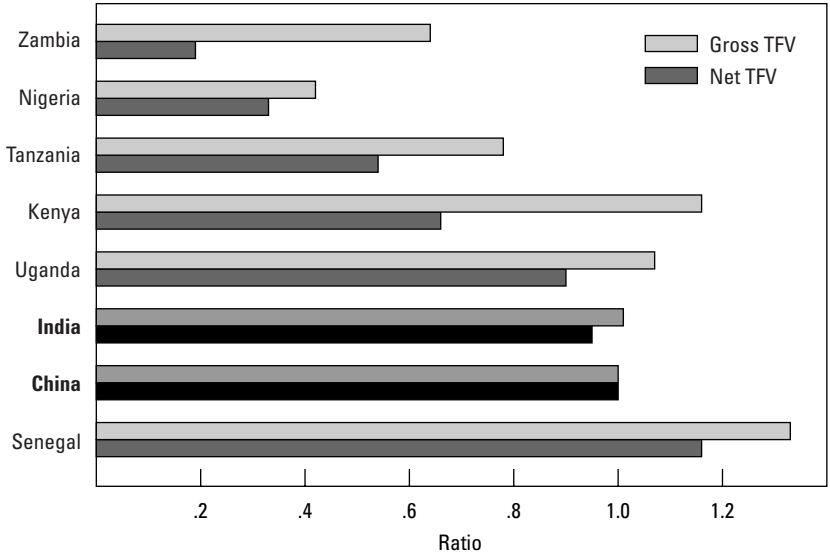
Source: World Bank Enterprise Surveys (www.enterprisesurveys.org).

Africa is low compared with that of firms elsewhere. The reasons given range from the lack of skilled labor to macroeconomic instability, exchange rate fluctuations, adverse business climate, and lack of institutional development (Guasch and Escribano 2005; Fafchamps 2004; Collier and Gunning 1997; Biggs, Srivastava, and Shah 1995; Soderbom and Teal 2003; Mazumdar and Mazaheri 2003; Dollar, Hallward-Driemeier, and Mengistae 2005).

Impact of the Business Environment

In earlier work we examined the impact on firm performance of high indirect costs rather than shortages, focusing on energy costs in particular. That analysis showed that the lack of good infrastructure and the overall fragility

Figure 2-15. Impact of the Business Environment: Average Gross versus Net Total Factor Value, Indexed Relative to China

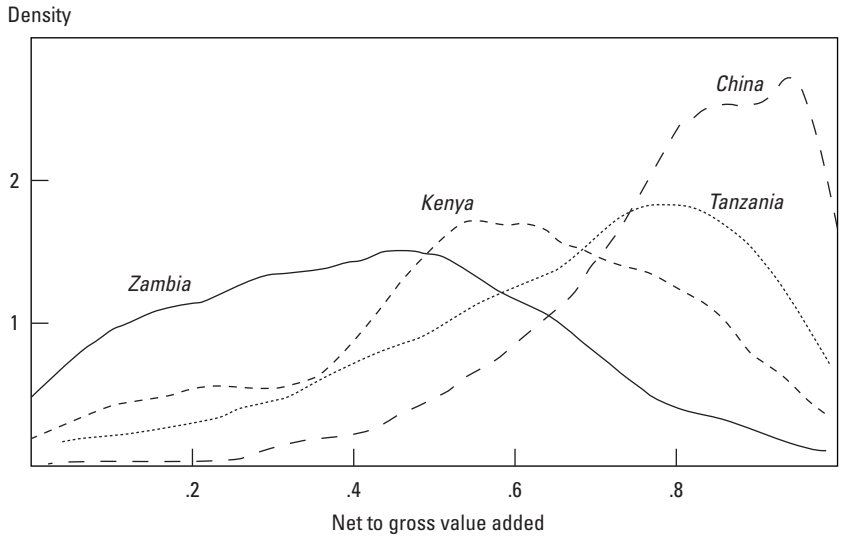


Source: Eifert, Gelb, and Ramachandran (2008).

of the business environment reduced the overall productivity of African firms vis-à-vis firms in other parts of the world (Eifert, Gelb, and Ramachandran 2008). The results are summarized in figure 2-15. "Gross" total factor value added is defined as sales minus the cost of raw materials, and "net" total factor value added is defined as sales minus the sum of raw materials and indirect costs—for example, for power, transport, licensing fees, and bribes. African firms look substantially less productive when indirect costs are accounted for—in some cases as much as 40 percent less productive.

