

# Light Manufacturing in Africa: Targeted Policies to Enhance Private Investment and Create Jobs

After stagnating for most of the past 45 years, economic performance in Sub-Saharan Africa is at a turning point. Between 2001 and 2010 the region's gross domestic product grew at an average of 5.2 percent a year and per capita income grew at 2 percent a year, up from -0.4 percent in the previous 10 years. The reforms of the 1990s that focused on macroeconomic stability and liberalization began to gain traction. Between 2001 and 2010 net flows of foreign direct investment totaled about US\$33 billion—almost five times the US\$7 billion total between 1990 and 1999—and export growth was robust (World Bank 2011).

Experience elsewhere shows that this growth cannot be sustained without a structural transformation that lifts workers from low-productivity agriculture and the informal sector to higher-productivity activities. This transformation has yet to take place in Sub-Saharan Africa. The booming price of commodities (oil, cotton, metals, minerals, and others) that Sub-Saharan Africa mostly exports fueled a large part of the past decade's growth. Investment remains low in Africa—less than 15 percent of gross domestic product, compared with 25 percent in Asia—and more than 80 percent of workers are stranded in low-productivity jobs.

Labor-intensive light manufacturing led the economic transformation of many of the most successful developing countries, but it has not fared well in Sub-Saharan Africa. While China's emergence in the global manufacturing market since 1980 has resulted in a broad decline in the market share of all regions, the decline in Sub-Saharan Africa's share has been longer and deeper than most. Sub-Saharan Africa's share of global light manufacturing has continually declined—to less than 1 percent—and preferential access to U.S. and European Union (EU) markets has made little difference. Indeed, without

structural transformation, Sub-Saharan Africa is unlikely to catch up with more prosperous countries like China and Vietnam, which were not very different from Sub-Saharan Africa in the 1980s.

In addition to increasing the productivity of medium and large formal firms, Sub-Saharan Africa has to raise the productivity and encourage the upgrading and expansion of small enterprises, mostly in the informal sector. Light manufacturing in Sub-Saharan Africa is characterized by a few medium-size formal firms providing products to niche or protected markets and by a vast number of small, low-productivity informal firms providing low-quality products to the domestic market. These enterprises provide low-paying jobs, little in foreign exchange earnings, and few productive employment opportunities for young Africans. Encouraging the productivity and expansion of small firms has not received adequate attention and will be addressed in this report.

This study draws on the following five analytical tools:

- New research based on the World Bank Enterprise Surveys
- Qualitative interviews with about 300 enterprises (both formal and informal) of all sizes in China, Ethiopia, Tanzania, Vietnam, and Zambia, conducted by the study team and based on a questionnaire designed by Professor John Sutton of the London School of Economics
- Quantitative interviews with about 1,400 enterprises (both formal and informal) of all sizes in the five countries listed above, conducted by the Centre for the Study of African Economies at Oxford University and based on a questionnaire designed by Professor Marcel Fafchamps and Dr. Simon Quinn of Oxford University
- Comparative value chain and feasibility analysis based on in-depth interviews of about 300 formal medium enterprises in the same five countries, conducted by the consulting firm Global Development Solutions, Inc.
- A study of the impact of Kaizen managerial training for owners of small and medium enterprises. This training, delivered to about 250 entrepreneurs in Ethiopia, Tanzania, and Vietnam, was led by Japanese researchers from the Foundation for Advanced Studies on International Development and the National Graduate Institute for Policy Studies.

A discussion of why we chose these countries and these analytical tools is presented in this report. Detailed results can be found online at <http://econ.worldbank.org/africamanufacturing>.

This study has five features that distinguish it from previous studies. First, the detailed studies on light manufacturing at the subsector and product levels in five countries provide in-depth cost comparisons between Asia and Africa. Second, building on a growing body of work, the report uses a wide array of quantitative and qualitative techniques, including quantitative surveys and

value chain analysis, to identify key constraints to enterprises and to evaluate differences in firm performance across countries. Third, the findings that firm constraints vary by country, sector, and firm size led us to adopt a targeted approach to identifying constraints and combining market-based measures and selected government interventions to remove them. Fourth, the solution to light manufacturing problems cuts across many sectors and does not lie only in manufacturing alone. Solving the problem of manufacturing inputs requires solving specific issues in agriculture, education, and infrastructure. Fifth, the report draws on experiences and solutions from other developing countries to inform its recommendations. The report's goal is to find practical ways to increase employment and spur job creation in Sub-Saharan Africa.

