



Textile factory, South Africa

CHAPTER 5

Leveraging abundant labor for manufacturing

Manufacturing has decided pluses. It can deliver increasing returns to scale and has great opportunities for technological learning. It gives agriculture a boost by creating demand for its products and by absorbing its labor. And it spawns an array of services from market research and design to shipping and payments. But manufacturing is yet to take off in Sub-Saharan Africa. Not only is the share of manufacturing in GDP low across the region, the shares in several countries have been falling.

A rising manufacturing capability propelled all previous economic transformations in their early stages. It diversified the production and export base and thus increased employment and export earnings. It reduced economic volatility from weather and the swings in international commodity prices. It also widened the scope for learning about and upgrading technology and thus for raising productivity.

This chapter shows how Sub-Saharan countries can leverage their abundant labor and low wages to enter the competitive production and export of manufactured goods. But since every country desires to raise the incomes of its workers, a low wage is not something a country should preserve as its long-term competitive advantage. Leveraging low wages should be seen as an interim strategy to make the most of the current situation while efforts are under way to change the underlying domestic supply conditions. The aim should be to reduce other domestic costs and raise productivity and technological capabilities over time so that real wages can rise while preserving global competitiveness. That is the way to transition from the poverty of low wages to the prosperity of high incomes.

The first section on garments starts with the key factors driving the global export markets in garments. The second provides short case studies of garments production and exports in six of the most important Sub-Saharan countries in the industry—Mauritius, Madagascar, Lesotho, Kenya, Ghana, and Senegal in that order. It brings out the domestic supply and policy constraints covered in the previous chapter on exports. The third section explores assembling and exporting consumer electronics and home appliances. Because the prospects depend on the ability of countries to attract foreign direct investment (FDI) by the multinational companies that control most global production and exports, the section centers on attracting manufacturing FDI and features the results of interviews with top executives of such companies.

Given the labor intensity of garment production, Africa has an opportunity to leverage its labor cost advantage for higher exports and employment

Garment manufacturing in the global economy

Textile and garment manufacturing has been among the first rungs that countries climbed on their way up the manufacturing ladder. Both were labor intensive. The capital requirements were generally modest. The technology and skills requirements were fairly simple. And there was local demand for the products. Today, textile manufacturing has become more capital and technology intensive, particularly textiles from synthetic materials. But garment manufacturing remains fairly simple and labor intensive. But to sustain a viable garment manufacturing industry today, small and medium-size countries (including all Sub-Saharan countries) have to export, and competition on the global market is fierce due to easy entry. (This section uses garments, apparel, and clothing interchangeably.)

Global exports of clothing, \$422 billion in 2012, have been growing at 6.7% a year since 2005, in the post-Multi Fibre

Arrangement (MFA) era.¹ Between 2008 and 2012, despite the global recession, garment exports grew on average by 4.2% a year. Average annual growth since 1995—when the transition from the MFA to the World Trade Organization (WTO) in textiles and clothing began—has been 6.5%. Most of the growth has been outside Africa, predominantly in Asia, particularly China. China's world market share of 38% in 2012 was almost twice the combined share of the next five developing countries—Hong Kong SAR (China), Bangladesh, Turkey, Vietnam, and India, in that order—at 20% (figure 5.1). In contrast, the growth of clothing exports from Sub-Saharan countries has been erratic, with truly minuscule world market shares, even as low as 0.0001% in Senegal.

Three challenges in the global garment industry

Given the labor intensity of garment production, Africa has an opportunity to leverage its labor cost advantage for higher exports and employment if it can overcome its domestic supply constraints and

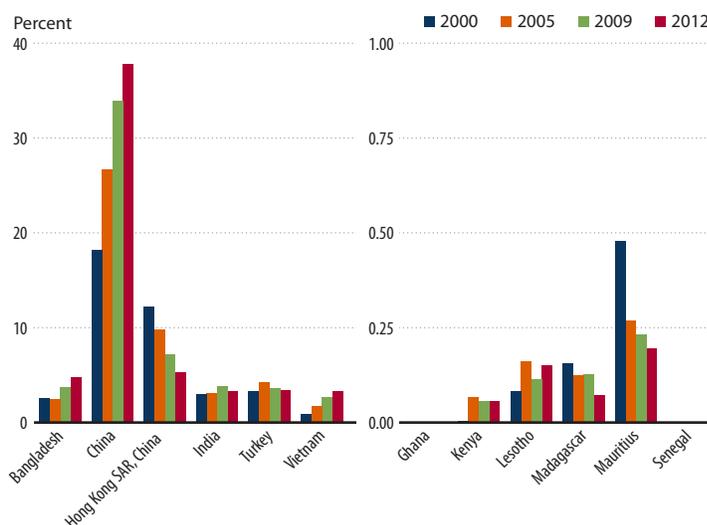
the three major challenges in the global garment market.

- One is dealing with the WTO and other international trade regimes—such as the African Growth and Opportunity Act (AGOA) and Everything But Arms (EBA)—that now shape global competition and market access.
- Second is the emergence of China (with its huge labor force, scale economies, deep domestic supply chains, and good logistics) on the world textile and garment market (since the end of the MFA in 2004), making competition based on low wages more difficult.
- Third is competing with or entering the global value chains that now dominate global exports of garments and have huge impacts on the viability of garment manufacturing in low-wage countries.

International trade regimes. Given the labor intensity of garment manufacturing, abundant labor at low wages can be a great advantage on the global market. From 1974 to 1994 the MFA muted this advantage for some labor-abundant countries. It allowed Europe and the United States to impose country-specific quotas on access to their textile and clothing markets—an attempt to protect their domestic producers. The practice restricted textile and clothing market access for large labor-surplus and low-wage countries, particularly China. And it prompted textile and clothing manufacturers in competitive countries such as Hong Kong SAR (China), South Korea, and Taiwan (China), which soon exceeded their quota limits, to move production to other low-wage developing countries.

The quotas hastened the entry of many developing countries into garments exports, including some that would not otherwise have been competitive. So, manufacturers in developed countries did not quite

Figure 5.1 Country shares in world garment exports



Source: Calculated using data from the WTO, accessed September 2, 2013.

receive the protection envisaged. Many responded by locating some of their operations in developing countries or sourcing from the Asian producers, which in turn also sourced part of their orders from their plants or independent suppliers in other developing countries.

The MFA quota system began to be phased out in 1995, and it was replaced in 2005 by the WTO system. This gave China and other competitive countries greater access to the international garments market, putting severe pressure on developing countries (including those in Sub-Saharan Africa) whose garments exports had depended mainly on the protection afforded them by the MFA quotas.