The intuition behind this result is fairly straightforward. If a firm incurs very high costs due to the need to pay for security services and costly, unreliable power or to transport its goods long distances on poor-quality roads, those costs are not reflected in a standard performance metric generated from regressions of sales on labor, capital, and raw materials. But it will show up in augmented estimations, which include indirect costs as well. When they leave indirect inputs aside and focus exclusively on more traditional inputs of raw materials and capital, studies that attempt to benchmark the performance of manufacturing firms across countries in the developing

Figure 2-16. Impact of the Business Environment: Distribution of the Ratio of Net to Gross Value Added, Africa versus China, Kernel Density Estimation



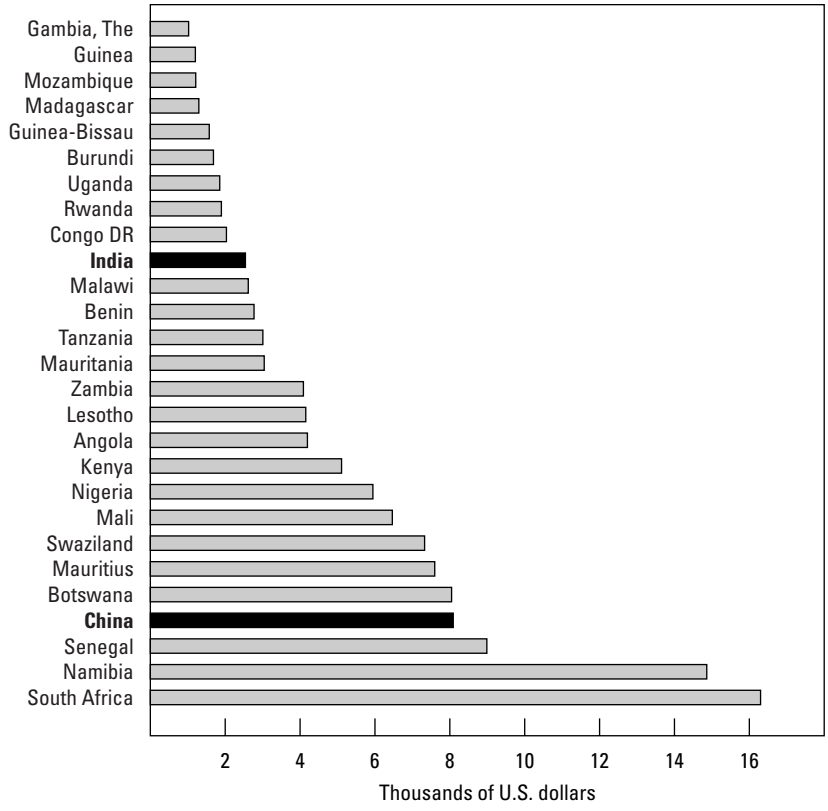
Source: Eifert, Gelb, and Ramachandran (2008).

world have typically underestimated the gap between African firms and their comparators elsewhere.

Figure 2-16 illustrates that effect. It shows the difference in the distributions of net and gross value added across firms within China, Kenya, Tanzania, and Zambia. The China distribution is heavily skewed to the right, with most of the mass of firms between 0.75–0.95. The African distributions have a great deal of mass on the left, in the 0.30–0.60 range, suggesting that many African firms see their ability to produce value beyond the cost of their direct and indirect inputs as heavily constrained by the magnitude of the cost of the latter. That is true in Zambia in particular, where the distribution is centered around 0.40.[5]

5. Several other studies have examined allocative efficiency and enterprise productivity using different approaches (Haltiwanger, Scarpetta, and Schweiger 2006; Escribano and Guasch 2005; Bastos and Nasir 2004; Biggs, Srivastava, and Shah 1995). Many of those studies show that an adverse business climate has a significant negative impact on firm performance. Other studies have found conflicting results, particularly when examining the role of regulation and governance in enterprise performance (Hallward-Driemeier, Wallsten, and Xu 2003). Reinikka and Svensson argue that a time tax on management due to a high regulatory burden can be positively correlated with productivity—firms that pay bribes are more productive than others (Reinikka and Svensson 2006).