## **Potential for Light Manufacturing: Creating Millions of Productive Jobs**

Using new evidence, this report shows that feasible, low-cost, sharply focused policy initiatives aimed at enhancing private investment could launch Sub-Saharan Africa on a path to becoming competitive in light manufacturing. These initiatives would complement progress on broader investment reforms and could increase the share of industry in regional output and raise the market share of domestically produced goods in rapidly growing local markets for light manufactures. And as local producers increase the scale of their operations, improve the quality of their products, and accumulate experience with technology, management, and marketing, they can take advantage of emerging export opportunities. In Sub-Saharan Africa, as in China and Vietnam (which also experienced accelerated growth), policies that encourage foreign direct investment can speed industrial development and export expansion. The impact of isolated successes can be multiplied, as demonstrated by Ethiopia's recent foray into selling cut flowers in EU markets: a single pioneering firm opened the door to an industry that now employs 50,000 workers. The strategies proposed here could initiate a process with the potential to create millions of productive jobs.

Sub-Saharan Africa's potential competitiveness in light manufacturing is based on two advantages. The first is a labor cost advantage. In Ethiopia, for example, labor productivity in some well-managed firms can approach levels in China and Vietnam. At the same time, Ethiopia's wages are only a quarter of China's and a half of Vietnam's, and its overall labor costs are lower still. Sub-Saharan Africa's second advantage is an abundance of natural resources that supply raw materials such as skins for the footwear industry, hard and soft timber for the furniture industry, and land for the agribusiness industry. Institutional obstacles and unsuitable policies, however, have prevented local producers from taking advantage of certain resources. Timber costs are far higher in

Ethiopia than in China or Vietnam, leading Ethiopia to import Asian furniture despite Ethiopia's enormous unexploited potential to supply domestic timber, especially bamboo. This report envisions reforms that can unlock the potential of domestic resources like leather and bamboo to make a growing range of light manufactures competitive in the domestic market and, eventually, in global markets for labor-intensive products.

Is there room for Sub-Saharan Africa in the global market today? Yes, if Africa can exploit its opportunities soon. China dominates the global export market in light manufactures, and its competitive edge far exceeds that of low-income exporters that recently entered the global market. But the steeply rising costs of land, regulatory compliance, and especially labor (including both wages and benefits) in China's coastal export manufacturing centers have begun to erode these centers' cost advantage. This erosion will continue and probably accelerate in the coming years. New entrants have already begun to line up: Bangladesh, Cambodia, and China's interior provinces. The ongoing redistribution of cost advantages in labor-intensive manufacturing presents an opportunity for Sub-Saharan Africa to start producing many light manufactures, enhance private investment, and create millions of productive jobs.

Fortunately, the current global trading environment favors Sub-Saharan Africa if it can overcome key constraints in the most promising subsectors. Along with low labor costs and abundant resources, Sub-Saharan Africa enjoys duty-free and quota-free access to U.S. and EU markets for light manufactures under the Africa Growth and Opportunity Act and the Cotonou Agreement.

Are these advantages enough to offset Sub-Saharan Africa's generally low labor productivity relative to that of its Asian competitors? Yes, if appropriate supportive policies are implemented. This report draws inspiration from Asia, which demonstrates the enduring benefits of adopting policies early that facilitate competitive output and input markets; attract foreign direct investment to capitalize on the region's comparative advantage in low-wage labor; and provide technological, commercial, and managerial expertise. Like Asia, Sub-Saharan Africa could benefit from applying policies that accord free access to domestic and international markets for the inputs and outputs associated with light manufacturing and create conditions conducive to attracting foreign direct investment.

## **Case Study: Ethiopia**

Using the five analytical tools described above and data from three African and two Asian countries, this study confirms that select African countries have the potential for light manufacturing. To realize this potential, these countries must overcome constraints that vary by country, subsector, and firm size.

Previous studies identified constraints in a long list of cross-cutting issues, including corruption, red tape, inadequate utilities, poor transport, poor skills, poor access to finance, and so on. In contrast, our detailed analysis points to a smaller, more specific, and sometimes new set of key constraints. Narrowing the analysis can make the reform agenda more manageable within the financial and human resource constraints of most African countries. The report presents an in-depth diagnosis of the constraints in five light manufacturing subsectors in Ethiopia: apparel, leather products, agribusiness, wood products, and metal products. We propose policy reforms to address these constraints based on the successes of other countries.

