Chapter 6

Raising Productivity in Africa’s Modern Wage Enterprises to Foster Job Growth for Youth

Although small (around 16 percent of the labor force), the wage employment sector represents Africa’s engine for employment and growth in the medium to long term, especially given the sector’s potential to exploit economies of scale and produce for export. Yet wage employment is growing unevenly across Africa. Modern manufacturing firms, in particular, account for only 3 percent of employment and export very little. This limited competitiveness in export markets is mainly the result of low productivity in the modern wage sector. It signals the presence of government and market failures, which vary across the subcontinent but have similar effects. Complementary inputs to labor (electricity, overland transport, and so on) are costly, regulations strangle business processes and the movement of goods, the high costs of financial intermediation starve investors of capital, and the small domestic markets and trade barriers suppress competition and reduce pressure to innovate and improve productivity.

Governments in Africa can do much to remedy this situation. The most important step is to improve the business climate through key reforms to improve access to finance and infrastructure services, improve trade logistics, and ease regulatory constraints to entrepreneurship. Many reforms are not so expensive in monetary terms and can deliver huge impacts in the short run by reducing distortions and increasing efficiency. Selective and spatially targeted support to emerging clusters can promote agglomeration economies. For young people to be truly productive in modern firms, governments should foster a strong foundation in basic skills by improving the quality of general education. In the training sector, governments should focus on “public goods” such as quality assurance and information to foster a sector that is efficient and relevant to the market for skills. Programs for disadvantaged youth that integrate training with internships show promise, as do programs offering managerial training.
Alongside employment in household farms and firms, discussed in the previous two chapters, employment in modern enterprises is becoming increasingly important to African youth. If history is any guide, this trend will only continue. As European and North American countries developed, jobs in modern enterprises gradually replaced other kinds of jobs, even in agriculture. In developed countries today, the modern wage sector dominates employment. In East Asia and China, the growth of jobs in modern firms is following a similar pattern.

The modern wage sector, as defined in this report, includes small, medium, and large firms that continuously employ five or more workers. It also includes the public sector. Historically wage employment grew as jobs in public services and public manufacturing enterprises expanded, but no more. As governments have sought to curb inefficiency and improve competitiveness, they have rolled back employment in the public sector—in some cases drastically, as in Ethiopia and Ghana in the 1990s—which has reduced the share of public sector employees among wage and salary earners. For young people seeking wage employment, a public sector job may be more elusive than ever. Instead, the primary challenge is to sustain high rates of investment and job creation in the private sector, where productivity and competitiveness really matter.

This chapter closely examines employment in modern enterprises in manufacturing, services, and other nonfarm sectors such as construction because they have the greatest potential to drive productivity and employment in the medium to long term, as Africa’s young workforce grows. Unlike household farms and firms, modern enterprises in these sectors are not limited by family size, so they can expand to exploit economies of scale, and they are far more likely to adopt the new technologies that permit them to do so. Because modern firms can impel higher productivity and create jobs, policy makers are understandably concerned with their development. But as shown in the discussion that follows, the circumstances must be right for entrepreneurship and productive firms to grow.

**Africa’s Modern Enterprise Sector: An Overview**

Modern nonfarm wage employment is growing across Africa, but inconsistently. With the exception of some countries—notably Mauritius and South Africa—nonfarm enterprises account for under 20 percent of the wage employment in Africa (figure 6.1, panel a). Despite reductions in public sector employment, the private modern wage sector still provides less than 10 percent of employment in most African countries (figure 6.1, panel b). Even by the standards of Asian and Latin American countries with comparable levels of per capita income, employment in Africa’s modern nonfarm enterprises is low, and it is extremely low in comparison with larger emerging economies such as Brazil, China, and Indonesia.

The expansion of employment in modern wage enterprises has been quite inconsistent across Africa. Labor force surveys reveal that while the modern wage sector has absorbed a growing share of the labor force in Madagascar, Mali, Tanzania, and Uganda, its share in total employment has changed little in Ethiopia, Kenya, and Zambia and has declined in other countries, such as Malawi and Senegal (figure 6.2).

Africa’s young people seem to have no special advantage when it comes to modern wage employment (box 6.1). Although the current generation has more education than its predecessors, employers seem to value the experience brought by older workers.

Service jobs, both with and without a formal contract, dominate wage employment in Africa. The single largest share of formal wage employment in services consists of jobs in education, health, and other social services (largely in the public sector). The next largest share consists of jobs in commerce (retail and wholesale) and transportation (figure 6.3, panel a).

Outside the service sector, manufacturing and construction each account for about 10 percent of wage jobs. Almost half of all manufacturing employment in modern firms is found within industries broadly classified as food and textiles (including leather and leather goods) (figure 6.3, panel b). Some countries,
such as Cameroon and Rwanda, have significant employment in the wood-processing industry. Employment in high-tech industries, such as machinery and electronics, is quite limited, although employment in the chemicals, plastic, glass, and paper industries is important in some countries.

**Modern Manufacturing Delivers Little Employment, Few Exports**

Despite their considerable untapped potential for employment growth, modern manufacturing enterprises currently account for less than 3 percent of total employment in Africa, which is a good deal lower than in other regions of the world (figure 6.4). The ratio of manufacturing wage employment to total employment varies significantly from one country in Africa to the next (and it is declining in some countries), but there is no indication that Africa as a whole is catching up with its comparators.

The concern is not just that the manufacturing sector is so small, but that manufacturing firms export so little of what they produce. The percentage of African manufacturing firms exporting is among the lowest in the world; the share of African manufacturing output sold domestically is among the highest (figure 6.5). The poor performance of Africa’s manufacturing sector is especially worrying because trade-oriented manufacturing may offer the best chance of quickly creating modern wage jobs. African economies are small, so developing an export-oriented sector is more important to them than to developing countries in other regions like South Asia, where domestic markets are generally much larger (Dinh et al. 2012). Small markets curb productivity and growth in employment by limiting the potential scale economies that industries can achieve. Because a small domestic market can support only a limited number of firms, the resulting lack of competitive pressure puts a brake on investment and growth. In the absence of trade, small economies are also less likely to benefit from agglomeration economies, simply because manufacturing clusters are much less likely to emerge (Collier and Venables 2008).

Given the potential significance of trade to Africa and the fact that manufactured goods are inherently more tradable than most services, the analysis in this chapter focuses more on manufacturing than on services. The reason for this approach is not that manufacturing is the only alternative for creating productive modern wage jobs in Africa. It is not. Services represent an increasingly important share of global trade, and Africa can certainly pursue this means of expanding wage employment.
Productivity growth in nontraded sectors can also create wage jobs, as demonstrated by recent growth in Africa’s construction sector. But as East Asia’s rapidly growing economies suggest, trade-oriented manufacturing may offer the greatest potential to create wage jobs. Equally important is the positive feedback from manufacturing to other domestic sectors. A growing manufacturing sector that is driven by trade—and hence not limited by the size of the domestic economy—will expand domestic demand for other industries (including services and construction) by raising incomes. Manufacturing firms will also demand a range of intermediate goods and services as inputs from domestic suppliers.

A final consideration is that manufacturing has been the subject of more research than other sources of wage employment in Africa. More and better data are available for the analysis, and the resulting policy lessons can be applied to firms in other sectors.

**How Competitive Is Modern Manufacturing in Africa?**

Traditional thinking on international trade contends that the relative abundance of production factors like labor, capital, and natural resources in a given country strongly determines which of its economic activities are internationally competitive. Given that Africa has rich natural resources but relatively poor human capital, Africa is thought to have a comparative advantage in producing primary commodities for export rather than manufactured goods for export (Wood and Berge 1997; Wood and Mayer 2001). More recent thinking suggests that factor endowments alone do not determine trade and that Africa could potentially become competitive in manufacturing.

First, aside from labor, capital, and natural resources, good infrastructure and public services also contribute to competitiveness. Utilities like electricity and water affect how much a firm can produce from a given amount of labor, capital, and raw materials. Transport costs influence the competitiveness of a country’s exports by affecting the cost of sending the output to export markets and the cost of importing inputs. Manufacturing, with its relatively complex supply chains, relies more heavily on infrastructure services than agriculture and extractive industries. Conceivably, investment in infrastructure could give rise to an internationally competitive manufacturing sector regardless of factor endowments.

Second, newer trade theories suggest that comparative advantage can be acquired over time, though not necessarily in a predictable way. For instance, an industrial cluster can sometimes become internationally competitive over time because of agglomeration econ-
Where do young people figure in Africa’s wage employment picture?

At present, in a cross-section of African countries, the ratio of wage employment to total employment among youth is remarkably similar to the ratio in the general population (see figure B6.1.1). The implication is that firms have no special proclivity to hire youth. Youth employment in modern enterprises simply grows in proportion to the growth of modern enterprises—no more, no less.

At the same time, this figure may not tell the whole story. It may be possible to enhance the impact of growth in wage enterprises on youth employment. Evidence presented in chapter 1 indicates that many individuals move into wage employment only when they are 30 years and older, which could reflect a preference for experienced workers. Policies that facilitate young people’s transition to wage employment, such as programs to support on-the-job training through internships or informational interventions to connect youths to firms needing their skills, might enable more young people to fulfill their aspirations for wage employment sooner rather than later. The scope for pursuing such policies and evidence of their effectiveness are discussed toward the end of this chapter.

Figure B6.1.1 The share of youth in wage employment tracks the share in the general population

Source: Based on household and labor force surveys.

Figure 6.3 Services form the largest share of nonfarm wage employment; within manufacturing, the food and textile industries dominate

Source: Based on standardized and harmonized household and labor force surveys (see appendix).
potential agglomeration economy (Fujita, Krugman, and Venables 1999). The development of India’s high-tech information technology clusters is a case in point.

Third, productivity at the firm level is now seen as a key determinant of international trade patterns. Firms in the same industry but located in different countries can both export, provided they are productive by international standards and can profitably charge competitive prices. Thus comparative advantage in extractive industries alone is not an inevitable outcome of Africa’s resource endowments. The question then becomes whether other sectors, particularly manufacturing, can become internationally competitive.

Unit Labor Costs as a Measure of Manufacturing Competitiveness

One measure of Africa’s manufacturing competitiveness is how much an industry has to pay workers for producing each unit of output. The specific measure used here is unit labor costs—wages divided by labor productivity (output per worker)—which are a more comprehensive measure of competitiveness than labor productivity or wages alone. Lower unit labor
costs indicate a higher degree of competitiveness (although unit labor costs have potential limitations as a single indicator of competitiveness; see box 6.2).

China’s experience illustrates how growth in manufacturing depends on maintaining international competitiveness. Between 1980 and 2007, China’s manufacturing workforce grew threefold, from 24 million to 72 million (figure 6.6, panel b). For a long time, the exceptional performance of China’s manufacturing industries benefited from China’s low wages relative to the rest of the world—including Africa. As employment started to expand, so did wage rates, which quadrupled between the early 1980s and 2007. But even as China was losing its labor cost advantage, its labor productivity grew at a rate that compensated for this cost increase, leaving unit labor costs virtually unchanged. As shown in figure 6.6 (panel b), China’s unit labor costs remained below those of other emerging economies throughout that period.

**Figure 6.5** African firms export relatively little

<table>
<thead>
<tr>
<th>Region</th>
<th>Percent Exporting Directly or Indirectly (at least 1% of Sales)</th>
<th>Proportion of Total Sales that are Domestic Sales</th>
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<tr>
<td>Middle East and North Africa</td>
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<td>East Asia and Pacific</td>
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<td>Latin America and the Caribbean</td>
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<td>Europe and Central Asia</td>
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<td>World</td>
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<td>Sub-Saharan Africa</td>
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<tr>
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<td>East Asia and Pacific</td>
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<td>Europe and Central Asia</td>
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<tr>
<td>World</td>
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</tr>
</tbody>
</table>

Source: Based on World Bank enterprise surveys.

**Box 6.2** Measurement issues and other limitations of unit labor costs

Unit labor costs—labor costs per worker divided by labor productivity or real (physical) output per worker—have some limitations as a measure of competitiveness. For instance, the unit labor costs in a shirt-making firm are its wages divided by the number of shirts produced per worker. However, the analysis in this chapter approximates labor productivity by value added per worker, where value added is revenue minus the cost of raw materials. This is standard practice when measuring labor productivity, and it is largely unavoidable, given that physical output is difficult to measure and to compare or aggregate across firms producing different goods.

Revenue and value added depend on both physical output and prices. Using revenue and value added instead of physical output can artificially inflate the measurement of productivity when firms charge higher prices than they would be able to charge in perfectly competitive markets (that is, a price mark-up). To the extent that high value added reflects a firm’s ability to charge high prices because of low market competition, it will overstate that firm’s competitiveness in international markets. If domestic market competition is relatively weak in Africa, then its competitiveness will be overestimated by revenue-based measures of labor productivity.

To account for price effects, revenue or value added per worker is deflated by an aggregate industry-level price index. Although this practice adjusts for changes in prices over time, it does not adjust for differences in price mark-ups across firms in the same industry. Nor does it adjust for differences in mark-ups across countries.