China's entry. China—with its low-wage advantage complemented by higher productivity, scale economies, deep supply chains, and good logistics—quickly shot up to become the world's leading textile and clothing exporter. Sub-Saharan countries obtained preferential access to the U.S. market under AGOA, introduced in 2000, and many continued to have preferential access to the EU market under the EBA agreement. But they have found it difficult to remain competitive. Several found their clothing exports and even domestic sales displaced by cheaper supplies from China and other more competitive countries.

Global value chains. Most global exports of garments are now controlled by global value chains. At the head of the chains are the buyers—large retailers, marketers, and branded manufacturers. Mostly in Europe and the United States, they focus on design and marketing. Retailers and marketers such as Wal-Mart, the Gap, and Liz Claiborne contract out their designs and requirements to suppliers in low-wage countries, mostly in Asia.² Some of these suppliers (such as

those in Hong Kong SAR [China]) have factories in several low-wage countries and coordinate the sourcing of inputs, the production of the garments, and the exports to buyers. Others (such as Li & Fung Ltd.) no longer produce, focusing instead on sourcing from and coordinating a wide network of factories owned by others. Under this triangle manufacturing the retailers and marketers at the top of the garment global value chains have no direct relationship with producers.³ These buyers now look for full-package suppliers who can deliver orders based on their designs or specifications. Brand manufacturers (such as Levi Strauss) still have direct relationships with factories in low-wage countries, either through factories they own or through production-sharing arrangements with factories owned by others.

Most Sub-Saharan garment manufacturers cannot now provide the full-package services that retailers at the top of the garment global value chains look for. Capabilities in most African countries are generally in the cut, make, and trim stage—and in niche African designs. So entering the garment global value chains for large-scale exports would have to be through production sharing with a brand manufacturer or through working with a larger supplier in triangle manufacturing.

The requirements for exporting through global value chains have been getting tougher. Retailers, under the lean retailing model, now prefer to keep inventories low and replenish them at short notice. This puts a premium on suppliers that can deliver orders quickly and meet price and quality requirements. Buyers have several suppliers to choose from, which in turn can source from many manufacturers. So producers in the chain that are not able to meet the price, quality, and timeliness requirements are quickly dropped (box 5.1).

Any particular manufacturer's ability to respond quickly depends on more than its own capabilities alone. It also depends on the general supply conditions in its home country, including trade policies and port logistics—to receive imported inputs and export promptly. It also depends on good infrastructure—reliable power and water supplies—to ensure continuous operations. And it depends on the availability of quality inputs (domestically produced or imported) at competitive prices. That makes an efficient duty-drawback system for imported inputs critical.

Sub-Saharan experiences in garments

The foregoing considerations reinforce the discussions in chapters 2 and 3 on the policy, institutional, and public investment requirements for economic transformation and export promotion. Provided here are summaries of the experiences of six Sub-Saharan countries with garment production and exports and how domestic supply conditions have interacted with the global market challenges to determine each country's performance. The countries are Mauritius, Madagascar, Lesotho, Kenya, Ghana, and Senegal. The discussion of Mauritius is more extensive, since it is the only Sub-Saharan country to have been very successful in producing and exporting garments.

- Mauritius achieved spectacular success in garment exporting from the early 1970s to the end of the century, riding the industry into job growth, rising incomes, and progress in transforming its economy.
- After initial promise in the early 2000s, Madagascar's growing garment exports were stalled by a political crisis that emerged in 2009 and broke its access to its main market, the United States.

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Box 5.1 What executives say about the global value chain for garments

To find out more about Sub-Saharan Africa's prospects in the global value chain for garments, ACET surveyed senior executives from eight companies in the industry and conducted more extensive interviews with three of the companies.

Of the three, one is a very large U.S. retail chain that sources its own brand garments from suppliers in several countries. The vendors are outside Africa, but some have factories in Sub-Saharan Africa. Two other companies are brand manufacturers that have manufacturing plants in several countries. Both had plants in Sub-Saharan Africa at one time but have since pulled out.

The retail company's project design and development group decides on the apparel (and accessories) product, including design, sizing, and colors. It then decides which of its approved vendors to place orders with. Vendors are in charge of production decisions, and the product may be manufactured in several vendor or vendor-affiliated factories in different countries. The retailer inspects the factories periodically for quality and social compliance.

The main criterion for vendor selection is execution, including time to market. As the executive noted, "A vendor needs to be late in delivery only once to be dropped from the list."

The vendors are mainly in the United States (with overseas representatives), South Korea, Hong Kong SAR (China), Shanghai, and Taiwan (China). The factories are mainly in China (a majority of factories), South Korea, South-East Asia, the Indian subcontinent, Egypt, Turkey, and Central America.

To take advantage of quotas during the MFA period, the retailer sourced from Sub-Saharan Africa through vendors in Hong Kong SAR (China) that had factories in Kenya, Lesotho, and Namibia. But when the MFA came to an end, the African countries became uncompetitive.

The main reason for dropping them was their difficulty in meeting the time-to-market requirement. Usually, the agreed date is around 90 days. Within that time, fabric must be sourced and garments made, packaged, transported, cleared through customs, distributed to the stores, and put on store shelves.

Sub-Saharan countries have had difficulty meeting the timeliness requirement—for four reasons. The majority of fabric and other inputs (zippers and buttons) were imported from China, adding to long lead times. If there were last minute changes in design by the retailer after the fabric was shipped, it was difficult to change production. Difficulties in the

domestic environment added to production times. And shipping times were long because of poor logistics. The other companies surveyed also identified the same main obstacles to their sourcing from Sub-Saharan Africa.

Separately, one of the other executives surveyed indicated the need to air-freight garments from Sub-Saharan Africa in order to meet deadlines, adding considerably to production costs.

The retailer experience is mirrored by that of the brand manufacturers. One, a pioneer in "fast fashion" clothing (inexpensive, designer-mirrored, and ready-to-wear), set up operations in Sub-Saharan Africa before AGOA was launched in 2000 and advocated strongly for that program. But its operation failed, mainly because of political instability and political interference that made it difficult to meet cost and timeliness targets. The company is now looking to set up production in India, saying that Sub-Saharan Africa is "no longer on the radar screen." The other manufacturer cites difficulties with the "low productivity of the unskilled workforce." Its operation failed, but it is considering setting up again on a "very small" scale, mainly for reasons of corporate and social responsibility.

Source: ACET interviews with senior executives of multinational garment companies.

