

Beyond manufacturing

Reconsidering structural change in Uganda



In brief

- Uganda, along with other African countries, needs targeted policies to shift employment into more productive activities.
- “Industries without smokestacks” – tradeable services and agro-industrial activities that have more in common with manufacturing industries than more traditional services and agriculture – offer a new path for structural change in African countries.
- Industrial policies to promote productive structural change no longer have to focus solely on manufacturing, but can also target these new, high productivity sectors. Since these industries share many of the characteristics of classic manufacturing firms, they also respond to broadly similar policies. Improving countries’ investment climates, helping firms to export, and harnessing agglomeration effects are key to the development of industries without smokestacks.
- Aid can help the process of structural change from agriculture towards these new industries and manufacturing by providing necessary infrastructure, supporting policies that improve firms’ capability to export and helping the development of industrial clusters. Some degree of experimentation and learning will be needed in promoting these new types of industries, and aid programmes should reflect this.

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Structural change and economic growth in Africa

Despite relatively robust economic growth since the 1990s, Uganda has recently experienced a slowdown in economic growth, from around 7% on average between 1990 – 2010 to 4.5% between 2011-2016. This was in large part driven by adverse weather shocks and neighbouring political instability that limited both the production and purchase of agricultural products.

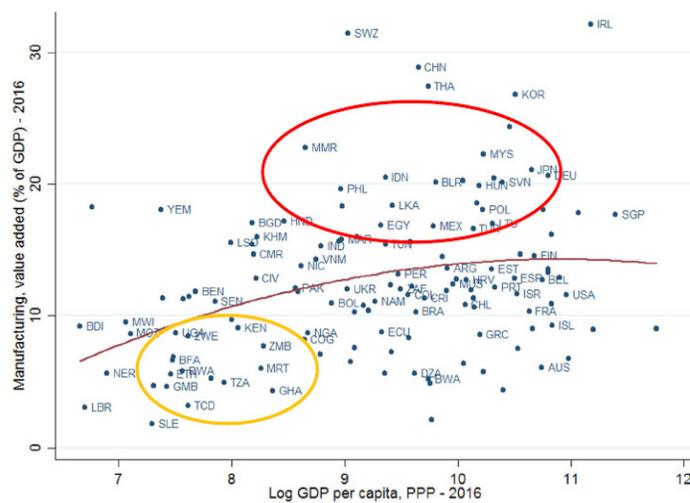
Though there are signs that growth in Uganda is recovering, this recent slowdown reveals an underlying challenge facing its economy. Economic activity is concentrated in volatile and low productivity agricultural production, which makes up only 26% of GDP, despite accounting for 69% of the country's employment. There has been limited development of competitive manufacturing and service firms. As a result, labour productivity growth has been weak, at only 2% per annum in real terms between 1990 and 2016 (Brownbridge and Bwire, 2016).

Structural transformation has been a key goal for policymakers in developing countries for decades. The movement of labour and other inputs towards higher productivity sectors of the economy offers the potential for higher wages, incomes, and competitiveness that can fuel long run national development. From Europe and the USA to East Asia, long term productivity growth has been associated with the transformation of economic activity from agriculture to manufacturing and service industries.

The potential for structural change is perhaps strongest in African countries, where differences between sectors in productivity per worker are greater than in any other region. Moving from the low productivity agricultural sector into higher value activities is likely to unlock long term, sustainable national growth.

However, structural transformation has not delivered promising results for African countries to date. Between 1990 and 2000, structural change was largely towards unproductive non-tradeable services that actually reduced overall growth among African countries. Since then, structural change has had a more positive impact, but has not resulted in the emergence of large-scale productive industry. Instead, sectoral change has largely been in the form of labour moving from low productivity agriculture to (not quite as) low productivity services. In fact, on average, the share of GDP from manufacturing industries has fallen since 1980. Though Uganda has performed relatively well compared to its neighbours in terms of the share of the economy dedicated to manufacturing, it still only accounts for 7% of its GDP.

Figure 1: For many African countries, manufacturing has a more limited contribution to GDP



Source: World Bank world development database and World Bank Africa development indicators

Why is industrialisation so difficult for African countries?

Industrialisation traditionally refers to the increased share of manufacturing in a country's GDP. Despite the importance of this process to productivity growth, industrialisation is considerably harder for African economies in the contemporary global economy than it was for the Asian countries of the 20th century. This is for three main reasons.

