4

"BEHIND-THE-BORDER" CONSTRAINTS ON AFRICAN-ASIAN TRADE AND INVESTMENT FLOWS

INTRODUCTION

This chapter explores how "behind-the-border" conditions in Africa affect the continent's trade and investment flows with Asia, especially China and India. Unlike chapters 2 and 3, where country-level (or sector-level) data were used, in this chapter, as well as in chapters 5 and 6, the analysis is largely based on firm-level data from the new World Bank Africa-Asia Trade and Investment Survey (WBAATI Survey) and Business Case Studies, as well as existing Investment Climate Assessments (ICAs) and Doing Business data of the World Bank Group. As such, the primary units of analysis are firms operating in Africa, whether of African, Chinese, or Indian origin (firms of other nationalities are also included as comparators). In addition, the examination focuses primarily on four Sub-Saharan African countries that have significant trade and investment ties with China and India and that were covered by the WBAATI survey and business case studies: Ghana, Senegal, South Africa, and Tanzania.

The basic diagnostics of behind-the-border conditions are first evaluated through the performance of the surveyed firms—in terms of productivity and export performance. These characteristics are compared across sectors, nationality, size, and ownership structure (domestic, joint venture, and foreign-owned).

An assessment of the sources of competition in these African markets is then conducted, first at the country level and then by differentiating among nationalities, with a particular focus on Chinese and Indian firms operating in Africa. At the country level, the assessment looks at various mechanisms through which competition is spurred or constrained. These include foreign import competition, market entry and exit, foreign direct investment, vertical dimensions of competition, and transactions with the state. At the nationality level, the

chapter discusses whether Chinese and Indian investors play any significant role in fostering domestic competition in African markets or in fostering international integration of Africa's private sector.

In light of the importance that domestic competition appears to play in leveraging the beneficial effects of Chinese and Indian trade and investment in these African markets, the analysis examines the principal behind-the-border factors that are most likely constraining such competition. The discussion focuses on: (i) the quality of infrastructure services (power supply, telephone services, Internet access), (ii) factor markets (access to finance, the labor market, and skilled labor), (iii) regulatory regimes, and (iv) governance disciplines. The chapter closes with conclusions and a discussion of policy implications.

PERFORMANCE OF FIRMS BEHIND-THE-BORDER

The WBAATI Survey data show that, among Chinese and Indian firms operating in Africa, there is significant heterogeneity in their performance, evaluated in terms of productivity and export intensity. This section discusses the observed variations in firm performance, by sector, nationality, size, and ownership structure.[1]

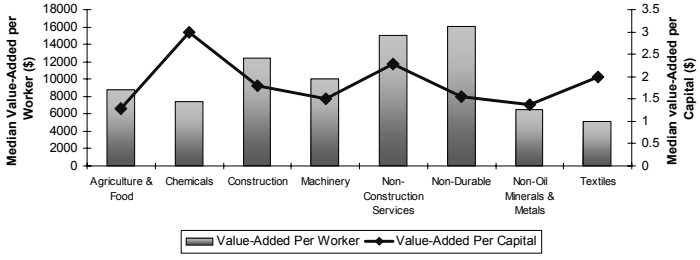
Sector

The non-durable, construction, and non-construction services sectors have relatively high labor productivity, measured as value-added per worker (see figure 4.1 (A)). The non-durable sector has the highest median value-added per worker ($16,000). The textile, non-oil minerals and metals, agriculture and food, and chemical sectors exhibit relatively low labor productivity. The chemical sector has the highest capital productivity, measured as value-added per unit of capital stock valued in dollars, followed by the non-construction services sector.[2]

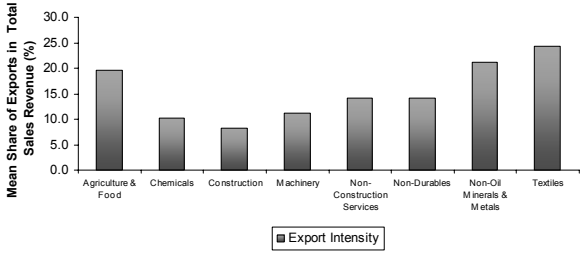
The sectors that show high export intensity are agriculture and food, non-oil minerals and metals, and textiles, reflecting comparative advantage in such sectors (figure 4.1 (B)). The construction services sector has low export intensity due to the sector's intrinsic nature.

Figure 4.1 Firm Performance by Sector

(A) Productivity



(B) Export Intensity



Source: World Bank staff.

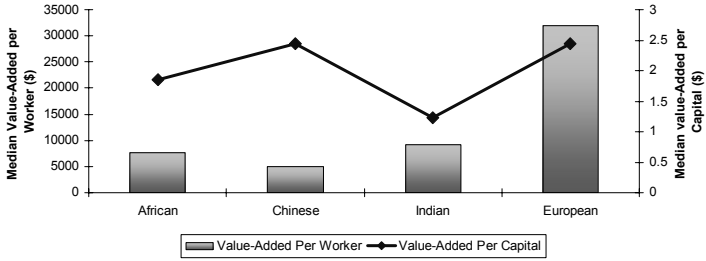
Nationality

Productivity varies across firms of different nationality (figure 4.2 (A)). African, Chinese, and Indian firms differ only marginally in terms of labor productivity, while in terms of capital productivity, Chinese firms are much more productive than African or Indian firms. The survey data show that Chinese firms have significantly less capital per worker (i.e., they are more labor intensive) than firms of other nationalities, which may explain the difference between the labor and capital productivity of Chinese firms relative to others.

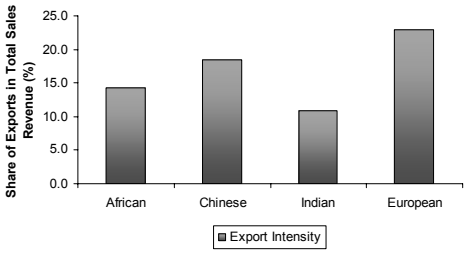
A comparison of export intensity provides another pattern. Chinese firms are more intensive in exports than African and Indian firms, as are European firms (figure 4.2 (B)). The surveyed Indian firms are found to be less export intensive than African firms.

Figure 4.2 Firm Performance by Ownership Nationality

(A) Productivity



(B) Export Intensity



Source: World Bank staff.

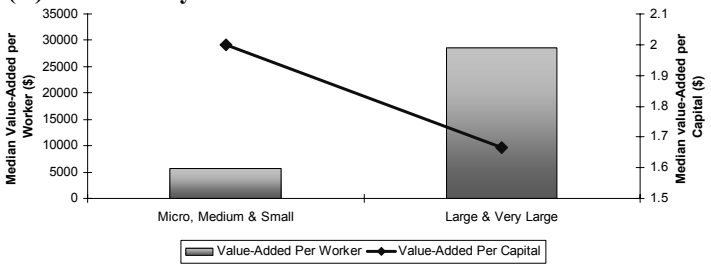
Size

There is a large volume of literature explaining how size is a determinant of firm performance.[3] This is true for firms around the world. Consistent with this literature, both labor productivity and export intensity increase with size among the surveyed firms in Africa (figure 4.3). It is likely to be the case that larger firms are more productive or more efficient in production due to economies of scale as well as economies of scope. This is in turn reflected in their export intensity. As exporting requires certain fixed costs, larger firms can expand their overseas marketing networks more easily. As discussed in detail in chapter 6, scale is also relevant for the geographical orientation of exports, particularly in terms of exports to the global market vis-a-vis intraregional exports.

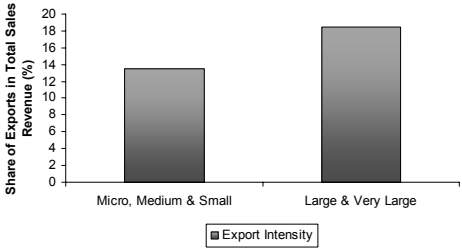
The figure also shows that, unlike labor productivity, capital productivity declines with size. Among surveyed firms, larger firms tend to have more capital per worker than do smaller firms. It may be the case that larger firms are already facing diminishing returns to capital while still enjoying increasing returns to labor.[4]

Figure 4.3 Firm Performance by Size

(A) Productivity



(B) Export Intensity



Source: World Bank staff.

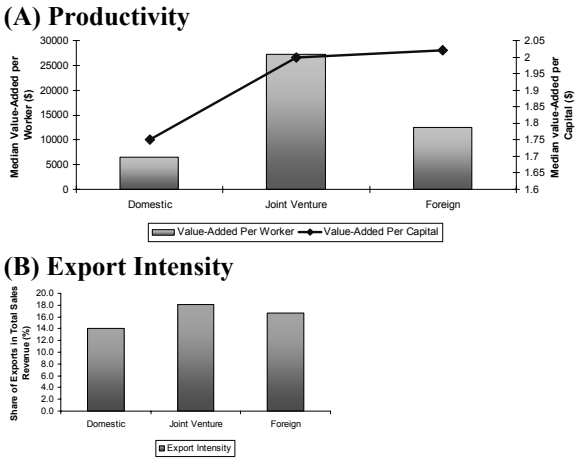
Ownership Structure

Among the surveyed firms, domestic businesses are not performing on par with joint venture firms or foreign-owned firms, either in terms of productivity or export performance (figure 4.4).[5] Interestingly, in the case of labor productivity, joint venture firms are found to be more productive than foreign firms, while they are equally productive based on capital productivity. Joint venture firms also export more intensively than do foreign firms.

Superiority of performance of joint ventures relative to foreign firms is at variance with some findings in other regions.[6] In certain cases, joint ventures are imposed by host-country governments as a condition for foreign investment. In general, it is believed that requiring a local partner weakens the export performance of joint venture firms relative to firms wholly owned by foreigners.[7] On the other hand, particularly in the context of African countries, where business transaction costs and business-related risks are often perceived to be high, joint venture firms may enjoy certain advantages. Unless firms intend to operate in isolated enclaves entirely detached from local economies, linking with local partners could mitigate risks associated with local transactions, making joint ventures a preferred option for many foreign investors.[8] This has been the

case in other countries, such as in Latin America. The fact that such advantage in local transactions is often embodied in labor rather than capital may help explain the observed contrast in productivity between joint ventures and foreign-owned firms; that is, while there is little difference in capital productivity, joint ventures exhibit superior performance in terms of labor productivity.

Figure 4.4 Firm Performance by Ownership



Source: World Bank staff.
Note: State-owned firms are not shown since very few of them reported their revenue data.

ROLE OF DOMESTIC COMPETITION IN PROMOTING INTERNATIONAL INTEGRATION

A competitive environment in domestic markets is one of the most significant factors promoting the international integration of nations' industries. This is the case found in many developing economies and economies in transition.[9] Surprisingly, there is only a limited literature focusing on the topic of domestic competition in Sub-Saharan African countries.[10]

Domestic competition propels international integration of domestic firms in two ways. First, it increases firm productivity, as the natural market mechanism forces out inefficient firms from the market while inviting new efficient firms to enter (*allocative efficiency*). An increase in productivity generates an improvement in the international competitive position of firms, hence improving their overall export performance.

