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DEVELOPING EXPORT-BASED MANUFACTURING IN SUB-SAHARAN AFRICA

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Policy Summary, March 2016



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EXECUTIVE SUMMARY

Strong growth in the African region, rebalancing and rising wages in China and improvements in the policy and institutional context provide a unique opportunity that African countries should use now to attract investment in higher value-added, export-led manufacturing. Contrary to some perceptions, production, employment, trade and foreign direct investment (FDI) in the manufacturing sectors has actually increased over the past decade in Sub-Saharan Africa (SSA). Quantitative and qualitative accounts of the manufacturing sectors and the policy context in nine SSA countries suggest **there are now excellent experiences and opportunities in a range of manufacturing sub-sectors (garments and textiles, agro-processing/horticulture, automobiles and consumer goods) and countries such as Ethiopia, Kenya, Mozambique, Nigeria and Zambia.** The challenge for policy-makers in these countries and sectors is to build on the experiences and make the opportunities a reality by tackling constraints that are common and specific to countries and sectors. Two SET-ACET papers (Ansu et al, 2016a; Ansu et al, 2016b) provide further insights into what needs to be done, and how.

Manufacturing production in SSA has more than doubled, from \$73 billion in 2005 to \$157 billion in current prices in 2014 (or \$98 billion in 2005 prices; equivalent to a 3.5% annual growth in real terms over the past decade). National statistics point to strong recent annual manufacturing real growth overall, for example 6% over 2008-2012 in Zambia or 5% in Uganda over 2010-2014. The food and beverages sector has increased above average partly because of the importance of growing domestic demand, whereas the textiles and clothing sector has found it hard to withstand the competition from Asian imports in the past. But this is now changing owing to increased Chinese investment interests.

SSA manufacturing exports (including re-exports) doubled between 2005 and 2014 from more than \$50 billion to more than \$100 billion. **SSA countries are increasingly exporting manufactures to each other (20% of total trade in 2005, 34% in 2014).** Asian countries have also become much more important destinations for African manufacturing exports. Top exporting products from SSA include leather manufactures from Ethiopia, Nigeria and Uganda, textiles and clothing from Kenya and Ethiopia and several other products (e.g. construction materials, chemical and machinery in other countries examined, such as Ghana, Mozambique, Nigeria, Uganda and Zambia).

FDI in African manufacturing has been low but is increasing; much FDI is among African countries. The FDI stock in SSA is 29% of GDP, not far below the figure for the world as a whole (33.6%), but there is wide variation among SSA countries. Absolute stock levels in Africa tend to be relatively small and often dominated by a few very large investments. Manufacturing FDI has so far taken an important share in only a few countries such as Ethiopia (75% of the total), followed by Kenya and Nigeria (around a quarter of the total). Nonetheless, manufacturing FDI rose in nine African countries considered between 2003-2006 and 2010-2014, with the exception of Nigeria. Intra-African FDI is a significant source of FDI in African countries (ranging from 4% in Ghana to more than 40% on Rwanda). There is increased attention from Chinese investors in labour-intensive manufacturing FDI (e.g. in Ethiopia or Rwanda).

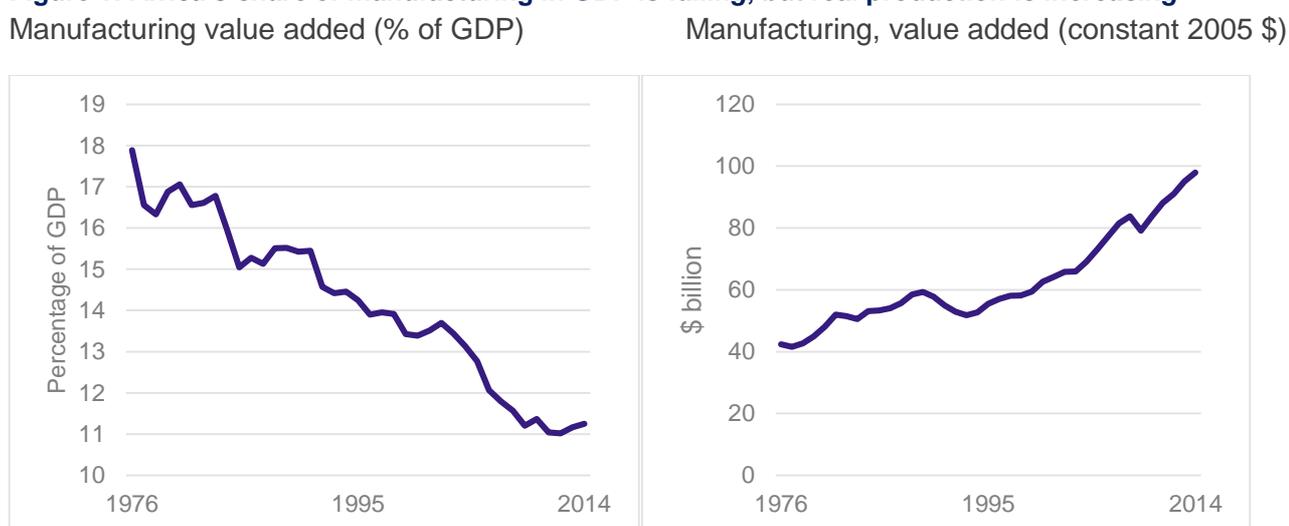
Our analysis suggests a number of promising manufacturing sub-sectors. Africa's shares in world exports of fertilisers and inorganic chemicals is higher than 5%, is more than 4% for leather, leather manufactures and dressed furskins and is 2% for articles of apparel and clothing accessories. The analytical techniques discuss opportunities at product level, too detailed to cover, but our qualitative accounts suggest there are excellent manufacturing opportunities in garments and textiles, agro-processing/horticulture, automobiles and consumer goods.

Our analysis highlights five promising countries that are relatively well positioned (for different reasons as explained in Table 6) to attract manufacturing FDI: Ethiopia, Kenya, Mozambique, Nigeria and Zambia. The *Manufacturing FDI Potential Index* calculates a total score for each of nine African countries based on their rankings on a number of key factors influencing FDI, including past manufacturing FDI stock as a percentage of gross domestic product, recent performance in manufacturing exports, domestic value added in manufacturing, manufacturing value added per capita, economic complexity, labour productivity in manufacturing, population, quality of the business climate and infrastructure, education and cost and reliability of electricity.

1. AFRICAN MANUFACTURING PRODUCTION

African manufacturing has been growing fast over the past two decades despite the perception among some that it is in decline. While the share of manufacturing in gross domestic product (GDP) (at factor prices, using World Development Indicators (WDI) data) in Africa (Sub-Saharan Africa (SSA) including South Africa) declined from 18% in 1975 to 11% in 2014 (albeit with varying experiences across countries), manufacturing production has more than doubled, from \$73 billion in 2005 to \$157 billion in current prices in 2014 (or \$98 billion in 2005 prices) (Figure 1). African manufacturing has grown at 3.5% annually in real terms over the past decade, which is faster than global growth in manufacturing production. The share of manufacturing in total formal and informal employment (International Labour Organization (ILO) data) fell from 6.4% in 1991 to 5.3% in 2013, but the total numbers of employees in SSA increased from 11.0 million to 17.7 million.

Figure 1: Africa’s share of manufacturing in GDP is falling, but real production is increasing



Source: WDI.

National statistics also point to strong recent manufacturing growth overall but they also reveal a mixed pattern across sub-sectors (CSO, 2012; NBS, 2013; UBoS, 2015). Tanzanian manufacturing grew by 6% annually in real terms over 2008-2012, but basic metal industries grew by 14% whereas the textile and leather sector decreased by 10%. In Uganda, total manufacturing real output growth was 5% over 2010-2014, but food processing, drinks and tobacco increased by 8%, chemicals fell by 3% and textiles, clothing and footwear dropped by 11%. Zambian manufacturing grew by 3% annually over 2006-2010, but the paper industry increased by 14% and the textiles and leather industry fell by 32%. The food and beverages sector increased above average partly because of the importance of growing domestic demand, whereas textiles and clothing could not withstand the competition from Asian imports. In the countries with easily accessible data (Ethiopia, Kenya, Nigeria, Rwanda), food and beverages – usually a domestically oriented industry – is the dominant manufacturing sector (40-70% of the total), followed by textiles and clothing, which is more likely to be export-oriented. There are also some ‘other’ important industries – for example 6% for cement in Nigeria, 12% for machinery and transport equipment in Kenya and 5% for non-metallic mineral products in Rwanda. Manufacturing growth builds resilience by diversifying out of commodities, which is important now commodity prices have fallen rapidly.¹

¹ Using imports data from the European Union (EU), US, Japan and China we find that, in general, the current crisis leads to a much bigger drop in the imports of other goods than in imports of manufacturing: Imports from SSA (y-o-y growth rates) 2015/2014

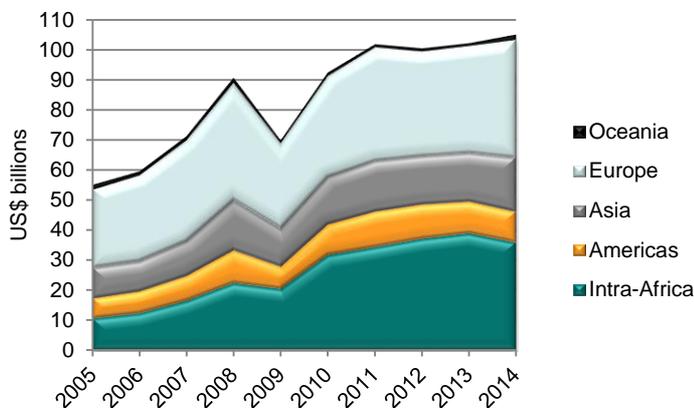
| | Manufacturing | Other goods |
|--------------------------------|---------------|-------------|
| EU (Jan-Oct 2015/Jan-Oct 2014) | 0 | -31 |
| US (Jan-Nov 2015/Jan-Nov 2014) | -9 | -31 |
| JP (Jan-Oct 2015/Jan-Oct 2014) | -11 | -30 |
| CH (2014/2013) | 10 | -39 |

2. TRENDS IN AFRICAN MANUFACTURING EXPORTS

African countries have increased their share of world exports of many manufacturing sectors. The value of manufacturing exports from developing countries (including China) more than doubled between 2005 and 2014, reaching nearly \$5.4 trillion in 2014. Africa's (not just SSA's) share in total world manufacturing exports remains less than 1%, and has fallen somewhat since 2010. Even so, the continent's shares in world exports of fertilisers and inorganic chemicals both exceed 5%, and Africa accounts for more than 4% of global exports of leather, leather manufactures and dressed furskins, and 2% of world exports of articles of apparel and clothing accessories. In many other manufacturing sectors, Africa has increased its share of global exports since 2005. There was also strong growth in exports from Africa in many manufacturing product groups between 2005 and 2014, such as plastics in non-primary forms, telecommunication and sound recording apparatus, chemical materials and products and specialised machinery.

African countries are increasingly exporting manufactures (34% of the total) to each other and other developing regions (see Figure 2). Between 2005 and 2014, the share of intra-African manufacturing exports in the total value of African manufacturing exports increased by nearly 15 percentage points to reach 34%. Between 2005 and 2014, the shares of intra-African manufacturing exports increased markedly in relative terms in Ethiopia, Ghana (2005-2013), Rwanda and Zambia. In six of the nine countries (Ghana, Kenya, Rwanda, Tanzania, Uganda, Zambia), intra-African manufacturing exports accounted for more than 70% of total exports (and as high as 82% in Zambia) in 2014 (2013 for Ghana). There are also shifting patterns in manufacturing exports to other major destination regions. For the bulk of the countries (Ethiopia, Ghana, Nigeria, Rwanda, Uganda), Asia has become an increasingly important destination – in relative terms – for manufacturing exports, whereas there has been a relative decline in the share of manufacturing exports destined for Europe and the Americas. Even so, in value terms, Europe remains an important export destination for manufactures produced in these countries.

Figure 2: African manufactures exports by destination region, 2005-2014

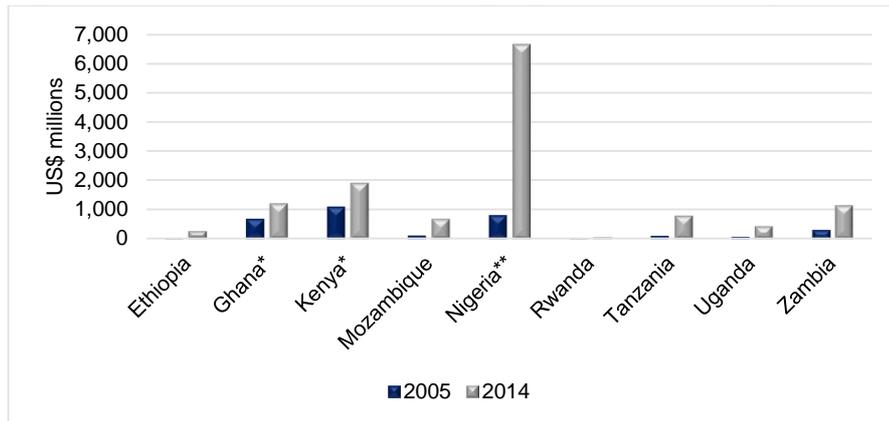


Note: Manufactures includes SITC 5-8 (less 667 and 68).

Source: UNCTADstat.

Exports of road vehicles, iron and steel, essential oils for perfume materials and cleaning preparations, non-metallic mineral manufactures and manufactures of metal made the largest contributions to intra-Africa manufacturing exports. The technology intensity of African manufacturing exports is gradually increasing, with some growth in the relative share of exports of medium-technology (automotive, process and engineering) and high-technology manufactures (electronic and electrical and other). But exports of resource-based and low-technology manufactures still dominate.

The total value (in \$ million) of manufacturing exports in 2005 and 2014 differs markedly in nine countries of interest, in part reflecting the relative sizes of the various economies (Figure 3). When measured in average annual terms, growth in manufacturing exports to the world was fastest over 2005-2014 in Rwanda, followed by Nigeria (2006-2014), Tanzania and Ethiopia. Mozambique and Zambia also expanded their total manufacturing exports significantly. With the exception of Nigeria, however, growth in these countries occurred off comparatively small bases in 2005.

Figure 3: Total value of manufacturing exports to the world (\$ millions), increasing between 2005 and 2014

Source: UN Comtrade. Note: * 2005 and 2013; ** 2006 and 2014.

A look at the top five manufacturing export products to the world in 2014 in each of the selected SSA countries reveals a number of commonalities across countries (summarised in Table 1). Several of these manufactures also rank among the top five fastest growing exports over 2005-2014. Mirroring the broader pattern for Africa as a whole, manufacturing exports in most of the nine countries are still concentrated in resource-based (especially in Rwanda, but less so in Ethiopia and Kenya) and low-tech manufactures (particularly in Tanzania and Uganda). But there is some evidence of technological deepening, reflected in growing shares of low- and medium-technology manufactures in total manufacturing exports (and, to a lesser extent, high-tech manufactures).

Table 1. Product groups among the top five manufacturing exports to the world in 2014 (by \$ value) in more than one of the selected African countries

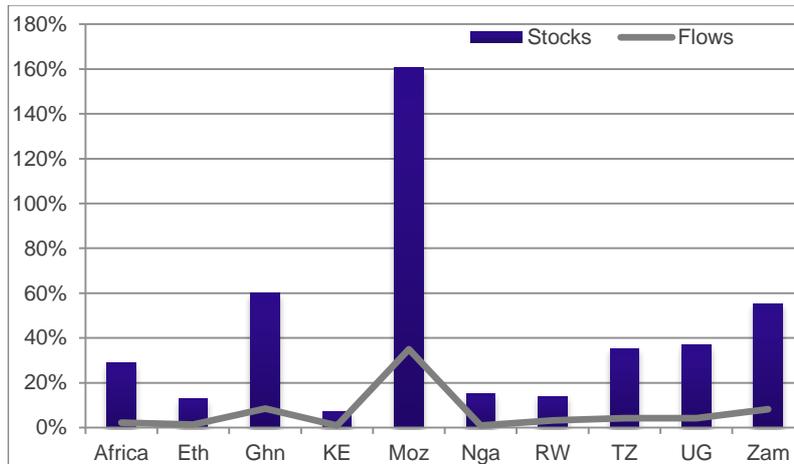
| Manufactured product group (SITC 2-digit) | Countries |
|---|--|
| Leather manufactures | Ethiopia, Nigeria, Uganda |
| Textile yarn and fabric | Ethiopia, Nigeria, Tanzania |
| Apparel, clothing and accessories | Ethiopia, Kenya |
| Lime, cement, construction material | Ethiopia, Rwanda, Uganda, Zambia |
| Perfume, cosmetics and cleansers | Ghana, Kenya, Uganda |
| Industry special machinery | Ghana, Mozambique, Nigeria, Tanzania, Zambia |
| Miscellaneous manufactures | Kenya, Mozambique, Nigeria, Tanzania |
| Iron and steel | Kenya, Mozambique, Rwanda, Uganda, Zambia |
| Inorganic chemicals | Kenya, Zambia |
| Railway/tramway equipment | Mozambique, Nigeria, Rwanda |

In most of the countries considered, the share of domestic value added (DVA) content in total exported value added fell close to the range of 70-80% (Kenya and Tanzania are exceptions, with lower average DVA content of 62% and 68%, respectively, in 2011) and the changes in the relative shares of DVA and foreign value added (FVA) content between 2000 and 2011 were relatively moderate (apart from in Tanzania and Rwanda). All countries recorded strong average annual growth in exports of intermediate goods between 2005 and 2014, with this growth most pronounced in Ethiopia, Ghana and Zambia. This growth may be indicative of rising participation in global value chains.

