The Study’s Objectives and Methods

This study aims to develop practical insights to help some African countries to become competitive in light manufacturing. This requires understanding why light manufacturing has been slow to grow in African countries but has taken off in other countries with similar development levels and investment climate indicators. It also requires understanding what strategies have been pursued by successful countries that not too long ago were at a similar development level and how such strategies could be adapted to African countries while fully recognizing their special circumstances.

The study aims to answer the following questions:

- Is there potential for light manufacturing in Africa? And if so, why, under generally similar constraints, are light manufacturing products that require fairly simple technologies and less-skilled labor produced and even exported by countries in all regions of the world except Africa, where they are not even produced for the domestic market?
- What are the critical constraints facing African firms? How have firms devised institutions and arrangements to circumvent some of these constraints?
- What are some practical policies that other countries have used to help firms to overcome the identified constraints, jump-start light manufacturing, and facilitate their transformation into modern economies?

Industry and Country Focus

The study focuses on five light manufacturing industries that are basic, simple, and labor intensive: agribusiness, leather goods, wood processing and wood products, simple metal products, and apparel.

Three countries in Africa were chosen for the study: Ethiopia, Tanzania, and Zambia. All three have been spared recent conflicts and experienced a degree of political stability over the years; such peace and stability are needed for the development of light manufacturing. Ethiopia was selected as the first case study for several reasons. It is among the largest African countries with relative
political stability. Like many other African countries, it is landlocked. And its government has emphasized industrial growth as a pillar for the country’s overall development. Tanzania has a long tradition in manufacturing, while Zambia has experienced similar problems with industrialization as many mineral-based African economies.

While many of the report’s policy recommendations are based on Ethiopia, most of the policy issues addressed are common to many African countries. For this reason, the report does not always make a distinction between Ethiopia and Africa, although it does so where needed.

Two comparators that in the late 1980s had levels of development similar to those in Africa were selected from East Asia: China and Vietnam. Because China is the world’s most competitive country in light manufacturing and a fierce competitor in Africa’s domestic markets, it was chosen as the benchmark country for an in-depth study of the cost structure of production. China is relevant as a comparator because, when it emerged onto world markets, it had to compete in manufactured goods initially dominated by Hong Kong SAR, China; the Republic of Korea; Singapore; and Taiwan, China. When China started entering those labor-intensive sectors in 1979, it shared many of the investment climate constraints prevailing now in Ethiopia, which Ethiopia’s low labor costs can offset if labor is the main input for production.

The sheer size of the Chinese economy makes it difficult for African countries to emulate its success. Vietnam is closer to African countries in size and level of development. Indeed, Vietnam does not have many of those favorable conditions that China has today. But Vietnamese products in many light manufacturing sectors compete with Chinese products in the domestic market, and some even compete in international markets because of Vietnam’s low labor costs.

How producers in Vietnam cope with competition from China can provide insights for African countries by bringing into focus the competitiveness gap that African countries need to fill and the lessons they can learn to move forward. Vietnam turned out to be a good choice of comparator because many of its development characteristics lie between those of China and the three African countries (Fafchamps and Quinn 2011).

The decision to compare the three African countries with China and Vietnam was not based on the expectation that they can catch up right away. The conditions under which China and Vietnam initially started on their development path were different and have changed substantially since then. For example, both China and Vietnam started their reforms with a highly educated workforce and a stable political regime. And each country has its own resource endowments and comparative advantages.

But light manufacturing products coming out of Africa would have to compete with Asian products in today’s market, and it is important to know what it
would take for them to earn and keep market share. Moreover, a comparison of Africa with these Asian countries is certainly much more realistic than the traditional (implicit or explicit) comparison with production in the West, which has a longer and more complex history of development.

Methodology

The study draws on five analytical tools:

- New research based on the Enterprise Surveys
- Qualitative interviews with about 300 enterprises (both formal and informal of all sizes) by the study team in Ethiopia, Tanzania, and Zambia and in China and Vietnam, 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) by the Centre for the Study of African Economies at Oxford University in the same countries, based on the 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 Kaizen study on the impact of 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.