Second, competitive domestic market structure facilitates international integration of firms by inducing imports and competition through foreign entries. Import competition and foreign entries through direct investment could then encourage domestic firms to innovate and thus improve their efficiency (*dynamic efficiency*).

This section discusses the role of competition in promoting international integration at the country level, looking at the following dimensions: (i) foreign import competition, (ii) market entry and exit, (iii) foreign direct investment, (iv) vertical dimension of competition, and (v) transaction with the state. The section then quantitatively shows how competition improves firms' productivity and international integration.

State of Competition in Domestic Markets of Four African Countries

Average domestic market share among firms in a sector is one measure of intensity of market competition in that sector.

Table 4.1 lists the average domestic market share by sector and country, as perceived by the firms surveyed. According to the data, the construction, non-construction services, and non-oil minerals and metal sectors appear to be least concentrated or most competitive. The chemical sector appears to be the most concentrated sector in Senegal, South Africa, and Tanzania. Overall, the sectors in Senegal tend to be more concentrated than the sectors in the other three countries.

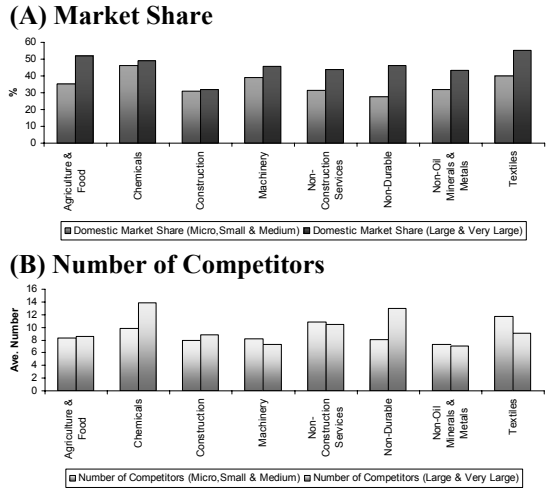
Table 4.1 Average Domestic Market Share, by Sector and by Country (Percent)

Sector	Ghana	Senegal	South Africa	Tanzania	All Four Countries
Agriculture and Food	32	49	52	41	42
Chemicals	22	78	62	46	47
Construction	28	28	40	26	31
Machinery	34	67	43	38	41
Nonconstruction Services	22	55	34	25	36
Nondurable	27	50	45	40	39
Non-oil Minerals and Metals	30	50	59	29	36
Textiles	17	66	44	43	44
All Sectors	26	57	42	34	39

Source: World Bank staff.

As shown in figure 4.5, domestic market shares are greater for firms of larger scales, which is to be expected. For any sector, there is generally a positive correlation between size and average market share. Number of competitors that firms face is another dimension to measure intensity of market competition.[11] The competitors here include overseas competitors through imports.[12] The figure shows that larger firms on average face fewer competitors in the majority of the sectors. The only exceptions are the chemical, construction, and non-durable sectors.

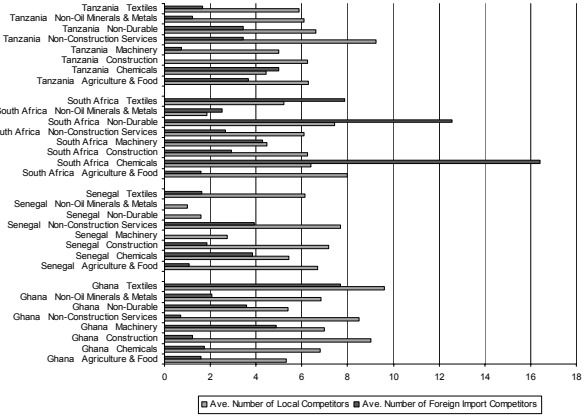
Figure 4.5 Size and Domestic Competition



Source: World Bank staff.

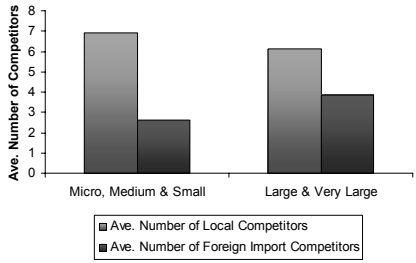
Foreign Import Competition. Typically, the most immediate channel through which competition is introduced to domestic markets is imports from other countries. In Africa, import competition appears to have differentiated impacts. In the survey data, only in South Africa do firms on average appear to be exposed to more foreign import competition than to competition from local rivals. In the other three countries, competition from local rivals appears to be more dominant (figure 4.6).[13]

Figure 4.6 Local and Foreign Import Competitors by Country and Sector



Source: World Bank staff.

Figure 4.7 Local and Foreign Import Competitors by Size



Source: World Bank staff.

The reason South African firms appear to face more foreign import competition than local competition is partly related to the fact that there is relatively large representation of large and very large firms in the survey sample from South Africa. The survey data show that larger firms face more import competition than do smaller firms, while smaller firms face more local competitors than do larger firms (figure 4.7). This size-related difference is intuitive because large firms often have relatively greater technological prowess and tend to produce products that are more comparable to the products made by overseas producers.

Market Entry and Exit. Barriers to entry and exit in domestic markets are fundamental impediments to competition in Africa. Such barriers arise from different sources. Some are formal policy-based barriers, either for an intentional purpose of deterring new entrants to protect domestic incumbents or hangovers from the past command-and-control domestic economic regimes (e.g., state-owned enterprises). The privatization efforts in African countries that have taken place in the past decades have created conditions for lowering entry and exit barriers.

Still, certain types of government-generated entry and exit barriers continue to constrain firm turnover in Africa. Some of these are cumbersome administrative procedures that make entry and exit costly. The height of so-called administrative barriers in Africa is appreciable (table 4.2). In some instances, however, China and India have actually higher entry and exit barriers.

The bulk of empirical research in many regions around the world points to more fundamental barriers to entry and exits. These include weak market-supporting institutions, especially those assuring a competitive business environment; legal protection and enforcement of property rights; sound

Table 4.2 Administrative Barriers to Starting and Closing a Business

	Starting a Business				Closing a Business		
Country	Procedures (number)	Time (days)	Cost (% of income per capita)	Min. capital (% of income per capita)	Time (years)	Cost (% of estate)	Recovery rate (cents on the dollar)
Sib-Saharan Africa Ave.	11.0	63.8	215.3	297.2	3.3	19.5	16.1
Ghana	12.0	81.0	78.6	27.9	1.9	22.0	23.7
Senegal	9.0	57.0	108.7	260.4	3.0	7.0	19.1
South Africa	9.0	38.0	8.6	0	2.0	18.0	34.0
Tanzania	13.0	35.0	161.3	6.0	3.0	22	22.4
East Asia Ave.	8.2	52.6	42.9	109.2	3.4	28.8	24.0
China	13.0	48.0	13.6	946.7	2.4	22.0	31.5
South Asia Ave.	7.9	35.3	40.5	0.8	4.2	7.3	19.7
India	11.0	71.0	61.7	0	10.0	9.0	12.8

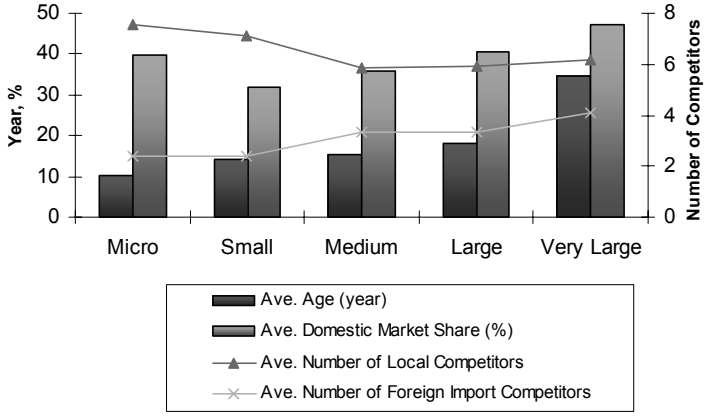
Source: World Bank Doing Business 2006.

governance; and market-reinforcing regulatory regimes governing the provision of basic infrastructure services. They constitute the set of serious business barriers in Africa. Reforms in these areas—those that shape a country's microeconomic fabric at a *deeper* level beyond what is touched by reform of so-called administrative barriers, such as speeding up the pace of business registration or of obtaining a business license—would significantly facilitate domestic competition in the region.

There are also less visible barriers in Africa to business growth. Such invisible barriers include ethnic networks. Ethnic networks often facilitate business transactions in the private sector in African countries, where businesses and consumers incur high transaction costs. As discussed in chapter 5, ethnic networks in fact facilitate cross-border trade and investment, linking nonindigenous ethnic groups in Africa with their countries of ethnic origin (e.g., the Indian *diaspora* in African countries and their ties with India). However, closely integrated ethnic networks can also work as an implicit barrier to entry for parties outside of the networks. Due to network externalities, market entry is easier for members of a particular group but not for others. Parties who receive information from their own community that helps them screen each other become less willing to spend additional resources screening individuals from outside their communities.[14]

Business turnover in Africa appears to vary with firm size.[15] Figure 4.8 shows that smaller firms in the survey data are much younger than larger firms. They also generally face more local competitors and have smaller domestic market shares than larger firms. This indirectly suggests a higher turnover rate among smaller firms than larger firms.

Figure 4.8 Age, Market Share, and Numbers of Competitors by Size



Source: World Bank staff.

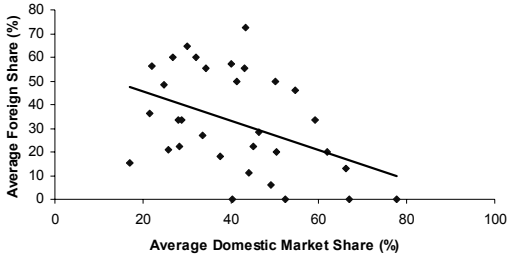
Foreign Direct Investment. Entry and exit barriers in Africa impinge not only on firm turnover among domestically owned local firms but also on foreign entry through direct investment. Foreign investors seek opportunities to penetrate domestic markets in Africa not only through exporting their products from their factories in the home countries but also through establishing *de novo* greenfield operation bases in Africa or through acquiring existing African firm; see chapter 6.

Restrictions on foreign investment, either explicit or implicit, lead to a less competitive market environment, thus also limiting other beneficial elements of foreign investment such as generating incentives among domestic firms to innovate. On the other hand, depending on the way in which the foreign investors enter the market, they can either enhance the competition or limit it.[16]

Among surveyed firms in Africa, greater foreign capital involvement appears to be more procompetitive than anticompetitive.