- Lesotho's garment exports, after a promising start, have been facing serious challenges since the expiration of the MFA and the opening of the global garment market to large labor-surplus countries like China. Preferential access to the U.S. market under AGOA has not been enough for it to overcome all of its competitive disadvantages relative to China and other growing exporters.
- The garment industries in Kenya, Ghana, and Senegal have traditionally been oriented to

the domestic market, started and sheltered under import-substitution regimes. With trade liberalizations in the mid-1980s and 1990s, the industries in these countries found it difficult to compete with imports. The situation is not helped by an influx of secondhand clothing that comes in under low duties and “porous” customs borders. Despite market access granted through AGOA and EBA, they have found it difficult to progress. But the potential remains for leveraging low wages and profiting from niche African designs.

Mauritius—garment-based transformation

Mauritius has one of the most developed textile and clothing industries in Sub-Saharan Africa.⁴ In 2012 its textile and clothing exports of \$850 million were 47% of its merchandise exports. With a workforce of 40,300 in 2012, or 7% of total employment, the sector is the largest employer in export manufacturing. At the industry’s height in 1990 it employed 90,000 workers. Apparel is by far the largest subgroup, with exports of around \$800 million and employment of 36,000 in 2012. It focuses on pullovers, shirts, trousers, shorts, swimwear, and lingerie, and its main markets are Europe and the United States.

At independence in 1968 the Mauritian economy was highly dependent on sugar, with 90% of exports. In 1970 it established an export processing zone (EPZ) to diversify into textile and clothing manufacturing. EPZ firms, allowed to import inputs free of tariffs, were given liberal tax exemptions and a less regulated labor environment. The EPZ also provided job options for women, who became a majority of its workers.

By 1985 apparel exports from the EPZ had overtaken sugar as the

main foreign exchange earner. Starting with \$0.7 million in 1971, EPZ export earnings surpassed \$17.5 million in 1974, \$111.9 million in 1981 and \$639 million in 1991. By 2000 garments from the EPZ constituted 76% of exports, up from only 2% in 1970, upending sugar, which fell to 12%.⁵

Mauritius illustrates the points in chapters 2 and 3 about government and private sector roles in transforming economies and promoting exports. Cheap labor was enhanced by labor laws in the EPZ that minimized strikes. EPZ factories were scattered throughout the island in small or individual industrial sites, public and private. The government provided infrastructure and factory spaces as part of an incentive framework to confer some cost competitiveness to the industry. It also provided tax holidays, duty-free imports of inputs, and an exchange rate that kept exporting competitive. Substantive reforms were undertaken between 1980 and 1986 with the help of the International Monetary Fund and the World Bank as part of a stabilization and structural adjustment program aimed at accelerating export-oriented textiles and clothing.

The government also negotiated preferential trade agreements for textiles and clothing to ensure a stable market for Mauritian exports. And the Lomé Convention gave Mauritian textiles and clothing preferential access to European Community markets.

Garment exports from the EPZ really took off in 1984, thanks mainly to FDI from Hong Kong SAR (China).⁶ After China announced in 1983 that it was setting in train the process to take over Hong Kong, many industrialists became very nervous and decided to relocate elsewhere. Mauritius was attractive because of the EPZ facilities,

access to European markets under a preferential trade agreement, abundant cheap labor, and government support in such areas as the provision of factory premises. Investments in the EPZ were mainly by Hong Kong and Taiwanese companies. With dedicated factory sites provided by government agencies, the investments were predominantly in machinery and equipment.

The initial success of the EPZs had spillovers on the nation’s entrepreneurial spirit. Many locals set up apparel businesses, most clustered around larger firms, operating as contract manufacturers. And some exported directly.

The success of the EPZ in the 1980s was also due to government policies and institutions. Commercial banks were reluctant to lend to new EPZ firms and to smaller Mauritian entrepreneurs because of the perceived high risks in manufacturing. But the Development Bank of Mauritius, a public development finance agency, provided capital to EPZ operators. It also built several industrial estates around the island and leased sites to operators at subsidized rates.

The manufacturing activity spurred banking, transportation, and trade—and induced demand for such services as accounting, auditing, consultancies, mechanical workshops, and engineering works. Packaging and freight forwarding also developed in the textile and garment boom.

By 1988 Mauritius was at full employment for the first time in its history. Mauritian workers had more bargaining power, and their standard of living improved. And thanks to buoyant tax receipts from consumers and a more diversified business base, the government could invest massively in new roads and port facilities and in redeveloping the airport.

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But beginning in the mid-1990s the export strategy came under severe stress from rising wages and the phasing out of the MFA quotas. That reduced Mauritius's competitive advantages in cheap labor and preferential access to European and U.S. markets. For many industrialists, mostly those from Hong Kong SAR (China) and Taiwan (China), the rising labor costs removed the reason to keep their operations in Mauritius. Many foreign investors left when their tax holidays lapsed.

Textiles and garments survived thanks to the resilience of Mauritian operators, who continued to develop new technologies, products, and markets. By 2000 Mauritian companies held as much as 60% of the industry ownership. Some operators also started to vertically integrate their businesses, producing textiles (spinning and weaving) as well as garments.

Computerized sewing and stitching machines, backed by rigorous quality systems like ISO 9000, became a priority for most companies. Workflows and production controls improved efficiency. Automating the pressing, folding, and packaging also raised productivity. And information technology moved beyond the shop floor to support such operations as cost accounting, so that management could better allocate resources and discontinue loss-making lines. Some Mauritian companies also expanded operations offshore to Madagascar to take advantage of lower labor costs there.

The government beefed up the resources of the Mauritius Export Development and Investment Authority, which became very aggressive in prospecting new markets and new investors for the EPZ. The Mauritius Standards Bureau and the Industrial and Vocational Training Board were very responsive to the needs of the textile and clothing sector. Even the University

of Mauritius became involved in developing skills and technology for clothing. And the Technology Diffusion Scheme provided grants to firms that wanted to procure technical services to improve productivity, quality, and design and promote quality assurance standards and systems in garments.

The efforts of the government and private sector helped industry weather the storm. Although 111 factories closed between June 2005 and June 2013, costing nearly 16,000 jobs, businesses kept growing even in the face of the global recession. Mauritian textile and clothing exports grew 25% between 2005 and 2012—to reach \$850 million. The industry increased its productivity and competitiveness and upgraded to higher value-added products in all product categories, as apparel makers scaled up their design capabilities.

Madagascar: paying the price of political instability

In the 1960s and 1970s textiles and clothing were a top priority for the government of Madagascar, which poured in public money and ran factories. Supported by the domestic cotton supply, the industry emerged as one of the country's fastest growing.