3. TRENDS IN FDI TO AFRICA

The foreign direct investment (FDI) stock in SSA is 29% of GDP, not far below the figure for the world as a whole (33.6%), but there is wide variation among the nine countries, with only Tanzania and Uganda in the neighbourhood of the continental and global averages (Figure 4). Mozambique's stock is startlingly high at 160% of GDP (owing to a few mega projects), whereas Kenya is the lowest at below 10% of GDP. The flows (average over 2012-2014) show similar variation to the stocks, being largest as a share of GDP for those countries where the stock share is highest – Ghana, Mozambique and Zambia. FDI stocks have grown by over 20% per annum (compound annual growth rate) since 2000 in Ghana, Mozambique, Rwanda and Uganda and by between 13% and 20% for Ethiopia and Tanzania. For Kenya, Nigeria and Zambia, the stock growth rate has been around 10% per annum since 2000.

Figure 4: Aggregate FDI stock and flow (% of GDP), 2014

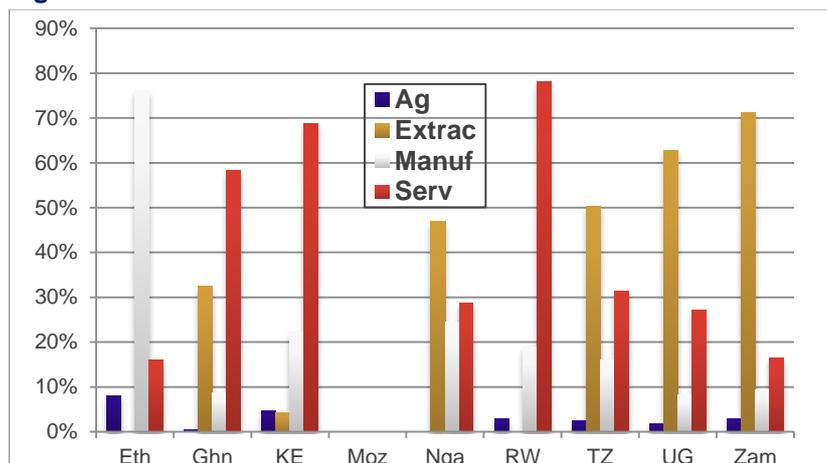


Note: Flows are averages of the annual figures for 2012-2014.

Source: UNCTAD.

Absolute stock levels in Africa tend to be relatively small and often dominated by a few very large investments, and manufacturing is important in a few countries, such as Ethiopia (75% of the total), followed by Kenya and Nigeria (around a quarter of the total) (Figure 5). For the most part, the large investments in Africa are natural resource-seeking operations in extractive industries. Their prominence explains the strong FDI-attracting performance of Tanzania and Uganda as well as Ghana and Zambia. Nigeria performs relatively poorly in attracting FDI, notwithstanding the dominance of extractive investments in total FDI (Figure 5), as many of the assets in the oil and gas industry remain in public ownership. Mozambique has seen very strong inward FDI. This apparently strong FDI performance is dominated by natural resource-seeking 'mega-projects', such as the Mozal aluminium smelter and a series of large extractives projects in coal, oil and gas and titanium mining. Growth driven by the resource boom has led to a rapid and more recent increase in construction and real estate FDI inflows. The average official FDI inflow for 2012-2014 for Mozambique was \$5.57 billion, equivalent to 35% of Mozambique's GDP for 2014 and accounting for 10.2% of all inflows into Africa for the year. Both Ethiopia's and Kenya's share of African flows were well below their respective shares of African GDP, but Ethiopia attracted FDI inflows averaging over \$800 million per annum, whereas Kenya's inflows were below \$600 million per annum. Ethiopia's FDI stocks are dominated by manufacturing, much more so than Kenya's, about two thirds of which are in services. Rwanda has been successful in attracting inflows into services (information and communications technology and finance) as well, as opposed to manufacturing.

Figure 5: FDI stock – sectoral distribution

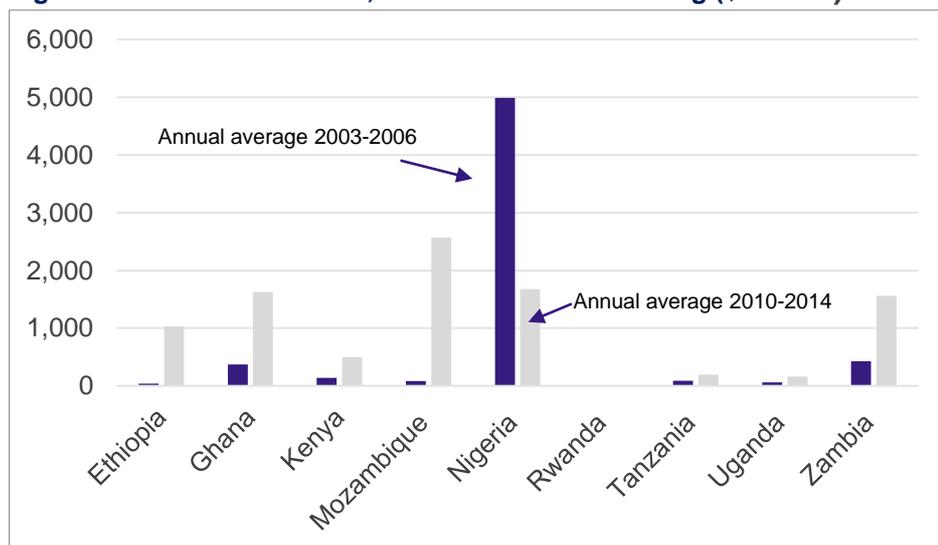


Note: No data for Mozambique were available.

Source: Various, by country (see main report).

Manufacturing FDI rose in all countries between 2003-2006 and 2010-2014 (Figure 6), with the exception of Nigeria, where manufacturing FDI flows fell steeply by about two thirds in value. These flows include large capital-intensive material beneficiation plants for some countries. For example, in Rwanda, as Chen et al. (2015) suggest, a large share of manufacturing FDI – up to 80% – may be linked to construction material production (cement). This is potentially consistent with the aggregate data for Rwanda discussed above, which suggested roughly 20% of FDI stocks were in manufacturing.

Figure 6: FDI annual inflows, Greenfield manufacturing (\$ million)

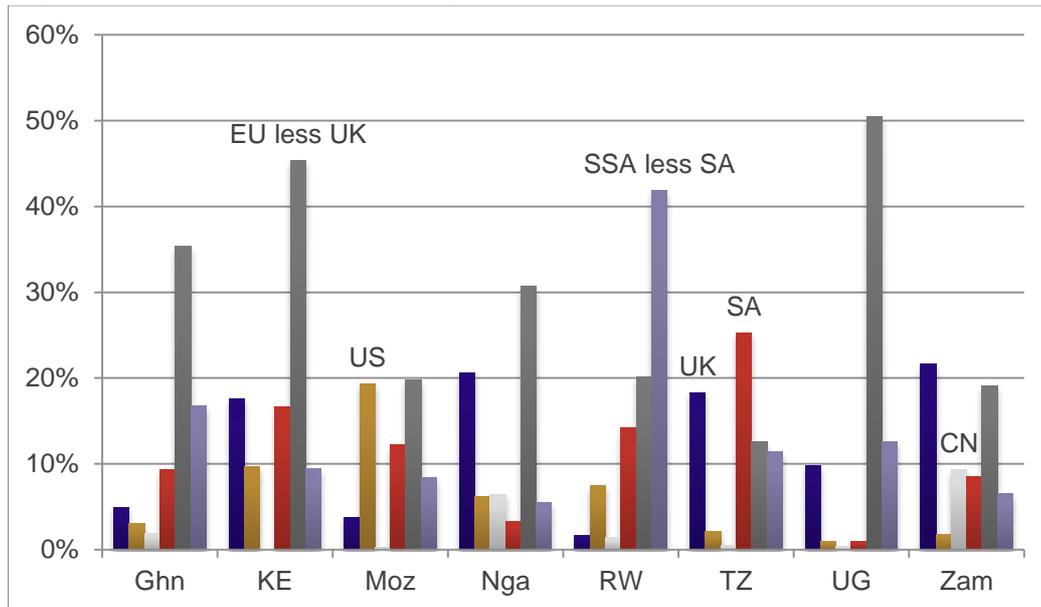


Note: Data for Rwanda not available.

Source: fDi Markets Database (www.fdimarkets.com), as reported in Chen et al. (2015).

The European Union (EU), including the UK, remains the most important owner of foreign assets in eight of the countries (Figure 7); Rwanda is the exception, with SSA as the largest. The latter group includes Mauritius, which is an important ‘third country’ routing for FDI flows, owing to favourable tax treatment of holding companies.²

² Mauritius is the largest single source of inward FDI into India, and the largest single destination of outward FDI from India.

Figure 7: FDI stock – distribution by investor (home country/region), % of total

Source: Main report.

Intra-African FDI is a significant source of FDI for African countries (ranging from 4% in Ghana to more than 40% on Rwanda) (see Table 2, which focuses on the most recent FDI stock levels (in \$ millions) from each of the nine countries as well as from South Africa, the rest of SSA and North Africa). Unsurprisingly, South Africa is an important source of FDI in each of the countries where data are available. FDI from Kenya and Nigeria is also significant in several other African countries, with Kenya in particular the source of relatively large stock levels in regional neighbours (Rwanda, Tanzania and Uganda) as well as in South Africa and Mozambique. Tanzania is the source of comparatively large FDI stocks in Mozambique and Zambia, but is also invested in Rwanda and Zambia. The bulk of FDI stocks from Ghana and Kenya are invested in SSA rather than the rest of the world, but the SSA share is smaller for FDI from Uganda. The opposite is true for Mozambique, Nigeria and Zambia, where SSA countries are the destination for only small shares of total FDI from these countries. Inward stocks of FDI from SSA are most significant relative to those from the rest of the world for Rwanda, Nigeria, Tanzania and Uganda.

The increased attention to, and resources devoted to, attracting potential Chinese manufacturing investment into Africa as a result of developments in China's own economy – the need for 'rebalancing' in China, and the consequences for increased outward investment – **is positive for attracting labour-intensive manufacturing FDI**. There are already signs of increasing Chinese investment in African manufacturing, reflected in the well-known examples of Huajian Shoes in Ethiopia and C&H Garments in Rwanda (Financial Times, 6 May 2015). These have contributed to increases in manufacturing employment and exports, and likely also to productivity increases in manufacturing. Widespread emulation of these examples of successful investments could lead to significant upscaling of these outcomes.³

High returns on foreign investments motivate increased inflows, and these tend to be similar in Africa compared with elsewhere. The US Bureau of Economic Analysis reports that returns to US foreign equity holdings in Africa were 8% in 2014, which was very similar to returns to US equity holdings globally (9%) and in Europe (8%). However, in manufacturing, returns in Africa of 4% were somewhat below those globally (9%) and in Europe (10%), although they were above Asia and the Pacific (3%).⁴ The UK Office for National Statistics reports a 9% rate of return on equity for investments in Africa across all sectors for 2014. It also reports rates of return for investments in Kenya (all sectors) at 15% and in Kenya at 46%. Of the group of countries of interest, only Rwanda reports data on rates of return: 16.1% for foreign investment across all sectors, 24% in manufacturing and 23% and 15% in extractives and services, respectively

³ For discussion of the potential for economic transformation of Chinese FDI in Africa, see Tang (2015).

⁴ Returns to US investments in extractive sectors in Africa were 7%, and in services were highest, at 12%.

(National Bank of Rwanda, 2013). These numbers are much higher than those for US and UK investment in Africa, although the basis for the net profit estimate in the numerator is not clear.⁵

Table 2. Most recent intra-African FDI stock level, \$ millions

| | | Home countries (sources of FDI) | | | | | | | | | | | Total inward stocks from world | SSA as % of total inward stocks from world | | | | |
|---|---------------------|---------------------------------|-------|---------|---------|-------|-----|-------|---------|------|--------------|-------------|--------------------------------|--|--------------|-----------|-----------|-------|
| | | Eth | Ghn | Ken | Moz | Nga | Rwa | Tzn | Ugn | Zam | South Africa | Rest of SSA | | | North Africa | Total SSA | | |
| Destination countries | Eth | | | | | | | | | | | | | | | | | |
| | Ghn | | | 19.3 | | 307.7 | | | | | | | 1943.7 | 146.3 | 42.2 | 473.3 | 13,327.0 | 3.6 |
| | Ken | | | | 0.8 | | | | | | | | 614.6 | | | 309.7 | 2,876.0 | 10.8 |
| | Moz | | | | 37.4 | | | 110.2 | | | | | 2127.7 | 861.4 | | 2,752.3 | 13,907.0 | 19.8 |
| | Nga | | 367.7 | 1.0 | | | | | 2.3 | | | | 1196.5 | 20193.2 | 72.8 | 22,506.1 | 176,369.0 | 29.5 |
| | Rwa | | | 100.5 | | 19.3 | | 15.1 | 4.8 | | | | | 58.8 | | 309.3 | 716.0 | 43.2 |
| | Tzn | | | 517.4 | | 11.8 | | | 20.5 | 2.5 | | | 608.9 | 766.2 | 24.7 | 3,499.0 | 12,741.0 | 27.5 |
| | Ugn | | | 977.5 | | | | | | | | | 467.2 | 498.8 | | 1,865.0 | 1,205.0 | 154.8 |
| | Zam | | | 8.6 | | 117.4 | | 51.7 | | | | | 643.8 | 386.9 | 3.4 | 1,544.6 | 11,048.0 | 14.0 |
| | South Africa | | 21.2 | 52.3 | | 111.3 | | 79.3 | 19.9 | 3.7 | | | | 23,063.0 | 324.0 | 287.7 | | |
| | Rest of SSA | | | 1.0 | 0.4 | | | | | 33.2 | | | | 16,476.7 | | | | |
| | North Africa | | | | | | | | | | | | 3.6 | | | | | |
| | Total to SSA | | 388.9 | 1,077.9 | 1.2 | 228.7 | 0.0 | 241.1 | 19.9 | 41.7 | | | | 24,082.7 | | | | |
| Total to rest of world | | 109.0 | 316.0 | 17.0 | 7,407.0 | 13.0 | | 46.0 | 1,409.0 | | | | | | | | | |
| Ratio SSA to total rest of world | | 356.7 | 341.1 | 7.3 | 3.1 | 0.0 | | 43.2 | 3.0 | | | | | | | | | |

Notes: Data are for various years (2011, 2012 or 2014). Data are a combination of own reported data by country and mirror data from the counterpart country (where the own reported data are not available).

Source: UNCTAD Bilateral FDI data for total to/from SSA; UNCTAD individual country data for total to/from the world

5. IDENTIFYING PROMISING MANUFACTURING SECTORS

The complexity of the manufacturing production structure today and hence the promise of future growth varies by country. The ranks on the Economic Complexity scoring (for 2014) were as follows: Zambia (85), Kenya (87), Uganda (97), Tanzania (102), Mozambique (106), Ethiopia (111), Ghana (113) and Nigeria (123). Some countries experience rapid *changes* in the complexity index. Hausmann (2015) uses complexity scores to forecast future growth and finds that East African countries (Kenya, Tanzania, Uganda) are expected to be in the top of the world's future fastest-growing economies.⁶ But we can say more about identifying promising sectors and products in African manufacturing.

We highlight promising products identified through two assessment techniques – analysis of revealed compared advantage (RCA) and the Hausmann product space – for all nine countries (Table 3).⁷ The first column presents the specific products in which the country has an RCA (the country has a greater specialisation in this product compared with the world average). We select the 10

⁵ The National Bank of Rwanda (2103) suggests the rate of return on equity for 2012 was 20%, implying it dropped by 4 percentage points between 2012 and 2013.

