



# Manufacturing

Structural transformation and manufacturing in Africa

Kouassi Yeboua

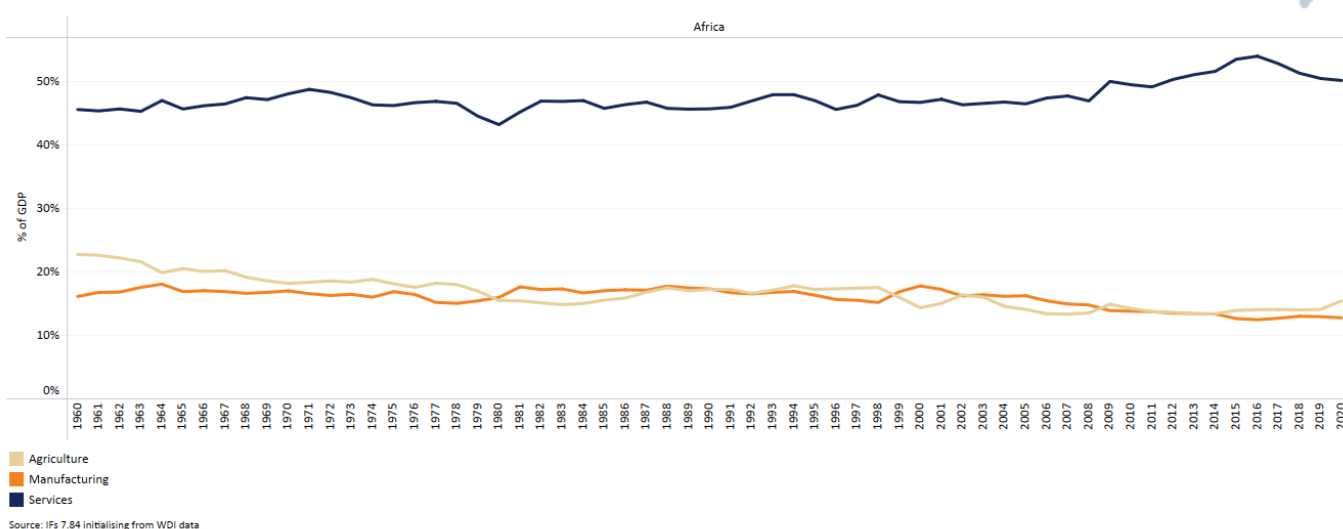
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## Structural transformation and manufacturing in Africa

A number of African countries have experienced very rapid economic growth in the last two decades. But that growth came mainly from high commodity prices. Further, high commodity prices have attracted more investment in extractive industries with limited linkages to the rest of the economy and away from manufacturing, limiting economic diversification and rendering Africa vulnerable to external shocks.

Using the standard threefold categorisation of the economy into agriculture, manufacturing and services, Chart 4 shows that the service sector has the largest contribution to GDP in Africa, having increased from 43.3% in 1980 to a peak of 54% in 2016 before declining slightly to 50% in 2020. At high levels of development, financial services, computer and software services, and transport and distribution services are dynamic requirements for continued growth. But high-value services constitute only a very small segment of the large and growing service sector in Africa, much of which is in the informal retail sector.[1]

Chart 4: Shares of agriculture, manufacturing and services in Africa's GDP, 1960-2020



The agriculture sector's share of Africa's GDP is decreasing but at a slower pace, from 23% in 1960 to 16% in 2020. The share of the manufacturing sector declined from 18% in 2000 to 13% in 2020. The gradual shift from the agriculture sector has not been towards manufacturing as in the classic pattern of structural economic transformation experienced by most advanced countries. The service sector has absorbed most of the shift away from agriculture, becoming the most significant contributor to GDP for most African countries.

The slow structural transformation and industrialisation in Africa come with high economic and social costs, preventing large segments of the population from benefiting from economic growth and subsequent improved livelihoods.

The Current Path forecast is for a steady increase in the size of Africa's service sector, to 58% in 2043, with manufacturing increasing to 22% and agriculture declining to 6%.