In the 1990s the industry suffered from declining output due to inefficiencies at the state-owned companies and to trade liberalization. The government then changed its orientation toward the private sector, establishing EPZs for manufacturing. With a business-friendly climate and low labor costs, the industry recovered, attracting FDI, including that from Mauritian firms on the lookout for offshore locations.

The sector also got a boost from AGOA. By 2009 apparel was by far the largest manufacturing activity, with exports at about \$600 million, more than half to the United States.

The factories operating under AGOA employed about 50,000 people and provided work to a further 100,000 indirectly. But the political instability that began in 2009 cut the industry's exports to \$300 million in 2011. The United States closed its market as Madagascar was suspended from AGOA following the political upheaval.

Lesotho: dangerous overreliance on U.S. markets

The geographic closeness of Lesotho, a small landlocked country, to South Africa is one of the reasons for its garment industry taking off in the 1980s. To avoid global trade sanctions on South Africa's apartheid government and access the international market, many African and Asian investors moved their textile and clothing operations to Lesotho. Proximity to South Africa also enabled Lesotho to leverage its big neighbor's developed port and transport infrastructure to move goods in and out under more favorable conditions than other landlocked African countries could.

The clothing industry accounted for nearly 12% of Lesotho's GDP in 2012. The country's manufacturing base is by far dominated by garment-making; textile and clothing industries made up around 85% of manufacturing employment in 2012 (a bit lower than in 2007 when it constituted about 90%). Multiplier effects on other sectors of Lesotho's economy are high. A range of formal and informal activities feed into the industry: packaging, road freight transport, courier services, clearing and forwarding, security, passenger transport, traders that sell food to workers, residential accommodation, water, and utilities for electricity and telecommunications.

Lesotho's garment firms specialize in denim (mostly jeans, but some chinos and corduroys) and cotton knit fabrics (t-shirts, polo

shirts, tracksuits, and fleece), mainly through cut-make-trim assembly, selling mainly to the United States. Lesotho joined AGOA in 2000. The trade agreement attracted new industrialists, creating much-needed jobs and increasing textile and apparel exports to the United States.

The removal of the Multi Fibre Arrangement in 2005 intensified global competition and caused the industry to contract. Employment fell from 53,000 in 2004 to 40,000 in 2013. Part of the slowing exports and job losses also stemmed from the global economic crisis.

Lesotho benefits from its connection to South Africa's inland transportation systems and ultimately to its port and airport logistics. Apparel firms in the country can also count on favorable labor and import policies, as well as factory shells.

But challenges abound. The lack of skilled labor, underdeveloped infrastructure, and inadequate market information make business very costly in Lesotho. Many facilities are either deficient or simply nonexistent, and the quality of road and rail infrastructure in the country is lower than in regional competitors.

More industrial sites are needed to attract new investments and expand volumes and value. Poor utilities also prevent the industry from moving up the value ladder. Water and wastewater treatment require urgent attention. Lesotho's water is adequate but hard and inappropriate for dyeing yarns, fabrics, or garments. The ability to wash garments would allow Lesotho's manufacturers to produce clothing that international buyers demand.

Kenya: imported used clothing thwarts the garment industry

Kenyan clothing has been competing with a terrible rival: imported secondhand garments. The

widespread sale of used clothing (mitumba in Swahili) threatens a struggling domestic industry. As shoppers, especially the poor, hunt for the best deals on shirts, trousers, dresses, and other clothing, Kenyan apparel manufacturers see few prospects to keep their local sales running.

The Kenyan textile and apparel industry employs fewer than 20,000 workers, down from more than 200,000 at its peak in the late 1980s. The invasion of secondhand clothes is the latest destabilizer. Used clothes emanate from charities in Europe and the United States and should in principle be donated to poor communities. But they are diverted to Kenyan businesses almost free of cost, making their way through informal distribution channels in cities and villages.

But the problem is more complicated. The used garments, which enjoy low duties as they enter Kenya, also camouflage new imported clothes, which get to the market without paying the higher duties. That makes it even more difficult for domestic producers to compete.

Kenya had nurtured its textiles industry under a very protective environment. But in the late 1980s and early 1990s the government lowered tariffs on textiles and apparel, allowing more imports. The sector could not adjust. Capacity utilization dropped below 50%, and most of the 50 textile mills operating in 1990 had closed by 2006. AGOA provided some temporary respite in 2000, but mostly in the export sector rather than for the domestic market, the backbone of the textile activity.

Mauritius had integrated its domestic-oriented and export-oriented manufacturing in a single platform. But Kenya keeps the two segments separate. Some Kenyan

industrialists claim that if the EPZs could produce for the local market, they would compete with the imported secondhand clothing at the same price or even cheaper.

Potentially competitive export products for Kenya include yarn and fabric from organically grown cotton. Niche products can garner a premium price that helps compensate for higher production and transport costs. Kenya also sources a large portion of its raw materials locally. Textile and apparel inputs produced by Kenya's small but vertically integrated industry include cotton yarn and some synthetic yarn, knit cotton fabric, and woven fabric for blankets. These products are either exported directly or incorporated in products exported to the European Union and the United States. Although Kenya has developed an export-oriented apparel industry, expensive electricity and poor infrastructure hinder its growth and competitiveness.

Ghana: searching for renewal

Garment manufacturers in Ghana face formidable challenges—even with AGOA. The industry has come a long way since the 1960s, when it set in train import-substitution manufacturing to diversify the country's economy away from agriculture. But unlike the Mauritian industry, large parts of apparel production in Ghana are geared toward the domestic market. So confronting imports is a marketing and business development challenge. The textile activity in Ghana goes beyond apparel and embraces bed sheets and towels, produced in limited quantities.

Early on foreign-owned firms dominated the industry. Then in the 1960s the state increased its stake. Whereas Mauritius supported the industry through policies, legislation, support institutions, and a range of facilities, Ghanaian authorities owned and operated textile

Potentially competitive export products for Kenya include yarn and fabric from organically grown cotton

Some rays of hope have emerged of late with opportunities under the AGOA's preferential market access to the United States

mills, in 1970 employing about 25,000 people, slightly more than a quarter of manufacturing workers.

The industry relied heavily on imported raw materials, and in 1982 a shortage of foreign exchange left factories operating at extremely low capacity. Most firms closed shop. Manufacturers were also exposed to a wave of trade liberalization under structural adjustment programs in the 1980s and 1990s.