⁶ See <http://atlas.cid.harvard.edu/rankings/growth-predictions/>

⁷ Other techniques such as input-output models, employment multipliers, analysis of manufacturing production shares, calculation of total factor productivity using firm-level trade data analysis and qualitative assessment can also be used to identify promising growth sectors. See Table 2 in the main report for an application of these techniques to the case of Tanzania, which is based on previous SET work.

manufacturing products with the highest RCA (out of the 25 products with the highest RCA). The products range from textiles, garments and leather to iron and steel products. The second column uses the Hausmann product space. For each country and product (at 4-digit level) we calculate the 'opportunity gain' and take the 50 most important products (i.e. those that offer the best possibilities for diversification into connected products). We then use this list to focus on the 10 products with the least distance to the current production structure (i.e. the easiest to diversify into because of prior manufacturing knowledge). We summarise these into the final column (see main report for details). The results are country-specific.

Table 3. Identifying promising sectors

| Country | Manufacturing export product with the 25 highest RCAs (at 4-digit level) | Promising sectors using Hausmann product space analysis (largest opportunity gain, lowest distance) |
|-------------------|---|--|
| Ethiopia | Cutgut, television cameras, sheep or lambskin leather, telephonic or telegraphic switching apparatus, woven fabrics of cotton, women's or girls' nightdresses and pyjamas of textile materials | Tobacco, textile sacks, vegetable materials, women blouses, suits, T-shirts, underwear, peppers |
| Ghana | Glassware, of lead crystal, of a kind used for toilet, office, indoor decoration or similar purposes, sheets for veneering, palmitic acid, stearic acid, their salts and esters, quicklime, barbed wire of iron or steel | Natural potassium salts, cocoa wastes, parts for fans/gas pumps, pump elevator parts, machine parts, knives, parts industrial machinery, parts of centrifuge, iron bolt and screw |
| Kenya | Automatic typewriters and word-processing machines, self-adhesive paper and paperboard, goat or kidskin leather, cutgut, hair-nets, non-self-adhesive paper and paperboard, safety pins of iron or steel, carbonates and peroxocarbonates, flat-rolled products of iron or non-alloy steel television cameras, sheep or lambskin leather | Sesame seeds, coffee (not roasted), jute, bovine skin leather, palm oil, edible nuts, cotton |
| Mozambique | Bars and rods of iron or non-alloy steel, lead oxides, activated natural mineral products, non-self-adhesive paper and paperboard, hair-nets of any material, metallised wood, twine, cordage, ropes and cables, of sisal or other textile fibres of the genus agave, wigs, false beards, eyebrows and eyelashes, switches and the like, of animal hair or textile materials | Crude natural potassium salts, fluid gauges/instruments, parts for fans/gas pumps, knives/blades/tool tip, goods trucks and tractors, pump parts, colouring preparation, tool holder, industrial machinery, safety valves |
| Nigeria | Clock movements of alarm clocks, lead oxides, parts of footwear, of wood, microfilm, microfiche or other microform readers, goat or kidskin leather, multiple 'folded' or cabled cotton yarn, boxes, pouches, wallets and writing compendiums, of paper or paperboard, travel sets for personal toilet, sewing or shoe or clothes cleaning, telephonic or telegraphic switching apparatus | Cocoa wastes, crude natural potassium salts, exoxide resins, fluid gauges and instruments, polyamides, parts for fans and gas pumps, auxiliary textile machinery, knives, goods trucks and tractors, colouring preparation |
| Rwanda | Shaping or slotting machines, letter cards, plain postcards and correspondence cards, of paper or paperboard, containers of iron or steel, travel sets for personal toilet, sewing or shoe or clothes cleaning, mattress supports for bed frames | Parts for fans, gas pumps, metalwork machinery tools, nickel/alloys, safety valves, parts centrifuge, knives, polyamides |
| Tanzania | Primary cells and primary batteries of mercuric oxide, heads, tails, paws and other pieces or cuttings of tanned or dressed furskins, cotton yarn, twine, cordage, ropes and cables, of sisal or other textile fibres of the genus agave, coconut 'coir' yarn | Tin and uranium concentrates, sesame seeds, other crude natural potassium salts, cotton, cotton seed oil, cocoa wastes, bovine skin leather, pump elevator parts |
| Uganda | Goat or kidskin leather, flat-rolled products of iron or non-alloy steel, articles of cadmium, hoopwood, portland cement, soap and organic surface-active products and preparations, tubes, pipes and hollow profiles of iron or steel | Uranium concentrates, sesame seeds, cocoa wastes, bovine skin leather, knives, pump elevator parts, parts centrifuge, fans/gas pumps, goods trucks and tractors, parts of industrial machinery |
| Zambia | Hydraulic lime, sulphuric acid, articles of cobalt, sulphur, sublimed or precipitated; colloidal sulphur, slaked lime, quicklime, ammonia in aqueous solution | Uranium concentrates, other crude natural potassium salts, pump elevator parts, parts for fans and gas pumps, rotary pumps, colouring preparation, metal tool holder, nickel /alloys worked, knives, blades and tool tips |

We also look at promising products and sectors by noting when Africa has a high share in world exports. Africa has a share that is higher than 2% of world trade for fertilisers, chemicals, leather products, apparel, oil, iron and steel. It is therefore likely that there is relevant African manufacturing capacity that can be used to build on for the future. We conducted further examination into the importance of manufacturing sectors in growth in domestic value-addition in exports using EORA data. The largest increases have occurred in metal products in Ethiopia and Kenya, food and beverages in Mozambique, Ghana and Zambia and electrical machinery in Nigeria, Rwanda and Tanzania.

The Supporting Economic Transformation (SET) programme examined promising growth sectors in Tanzania on the basis of a range of analytical techniques based on the following findings. First, there are important sectors that use Tanzania's resources, including traditional products such as sisal, fish and gold, and future promising products such as natural gas, vegetables and uranium. Some generate jobs and others bring export revenues. Second, there are key sectors that move Tanzania up the value added ladder through agro-processing and manufacturing, including processing of cashews, leather, fruit and nuts and production of wood and paper products, with machinery and chemicals as strategic bets. Some of these help increase Tanzania's value addition; others help raise its productivity and productive capacity. Finally, services such as tourism, logistics and finance are fast-growing sectors, with tourism creating foreign exchange and jobs and logistics and finance supporting other industries.

Promising manufacturing sub-sectors can also be analysed on the basis of qualitative accounts:

1. **Garments and footwear.** In several African countries – including Kenya, Lesotho, Madagascar – industries with relatively large labour forces have developed that participate in global value chains led by US and European retailers and branded clothing or footwear companies. These companies use preferential access to the US market via the African Growth and Opportunity Act (AGOA) or the European market via economic partnership agreements (EPAs). Under the rules of origin for low-income countries included in these agreements, intermediate inputs may be imported for product assembly. Assembly operations of basic standardised products, such as the sewing together of t-shirts or jeans, are characterised by very low entry barriers. Competitive production depends primarily on the presence of low-skill, low-wage labour, as well as a stable supply of intermediate inputs (fabric for clothing, leather or plastic for shoes). In many African countries, product assembly in these sectors is done by firms owned by foreign (often Asian/Chinese) entrepreneurs, rather than domestically owned firms. The firms mentioned in the previous section, Huajian Shoes in Ethiopia and C&H Garments in Rwanda, represent examples of this group. If the infrastructure works well, being landlocked is not necessarily a barrier to a country's participation in these global value chains, as the large garment sector in Lesotho illustrates.
2. **Horticulture.** In several African countries, notably Ethiopia, Ghana, Kenya, Tanzania and Uganda among the countries of interest, substantial industries processing fresh fruit and vegetables and/or cut flowers for exports have emerged over the past 20 years. These sectors are now employing large numbers of people in crop-growing activities – usually a mix of small-scale independent farmers and large-scale industrial-type farms – and a larger share in processing and logistics activities, serving large export markets in Europe. The lead firms in global value chains in these activities are usually European supermarkets or flower wholesalers, which do not themselves own or operate production or distribution operations in the supplier countries but work with locally owned firms that are their first- or second-tier suppliers. In Kenya, probably the most successful country in this sector among the nine countries of interest, an estimated 200,000 people, of whom fewer than 10,000 are small-scale growers,⁸ are employed in the sector, which provides over \$1 billion exports annually, about 20% of total Kenyan goods exports. But Kenya supplies a very small share of EU imports of fresh fruits and vegetables, possibly below 1%, suggesting there is considerable scope for output, employment and productivity growth in the countries of interest.

⁸ Small-scale growers in the horticulture global value chains are generally much higher-productivity farmers than those involved in subsistence or local-market production.

3. **Automobiles.** An incipient auto industry exists in several of the countries of interest. In Nigeria, eight assembly plants operated until the 1980s, but the sector collapsed in the 1990s, and only three have continued operations, though not very successfully. There is now an attempt by the Nigerian government to revive the industry, and several European and Asian assemblers have announced plans to establish assembly operations. Twelve licences were awarded to prospective assemblers in late 2015, including three Chinese assemblers. In Kenya, several companies have small assembly operations that are in the process of being expanded, including an \$85 million current new investment by Hyundai, Tata and Foton (a Chinese truck and commercial vehicle assembler). Ethiopia has two Chinese assembly operations, Lifan and Geely. The latter has doubled its capacity since opening in 2007, but 80-90% of the components used are imported. Toyota has a small assembly plant in Tanzania, as well as a presence in Kenya. Thus, the auto industry across the nine countries of interest is at a point where there is considerable potential for rapid expansion. The Nigerian government argues that the assembly industry could provide as many as 70,000 jobs directly, and another 200,000 indirectly, in components production and after-sales services. In addition, there are potential export benefits, though the increase in imported inputs and equipment needs to be taken into account.
4. **Fast-moving consumer goods.** This sector (known as FMCG) encompasses products such as cosmetics and soaps, household cleaning products and processed food (such as dairy products, beer and soft drinks). Rising per capita incomes over the past 15 years or so in many of the countries of interest here, the low price per unit cost of products in the sector and the rapid pace of urbanisation mean many of the large multinational corporate producers in the sector see Africa as a major market growth opportunity over the next two decades. Production processes are often not complex, but distribution is key to producer success in the sector, and relies on good logistics and transport infrastructure. It also relies on an extensive retail network, which has increased rapidly in the countries of interest over the past 15 years, illustrating the complementarity between foreign investments in services and manufacturing. There are many large-scale African manufacturers in this sector, including in Kenya (e.g. Bidco Africa, which has 48 brands in 18 countries) and Tanzania (e.g. MeTL group, whose billionaire owner is Tanzania's richest person).

6. IDENTIFYING PROMISING AFRICAN COUNTRIES

A range of different factors influence the ability of African countries to export manufactures, compete effectively in global markets for manufactured products and attract FDI into export-based manufacturing. General determinants of manufacturing trade include factors that influence (1) access to markets for manufactures (**geographical location and proximity** to key regional and global markets; **membership in trade agreements**) and (2) the ability of individual countries to produce particular types of export-based manufactures competitively (**productive capabilities; trade and transportation costs; quality of domestic and cross-border infrastructure; efficiency of trade logistics services; quality of the business climate; relative unit labour costs; exchange rates; skills** of the labour force; presence of **special economic zones or industrial parks and other forms of trade promotion**). External factors also influence African trade in manufactures (including, for example, presence of protectionist policies and trade restrictions, growth in regional and international markets and trends in offshoring investment in manufacturing production).

A similar set of factors that help exports can also help attract manufacturing FDI: (1) general policy factors (e.g. political stability, governance, investment climate); (2) macroeconomic and structural factors (human resources, infrastructure, market size and growth); (3) specific FDI policies (FDI promotion agencies and incentives packaged in a strategy, investment promotion to address imperfect information, international trade and investment treaties, home-country measures); and (4) firm-specific factors (e.g. technology) and one-off factors such as the availability of natural resources or large-scale privatisation (Dunning, 1993; te Velde, 2002, 2006; UNCTAD, 1999). The literature suggests specific FDI incentives are less effective in attracting FDI than so-called general economic fundamentals, such as good-quality and appropriate education and infrastructure. Incentives do tend to have an effect on the choice of location at the margin (examples include Ireland and Singapore over the 1970-1990 period) (te Velde, 2002) Global

and regional trade and bilateral investment agreements may help mobilise FDI a little (see te Velde and Bezemer, 2006).

We assess how the nine selected African countries compare with similar competitor countries in Asia (Bangladesh, Cambodia, Myanmar, the Philippines, Thailand and Vietnam) and Latin America (Peru) along a range of indicators that relate to the factors we have identified as important for attracting FDI in export-oriented manufacturing. We first compare these countries along several different measures of **labour productivity** in manufacturing and **annual labour costs** (see Table 4). High levels of labour productivity and competitive labour costs (of which wages are a key component) are important factors in the development of competitive manufacturing sectors. In general, the relative performance of the selected African countries in terms of labour productivity is mixed. Mozambique is the best performer (because of its mega project) but an outlier. When measured as constant value added per person employed, labour productivity in manufacturing is higher in Kenya, Nigeria, Tanzania and Zambia compared with several Asian comparators (but not Peru, the Philippines and Thailand); Ethiopia and Rwanda are the two worst performers. Kenya also fares well in terms of relative labour productivity in manufacturing (around 3.5 times higher than in other sectors), as do Tanzania and Zambia (around 2.5 times higher, eclipsed only by the Philippines among the comparators). But, when measured against the Asian and Latin American comparators, manufacturing productivity relative to other sectors is low in Ethiopia, Ghana, Nigeria and Uganda.⁹ Moreover, annualised growth in manufacturing labour productivity in some of the selected countries has also been comparatively limited (and even negative in Rwanda and Uganda in recent years); Ethiopia and Nigeria have performed much better on this measure, outstripping all comparators over 2010-2013. While the data on annual labour costs are limited and do not cover all countries, among the countries with comparable data labour costs are lowest in Ethiopia and also relatively low in Ghana (only Bangladesh had lower labour costs per full-time worker than Ghana), Mozambique, Nigeria, Tanzania and Uganda compared with the other comparator countries.

Table 4. Labour productivity and costs for selected African countries and competitors

| | Country | Labour productivity in manufacturing (constant value added per person employed) (2013) | Labour productivity in manufacturing relative to average across all sectors (2013) | Average annualised growth in labour productivity in manufacturing (%) | | | Annual labour cost per full-time worker (constant 2005 US\$) |
|----------------------------|-------------|--|--|---|-----------|-----------|--|
| | | | | 2000-2005 | 2005-2010 | 2010-2013 | |
| Selected African countries | Ethiopia | 705 | 1.18 | -2.7 | 6.7 | 12.0 | 461 |
| | Ghana | 2,359 | 0.84 | 3.1 | 3.5 | 3.9 | 568 |
| | Kenya | 6,595 | 3.61 | -0.3 | -0.2 | 4.3 | 2,176 |
| | Mozambique | 27,360 | 19.87 | 11.2 | 4.5 | 1.8 | 880 |
| | Nigeria | 7,504 | 1.18 | 13.8 | 10.5 | 10.4 | 963 |
| | Rwanda | 1,500 | 2.01 | 7.1 | -2.7 | -1.8 | - |
| | Tanzania | 3,051 | 2.48 | -5.8 | 0.8 | 1.7 | 1,033 |
| | Uganda | 1,820 | 1.43 | 11.8 | -2.2 | -3.1 | 948 |
| | Zambia | 5,174 | 2.43 | 3.1 | 0.9 | 1.8 | 1,768 |
| Competitor countries | Bangladesh | 2,163 | 1.55 | -4.5 | 3.9 | 8.4 | 513 |
| | Cambodia | 2,410 | 2.08 | 0.8 | 4.6 | 9.5 | - |
| | Myanmar | 1,504 | 1.86 | 18.8 | 17.6 | 4.9 | - |
| | Peru | 12,059 | 1.65 | -6.9 | 0.8 | 4.5 | - |
| | Philippines | 11,014 | 2.77 | 1.9 | 3.7 | 4.4 | 1,939 |
| | Thailand | 13,161 | 2.05 | 2.9 | 4.8 | 0.5 | - |
| | Vietnam | 2,845 | 1.80 | 2.3 | 5.4 | 6.8 | 1,506 |

Source: Labour productivity data from SET data portal (<http://set.odg.org/data-portal/>); annual labour cost data from Gelb et al. (2013) based on World Bank Enterprise Survey data.

⁹ One reason for this is the high degree of informality in African manufacturing. As Rodrik (2014: 9) explains, manufacturing in Africa is 'dominated by small, informal firms that are not particularly productive'.

We also compare the performance of these countries on a range of more general indicators related to determinants of FDI in manufacturing, and assess how they perform relative to the low-income country (LIC), lower-middle-income country (LMIC) and upper-middle-income country (UMIC) averages on selected indicators.¹⁰ We summarise the main findings presented in Table 5.