While these five data sources use different methodologies, their results are consistently similar, presenting a robust picture of the strengths and weaknesses of light manufacturing in Africa relative to East Asia.

Enterprise Survey Studies

Four studies were conducted based on World Bank Enterprise Surveys, which provide representative samples of each country’s private sector. The surveys collect information on standard accounting measures of firm performance and many areas of each country’s investment climate. Summaries of the broad survey results are posted on the Enterprise Surveys website (www.enterprise surveys.org).
Since 2006 the surveys have used almost identical questionnaires and identical sampling methodologies. They were conducted in two to five cities in each country and covered firms with more than five employees in manufacturing, construction, retail and wholesale services, hotels and restaurants, transport, storage, communications, and computer and related activities. The survey methodology is described in more detail and the survey data are available for download on the Enterprise Surveys website.

In the first study we used a large sample, containing more than 39,000 firms across 98 developing countries, to identify the most binding constraints on firm operations (Dinh, Mavridis, and Nguyen 2010). While each country faces a different set of constraints, the constraints also vary by firm characteristics, especially firm size.

In the second study we used firm-level data from 89 countries to examine the performance of African firms and the reasons for their disadvantages (Harrison, Lin, and Xu 2011). Our findings fail to confirm the perception that African manufacturing firms are not globally competitive and cannot be competitive in manufactured products. Formal manufacturing firms in Africa do not perform much worse than those in other countries at similar income levels, but they do exhibit structural problems: similar sales growth and higher labor growth, but slightly lower productivity and much lower export intensity and investment rates.

Given that the crucial issue of whether labor costs for formal firms are higher in Africa than in other countries at similar levels of development, we commissioned a third study to explore this question in greater depth, using data from the Enterprise Surveys, focusing on manufacturing (Clarke 2011a).

To make sure our study incorporates the latest findings in the literature concerning how the investment climate affects firm performance in Africa, we undertook a fourth study to review the empirical evidence on this issue (Clarke 2011b). A preponderance of evidence points to the importance of firm size.

Qualitative Survey

The study team interviewed firms with more than 300 owner-managers of enterprises (both formal and informal) of all sizes in all five countries, using the questionnaire designed by John Sutton as a guide. The objective was to learn about each firm's business, its owner-manager, and factors affecting business. Like the quantitative survey, this component of the study sought to go beyond the traditional investment climate surveys to probe the origin and capabilities of the firm's owner-manager, and other issues pertinent to the firm's operations and growth.
For the origins and development of capabilities to manage the firm, questions were asked about when and how the firm was set up, the original sources of capital, and where the idea for the business, as well as the know-how or technological knowledge, came from. Questions were also asked about how and why the firm’s owner moved from one product to another and the role of family, relatives, or friends in the decision to make a product. For finance, we asked about the initial and later sources of financing to expand the business, reasons for not using bank financing, and the cost of financing. We also asked about staffing, including how hiring decisions were made. On inputs, we asked about sources of raw materials or inputs to produce the final product and the tariff or duty imposed on imported inputs. On market demand, we asked about the customers, the competition, and the government policies that affect the firm’s competitiveness. We also asked about domestic competition and imports and about other types of constraints such as utilities and infrastructure.

Quantitative Survey

In many ways the quantitative survey mirrors the qualitative survey. It sought to quantify as far as possible the foregoing questions in the context of a firm survey and highlighted the contribution of factors that are different from those identified by the traditional investment climate assessments or Enterprise Surveys. This component of the study was carried out by the Centre for the Study of African Economies at Oxford University (Fafchamps and Quinn 2011).

The traditional Enterprise Surveys focus on the investment climate or external environment in which firms do business and identify policy-related constraints that need to be alleviated to promote a more conducive business environment. Many of these constraints relate to regulatory and bureaucratic hurdles, corruption, credit and interest rates, and availability of public services such as water, electricity, and roads that affect all types of firms. The presumption is that the capability of firms to grow is uniform and that they will respond positively to an improved investment climate. The policy implications of the traditional Enterprise Surveys are well known: the government can contribute to a more conducive business environment by alleviating these constraints. But the Enterprise Surveys cannot explain why producers in a country with the same investment climate produce some products and not others.