Figure 2-17. Labor Productivity of Firms[a]

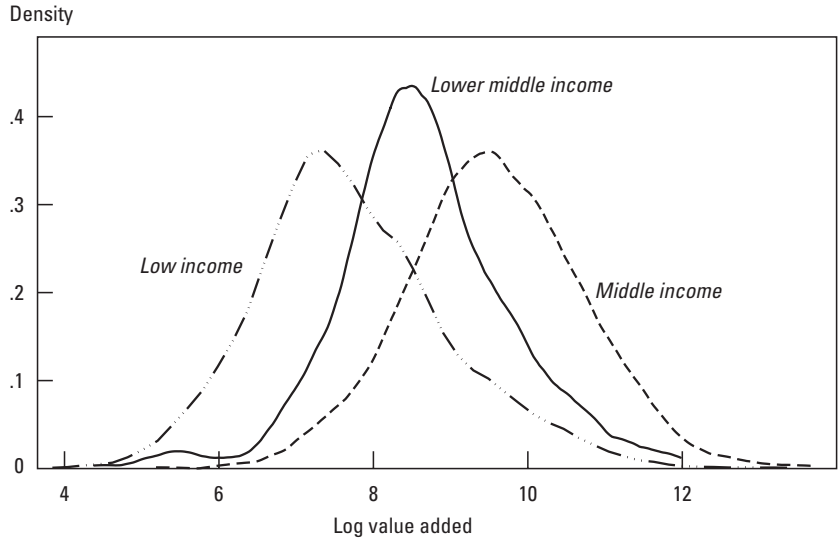


Source: World Bank Enterprise Surveys (www.enterprisesurveys.org).
a. Labor productivity is measured as value added per worker in US$.

Labor Productivity

Figure 2-17 shows that enterprises in middle-income Africa have much higher labor productivity than those in low-income Africa. Average labor productivity in India is similar to that of lower-income African countries, while China's labor productivity is comparable to that of middle-income African countries. We also examined the entire distribution of the labor productivity of firms across different income groups in sub-Saharan Africa; those kernel density estimates are presented in figure 2-18. The figure shows that there is very little overlap in labor productivity between firms in middle-income and low-income African countries. The width of the distribution,

Figure 2-18. Distribution of Labor Productivity (Log), by Level of Income, Kernel Density Estimations



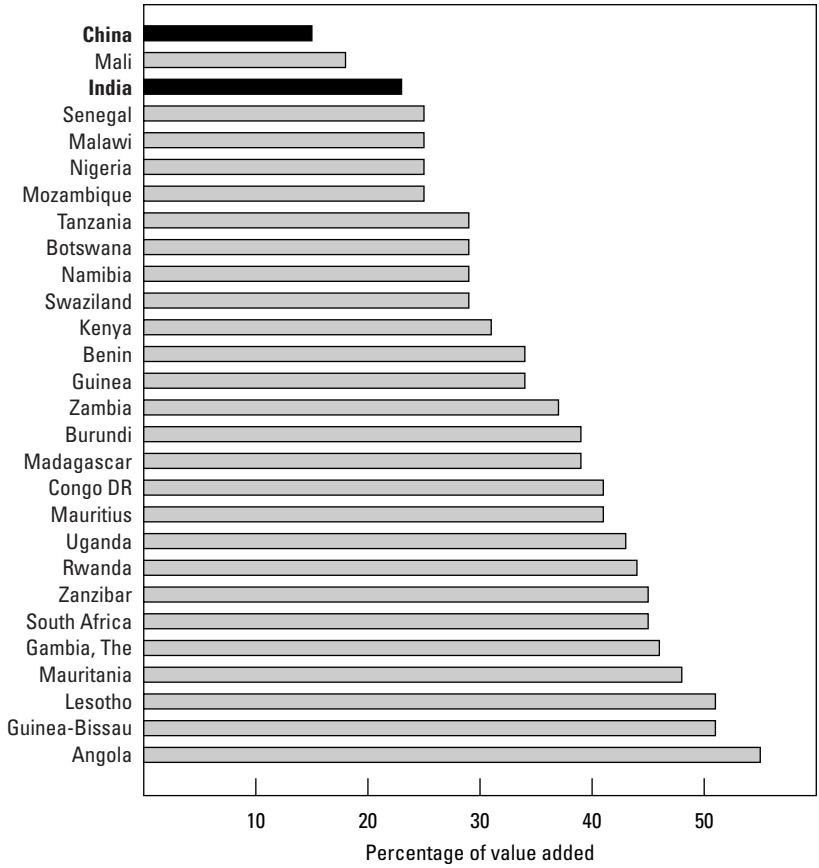
Source: World Bank Enterprise Surveys (www.enterprisesurveys.org).

which captures the dispersion across firms in these countries, is also much greater for the low-income countries and is skewed to the left, indicating that the majority of firms have very low productivity.