Another limitation of unit labor costs is that a firm’s competitiveness depends on total costs per unit of output, not just on labor costs. If the costs of other “indirect” inputs (such as water and electricity) are similar across the countries being compared, then labor costs per unit of output are what really matter. Evidence that African firms pay relatively more for indirect inputs than firms in other developing countries suggests, however, that unit labor costs overstate the competitiveness of African firms compared to firms in other developing countries.

Sources: Clarke 2011; Eifert, Gelb, and Ramachandran 2008.
Manufacturing Is Not Competitive in Most African Countries
Comparing trends in manufacturing employment and unit labor costs across Africa and emerging economies can help to determine whether African countries are competitive or on their way to becoming competitive. The comparison with China is especially important, because China maintains the lowest unit labor costs among large emerging economies and has a large export presence in most industries. Potential large competitors such as India seem to be reaching for similarly low unit labor costs. Because China’s market penetration is so widespread, even African firms considering exporting to nearby markets must maintain competitiveness with China. Seen through this lens, the manufacturing sector in most African countries is not competitive, although some countries may have reached competitive levels of unit labor costs. As labor costs rise elsewhere in the world—especially in China—they may create an opening for African manufacturing.

The countries selected for review are reasonably representative of Sub-Saharan Africa. They include low-income (Ethiopia, Kenya, Malawi, and Tanzania) and middle-income (Cameroon, Ghana, and Senegal) countries; resource-rich (Cameroon and Ghana) countries; countries from West and East Africa; and countries with large and small populations. Data for this sample are compared to data for emerging economies, particularly China.

Growth in manufacturing employment since 1990 has been inconsistent in these African countries (figure 6.7). Ethiopia and Kenya saw significant growth. Although small relative to total employment, manufacturing employment in Ethiopia increased from 82,000 in 1990 to 135,000 in 2007; over the same period, manufacturing employment in Kenya grew from 188,000 to 256,000. Cameroon, Ghana, and Malawi also experienced growth, though to a lesser extent. In contrast, Malawi, Senegal, and Tanzania saw relatively little change in the size of the manufacturing workforce.

Figure 6.8 depicts unit labor costs across the sample of African countries and three important emerging economies (Brazil, China, and India). As with manufacturing employment, trends in unit labor costs are mixed in Africa, suggesting that some countries could become competitive.

Based on the limited data available, Ghana appears to have unit labor costs that are comparable to those in Brazil, China, and India. As with manufacturing employment, trends in unit labor costs are mixed in Africa, suggesting that some countries could become competitive.

Source: UNIDO statistics.
costs, and the years in which manufacturing rapidly created jobs in Ethiopia coincided with a sharp decline in unit labor costs. In recent years, Ethiopia and Ghana have maintained unit labor costs almost on par with historical levels in China and well below levels in other major emerging-market economies, including Brazil and India.

Consistent with their disappointing growth in manufacturing employment, Senegal and Tanzania have higher unit labor costs compared to the large emerging economies. Tanzanian unit labor costs have declined in recent years, but they are not yet lower than those in Brazil, China, or India. Senegal’s unit labor costs have remained high for a long time.

The association between unit labor costs and employment trends has some exceptions. Unlike Ethiopia and Ghana, Kenya has seen significant growth in manufacturing employment despite having higher unit labor costs than the large emerging economies. Similarly, manufacturing employment has grown in Cameroon and Malawi, even though their unit labor costs have been relatively high in recent years.

Other approaches to measuring competitiveness consistently suggest that Africa is less competitive than other developing regions. For example, in the World Economic Forum’s Global Competitiveness Index, which defines competitiveness as “the set of institutions, policies, and factors that determine the level of productivity of a country,” African countries clearly rank the lowest among developing countries (World Economic Forum 2012). In the World Bank’s Doing Business index, which focuses largely on the regulatory environment, Sub-Saharan Africa ranks the lowest as well (World Bank 2012b).

### Is manufacturing creating jobs in some countries?
Growth in total manufacturing employment has been disappointing in Malawi, Senegal, and Tanzania, but their wood-processing industries (excluding furniture) have created jobs. In Malawi, the furniture industry and the rubber and plastics industry have also
created jobs. This information suggests that industry-specific factors, and not just national determinants, also matter for manufacturing growth.

Some industries have done well in several countries, while others have fared poorly. The number of jobs in the food, beverage, and wood-processing industries (and to a lesser extent the rubber and plastics industry) has grown substantially in Cameroon, Ethiopia, Ghana, and Kenya. The rubber and plastics industry has generated jobs in Cameroon, Ethiopia, Ghana, Kenya, and Malawi. In contrast, the textile and leather industries have been shedding modern wage jobs in almost every country analyzed for this report, except for Ethiopia (leather and leather goods) and Kenya (textiles).

These findings do not imply that certain industries are destined to do well regardless of the country context. For instance, although the furniture industry has recently created thousands of new jobs in Ethiopia, Ghana, Kenya, and Malawi, it has contracted steadily over the past two decades in Cameroon, Senegal, and Tanzania.

Instead, these findings indicate that industries do well when they are competitive. With some exceptions, employment trends in a given industry tend to mirror trends in its unit labor costs. For instance, the textile industry in Africa has higher unit labor costs than its counterparts in China and India, and it is losing jobs. Similarly, the leather industry has high unit labor costs in most African countries examined here, except for Ethiopia. In contrast, unit labor costs in the food-processing industry, which has created thousands of jobs in several African countries in recent years, compare favorably with those in emerging economies like China and India.

Low Wages Are Not Enough: Productivity Is the Linchpin of Competitiveness for Africa

Can African countries become competitive on the basis of low labor costs alone? It seems unlikely. African countries do not have a uniform wage advantage over other developing regions (figure 6.9). Although median labor costs in small and medium-size firms are slightly lower than in East Asia and the Pacific, they are similar to those in South Asia. Median labor costs in large firms in Africa are higher even than those in East Asia and the Pacific, which is significant because large firms tend to be the leading exporters in export-oriented industries.

Some African countries have a wage advantage over China and India, but it is more than offset by low labor productivity. Even though wages have been rising faster in China and India than anywhere in Africa over the past two decades, Africa is not closing the unit labor cost gap with them, because labor productivity has not been rising as fast in Africa as in China and India.

If Africa cannot compete with large emerging economies like China or India, could it compete with smaller developing countries on the strength of low wages? Again, it seems unlikely. Wages are not lower in African coun-
Does Africa really have a labor cost advantage?

As labor costs in manufacturing continue to rise in China, a common observation is that other developing countries with lower labor costs will be poised to compete with China (Lin and Monga 2011). Wages are expected to be lower in countries with significantly lower per capita incomes than China, including African countries. Recent research using firm-level data seems to contradict that view, however, suggesting that industrial labor costs in Africa are far higher than might be expected solely on the basis of gross domestic product (GDP) per capita (Gelb, Meyer, and Ramachandran 2013). Labor costs per worker are nearly 80 percent higher in firms in African countries than in firms in other countries at the same level of GDP per capita.

These findings are partly explained by an “enclave effect”: compared with countries at the same income levels in other regions, African countries have an enclave of manufacturing firms that have high labor productivity and pay high wages. But even after adjusting for this effect, African firms face nearly 50 percent higher labor costs.

Higher labor costs could be explained by labor market factors such as regulation and unionization, but on average indicators of labor market regulation do not differ significantly between African countries and the comparators. Another explanation is that prices are generally higher in African countries. This explanation is supported by a comparison of price levels, so it is possible that firms in Africa have to pay relatively high wages to compensate workers for the relatively high cost of living.

In turn, the high cost of living could result from the dominance of resource-based industries in Africa. High prices are a typical feature of resource-abundant countries, because the high income from resources raises the price of nontraded goods, including labor. These interactions are often cited to explain why resource-rich countries tend to perform so poorly when they rely on export-led growth alone (Sachs and Warner 2001).

Larger firms, in particular, pay higher wages in African countries. Research based on matched employer-employee data from 10 African countries suggests that larger firms pay higher wages partly because labor management is especially problematic in Africa, which has a much higher supervisor to worker ratio than elsewhere (Fafchamps and Soderbom 2006).

Sources of Productivity Gaps in African Manufacturing

To understand how African manufacturing can become internationally competitive, it is necessary to pry labor productivity open and examine its component parts. This section examines components of labor productivity in a group of developing countries, including many from Africa, using firm-level data collected by the World Bank’s enterprise surveys. To avoid complications arising from technological differences across industries, the analysis focuses on the textile industry, which is generally oriented toward exports and therefore more comparable across countries than domestically oriented industries.

The firm-level data show that labor productivity is particularly low in Africa, especially in the region’s low-income countries. Figure 6.10 illustrates this point by showing sales per worker, a measure of labor productivity, in the textile industry. For example, the annual turnover per employee in Tanzania’s textile industry is just US$9,000, compared to US$25,000 in Malaysia’s garment industry.

Labor productivity is low in Africa’s low-income countries partly because workers are not as well equipped with fixed capital (that is, plant and machinery) as their counterparts elsewhere in the world, such as China, Malaysia, Mexico, and Thailand (figure 6.11). The typical textile manufacturer in China, for
example, equips every worker with twice as much plant and equipment as a manufacturer in Tanzania.

Why does African manufacturing use so little capital per worker? A major reason for low capital intensity in Africa is that African firms do not have access to the same supply of capital as their counterparts in China. Although access to international capital is particularly important to African manufacturing (given low per capita incomes), studies of international capital flows suggest that Africa and other developing regions have limited access to international capital markets (see, for example, Kalemli-Ozcan, Alfaro, and Volosovych 2008). Imperfections in Africa’s domestic credit markets, discussed later, are also likely to be worsening their access to capital.

A low level of fixed capital can only partly explain why output per worker is so much lower in most African countries than elsewhere. The difference in fixed capital between firms from Africa and those from other parts of the world is not as great as the difference in output (figure 6.11). For instance, the difference in fixed assets between Tanzanian and Chinese textile firms is significantly lower than the difference in output. Namibian textile firms produce significantly lower output per worker than their Chinese counterparts but have similar levels of fixed assets.

Even with the same level of plant and machinery, it is possible that workers in one country cannot produce as much as those in another. A range of factors other than plant and machinery affect labor productivity. Some of these factors are external, such as the quality of infrastructure. In general, these other factors are less concrete than plant and machinery and difficult to quantify. To distinguish them from machinery and other
concrete inputs, these factors are often lumped together under the term “productivity” (as opposed to labor productivity).8

Since the individual components of productivity cannot be measured directly, their net effect is simply inferred as that part of total output which cannot be explained by the level of measured inputs such as labor, plant, and machinery. Estimated as this residual, productivity is known to account for a large part of the difference in output per worker across countries (Hall and Jones 1999).

When accounting for the difference in labor productivity between African and Chinese firms, productivity is found to be responsible for a larger share of the gap than fixed assets. As figure 6.12 shows, the shortfall in productivity in Tanzania’s textile industry relative to China’s is slightly larger than its shortfall in fixed assets. This productivity gap between African and Chinese firms persists throughout a range of manufacturing industries and services (figure 6.12, panel b).

**What Determines Productivity at the Firm Level?**

Although productivity is often equated with production technology, it should be interpreted more broadly. The quality of a firm’s management and its organizational efficiency (which includes elements such as the quality of factory floor and workplace organization, workforce incentive and supervision structures, and supply chain management) also contribute to productivity. Productivity is influenced by elements of a firm’s human and knowledge capital, which cannot be captured in data on the formal qualifications of its workforce. For example, firm-specific skills generated by on-the-job learning and training for the workforce can make employees more productive. Knowledge and tacit technology, such as a more efficient production process developed through internal research and development (R&D), are other firm-level components of productivity, as are computerized processes and databases tailored to a firm’s needs. Firms often become
more productive by adapting a technology to their context—whether through trial and error or a more formal R&D process—and such adaptation also raises productivity.

Understanding how much these specific factors matter to productivity is very relevant for policy. Some studies attempt to unpack productivity by examining how much firms spend on acquiring specific types of human, knowledge, or organizational capital (Corrado, Hulten, and Sichel 2005; OECD 2010). For instance, a new production process could be the result of R&D expenditures incurred over many years. While the quality of the new production process itself is difficult to quantify, it is likely to be reflected in the R&D expenditure incurred to develop the process. In developed countries, such spending on human, knowledge, or organizational capital is at least as high as spending on plant and machinery. It is not as high in the two emerging economies where attempts have been made to measure it (Brazil and China), but it is still quite sizable and rising. These differences suggest that variation in firms’ human, knowledge, and organizational capital could account for a large part of the productivity gap between Africa and other parts of the world (Hao and Hulten 2011; Dutz et al. 2012).

A firm’s productivity is also affected by factors external to the firm, such as the quality and reliability of transport and logistics systems and the supply of utilities, including power, telecommunications, and water services. Poor transportation infrastructure can reduce the efficiency of production by making the supply of raw materials less reliable. Similarly, an inadequate and unreliable utility supply can interrupt production and force workers to remain idle. In effect, it increases the amount of labor and capital needed to produce a given level of output.