Ethiopia navigated the global economic crisis in 2008–09 better than many developing countries, encountering only modest declines in exports, remittances, and foreign investments, which have since recovered beyond their pre-crisis levels. Growth in exports and earnings, in conjunction with a relative slowdown in imports, has enabled foreign exchange reserves to rise. Overall inflation has dropped to single digits, mainly due to declining food prices, and growth has remained strong at about 8 to 9 percent a year since 2009. The Ethiopian government is committed to achieving continued growth within a stable macroeconomic framework in the context of the new five-year development plan (Growth and Transformation Plan 2010/11–2014/15, Ministry of Finance and Economic Development 2010). The plan's strategic pillars include sustaining rapid economic growth by promoting industrialization, enhancing social development, investing in agriculture and infrastructure, and strengthening governance and the role of youth and women.

Although each country's economy is unique—and several aspects of Ethiopia's governance, institutions, and political environment set it apart—there are enough common factors to make Ethiopia a good exemplar for a large group of Sub-Saharan African countries. Ethiopia has many natural resources that can provide valuable inputs for light manufacturing industries serving both domestic and export markets. Among its abundant resources are cattle, which can be processed into leather and its products; forests, which can be managed for the furniture industry; cotton, which can support the garments industry; and agricultural land and lakes, which can provide inputs for agroprocessing industries. Ethiopia has abundant low-cost labor, which gives it a comparative advantage in less-skilled, labor-intensive sectors such as light manufacturing. Ethiopia also shares several negative factors with other low-wage African countries, such as shortages of industrial land, poor trade logistics (particularly in landlocked countries), and limited access to finance.

This report does not claim that its Ethiopia-specific findings apply to all Sub-Saharan African countries, although, as discussed in part II, there are some commonalities among the three Sub-Saharan African countries studied in this report. Nevertheless the analytical approach applied to Ethiopia can be replicated

in other African countries to derive specific diagnoses and propose solutions tailored to country circumstances. Detailed policy recommendations for Tanzania and Zambia will be available shortly. Replicating this study's methodology beyond our countries of focus will enable a rich analysis of the constraints to light manufacturing in other Sub-Saharan African countries and provide concrete policy recommendations to facilitate the growth of this sector across the region.

### **Apparel: Poor Trade Logistics**

Given the ready availability of the technology and skills required to manufacture garments, there is obvious potential for domestic firms to increase their share in the domestic and global clothing markets. A significant and growing labor cost advantage, access to a state-of-the-art and well-located container port in Djibouti, and duty-free access to the U.S. and EU markets offer Ethiopia the opportunity to expand its apparel industry. Foreign direct investment can accelerate the process of ramping up production and exports. Ethiopia's potential for expanding its production of high-quality cotton enhances the potential benefits associated with expanded production of clothing. The binding constraint on Ethiopia's competitiveness in apparel has been poor trade logistics, which wipe out its labor cost advantage and cut it off from the higher-value, time-sensitive segments of the market.

Establishing a green channel for apparel at customs, providing free and immediate access to foreign exchange, reducing the cost of letters of credit, and setting up an industrial zone close to Djibouti would resolve the most important trade logistics issues. As in China and Vietnam, these reforms would position Ethiopia to attract outside investors to lead the industry. Competitiveness could be reinforced by developing a competitive textiles industry (Ethiopia produces high-quality cotton and has cheap hydro-energy). While Ethiopia's apparel sector currently generates only US\$8 million in exports and 9,000 jobs, Vietnam has—with policies similar to those recommended in this report—achieved US\$8 billion in exports and created 1 million productive jobs.

### **Leather Products: Input Shortages**

Ethiopia has even greater potential in leather, which is more labor intensive than apparel. Italian shoe importers express the highest regard for Ethiopian leather. Modest, targeted reforms could enable Ethiopia's large animal herds to produce vast amounts of some of the best leather in the world. Furthermore, the penalty of poor trade logistics is less serious because leather products are less time sensitive than apparel. The immediate constraint is limited access to high-quality processed leather.