Figure 4.9 suggests that, the more foreign investment sectors attract, including Chinese and Indian investment, the more competitive the environment in which they operate. Of course, other factors also play a role in affecting the size of market shares.

Figure 4.9 Domestic Market Share and Foreign Ownership Share

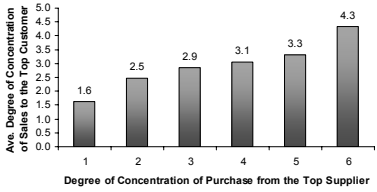


Source: World Bank staff.
Note: Each plot represents an individual sector in a country among the four African countries covered by the WBAATI Survey.

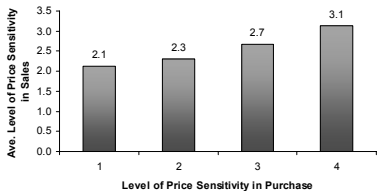
Vertical Dimensions of Competition. Buyer-supplier relations can have prominent effects on domestic competition. There are several dimensions in which competition can be affected. The survey data suggest an association between the degree of competition on the sales side and on the purchase side (figure 4.10). Firms that face more diversified suppliers of material inputs appear to have less concentration of business customers to whom they sell their products. Similarly, firms that are more sensitive to price differences among those suppliers (in other words, firms who buy from more competitive input markets) appear to face customers' demand that is more sensitive to price changes (that is, they are selling to more competitive output markets).

Figure 4.10 Competition in Input and Output Markets

(A) Top Customer Supplier Shares



(B) Price Sensitivity



Source: World Bank staff.
Note: The degree of concentration of top supplier (buyer) is measured on a scale 1–6, where 1 = share in the total purchase (sales) is less than 5 percent; 2 = if between 5–10 percent; 3 = if between 10–25 percent; 4 = between 25–50 percent; 5 = between 50–99 percent; and 6 = 100 percent. Price sensitivity in sales (purchases) is based on the expected responses in quantity sold to existing buyers (quantity purchase from existing suppliers) from a hypothetical increase of 10 percent in the price of main outputs (inputs). It is measured on a scale of 1–4, where 1 = no quantity change or *not sensitive*; 2 = a small quantity reduction with limited switch to competitors or *moderately sensitive*; 3 = major quantity reduction with significant switching to competitors or *sensitive*; or 4 = complete switching to competitors or *very sensitive*.

A closer look at value chains reveals a deeper dimension of competition in the relationships between buyers and suppliers.

Table 4.3 shows that, among the firms surveyed, firms' sales are more price sensitive when firms sell unfinished products for further processing by their buyers, such as raw materials or partially assembled products, than when they sell completely finished products.[17] This is suggests that, by adding value, products become more differentiated and less homogenous, thus facing more inelastic demand. At the same time, this observation hints that by engaging in the production of upstream products in value chains, firms would be exposed to tougher competition.

Table 4.3 Price Sensitivity in Sales and Proportions of Finished and Unfinished Products Sold

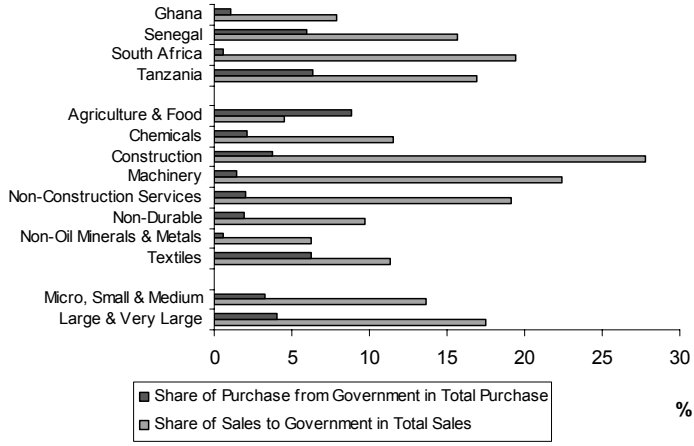
Price Sensitivity in Firm's Sales	Domestic Sales		Export Sales (Africa)		Export Sales (Outside Africa)	
	Finished Product	Unfinished Product	Finished Product	Unfinished Product	Finished Product	Unfinished Product
1 (Not Sensitive)	94.9%	5.1%	90.5%	9.5%	92.3%	7.7%
2 (Moderately Sensitive)	92.5%	7.5%	92.6%	7.4%	83.9%	16.1%
3 (Sensitive)	90.7%	9.3%	86.9%	13.1%	84.1%	15.9%
4 (Very Sensitive)	85.8%	14.2%	76.1%	23.9%	75.6%	24.4%

Source: World Bank staff.
Note: For each group of firms with different level of price sensitivity, the figures show percentage of finished and unfinished products in total sales to three types of market. Price sensitivity in sales is based on the expected responses in quantity sold to existing from a hypothetical increase of 10% in the price of main outputs. It is measured on a scale of 1–4, where 1 = no quantity change or *not sensitive*; 2 = a small quantity reduction with limited switch to competitors or *moderately sensitive*; 3 = major quantity reduction with significant switching to competitors or *sensitive*; or 4 = complete switching to competitors or *very sensitive*.

Among the firms surveyed, firms' relations with buyers of their products are found to be less concentrated than firms' relations with their suppliers of inputs (table 4A.2). This suggests that firms in Africa are more selective in their relationships with input suppliers because they need to ensure the quality levels of the inputs they use. Exposure to competition is more evident when such products are sold to geographically distant markets through exports. This implies that by selling raw materials to geographically more distant markets, firms operating in Africa are facing more competitive pressure (see chapter 6 for a detailed discussion of value chains and international integration).

Transacting with the State. Purchases of goods and services by national governments—through participation in "state orders" or other forms of public procurement—constitute a significant portion of business transactions for many firms operating in Africa and, as a result, can have a significant impact on competition in the market. In turn, this can have an influence on the extent and

Figure 4.11 Dependence on Sales and Purchase Relations with Government by Country, Sector, and Size



Source: World Bank staff.

pattern of the region's international integration. Privatization in African countries has reduced the prevalence of state-owned enterprises, which once occupied the lion's share of economic activities. However, given the thinness of the private sector in Africa, sales and purchase relations with governments remain a significant part of many firms' business transactions.

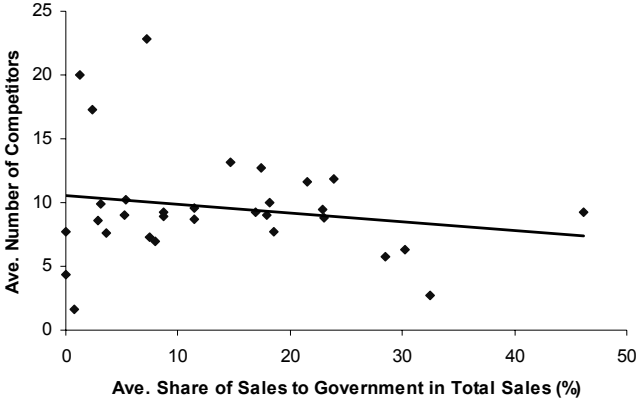
Based on the WBAATI Survey, the construction sector has the largest share of sales to governments (figure 4.11). This is consistent with findings in the other regions of the world. Larger firms generally rely more on government sales and purchases. With the exception of the agriculture sector, the survey data show that transactions with governments are more intensive on the sales side than on the purchase side across the board, regardless of sector and size.

Dependence on government sales and purchases appears to make firms in Africa less competitive. The sectors that have higher shares of sales to governments in their total sales revenues tend to have fewer competitors in their national markets (figure 4.12). Also, the degree of intensity in sales to or purchase from government is associated with the degree of concentration in firms' buyer or supplier relations (figure 4.13).

Minimizing the anticompetitive nature of transactions with government is important for fostering overall domestic competition in Africa. Adherence to WTO-based rules regarding government procurement that provide for open competition, transparent procedures, and nondiscriminatory treatment to

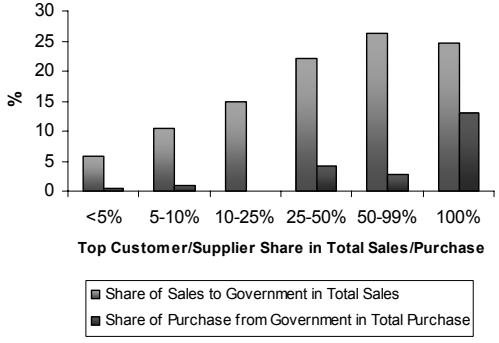
domestic and foreign firms alike can be an important reform in minimizing existing distortions in international trade and investment in Africa and in fostering international integration on the continent.

Figure 4.12 Sales to Government and Domestic Market Share



Source: World Bank staff.
Note: Each plot represents an individual sector in a country among the four African countries covered by the WBAATI Survey. One sector, which has only two firms represented, has not been included.

Figure 4.13 Top Supplier Buyer Concentration and Government Sales and Purchase



Source: World Bank staff.

Quantifying Impacts of Competition on Firm Performance

Analysis of firms operating in Africa suggests a linkage between firms' performance and the degree of competition as measured by price sensitivity in output and input markets as well as by concentration in buyer-supplier relationships. Price sensitivity negatively correlates with market power. For

Table 4.4 Market Competition, Concentration in Buyer-Supplier Relationship, and Productivity

		Median Value-Added Per Worker ($)	Median Value-Added Per Capital (ratio)
Competitiveness in Sales Market (Price Sensitivity in Firms' Output Sales)	**Less Competitive Market** (Firms face buyers not sensitive or moderately sensitive to changes in price of firms' products)	12,424	1.08
	More Competitive Market (Firms face buyers sensitive or very sensitive to changes in price of firms' products)	15,114	2.53
Competitiveness in Input Market (Price Sensitivity in Firms' Input Purchase)	**Less Competitive Market** (Firms are not sensitive or moderately sensitive to changes in price of material inputs)	13,677	1.50
	More Competitive Market (Firms are sensitive or very sensitive to changes in price of material inputs)	12,447	2.40
Concentration in Buyer Relations	**Less Concentrated Relations** (Firms sell 50% or less of output to largest buyer)	14,455	2.40
	More Concentrated Relations (Firms sell more than 50% of products to single buyer)	11,098	1.00
Concentration in Supplier Relations	**Less Concentrated Relations** (Firms buy 50% or less of inputs from largest supplier)	14,160	1.71
	More Concentrated Relations (Firms buy more than 50% of inputs from single supplier)	11,930	1.41

Source: World Bank staff.
Note: Firms with 10 or fewer workers or age less than 5 years are not included. Price sensitivity in sales (purchases) is based on the expected responses in quantity sold to existing buyers (quantity purchase from existing suppliers) from a hypothetical increase of 10% in the price of main outputs (inputs). It is measured on a scale of 1–4, where 1 = no quantity change or *not sensitive*; 2 = a small quantity reduction with limited switch to competitors or *moderately sensitive*; 3 = major quantity reduction with significant switching to competitors or *sensitive*; or 4 = complete switching to competitors or *very sensitive*.