Table 5. Relative performance of selected African countries on factors attracting FDI in manufacturing

| Determinant | Analysis of selected countries and comparators | African country best positioned against comparators |
|--|---|--|
| Geographical advantages (proximity to high-growth regional and overseas markets) | <ul style="list-style-type: none"> The coastal countries (Ghana, Kenya, Mozambique, Nigeria, Tanzania) have better access to overseas markets through ports compared with landlocked countries (Rwanda, Zambia, Ethiopia, Uganda). Kenya and Tanzania benefit from proximity and preferential access to a growing regional (East African Community) market. | Kenya |
| Market size | <ul style="list-style-type: none"> Ethiopia and Nigeria benefit from large domestic markets but markets in Ghana, Mozambique, Rwanda and Zambia are relatively small. Growth has been strong in Ethiopia and Tanzania. | Nigeria (size) Ethiopia and Tanzania (growth) |
| Economic fundamentals (skills, infrastructure and logistics, labour productivity/technology, input costs including labour and energy) | <ul style="list-style-type: none"> The selected African countries generally perform poorly on key education indicators. Overall, Rwanda boasts comparatively good-quality infrastructure, as does Kenya (and to a lesser extent Uganda and Zambia). But the African countries are ranked lower than most Asian and Latin American comparators on measures of logistics performance. When measured as constant value added per person, labour productivity is higher in Mozambique (an outlier), Kenya, Nigeria, Tanzania and Zambia compared with most Asian comparators (excluding the Philippines and Thailand). Labour productivity in manufacturing is comparatively high relative to other sectors in Kenya, Tanzania and Zambia; these countries fare well on this measure against comparable Asian and Latin American countries. Ethiopia and Nigeria have registered strong annualised growth in manufacturing labour productivity since 2010, but this has been quite limited in the other countries. Relative unit labour costs in Ethiopia and Tanzania are comparable with China, while in most other countries they are still significantly higher (but decreasing). Average annual manufacturing wages are low in Ethiopia, and also relatively low in Tanzania. In Tanzania, however, taxes and levies on labour make the use of labour expensive. The price of electricity (per kWh) is low in Ethiopia, and also comparatively low in Zambia, Mozambique and Tanzania, but it is comparatively high in Ghana, Kenya and Uganda. Even so, the price of electricity in the selected African countries is generally lower compared with the comparators. | Ghana (skills) Rwanda (infrastructure) Kenya (logistics) Nigeria (labour productivity in manufacturing value added per person, Mozambique discounted as an outlier); but fastest growth in labour productivity in manufacturing relative to other sectors in Kenya, and fastest most recent average growth in Ethiopia Ethiopia (labour and energy input costs) |
| General investment climate (regulatory rules) | <ul style="list-style-type: none"> Rwanda is ranked highest among the African countries on the overall quality of the business climate (only Peru and Thailand have higher rankings). Ghana, Kenya, Uganda and Zambia also have comparatively favourable business climates. But Ethiopia, Mozambique, Nigeria and Tanzania have among the worst business climates. | Rwanda |
| Specific policies (trade and investment agreements, exchange rate policy, special economic zones) | <ul style="list-style-type: none"> All countries benefit from preferential access to the US market (for sectors such as garments) through AGOA. Ethiopia, Mozambique, Rwanda, Tanzania, Uganda and Zambia are also beneficiaries of Everything But Arms under which their exports to the EU are duty- and quota-free. Others such as Zambia have signed an EPA with the EU. Exchange rate misalignment undermines the price competitiveness of manufacturing exports from some African countries. China is building SEZs in Ethiopia, Nigeria and Zambia. | |

¹⁰ The comparative data for these indicators are presented in Table A.4 in Appendix II in the Main Report.

In order to provide a more comprehensive measure of promising countries for attracting FDI, we develop a *Manufacturing FDI Potential Index* (see Table 6), which calculates a total score for each of the nine countries based on their¹¹ rankings on a number of core factors behind attracting FDI, including past manufacturing FDI stock as a percentage of GDP, recent performance in manufacturing exports, domestic value added in manufacturing, manufacturing value added per capita, economic complexity, labour productivity in manufacturing, population, quality of the business climate and infrastructure, education and cost and reliability of electricity. Our analysis suggests the five most promising countries that are currently best positioned to attract FDI into export-based manufacturing are **Zambia, Nigeria, Kenya, Ethiopia and Mozambique**.

Table 6. Total scores and ranking on Manufacturing FDI Potential Index

| | Zam | Nga | Ken | Eth | Moz | Rw | Ghn | Tzn | Ugn |
|--|-----|-----|-----|-----|-----|----|-----|-----|-----|
| Overall ranking | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Overall score | 56 | 65 | 66 | 71 | 71 | 73 | 75 | 75 | 78 |
| Sub-indicators | | | | | | | | | |
| Ave. annual growth in manufacturing exports to the world (2005-2014) | 7 | 2 | 9 | 4 | 5 | 1 | 8 | 3 | 6 |
| Labour productivity in manufacturing (constant value added per person employed) (2013) | 4 | 2 | 3 | 9 | 1 | 8 | 6 | 5 | 7 |
| Domestic value added content of gross exports as a share of total exported value added (%) (2011) | 4 | 3 | 7 | 9 | 1 | 6 | 2 | 8 | 5 |
| Average annualised growth in labour productivity in manufacturing (%) (2010-2013) | 6 | 2 | 3 | 1 | 5 | 8 | 4 | 7 | 9 |
| Estimated population size (2015) | 8 | 1 | 4 | 2 | 6 | 9 | 7 | 3 | 5 |
| Ease of doing business rank (2016) | 2 | 9 | 3 | 8 | 6 | 1 | 4 | 7 | 5 |
| Quality of overall infrastructure rank (2015-2016) | 3 | 9 | 2 | 5 | 8 | 1 | 7 | 6 | 4 |
| Secondary education enrolment rate (%) | 1 | 4 | 3 | 7 | 9 | 6 | 2 | 5 | 8 |
| Tertiary education enrolment rate (%) | 9 | 2 | 7 | 4 | 5 | 3 | 1 | 8 | 6 |
| Price of electricity (US cents per kWh) (2016) | 2 | 8 | 7 | 1 | 3 | 5 | 9 | 4 | 6 |
| Number of electricity outages in a typical month (2013) | 3 | 9 | 5 | 4 | 1 | 2 | 7 | 8 | 6 |
| Manufacturing value added per capita (2013) | 2 | 1 | 3 | 9 | 7 | 8 | 4 | 6 | 5 |
| Country ranking on Economic Complexity Index (2014) | 1 | 8 | 2 | 6 | 5 | 9 | 7 | 4 | 3 |
| Manufacturing share of FDI stock (% of GDP) (most recent year available) | 4 | 5 | 8 | 2 | 9 | 6 | 7 | 1 | 3 |

Source: See Table A.5 in Appendix II of the Main Report for the sources of data used for individual indicators.

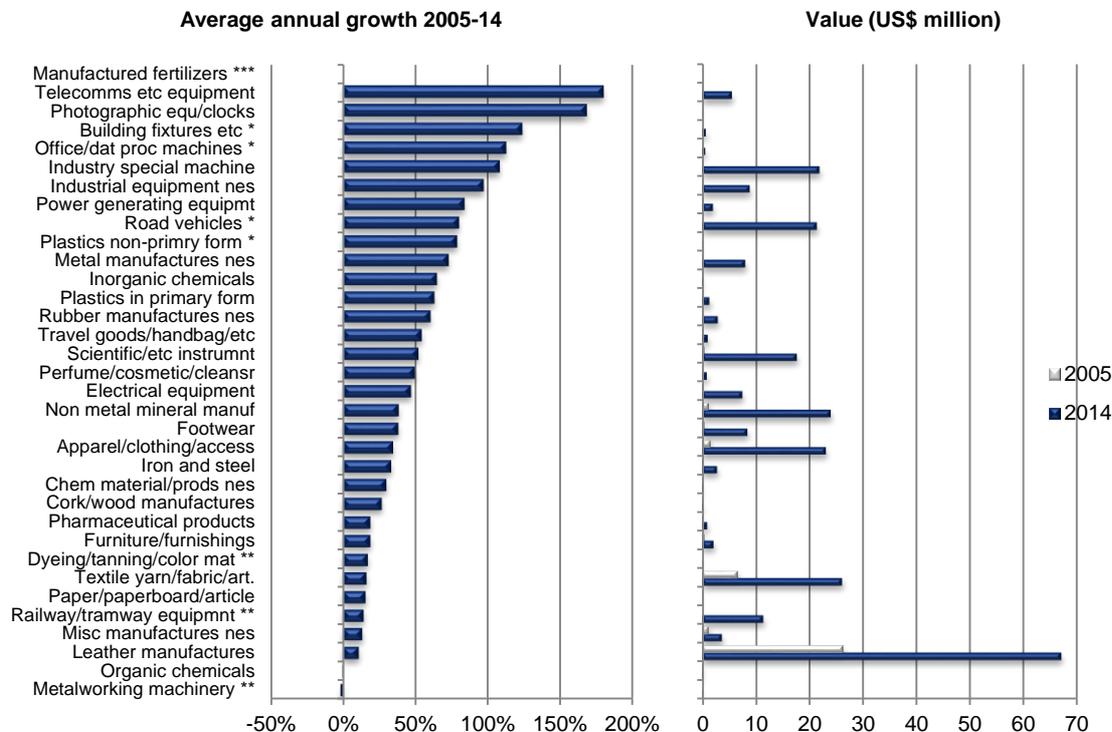
Two SET-ACET papers (Ansu et al, 2016a; Ansu et al, 2016b) provide further insights into what needs to be done, and how.

¹¹ It is important to note that the index scores and ranking are a relatively crude measure of the nine countries' preparedness to attract FDI into export-based manufacturing – the 14 indicators are not weighted in terms of their relative importance, several of the indicators are based on perceptions, the scoring system does not take into account issues related to policy preparedness, governance and the ability to support FDI and it does not reflect the views of the business sector. Nevertheless, the Index is based on a number of core FDI determinants and, in this sense, does provide preliminary insight into which countries are likely to be best positioned to attract FDI into export-based manufacturing.

APPENDIX: MANUFACTURING PROFILES

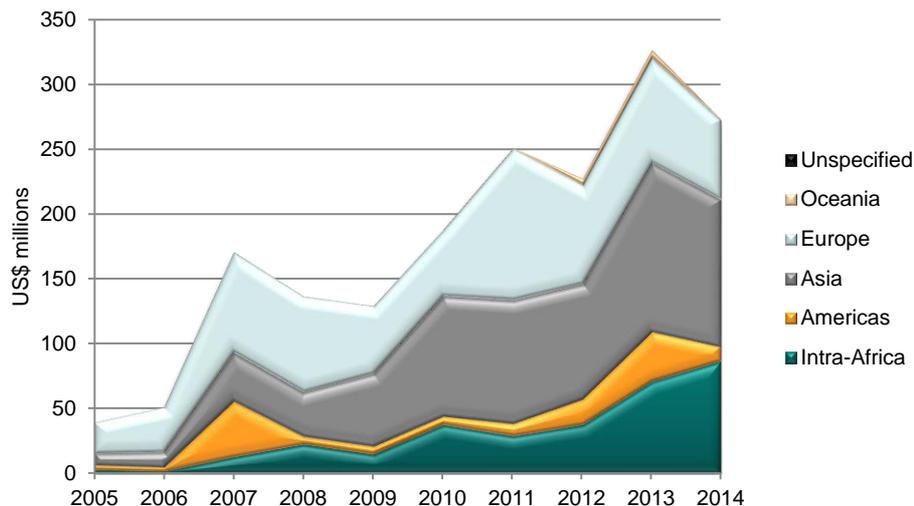
ETHIOPIA

Figure 1: Ethiopia manufactures exports by sector, 2005–2014



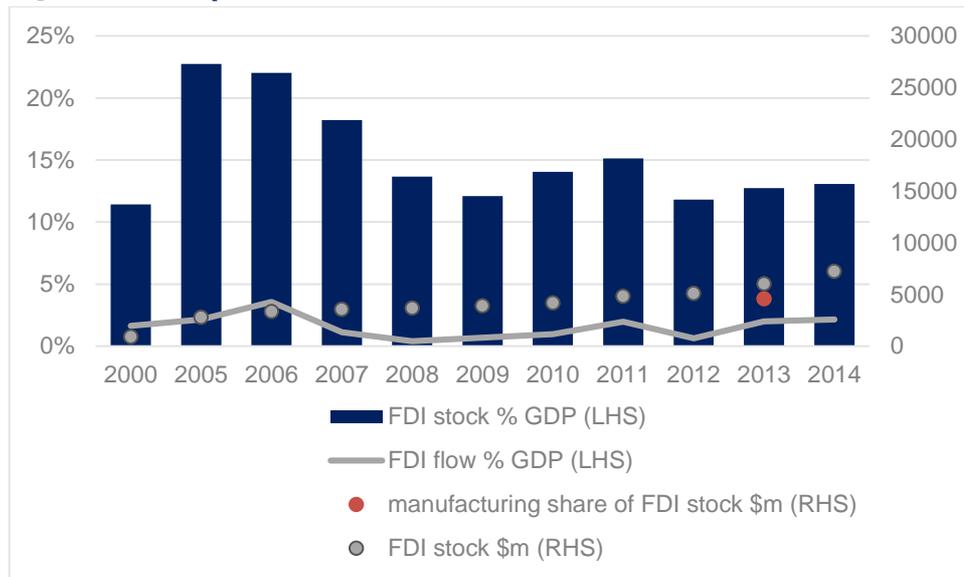
Notes: * Not exported in 2005; average annual change shown is 2006–2014. ** Not exported in 2005 or 2006; average annual change shown is 2007–2014. *** Not exported in either 2005 or 2014.
 Source: Derived from data obtained from UN Comtrade.

Figure 2: Ethiopia manufactures exports by destination, 2005–2014



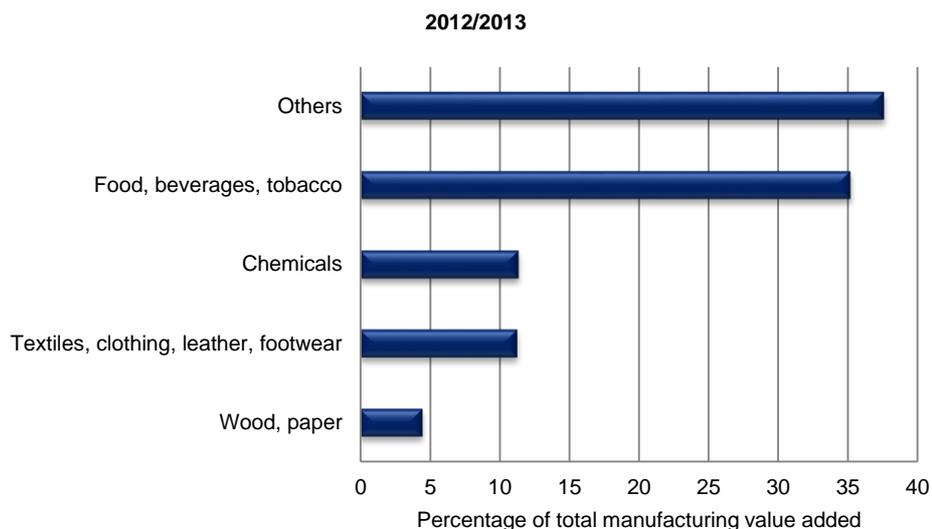
Source: Derived from data obtained from UN Comtrade.

Figure 3: Ethiopia FDI stock and flow, 2000–2014



Source: UNCTAD for stocks and flows, Chen et al. (2015) for share of manufacturing.

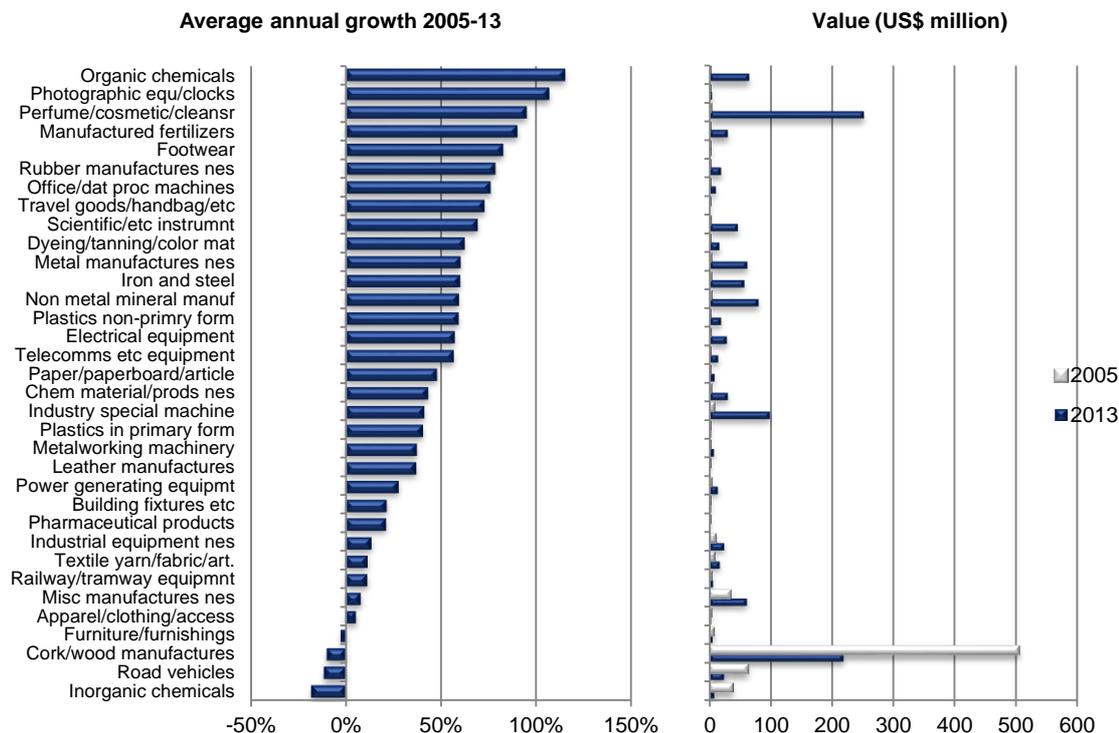
Figure 4: Ethiopia distribution of manufacturing VA by subsector, 2012/13



Source: http://www.csa.gov.et/images/documents/pdf_files/nationalstatisticsabstract/2012/ma.pdf.