Enabling imports of high-quality processed leather would easily and immediately solve the acute shortage of leather in the industry. Removing restrictions

on the exports of leather would increase incentives to invest in the Ethiopian leather supply chain. The challenge is to expand the commercial production and sale of high-quality animal hides. Facilitating access to rural land for good-practice animal farms (already written into Ethiopia's current development plan) will open the door to large-scale commercial herding enterprises. Promoting better breeds, controlling cattle diseases, and enabling the use of cattle as collateral would expand the capacity of small-scale operators to contribute to a larger supply of quality hides. Ectoparasites—a disease that affects Ethiopian hides—can be controlled by a modest program costing less than US\$10 million a year. And improving trade logistics along the same lines as apparel would further enhance competitiveness. Vietnam—with a population similar to that of Ethiopia—created 600,000 productive jobs in the leather products sector by implementing policies similar to those recommended in this report.

### **Agribusiness: High Input Prices**

As exemplified by the success of coffee and cut flowers, the potential for agribusiness lies in low wages, varied soil and climatic conditions, opportunities to increase yields on cultivated land, and large tracts of unused arable land. Ethiopia has the second largest dairy cattle population in Sub-Saharan Africa, behind Sudan and followed by Tanzania. As in other sectors, problems lie in the market for inputs (in agriculture), where distortions lead to low productivity and high prices. Fixed prices for several food items discourage farmers from increasing productivity. Issues in the seed and fertilizer markets also contribute to very low agricultural productivity—yield rates for wheat are generally less than 1 ton per hectare. Investor access to rural land is also difficult because of the confluence of traditional rights with state ownership of land. And neither agricultural land nor cattle can be used as collateral for loans.

To unleash the vast potential of agribusiness, the government should facilitate private sector investments in key input markets, such as fertilizers and hybrid seeds, and extend rural food safety nets to vulnerable urban dwellers as an alternative to price caps and export bans. In recent years, the government has encouraged these investments, and this trend should continue. The government is also advised to pilot in key locations the use of land and cattle as collateral and facilitate access to rural land for good-practice investors.

### **Wood and Metal Products: Land and Finance**

Firms in the wood and metal products subsectors rely on expensive imports of wood and steel. Ethiopia has the natural resources to develop a competitive supply of wood, but its current supply is unreliable, unsustainable, and poorly organized. Even in the better-managed wood product firms, labor productivity is low—a worker produces 4.5 chairs a day in China and 1.9 in Vietnam, but

only 0.3 in Ethiopia. Ethiopia's steel subsector is also constrained. The price of steel is 30 percent higher in Ethiopia than in China due to poor trade logistics and high import tariffs.

The potential lies not in exports (at least initially) but in the growing domestic market and in the high weight-to-value ratio of finished wood and metal imports. The sector is dominated by smaller, mostly informal, firms with no large or exporting firms. For wood the government should facilitate access to rural land and financing for private wood plantations. For metals the cost of inputs could be reduced by cutting the 10 percent import tariff on steel and exploiting Ethiopia's proven reserves of iron ore. For both subsectors the government could support the most deserving enterprises by facilitating their access to skills, finance, and industrial land as part of "plug-and-play" industrial parks.

### **The Five Subsectors**

In sum, although labor productivity is high among the few larger firms in four of the five subsectors, it remains low on average, especially for smaller firms that lack entrepreneurial, managerial, and technical skills. Access to industrial land and formal finance are also constraints in each of the subsectors. Smaller firms are constrained because the government gave larger exporters in certain sectors (including apparel and leather) preferred access to land and finance. Banks do not accept machinery or cattle as collateral, and restrictions on buying and selling make land difficult to use as collateral. Without easy access to land and finance, small firms remain small, low in productivity, and unable to upgrade technology or expand production.

Input policy issues are the most significant constraints (table 1). This finding is important because issues related to input industries tend to be overlooked in the reform agenda for light manufacturing. Indeed, Ethiopia (like many other African countries) should reform the many input industries where it has a comparative advantage—leather, wood, many agricultural products, and possibly apparel and steel—thanks to abundant natural resources, a favorable climate, and the potential for cheap hydro-energy.