The lower trade barriers encouraged the entry of foreign garments, making local producers even more vulnerable. By the mid-1990s the industry employed only 7,000 workers, a figure that shrank to 5,000 five years later. Today it employs only around 3,000.

Some rays of hope have emerged of late with opportunities under the AGOA's preferential market access to the United States. There has also been interest in expanding to serve local demand for garments. But some problematic issues keep the apparel activity under considerable stress.

Cheap imports, including smuggled goods, particularly from China and Pakistan, have turned into a major threat, compounded by the rising imports of used clothes and the rapid spread of pirated designs and smuggled counterfeit garments.

Smuggling and counterfeiting are just part of the story. The local industry finds it difficult to compete even when imported low-cost products from Asia come in through the regular international trade channel. Its high production costs and poor fabric quality do not meet standards.

Ghana's deficiencies in trade-related infrastructure add to the already high costs of production. The country's two ports are inefficient, causing long delivery delays,

sometimes several weeks, making it a costly and an unreliable source of supply. Mauritius made improving trade-related logistics a key requirement for productivity and competitiveness. Without tackling these issues, there is little chance for Ghana to enter the world apparel market. But refocusing the apparel sector on the export market could spur activity in the export chains and logistics services. New sources of raw materials at more competitive prices should be explored. But manufacturers will need to make sure that the supplies of foreign fabric comply with AGOA's rules of origin.

Regional demand is growing for African print fabrics, a niche market that Ghana is beginning to tap (box 5.2). And Ghana's industry could also tap local demand to develop the domestic market. The government can help by favoring local firms in government procurement of garments and nongarment textiles. It can also assist through training and the facilitation of technology transfers.

Senegal: tailoring to export

Close to Europe and North America, Senegal's ports and airports are well connected to shipping lines and air routes serving these markets. But many other constraints overpower the location and transport-related advantages.

Small and medium-size enterprises see poor access to bank financing as a main hurdle. Banks have stopped backing textile companies, which have a bad record of not meeting their repayment commitments. Power is unreliable and expensive, and high production costs make Senegalese garments uncompetitive in local and global markets. Locally manufactured apparel faces stiff competition from imports of secondhand clothing under widespread customs fraud.

The authorities estimate that more than half the domestic demand for apparel is met by fraudulent imports.

Senegalese garments seldom match the high standard of imported garments. Manufacturers have to put up with low-quality cotton that produces substandard apparel. And trade liberalization exposes local products to foreign competition.

Despite the drawbacks Senegal has carved out a niche in the "haute couture" segment, especially in European fashion centers. It has a reputation for high-quality African design cloth and exclusive embroidery of premium clothing. Senegalese designers and fashion stylists are regular participants in major fashion events in European cities.

The fashion- and design-intensive product range reflects the country's ability to connect its high-end fashion to grassroots skills, with the apparel industry clustered around a wide network of individual tailors and firms. The National Federation of Garment Professionals counts some 100,000 members. The Center for the Promotion of Textiles helps firms meet international standards and facilitate technology transfers. And more private training institutions are offering courses that cater to manufacturers.

Senegal can leverage its strengths. Closeness to main markets remains a key asset. It is also at the door to Africa's largest cotton producing zone, so sourcing raw materials can be competitive. And as an AGOA-eligible country, a signatory to the Cotonou Agreement and the EBA, and a member of the Economic Community of West African States, Senegal does not face major tariff barriers. Senegal should thus strive to transform artisanal clothing and tailoring into a thriving business integrated with a robust high-end apparel platform.

Box 5.2 Riding African designs into niche exports

Every Friday is African Wear Day in Ghana. Workers in businesses and government offices around the country fold their conventional western attire and don their African prints. While most of the outfits are custom-made by neighborhood tailors, one ready-made label, Woodin, has recently become a mark of style.

With billboards emblazoned with confident young people, Woodin professes to be “capturing the optimism of the modern African lifestyle.” Undergirding that image is a long history of traditional African designs now welded to modern Africa styling. Owned by the Vlisco Group of the Netherlands, Woodin has been producing fabrics in Ghana since 1966.

Vlisco designs, produces, and distributes African-inspired fabrics and apparel. The group comprises four brands, targeting four consumer segments. Vlisco, the luxury, high-fashion brand, produces intricate patterns and vibrant colors to appeal to the international market. Woodin offers casual ready-to-wear

styles in its retail outlets, using Vlisco manufactured fabric. GTP and Uniwax are the group’s two nationally oriented brands, with GTP tailored to Ghana’s cultural aesthetic, and Uniwax to the Ivorian market.

Woodin’s apparel business has taken off in the last decade, thanks to popular styles, signature retail outlets, and Africa’s booming middle class. Thus, new opportunities are opening for exports to the subregion and beyond. Woodin now has outlets in West and Central Africa: Benin, Democratic Republic of Congo, Côte d’Ivoire, Ghana, and Togo. It also has stores in London, New York, and Paris. And exports make up 15% of sales.

Even as Vlisco’s fabric business expands beyond Ghana’s borders, it faces a major threat: counterfeits from China—at a third the price of the originals. Within months of coming up with new fabric designs, counterfeits appear on the Ghanaian and West African markets. Take away the fakes, and the company

estimates its sales could shoot up from 20 million yards a year to 36 million.

But as an apparel business, Woodin faces no such challenge. Moving down the textile value chain, the industry becomes less capital intensive and more labor intensive. So Woodin, operating at the tail end of the chain, plays to Africa’s advantage in low-wage labor. Add to that the growing middle class, and the future inside Africa looks promising. The preferential treatment under AGOA, the Cotonou Agreement, and EBA also helps with exports to the United States and Europe.

A push to new heights will require addressing access to finance, efficient logistics, and reliable electricity.

Source: Site interview at GTP factory, and <http://woodinfashion.com/About>; <http://www.ghanabusinessnews.com/2010/09/08/ghanas-gtp-woodin-sold-for-151m/>; and <http://www.ghanabusinessnews.com/2010/09/08/ghanas-gtp-woodin-sold-for-151m/#sthash.pzhA3w8O.dpuf>.

As with garments, global exports in assembled products, particularly consumer electronics, are organized in global value chains

Component assembly

Component assembly was another way for poor countries to leverage their low-wage labor to industrialize in the second half of the twentieth century. Korea, Malaysia, Singapore, Taiwan (China), and now China rode the assembly of simple consumer electronics (radios, televisions, computers, computer peripherals, cell-phones) and home appliances (fans, refrigerators, microwave ovens, air conditioners) to get onto the first rungs of the global manufacturing ladder.