Poor infrastructure also reduces productivity by forcing firms to adopt inefficient and costly coping mechanisms. Firms may have to compensate for the poor quality of public services on their own; they might purchase generators as back-ups for the public electricity supply, for example. A recent study shows that costs related to infrastructure services account for a relatively high share of firms’ costs in poor African countries, thus imposing an extra burden on the competitiveness of African firms (Eifert, Gelb, and Ramachandran 2008). Figure 6.13 shows firm-level indicators of the quality of transport, water, and electricity supply in different parts of the world. Along with South Asia, the Middle East, and North Africa, Sub-Saharan Africa is generally near the bottom of the rankings.

**Figure 6.13** Africa fares poorly in firm-reported indicators of transport, water, and electricity supply

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Sub-Saharan Africa</th>
<th>South Asia</th>
<th>Middle East and North Africa</th>
<th>Latin America and the Caribbean</th>
<th>High-income OECD countries</th>
<th>Europe and Central Asia</th>
<th>East Asia and Pacific</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proportion of products lost to</td>
<td>10</td>
<td>5</td>
<td>3</td>
<td>1</td>
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<td>breakage or spoilage during shipping</td>
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<td>Number of water insufficiencies</td>
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<td>5</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>2</td>
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<tr>
<td>in a typical month</td>
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<tr>
<td>Losses due to electrical outages</td>
<td>10</td>
<td>5</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>2</td>
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<tr>
<td>(annual sales)</td>
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</tr>
<tr>
<td>Number of electrical outages in a</td>
<td>10</td>
<td>5</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>0</td>
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<td>typical month</td>
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</table>

Source: Based on World Bank enterprise surveys.

**How Unproductive Firms Survive and Hurt Industry-Level Competitiveness**

One way to raise an industry’s competitiveness is to make all of its firms more productive. Another way is to let competition between firms run its course and ensure that only the most productive firms thrive. The latter is significant because differences in productivity across firms in the same industry can be surprisingly large, especially in developing countries (Sverson 2011; Banerjee and Duflo 2005). According to one study on China and India, if manufacturing plants are ranked according to their productivity, those near the top of the rankings produce about five times more with the same amount of labor and capital as those...
A reallocation of workers from the least to the most productive firm in an industry would thus raise the productivity of the industry fivefold. Indeed, an increase in competition in an industry is often seen to result in such reallocation, or shifting, of labor and other inputs from less to more productive firms. Conversely, market distortions that reduce competition tend to protect the market share of less productive firms, which in turn reduces the (aggregate) productivity of the industry.

The productivity of an industry is the sum total of the productivity of firms in it. Thus an industry could be more productive in Country A than in Country B for two reasons. The first is that, relative to Country A, the typical firm in Country B may be less productive. The second is that, compared to Country A, less productive firms may control a larger share of the market in Country B. The net productivity difference between countries can be decomposed into these two components.

How much of Africa’s lower productivity is due to the lower productivity of the typical firm, and how much is due to the fact that less productive firms are more likely to survive and maintain outsized market shares? Figure 6.14 illustrates these components of productivity for the textile industry in a sample of countries, including some in Africa. This case is typical of most manufacturing and service sectors, and it shows that the greater survival and abnormally large share of unproductive firms (“allocative inefficiency”) in Africa explain a large part of the productivity gap between African economies and emerging economies such as Brazil and China.

For example, about one-third of the productivity gap between the textile industries in Tanzania and China is explained by the fact that the average Chinese textile firm is more productive than its Tanzanian counterpart. The other two-
thirds of the gap is explained by the fact that in Tanzania, unlike China, unproductive firms have captured too much market share. A comparison of South Africa and China illustrates the significance of this allocative efficiency even more strongly. The average productivity of South African textile firms is actually higher than that of their Chinese counterparts, but this advantage is completely overturned by the dominance of unproductive firms within South Africa.

Potentially, several market distortions could explain why unproductive firms are more likely to survive and maintain inefficiently large market shares in Africa. Credit market inefficiency is a case in point. In the short run, a working capital constraint can prevent a relatively productive firm from producing as much as it profitably could. Credit constraints can also prevent a productive young firm from investing in fixed capital and growing to its optimal size. Larger, older incumbents may have easier access to credit, even if they are less productive. Similarly, political favoritism—such as preferential access to land or other inputs granted to politically connected firms—can enable unproductive firms to capture a large market share.

Regulations can also affect allocative efficiency. For example, labor market regulations can prevent the allocation of labor to its most productive uses by hampering the movement of labor across firms.

Entry barriers (such as high costs or onerous procedures for establishing a new enterprise) can also enable unproductive firms to sustain large market shares by preventing competition from entrants who could be more productive. A reduction in entry barriers can reallocate resources away from unproductive incumbents and toward more productive entrants (Chari 2011).

From the Factory to the Market: How Poor Trade Logistics Hurt Africa’s Competitiveness

When it is costly to transport goods from the factory to international markets, an otherwise productive industry can become uncompetitive in those markets. Africa does poorly on this dimension of competitiveness (figure 6.15).

**Figure 6.15 Trading across borders is expensive and slow in Africa**

It costs 60 percent more to ship to the United States from Djibouti than from China and about the same to ship to Europe, despite the much greater distance from China. The costs of inland transportation from the factory to ports are also high. A World Bank study estimates that higher shipping and inland transportation costs add a 2.5 percent production cost penalty for textiles in Ethiopia and Zambia (Dinh et al. 2012).

Export competitiveness is also affected by port and terminal handling fees, customs clearance and technical control fees, costs of document preparation and letters of credit, and the cost of foreign exchange. These additional trade costs are exceptionally high in Africa, adding a 5.5 percent production cost penalty for textiles in Ethiopia and Zambia, for example.

**Making African Firms Competitive: Priorities for Improving the Business Climate and Workforce Skills**

Making modern enterprises more competitive by increasing their productivity is critical for creating more modern wage jobs that are accessible to Africa’s youth. Increasing productivity involves a complex set of reforms and interventions. The most important measures include
of survey respondents regarded macroeconomic instability as a major obstacle to business growth, compared to 80 percent of respondents surveyed in 2003 (World Bank 2009). These encouraging conditions deteriorated in the wake of the 2008 global recession, demonstrating that the structure of the Zambian economy (like the economies of other resource-rich countries in the region) is especially vulnerable to the forces of macroeconomic instability. Maintaining price and exchange stability and bringing government borrowing under control over the long term are critical to the smooth functioning of finance and business investment in such countries.

**Strengthening Infrastructure Services**

The poor quality and inadequacy of physical infrastructure in Africa is the most visible aspect of a deep, pervasive infrastructure problem that inhibits the competitiveness of African firms. The more reassuring aspect of this problem is that governments can begin to address it without building new infrastructure. Evidence points to government failure as the main source of Africa’s infrastructure problem, reflected, for example, in the underpricing of electricity and water or the monopoly power of trucking companies. There is also evidence that infrastructure policies and regulations block firms’ access to infrastructure services and undermine the incentives for further investment (Briceño-Garmendia and Foster 2010).

**Dealing with electricity and other public utility shortages.** In countries with chronic shortages in infrastructure services, established businesses report that frequent outages cause significant losses of revenue. Such shortages particularly affect smaller, younger firms and manufacturing firms. Start-ups can wait months to be connected to the public utility grid, a delay that is likely to reduce firm formation and business entry rates.

As electricity shortages have become increasingly common, governments have sought to promote long-term solutions in the form of large investments in maintenance and in additional generating and transmission
capacity. Such solutions ignore opportunities for quicker wins through steps to address the causes of underinvestment and inefficiency in the power sector. These include the deliberate underpricing of electricity to subsidize household consumption, the failure of poorly managed state-owned operators to collect payments, and the absence of a workable legal and regulatory framework for private investment.

The specific measures needed to resolve the problem depend on which of these causes is most prevalent in a given country. Regulatory agencies could revise power tariffs. State-owned power companies could be privatized or reorganized on a more commercial footing to improve payment collection and minimize transmission and distribution losses. Countries are often advised to reorganize the industry by separating power generation, transmission, and distribution into independent operations conducted by independent enterprises. Cross-border and regional initiatives to supply power are often encouraged because they entail economies of scale. Initiatives could range from cross-border pooling of power based on existing power grid connectivity among neighboring countries to establishing a regional market in electricity as a component of an integrated regional energy market, as planned in Southern Africa.

**Improving transport infrastructure.** Inadequate and costly transport infrastructure is by far the most important factor in Africa’s exceptionally high trade costs, the fragmentation of the domestic market for manufacturing and service industries, and the region’s isolation from other regional and global markets. Inadequate transport infrastructure is a powerful drag on productivity and economic growth, manifested in many ways (the port of Dar es Salaam is one manifestation; see box 6.4). Problems with transport infrastructure not only limit scale economies but also bestow market power on firms already in the trade by removing the threat of foreign competition and preventing potentially more productive firms from entering local markets.

Ultimately, the solution to high transport costs is large-scale investment in road and rail-way networks. But immediate measures to promote more efficient use of the infrastructure that already exists can also help. Nor is government investment the only option for building new networks. Private participation can be expanded if policy reforms create the right conditions. Mozambique, where high transport costs originate with inefficient railway and port services, is both rehabilitating and expanding the network as a long-term solution. At the same time, it is enacting a series of structural reforms to improve operations and encourage private participation in the management of state-owned transport operators. Improving rail services is the key to cutting transport costs in Lesotho, where the chronically dysfunctional rail sector has caused exporters to rely exclusively on road transport, which costs three times as much as rail.

**Reducing Barriers to Trade: Trade Liberalization, Costs, and Logistics**

When the domestic market for manufacturing and service industries is fragmented or isolated from regional and global markets, it is hard for productivity to grow in those industries. Such conditions insulate incumbent firms from competition (domestic or foreign), reduce the entry of potentially more productive firms, and limit incumbents’ incentives to innovate.

A central argument for trade liberalization is that it increases the competitive pressure on domestic firms and encourages them to become more productive. The liberalization of import tariffs by most African countries in the 1990s and early 2000s may have constituted one of the most significant policy developments in Africa’s recent economic history. Although there are no systematic assessments of their impact in the region, anecdotes and studies of the effects of similar reforms in other regions suggest that in Africa they could have led to substantial and widespread productivity gains by exposing local producers to greater competitive pressure and reshaping the structure of domestic production.

Recent studies of other developing regions and developed economies report that trade liberalization reforms of the kind that took place in Africa lowered domestic prices and mark-up
rates, increasing competitive pressures on the large players in the domestic economy. Those studies also provide evidence that increased openness to trade generates productivity gains in three distinct but complementary ways: by allowing more productive firms to take fuller advantage of their superior productivity and gain market share from unproductive firms, by encouraging innovation and the adoption of better techniques of production, and by facilitating economies of scale (see, for instance, Melitz and Trefler 2012; Krishna and Mitra 1998).

Another, newer argument for import liberalization originates in the increasing frag-

### Box 6.4

**The high price of inefficiency at the port of Dar es Salaam**

The Dar es Salaam Port—East Africa’s second-largest port after Mombasa—is the conduit for about 90 percent of Tanzanian trade, and it is also a gateway for Tanzania’s land-locked neighbors, including Burundi, the Democratic Republic of Congo, Rwanda, Uganda, and Zambia. For Tanzania especially, manufacturing, trade, and economic expansion depend on the efficient movement of goods through the port.

The main agencies involved in the port’s operations are the Tanzania Port Authority (TPA), the landlord and service provider; Tanzania International Container Services (TICTS), a private container stevedoring contractor; and the Surface and Marine Transport Authority (SUMATRA), the multisectoral regulatory agency.

The port is not efficient by international or East African standards. In mid-2012, container vessels waited an average of ten days for a berth in Dar es Salaam, compared to less than one day in Mombasa. Merchandise took ten days on average to clear and exit the port, compared to three to four days in Mombasa (and 48 hours in many East Asian ports). Official and unofficial fees are numerous, high, and inconsistently applied. The additional costs incurred by shippers and shipping companies in Dar es Salaam compared to Mombasa are equivalent to an additional tariff of 22 percent on container imports and 5 percent on bulk imports. Compared to the port of Mombasa, inefficiencies at the port of Dar es Salaam cost Tanzania and its neighbors an estimated US$2.5 billion a year. Reforms have been initiated but have progressed very slowly.

Merchandise fails to clear the port rapidly because processes (especially customs clearance) are slow and storage periods are quite long. The rules are not transparent and oversight is poor, creating opportunities for corruption. In Dar es Salaam, where the port charges fees in proportion to the value of the merchandise, official port fees are 74 percent higher than those in Mombasa, where the port charges flat fees. Customs valuations of goods imported via Dar es Salaam also vary more widely than can be explained by normal variations in quality and price. For example, the stated customs values for 1 kilogram of fertilizer ranges from US$0.39 to US$5.00 (the global price is US$0.60–US$0.80), and the ratio between the highest and lowest reported customs values is 152 for rice and 33 for palm oil.