Detailed policy recommendations, including the time frame for implementation, are presented in table 2. Many of these recommendations, consistent with the traditional agenda for investment climate reform, seek to promote competition and reduce transaction costs (such as improved trade logistics and lower import tariffs). In this case, however, the detailed subsector diagnostics and the cross-country comparisons reduce the number of policy recommendations and make them more specific. More importantly, the benefits of policy reforms are easy to identify. Some new critical issues have also emerged, such as the need to develop wood plantations. Even implementation of the "traditional" investment climate reforms can be dramatically improved by focusing,



**Table 1 Constraints in Ethiopia, by Importance, Size of Firm, and Sector**

		Input industries	Land	Finance	Entrepreneurial skills	Worker skills	Trade logistics
Apparel	Smaller	Important	Critical	Critical	Important	Important	
	Large	Important			Important		Critical
Leather products	Smaller	Critical	Critical	Critical	Important		
	Large	Critical			Important		Important
Wood products	Smaller	Critical	Important	Important	Important	Important	
	Large	Critical	Important	Important	Important	Important	
Metal products	Smaller	Critical	Important	Important	Important	Important	
	Large	Critical	Important	Important	Important	Important	
Agribusiness	Smaller	Critical	Critical	Critical	Important		
	Large	Critical	Critical	Important			

Source: Authors.

Note: Blank cells are not a priority.

at least initially, on the subsectors where they will yield the most benefits (such as trade logistics for apparel and leather products) and for which the country has a comparative advantage.

Implementing this policy agenda will require coordination across various government departments and agencies and a clear understanding of the objective of promoting the competitiveness of light industry manufacturers in the domestic and global markets. Before they commit resources, domestic and foreign investors need to see credible commitments from government pledging to complete the reform agenda. High-level support is a crucial ingredient in execution of the report's recommendations. We suggest that the Ethiopian government put in place a dedicated high-level team to develop and implement the proposed reform program.

The priorities and sequencing of policy reforms and interventions should adhere to three criteria. First, these measures should focus on sectors and subsectors demonstrating the most potential for comparative advantage and job growth. Second, measures should be the most cost-effective in the short and long runs, with the least fiscal impact. Third, implementation capacity and implications for governance and the political economy of policy reforms should be thoroughly assessed and used as a guide.

The report highlights the importance of industry-specific issues (such as the effects of cattle disease on leather, import tariffs on steel, and price caps on agricultural products) in addition to economywide issues (such as poor access to industrial land, lack of technical skills, and poor trade logistics). This raises the

Table 2 Proposed Policy Measures in Ethiopia

Sector	Short term (6–12 months)	Medium term (1–2 years)	Long term (2–5 years)
All sectors	<p>(a) Remove import tariffs on all inputs for light manufacturing, including those that are destined for national and regional markets;</p> <p>(b) offer incentives for banks and other financial institutions to offer financing for machinery to well-managed firms</p>	<p>(a) Develop collateral markets to improve access to finance; for example, facilitate the use of machines, livestock, and land as collateral; (b) support programs such as Kaizen's managerial training on marketing and business strategy, production and quality management, and business record keeping; (c) improve the performance of trade between Addis Ababa and Djibouti, investigate and address issues relating to letters of credit, fuel costs, and competition among trucking companies; (d) harmonize and improve customs procedures by simplifying procedures and leveraging information technology</p>	<p>(a) Develop "plug-and-play" industrial zones to facilitate access to industrial land and basic infrastructure; consider setting up zones next to Djibouti; (b) develop the hard infrastructure (across boundaries) to support multimodal systems, which would entail rehabilitating the railway line between Addis Ababa and Djibouti (planned); (c) develop strategic partnerships along key trade corridors, including with Djibouti, to optimize port operations and minimize charges; (d) in partnership with the private sector, design technical skills development programs such as those at the Penang Skills Development Centre (Malaysia) that offer a variety of sector-specific short- and long-term certificate, diploma, and degree courses</p>
Apparel	<p>(a) Remove restrictions on exports of cotton;</p> <p>(b) guarantee the immediate availability of foreign exchange for apparel producers;</p> <p>(c) eliminate foreign exchange fee; (d) establish a green channel for apparel at customs;</p> <p>(e) negotiate lower handling fees with Djibouti</p>	See the proposals for all sectors	See the proposals for all sectors
Leather products	<p>(a) Remove restrictions on exports of leather and facilitate the import of high-quality processed leather; (b) guarantee the immediate availability of foreign exchange for leather producers; (c) eliminate foreign exchange fee; (d) establish a green channel for leather at customs; (e) negotiate lower handling fees with Djibouti</p>	<p>(a) Control cattle disease; (b) facilitate access to rural land for strategic investors in cattle through an inclusive and transparent process</p>	Promote cross-breeding of cows