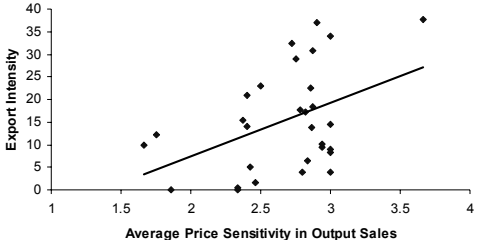
example, if firms face buyers that are more sensitive to price changes (that is, with more elastic demand), firms have less market power in the output markets in which they operate. Concentrated buyer-supplier relationships also limit the extent of competition in respective markets. Based on the WBAATI Survey data, table 4.4 shows that, in general, firms facing more competitive input and output

markets and operating with less concentrated buyer and seller relationships have higher average labor and capital productivity.

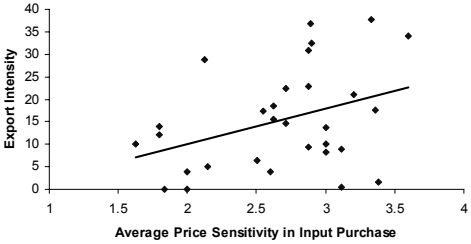
Higher productivity places firms in more competitive positions in international markets. Sectors with more competitive environments for input purchases and output sales or with less concentrated buyer-seller relations exhibit better average export performance among firms in the sectors (figure 4.14).

Figure 4.14 Competition and Export Intensity

(A) Price Sensitivity in Firms' Output Sales

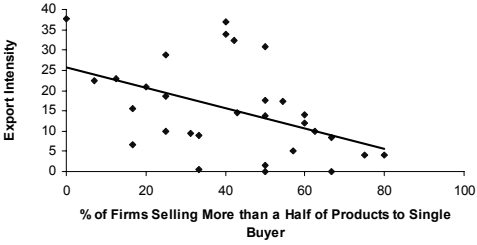


(B) Price Sensitivity in Firms' Purchase

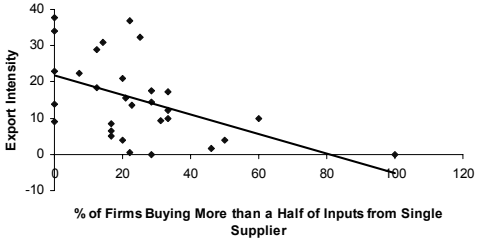


* Price Sensitivity: 1 = not sensitive; 2 = moderately sensitive; 3 = sensitive; and 4 = very sensitive.

(C) Buyer Concentration



(D) Supplier Concentration



Source: World Bank staff.

Note: Each plot represents an individual sector in a country among the four African countries covered by the WBAATI Survey. Firms with 10 or fewer workers or age less than 5 years are not included. Price sensitivity in sales (purchases) is based on the expected responses in quantity sold to existing buyers (quantity purchase from existing suppliers) from a hypothetical increase of 10% in the price of main outputs (inputs). It is measured on a scale of 1–4, where 1 = no quantity change or *not sensitive*; 2 = a small quantity reduction with limited switch to competitors or *moderately sensitive*; 3 = major quantity reduction with significant switching to competitors or *sensitive*; or 4 = complete switching to competitors or *very sensitive*.

ROLE OF CHINESE AND INDIAN FIRMS IN AFFECTING AFRICA'S COMPETITION AND INTERNATIONAL INTEGRATION

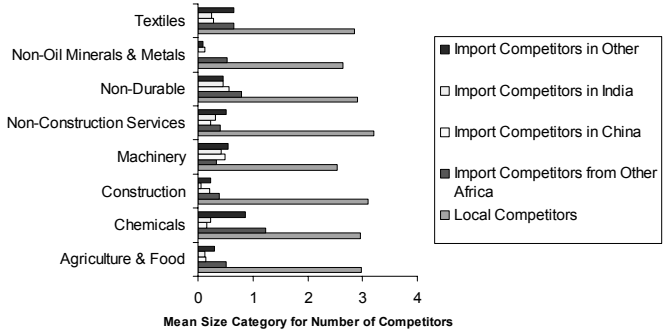
The preceding discussion centered on dimensions of behind-the-border competition in Africa at the country level, without differentiating among the nationality of the firms. How does competition coming from Chinese and Indian firms, either through exports to African markets or through investment, affect the competitiveness of African markets?

Import Competition from China and India

The WBAATI Survey data show that import competition from China and India is felt differently among sectors and countries (figure 4.15). Labor-intensive sectors seem to face more Chinese and Indian import competition. Sectors such as agriculture and food, machinery, non-durable, non-construction services, and textiles face tougher competition from Chinese and Indian imports than do other sectors.

Competitive pressure coming from import competition may likely reduce the profitability of firms. However, this does not imply that import competition affects firms in Africa only in a negative way. Import competition can motivate firms to differentiate their products from imported goods in order to capture a market niche. For example, one South African blanket manufacturer that was the subject of a case study focuses on producing blankets at the higher end in the quality range so that it can effectively differentiate itself from low-quality blankets imported from China, locally referred to as "Wash and Cry." The term

Figure 4.15 Origins of Foreign Import Competitors by Sector



Source: World Bank staff.
Note: The number of competitors is measured in a scale of 0–4, where 0 = no competitor; 1 = one competitor; 2 = 2–3 competitors; 3 = 4–10 competitors; of 4 = more than 10 competitors.

"Wash and Cry" comes from the fact that those low-quality Chinese blankets are not dyed properly, so the colors of the blankets can be easily lost when such blankets are washed. Import competition also enables local producers to access a variety of imported raw and intermediate materials, including those from China and India (see chapter 6).

Foreign Investors and Import Competition from China and India: Two-Way Street in Competition and International Integration? There is no doubt that the increasing penetration of Chinese and Indian businesses in African national markets has intensified competition. However, is the competition generated by Chinese and Indian businesses helping the private sector in Africa to be more internationally competitive and become more integrated in the global economy?[18] The WBAATI Survey data indicate that business transactions with Chinese and Indian firms play a pivotal role in linking domestic competition with international integration of Africa's private sector. The analysis shows that the major source of the competition engendered in African markets by the presence of Chinese and Indian investors is competition from imports—indeed, imports from China and India themselves. The survey data reveal that import competition from China and India is faced more by Chinese- or Indian-owned firms operating in Africa than by African indigenous firms (table 4.5).[19]

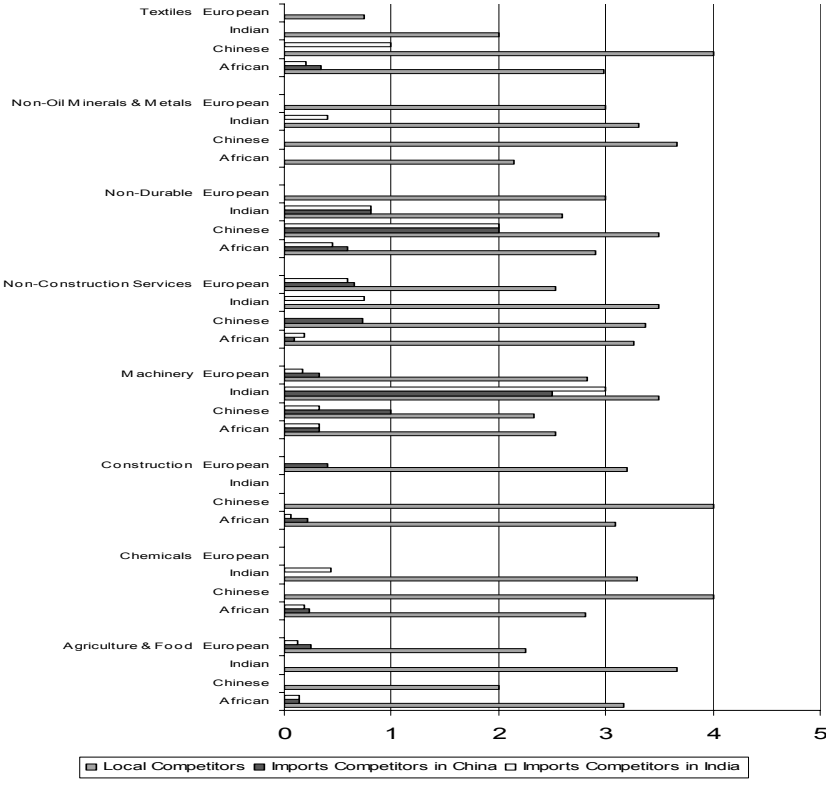
Table 4.5 Mean Category for Number of Competitors in Domestic Market, by Nationality and by Source of Competition

Nationality of Firms in Africa	Local Competitors	Competitors through Imports from:			
		Other African Countries	China	India	Other, including European
African	3.0	0.5	0.2	0.2	0.4
Chinese	**3.3**	0.7	**0.6**	0.3	0.3
Indian	3.2	**1.1**	0.2	**0.6**	0.5
European	2.5	0.6	0.4	0.3	0.5
Other	2.9	0.6	0.1	0.3	**0.8**

Source: World Bank staff.
Note: The number of competitors is measured in a scale of 0–4, where 0 = no competitor; 1 = one competitor; 2 = 2–3 competitors; 3 = 4-10 competitors; of 4 = more than 10 competitors.

Figure 4.16 looks into sector-specific patterns of Chinese and Indian import competition. The figure suggests that, in the machinery and non-durable sectors in the four African countries under examination, Chinese and Indian firms face more intense competition from imports from China and India than African firms face. At the same time, such competition is more intense than or at least on par with what Chinese and Indian firms operating in Africa face from local rivals. Chinese construction firms that participated in the business case studies indicate that their pricing decisions are more dependent on the behavior of other Chinese construction firms in Africa than on the firms of other nationalities.

Figure 4.16 Numbers of Domestic Competitors and Import Competitors from China and India by Nationality of Owners



Source: World Bank staff.
Note: The number of competitors is measured in a scale of 0–4, where 0 = no competitor; 1 = one competitor; 2 = 2–3 competitors; 3 = 4–10 competitors; of 4 = more than 10 competitors.

Competition between foreign *investors* from one country and foreign *exporters* from the same country serving the same overseas markets is quite plausible, given the fact that firms choose foreign investment as an alternative to serving the overseas markets through imports due to high transportation costs or tariff barriers against imports.[20] Firms choose to export rather than invest if the investment climate in the destination market is not favorable and transactions costs in the destination market are high. In turn, a more competitive environment in the destination market would encourage firms to invest rather than export, because the more intensive domestic market competition would reduce local transactions costs relative to cross-border trade costs, which firms incur only

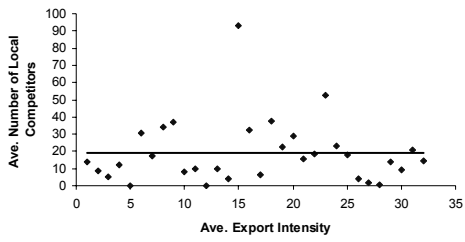
when they export. Chapter 6 presents a more detailed discussion on such choices between exports and FDI.