Labor productivity, however, is only a partial measure of the productivity and competitiveness of the labor force; workers' wages also need to be considered. If wages are correspondingly low, workers in these countries can still compete with workers in other parts of the world. This issue can be examined by looking at unit labor costs, which measure the ratio of wages to value added and indicate the relative competitiveness of labor across countries. Comparing across countries, we see that almost all countries in Africa are less competitive than China and India (figure 2-19).

However, the competitiveness of labor also captures only a partial picture of productivity, because it does not take into account the amount of machinery and equipment available to each worker and the productivity of capital. To examine the impact of capital and labor on enterprise output differences, we use the OLS regression approach, examining differences in value added across firms after controlling for capital and labor usage and for sectoral differences.

Figure 2-19. Unit Labor Costs



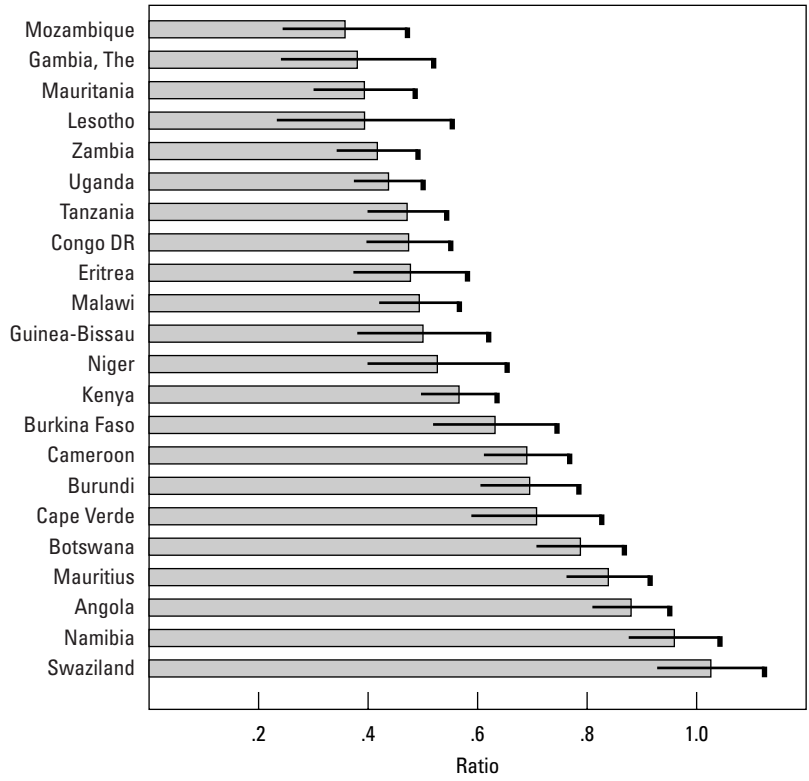
Source: World Bank Enterprise Surveys (www.enterprisesurveys.org).

Differences in the residual, which measures total factor productivity differentials, is presented in figure 2-20, which shows that the productivity of firms in lower-income countries in Africa is much lower than that of firms in middle-income countries such as South Africa, Namibia, and Swaziland.

Total Factor Productivity

We estimate total factor productivity with a model that includes firm-specific characteristics that drive productivity differentials; the results are presented

Figure 2-20. Total Factor Productivity Relative to South Africa



Source: World Bank Enterprise Surveys (www.enterprisesurveys.org).

in appendix table A-1.[6] We examine productivity for each income group separately and also control for differences in performance across sectors and countries within each income group. After controlling for these intercept differences, we see that in low-income countries, learning channels such as ISO certification and Internet connections are very significant and positive in determining productivity.

Enterprises that report higher losses due to power outages are not less productive than others, and firms that report higher transport losses—losses due

6. Due to survey limitations, the augmented TFP regressions are estimated for sixteen countries for which we have comparable data.

to breakage or theft—are in fact more productive than others, ceteris paribus. Those results seem counterintuitive, but closer examination of the data shows that firms that face higher demand for their products in low-income environments are more likely to report transport and electricity outages; these firms also are the more productive firms. As expected, having a generator (a sensible precaution) endogenizes the problem—firms that have generators are likely to be more productive than others. For lower-middle-income countries, in which demand is more predictable, firms reporting higher sales losses due to power outages are likely to be less productive and those with generators more productive than others, ceteris paribus.