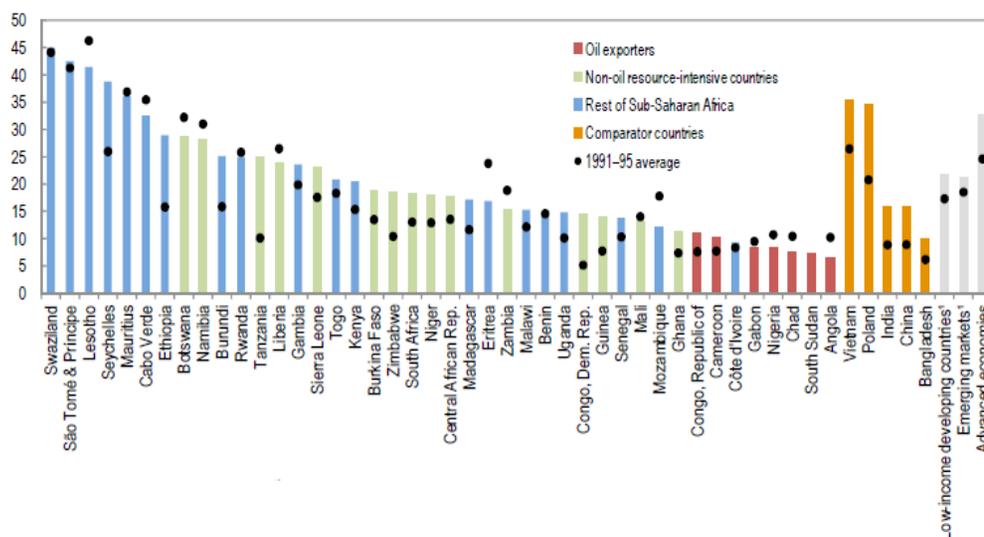
First, the rapid growth of manufacturing in East Asian economies in the 20th century means that a group of low-wage, high productivity incumbent manufacturers dominate the world market for manufactured goods. The hegemony of competitive Chinese and East Asian firms makes it extremely hard for African countries to claim a significant share of the global market for manufacturers. This is particularly difficult given high labour costs in most African countries. For instance, while both Bangladesh and Kenya display similar levels of economic development, the median cost of industrial labour is about four times as high in the latter (De Melo, 2017).

Second, over the past four decades, manufacturing has become less important to the process of structural change. Since the 1980s, the relationship between the share of manufacturing in a country's GDP and its level of income per capita has weakened considerably. This is driven by:

- The rising importance of service industries such as finance in more developed economies
- The break up and 'servicification' of aspects of traditional manufacturing through industries such as accounting and advertising

Third, there has been a crucial shift in manufacturing towards ‘trade in tasks’, based on global value chains. Because of the increasing ability of firms to distribute different steps of a production process across a variety of countries according to their complexity, the importance of traditional, ‘vertically integrated’ enterprises is steadily declining. In order to be able to sell to global markets today, participation in global value chains - importing partly-finished products, adding value, and re-exporting - is essential. Cross-country evidence reveals that countries that are able to successfully export to global markets have a large share of foreign value added in their exports. Most African economies, including Uganda, use a limited share of globally competitive imported inputs for their exported products, thereby undermining the development of a strong industrial base.

Figure 2: GVCs (Average share of foreign value added in exports, 2008-2012)



Source: International Monetary Fund 2015

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Good news: Industries without smokestacks

The good news for many African countries is that technological changes and falling transport costs mean that there is another option policymakers can pursue in promoting growth enhancing structural change. A class of tradeable services and agro-industrial activities that have more in common with manufacturing industries than more traditional services and agriculture – and that come with higher productivity – has emerged. These include call

centres, cut flowers, and tourism. These ‘industries without smokestacks’ share a number of characteristics with manufacturing firms:

- They are tradable, allowing producers to tap into global value chains
- They offer high value added per worker and medium-skill employment
- They have the capacity for long term technological change, learning and productivity gains over time. They also benefit from agglomeration by sharing ideas and inputs that improve efficiency of production.

These forces all combine to give these industries strong potential for productivity growth and value addition. In many cases, these industries are less subject to automation than traditional manufacturing – making them well suited to countries like Uganda that are in dire need of formal employment opportunities.

In fact, these industries already play a significant role in many African economies. Industries such as telecommunications and post-crop harvest processing offer some of the highest levels of worker productivity in Uganda (Spray and Wolf, 2017). At the same time, these industries without smokestacks offer longer product and firm survival rates, as well as larger outputs and employment.