The observation from the WBAATI Survey that Chinese- and Indian-owned firms in Africa are facing relatively fierce import competition from China and India themselves implies a mutually reinforcing relationship. African firms that face more competitive markets at home have greater involvement with Chinese and Indian capital, while the African markets where Chinese and Indian investors are most prevalent tend to be the most competitive. As shown in chapter 6, the WBAATI Survey data suggest that Chinese and Indian investment, relative to European investment in Africa, tend to take the form of *de novo* greenfield investment rather than acquisition of existing national firms or joint ventures with national firms. In this regard, Chinese and Indian investments have a salutary effect on behind-the-border competition in Africa.

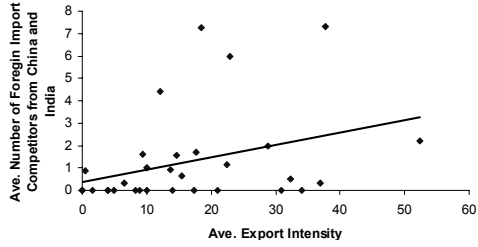
There is also a two-way relationship between import competition from China and India and firms' export performance. Based on the survey data, average export intensity of a sector appears to be positively associated with import competition from China and India, while no particular association is observed with local competition (figure 4.17).

Figure 4.17 Number of Competitors and Export Intensity

(A) Local Competitors



(B) Import Competitors from China and India



Source: World Bank staff.
Note: Each plot represents an individual sector in a country among the four African countries covered by the WBAATI Survey. Firms with 10 or fewer workers or age less than 5 years are not included.

Competition from Chinese and Indian Investment and Local Linkages. In addition to invigorating competition in Africa through their exports and investment, Chinese and Indian firms operating in Africa are engendering competition in the informal sector. Building working relationships with informal firms is important for Chinese and Indian firms to survive in African markets.

Box 4.1 Informal-Sector Competition and Chinese and Indian Firms in Africa

The informal sector in West Africa is geared almost exclusively toward producing final consumer goods. Even in manufacturing, final consumption products, such as garments, leather products, furniture, and foodstuffs are by far the most important. Some manufacturing firms in Senegal are selling their products to distributors working in the informal sector. As such, there is a high volume of cash-based transactions, without formal contracts with their distributors. There is a high rotation of distributors for these firms. This in part due to the low survival rate of firms in the informal sector. One manufacturing firm that participated in the WBAATI Business Case Studies reported that 25 percent of new dealings with distributors in one year do not continue the next year. There is no repetition of future sales with bad informal distributors. In South Africa, the informal sector is not highly representative, as it is in West Africa. However, informal firms are present in the manufacturing sector, such as textile and food and beverages sectors.

The WBAATI Business Case Studies provide some evidence that Chinese and Indian businesses operating in Africa interact with the informal sector in various ways. The informal sector is a significant competitor for Chinese and Indian firms. For example, the biggest agenda for an Indian beverage company in South Africa (sorghum beer) is how to gain the share of the market currently served by the informal sector producing competing product (household back-yard production of sorghum beer). They try this by influencing both the supply and the demand sides. For the supply side, they try to absorb the informal sector by providing them the production licenses of their branded sorghum beer. For the demand side, they lobby to the government on the negative health impact of informally brewed sorghum beer due to sanitary and health quality conditions.

Source: World Bank staff.

The WBAATI Business Case Studies reveal a number of experiences of Chinese and Indian firms operating in both formal and informal sectors in Africa (box 4.1).

Like foreign investment from other countries, Chinese and Indian investment in Africa also creates opportunities for backward and forward linkages with local indigenous industries. Thus, while facing competition from Chinese and Indian rivals, local indigenous African firms are at the same time finding ways in which they can engage Chinese and Indian firms through subcontracts and joint ventures (box 4.2).

Box 4.2 Competition and Complementarities in the Construction Industry in Africa: Chinese and African Firms

Competition

Construction services procured by governments represent the largest share of the construction markets in African countries. Outsourcing and subcontracting services are the trend in this market. Based on the government procurement policies and the procurement policies of the donors, in line with the WTO Agreement on Government Procurement, the international bidding process is required for public construction projects in Sub-Saharan African countries above certain threshold values of contracts. Cost-efficient Chinese construction firms now dominate large-scale infrastructure construction projects in Sub-Saharan African countries by winning such international bids. The lack of capacity in this sector in African firms is undermining their ability to bid for implementation of the construction projects domestically and compete with international firms, particularly those from China. The majority of African firms are small and do not have the level of experience required to compete in large bids financed by multilateral organizations. In several cases they do not even fulfill the prequalification requirements requested for international bids and larger projects of infrastructure. For example, firms in Tanzania cannot compete in the market above $2 million based on the WBAATI Business Case Studies. Local firms cannot meet requirements for equipment, cash flow, and other items for this level of bid. African firms are unable to compete with the subsidies or other policies that may indirectly subsidize Chinese firms.

Complementarities

While international contractors from other regions such as European countries, Japan, and Korea face serious setbacks from Chinese penetration in the construction market in Africa as they directly compete against Chinese firms in construction projects of similar scale, local African contractors are impacted somewhat differently. While facing competitive pressure as mentioned above, local African contractors still have some complementarities with Chinese firms. Based on the WBAATI Business Case Studies, there seem to be three ways in which local African firms seek complementarities with Chinese construction firms in the construction industry.

Market Specialization. As small contracts are not subject to international bidding, African contractors can still obtain small-scale contracts of public work. At the same time, Chinese contractors prefer to specialize in large-scale contracts to capture economies of scale as they still rely on a sizable technical workforce brought from China for each project. The procurement thresholds for international open tenders, coupled with Chinese contractors' strategies of specializing in large-scale contracts, have led to a natural division of labor between African and Chinese contractors in terms of scale of projects.

Joint Venture Opportunities. Several African contractors seek opportunities to form joint ventures with Chinese contractors. For example, a Senegalese construction firm that participated in the Business Case Studies has a joint venture project with a Chinese contractor. The firm has a company strategy to form joint ventures with Chinese firms rather than compete with them. For this firm, if Africans *"cannot beat Chinese, then,"* Africans should *"join them."*

(cont.)

Backward and Forward Linkages. Chinese firms subcontract services to local firms. This provides opportunities for the acquisition of experience and access to technology for developing country firms. A road paving and equipment company in Ghana that participated in the Business Case Studies receives subcontracts from a Chinese construction firm that is engaged in road construction work in Ghana and in neighboring countries. However, it is still the case that the benefit African firms receive from subcontracts in terms of acquisition of experience and technology is limited.

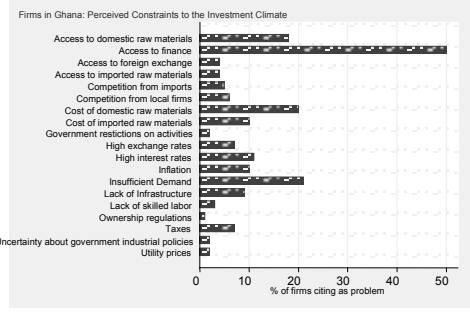
Source: World Bank staff.

SOURCES OF COMPETITION IN AFRICA'S MARKET

If the degree of competition in African markets faced by Chinese and Indian firms is important to engendering Africa's international integration, what are the main ingredients that give rise to a competitive business environment? Numerous studies on the investment climate in African countries point to the critical factors.[21] Among them, perhaps the most prominent approach has been taken by the Investment Climate Assessments (ICAs) and the Doing Business reports by the World Bank Group. Box 4.3 summarizes the principal findings of the ICAs on the investment climate constraints faced by firms, including Chinese- and Indian-owned businesses, operating in the four African countries under examination.

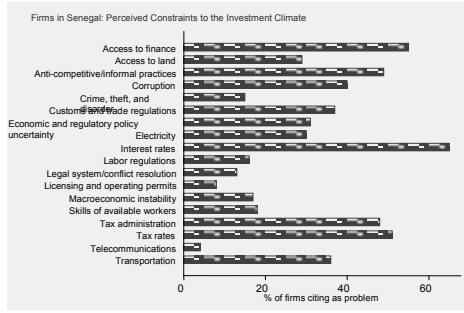
Box 4.3 Firms' Perception of the Domestic Investment Climate

Ghana. The predominant constraints that firms in Ghana face are access to credit, the cost of and access to domestic raw materials, insufficient demand, and high inflation and interest rates. The obstacle identified as the most severe problem is access to credit; this is stated as being a major problem by 50 percent of firms. As is the case for most firms in Africa, smaller firms in Ghana were far more likely to rank access to finance as a problem in comparison to larger ones; almost 70 percent of small firms identified this as a constraint, whereas only 20 percent of larger firms perceived it as a serious problem. A large percentage of firms are reported to be either discouraged by the procedural requirements for obtaining credit or the cost of obtaining it, such as high interest rates. Following access to finance, insufficient demand is ranked second as the most severe problem by over 20 percent of the firms. Ranked third, with 20 percent of firms identifying it as a major constraint, is the cost of domestic raw materials. When broken down by firm size, it is reported that, while large firms find access to domestic

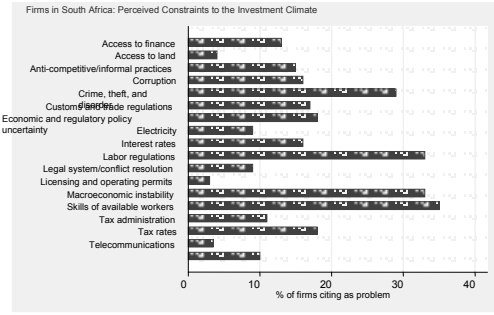


(cont.)

raw materials to be a serious constraint, small firms focus on the problem of cost. This can be explained by export orientation and the different cost structure that larger firms have.



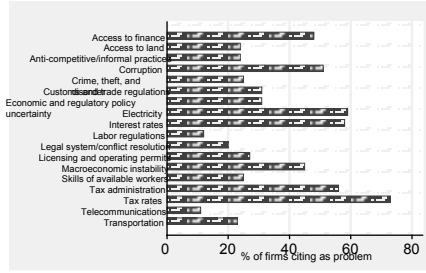
Senegal. For enterprises in Senegal, finance is ranked as the biggest problem; access to and cost of finance were more likely to be identified by enterprise managers as a major or severe constraint to the investment climate then any other constraint. Smaller firms in Senegal have much less access to finance; only 20 percent of small-sized firms reported having access to formal bank credits compared to 90 percent of large firms. Following the constraint of finance, tax rates and anticompetitive practices rank highest as serious constraints. Fifty-five percent of enterprises perceived tax rates as a major or severe constraint, whereas 54 percent stated anticompetitive practices (informality) as a serious problem. The tax system in Senegal is more complex than those of other countries in the region with higher corporate and local taxes levied on enterprises. Compared to the other three focus countries, firms in Senegal are more likely to perceive informality as a major or severe constraint.