Wood products	Reduce taxes on legal wood	(a) Facilitate access to land and financing for sustainable private wood plantations of fast-growing species on degraded land close to the main urban centers; (b) facilitate access to rural land for strategic investors in wood plantations through an inclusive and transparent process	(a) Fight illegal logging; (b) enable carbon financing
Metallic products	See the proposals for all sectors	(a) Promote the exploitation of iron ore deposits; (b) conduct a feasibility study to assess the competitiveness of a domestic steel industry	See the proposals for all sectors
Agricultural products	Remove price controls on agricultural products	(a) Facilitate private sector investments in key input markets such as hybrid seeds and fertilizers (for example, by easing access to foreign exchange); (b) facilitate access to rural land for strategic investors in agricultural plantations through an inclusive and transparent process; (c) provide technical assistance to smallholders to connect with strategic investors	Promote cross-breeding of cows

Source: Authors.

Note: Proposals would benefit both small and large firms, with the exception of the promotion of iron ore deposits, which would only benefit large firms.

issue of how to prioritize and package policy reforms within and across sectors given that the government cannot tackle all issues at once. Specific reforms and economywide reforms need not be mutually exclusive. They can be complementary, and both are needed to move the economy forward. Priorities should be determined by cost-benefit analysis. Where hard choices are required, the government should give priority to the locations and industries with the greatest potential, taking into account the political cost of reforms. This approach would also help to expand the reforms through demonstration effects. China adopted this approach with land reforms (initiated in the Shenzhen Special Economic Zone), and Mauritius adopted it with labor reforms (first limited to exporters). Of course, such deliberately targeted reforms may be prone to mistakes and capture—hence the importance of a transparent and professional process to implement reforms and the political courage to correct mistakes.

### **African Competitiveness in Light Manufacturing and Possible Solutions from Asia**

Although the specific nature and relative importance of the binding constraints and policy responses will vary by country, subsector, and firm size, the analysis in Tanzania and Zambia confirmed that most of the main constraints fall into the same six categories as in Ethiopia: input industries, trade logistics, access to finance, access to industrial land, worker skills, and entrepreneurial skills. Detailed policy recommendations on Tanzania and Zambia will be presented in an upcoming report.

To address the issues identified above, other successful developing countries have implemented several practical solutions, explored below.

#### **Plug-and-Play Industrial Parks**

In developing plug-and-play industrial parks, China gradually learned to address multiple constraints. Beginning in the late 1970s, special economic zones provided mostly foreign-owned firms with access to industrial land, port facilities, standardized factory shell buildings, worker housing, and duty-free import of materials and equipment for export production. Initial success encouraged the proliferation of industrial parks for domestic firms serving both home and overseas markets. Zone operations subsequently expanded to include training facilities and one-stop shops for business regulations. These initiatives considerably reduced financing costs and risks for the better-managed small firms, allowing them to grow into medium enterprises despite their inability to obtain bank loans. This is how China avoided the “missing middle” problem, where the size distribution of firms is characterized by either very small or very

large firms. The parks also contributed to the development of industrial clusters by making it easier for smaller firms to locate near larger firms, generating economies of scale and scope for Chinese industries. And housing workers next to plants reduced the labor costs for plant operators as well as the cost of living for workers.

Proximity first to Hong Kong SAR, China, and later to domestic ports that gradually developed into world-class cargo facilities, enabled China's special economic zones to help resolve trade logistics issues. Establishing the Shenzhen Special Economic Zone next to Hong Kong SAR, China, transformed a fishing village into a leading light manufacturing city of 8 million people in less than 30 years. The parks also served as the testing ground for difficult reforms: Shenzhen led China's adoption of a market-friendly land-lease system and many other new institutional and regulatory arrangements.

The key to success is intense competition and cooperation among firms inside and outside the parks. Most parks did not preselect specific light industries, instead letting market forces drive the formation of specialized clusters. The parks, including the factory shells and housing, are financed by local governments as well as the private sector. The local governments' share is often financed by bank loans (with the zone's real estate as collateral), repaid with the additional tax revenues from increased economic activity. To be successful, parks must be part of a package of interventions that address the most binding constraints limiting production and trade.

### **Key Input Industries**

China and Vietnam reformed and supported key input industries so they could become competitive. Nationally, both China and Vietnam encouraged foreign direct investment for key inputs (as in machine manufacturers) and developed sustainably managed wood plantations and competitive agricultural sectors. They supported input and output markets through the provision of land and financing, as with the local government-managed Yiwu market in China, now the largest commodity market in the world. China and Vietnam also provided support and coordination along the value chains, while gradually reducing the trade restrictions protecting domestic input industries. In addition, China exempted export producers in special economic zones from paying taxes and duties on imported inputs; offered tax rebates to exporters outside the special economic zones; and gradually developed programs to provide information and technical assistance on inputs, technology, and suppliers to small and medium enterprises. The report shows that removing Ethiopia's import duty on inputs in the light manufacturing sector would cost no more than 2 percent of total tax revenue, which could easily be recouped by imposing an excise tax, if needed.