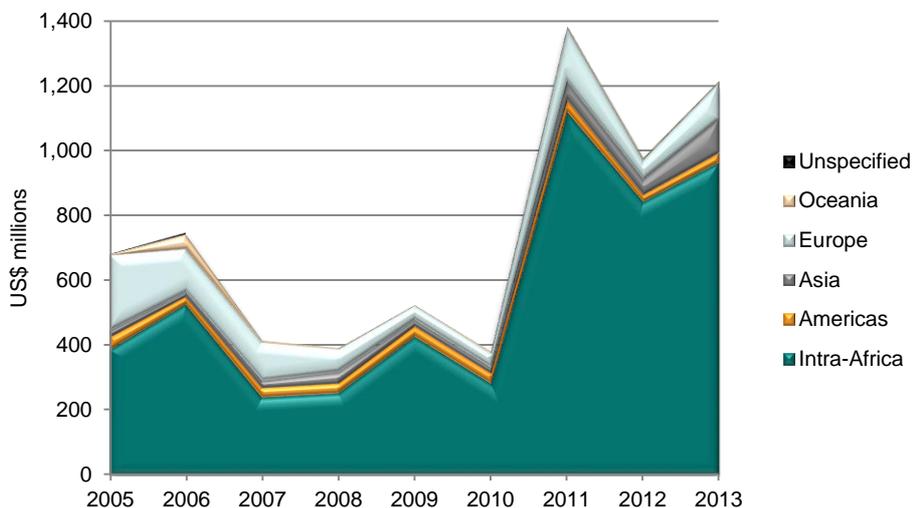
GHANA

Figure 5: Ghana manufactures exports by sector, 2005–2014



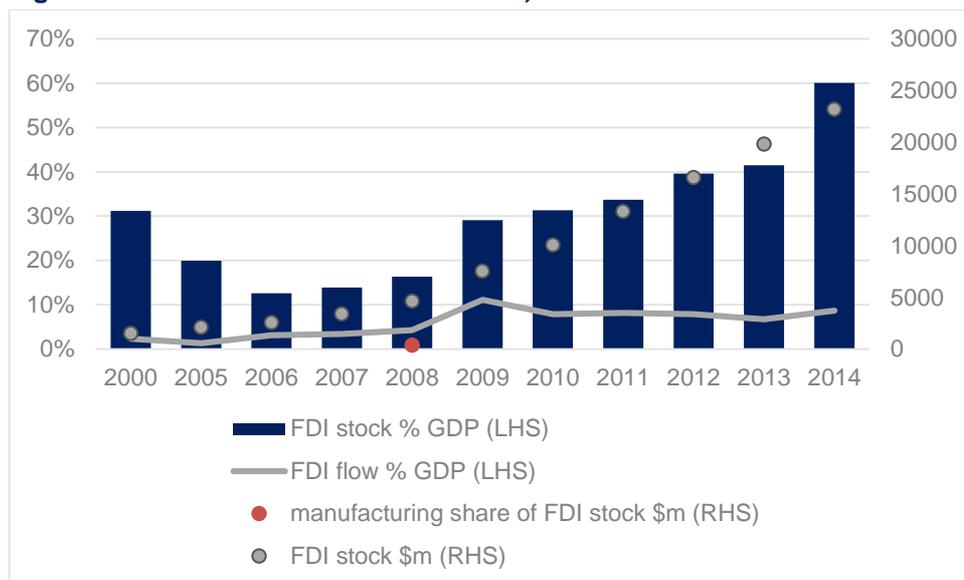
Source: Derived from data obtained from UN Comtrade. There are no data for 2014.

Figure 6: Ghana manufactures exports by destination, 2005–2013



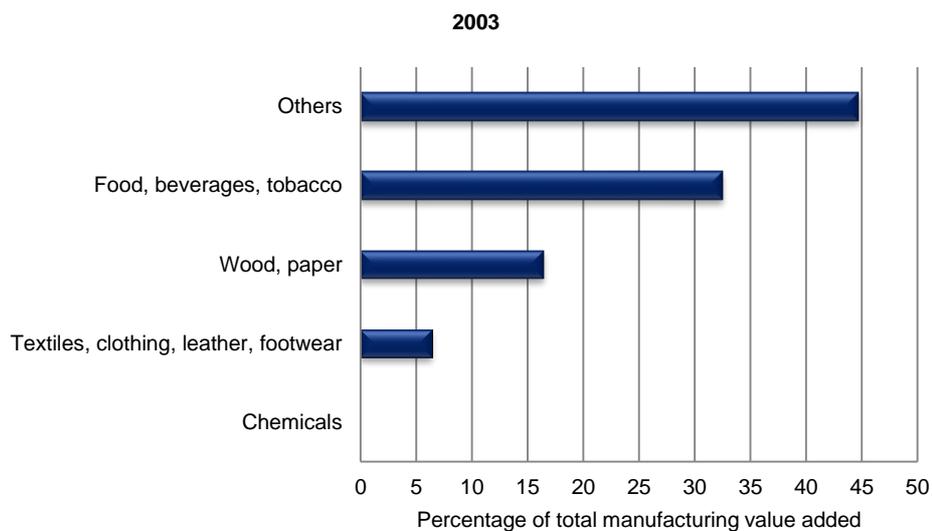
Source: Derived from data obtained from UN Comtrade. There are no data for 2014.

Figure 7: Ghana FDI stock and flow, 2000–2014



Source: UNCTAD for stocks and flows, Bank of Ghana (2009) for manufacturing share.

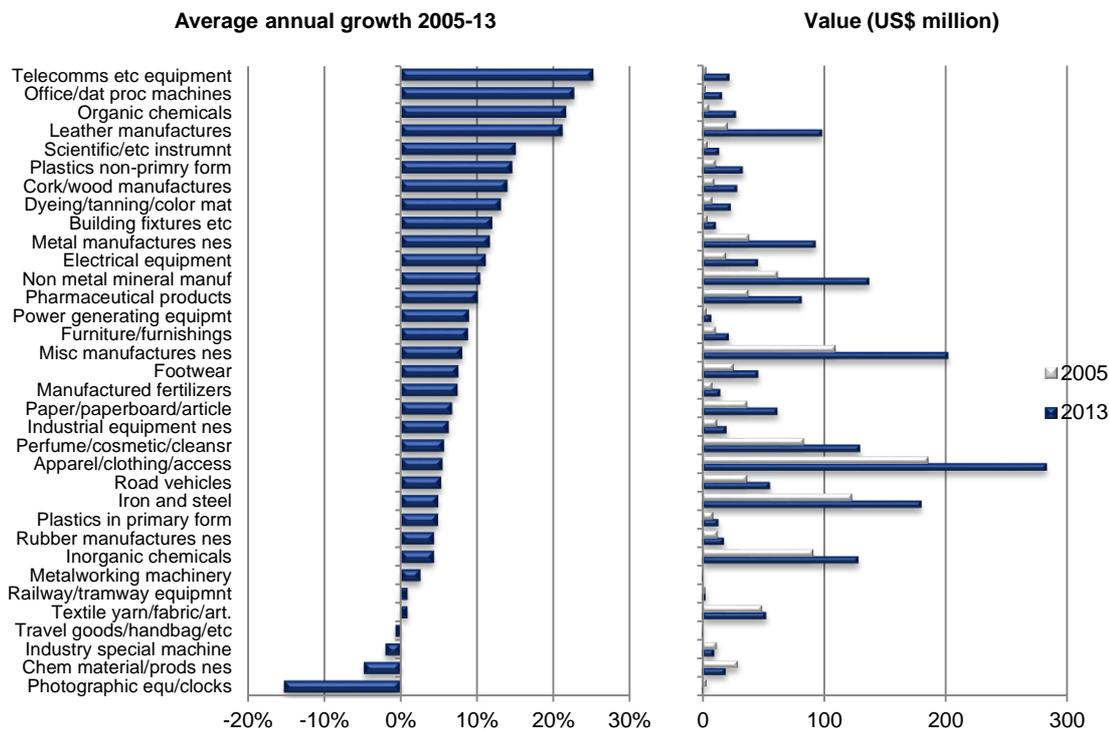
Figure 8: Ghana distribution of manufacturing VA by subsector, 2003



Source: UNIDO INDSTAT.

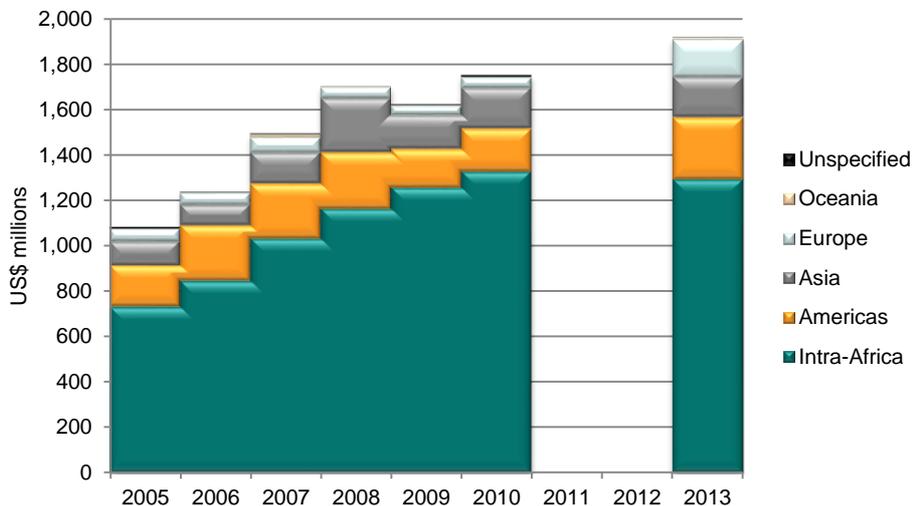
KENYA

Figure 9: Kenya manufactures exports by sector, 2005–2013



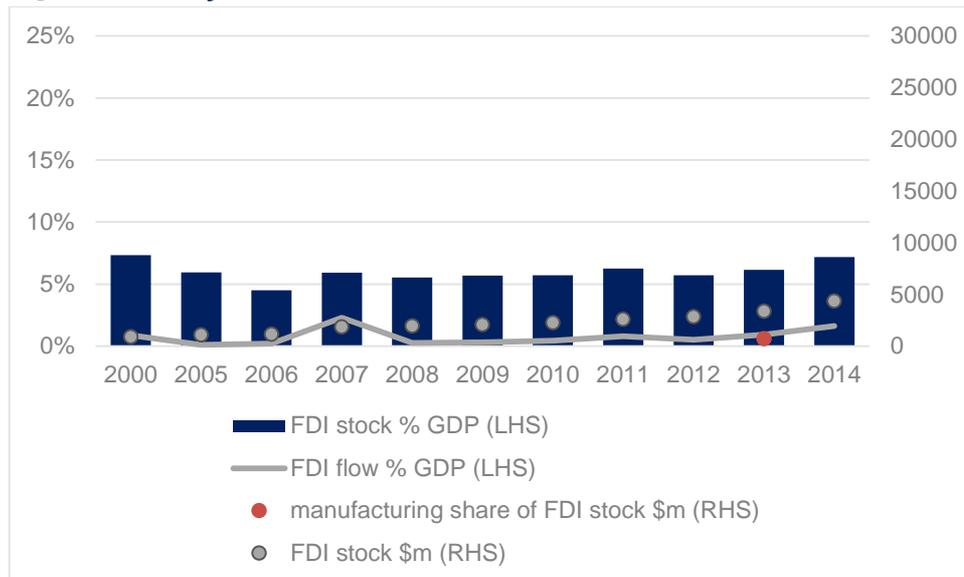
Source: Derived from data obtained from UN Comtrade. There are no data for 2014.

Figure 10: Kenya manufactures exports by destination, 2005–2013



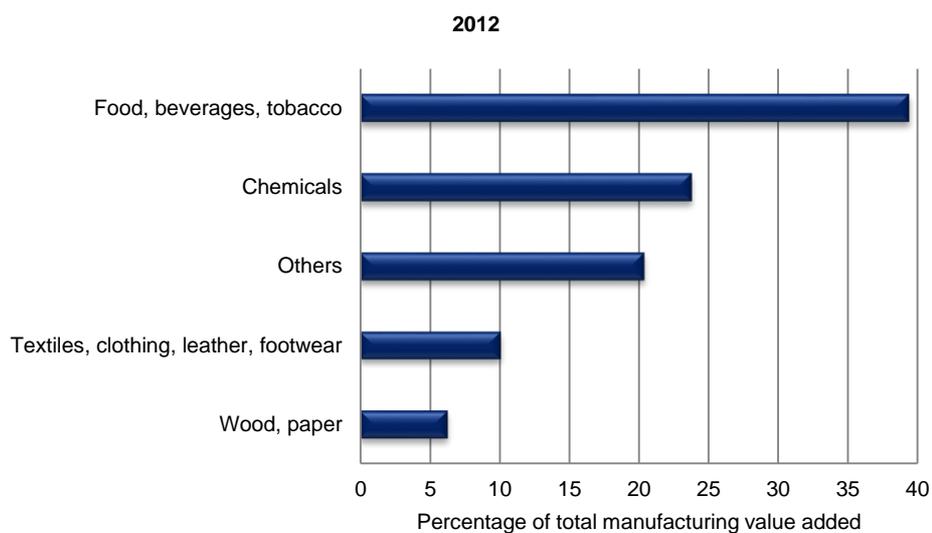
Source: Derived from data obtained from UN Comtrade. There are no data for 2011, 2012 or 2014.

Figure 11: Kenya FDI stock and share, 2000–2014



Source: UNCTAD for stocks and flows, Central Bank of Kenya (2015) for manufacturing share.