South Africa. Worker skills, macroeconomic instability, labor regulation, and crime and theft stand out as the most important problems for the investment climate. However, when compared to the other three focus countries, relatively few firms rated the constraints as major or severe problems. For firms in South Africa, 35 percent of managers were more likely to rate worker skills as the most serious obstacle to their enterprise, suggesting that firms find it difficult to hire skilled workers. This could be explained by higher wages for skilled workers and mangers relative to other countries in the region. Following worker skills, macroeconomic instability and labor regulations are pointed out as the second and third most serious constraints. Although growth has been increasing steadily and inflation has remained low for the last decade, exchange rates have been very unstable, with the Rand depreciating against major currencies. Labor regulation in South Africa appears to be more rigid than in most of the comparator countries, and the cost of firing and hiring workers is higher than in most OECD countries. Another important obstacle identified as a serious problem is crime and theft. Direct losses due to crime and robbery and security costs in South Africa are a lot higher than they are in other middle-income countries.

(cont.)

Tanzania. Firms in Tanzania point out tax rates and administration, electricity, interest rates, and corruption as the leading constraints to the investment climate. Over 70 percent of firms were more likely to perceive tax rates as a serious problem than any other constraint. Despite being ranked the biggest concern, corporate income tax rates are similar to rates in other developing countries; however, value-added rates are slightly higher than those of comparator countries. Electricity came in second as the highest-ranked constraint to the investment climate. Sixty percent of firms rated the power sector as a serious problem, even though the cost of power is not excessively high in Tanzania compared to other countries in the region. When broken down by firm size, concern was more widespread among larger enterprises; the median firm reported losing 5 percent of production due to power shortages. Despite considerable progress achieved in developing the Tanzanian financial sector, access to and the cost of finance continue to be reported as important constraints. Interest rates in Tanzania are very close to those in neighboring countries; however, access to finance seems to be more of a problem in this country. Another highly ranked constraint is the problem of corruption. In comparison to other countries in the region, Tanzania does well on most measures of governance; however, in terms of corruption, it lags behind most comparator countries.



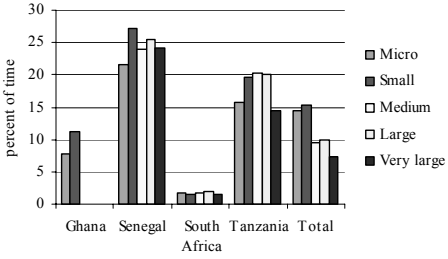
Sources: World Bank Investment Climate Assessments for Senegal, South Africa, and Tanzania. Teal et al. 2006 for Ghana.

Quality of Infrastructure Services

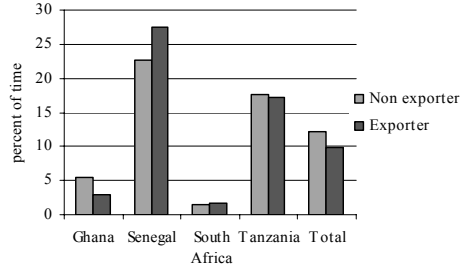
Infrastructure is often cited as the most immediate source of the high cost of doing business in Sub-Saharan Africa. Among various dimensions of infrastructure-related constraints, the poor quality of power services is the leading bottleneck, causing interruptions in production and thus revenue losses. (Owning generators only adds production costs.) The limited availability of communications networks also costs firms marketing opportunities. Transportation costs are also excessively high in Africa due to the poor road, port, and aviation services quality, as discussed in chapter 5. Economic sparseness is a considerable obstacle to the quality of infrastructure services in the region, but it is clear that the quality of management of infrastructure systems is also questionable. The most recent progress in infrastructure in Sub-Saharan African countries has been made in the area of telecommunications, where the successful incorporation of private providers of cellular infrastructure has enhanced the overall accessibility of telecommunications networks. The least progress has been made in electricity, where effective reforms of national companies still lag.

Figure 4.18 Electricity Service Interruptions from Public Grids, Percent of Time

(A) By Size and Country



(B) By Exporter Status and Country



Source: World Bank Investment Climate Assessment for Senegal, South Africa, and Tanzania. Teal et al. 2006 for Ghana.

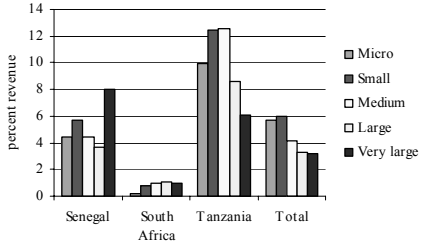
Electricity. Based on the ICA data in Senegal, South Africa, and Tanzania, as well as a comparable data set for Ghana, figure 4.18 presents reported average interruptions of electricity as a percent of production time and average revenues lost due to electricity outages from public grids, by size category and by exporter status. The figure shows that Senegal and Tanzania have the highest average electricity interruption time, accounting for close to 25 and 20 percent of production time, respectively. South Africa has the best electricity supply, with only about 2 percent of interruption time. In terms of firm size, there is no particular pattern within each country that indicates a consistent correlation between the size of the company and the electricity supply. On average, however, micro and small firms suffer more electricity interruptions than do large firms.

There are no consistent patterns among the four countries in terms of electricity interruptions between exporters and nonexporters. However, the average of the four countries shows that exporters experience fewer power outages than do firms that sell products domestically.

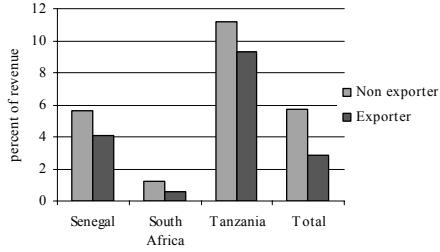
shows the average percentage revenue lost due to electricity outages. The average revenue loss is consistently higher for nonexporters than for exporters. This is an especially interesting case for Senegal, where exporting companies experience more frequent average incidents of electricity outages but a lower percent of average revenue loss. Also, although Senegal has the highest percent of electricity interruption time among the four countries, its average revenue loss due to the electricity outages is much lower than that of Tanzania. One reason is that Senegal has better facilities and capacity to monitor electricity outages so that firms can report outages more accurately.[22]

Figure 4.19 Loss of Revenue Because of Electricity Outage, Percent of Sales Revenue

(A) By Size and Country



(B) By Exporter Status and Country



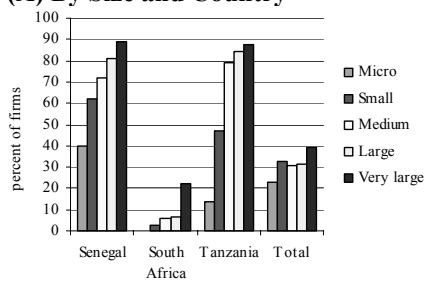
Source: World Bank Investment Climate Assessment for Senegal, South Africa, and Tanzania.
Note: Ghana is not included in the figures owing to lack of comparable data.

To compensate for the shortage of electricity, firms operating in Africa often need to own generators to supplement the electricity supply (figure 4.20). Generator ownership is more prevalent in Senegal, at 64 percent, than it is in Tanzania, at 56 percent. In all three countries, there is a clear pattern that the ownership of generators increases with size. There is not a visible difference between exporters and nonexporters in terms of generator ownership in Senegal. In Tanzania, while over 85 percent of exporters own generators, only about 50 percent of nonexporters do.

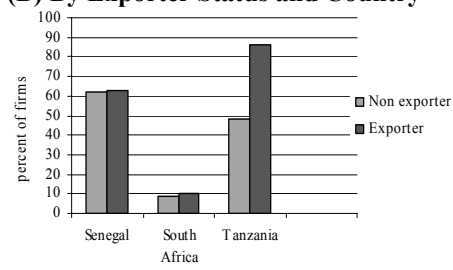
Telephone and Internet. In terms of telephone services, Senegal and South Africa have far fewer interruptions—only around one to three percent—than Senegal and Ghana (figure 4.21). In Ghana and Tanzania, micro companies experience much higher telephone interruptions—on average at above 20 percent—than larger-sized companies. In all countries except Tanzania,

Figure 4.20 Proportion of Firms with Generators

(A) By Size and Country



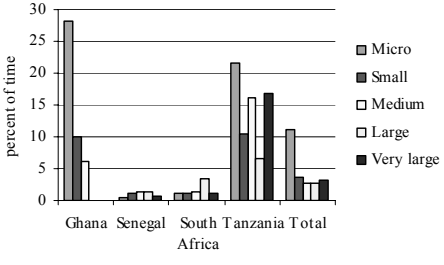
(B) By Exporter Status and Country



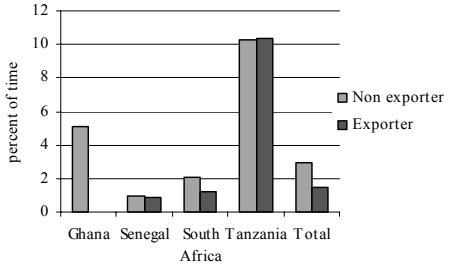
Source: World Bank Investment Climate Assessment for Senegal, South Africa, and Tanzania.
Note: Ghana is not included in the figures owing to lack of comparable data.

Figure 4.21 Telephone Service Interruption, Percent of Time

(A) By Size and Country



(B) By Exporter Status and Country



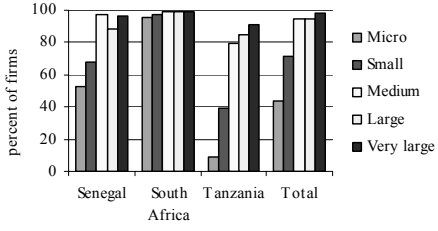
Source: World Bank Investment Climate Assessment for Senegal, South Africa, and Tanzania. Teal et al. 2006 for Ghana.

nonexporters experience a higher percentage of telephone interruptions than exporters.

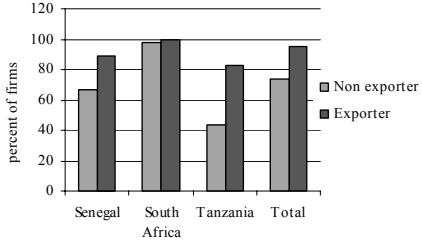
In terms of Internet access, South Africa has almost 100 percent access for all firms while Senegal and Tanzania have much less (figure 4.22). While about three-quarters of Senegalese firms have access to the Internet, only half of Tanzania firms have the access. The Internet divide, not surprisingly, is most pronounced in Tanzania where Internet access is low, with only 10 percent of micro companies having Internet access compared to more than 80 percent for the medium or above-sized companies. The Internet divide between exporters and nonexporters is also most pronounced in Tanzania. An increasing number of studies have addressed the trade facilitating role of the Internet. Use of the Internet is particularly relevant for African manufacturers to access to the global market.[23]

Figure 4.22 Proportion of Firms with Internet Access

(A) By Size and Country



(B) By Exporter Status and Country



Source: World Bank Investment Climate Assessment for Senegal, South Africa, and Tanzania.
Note: Ghana is not included in the figures owing to lack of comparable data.