### **Trade Logistics**

Both China and Vietnam relied on good trade logistics at the outset of their light manufacturing journey by creating manufacturing zones close to ports and then exempting firms in those zones from numerous domestic regulations and tariffs and import restrictions. This approach enabled China and Vietnam to import efficiently the inputs that domestic firms could not produce or supply competitively, allowing firms based in the new zones to gain access to export markets cheaply and quickly. Locating industrial zones next to world-class ports with efficient customs also made a difference, as shown in Shenzhen.

Emulating China and Vietnam will not be enough for Sub-Saharan Africa, especially in the many countries without direct access to a world-class port. African governments need to work together to pursue regional integration by improving trade logistics along key business corridors, especially governance and regulation at ports. To improve connectivity and increase competition, African countries should continue to develop the hard infrastructure to support multimodal systems combining trucking, railways, airways, and shipping. To harmonize and improve customs, countries should simplify procedures and leverage information and technology. And to increase competition among freight forwarders and shipping and trucking companies, countries should remove price controls and restrictions on foreign direct investment.

### **First Movers**

Entrants in new industries typically face high costs and risks. This is especially true in Sub-Saharan Africa, where industrial structure and infrastructure are limited and regulatory and governance risks are high. But the prospect of single entrants serving as catalysts for the rise of competitive new industries is real, as illustrated by Ethiopia's rose industry, which began with a single firm and quickly grew to more than a dozen firms with direct employment exceeding 50,000 workers (plus further job creation among suppliers of transport, packaging materials, and so on). The rise of Ethiopia's rose industry began after the government facilitated land access for the first rose plantation, demonstrating the potential benefits of undertaking a limited, sharply focused policy intervention on behalf of promising start-ups.

In China initial efforts to promote the expansion of low-wage, labor-intensive production have given way to programs offering support to start-ups in more complex sectors, often involving skilled labor and high technology. Support may begin before firms move into the industrial zones, with site selection proposals, project reviews, and licenses for land use and construction. After moving in, firms may obtain technical assistance, technological upgrading, and access to market information through networking to guide the firm and the industry to become nationally competitive. Support to first movers can be provided on a one-time basis (to avoid rent seeking) and does not have to be expensive.

Governments can provide a matching-grant scheme to share the high risks of first movers, such as paying for part of a feasibility study. Government support does not need to target large foreign firms. Official efforts to disseminate basic knowledge about markets and suppliers alone may unleash new industries, as with Zambia's corrugated tin roof industry. Support to first movers should be open, transparent, and consistent, and all candidates should have access to the same benefits and information.

### **Entrepreneurial Skills**

Our quantitative survey shows that entrepreneurs who receive technical assistance at start-up can deliver significantly better business outcomes. Ethiopia's Ramsay Shoe Factory shows the importance of technical assistance in raising the quantity and quality of output. Africa's multitude of small informal firms includes many operators with substantial entrepreneurial talent. The Kaizen study shows that lack of basic management skills limits the capacity of small firms to accumulate assets and expand (Sonobe, Suzuki, and Otsuka 2011). It also shows that, as in the case of Ramsay, access to modest and inexpensive training or technical support can open the door for some informal firms to prosper and expand into substantial generators of employment and, in some cases, exports. African governments should seek opportunities to invest in programs that can improve managerial and technical skills, especially among small-scale operators already working in high-potential subsectors. Governments should also help domestic firms to adopt and adapt existing technologies by providing targeted technical support and advice to owners and entrepreneurs. This support should encompass not only informal firms, but formal, large enterprises as well.

One way to help entrepreneurs is through Kaizen's managerial training in three modules: marketing and business strategy, production and quality management (including a brief introduction to workplace housekeeping techniques and other Kaizen activities), and business record keeping. Even a three-week training program can improve entrepreneurs' management practices and substantially increase their willingness to pay for the program. Foreign direct investment offers another way to expand the domestic stock of entrepreneurial skills. In China firms first benefited from the knowledge provided by overseas Chinese entrepreneurs and foreign managers at multinational branch plants. Firms then benefited from the transfer of know-how associated with foreign direct investment, which contributed to a new generation of domestic entrepreneurs.