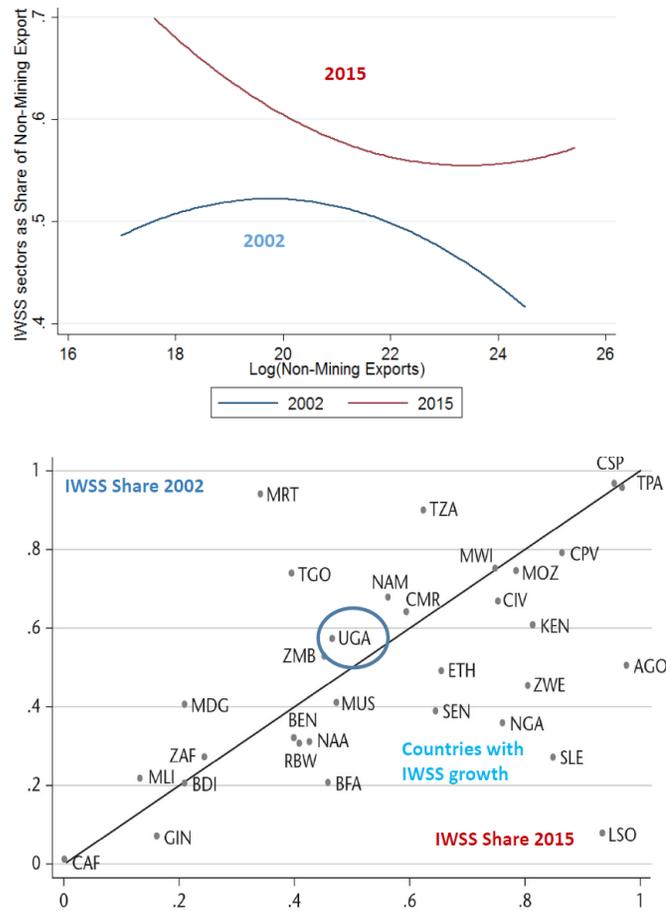
Figure 3: Selection of fastest growing export items in Uganda

5 year- Export Growth Rank	SITC product group	# of firms	Product survival - years	Firm survival - years	Monthly Output in mUSD	# of emp	Out/ Worker Rank
1	Leather products	13	2.37	4.15	0.49	38	7
5	Vegetables and fruits	192	0.72	3.19	0.35	38	21
8	Processed Feedstuff for animals	42	1.82	4.88	1.14	67	4
10	Processed Animal and vegetable oils/fats	10	2.2	7.1	1.59	96	5
19	Cereals and cereal preparations	159	0.78	3.18	0.4	52	17
	Economy average	44	1.17	4.3	0.58	70	

Source: Page and Wolf, 2017

Recent work highlights the growing importance of industries without smokestacks in the export portfolios of 33 African countries (including Uganda) in the last two decades, with these industries growing more rapidly and playing a larger role in exports since 2002 (Newfarmer et al., 2018).

Figure 4: IWSS sectors as a share non-mining exports



Source: Newfarmer, Page, and Tarp, 2018

Connecting the economy

In addition to their ability to provide large scale productive employment, it is important to note the important role of industries without smokestacks in boosting and connecting the wider economy in countries such as Uganda. More complex service industries such as construction, telecommunication and accounting provide essential inputs that reduce the costs of production of other industries (Spray and Wolf, 2017). As a result, investing in these industries not only boosts employment and output in these services, but in the firms they supply to and connect with.

The role for industrial policy

As a result, there is a new role for public policy targeted at promoting industries without smokestacks. As these industries share many of the characteristics of classic manufacturing firms, they are likely to respond to broadly similar policies. Policymakers can therefore learn from the experiences of Asian economies that have been able to foster the development of globally competitive manufacturing industries. Active policy

to address market failures preventing the emergence of competitive firms is integral.

Successful experiences in structural transformation suggest that policymakers in countries such as Uganda will need to address three main factors in encouraging competitive industries without smokestacks; improving investment climates, fostering the capacity of firms to export, and designing policies and initiatives that allow firms to harness agglomeration effects (Page, 2018).

An attractive climate for firms

An attractive environment for firms requires three key things; skills, infrastructure, and enabling institutions. Unfortunately for many Africa countries including Uganda, these features are lacking.

In particular, infrastructure for low cost transport and energy provision is limited in supply and poorly maintained. Across African cities, for example, only 10 percent of land is allocated to roads, as compared to international recommendations of around 30 percent (Collier and Venables, 2016). As a result, firms are unable to form crucial linkages to workers and markets to support competitive production. Tourism, horticulture and agro-processing all require low cost transport links, and IT-based services exports crucially rely on high speed data transmission. Improving the quality and reliability of supporting infrastructure is vital to encouraging new competitive industries.