Efficiency and Accessibility of Factor Markets

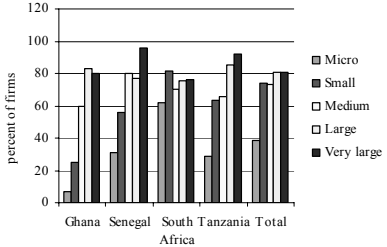
Access to Finance. Another serious bottleneck for firms operating in Africa is the lack of access to reliable and inexpensive financing (see box 4.3, above). The demand for trade finance in Africa far exceeds supply from commercial or noncommercial sources, foreign or local. Paradoxically, in many African markets, capital is not in short supply. For example, in the single-currency, eight-nation West African Economic and Monetary Union (UEMOA), more than $2 billion in excess liquidity lies dormant in the central bank.

When compared with firms operating in China and India, firms operating in Africa have less access to loans and overdrafts, use more internal funds and retained earnings to fund investments and operating costs, pay much higher interest rates, and are required to register much more assets as collateral. Market failures are rampant. Small firms are less likely to get loans; relationships and ethnic connections are very important in access to credit; and outstanding debt is positively related to obtaining future lending.

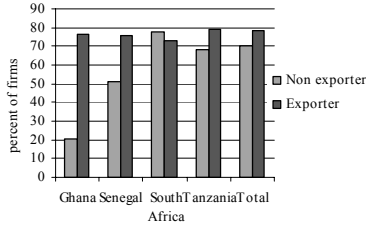
Figure 4.23 consistently shows that, in each country, access to finance improves with firm size. South African, Tanzanian, and Senegalese firms reported relatively high access to financial credit or overdraft facility (at 75, 70, and 60 percent, respectively). Access to financial services is the lowest in Ghana (at only 30 percent only). In addition, the financial divide is the most pronounced in Ghana, with micro and small firms having little access to financial services, but large and very large firms having access equivalent to that of South African companies. The difference in access to financial services between exporters and nonexporters is also the largest in Ghana, visible in Senegal, and not very significant in Tanzania.

Figure 4.23 Proportion of Firms with Access to Financial Services (Overdraft Facility or Loan)

(A) By Size and Country



(B) By Exporter Status and Country



Source: World Bank Investment Climate Assessment for Senegal, South Africa, and Tanzania. Teal et al. 2006 for Ghana.

Table 4.6 Cost of Hiring and Firing

Country	Rigidity of Employment Index	Hiring Cost (% of Salary)	Firing Cost (weeks of wages)
S.S. African Average	53.1	11.8	53.4
Ghana	34.0	12.5.0	24.9.0
Senegal	64.0	23.0	38.3.0
South Africa	52.0	2.6	37.5.0
Tanzania	69.0	16.0	38.4
East Asia Average	26.2.0	8.8	44.2.0
China	30.0	30.0	90.0
South Asia Average	39.9.0	5.1	75.0
India	62.0	12.3.0	79.0

Source: World Bank Doing Business 2006.

Labor Market Rigidities and Shortages in Skilled Labor. Restrictive labor regulations can limit flexibility and increase operating costs. Sub-Saharan Africa suffers from very large regulatory burdens on labor markets, which translates into excessively high rigidity in the workers' mobility (see table 4.6).

A highly skilled labor force is critical for firms operating in Africa, including firms owned by Chinese and Indians, to build export competitiveness. The shortage of skilled labor is the most significant constraint reported by the majority of the firms that participated in the WBAATI Business Case Studies (see box 4.4). The types of skill that are in short supply vary among countries and sectors. In some cases, the scarcity of skilled labor (e.g., technicians) is acute. In other cases, firms claim that there is not a sufficient supply of skilled engineers and managers with experience in export-oriented business and modern commercial practices.

Box 4.4 Shortage of Skilled Labor in Africa

In South Africa, the problem of skilled labor shortage seems to be pervasive. Among firms that participated in the Business Case Studies, a shortage of engineers was reported in the large export-oriented apparel manufacturing industry. A few graduates of South African universities from the "previously advantaged group" (white) are moving to Australia and New Zealand because it is difficult for them to find jobs after school due to the government's Black Economic Empowerment program, which favors employment of people in "previously disadvantaged groups" (e.g., black, colored, and Indian). The country also lacks productive workers for the assembly of vehicles. There is also a shortage of specialized mechanics and engineers. Firms look for qualified labor nationwide. They subcontract to specialized engineers (from three companies) some specific tasks such as detailing and tools drawing. In the automotive sector, qualified workers may likely go to their foreign competitors, like Toyota, Nissan, Daimler-Chrysler, and Mazda. So their strategy for obtaining qualified workers is to pay more. In the apparel and textiles sector, firms that provide training lose their best qualified employees to their competitors. In Senegal, there is a lack of specialized engineers. A Chinese firm in Senegal has found it very difficult to employ local managers and technicians that have experience operating in large construction projects.

(cont.)

The shortage of skilled workers is voiced by Chinese and Indian firms, as well as local indigenous companies, as one of the major constraints they face in Africa. Chinese firms cope with this problem by either bringing skilled workers from China (construction firms) or by limiting the manufacturing component of their operations in Africa. As an example for the latter case, one Chinese automobile maker operating in South Africa decided to shift from *Complete-Knock-Down* (CKD) to *Complete-Build-Up* (CBU) in automobile manufacturing to reduce manufacturing components in their operation in South Africa.

Source: World Bank staff.

Regulation, Governance, and Judiciary System

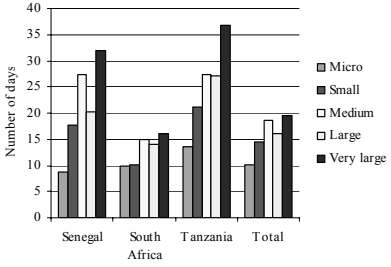
In addition to insufficient infrastructure and financial services as well as rigidities in the labor market, large regulatory burdens and weak discipline on governance constitute significant impediments to business development among firms operating in Africa, including those owned by Chinese and Indians.

Figure 4.24 shows that Tanzania has the highest incidence of inspections per year at an average of 27 days, compared to 19 days in Senegal and 14 days in South Africa. For all three countries, larger firms tend to be inspected more often, as do exporters. The number of inspections could be correlated with the scope and the scale of the firms' activities. Nonetheless, the excessively high frequency of government inspections places serious constraints on them.

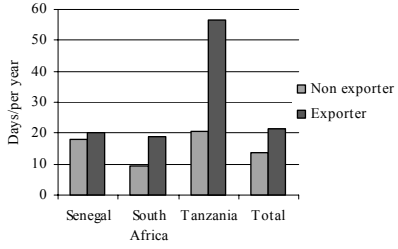
Corruption remains a serious issue in African countries. Small companies in Ghana, Senegal, South Africa, and Tanzania chronically report the burden of having to make unofficial payments (figure 4.25). Among the three countries, South African firms reported almost no unofficial payments. In Tanzania, micro and small firms reported the highest unofficial payments as percent of sales, while in Senegal, only very large firms are exempted from high unofficial payments.

Figure 4.24 Average Number of Days of Inspections per Year

(A) By Size and Country



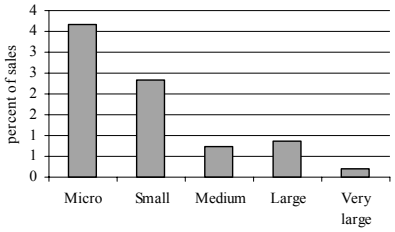
(B) By Exporter Status and Country



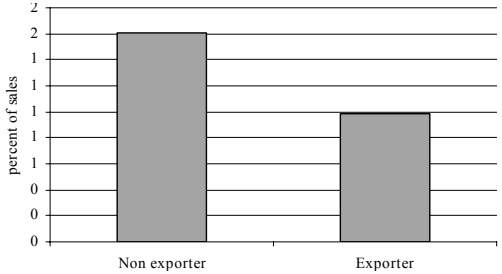
Source: World Bank Investment Climate Assessment for Senegal, South Africa, and Tanzania.
Note: Ghana is not included in the figures owing to lack of comparable data.

Figure 4.25 Unofficial Payments as Percent of Sales

(A) By Size



(B) By Exporter Status



Source: World Bank Investment Climate Assessment for Senegal, South Africa, and Tanzania.
Note: Ghana is not included in the figures owing to lack of comparable data.

Enforcement of property rights and contracts is at the heart of a properly functioning market economy. However, many African countries have serious deficiencies in their judicial systems, due to lack of resources and human capital, weak institutional capacity, as well as lack of transparent administration. Therefore, business disputes tend to be costly and lengthy in the Sub-Saharan Africa region. In the case of Ghana, Senegal, South Africa, and Tanzania, contract enforcement is costly in terms of the duration of time it requires if not the number of procedures or cost (table 4.7).

Table 4.7 Contract Enforcement

Country	Procedures (number)	Time (days)	Cost (% of debt)
S.S. African Average	35.9.0	438.5	41.6
Ghana	23.0	200.0	14.4
Senegal	33.0	485.0	23.8
South Africa	26.0	277.0	11.5
Tanzania	22.0	242.0	35.3.0
East Asia Average	29.8	406.8	61.7
China	25.0	241.0	25.5
South Asia Average	29.9.0	385.5	36.7
India	40.0	425.0	43.1

Source: World Bank Doing Business 2006.

CONCLUSIONS AND POLICY IMPLICATIONS

Summary of Main Findings

The basic diagnostics of behind-the-border conditions, based on the WBAATI Survey data, find that surveyed larger firms outperform surveyed smaller firms both in productivity and exports. Among the surveyed firms, export propensity is lower for domestically owned firms than for Chinese or Indian firms.

An assessment of the sources of competition in these African markets at the country level suggests that, not only do imports play an important role, but so do low domestic entry and exit barriers, the incidence of FDI in the market, and access and integration into global production networks. Not surprisingly, firm turnover is found to be more prevalent among smaller businesses, while larger firms enjoy longer tenure and higher market shares. Again, this is true regardless of firm nationality. The data suggest that entry via FDI is an important channel through which competition is introduced into these surveyed African markets, a finding consistent with research on other regions of the world. International integration into production networks—the focus of chapter 6—particularly upstream in the value chain, appears to stimulate competition among the surveyed firms.