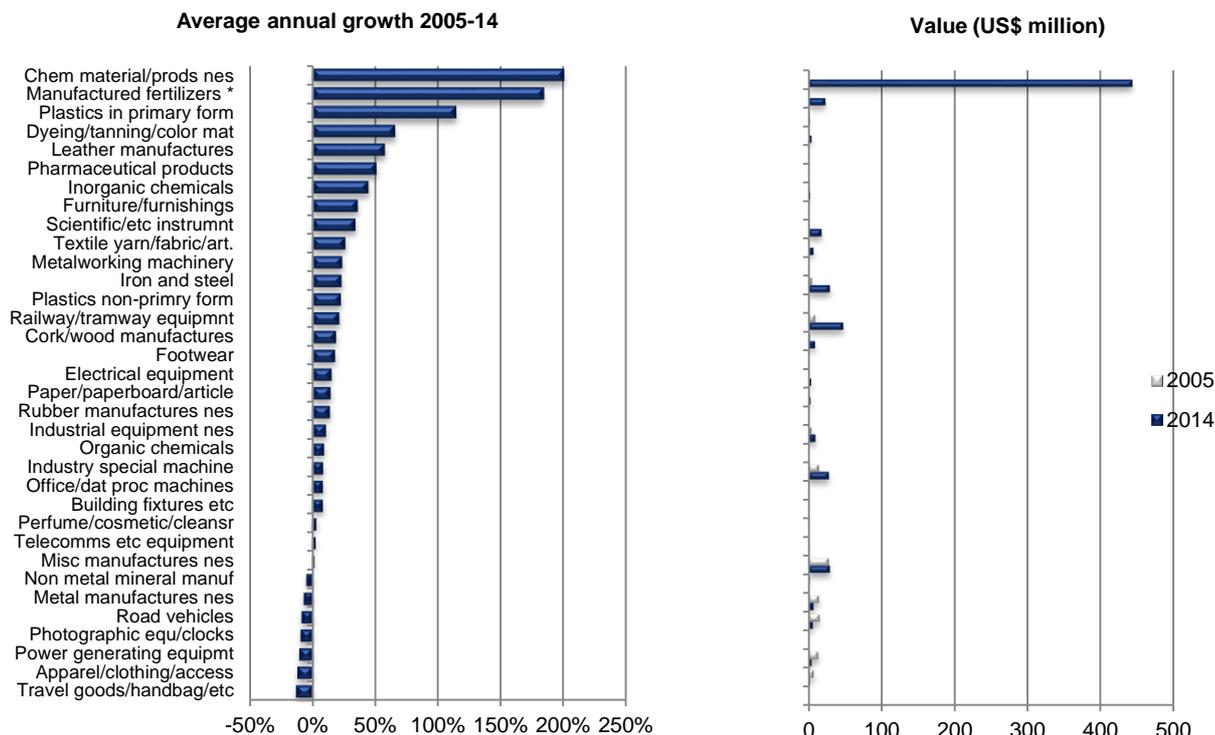
Figure 12: Kenya distribution of manufacturing VA by subsector, 2012



Source: <http://www.kippra.org/downloads/Kenya%20Economic%20Report%202014.pdf>

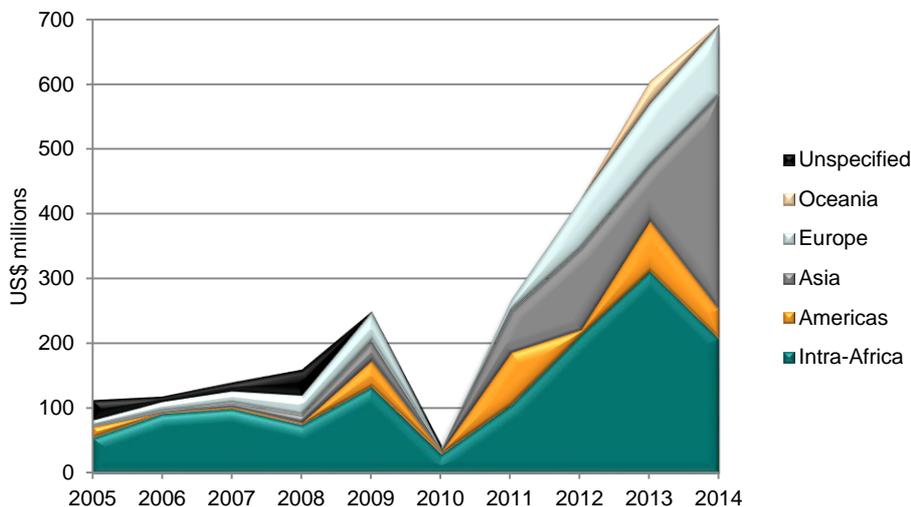
MOZAMBIQUE

Figure 13: Mozambique manufactures exports by sector, 2005–2014



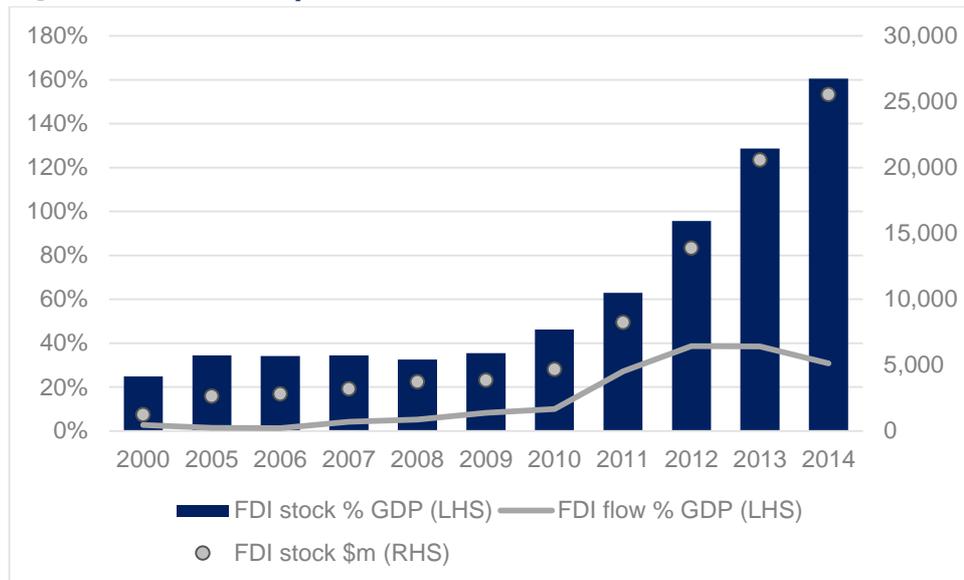
Note: * Not exported in 2005; average annual change shown is 2006–2014.
 Source: Derived from data obtained from UN Comtrade.

Figure 14: Mozambique manufactures exports by destination, 2005–2014



Source: Derived from data obtained from UN Comtrade.

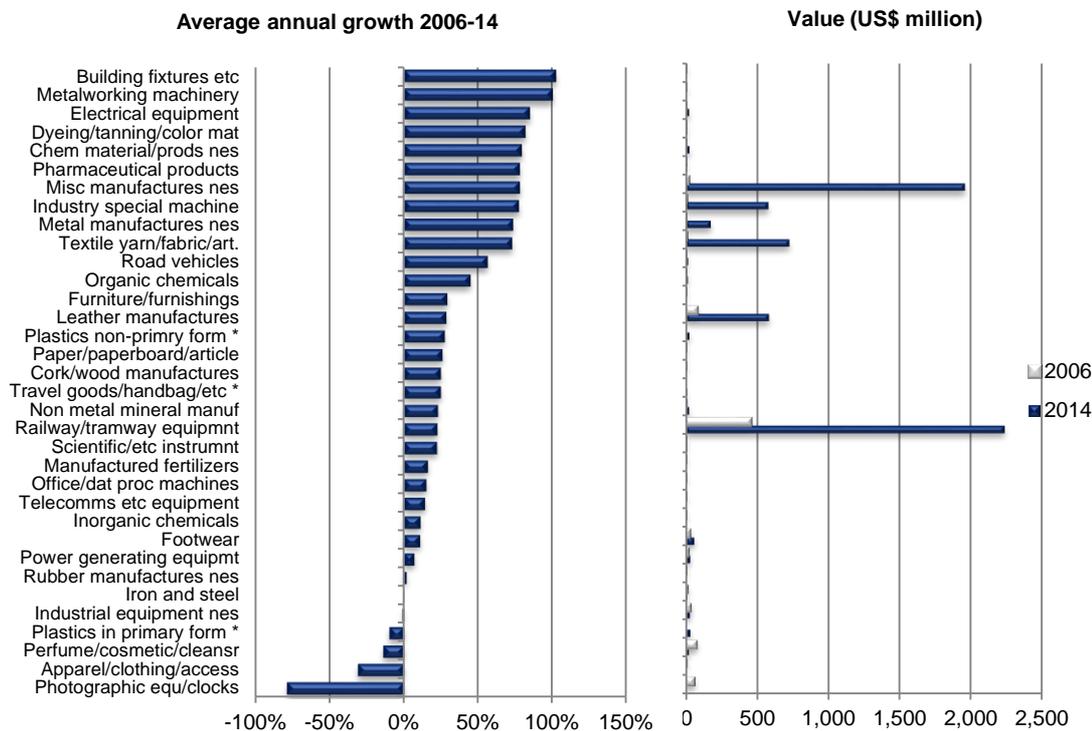
Figure 15: Mozambique FDI stock and flow, 2000–2014



Source: UNCTAD for stocks and flows, (no data for FDI share of manufacturing identified).

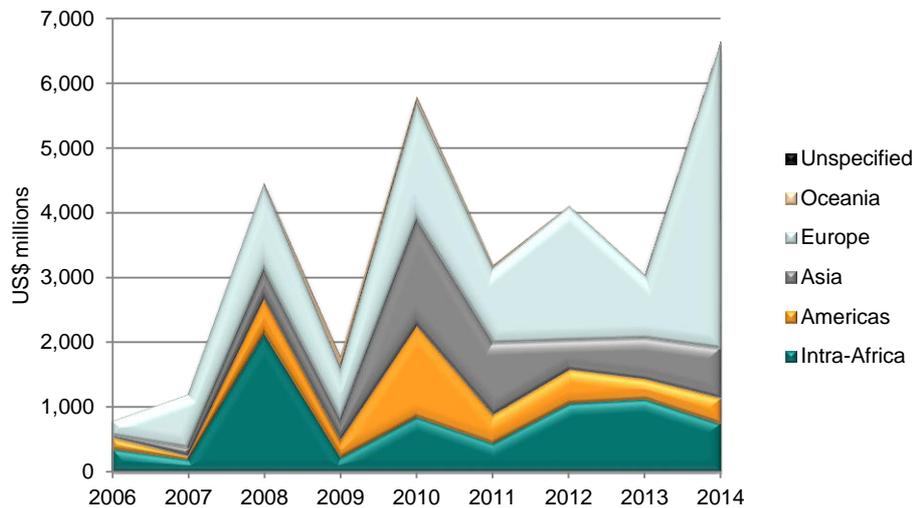
NIGERIA

Figure 16: Nigeria manufactures exports by sector, 2006–2014



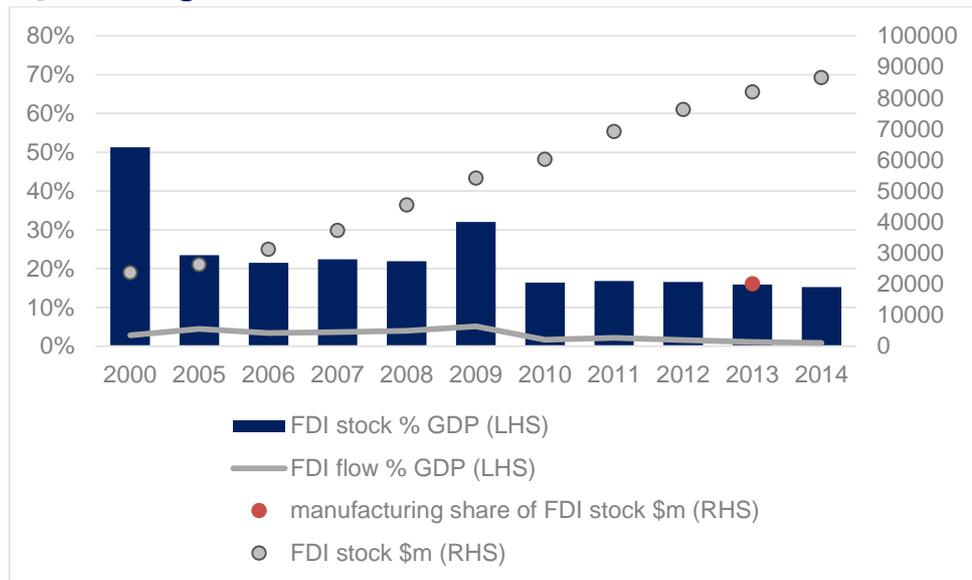
Note: * Not exported in 2006; average annual change shown is 2007–2014.
 Source: Derived from data obtained from UN Comtrade. There are no data for 2005.

Figure 17: Nigeria manufactures exports by destination, 2006–2014



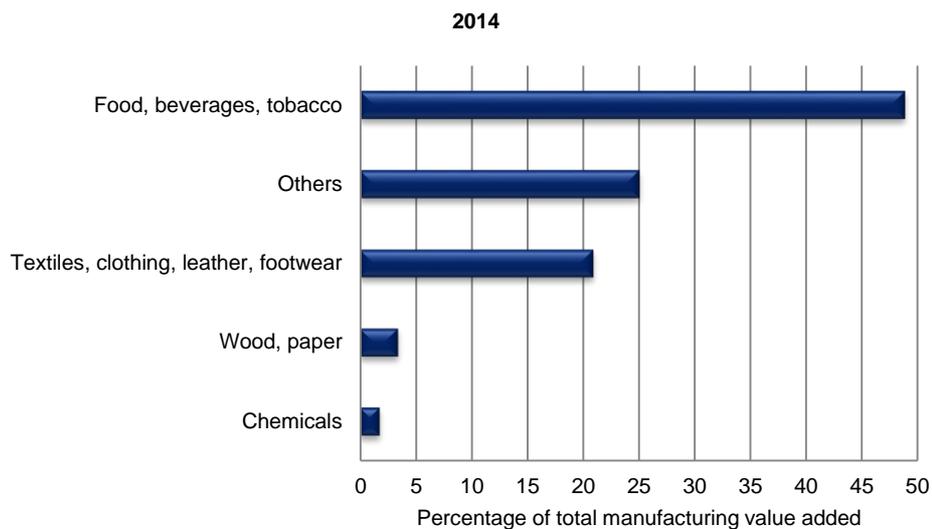
Source: Derived from data obtained from UN Comtrade. There are no data for 2005.

Figure 18: Nigeria FDI stock and flow, 2000–2014



Source: UNCTAD for stocks and flows, FDI share of manufacturing from Ajibola and Omotosho (2015).

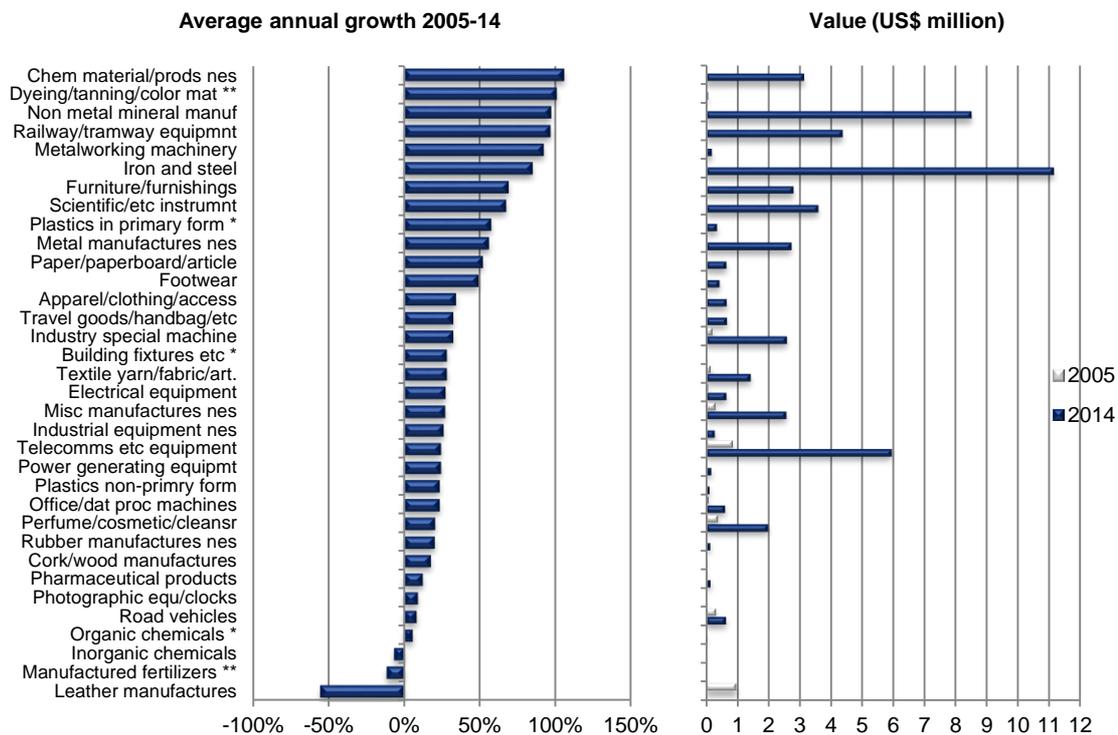
Figure 19: Nigeria distribution of manufacturing VA by subsector, 2014



Source: <http://nigeria.prognoz.com/>

RWANDA

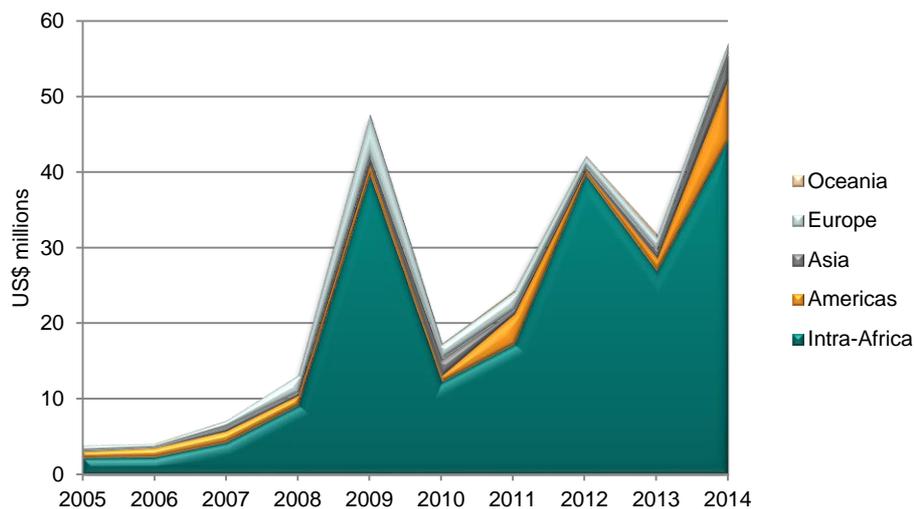
Figure 20: Rwanda manufactures exports by sector, 2005–2014



Notes: * Not exported in 2005; average annual change shown is 2006–2014. ** Not exported in 2005 or 2006; average annual change shown is 2007–2014.