As with garments, global exports in assembled products, particularly consumer electronics, are organized in global value chains. The lead firms in these chains are technology-intensive multinational corporations, most headquartered in Europe, Japan, Singapore, and the United States.⁷ Although initially involved in production through FDI in offshore factories, these firms now focus much more on design and marketing, leaving production to contract manufacturers in Europe, Singapore, Taiwan (China), and the United States, which in turn

operate plants in low-wage countries, primarily China and other East Asian countries.

Sub-Saharan Africa has yet to take advantage of component assembly as a stepping stone to manufacturing exports. Of the \$998 billion in world exports of electronics in 2012, its share was 0.1% (figure 5.2).⁸ And of the \$123 billion in world exports of domestic appliances, its share was 0.15% (figure 5.3). No country in Sub-Saharan Africa is a major player in these industries either as an exporter or as a producer for

A big part of Sub-Saharan Africa's efforts to get into the global production and exports of assembly manufactures will depend on attracting FDI

the domestic market (except South Africa for home appliances in the domestic market). This, despite the region's enthusiastic embrace of cellphones and the potentially large market for fans, refrigerators, and air conditioners in the hot tropical climate.

Foreign direct investment for assembly in Sub-Saharan Africa

A big part of Sub-Saharan Africa's efforts to get into the global

production and exports of assembly manufactures will depend on attracting FDI—by lead global value chain firms or by contract manufacturers. Purely domestically owned firms will find it difficult to compete in the export market (or even in the domestic market without high protection). As chapter 2 stressed, however, the FDI strategy would have to be coupled with increasing the capabilities of domestic firms and linking them to FDI firms as suppliers and ultimately as exporters.

A foreign direct investment manufacturing matrix

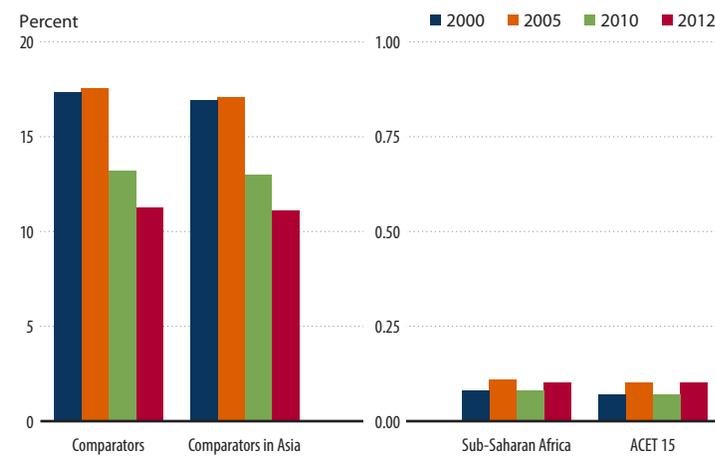
Sub-Saharan countries have in recent years seen a rise in FDI inflows, mostly into extractive operations in oil, gas, and minerals. In 2012, 70% of Africa's FDI was in resource-rich countries, presumably for extractives.⁹ Indeed, the region's landscape is rather sparse in FDI manufacturing plants, particularly those for consumer electronics and home appliances.

Several sources provide systematic information on FDI financial flows into Sub-Saharan Africa (such as the International Monetary Fund, the United Nations Conference on Trade and Development, and the World Bank). But there does not appear to be a similar effort to track FDI in manufacturing, so ACET is developing a simple tool to track it. Dubbed the FDI manufacturing matrix, it shows which global manufacturing powerhouses—in sectors aligned to Sub-Saharan Africa's abundant labor and natural resources—have manufacturing plants in the region (box 5.3). The matrix provides a starting point for countries to assess where they stand relative to other countries in making inroads into global manufacturing through FDI.

Table 5.1 and box 5.4 show a summary of the results. Not surprisingly, China (including Taiwan), with 167 manufacturing facilities, had the most plants, followed by the rest of Asia, India, and Brazil with 141, 107, and 97 facilities respectively. South Africa, with 61 facilities, showed the greatest concentration in Africa.

The results in the matrix and star categories are not meant to suggest that all countries should have the same number of FDI manufacturing plants. Many factors influence the decision of multinational companies to locate plants abroad, including the size of the

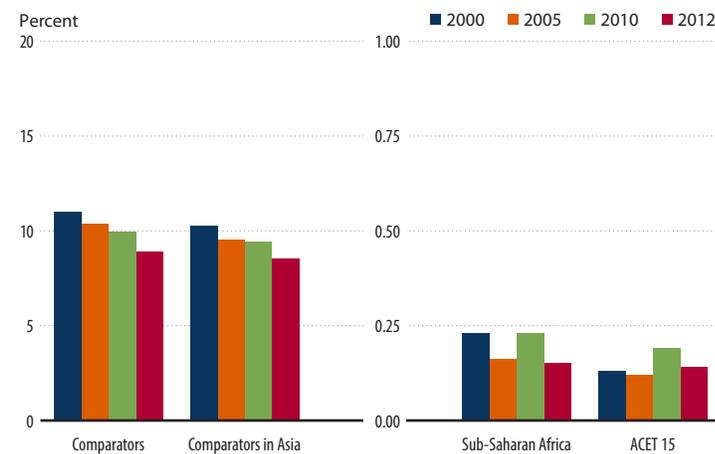
Figure 5.2 Shares of world electronic equipment exports



Note: Electronic equipment (SITC rev 3, 762, 764, 761, 751, 752).

Source: Calculated using data from UN Comtrade, accessed December 12, 2013.

Figure 5.3 Shares of world domestic appliances exports



Note: Domestic appliance (SITC rev 3, 697, 775).

Source: Calculated using data from UN-data.org, accessed December 9, 2013.

Box 5.3 ACET's FDI manufacturing matrix

The matrix maps the location of manufacturing FDI by taking a group of companies and tallying the number of manufacturing facilities they have in each of the ACET 15 countries and in Brazil, China, India, countries in South-East Asia, and a catchall "other," representing Mexico, Turkey, and other Latin American markets.¹

The dataset comprises 200 companies selected from ACET's survey of companies and from the 2012 *IndustryWeek* 1000, the magazine's annual ranking of the 1,000 largest public global manufacturers based on revenue.² The companies were selected based on four criteria:

- *Industry*: light manufacturing in those sectors more aligned to Africa's relative comparative advantage in labor and natural resources.
- *Revenue growth*: companies with positive global growth or strong demonstrated growth in Africa.
- *Revenue*: companies above \$3.5 billion.
- *Geographic representation*: companies headquartered in traditional OECD countries (Europe, Japan, and the United States) as well as in South Korea and in emerging

economies (Brazil, China, India, and Turkey).