For middle-income countries in Africa, where there are many fewer power outages, the dispersion is lower and the productivity of firms that report higher outages is no different from that of others. However, in those countries, firms that secure a more reliable power supply by using generators are likely to be more productive than others, indicating the importance of substitute power in overcoming the power shortage problem.[7]

Finally, we turn to the interaction of market structure and firm performance. An adverse business environment might not only affect productivity but also skew the market structure toward firms that can offset their losses with higher revenues resulting from market share advantages, political connections, or better coping mechanisms. As a result, firms with greater market power might suffer more delays and costlier regulation but nevertheless survive because they do not have to compete with other firms.

It is difficult to tease out the effect of market structure from the Enterprise Survey data. In a few countries, questions on influence peddling were included (unfortunately, that is no longer the case). Anecdotal evidence suggests that African manufacturing firms have continued to retain their market leadership in domestic markets by investing in their relationship with governments, thereby maintaining high barriers to entry and reduced competition. Analysis of the Enterprise Survey data confirms that assessment. Comparisons with selected countries in Asia show that lobbying in East Africa is different from lobbying in Asia—in East Africa, larger firms and firms with

7. It is important to note that the results described above show correlations between different variables and productivity; they do not show causation. Without time-series data, it is not possible to push our conclusions any further. At this point, they are indicative of the key drivers of business performance and worthy of much more investigation as multiple rounds of survey data become available. Nonetheless, the results do show that total factor productivity is correlated with country-level variables as well as with firm characteristics and various aspects of the business environment.

Table 2-4. Enterprises Lobbying Government and Market Share

Country	*Percentage of enterprises lobbying government*	*Number of enterprises lobbying government*	*Mean self-reported market share of lobbying enterprises*	*Mean self-reported market share of non-lobbying enterprises*
Senegal	8.3	21	36.8	37.2
Mali	3.9	3	33.2	25.7
Tanzania	13.4	35	31.9	17.9
Uganda	16.4	49	32.7	20.2
Kenya	35.4	97	32	15
Zambia	43.7	90	38	27.7

Source: Ramachandran, Shah, and Tata (2007).

higher market share lobby; in Asia, market share is not a significant determinant of lobbying activity.

Table 2-4 looks at mean self-reported market share and at how many firms acknowledge that they invest in their relationship with the government by lobbying. Firms were asked directly whether they themselves lobby the government to influence the content of laws and regulations that affect their business; lobbying activities included the seeking of special arrangements that would raise the profitability of the enterprise, such as exemptions on tariffs and taxes, quicker clearance at land or sea ports, access to land or other resources, and sole source contracts.

The first striking conclusion is the very high level of self-reported market share. Table 2-4 shows that a limited number of enterprises control market share in many African domestic markets. That finding is likely a reflection of the sparseness of economic activity: even relatively small firms see themselves as having a high share of the domestic market. In most cases, market share controlled by lobbying enterprises is even higher than that reported by enterprises that do not lobby the government.

Is the degree of influence peddling greater in Africa than elsewhere? Most likely it is not—there is a great deal of evidence to suggest a high level of lobbying activity in East Asia and elsewhere (Amsden 1989). The more interesting difference is in self-reported market share. Available data for East Asia show that there is a significant difference between the self-reported market share of lobbying firms in Asia and those in Africa. While firms that lobby in Africa report that they control more than one-third of the market for their main product in the country in which they operate, Asian firms report their share to be just over one-tenth of their far larger, denser, markets. This area needs further investigation—it may be that Asian

firms lobby for things like export licenses while African firms lobby to retain domestic market share.

The relationships among market structure, the business environment, the capacity of individual firms, and the performance of firms across different levels of income will be easier to untangle as time-series data become available. The simple approach that we take indicates that the business environment does drive productivity in some areas but that other factors also may play a role in determining outcomes for firms. In the next chapter, we discuss a related set of issues that may shed additional light on the questions raised here, including ownership and entrepreneurial and managerial capability and the question of why there are so few large black-owned businesses in Africa. Understanding these issues as well as the business environment helps us understand the political economy of the private sector in many African countries and what real reform needs to look like.