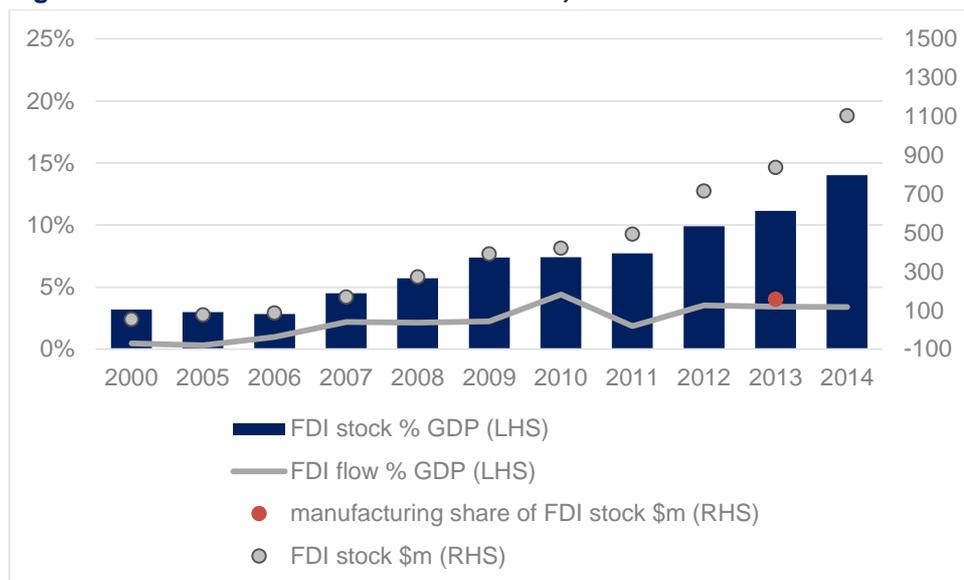
Source: Derived from data obtained from UN Comtrade.

Figure 21: Rwanda manufactures exports by destination, 2005–2014



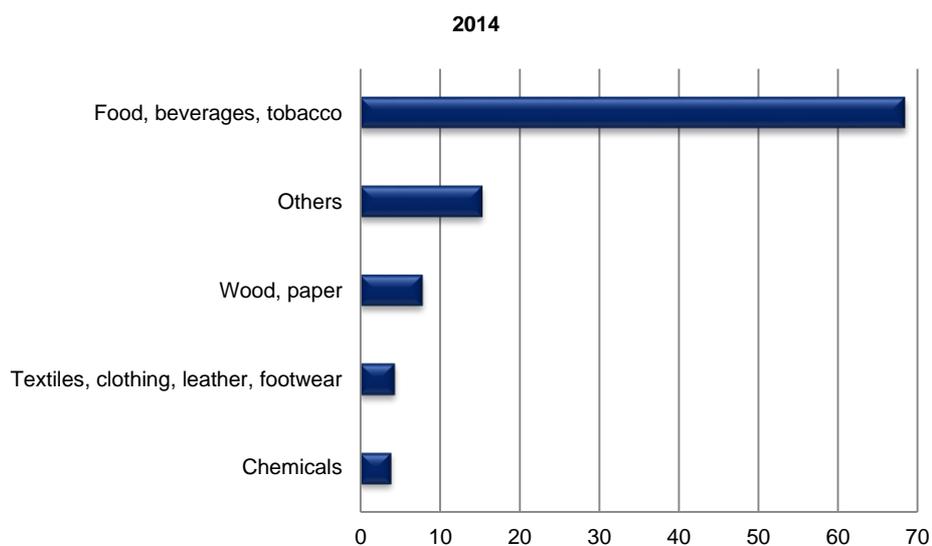
Source: Derived from data obtained from UN Comtrade.

Figure 22: Rwanda FDI stock and flow, 2000–2014



Source: UNCTAD for stocks and flows, FDI share of manufacturing from National Bank of Rwanda (2013).

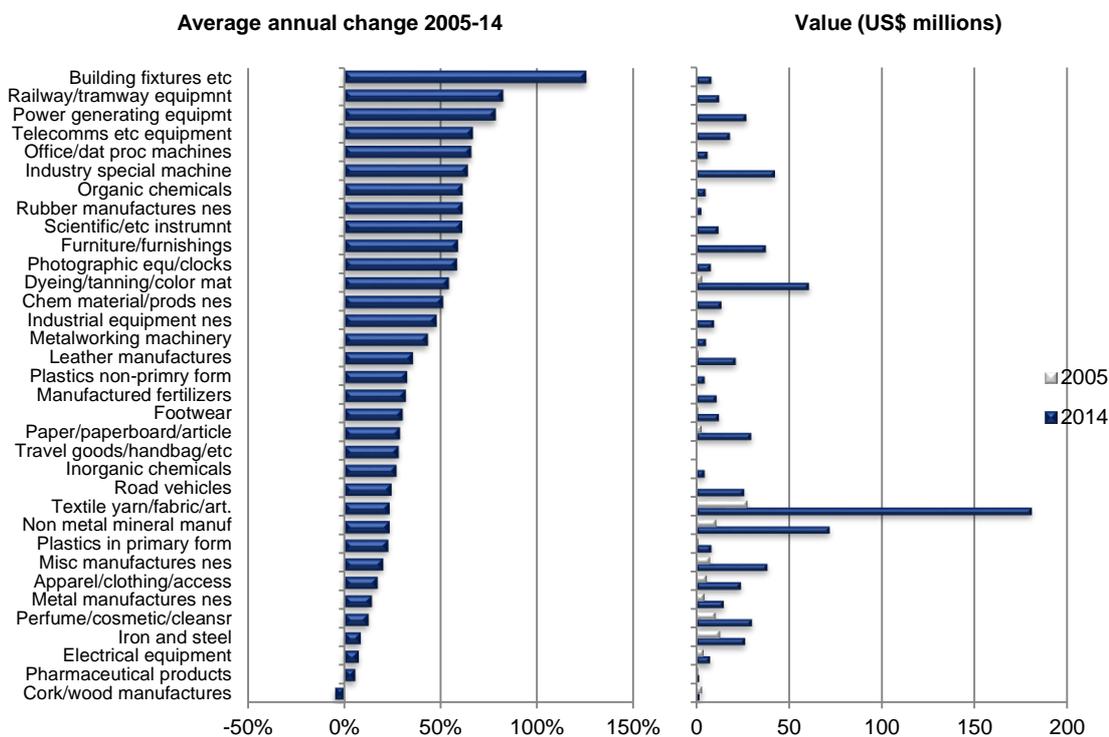
Figure 23: Rwanda distribution of manufacturing VA by subsector, 2014



Source: <http://statistics.gov.rw/publications/gdp-national-accounts-fiscal-year-201415>

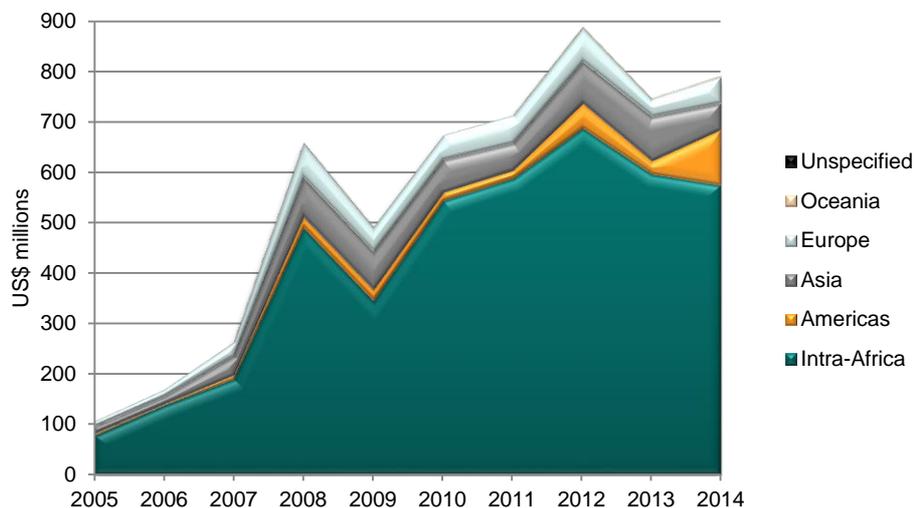
TANZANIA

Figure 24: Tanzania manufactures exports by sector, 2005–2014



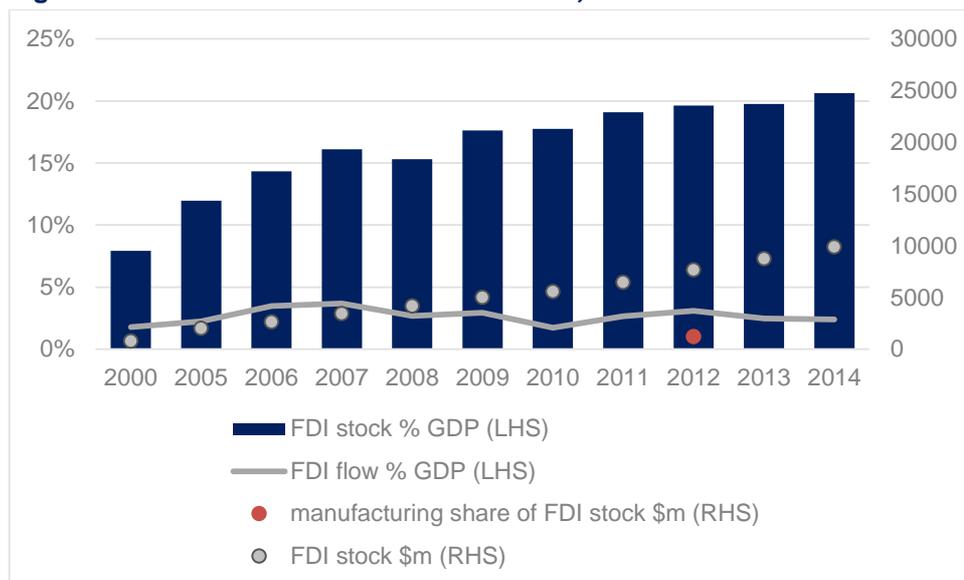
Source: Derived from data obtained from UN Comtrade.

Figure 25: Tanzania manufactures exports by destination, 2005–2014



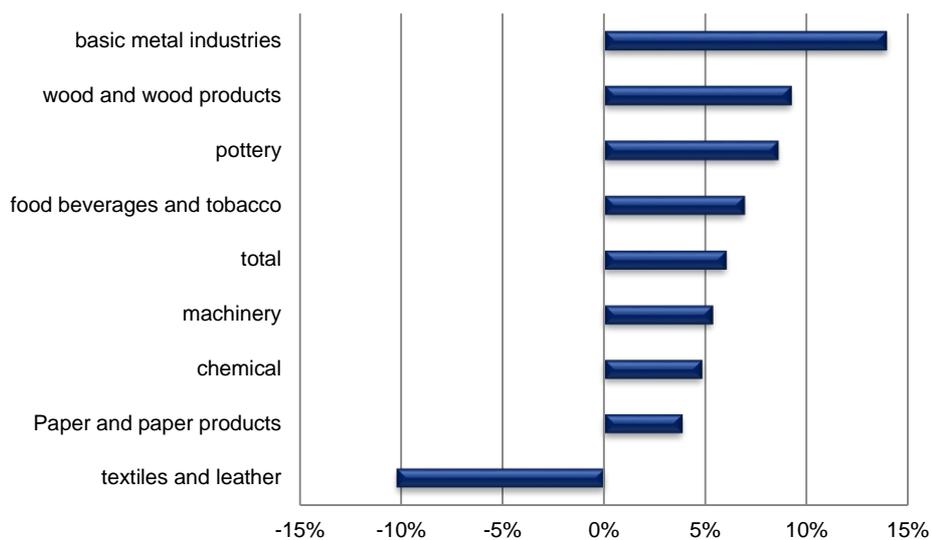
Source: Derived from data obtained from UN Comtrade.

Figure 26: Tanzania FDI stock and flow, 2000–2014



Source: UNCTAD for stocks and flows, Bank of Tanzania (2013) for share of manufacturing.

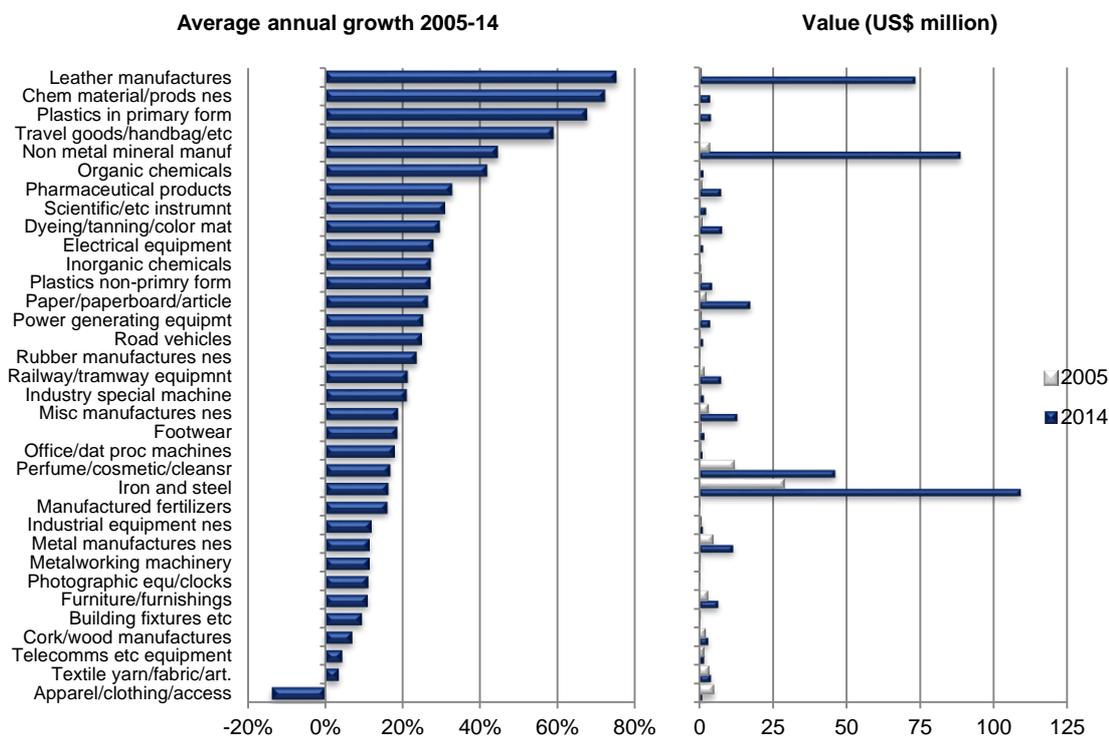
Figure 27: Tanzania annual change in manufacturing production (2008-2012)



Source: http://www.nbs.go.tz/nbs/takwimu/Industry/Industrial_Commodities_Quartely_Report_2004-2012.pdf

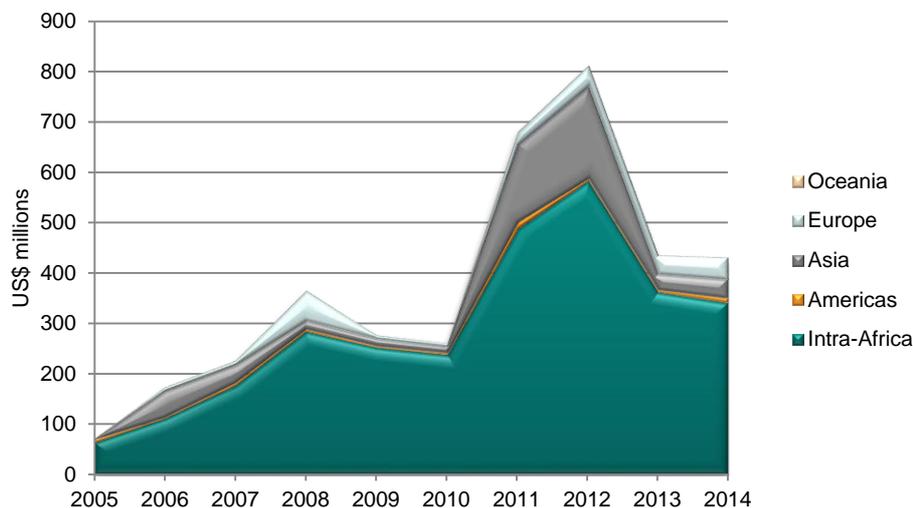
UGANDA

Figure 28: Uganda manufactures exports by sector, 2005–2014



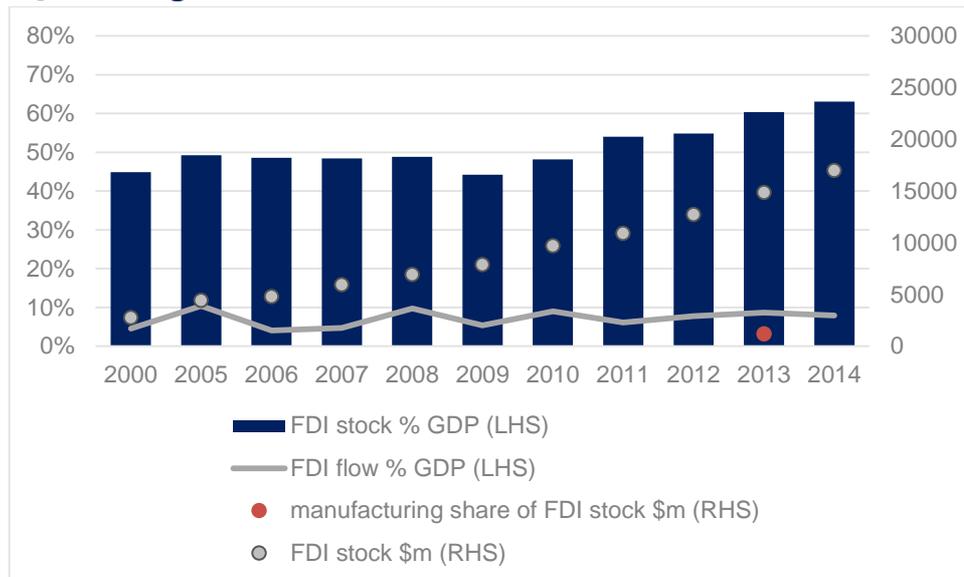
Source: Derived from data obtained from UN Comtrade.