The sample clearly is biased toward large multinational corporations and likely misses FDI manufacturing plants of medium-size companies, which are beginning to move to Africa. We plan to rectify this over time.

1. The South-East Asian countries comprise members of the Association of South East Asian Nations: Indonesia, Malaysia, the Philippines, Singapore, Thailand, Brunei, Burma (Myanmar), Cambodia, Lao PDR, and Vietnam.
2. www.industryweek.com/resources/iw1000/2012

Source: ACET research.

The FDI manufacturing matrix provides a starting point for countries to assess where they stand relative to other countries in making inroads into global manufacturing

domestic market, which tends to favor large countries such as Brazil and China. But policies that encourage investment also matter, as evidenced by the success of such small economies as Ireland, Malaysia, Singapore, and Taiwan (China). The point of the matrix and stars is to provide data for countries keen on attracting FDI manufacturing so that they can benchmark themselves against comparable countries and then ask why those countries are doing better (or worse) in attracting manufacturing FDI.

For the ACET 15, other factors, in addition to economic size, may also influence the location decision for FDI manufacturing plants (table 5.2). Indeed, South Africa, with the largest GDP, has the largest number of plants. But Nigeria, with the second largest GDP and by far the largest population, has the same number of plants as Kenya, which is fifth in GDP and population. Ethiopia, with the third largest GDP

and second largest population, is among countries with the lowest number of FDI manufacturing plants.

The hope is that the matrix results and the stars will prompt policy-makers to ask questions. Take Nigeria and Kenya: Why does Kenya have the same number of FDI manufacturing plants as Nigeria, and yet has about a fifth the GDP and population? Is it because of differences in domestic policies? Does Kenya have better access to the regional East African market than Nigeria has to the West African regional market? And if so, is it due to regional trade policies or to regional infrastructure and logistics? Now consider Ghana and Kenya. Ghana's GDP is about the same as Kenya's, but Kenya has twice as many FDI manufacturing plants. Why? Is it because Kenya's population is significantly larger than Ghana's? Or is it because of differences in domestic policies, and if so, which one?

What foreign direct investment firms say about locating in Sub-Saharan Africa

Supplementing the FDI manufacturing matrix are interviews with executives of 10 global FDI manufacturing companies to find out why they are in a particular Sub-Saharan country or why they have stayed out. The objective was to find out the key factors in deciding where to locate their manufacturing operations. The results provide qualitative information to complement the FDI manufacturing matrix. Although the sample size is small, the detailed and pointed answers add nuances to the results from large datasets.

Recognizing the rising importance of emerging economies in trade and manufacturing FDI, in addition to U.S.- and Europe-headquartered companies, we interviewed companies with headquarters in India and South Korea. All had or still have some type of presence in Sub-Saharan Africa.

All the executives interviewed recognized that Sub-Saharan Africa is a market they could not afford not to be in

Table 5.1 ACET's FDI manufacturing matrix

Industry	Apparel (5)	Food and beverages (7)	Chemicals (50)	Communications equipment (10)	Computer and other electronics (41)	Electronic equipment and appliances (13)	Machinery (3)	Miscellaneous (7)	Motor vehicle parts (21)	Motor vehicles (28)	Rubber products (8)	Industry (7)	Total plants
Country													
Botswana			1										1
Burkina Faso			1										1
Cameroon		3	2										5
Ethiopia		1	1										2
Ghana		3	1							1			5
Kenya		2	5							4			11
Mauritius	1												1
Mozambique		1	1										2
Nigeria		3	4			1				3			11
Rwanda		1											1
Senegal			2										2
South Africa	2	2	17	2	4	3	1	1	13	11	4	1	61
Tanzania		1	1									1	3
Uganda		1											1
Zambia		1	2										3
Brazil	1	5	27	5	14	6	1	2	15	16	3	2	97
India	1	3	26	5	19	5		3	18	20	4	3	107
China (including Taiwan)	3	5	43	8	36	12	3	5	19	21	7	5	167
Russia/CIS		5	13	5	9	3	1	3	8	13		3	63
Asia (excluding China)	4	3	39	6	27	7		6	17	20	7	5	141
Other	3	5	33	6	21	8	1	3	19	27	5	4	135
Number of survey countries with plants	7	17	18	7	7	8	5	7	7	10	6	8	

Note: Numbers in parentheses indicate how many of the 200 companies surveyed fall into each industry. For example, 41 of the 200 companies manufacture computer and other electronics. CIS is Commonwealth of Independent States.

Source: ACET research.

Box 5.4 Stars of FDI manufacturing

For the ACET 15 we further classified "Star Categories," awarding five stars to countries that had 100 or more plants; four stars for countries with 51–100 plants, and so on. Gold Star Achievement Awards, used to recognize rising stars in almost every industry, can be a powerful symbol of recognition and motivation.

★★★★★ (100+ plants)

★★★★ (51–100 plants)
South Africa (61)

★★★ (11–50 plants)
Kenya (11)
Nigeria (11)

★★ (5–10 plants)

Cameroon (5)
Ghana (5)

★ (0–4 plants)

Tanzania (3)
Zambia (3)
Senegal (2)
Botswana (1)

Burkina Faso (1)
Ethiopia (1)
Mauritius (1)
Mozambique (1)
Rwanda (1)
Uganda (1)

Source: ACET research.

Table 5.2 Economic size of the ACET 15, 2012

Country	GDP (current US\$ billions)	GDP per capita (current US\$ billions)	Population (millions)
South Africa	384	7,508	51.2
Nigeria	263	1,555	168.8
Ethiopia	42	454	91.7
Ghana	41	1,605	25.4
Kenya	41	943	43.2
Tanzania	28	609	47.8
Cameroon	25	1,167	21.7
Zambia	21	1,469	14.1
Uganda	20	547	36.4
Botswana	15	7,238	2.0
Mozambique	14	565	25.2
Senegal	14	1,023	13.7
Mauritius	10	8,120	1.3
Burkina Faso	10	634	16.5
Rwanda	7	620	11.5

Source: Calculated using data from World Bank (2012).

Most of those interviewed were developing their sales and service capabilities across Sub-Saharan Africa to take advantage of the growing economies. Two had full product manufacturing facilities, one of them with 15 plants across East, West, and Southern Africa. Four operated some type of assembly facilities, including semi-knocked down, completely knocked down, and conversion in Sub-Saharan Africa—either owned directly or operating through distribution partners. Three once had completely knocked down and manufacturing facilities but closed them due to the lack of commercial viability, primarily from high production costs.