But building is not enough. To complement this infrastructure, regulation to improve competition, particularly in the transport sector, is key to driving down costs of exporting – particularly for landlocked countries such as Uganda. At the same time, policies to encourage training and skills development, particularly in post-primary vocational training, can provide a competitive supply of workers for services such as high-quality tourism and call centres.

Emphasising exports

Exporting allows firms to increase their productivity by operating in highly competitive international markets and learning from international best practices and the high demands of international buyers (van Biesebroeck, 2005;Atkin et al, 2017). However, firms often face high individual costs of entry into export markets. Government policy may be needed to drive down these risks and costs, by implementing sound trade and exchange rate policies and implementing trade facilitation agreements such as the WTO Trade Facilitation Agreement aimed at reducing the logistical costs associated with trading.

At the same time, targeted support to individual domestic sectors to reach globally competitive levels may be necessary. This support can come in a number of forms, including:

- Time bound and conditional subsidies levied on domestic production as firms learn to competitively produce new products and services.
- Management training for firms. Evidence from India, Pakistan, Bangladesh and Mozambique highlights that management practices in developing countries are often significantly worse than in their higher income counterparts, and that these management practices have a significant impact on productivity and profitability of firms. The ability of employers to monitor, assess and incentivise job performance crucially affects innovation levels, technology use and adaptation over time. In textile firms in India, improving management practices raised average productivity by 11% (Bloom et al., 2010).
- Active policies to encourage linkages between FDI and domestic suppliers for further learning. Growing evidence suggests that FDI can boost productivity of surrounding firms, both through horizontal spill-overs to firms in the same sector, or to firms along the supply chain – resulting in higher paid jobs and higher value activities (Farole and Winkler, 2014).

Agglomeration economies

Just like “normal” manufacturing firms, industries without smokestacks such as agro-processing or horticulture can greatly benefit from agglomeration effects. Governments can try to harness the benefits of agglomeration through specialised areas of production such as Export Processing Zones and Special Economic Zones. Targeted provision of infrastructure and incentives can encourage businesses to cluster together in a way that promotes productive scale and specialisation. Dense networks of people and firms enable the spread of ideas and technologies, promoting innovation and entrepreneurship. This is particularly important in low-income economies that may not be able to afford to create high-connectivity infrastructure across the country as a whole.

Agenda for aid

Given the key role of industrial policy in promoting industries without smokestacks, there is a complementary agenda for aid in supporting this. There are three key ways in which development assistance can be leveraged to promote higher productivity sectors: infrastructure, export promotion, and capacity building.

Infrastructure for firms

Since the 1970s, development assistance for economic infrastructure such as power and transport has steadily declined. However, infrastructure for firm competitiveness remains vital. A recent World Bank Enterprise Survey (2011/2013) reveals that 37% of foreign investment firms identify electricity constraints as a key hurdle for doing business in African countries.

While aid will not be sufficient to fill the infrastructure gaps in a country like Uganda where financing gaps for infrastructure investment are around USD\$1.4 billion per year (World Bank, 2017), current trends can be reserved

so that it can be better leveraged for this purpose. In particular, targeted aid towards firm clusters can yield higher returns through agglomeration effects.

Figure 5: ODA for economic infrastructure (1973-2009)



Source: Newfarmer, Page, and Tarp, 2018

Export promotion

At the same time, aid can be used to provide additional support for exporting. Providing ‘aid for trade’ in the form of technical assistance on trade strategies and negotiations, infrastructure investment, and trade logistics can help to reduce trade costs further and expand opportunities for competitive export industries. At the same time, key to making unilateral trade agreements such as the African Growth and Opportunity Act or the Everything But Arms Initiative (soon to be replaced by Economic Partnership Agreements) work for development will be to enhance trade preferences for beneficiary countries. For instance, allowing African LDCs to source inputs for exports from third states (like China or India) could facilitate their participation in global value chains.

Capacity building

Relatedly, aid can be used to build capacity building, not only for managers and employees in firms, but also within government. Capacity building in developing world class FDI agencies can help to attract foreign investment that have positive spillover effects on domestic firms. To effectively attract FDI requires well designed and staffed investment promotion agencies aimed at facilitating trade by reducing information costs and streamlining approval processes. At the same time, strengthening linkages with local suppliers can be enhanced through specialised and flexible Local Content Units.

Most important for development assistance is to design aid programmes that reflect the uncertainty and experimentation inherent in developing new competitive industries. Development assistance should allow governments the space to experiment with new policies and learn both through successes and failures – as was the case with industrial policy in East Asia and China.

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