Storage tariffs are structured in ways that discourage rapid clearance of merchandise from inland container depots. After the free storage period of seven days expires, each additional day represents a direct additional profit for TPA, TICTS, and the container depots. TPA’s revenues are higher when TICTS is less efficient. When berths managed by TICTS are full, some of the container traffic is redirected to TPA berths, creating a situation in which the landlord of the port (TPA) competes against its own service provider (TICTS). TPA obtained an estimated US$36.5 million in this manner in 2011.

Such arrangements reduce incentives among port operators to invest in increased capacity. While a small, well-connected coterie benefits from the status quo, Tanzanian workers, firms, consumers, and the government bear the costs. An uncompetitive manufacturing sector creates fewer jobs for workers and produces more expensive goods for consumers. Tanzanian agriculture suffers because port inefficiency adds an estimated 5.2 percent to the cost of imported fertilizer. Policy makers may well ask whether making a single large investment to improve efficiency at the port would be better than continuing to subsidize fertilizer year after year.

The cost of inaction is mounting. The port of Dar es Salaam will decline in importance as ports and railways in neighboring countries become operational and prove more efficient. The authorities have been moving to improve port operations, yet more pointed reform is needed, beyond actions to improve infrastructure (such as building new berths). Efficiency-enhancing reforms would ensure that end users are aware of the costs related to the port’s inefficiency and participate in decisions related to port reform, strengthen competition among port operators, and reduce corruption through streamlined and transparent procedures and improved oversight.

**Source:** World Bank 2013b.
mentation of export value chains. The different stages involved in producing a particular final good are now often performed in many different countries, and a country can specialize in specific “tasks” in this value chain. For an African firm to succeed in exporting a manufacturing task, it must be able to import all the complementary upstream tasks as easily as any international competitor that specialize in the same task (Collier and Venables 2007). Import liberalization and other measures to improve access to imported inputs can help African firms to insert themselves in international value chains.

Has Africa experienced benefits similar to those attributed to tariff reductions in other regions? Lower tariff barriers should have made African firms more productive by opening them up to competition and enabling their integration within global value chains. Africa’s experience with the Multifiber Agreement suggests that such outcomes did not occur. During the final years of the Multifiber Agreement, the United States imposed strict import quotas on Chinese apparel and awarded duty- and quota-free access to African apparel. If African firms were truly competitive, they should have taken advantage of such preferential access to the U.S. market. African apparel exports did rise, but the rise was temporary and has been attributed to Chinese firms that shifted their final assembly steps to Africa to avoid the quota (Rotunno, Vézina, and Wang 2012).

The productivity benefits of tariff liberalization may have failed to materialize in Africa because the costs of trade remain extremely high for reasons unrelated to tariffs, such as the region’s onerous transport costs. Reducing such costs could enable African firms to realize the gains of trade liberalization (Djankov, Freund, and Pham 2010).

Freight costs are often the largest component of trade costs in most countries, implying that investment in transport infrastructure and ports could significantly ease constraints to regional and global trade. Such investment is expensive and will take time. In the short run, tackling nontariff barriers such as inefficient customs administration and high regulatory costs of cross-border transactions would also significantly reduce trade costs. Many countries could considerably reduce trade costs by simplifying customs clearance and import procedures and increasing the use of inland clearance facilities to shorten processing times.

Land border crossings remain a major obstacle to regional integration in Africa. These obstacles are common along the gateway corridors serving the landlocked countries, and they also hinder regional trade and international transit. Aside from improvements in transport infrastructure, improved management of border crossing through institutional reform and increasing border coordination could also have a major impact on border-crossing times. East Africa’s one-stop border post (OSBP) initiative is a step in this direction. A pilot OSBP between Kenya and Uganda seems to have produced dramatic results even in the absence of infrastructure refurbishment (see box 6.5; Fitzmaurice and Hartmann 2013).

Improving Access to Finance

The lack of finance is another serious constraint on the growth of manufacturing and tradable services in Africa (World Bank 2008, 2012c; IFC 2013; see also Dinh, Mavridis, and Nguyen 2012; Harrison, Lin, and Xu 2013; Li, Mengistae, and Xu 2011). Firm surveys suggest that the cause is poor access to formal bank financing (figure 6.16). A survey comparing firms in China to firms in Ethiopia, Tanzania, and Zambia found that the most visible advantage enjoyed by Chinese firms was access to bank finance at favorable conditions, such as low interest rates and low collateral requirements (Fafchamps and Quinn 2012). Expensive or limited financing suppresses growth in productivity by forcing firms to operate at a suboptimal size or to use substandard technologies. Research suggests that many firms cannot take advantage of profitable opportunities for expansion because they cannot obtain financing.16

Access to finance varies by type of economic activity and is generally more constrained for smaller and younger firms. In Namibia, for example, banks require small firms (employing fewer than 30 workers) to provide twice the amount of collateral on average as mid-size
firms (World Bank 2010; Barker and Mengistae 2013). This differential access implies that smaller and younger firms are less likely to exploit potentially profitable opportunities than larger and older firms. To the extent that younger firms are a source of innovation and productivity growth, such restrictions pose a particular threat to competitiveness.

To some degree, however, the problems that smaller and less established firms encounter in obtaining credit may reflect the higher costs and risks involved in lending to them. For banks, the high fixed costs per transaction and difficulty in attaining scale economies make it costlier to lend to smaller firms. As bank managers observed in a survey in Rwanda, the poor quality of financial statements and business plans, lack of business skills, inability to manage risks, and informality of smaller enterprises constitute a big challenge for lenders (World Bank 2012c). These observations suggest that the problem could be remedied partly by improving the management and transparency of firms.

### Box 6.5

**Improving land transportation through increased international cooperation and comprehensive procedural reforms: The Malaba border-crossing pilot**

The long-standing response to the chronically slow movement of goods within Africa has been to build better roads and border facilities, but better physical infrastructure alone has not solved the problem. Twenty-five years ago, only 20 percent of Africa’s main road network was considered to be in “good” condition. Today, almost half of it is considered good. Border facilities have been remodeled. But a lot of time is still lost at the border, largely due to procedural delays at border crossings.

A more recent approach to resolving border delays is the development of one-stop border posts. OSBPs include more than refurbished facilities; they involve improved coordination between border agencies from neighboring countries and better coordination among the domestic agencies managing aspects of transport and border crossings in each country. Interagency coordination is challenging to achieve, however, and many OSBPs have not met expectations.

The Transit and Transport Coordination Authority of the Northern Corridor has been trying to improve OSBPs in East Africa by gathering better data on their performance. The authority is supported by the Sub-Saharan Africa Transport Policy Program (SSATP), an international partnership for policy reform and capacity building in Africa’s transport sectors. Their efforts include border-crossing surveys to gain insight into the reasons for slow border processing and to document the impact of reforms.

During 2011–12, customs authorities in Kenya and Uganda modified selected business procedures related to border crossings. They had a unique opportunity to observe the impact of those reforms, because the Malaba border post between Kenya and Uganda (one of the pilot OSBPs) was included in a border-crossing survey commissioned by the northern corridor authority.

The survey found that the border crossing at Malaba improved dramatically after the reforms. The average time to cross the border dropped from 24 to 4 hours. The SSATP study estimated that the reforms may have saved up to US$70 million a year. Notably, these results occurred in the absence of infrastructure refurbishment, which is expected to take place at a later stage. What was so special about the Malaba border-crossing reforms?

The primary insight from this case is that simply changing the procedures is probably not sufficient to improve border crossings. Before launching the reforms, the authorities undertook significant preparatory work to build a culture of cooperation across border agencies (within and between the two countries), develop a legal framework enabling that cooperation to take place, and install the information technology infrastructure making it possible to start the documentation process even before trucks arrive at the crossing.

Unlike many other OSBPs, at the Malaba OSBP the reforms targeted all of the key parties involved in border crossings:

- **Border management agencies**, through advance preparation with prearrival lodgment of the customs declaration and better coordination between agencies at the crossing
- **Clearing agents**, through mandatory prearrival lodgment of declarations (which used to be optional and rarely used)
- **Truck drivers**, through traffic and parking rules to ease congestion in the customs zone

Source: Fitzmaurice and Hartmann 2013.
Even if lending to smaller or younger firms is inherently more difficult, basic policy reforms to address credit market issues will help them. Indeed, reforms will be particularly helpful to smaller and less established firms, because they are the most disadvantaged by credit market imperfections. Critical reforms include steps to make the banking industry more competitive, the development of credit information systems, and better creditor rights.

Making the Banking Industry More Competitive
The banking sector in much of Africa is characterized by a lack of competition (it is dominated by a few large banks) and heavy government involvement (IFC 2013; Bertrand, Schoar, and Thesmar 2007). Measures that would facilitate new domestic and foreign entry into the industry could increase competition, make the lending industry more efficient, and increase the likelihood that banks will find better ways of reaching out to firms. Where government ownership of banking assets is extensive, as in Tanzania, fostering competition may require a reduction in the government’s financial stake.

The banking sector should be opened up with care, however, as the system can become more vulnerable when more banks enter and begin to compete. For instance, banks may take on too much risk in more competitive environments. It is also hard to open up the financial system to competition if the supervisory structure is poor. Reforms to improve the institutions that support the financial sector, described next, are more feasible.

Strengthening Credit Information Systems
Well-developed credit information systems have improved access to finance in advanced economies. One reason why collateral requirements or interest charges are so high in some developing economies is that banks have little information on prospective clients, so they set high risk premiums. Credit information systems that permit banks to share customer repayment information can help lenders to evaluate prospective customers and bankable projects (IFC 2013). Most countries in Africa have no credit information system at all. Where credit information systems exist, they tend to be rudimentary, with low coverage of potential borrowers (figure 6.17).

Countries seeking to establish strong credit information systems require new regulations for the licensing, operation, and supervision of credit bureaus. Kenya’s credit information system, for instance, significantly improved after 2008, when new regulations were approved on the licensing, operation, and supervision of credit bureaus by Kenya’s central bank.17 By

![Figure 6.16 African firms use relatively little bank financing](image)

Source: Based on World Bank enterprise surveys.

![Figure 6.17 Coverage of credit bureaus is generally low in Africa](image)

raising productivity in africa’s modern wage enterprises to foster job growth for youth

2010 and 2011, respectively, the first two credit bureaus had started to operate. The new legislation allowed banks to share negative credit information by obligating banks to report all of the nonperforming loans on their books.

To be truly effective, credit information systems must cover not only all potential borrowers but also all prospective lenders, and they must include both positive and negative information on borrowers. The scope of credit information systems is commonly much more limited in Africa, however. In Zambia, for instance, the credit reference bureau that opened in 2007 has yet to expand its sources to retailers, trade creditors, and utility companies in order to capture a larger share of the population of potential borrowers (World Bank 2009). Similarly, in a survey following the regulatory reform in Kenya, the two most prominent concerns highlighted by the banks were the need to share positive as well as negative information and the need to incorporate the information collected by other providers, such as microfinance institutions and utility companies. The sharing of positive data enables the development of a credit-scoring system, allowing good borrowers to establish a track record and access loans at more favorable interest rates.

Strengthening Contract Enforcement and Creditor Rights Institutions
Legal rights of lenders and borrowers can facilitate the use of collateral and the ability to enforce claims in the event of default. Strong creditor rights can expand the supply of loans by providing legal protection for lenders in cases of nonpayment. The legal system should also allow borrowers to use a broader range of assets as collateral, which should allow them to obtain loans on better terms. These legal rights must also be enforced well in practice. Some of the high risk premiums that banks attach to borrowers in Africa reflect their low confidence in creditor rights and their enforcement. Contract enforcement institutions are particularly weak in most countries in the region, even upper-middle-income countries. For example, banks in Rwanda contend that insolvency and bankruptcy procedures do not function well in practice, despite the new legal framework passed in 2009 (World Bank 2012c). Angola, Botswana, and Swaziland have among the lowest global scores on the World Bank’s Doing Business indicators of contract enforcement, especially the length of time required to enforce a standard contract (World Bank 2011b).

Banks’ reliance on real estate and land as prime collateral can further complicate the efforts of smaller enterprises to obtain financing. Banks typically do not use other assets, especially movable assets, as collateral for several reasons. Contract enforcement is weak, the registration of assets is poor, and the legal framework for creditor rights does not adequately support secured transactions in assets. Potential reforms include the introduction of electronic property registration and land titling systems, along with the adoption of a more modern framework of security interests over movable assets. Such a framework would allow banks to register security interests over a wide range of movable assets—including personal property, vehicles, machinery, inventory, raw materials, receivables, and intellectual property—and to enforce claims on those assets as collateral.

Reducing Constraints to the Entry and Growth of Productive Firms: Governance Is Key
A good business environment should facilitate the entry of new firms and the growth of more productive firms. Unproductive firms are pressured either to improve their productivity or to exit, and overall productivity improves.