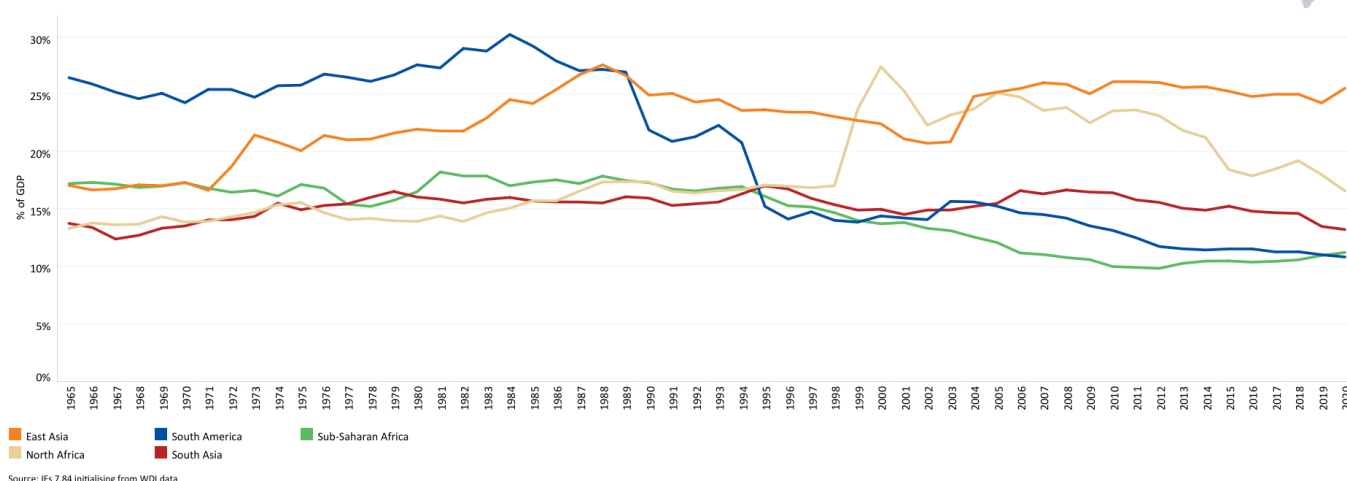
On its Current Path, Africa is following in India's footsteps. India is an example of a country that, until recently, pursued a services-led growth strategy. The contribution of the service sector to GDP overtook that of agriculture in 1975, but the contribution of manufacturing to GDP only overtook agriculture three decades later. India's developmental model has been unique among major economies, shifting from low-end agriculture to low-end services without major industrial expansion.

The early growth in services and fairly recent entrance into a favourable demographic window are two important reasons for India's lower-than-expected growth over several decades. Since 1991, economic liberalisation has partly unshackled an economy stifled by over-regulation, corruption and lack of competition. However, the recent improvement in the ratio of working-age persons to dependants, better education, the prioritisation of investment in infrastructure and greater emphasis being placed on expanding the manufacturing sector offers prospects for more rapid future growth.

The counter-example to India is China, which focused on manufacturing and, together with a much lower population dependency ratio, had significantly higher sustained growth and employment generation.

Chart 5 shows trends in manufacturing value added as a percentage of GDP across different regions. Deindustrialisation is evident in North Africa, sub-Saharan Africa and South America. Sub-Saharan Africa has significantly lower levels of manufacturing compared to other developing regions. On average, since independence, the contribution of manufacturing to sub-Saharan Africa's GDP is either stagnant or declining and has never reached the peak share of 20–35% of GDP as was seen in Europe and North America. North Africa is the most industrialised region on the continent, with a manufacturing sector contributing 18% to GDP in 2019.

Chart 5: Trends in manufacturing Value Added in selected regions, 1965-2020



While deindustrialisation in developed countries with higher income levels is expected due to structural changes in their economies, deindustrialisation in low-income countries is alarming and worrisome. *The Economist*, in its 7 November 2015 issue, summarised the challenge thus: 'Many African countries are deindustrialising while they are still poor, raising the worrying prospect that they will miss out on the chance to grow rich by shifting workers from farms to higher-paying factory jobs.'<sup>[2]</sup>

Growth in the manufacturing sector drove wage increases in the West, and after they peaked, employment and output in that sector declined. In an environment of a stagnant but skilled labour force, growth in high-end services and industrial agriculture compensated for stagnant manufacturing growth. As countries develop, the manufacturing compensation premium—the additional pay a manufacturing worker traditionally earns relative to a comparable non-manufacturing worker at the same educational level—has also declined.<sup>[3]</sup>

Chart 6 presents the sectoral composition of all African economies as modelled in IFs, with countries ranked according to the contribution of manufacturing to GDP in 2019. With a few exceptions, African economies are dominated by large, low-productivity service sectors and subsistence farming. Evidence has shown that countries that specialise in supplying raw materials, unprocessed agricultural products or low-end services yield a progressively smaller return for every unit of capital or labour compared with those that provide value-added goods.<sup>[4]</sup> 'German' coffee, 'Swiss' chocolate or 'Italian' handbags or shoes all demand high prices. Yet, the raw materials all originate in Africa, which receives little of the



associated value-added profits. Instead, the manufacturing sector in Africa has been dominated by low-value production of food, beverages, tobacco, textile, clothing and wood, shifting to more durable and capital goods in only a few countries, such as South Africa.