The evidence from the degree of competition among different nationalities of firms indicates a clear role played by Chinese and Indian investors in fostering domestic competition in African markets. In fact, a mutually reinforcing effect is found: African firms that face more competitive markets at home have greater involvement with Chinese and Indian capital, while the African markets where Chinese and Indian investors are most prevalent tend to be the most competitive. The analysis also shows that the major source of the competition engendered in the African markets by the presence of Chinese and Indian investors is competition from imports—indeed imports from China and India themselves. Chinese and Indian investment also provides opportunities for indigenous African firms to form joint ventures or backward-forward linkages with such investment. The question is whether skills and technology are effectively transferred from such business relations.

African countries continue to face high business transaction costs due to poor infrastructure quality, inefficient and insufficient factor markets such as shortages in credit access and skilled labor, labor market rigidity, and heavy regulatory burdens and weak governance and judiciary systems. As is the case elsewhere in the world, the analysis suggests why such factors constitute integral roles in Chinese and Indian (as well as other) investors' location choices in Africa. To be sure, there have been visible efforts taken by several African governments in reforming their domestic business environments. But African countries overall still lag other regions with whom they are competing both in terms of attracting investment and exporting to foreign markets.

Policy Implications

Proper conditions for greater domestic competition and sound governance in the domestic market are of high priority on the reform agenda of African countries to enhance the prospects that trade will engender growth in those countries. It is important to emphasize that strong policy initiatives are critical for supporting Africa's private sector to effectively link competition and international integration.

In order for competition to work, the countries need to implement more rigorous policy reforms to encourage competition by providing necessary institutional frameworks to foster entry and exit and eliminate inefficient barriers. Governments should work toward eliminating economic and policy barriers to entry and establishment of new businesses. Stronger efforts among policy leaders are needed to reduce administrative barriers and remove underlying economic barriers to entry. At the same time, barriers to exit of commercially nonviable firms need to be eliminated. Exit barriers can be lowered through reduction of publicly provided subsidies to businesses. National competition policies in Sub-Saharan African countries are still at an early stage of their development and need to be properly institutionalized to build competitive markets at home.

African countries continue to face high business transaction costs, due to inferior quality of infrastructure, insufficient access to credits, rigid labor markets, heavy regulatory burdens, lack of transparency in public administration, and weak judiciary systems. For competition to work and to develop a mutual reinforcing linkage with international integration, more comprehensive improvements in the investment climate are in order. African countries must reinvigorate their efforts toward investment-climate reforms in those countries in all aspects. It is important, in this regard, to promote more active public-private dialogue in such forms as Investor Councils, thereby allowing the governments to absorb concerns from the private sector (see chapter 3).

Private markets in Africa need to be sufficiently large relative to procurement-based markets with governments so that business transactions with the government do not crowd out the incentives of private firms to compete in the private market. Government procurement policies need to be transparent and market-oriented. Improving quality of institutions, strengthening governance, and reducing incentives for corruption are critical components of behind-the-border reforms to engender the international integration of African countries. This will require greater transparency and accountability of public officials' conduct, a reorientation of the public sector incentive framework (for example, through civil

service and public administration reform), and establishment of a stronger system of checks and balances.

Improving governance will require strengthening well-functioning institutions that facilitate contract enforcement. Efficient settlement of commercial disputes is generally limited by lengthy procedures, lack of qualified and independent judges, and weak enforcement mechanisms. Policies towards the simplification and cost reduction of formal legal procedures will strengthen contract sanctity and property rights and improve the level of confidence that businesses have in the investment environment of the region.

Lastly, policy initiatives to foster domestic competition have to be in tandem with various supports for scaling-up private sector capacity in expanding their value-added activities along the value chains and absorbing skills and technology through interacting with foreign investors, including Chinese and Indian investors. Thus, the African governments, in support of international donors, need to implement more comprehensive capacity building-programs of small and medium enterprises (SMEs), encompassing improvement in credit access, skills development among workers, and supporting their market access both domestically and internationally.

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ANNEX

Table 4A.1 Average Market Share in Domestic Market, by Sector and by Country (%)

Sector	Ghana	Senegal	South Africa	Tanzania	All Four Countries
Agriculture and Food	32.0	49.1	52.4	41.4	42.4
Chemicals	21.6	77.6	62.0	46.4	47.2
Construction	28.4	28.0	40.3	25.9	31.4
Machinery	34.3	67.0	43.5	37.6	41.4
Non-Construction Services	22.1	54.7	33.7	24.9	35.5
Non-Durable	26.9	50.3	45.1	40.1	38.8
Non-Oil Minerals and Metals	30.1	50.0	59.2	28.9	36.1
Textiles	16.9	66.2	44.2	43.1	44.4
All Sectors	26.3	57.1	42.0	33.9	38.8

Source: World Bank staff.

Table 4A.2 Top Buyer and Supplier Shares: Joint Distribution

		Top Supplier Share in Total Purchase						All % level of top supplier share
		<5%	5-10%	10-25%	25-50%	50-99%	100%	
Top Buyer Share in Total Sales	<5%	24	10	8	11	15	3	71
	5-10%	8	17	13	21	22	5	86
	10-25%	7	15	13	29	14	8	86
	25-50%	1	3	9	26	18	3	60
	50-99%	0	4	5	10	26	9	54
	100%	0	0	1	1	4	16	22
All % level of top buyer share		40	49	49	98	99	44	379

Source: World Bank staff.

ENDNOTES

1. *Productivity* measures how efficiently firms produce their products and services using one unit of factor input, either as labor or capital. *Value-added* per work and value-added per a unit of capital are used to show labor and capital productivity of the firms. *Export intensity* is measured as the share of export sales revenue in the total sales revenue and indicates how well firms perform in terms of exports. For both labor and capital productivity, productivity for services has to be interpreted carefully because services require substantive amounts of nontangible material inputs that are not captured by materials in the sense of raw and intermediate materials for manufactured products.

2. In the survey, the capital value is measured in terms of replacement cost of capital firms.

3. See Tybout (2000) for the survey of the literature on this topic.

4. Total factor productivity is in fact found to be higher among medium-sized firms while lower among small and large firms.

5. State-owned enterprises are excluded here due to the small number of firms who provided revenue and cost information in the survey.

6. See, for example, Stoford and Wells (1972) and Fagre and Wells (1982).

7. The technology employed is not as current as in the wholly owned foreign counterpart, partly due to fear of having the technology misappropriated. Concerns about quality control inhibit integration of local production into the parent's global networks. See Moran (1998).

8. Based on the Brazil data in the 1970s, Evans (1979) found supporting evidence for foreign investors choosing joint ventures as their optimal strategy. Using Ghanaian firm-level data, Acuaah (2005) found that the enhancement in manufacturing efficiency and quality improvement in privately owned enterprises could be traced to the activities of foreign–domestic joint venture enterprises. However, as market competition increases, wholly domestic-owned enterprises emphasize manufacturing efficiency and quality improvement more that foreign–domestic joint venture enterprises.

9. For example, Broadman (2005) provides a comprehensive analysis of how domestic competition effectively promotes integration of East European countries and the Former Soviet Union.

10. The existing studies on the role of competition in the African private sector are often conducted for individual countries. For example, Azam et al. (2001) for Cote d'Ivore, Haji (2001) for Tanzania, Reinikka and Svensson (1999) for Uganda, and Frazer (2005) for Ghana.

11. Another measurement of intensity of domestic competition is average domestic market share by individual firms. In this case, domestic competition is more intensive if average market share is smaller. See Table 4A.1 in the appendix.

12. For the remainder of the chapter, "numbers of competitors" in the WBAATI Survey data always refers to the numbers of competitors in reference to national markets of the four African countries the survey covered.

13. Note that "local competitors" includes firms owned by foreign nationals but operating in Africa as opposed to "foreign import competitors," who are physically located outside of the market and compete with local firms through imports.

14. Fafchamps (2004).

15. Formal policy-based barriers as well as nonpolicy institutional barriers would have different impacts on firm turnovers depending on the size of the firms. Nonpolicy institutional barriers such as ethnic networks would have stronger impact on smaller-sized and informal sector firms. There are several studies that have examined firm turnover patterns in Sub-Saharan African countries. They are consistently reporting higher turnover rates among smaller firms. Based on the data from firm-level surveys conducted in the 1990s through the Regional Program on Enterprise Development (RPED), Harding, Soderbom and Teal (2004) report that more than 40 percent of firms existed in Tanzania and Kenya between 1993–94 and 1998–99 and 20 percent in the case of Ghana. For both Ghana and Kenya, they found that the exit rate decreases with the firm size. Using similar data of Ghana, Frazer (2005) also found larger firms are less likely to exit. The finding that smaller firms have high turnover rates is consistent with the data from the WBATTI Survey.

16. Entry can occur through several channels. Each channel would have a different impact on domestic market concentration. Entry can affect market structure not only by altering the relative market shares of sales, but also the number of producers; thus, the effects of foreign business entry on domestic market structure and competition may vary. Entry through imports as well as greenfield investment decrease market concentration in host countries. On the other hand, mergers would increases domestic market concentration (Broadman 2005).

17. Although it is not as clear as the sales side, a similar pattern exists on the purchase side.

18. This linkage is clearly shown in the case of East Europe and Former Soviet Union per Broadman (2005).

19. As the data on competitors are not measured in a perfectly objective manner, the numbers of competitors from the same home countries can be biased upward, particularly among foreign-owned firms. However, the table shows that, comparing *across different origins of competitors* (rather than comparing *across different firm nationalities*), local competitors and competitors from neighboring African countries are the leading origins of competitors for any nationality group. Thus, potential upward bias should not change the basic pattern in any significant manner. Even with the bias being corrected, it appears that Chinese and Indian import competition are felt more by Chinese and Indian firms operating in Africa than indigenous African firms.

20. Recently, Helpman, Melitz, and Yeaple (2004) both theoretically and empirically showed that more efficient firms would choose FDI to serve a foreign market while less-efficient firms serve the market by exporting their products.

21. Macroeconomic data show that African countries in general are high-cost countries relative to income and productivity. In addition, several recent studies based on firm-level data show that manufacturers in Africa also experience high transaction costs at the micro level. For example, Eifert, Gelb, and Ramachandran (2005) show how high indirect costs reduce the productivity and competitiveness of manufacturers across Africa. These costs are reducing productivity for the region's manufacturers. Indeed, the combination of high regulatory costs, unsecured land property rights, inadequate and high-cost infrastructure, unfair competition from well-

connected companies, ineffective judiciary systems, policy uncertainty and corruption makes the cost of doing business in Africa 20–40 percent above that for other developing regions, according to the World Bank Doing Business Indicators.

22. See Eifert, Gelb, and Ramachandran (2005).

23. Using industry-level data, Clarke and Wallsten (2006) found a strong effect of the Internet in promoting North-South trade. Using firm-level ICA data of African manufacturing firms, Yoshino (2006) found that the use of the Internet has much more significant effect for firms to export outside of Africa than to export within Africa.