### **Vocational Training to Improve Workers' Skills**

Even with its low-skill workforce, Sub-Saharan Africa could become competitive in some light manufacturing sectors. In the apparel sector, for example, small numbers of managers and technicians can guide hundreds of workers. Specialists report that inexperienced workers can learn to operate sewing

machines in no more than two weeks. For the longer term, upgrading to more complex production will require a better-trained workforce than is currently available. But the expansion of light industry need not await higher school enrollment and better-quality schooling. Industrialization can begin rapidly by targeting promising sectors with modest skill requirements—the objective of this report—and then adopting policy measures that contribute to lowering the training costs facing would-be private investors. Together with the private sector, governments can offer technical assistance to foster industry-specific vocational training for less-skilled workers. Such training could be offered to smaller firms in industrial clusters (including informal ones) and to larger firms in industrial parks.

Governments, in partnership with the private sector, can leverage publicly funded programs to turn out technicians who can operate or repair simple machines, read instructions, and use the Internet to communicate and search for information. In addition to good basic education, governments could design technical skills development programs such as those at the Penang Skills Development Centre (Malaysia), which offers a variety of sector-specific short- and long-term certificate, diploma, and degree courses for all levels of the workforce. Dedicated skills development schools have had huge payoffs in countries where they were directed at sectors in which the country had a latent comparative advantage.

### **Implementation Issues**

The report emphasizes how important it is for African governments to focus their scarce resources on resolving the most significant constraints on light manufacturing industries with the biggest potential. Reform implementation should take into account five considerations:

- First, policy interventions should begin with pilot initiatives and be continually revised and updated. As the Chinese reform experience shows, where policy reforms are needed, pilot initiatives can be designed in selected rural, geographically isolated areas to ensure that lessons are learned before scaling up (Zhang, de Haan, and Fan 2010). Implementation should be decentralized as much as possible to increase proximity to the private sector, improve accountability, and foster competition between local governments.
- Second, not all efforts to support selected industries will succeed. The Asian experience shows that governments should be willing to drop failing policies. For this reason it is important to keep pilot initiatives small and put in place effective monitoring and evaluation mechanisms to review and improve ongoing interventions regularly.
- Third, the fundamental role of the government in private sector development is to foster competition. Ongoing patterns of development in light



manufacturing in China and Vietnam show that competition is the most critical aspect of industrial development. In both countries, initial preference for state-run enterprises has given way to national policies that facilitate the growth of light manufacturing industries through open competition.

- Fourth, it is important for African governments to mobilize support from all partners—the private sector, nongovernmental organizations, and the donor community—in their structural transformation efforts.
- Fifth, one of the best ways for the government to facilitate robust private sector growth is to maintain a stable and conducive macroeconomic environment and ensure that natural resources are well managed. Most African countries have made substantial progress in this area in recent years, and these efforts should continue.

The fiscal impact and political economy of light manufacturing policy reforms should be assessed before implementation begins. It is often said that limited capacity and weak governance make it difficult for many Sub-Saharan African countries to design and implement the specific policies proposed here. But the proposed approach is not expected to create serious governance issues for four reasons:

- First, although some of the proposed reforms would reduce the rent of vested interest groups, the extent of policy intervention is smaller than the traditional big-bang approach, and any political impact is likely to be smaller. The benefits can be calculated up-front, and a deeper analysis of political economy issues can be conducted to reduce the losses of vested interest groups.
- Second, the proposed policy reforms would be consistent with the latent comparative advantage of the economy. If subsidies and other supportive policies target industries consistent with latent comparative advantage, the required subsidies will be small but will attract many new entrants into a competitive sector, making rent seeking less likely.
- Third, policy interventions should increase competition (for example, by reducing entry costs and risks) as well as the capacity of firms to compete. This is the opposite of what past, failed industrial policies did in Africa, such as policies protecting and subsidizing a few companies in industries in which the country had no comparative advantage.
- Fourth, while the broader agenda of good governance is important, African governments should not wait for improvements before supporting the private sector with focused policies to enhance investment and create more growth and more jobs. The East Asian experience shows that, with capable leadership that promotes development by encouraging private business and enabling market forces, a country can achieve impressive results even if the governance issues have not been addressed at all levels.

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