All recognized that Sub-Saharan Africa is a market they could not afford not to be in. According to one executive, with the region's growing middle class, a company was "crazy not to consider building a processing plant in Africa just to supply the local market demand. Yet the challenges are still too large for us to be comfortable to invest."

Across industries, the responses clustered around six main areas:

- Policy (consistent policy environment, fiscal incentives, and tariff and nontariff barriers).
- Governance (regulations and corruption).
- Infrastructure.
- Labor (skills and stability).
- Supply chain (existence of local supply).
- Markets (size of the domestic market).

The most important factors cited are policy and the low productivity of labor (expressed primarily as the dearth of an educated and skilled workforce). The low productivity and high costs arising from the lack of education and skills make it infeasible for them to locate manufacturing in Sub-Saharan Africa, especially when compared with India and other low-cost producers. As one executive said: "Until there is an educated and skilled workforce, all other initiatives/incentives are of no use." Another reported that when it wanted to train its workers to use computers to upgrade their

productivity, it ran into difficulty because the workers could not read even at a basic level. Indeed, all the companies interviewed were involved in local employee training, and two were involved in skills training beyond their employees.

The lack of skills affects not only the companies' manufacturing but also a reliable and skilled local supply chain. Several executives indicated that a strong local supply chain does not yet exist in Sub-Saharan Africa, except for South Africa to a degree. Companies need to source parts and components locally to sustain cost-effective manufacturing, and the more technically sophisticated the product, the more difficult it is for them.

The policy environment was also a major factor, especially tariff and nontariff barriers, which increase manufacturing costs and make manufacturing uncompetitive with other markets.

Ranking third was small market size, preventing economies of scale. Some executives suggested that more progress in freeing trade within regional groups (Southern African Development Community, East African Community, Economic Community of West African States) could ameliorate the problem. But one executive said that customs duties make regional trade "prohibitive." Another reported that he had just imported a service vehicle from the United Kingdom for his operations in Zambia. The vehicle had been manufactured in South Africa, yet it was still 30% cheaper to bring it in from the United Kingdom than to import it directly from South Africa (within driving distance).

On governance, five companies complained about cumbersome regulations and inefficient import and export logistics. Interestingly, while corruption is often cited as a reason for not investing, it did not

The lack of skills affects not only the companies' manufacturing but also a reliable and skilled local supply chain

Integrating the region's national markets would give a powerful boost to developing competitive manufacturing industries

figure as one of the top obstacles with the executives. According to several of those interviewed corruption may exist, but as a result of the U.S. Foreign Corrupt Practices Act and the U.K. Bribery Act, there was no way they were going to pay bribes. By making this clear upfront, none experienced significant problems.

While the lack of infrastructure does pose a challenge, only two of the executives interviewed cited it (specifically power) as a key constraint. This is rather surprising, since infrastructure is always prominent in discussions of the constraints to manufacturing. For these executives the challenges of trade policy, labor productivity, and market size appear more pressing.

Regional integration and manufacturing

Many Sub-Saharan economies are small and have to import most inputs in order to manufacture, and they lack a large domestic market that would provide some form of natural protection for their manufacturers. While these challenges are surmountable through exports, at the early stages of development they make it more difficult for domestic firms to compete against foreign firms that have the advantages of scale, dense industrial clusters, and local supply chains. Integrating the region's national markets would thus give a powerful boost to developing competitive manufacturing industries, including the labor-intensive manufactures discussed in this chapter.

Sub-Saharan garment exporters now import most of their fabric. But the region has the potential, with more progress in regional integration, to develop a more integrated textiles and clothing industry. West African countries like Burkina Faso and Mali are significant producers

and exporters of raw cotton, but they lack the logistics, large middle class, and industrial infrastructure of some of their coastal neighbors such as Ghana, Nigeria, and Senegal. A regional cotton textiles and garments industry, which would be more competitive than the current national industries, could be facilitated by an Economic Community of West African States customs union and better inter-country transport infrastructure.

With several Sub-Saharan countries now producing oil and gas, the crude ingredients for a synthetic fiber industry are more available. Regional integration could help turn this potential into a viable industry. In addition, Sub-Saharan countries should get the European Union and the United States to allow garments incorporating inputs sourced from any country in the region to qualify for full duty preferences under AGOA and EBA, regardless of whether the supplying country is developing or least developed and whether it also is eligible for AGOA or EBA.

Attracting FDI for component assembly, particularly home appliances, will be abetted by large and buoyant markets, supported by the growing middle class, and perhaps more important, by integrating the national markets. Only Nigeria and South Africa have a large enough domestic market to attract a market-seeking FDI (as many heavy home appliance manufacturers tend to be). But the regional economic blocs could enable many more countries to have access to the benefits of a wider domestic market. The Southern African Development Community comprises 15 member states with a market of almost 250 million consumers, a combined GDP of \$649 billion, and per capita incomes of \$2,600. The 15 import \$213 billion worth of goods, and their exports are valued at around \$207 billion.¹⁰ Similarly, the Economic Community of West African States comprises

15 member states, with a market of about 320 million people, a combined GDP of \$396 billion, and per capita incomes of around \$1,250. With an open market in each bloc, FDI manufacturers would become more interested in the blocs as possible sites for manufacturing plants. And member countries—even the small ones—would with good policies, adequate infrastructure, and logistics stand a better chance of becoming locations for FDI manufacturing.

Notes

1. <http://stat.wto.org/StatisticalProgram/WSDBStatProgramHome.aspx?Language=E>
2. Adhikari and Yamamoto 2007; Gereffi and Memedovic 2003.
3. Gereffi and Memedovic 2003; Gereffi and Frederick 2010.
4. The Mauritius and other country cases are based on an ACET (2012).
5. Besides textile and clothing, the EPZ firm also produced fish preparations, pearls, precious stones, optical goods, watches, clocks, toys, games, sporting goods, and jewelry.
6. EPZ growth was 30% in 1985, 35% in 1986, 22% in 1987, and 12% in 1988 (www.gov.mu/portal/goc/cso/hs/industry/t1-2010.xls).
7. Sturgeon and Kawakami 2010.
8. In figures 5.2 and 5.3, the comparators are South Korea, Singapore, Indonesia, Malaysia, Thailand, Vietnam, Brazil, and Chile and the Comparators in Asia include the first six.
9. AfDB and others 2013.
10. World Bank 2012; Mauritius Chamber of Commerce and Industry: www.mcci.org/.

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