Credit constraints, poor start-up financing, and high costs of access to public utilities are major barriers to firm entry and expansion in Africa. Another critical influence on firm entry and growth is the quality of governance. Excessive or poorly designed business regulation, corruption, and weak contract enforcement impose high entry and expansion costs, which reduce productivity through their negative effects on entry and competition (Klapper, Laeven, and Rajan 2006; Djankov 2009; see also Xu 2011).

Formal entry requirements are probably the most ubiquitous means by which governments directly regulate entry. Almost everywhere in
Africa, anyone setting up a new business needs to obtain an operating license from a local and central government authority and to acquire legal status to engage in certain transactions from the government registrar. Often, various construction permits and site use licenses are required to establish or expand a firm. Usually the time and costs associated with all of these permits and licenses are a substantial share of the overall cost of setting up a business, and they can be prohibitive (World Bank 2011b).

On average, the formal costs of setting up a business are higher in African countries than elsewhere in the world (figure 6.18). Reforms to reduce the start-up and expansion costs linked to regulation should be a priority for improving the business environment in Africa. Many resource-poor countries in Africa have steadily and significantly reduced business start-up costs over the past five years through a series of administrative and legislative reforms. For example, in countries throughout Southern Africa (including Lesotho, Madagascar, Malawi, and Mozambique), start-up costs have converged with or even fallen below those of South Africa, which have always been low by emerging-market standards. In contrast, start-up costs remain very high in some resource-rich countries (figure 6.19; World Bank 2012b).

The formal cost of setting up the standard business (as a percentage of per capita income) is 105 percent in Angola and 284 percent in the Democratic Republic of Congo, for example. These costs are high by international standards, even compared to South Africa, where the same cost is a mere 0.3 percent of per capita income.

Corruption in the granting of entry licenses and other permits also hinders the setup and expansion of firms, and it must be tackled to strengthen competitive forces in Africa. Survey evidence from Uganda on who has to pay bribes and how much they have to pay suggests that more profitable firms have to pay larger bribes when seeking access to permits, licenses, and public services. By raising costs disproportionately for more productive firms, corruption acts as a tax on efficiency. This same research suggests that if firms have better information and undertake collective action, they can improve their bargaining position when dealing with bribe takers and reduce corruption (box 6.6).

Better governance can also help by strengthening contract enforcement. Poor contract enforcement can constrain the growth of productive firms by making trust more important than efficiency in determining how production is organized. Owners and top management shy away from delegating responsibility to other employees (see, for instance, Cingano and

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**Figure 6.18** Africa has the highest formal costs of setting up a business

![Diagram showing formal costs of setting up a business in different regions](source)


Note: Paid-in minimum capital is the amount that the entrepreneur needs to deposit in a bank or with a notary before registration and for up to three months following incorporation.

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**Figure 6.19** Business setup costs are higher in resource-rich African countries

![Diagram showing business setup costs in African countries](source)

Localized Interventions to Improve the Wider Business Environment

To increase competitiveness, the ultimate policy objective is to improve the overall business environment, but in some cases localized interventions can lay the groundwork for a competitive, modern enterprise sector to emerge. Concentrating public resources in selected clusters of activity is one kind of localized intervention. Such clusters can also be used to introduce incremental reforms in the investment climate, before they are rolled out more broadly.

Firms engaging in similar or linked activities often cluster, because clustering has many potential advantages. Firms in the cluster can learn production and business management techniques from one another. Transport and other types of infrastructure that serve the cluster improve as clusters grow. Together, the firms can attract more consumers, more and better input suppliers, and more skilled workers than they could attract if they were dispersed. Clusters can be especially conducive to the growth of specialized input suppliers. They also help to reduce the cost and raise the quality of specialized inputs. Investments to improve input quality or reduce input costs are less risky for financial institutions to make as they are concentrated in a single location.
In this way, clusters can exhibit “agglomeration economies”—that is, the firms in a cluster can become increasingly productive as the cluster grows and matures. Many of the potential productivity benefits from growing clusters occur through spillovers between firms—for example, firms learn from one another or downstream firms benefit from having several input suppliers located nearby. The gains from being in a cluster thus depend on how many other firms locate there, and every firm that locates in a cluster could be conferring benefits on the other firms in that cluster. A cluster that is not out of the ordinary to start with may become internationally competitive once it is big enough. But when choosing where to locate, firms fail to take this collective benefit into account. This is a form of market failure, so although clusters can emerge spontaneously, they may need some kind of public support to reach a truly competitive size.

Public support may be especially necessary to form clusters in manufacturing and tradable services, given their potential export orientation. Because they are not limited by the size of the domestic market, such clusters can truly exploit the economies of scale from clustering production. As discussed, African firms can integrate with global supply chains by specializing in specific tasks or steps in a value chain. To do so, they must be able to import inputs as easily and cheaply as their international competitors, and they must have access to the same high-quality physical infrastructure and supportive regulations. Thus one option for public support is to develop clusters specializing in specific tasks within global value chains.  

Box 6.7 looks at the common attributes of 11 successful clusters in Africa. These clusters highlight the role of value chains (linking input suppliers with downstream firms), knowledge flows, ability to attract a skilled workforce, and coordination. All of the clusters had public support, although the form of support varied. A common pattern, however, was the spontaneous rather than publicly engineered inception of the clusters, suggesting that public support should be concerned mainly with enabling nascent clusters to transition toward self-sustaining growth.

Special economic zones (SEZs) are an increasingly popular vehicle for supporting localized growth, especially in the form of export-oriented clusters. The idea is to support clustering by concentrating public investment (such as infrastructure) and policy reforms in specially marked zones. Some SEZs target locations that are considered to have an inherent advantage for insertion into global value chains, such as areas near ports, but the choice of a high-potential location may not be critical to success: a particular location may have no inherent advantage in a sector or task, but it may acquire comparative advantage as a cluster starts to develop and agglomeration economies arise (Collier and Venables 2007). As the experience of successful clusters in Africa suggests, SEZs should focus on supporting incipient clusters to develop beyond a critical threshold, after which they can sustain themselves. SEZs in Africa have rarely been located around pre-existing clusters, which is thought to be one reason that their performance has been less satisfactory than that of SEZs in other developing regions (Farole 2011).

Creating a superior business environment within SEZs reduces the availability of public resources for improving the business climate outside of those areas. If there are significant increasing returns to clustering, then allocating public resources to SEZs is likely to be superior to spreading public resources everywhere to provide services at a “uniformly low level” (Collier and Venables 2007). SEZs do not always fulfill their potential, however, as indicated by the varied experience with SEZs worldwide. Because it is difficult to measure the extent of agglomeration economies rigorously, the causal impact of promoting clusters through SEZs is difficult to evaluate. For that reason, every potential SEZ should be considered carefully.

SEZs designed to cater to the needs of particular firms or industries to the exclusion of others are especially risky. Such SEZs concentrate resources not just spatially, but also in certain lines of activity or firms that are deemed to be “winners.” This strategy assumes that the state has the ability to identify which firms stand to gain the most from agglomerat-
Knowledge, technology, and the emergence of successful enterprise clusters in Africa

How have successful enterprise clusters evolved in Africa, and what lessons do they offer for encouraging new clusters to develop? A study of 11 clusters that emerged more or less spontaneously in various countries and industries provides insight into those questions.¹

Except for the Mauritian textile cluster (originating in an export-processing zone established by the government in the 1970s), the clusters arose spontaneously because they had access to major local markets and infrastructure (all clusters); natural resources (the cut flower, fish, and wine industries); and local entrepreneurs with tacit knowledge and basic skills in trading, design, or manufacturing (the metalwork, computer, and Nnewi auto parts clusters, which started with trading or repairing and evolved into assembling or manufacturing). Strong local demand existed for their products, except for cut flowers and fish, which had strong international demand. Governments sometimes promoted clusters indirectly. For example, the handicraft cluster in Tanzania and the Suame automotive cluster in Ghana developed because the government relocated scattered, unorganized businesses to clear the city or facilitate spatial planning.

Efficiencies from a cluster-based value chain were fundamental. A value chain develops when a cluster acquires a certain scale, gains visibility, and expands further to benefit from efficiencies derived from a larger clientele, synergies among firms, the developing knowledge network, and shared facilities and services, including some provided by governments and donors (warehouses, for example).

To succeed, all clusters had to acquire, adapt, and disseminate knowledge. Horizontal and vertical links among firms—subcontracting relationships, connections with customers and suppliers, information and formal collaboration through joint ventures and franchises, membership in associations, and the movement of skilled personnel—created knowledge networks. Foreign knowledge and technology sustain several clusters. Foreign direct investment from Hong Kong SAR, China, and Taiwan, China, brought technology and know-how to the Mauritian textile industry. Nigeria’s Otigba computer village imports computer hardware from China, Dubai, and Malaysia, with which it maintains technical and production channels. Kenya’s Kamukunji metalworkers obtain technology from South and East Asia. Formal and informal learning and training assume numerous forms. Technology-intensive manufacturing clusters are trained by experts (locally and overseas) and offer training on the job or at factory site. South African wine producers participate in viticulture forums and root stock associations. In most instances, universities and technology institutes contribute minimally to knowledge and technology flows for clusters. Even so, South Africa’s wine industry benefits from the Elsenburg Agricultural Training Institute and the Wine Industry Network for Expertise and Technology.

All successful clusters have a labor force that is more educated than the norm for Africa, sometimes far beyond the norm (in Otigba, 55–60 percent of entrepreneurs are university graduates). In Suame—Africa’s largest artisanal engineering cluster—75 percent of entrepreneurs have a primary education or less; only 2 percent have a higher education. Yet such clusters create employment for increasing numbers of university graduates, who can be an important force for continued growth and sustainability.

Government support to clusters takes several forms: defining and implementing sectoral policies, regulations, and standards; creating a special agency to promote or develop a cluster; establishing institutions to provide technical support and develop capacity; offering incentives in the form of subsidized land or infrastructure; and forging strategic alliances with industries overseas.

Industrial and professional associations facilitate collective action and cooperation. For example, Tanzanian clusters voice concerns and obtain technical advice through associations. Suame associations focus on social welfare. Associations for flower producers engage in lobbying, environmental conservation, maintaining standards, and facilitating market access, among other activities. The Wines of South Africa Association markets South African wines internationally.

Amid stiff global economic competition, the survival of these clusters depends on overcoming local challenges related to the critical mass of skills at their disposal, weak local technology institutions (disconnected from the business sector), weak government and institutional support, natural resource depletion, and the failure to meet international standards for product quality and safety. The government has a multifaceted role to play in enabling clusters to meet these enormous challenges. Aside from overall coordination, the public sector can facilitate the acquisition of knowledge and technology (through links with foreign enterprises and improved links between local institutes and businesses), establish a conducive institutional regime (clear regulations, standards, and quality assurance) in collaboration with trade and professional associations, strengthen training and skills, provide basic infrastructure, and enact policies that increase consumers’ purchasing power and demand for high-quality goods.

Source: Zeng 2006.

¹ The clusters were cut flowers and metalwork (Kenya), fish production and processing (Uganda), handicrafts and furniture (Tanzania), automotive parts and computer hardware (Nigeria), manufacturing and vehicle repair (Ghana), textiles (Mauritius), and wine and textiles (South Africa).
Why have special economic zones failed to thrive in Africa, and what are the lessons for the future?

Government attempts to launch SEZs in Africa have met with little success. Numerous zones and industrial parks have been announced but failed to materialize; others have been “built,” but never occupied. The few SEZs that have emerged are smaller than those in other regions. For example, SEZs in six African countries supported perhaps 35 firms on average, versus 350 in Honduras, nearly 300 in Bangladesh, and 3,500 in Vietnam (Farole 2011, 71). Evidence is emerging that Africa’s SEZs have started to stagnate at low levels of growth (Farole 2011, 4). What could help the next generation of SEZs to do better?

In India, the Scheme for Integrated Textile Parks, inaugurated in 2005 by the Ministry of Textiles, is in its early stages but has successfully built parks and attracted firms to locate and invest in them. The parks appear to be generating the benefits associated with clustering. The scheme’s most prominent innovation is to give the park users a much greater role, much earlier, in development of the park. In fact, the first order of business is not to build parks but to organize entrepreneurs.

Entrepreneurs form a group (called a special-purpose vehicle, SPV) to develop a detailed proposal for a park. To assist with this task, the SPV selects a specialized project management consultant (PMC) that is stringently vetted by the ministry. Guided by the SPV, the PMC designs, costs, and conducts a feasibility study for the project. The SPV makes the final decisions on location, project design, and costing, because the entrepreneurs constitute the “demand” for the park and have the most incentives to select the best alternative.

If the central government approves the proposal, it provides a grant for infrastructure to be shared by park users (up to 40 percent of the cost, up to a maximum of about US$8 million). The SPV finances the rest. It may solicit state grants, obtain other state and local contributions (such as subsidized land), and even obtain investment from PMCs, but the SPV must contribute at least 51 percent of the equity to ensure that members retain managerial control. No single private entity within the cluster may own more than 20 percent of the equity, and each firm occupies land in proportion to the equity it contributes. The PMC receives fees only if the project is accepted.