The quantitative survey focused on intrinsic differences among entrepreneurs, which can explain why some innovate, produce certain products, and prosper more than others in the same investment climate. The quantitative questionnaire asked the qualitative questions discussed above in a more rigorous framework suitable for advanced econometric techniques.
Comparative Value Chain and Feasibility Analysis

This analysis—by the Global Development Solutions of Reston, Virginia—complements the other elements of the study by providing a complete micro-economic framework to assess, for each product, the relative performance and potential of countries in productivity and costs and to identify some of the main factors contributing to low productivity and high costs. The comparative value chain and feasibility analysis highlight industry-specific factors (such as product market regulations and market failures) that tend to be overlooked by traditional cross-cutting approaches, such as the Enterprise Surveys (Global Development Solutions 2011).

The comparative value chain and feasibility analysis had the following objectives:

- Benchmark the competitiveness (productivity and costs) of a selected group of African countries against Asian competitors (China and Vietnam) in a representative sample of simple light manufacturing value chains
- Review the detailed breakdown of costs and productivity for each product and identify the main reasons for the productivity and cost gaps (such as policy and infrastructure issues, market failures, and a lack of social and human capital) done pro forma for the products not being produced
- Identify the most important and common constraints for each product and across the sample of products
- Generate insights into the possible practical solutions for addressing a critical mass of the identified constraints.

The detailed comparative value chain analysis benchmarked productivity and costs between firms in Ethiopia, Tanzania, and Zambia and the comparator countries, China and Vietnam. The analysis was based on interviews with more than 300 companies in these five countries and was conducted for specific products (representative of broader product categories or industries) to ensure the comparability of performance benchmarks, such as costs and productivity, between countries and to establish causality between external factors and firm performance through microeconomic analysis and company interviews. The conclusions can be generalized to broader product categories.

Five important and representative products were chosen for the value chain analyses: polo shirts, leather shoes (sheepskin loafers), wood chairs, crown corks (metal bottle caps), wheat flour, and processed milk. In addition, feasibility studies were conducted for men’s boxer briefs, leather golf gloves, and padlocks.
Kaizen Training

In most African countries the private sector has a dual structure, with a large number of small indigenous enterprises and a small number of fairly large enterprises, often owned by foreigners or ethnic minorities or formerly owned by the government. These larger enterprises are, however, small and stagnant by the standards in other developing countries.

Drawing on the work at the National Graduate Institute for Policy Studies in Tokyo, Japan, this component of the study offered Kaizen training for micro and small entrepreneurs and assessed its short- and longer-term impact on firm performance. Kaizen is a self-help approach to efficiency improvements in organizations, also called lean manufacturing, which includes performance-based human resource management, continual analysis and refinement of quality control procedures, inventory management, and planning. Developed in the manufacturing sector in Japan, the Kaizen approach has evolved into what is now a standard set of modern management practices in Europe and the United States.

Most entrepreneurs of micro and small enterprises in developing countries are unaware of this approach to modern management. A major hypothesis is that imparting the basics of the Kaizen approach to entrepreneurs in micro and small enterprises will help their businesses to grow into small and medium enterprises. The National Graduate Institute for Policy Studies designed and implemented Kaizen training programs in Ethiopia, Tanzania, and Vietnam, so that participants could serve as a randomized pool of interviewees whose responses could be used to assess the impact of Kaizen training modules.

The impacts of Kaizen training were measured through an experiment with four major components: baseline surveys of enterprises, the planning and implementation of managerial training programs, the post-training surveys of enterprises, and impact evaluation of the managerial training programs based on the experimental data collected through the baseline and post-training surveys. The sample consisted of about 120 enterprises in the garment and textile industry in Dar es Salaam, about 100 enterprises in the engineering industry in Addis Ababa, about 120 enterprises in the knitwear industry in Ha Tay, and about 200 enterprises in the rolled steel products industry in Bac Ninh. Because the final results of the Kaizen impact evaluation will not be available until 2012, this study reports the interim results available in early 2011 (Sonobe, Sazuki, and Otsuka 2011).
Note
1. This questionnaire, and all the others mentioned in this paragraph, can be found in Fafchamps and Quinn 2011.

References