Chart 6: Sectoral composition of African economies ranked by contribution from manufacturing, 2019

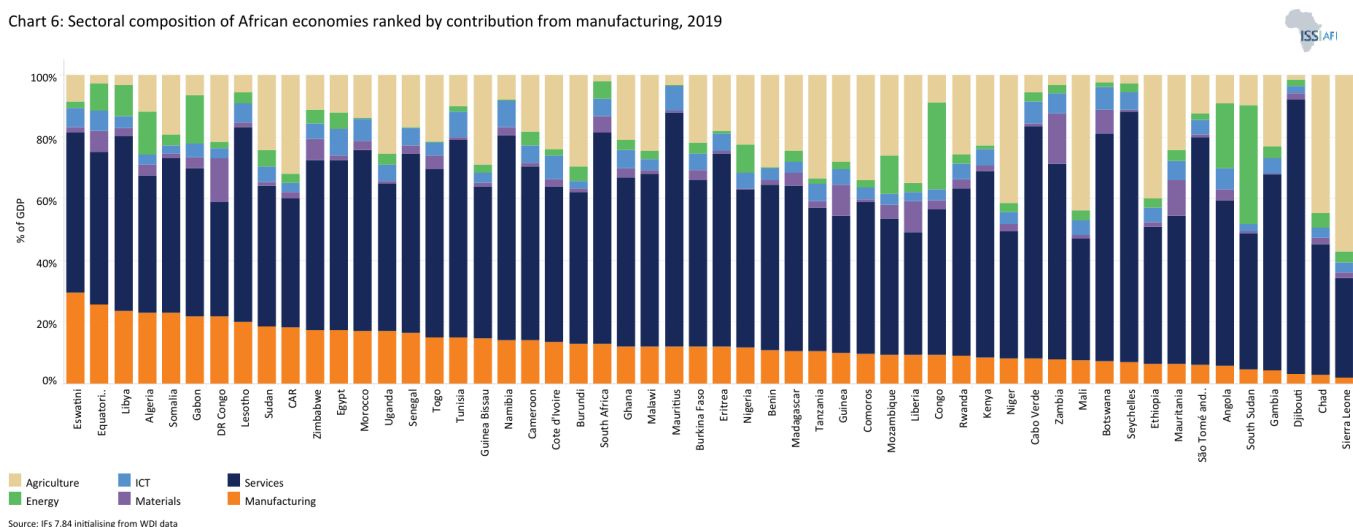


Chart 6 shows that only two African countries, Algeria and Eswatini, have a manufacturing share in GDP higher than 25%, and it has been so for these two countries for the last 30 years. Manufacturing's share of GDP fluctuated around 15% for many African countries, with most of them recording a decline in the last ten years.

The African Industrialization Index from the African Development Bank tracks African progress on industrialisation.[5] The results of the first edition in 2022 show that a handful of countries in Africa have already developed sophisticated manufacturing capabilities. The top quintile in the African Industrialization Index ranking includes South Africa, three North African countries (Morocco, Tunisia and Egypt), along with Mauritius and Eswatini. Encouragingly, the index also shows that some African countries are making steady progress in industrial development.

With appropriate policies, Ethiopia, for instance, did well in growing its manufacturing sector (though from a very low base) by attracting manufacturing foreign direct investment (FDI) from China and elsewhere. The Ethiopian government has determinedly pursued policies to develop its manufacturing sector. For example, over the period 2005 to 2017, on average, output in Ethiopia's manufacturing sector grew by 11% annually, and manufacturing for export gained a foothold until the civil war in Tigray ended Ethiopia's remarkable growth trajectory. Industrial parks and factories emerged, many dedicated to making the textiles and clothing that often represent the first rung on the industrialisation ladder. Apparel giants like H&M and Primark began sourcing products from Ethiopian plants, and the value of clothing exports rose more than sixfold from 2009 to 2019.[6] FDI in Ethiopia roughly quadrupled from 2011 to 2017, with about 80% in the manufacturing sector.[7] However, the manufacturing sector is still at the embryonic stage, and its contribution to job creation and output is far from being an engine for growth and economic transformation. With the end of the conflict in the Tigray region, Ethiopia now needs to work hard to regain investors' confidence.

Tanzania also has built a more resource-intensive manufacturing sector focused on serving domestic and regional markets. The manufacturing output in Tanzania increased by more than 7% annually from 1997 to 2017.[8]

Chart 6 also illustrates a number of other trends and counter-factual observations:

- The contribution from agriculture is generally lowest among upper-middle-income countries and highest among low-income countries in Africa.