The combination of incentives offered under the scheme fosters interdependence among the stakeholders. Institutional mechanisms reinforce those relationships, including regular monitoring reports from the PMC to the ministry, quarterly central government reviews of the scheme, and the appointment of directors on the SPV board by the ministry, PMC, and the state.

The small size of the parks and the grants seems to reduce the incentives for interference at the state and central level. Because a central ministry rarely has local knowledge or human resources to monitor at a micro level, devolving this task to a specialized agency (the PMC) allows the ministry to focus on its strategic mission and obtain better micro data. The reporting requirements for PMCs are clear and standard. Strict rules and methods for grant disbursements help to limit the abuse of funds.

Responsibility for engagement and coordination with state agencies lies with local entrepreneurs, who are best positioned to navigate the political economy of their state. States issue the clearances that are vital for park development, especially for converting land to industrial use. Although limits on state participation in SPV funding curb the state’s direct role, the ability to appoint a director to the SPV board is an incentive to participate. SPVs also have recourse to the center if issues arise with the state.

The scheme appears highly adaptable to India’s diverse conditions and its textile industry. Although this model may not suit circumstances in other industries or countries, it indicates that success is more likely when incentives are carefully calibrated to the political, institutional, and entrepreneurial context.

Sources: Saleman and Jordan 2013; Zeng 2006.

Building Skills for the Modern Wage Sector

As discussed in chapter 3, productivity in modern wage enterprises depends on a range of skills: cognitive skills, soft skills, and managerial and business skills. Policy discussions often revolve around technical skills, but foundational skills
acquired through schooling are also important. Recent research from Kenya, for instance, sug-
ests that by raising literacy and reasoning skills, secondary school completion reduces the prob-
ability of low-skilled self-employment by 50 percent, while raising the probability of formal employment by 30 percent (Ozier 2013). These skills seem to matter because they facilitate on-
the-job learning in firms. Literate workers can be trained through written instructions in job
specifications and procedures, for example, and they require less hands-on technical supervision
by others. Such training is rare in Africa, how-
ever, because of low literacy levels (Biggs, Shah,
and Srivastava 1995).

Employer surveys from some African coun-
tries—Botswana, Lesotho, and Sierra Leone—
suggest that employers are also looking for soft
skills in young hires. Employers in Botswana,
for instance, rate reliability and punctuality,
commitment and hard work, honesty, and
teamwork skills as the top skills required when
hiring skilled workers (World Bank 2011a).

While there is increasing international evi-
dence on the link between skills and produc-
tivity, firms in Africa generally do not rate
skills as a top constraint. Self-reported short-
ages of skills tend to be higher in relatively
capital-intensive industries. Skills also tend
to become a constraint for high-performing
firms: businesses that complain of a skills
shortage consistently outperform those that do
not (Barker and Mengistae 2013). This inform-
ation suggests that while raising skills is not
going to solve the employment problem by
itself, it should be part of the policy package
for improving competitiveness. Even if skills
are currently not a binding constraint, they will
quickly become binding as the sector takes off.

In addition to the limited availability of
cognitive, soft, and technical skills among job
seekers, a lack of “managerial capital” could
also be constraining the competitiveness of
African firms. As discussed in chapter 3, there
is increasing evidence that firms in the region
have visibly poor basic management practices.
There may be considerable scope for improving
productivity (and hence raising employment)
by investing in business and management skills
training, and perhaps even in individualized
management consulting.

Several policy recommendations emerge
from this evidence on the role of skills. They
emphasize the need to focus on foundational
skills and public goods such as quality assur-
ance and information, the need for govern-
ment to focus on building portable rather than
job-specific skills, the need for special support
to enable poor and disadvantaged groups to
acquire skills, the need to develop interna-
tional linkages, and the need for systems that
link employers with trainers. The following
discussion of these recommendations reviews
interventions that have been tested in Africa
and elsewhere.

Focus on Foundational Skills and on
Public Goods Such as Quality Assurance
and Information

The discussion on public support to build skills
for youth employment often takes a short-term
view of the problem and centers on technical
vocational education and training (TVET), but
it is equally, if not more, important to build a
solid foundation for individuals to develop
their skills as they progress in life. Basic school-
ing is a key determinant of wage workers’ cog-
nitive and soft skills. It is the foundation for
the acquisition of additional skills, whether
through more formal education, training, or
on-the-job learning. Improving access to gen-
eral schooling and the quality of that school-
ing—even at the basic level—is a priority for
increasing the productivity of labor in the
modern wage sector.

Parental investment and early childhood
interventions in health and education also
influence personality traits that become rele-
vant to productivity later in life, either directly
or through the fact that some personality traits
will make some students more likely to suc-
ceed in school (Almlund et al. 2011). Recently,
many governments have included soft skills in
training programs for youth, and while there is
some evidence of their impact, evidence on the
significance of early childhood investments is
much better established.

Governments should also reevaluate their
role in providing TVET directly. As discussed
in chapter 3, publicly provided TVET has a
poor track record in Africa, where it is expen-
sive but often inefficient or irrelevant to the
labor market. An increasingly large share of TVET in Africa is provided by the private sector (Mingat, Ledoux, and Rakotomalala 2010; World Bank 2012d; Atchoarena and Esquieu 2002; Kitaev 2002). Although private providers may offer little training in some specific skills, this lack of interest does not necessarily mean that nascent private institutes are incapable of providing such training or that the returns to those skills are too low. Similarly, there may be an equity-based case for establishing public TVET institutes in poor or remote areas, where private entry is limited, but there may not be high enough returns to TVET training in remote areas. In many cases, low take-up of training is better addressed by improving access to credit (or grants) and providing information about training programs. In other contexts, a better alternative for public support may be active labor market programs that have training components and target specific groups (Almeida, Behrman, and Robalino 2012).

It is also critical to make formal TVET more efficient and market relevant. Several policy recommendations are pertinent here, but they are based largely on the experience of developed countries. Box 6.9 discusses potential reforms and how they have been undertaken in Africa.

**Address Information and Credit Constraints to Improve Access to TVET among Poor and Disadvantaged Groups**

As discussed in chapter 3, the government could step in to provide targeted financial

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**Box 6.9**

Reforming TVET systems in Africa

One strategy for improving the relevance and quality of skills developed through TVET programs is to grant public TVET institutions increased autonomy and accountability for results. Institutions would have the freedom to set fees, adapt training to local needs, hire appropriate staff, and choose methods of instruction. Accountability can be increased by basing financing on performance and outcomes rather than inputs, accompanied by better measurement of performance.

Governments also have a role in providing standards, accreditation, quality assurance, and information. The TVET qualifications system should be focused less on providing inputs and more on assuring that the training has provided the competencies (skills) required for the market. Lack of information about private TVET providers can constrain young people from making informed choices about training, and it can also dull providers’ incentives to improve their quality. Governments can play a role in collecting and disseminating this information. Instead of measuring inputs (number of students, institutions, and teachers) as is currently the norm, the emphasis should be on tracking efficiency (dropout, repetition, and survival rates) and outcomes (share of trainees entering wage or self-employment after graduating), which are more relevant to young people’s training decisions. For instance, in the Netherlands, almost all graduates of higher education institutions are surveyed a year and a half after they graduate to collect information on time taken to find a job, type and quality of employment, and students’ satisfaction with the education.

Many African countries have begun to reform their TVET systems along these lines. While this is a positive step, there is little rigorous evidence yet on whether these reforms have improved cost-effectiveness or market relevance. For instance, Ethiopia, Ghana, and Tanzania have developed national qualification frameworks to set standards. Recognizing the need for better coordination in their TVET systems, some countries have tried new governance arrangements and have introduced national coordinating bodies and national training authorities, with mixed results. Ghana, for example, established the Council for TVET (or COTVET) in 2006 as a coordinating body. A study of this reform suggests that COTVET’s engagement with the private sector and collection of demand-side data could be improved and that insufficient coordination within the government has led to parallel agendas, plans, programs, and committees. Governments in Africa may need to build more capacity in the relevant agencies before they can successfully transplant complex TVET systems from developed countries.

Sources: Based on Johanson and Van Adams 2004 (mixed results of governance arrangements); Darvas and Palmer 2012 (TVET in Ghana); World Bank 2012a (TVET with a business component in Uganda); Sondergaard and Murthi 2012 (reforms in Eastern Europe and Central Asia); Krishnan and Shaorshadze 2013 (TVET in Ethiopia).
support and information that young people from poor or otherwise disadvantaged backgrounds need to access TVET markets. Young women are less likely to participate in TVET than young men, and they frequently focus on narrow types of training such as tailoring or weaving, suggesting that direct financial support or information is needed to increase their take-up of training with high returns. Targeted voucher programs that have an information component, such as the Technical and Vocational Vouchers Program (TVVP) in Kenya, can improve access to training among poor and disadvantaged youth. The TVVP experience shows that flexible vouchers (not restricted to specific types of training providers) are more effective than inflexible ones. Another important lesson from TVVP is that participants are frequently mistaken about the returns to vocational education, with males strongly preferring traditionally “male-dominated” courses such as motor vehicle repair and women almost exclusively choosing traditionally “female-dominated” courses such as hairdressing. TVVP provided information on the higher economic returns in male-dominated trades, which encouraged women to take up training in those areas.

**Focus Government Intervention on Building Skills That Are Portable, Not Job Specific**

Government interventions should be focused on building more “portable” skills, as opposed to skills required only for a particular job or firm. More portable skills have higher social value, because they are less vulnerable to changes in the demand for skills specific to certain firms or industries. Because their current market returns could be lower than this social return, the likelihood of underinvestment is higher for more portable skills. Firms are also less likely to invest in portable skills because workers trained in such skills could be poached by other firms.

Firm-specific skills can be acquired through on-the-job training, and public support may not be necessary to supply them. Credit constraints could prevent firms from investing in firm-specific skills, but there is little evidence that African firms are particularly constrained in providing on-the-job training. World Bank enterprise surveys indicate that on average 30 percent of formal firms in Africa provide on-the-job training, which is comparable to the standard level across low- and middle-income countries. Nor does the absence of on-the-job training in a firm necessarily signal a constraint. A recent study estimates that many firms do not provide it because the returns to such training are close to zero for them (Almeida and Carneiro 2009). Governments could consider supporting on-the-job training in specific cases where there is compelling evidence of a market failure (box 6.10), but not more generally.

Some of the constraints to firm-specific training could be addressed by broader policies to improve the business climate or productivity in firms. For example, if liquidity constraints prevent firms from investing in training, then policies that improve firms’ access to finance will also have an impact on on-the-job training. To the extent that firms and workers would be more likely to reach an agreement on sharing the returns from training if contracts were enforceable, strengthening the enforceability of contracts and the rule of law could have a positive impact on on-the-job training. Sometimes, firms train workers in very specific or outdated skills because they use old technology. Policies that promote innovation and technological upgrading in firms could therefore also improve the social returns to on-the-job training.

**Facilitate International Linkages in Training and Technology Upgrading in Specific Industries**

Governments can facilitate technical cooperation with other countries in training and upgrading technology in specific industries, especially with other developing countries that have technical capacity in the industry. A recent example is the technical cooperation between Ethiopia’s Ministry of Trade and Industry, the Ethiopian Leather and Leather Products Technology Institute, and the Footwear Design and Development Institute of India. The Footwear Design and Development Institute provided technical assistance to seven Ethiopian shoe
factors in design, technical upgrading, quality assurance, productivity enhancement, and testing, which improved their productivity and the overall quality of shoes. For instance, cutting at one of the shoe factories rose from 2,000 pairs a day to 2,400, and defect rates dropped from 3 to 1 percent (Dinh et al. 2012).

If certain technical skills are in demand in several countries, but the demand is too small to justify the fixed costs of building a training center in every country, governments can cooperate to create regional hubs for technical skills training. “Importing” such skills could also make economic sense, and in response governments could ease constraints on the immigration of skilled workers. The current policy regime in most African countries is not conducive to importing technical skills. Policy makers do need to take political economy considerations into account, such as concerns about domestic jobs being taken by foreigners, but highly skilled foreign workers may actually create additional jobs. Building a base of evidence on the net employment effects of skilled immigration can help to generate support. Policies for importing skills can be designed to maximize domestic spillovers—for instance, by encouraging firms to train domestic workers in return for permits to hire technical skills from abroad.

**Foster Systems That Link Employers with Trainers**

Linking TVET systems to employers is necessary to ensure that the training is relevant to the market for skills. The returns to specific technical skills can vary substantially across markets and over time. For this reason, policies oriented toward improving the skills delivered through TVET should build TVET systems with employers’ involvement to ensure that employers transmit information to trainers about which skills are in demand on a regular basis.