Figure 29: Uganda manufactures exports by destination, 2005–2014



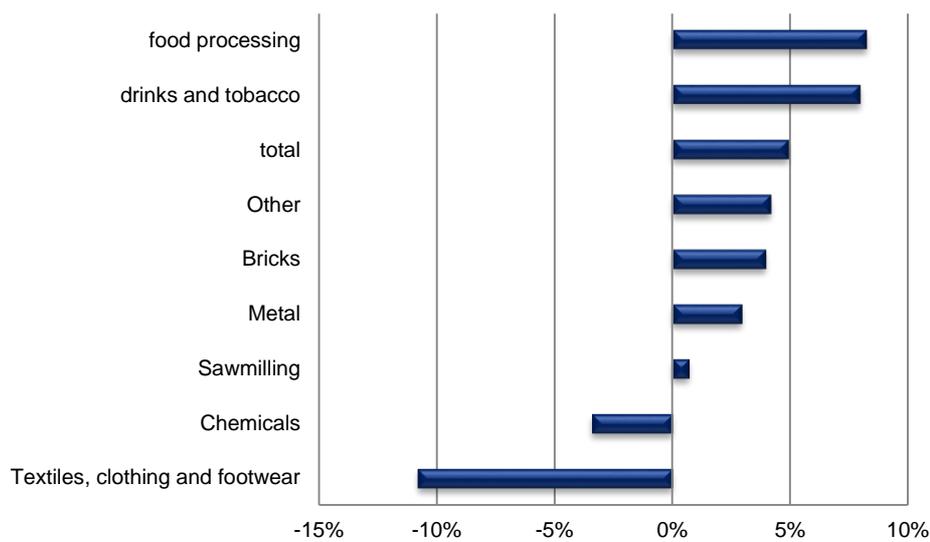
Source: Derived from data obtained from UN Comtrade.

Figure 30: Uganda FDI stock and flow, 2000–2014



Source: UNCTAD for stocks and flows, Bank of Uganda (2014) for FDI share of manufacturing.

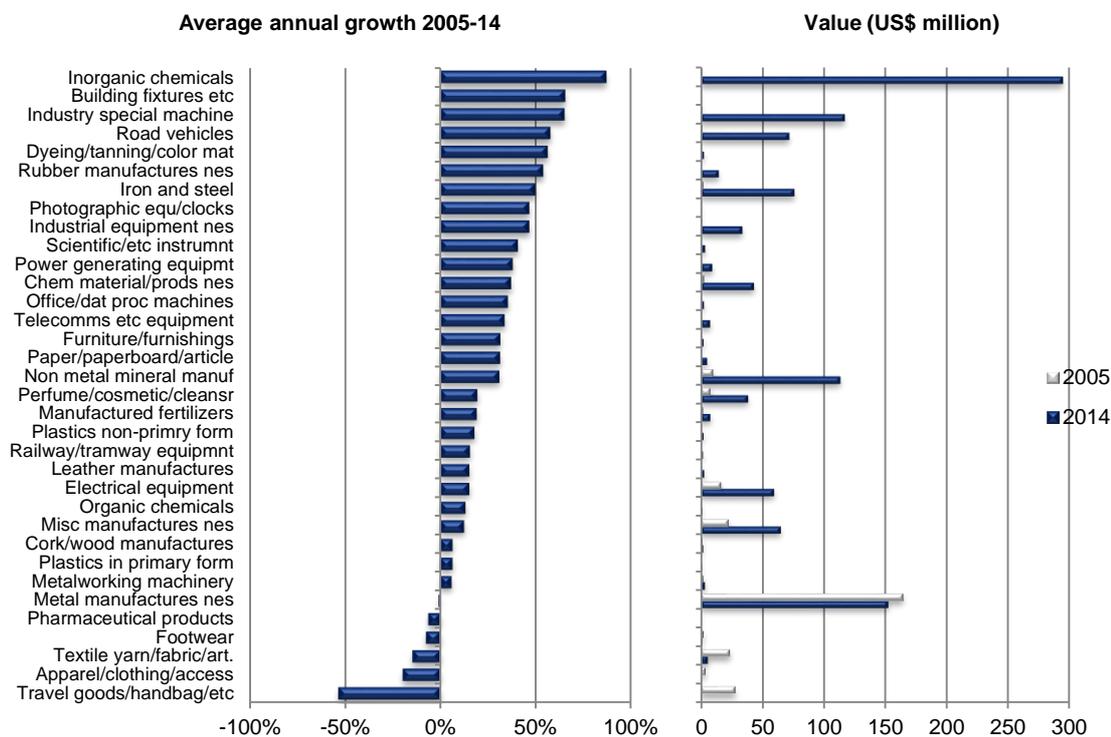
Figure 31: Uganda annual change in manufacturing production (2010-2014)



Source: http://www.ubos.org/onlinefiles/uploads/ubos/statistical_abstracts/Statistical%20Abstract%202015.pdf

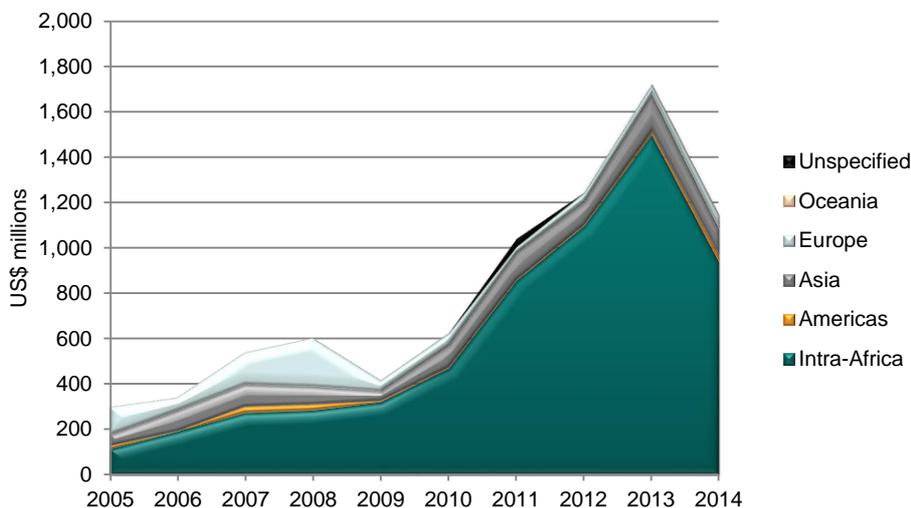
ZAMBIA

Figure 32: Zambia manufactures exports by sector, 2005–2014



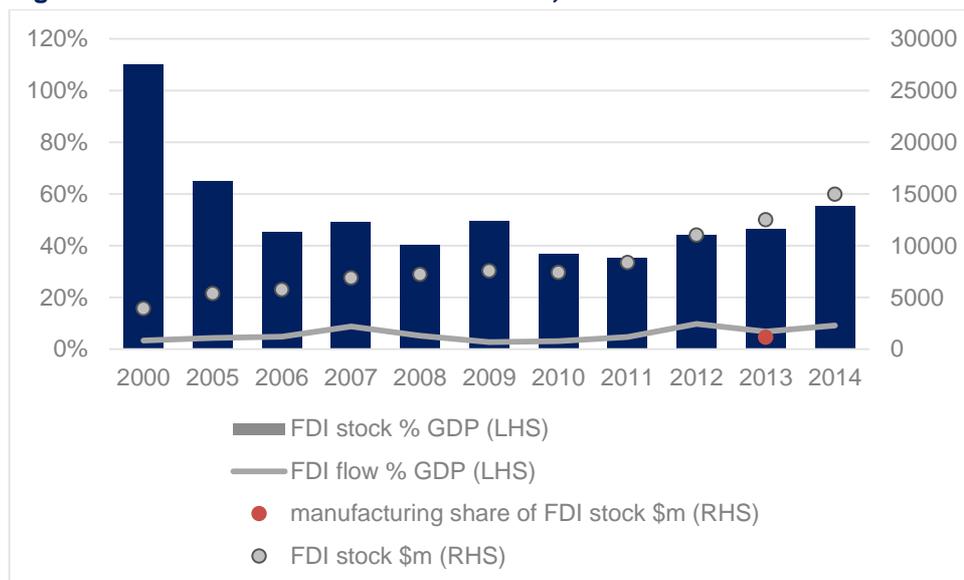
Source: Derived from data obtained from UN Comtrade.

Figure 33: Zambia manufactures exports by destination, 2005–2014



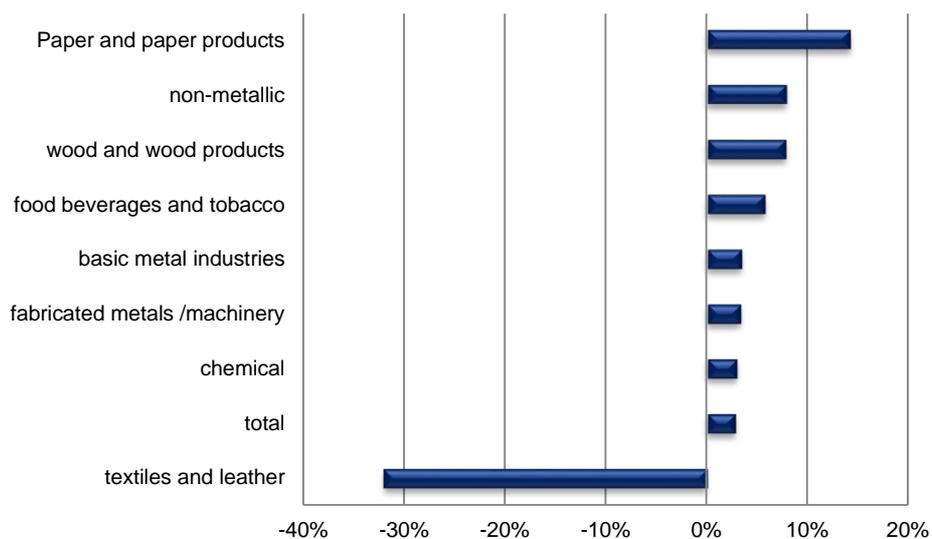
Source: Derived from data obtained from UN Comtrade.

Figure 34: Zambia FDI stock and flow, 2000–2014



Source: UNCTAD for stocks and flows Bank of Zambia (2014) for share of manufacturing.

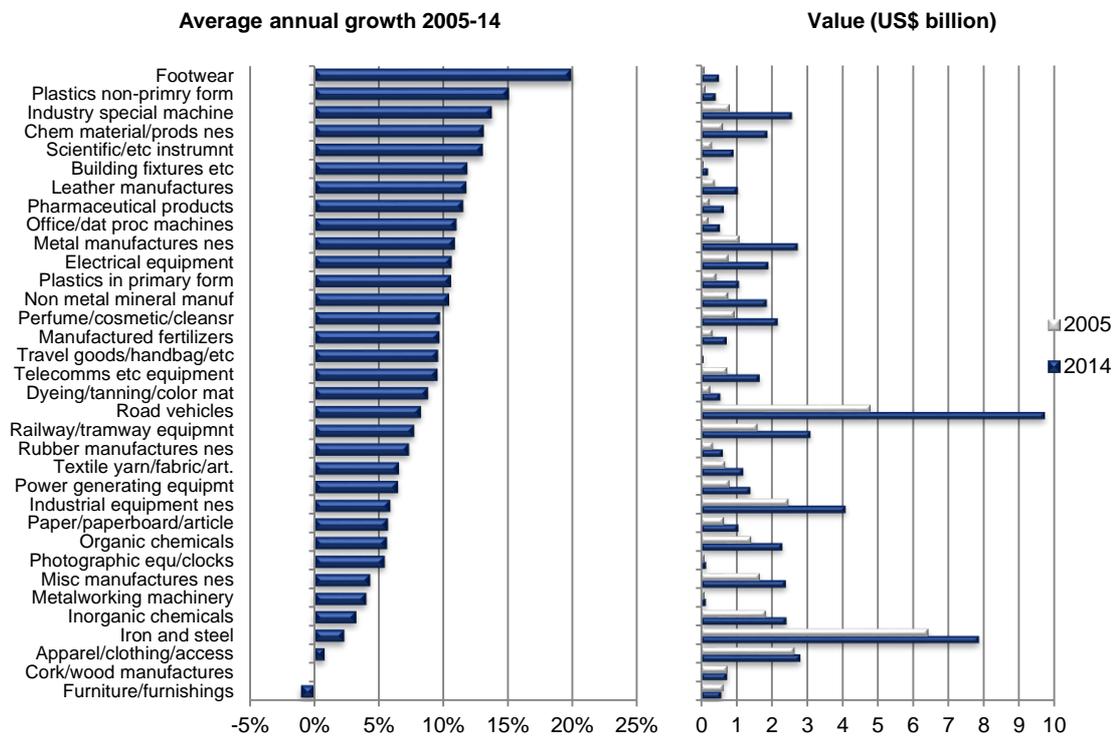
Figure 35: Zambia annual change in manufacturing production (2006-2010)



Source: http://www.zm.one.un.org/Commerce_Report.pdf%20on%2003/02/2015

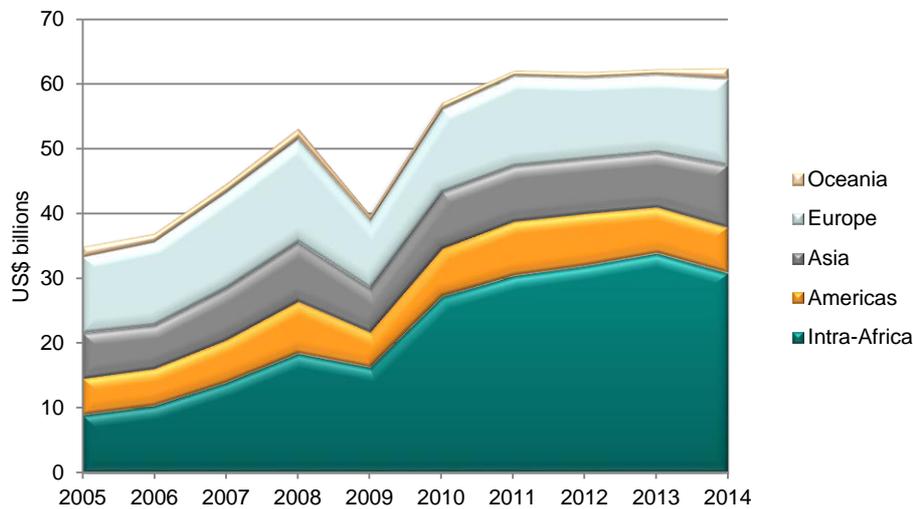
SUB-SAHARAN AFRICA

Figure 36: SSA manufactures exports by sector, 2005–2014



Source: Derived from data obtained from UNCTADstat.

Figure 37: SSA manufactures exports by destination, 2005–2014



Source: Derived from data obtained from UNCTADstat.