- South Africa is among the countries with the smallest contribution of agriculture to GDP (just over 2%). Yet, South Africa, which has an efficient commercial farming sector, is one of the few African countries that are largely self-sufficient with regard to the food supply, reflecting the dichotomy that famine typically occurs in countries with large, low-technology agriculture sectors and that the size of the agriculture sector does not necessarily relate to food security.
- Countries such as Sierra Leone, Burundi, Central African Republic, Mali and Nigeria all have large agriculture sectors as a portion of their economy but are all net food importers, and their import dependency is set to expand significantly in the future.
- Low-income countries generally have small energy and manufacturing sectors.
- Countries where the energy sector made up a large portion of the national economy in 2019 were South Sudan, Republic of Congo, Angola, Algeria and Gabon. All are oil exporters.
- Zambia (copper), DR Congo (copper, cobalt), Liberia (gold) and Mauritania (mostly iron ore and phosphate) have the largest contribution from raw materials.
- The service sector is highest in Djibouti, São Tomé and Príncipe and Seychelles, contributing more than 70% of GDP in all three in 2019. Seychelles is also Africa's only high-income country.

A final, important observation not evident from Chart 6 is that Chinese companies play an increasing role in growing manufacturing in Africa.[9] Chinese investors seem to have early recognised the potential and future demand in African markets as Africa's population grows rapidly.

- China has recently built the largest ceramic tile factory in Africa in Ethiopia.
- Nearly a third of the more than 10 000 Chinese companies that McKinsey[10] estimates are active in Africa are involved in manufacturing. Together they are responsible for more than 12% of Africa's industrial production.
- Most of the Chinese manufacturers are small and privately owned rather than state-owned behemoths, and their focus is mostly on serving the needs of Africa's fast-growing market rather than on exports.

The dominance of Chinese firms is even more pronounced in infrastructure projects, claiming nearly 50% of Africa's internationally contracted construction market. Most of these companies are oriented at serving the domestic market, not at exports and appear to 'represent a long-term commitment to Africa rather than [focusing on] trading or contracting activities.' [11] Furthermore, nearly two-thirds of Chinese employers provide some kind of skills training through introducing a new product, service or technology to the local market. In some cases, Chinese firms had lowered prices for existing products and services by up to 40% through improved technology and efficiencies of scale. The report by McKinsey upon which these findings draw indicates that Chinese firms' efficient cost structures and speedy delivery were noted as major value-adds by government officials in Africa.

If Chinese companies can enter and grow the manufacturing sector in Africa, why can't Africans? Aliko Dangote, Africa's wealthiest individual and a Nigerian businessman, provides an example by investing in oil refining, food processing and cement manufacturing across the continent.

## Endnotes

1. A Szirmai, *Is manufacturing still the main engine of growth in developing countries?*, UNU-WIDER, May 2009.
2. *The Economist*, *More a marathon than a sprint*, 7 November 2015.
3. See, for example, the debate in the US in: L Mishet, *Yes, manufacturing still provides a pay advantage, but staffing firm outsourcing is eroding it*, Economic Policy Institute, 12 March 2018.
4. For example, Africa is the largest source of hides and skins in the world but these exports come with very little value addition. See: R Banga, D Kumar and P Cobbina, *Identifying and promoting regional value chains in leather and leather products in Africa*, Geneva: United Nations Conference on Trade and Development, 2018.
5. African Development Bank, *Africa Industrialisation Index 2022*.
6. *The Economist*, *The violence in Ethiopia imperils an impressive record growth*, 20 November 2021.
7. *The Economist*, *The violence in Ethiopia imperils an impressive record growth*, 20 November 2021.
8. D Rodrik, M Ellis, M McMillan and X Diao, *Africa's manufacturing puzzle: Evidence from Tanzanian and Ethiopian firms*, 1 March 2021.
9. K Jayaram, O Kassiri and IY Sun, *The closest look yet at Chinese economic engagement in Africa*, New York: McKinsey & Company, 2017.
10. K Jayaram, O Kassiri and IY Sun, *The closest look yet at Chinese economic engagement in Africa*, New York: McKinsey & Company, 2017.
11. K Jayaram, O Kassiri and IY Sun, *The closest look yet at Chinese economic engagement in Africa*, New York: McKinsey & Company, 2017.

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## About the authors

Dr Kouassi Yeboua is a senior researcher in African Futures and Innovation programme in Pretoria. He recently served as lead author on ISS studies on the long-term development prospects of the DR Congo, the Horn of Africa, Nigeria and Malawi. Kouassi has published on various issues relating to foreign direct investment in Africa and is interested in development economics, macroeconomics, international economics, and economic modelling. He has a PhD in Economics.

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