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**Box 6.10**

**Does government have a role in on-the-job training?**

To the extent that they are substitutable, on-the-job training is by design more likely to be more market relevant than technical or vocational education in the classroom. When there is evidence that on-the-job training is being underprovided because of credit or other market failures, government subsidies could be considered. Some developing countries use subsidy schemes (in the form of levy-rebate systems) to promote on-the-job training. For example, Peru allows firms to use payroll-tax proceeds for in-service training or to purchase training at an accredited training institution. Levy-rebate systems have a mixed record of success, however. In South Africa, for example, only 35 percent of small enterprises claimed the training grant to which they were entitled—and even fewer large firms appear to be claiming them.

Some countries have also used a voucher system that subsidizes the cost of training to firms while giving them flexibility in choosing the training provider. Kenya’s Jua Kali Program is a good example. An evaluation of this program, which targeted small and microenterprises, found that firms using vouchers experienced markedly greater growth in revenue and assets. While this finding is promising, it should be interpreted with caution, because the firms that participated in the program are not necessarily comparable to those that did not. Ghana offered a similar voucher program to informal enterprises in the early 1990s, but it largely failed, apparently because of poor marketing and distribution.

Even when there is evidence that training is underprovided by some firms, governments should be cautious with on-the-job training subsidy schemes and their targeting. The returns could vary across firms. Training might be subsidized in firms in which the net returns are insufficient to justify the training, or scarce public resources might be wasted on firms that would have provided on-the-job training even without the subsidy. It is not easy to identify which firms are constrained in providing training. Many programs try to improve targeting by using proxies, such as targeting smaller firms based on the assumption that they are more likely to be credit constrained. These proxies are imperfect, and governments should also invest in better monitoring and evaluation systems for such programs. A randomized pilot, for example, could help to test whether subsidies are a substitute source of funding for on-the-job training that would have occurred in any case.

Sources: Based on Johanson and Van Adams 2004; Filmer 2012 (South Africa); World Bank 2011c (vouchers in Peru); Almeida, Behrman, and Robalino 2012 (Jua Kali).
Some developing countries already produce regular reports on the supply of and demand for skills, such as the Labor Market Intelligence Reports produced by the Philippines Technical Education and Skills Development Authority (TESDA). TESDA’s labor market reports are based on consultations and focus group discussions with employer associations as well as on labor market surveys (TESDA 2012a, 2012b).

Similar approaches are being rolled out in Africa. Tanzania’s vocational and educational training authority has a monitoring and evaluation system based on regular data that are collected by zonal labor market analysts and mini market surveys that track current and prospective industry needs (United Republic of Tanzania and UNESCO 2012). Regular interaction between training centers and industry and commerce is promoted by attaching tutors and students to industry to gain practical exposure and by attaching industrial practitioners to training centers to teach specific topics. The success of this approach has yet to be determined.

Linkages between the training system and industry can also help youth to make the transition to work. In Africa, matching specialized skills to jobs is not a major problem, but in low-skilled wage employment, young people from disadvantaged backgrounds have trouble connecting to employers because of basic informational problems. A signal of these problems is the ubiquity of informal networks as a source of information about jobs. Young people without networks in modern firms—especially youth from poor families or rural areas, whose family members or friends are less likely to have wage jobs—will have greater difficulty finding such jobs. Recent research suggests that informal job networks also put women at a disadvantage. An experiment on hiring in Malawi found that men referred men unless specifically asked to refer women, and women referred ill-qualified women unless specifically rewarded for providing good-quality referrals (Beaman, Keleher, and Magruder 2012). Aside from disadvantaging certain groups, informal job networks reduce the productivity of job matches by causing them to be based on connections rather than qualifications and by limiting the pool of potential hires that firms can tap.

Can the transition to work be eased by inserting training graduates in firms through temporary internships and other programs? A case in point is the German-style dual system, in which theory is taught in educational institutions and practical skills are acquired through an apprenticeship (or internship) in a company. Some evidence suggests that this system reduces unemployment among graduates (Pio-piuñik and Ryan 2012), but it is not clear how this system can be imported at scale into Africa, where the scope for internships with firms is much more limited. If adopted, training plus insertion programs should be selectively targeted to those most in need. Latin America’s Jóvenes en Acción model, described later, may be more suitable to the African context.

Governments also support insertion through employment or job search agencies. The evidence suggests that such services have limited relevance for Africa. Formal public placement agencies are underused. A survey of job seekers in 11 African cities found that only 7 percent were registered with an employment agency (De Vreyer and Roubaud 2013). Similarly, a recent study on the Middle East and North Africa found that many job seekers rely solely on personal and family connections, and most job placements occur outside of public employment services (Kuddo 2012). A review of impact studies—drawn largely from developed countries—found that these services tend to be more effective for the most educated workers, when demand for labor is high (Betcherman, Olivas, and Dar 2004).

Comprehensive training-related programs that link students to employers through internships are well-established in Latin American countries and have begun to spread to other regions, including Africa. The Jóvenes en Acción (Youth in Action) Program in Colombia, for example, provided three months of classroom-based training and three months of on-the-job training through internships in firms to unemployed young people between the ages of 18 and 25 in the two lowest socioeconomic strata of the population (Attanasio, Kugler, and Meghir 2011). Similarly, the Juventud y Empleo (Youth and Employment) Program in the Dominican Republic subsidizes
training for individuals between the ages of 16 and 29 who have not completed high school, with the training followed by an internship at a private firm (Ibarraran et al. 2012). The programs involve collaboration with the private sector to provide internships and select the content of training. They usually offer a package of skills, complementing vocational training with life skills training intended to improve social interaction and work-related practices and attitudes.

Rigorous impact evaluations of several Jóvenes en Acción programs show mixed but promising results. On average, the programs increase formal wage employment at the rate of about four to six additional jobs per 100 participants. Given the low wage employment rates for African youth from poor backgrounds, this impact could be large in relative terms. The programs also lead to significantly higher earnings, but the impacts are larger for female participants, and it is unclear if there is a significant impact on males. Evaluations of Jóvenes en Acción programs and of recent training programs from India and Jordan suggest that a more comprehensive package—such as a combination of soft skills training and on-the-job training—is more effective (see Maitra and Mani 2012 for India; Groh et al. 2012 for Jordan).

These findings suggest that a targeted, comprehensive (training plus internship) program could be an effective instrument for promoting productive wage employment among disadvantaged youth. Such programs are being adopted in Africa but have not yet been evaluated, and there are serious questions about their cost-effectiveness in Africa. Jóvenes programs were estimated to be cost-effective in Latin America, in the narrow sense that their average impact on earnings exceeded the program cost per participant. Because the modern wage sector is relatively small in Africa, the cost of subsidizing internships could be higher there, and impacts on earnings lower. The small size of the wage sector also makes scalability a bigger concern. Considering the mixed evidence on what type of training works best in these programs, they should be implemented on a pilot basis, and the pilots should be evaluated to find the most cost-effective model for Africa.

**Improve Management Practices**

Management training can have positive impacts, but more evidence is needed on how to target it. If poor management practices are as prevalent in Africa as some recent studies suggest, there may be considerable scope for improving productivity by investing in business skills training and perhaps even in individualized management consulting. Better management can make firms more productive and ultimately increase hiring. There is evidence that firms underinvest in management skills because they underestimate its value or are credit constrained.

Programs seeking to promote managerial skills in established small and medium-size firms are on the rise in developing countries, including programs that give intensive or individualized management consulting. Some have been evaluated in quasi-experimental or randomized studies, including studies by the Kaizen Institute of industrial clusters in Dar es Salaam and Addis Ababa. The evaluations suggest that such programs do lead to the adoption of new management practices. The magnitude of these effects is generally small, with some exceptions. Among Ghanaian metalwork firms, for instance, the percentage of firms keeping records increased 30 percent (Mano et al. 2012).

Evidence on whether the adoption of new management practices actually improves business performance and employment is more mixed, with few studies finding statistically significant impacts on sales, profits, or survivorship. The most promising finding is from a field experiment on large Indian textile firms, in which management practices raised productivity 17 percent in the first year and led within three years to the opening of more production plants (Bloom, Sadun, and Van Reenen 2012). These results suggest that improved management practices can create more jobs.

Given the limited but promising evidence, more pilot studies in Africa would be useful, including studies that examine issues related to targeting and selectivity. For instance, is limited managerial capital a constraint only for larger firms, as the Indian study suggests? Are the returns to managerial training highest when training targets firms with the most ability or
“potential” for success, and can that potential be identified? In industries where healthy competition among firms does not always occur, it is difficult to identify such potential by looking at current performance. Moreover, high-potential firms may do well even in the absence of government-supported managerial training. Small pilot programs directed at firms with alternative profiles could be useful for understanding where support is most needed.

**Many Options to Promote Competitive Modern Enterprises**

Modern manufacturing and services firms have been an engine of job growth in developed countries and more recently in East Asia. In the long run, the same should be true for Africa. The modern enterprise sector presently accounts for a small share of African employment, and it is growing unevenly across the region. The manufacturing sector, which has been a vibrant source of new jobs in other regions, accounts for less than 3 percent of total employment in Africa.

Because African economies are small, domestic demand alone cannot support a thriving modern enterprise sector, where so much depends on achieving scale and diversity. Trade in manufacturing (and tradable services) may be essential for modern firms in these sectors to realize their full potential for productive youth employment, but presently they export very little. Labor costs are generally not lower in African countries than in their potential competitors. If they cannot compete on the strength of low labor costs, the region’s modern enterprises must compete on the strength of their productivity—but African firms are relatively unproductive.

The lack of productivity signals deeper problems that are not identical across the subcontinent. In some countries, the cost of complementary inputs to labor (electricity, overland transport, and so on) is too high. In others, bureaucratic red tape delays investors’ access to land or permits or complicates efforts to move goods (inputs and output) through ports. The high costs of financial intermediation are starving investors of capital. Small domestic markets in many countries, combined with barriers to imports and regional trade, suppress competition and reduce pressure to innovate and improve productivity, even among firms that produce for domestic markets.

Governments in Africa can do much to remedy this situation. The most important step is to improve the business climate so that entrepreneurship and productive firms can grow. Key reform objectives are to improve access to finance and infrastructure services, improve trade logistics, and ease regulatory constraints to entrepreneurship. Some efforts—such as providing physical infrastructure for public utilities and transport—require costly investment in the long run. Yet many other policy reforms are not so expensive in monetary terms and can deliver huge impacts by reducing distortions and increasing efficiency. Selective and spatially targeted support to emerging clusters can make the most of limited resources by promoting agglomeration economies. Localized interventions of this sort should assist clusters by providing good infrastructure and supportive regulation, but they should never try to force clusters into existence by trying to pick “winners.”

A skills shortage does not seem to be a binding constraint on modern wage employment in Africa, but there is much evidence that a range of skills—cognitive, behavioral, and technical—matters to productivity in firms. African youths need those skills if they are to be truly productive in modern firms, particularly when this sector starts to take off. Governments should, first of all, foster a strong foundation in basic skills by improving the quality of general education. Rather than directly providing TVET, they should focus on providing “public goods” such as quality assurance and information to develop a training sector that is efficient and relevant to the market for skills. For poor and disadvantaged youths to gain access to training, governments should provide financial support in conjunction with information that enables them to obtain the right kind of training. Programs for disadvantaged youths that integrate training with internships show promise, as do programs offering managerial training—but their scalability and affordability in Africa remain unproven.
Notes
1. Africa’s wage employment sector is only partially “modern,” in the sense that many wage employees work without a formal contract. On average, about 57 percent of wage employees have a contract with their employer. Among young people, the share with a contract is 47 percent.
2. New thinking on international trade reflects the major impact that trade can have on productivity. An increasingly large share of the trade in goods now comes from trade in different varieties of products within the same industry; for example, the United States and European countries export cars to each other. Such trade is beneficial, because it allows different varieties to be produced at an efficient scale, which would not be possible if each variety were sold only within its country of origin. This kind of trade also allows more efficient producers to take fuller advantage of their efficiency, because a larger market—a direct consequence of lower trade barriers—has a disproportionately greater positive impact on the profitability of more efficient firms. As more productive firms gain market share at the expense of less productive ones, the industry’s potential for generating employment rises (a point addressed later in the analysis of Africa’s manufacturing competitiveness).
3. Less productive firms are limited to selling in the domestic market, as the price they would have to charge to recover transport and other costs of exporting would not be competitive. See, for instance, Melitz and Treffer (2012).
4. The caveat with these data is that the surveys collect information on firms that are formally registered. In most countries, all firms above a certain size are supposed to register, but in practice, the registration rates and quality of the registry information vary across countries.
5. Some evidence indicates that Sub-Saharan Africa, along with South Asia, may have the lowest labor productivity in manufacturing in the developing world. See Clarke (2011).
6. An additional reason is that African firms substitute labor for capital by using relatively labor-intensive production methods, despite the fact that many African countries have higher wages than China.
7. Moreover, foreign direct investment in Africa is dominated by investment in extractive industries (World Bank 2013a).
8. The technical term is total factor productivity (TFP).
9. As discussed later, some recent studies, notably Bloom et al. (2013), measure organizational efficiency.
10. Associations between these business environment variables and plant-level and aggregate productivity in World Bank enterprise survey data are analyzed in several papers, including Dollar, Hallward-Driemeier, and Mengistae (2005); Li, Mengistae, and Xu (2011); Harrison, Lin, and Xu (2013). See also Hall and Jones (1999); Bartelsman, Haltiwanger, and Scarpetta (2009).
11. That is, the simple average of firm productivities, not weighted by their market shares, is higher in Country A.
12. Specifically, it is possible to decompose industry productivity into the average of firm-level TFPs—which would be the industry’s TFP level if all firms had equal market shares—and an “allocative efficiency” component. This is referred to as the Olley-Pakes decomposition of aggregate productivity (Olley and Pakes 1996). See also Melitz and Polanec (2012) and Foster, Haltiwanger, and Syverson (2008) for related decompositions. The Olley-Pakes decomposition can be described as follows: let \(a_t\) be the weighted average of (log) TFP of a given industry in year \(t\) and let \(a_i\) be the log TFP of enterprises constituting the industry with respective market shares, \(s_i\), where \(i\) indexes enterprises. Then \(a_t\) can be written as
   \[
   a_t = \bar{a} + \sum_{i=1}^{N} (s_i - \bar{s})(a_i - \bar{a}),
   \]
   where letters with upper bars represent unweighted industry means of variables.
13. Banerjee and Duflo (2012), for instance, show that firms are credit constrained in India. Udry and Anagol (2006) discuss evidence on exceptionally high rates of return to capital in Ghana, which suggests credit constraints.
14. In India, for example, labor laws prevent firms from adjusting employment in response to external shocks. See Adhvaryu, Chari, and Sharma (2013).
15. Among the indicators of the potential gains from reductions in trade costs are the large and persistent cross-border disparities in the price of goods, earnings, and rates of return to capital among neighboring countries across the region. These suggest substantial room for increasing employment opportunities for young people simply by making it easier for countries to trade and invest across borders, without necessarily involving large international migration of people (Habyarimana and Mengistae 2013).
16. Barker and Mengistae (2013). Beck, Dermigüç-Kunt, and Maksimovic (2005) report that firms claiming to be more constrained by access to credit are likely to grow more slowly.
17. Kenya Gazette Supplement no. 52 (Legislative Supplement no. 31) and Legal Notice no. 97, of 11 July 2008.
18. Cadot et al. (2013) found that new exporters are more likely to survive beyond the first year when other firms are exporting the same product to similar destinations. They argue that information spillovers account for the finding.
19. Collier and Venables (2007). See also Monga (2012) and Lin and Monga (2011) on the instrumentality of localization to that end in the context of industrial policy, which the framework of Collier and Venables does not necessarily assume.
20. The issue of localizing interventions in support of clusters is often intertwined with the issue of industrial policy (that is, policy targeted to specific types of industries or firms). But the two are quite distinct. Interventions to localize clusters do not rely on identifying specific firms or industries that should be clustered. For the current debate on industrial policy, as distinct from the spatial targeting of measures for improving the investment climate, some key references are Lin (2011); Lin and Monga (2011); Pack and Saggi (2006); Rodrik (2004).
21. A survey of disadvantaged youth in Malawi found that only 13 percent had ever received technical or vocational training (Hicks et al. 2011). Those who had not received any training attributed it to high costs and limited access and information.
22. That evidence base does not yet exist for Africa.
23. This assessment is based on particular assumptions about how long the earnings impact lasts. See Attanasio, Kugler, and Meghir (2011).

References
———. 2012. “Do Firms Want to Borrow More? Testing Credit Constraints Using a Directed Lending Program.” Massachusetts Institute of Technology, Department of Economics, Boston, MA.
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South Africa’s labor market—unlike most others in Sub-Saharan Africa—has a high share of wage employment off the farm, very little employment in household enterprises (HEs), and an even smaller share of employment in agriculture (4.5 percent). South Africa also stands apart from other African countries in having a high unemployment rate, estimated at 25 percent (based on a narrow definition of unemployment) in 2012.

High unemployment is nothing new in South Africa, which had an unemployment rate of 39 percent in 2005, compared to 17 percent in Africa’s other upper-middle-income countries. At 51 percent, unemployment among those ages 15–24 was twice the national average in 2012. South Africa’s high rate of youth unemployment reflects the high rate of unemployment throughout the country, which is worsened by circumstances specific to youth.

Especially unique is the combination of high unemployment and a very small HE sector. The ratio of HE employment to unemployment in South Africa was estimated to be 0.30–0.48 in 2012, which is much smaller than the ratio in middle-income countries of Asia and Latin America (11 and 7, respectively) or other countries in Sub-Saharan Africa (4.7). In South Africa, residual labor is not absorbed by the informal sector, as it is in other African countries or even in middle-income countries elsewhere in the world. In South Africa, larger domestic firms occupy the space that HEs occupy in many other African countries.

Conventional Perceptions of the Causes of Unemployment

High wage levels and high real unit labor costs played a part in dampening the demand for labor and encouraging industry to shift into more capital-intensive modes and sectors of production—at the expense of low-skilled workers and of industries that use low-skilled labor intensively (Mengistae 2011). While South Africa’s industry has become more competitive over the last decade, it remains less competitive than that of many trading partners. Stringent labor market regulations are typically put forward as the primary cause of high unemployment. Yet close scrutiny of the evidence suggests that the story is not just about labor market rigidities. Deficiencies in economic growth, coupled with the rapidly growing working-age population, are major contributors to high unemployment in South Africa.

By many standards, South Africa has rigid labor market laws and high barriers to entry in the HE sector. The minimum wage imposed by the regulations is high, so the ratio of minimum to median wage is 1.52 for unskilled workers and can go as high as 2.66 in some sectors (Bhorat, Kanbur, and Mayet 2011). High unionization and the use of wage bargaining councils raise wages further: conservative estimates show that union jobs enjoy a wage premium of at least 17 percent. As a result, the labor market is segmented. Well-paying nonfarm wage jobs occupy the upper end of the spectrum, and a pool of the unemployed, queuing for wage jobs, occupies the lower end. High barriers to entry in the HE sector—created mainly by stringent local government by-laws, limited access to capital, and poor entrepreneurial skills—ensure that very few of those who fail to get a wage job join the nonfarm HE sector. Consequently, a high level of open unemployment coexists with a small informal sector that cannot be explained by high reservation wages among the unemployed (Kingdon and Knight 2004; Mitra 2010).

Yet the contribution of labor market rigidities to unemployment appears exaggerated.
An employment wage elasticity of −0.7 suggests that minimum wage laws and the wage premiums exacted by unions and bargaining councils do reduce employment, but the size of the elasticity also implies that wage rigidities only partially explain why unemployment is so high. It is important to note that violation of minimum wage requirements is high in South Africa, reaching 50 percent in 2007 (Bhorat, Kanbur, and Mayet 2011). Violations are highest in sectors where minimum wages are higher, suggesting that minimum wages are only moderately binding. Revised estimates of the unionization premium are also much smaller than previous estimates (Bhorat, Goga, and van der Westhuizen 2012). Indeed, recent estimates indicate that wage rigidities account for only 1 percentage point of unemployment in South Africa (Magruder 2012).

**The Real Unemployment Problem: Slow Growth**

To a larger extent, South Africa’s unemployment problem is a growth problem, arising not only from the structure of growth but also from its slow pace in relation to demographic trends. Most of the growth in employment between 1995 and 2005 was in skilled employment, which grew 22 percent, while unskilled employment declined 13 percent (figure F4.1, panel a). Demand for unskilled labor is weak at a time when the unskilled labor force is expanding significantly. Owing to this pattern of skills-biased growth, a great scarcity of skills exists alongside high unemployment among the unskilled.

In the decade between 1995 and 2005, prior to the global financial crisis, the employment elasticity of growth (ranging from 0.6 to 0.8) and growth of gross domestic product (GDP) were comparable in South Africa and other middle-income countries, except for China and India. Population growth was not comparable, however. Rapid population growth reduced growth per capita in South Africa compared to other middle-income countries (figure F4.1, panel b). South Africa’s labor force grew 46 percent between 1995 and 2005, outstripping the 29 percent growth in employment. Growth in the labor force was propelled by an increase in

**Figure F4.1 Patterns in economic and employment growth in South Africa**

<table>
<thead>
<tr>
<th>Country</th>
<th>GDP growth in South Africa and other countries</th>
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<tr>
<td>Argentina</td>
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<td>Brazil</td>
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<td>Botswana</td>
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<td>South Africa</td>
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<td>Middle-income</td>
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<td>Upper-middle-income</td>
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</tbody>
</table>

Sources: World Bank 2011; Bhorat, Kanbur, and Mayet 2011.
labor force participation as well as population growth. Labor force participation rose 11 percentage points between 1997 and 2005, mostly because post-apartheid norms enabled greater involvement in economic activity, especially among women. At the same time, the share of the working-age population expanded by 6 percentage points between 1990 and 2010. The high unemployment that accompanied growth in the working-age population is one indication that South Africa’s demographic dividend did not materialize.

Inefficient Job Search and Matching Processes

For young people in particular, the effects of South Africa’s oversubscribed market for unskilled labor are amplified by frictions in job search and matching. The quality of unskilled labor is extremely varied, and unskilled workers’ low level of education offers little indication of their real ability to prospective employers. Firms also face high hiring and firing costs owing to tight regulations. To minimize hiring costs, firms tend to hire unskilled labor through word of mouth and other nonpublic advertisements; to screen for productivity, they rely on referrals. For young people, with their limited experience, inability to signal their real aptitude, poor connections, and poor information on job openings, the job search can become very long and demoralizing, and the age at which they obtain their first wage job will continue to increase.

Policies to Reduce Unemployment

Various policies have been pursued and proposed to reduce unemployment in South Africa. Popular proposals on the demand side include wage subsidies, labor regulation reform, and public works; on the supply side, they include reforms in education and training systems, as well as support for entrepreneurship. What might be done to improve the potential for such strategies to work—especially for youth?

Improve the Targeting and Design of Wage Subsidies

Subsidies are expected to stimulate labor demand by mitigating the impact of high minimum wages, union premiums, or high reservation wages. Subsidies may not have much of an effect on demand for labor in South Africa, however, because it is difficult to substitute unskilled for skilled labor (Go et al. 2010). Subsidies may serve only to move those who are currently employed into other jobs, and their effects may well be temporary. High violation of the minimum wage law in sectors with the highest minimum wage ratios will further reduce the impact of wage subsidies.

Wage subsidies might be more effective if they target sectors where the response will be higher and are designed to reduce the displacement of workers from one job to another. Although preliminary evidence from an impact evaluation in South Africa showed that the wage subsidy program increased the probability of getting and keeping employment, a negligible proportion of employers claimed the subsidy. This finding suggests that the real impact of the subsidy was that it improved the efficiency of search and matching instead of reducing the real wage that the employer would have to pay. The general finding is that although youth wage subsidies may have a positive impact, their efficacy is conditioned by other labor market conditions, such as the flexibility of the labor market. A youth wage subsidy is just one instrument—of many—to tackle youth unemployment. If wage rigidities prove to be the primary cause of unemployment, eliminating labor rigidities would be a longer-term solution to the problem. If overall labor demand is low, then it will need to increase.

Provide Incentives for Labor-Intensive Growth

Public works programs have not significantly improved employment in South Africa, based on evidence from the Expanded Public Works Program (McCord 2007). A better alternative is to implement national policies that not only increase the pace of economic growth but also create incentives for labor-intensive firms to form and to locate near the pool of labor—
for example, by establishing special economic zones (as discussed in chapter 6) or offering fiscal incentives favorable to labor-intensive industries.

**Reform Education and Training Systems**

South Africa’s long-term employment issues cannot be addressed without reforms in education and training systems. Such reforms can help to improve the productivity of the labor pool, narrow the wide gap between the skills that the labor market demands and workers can supply, and increase the signaling ability of education, which, in turn, will improve the search and matching efficiency of the labor market.

The technical and vocational education and training (TVET) system is plagued by low enrollment, low completion, and low probability of finding employment, but it could be improved by reforms that strengthen basic education (an area where South Africa performs poorly). South Africa would also benefit from restructuring the further education and training (FET) system to permit part-time learning (which would make FET more flexible and accessible) and to introduce apprenticeships and closer engagement with industry (which would make FET more relevant to the workplace). Sector education and training authorities should have a simplified bureaucracy, move to demand-driven financing, and delegate training to the most competent institutions using a performance-based financing approach (see discussion in Filmer 2012).

**Revise By-Laws and Offer Focused Training to Support Entrepreneurial Activities**

South Africa should make it easier for young people to become self-employed by introducing by-laws that are compatible with self-employment and by offering financial support. Although international evidence is generally mixed, the evidence on the impact of the Women Entrepreneurship Programme in South Africa suggests that well-structured entrepreneurship training would enhance success (Botha, Nieman, and van Vuuren 2006). Current proposals to strengthen business licensing may work in the opposite direction by increasing the administrative burden for HEs (as well as small and medium enterprises).

**References**


