Policy brief 40433 | September 2019

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Performance, challenges, and potential policy approaches

In brief

- Manufacturing has long been considered an engine of economic growth and socio-economic development. Today, several developing countries are looking for the right industries that can trigger structural transformation.
- This brief discusses the cases of two agro-processing industries in Tanzania: horticultural processing, and wood and furniture. It discusses their characteristics and main challenges and analyses the industrial strategy of the country as well as the experience of other developing countries that have become world leaders in these sectors.
- The authors' analysis indicates that while these industries have a huge potential in Tanzania, their growth is hindered by several obstacles related to how firms are organised, but also to government's policies which are currently limited to special economic zones and ad hoc interventions.
- The authors make two policy recommendations that can be generalised to resource-rich developing countries and resource-based sectors: SEZs by themselves cannot accomplish the task therefore industrial targeting requires a carefully designed policy mix; and even in so-called low-tech sectors, science, technology, product quality, and innovation must be key priorities.

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This project was funded by IGC Tanzania





Policy motivation

With a per capita income of roughly \$900, Tanzania has been listed as a least developed country since 1971. In the last decade, Tanzania's economy grew at an average annual rate of $3.5\%^1$, far below the targets of 8-10% set in several government plans. Slow economic growth has been accompanied by slow productivity growth and limited transformation of the production structure of the economy. Today agriculture and natural resources still play an important role in the economy, while industrial processing of agricultural products and other natural resources is still very limited in scale. As a matter of fact, and despite receiving considerable attention in policy documents, manufacturing is yet to become that engine of economic growth that elsewhere transformed economies and countries into developed nations.

The literature on economic development has pointed out for decades now that all countries that developed into rich economies have done so by industrialising. In all these instances, manufacturing has provided more and better jobs than agriculture and services. It has created more linkages and spillovers throughout the economy, while enhancing productivity and triggering new innovations (Szirmai, 2012).

Tanzania's prospects for sustained growth and socio-economic development crucially depend on its ability to find the right manufacturing activities that could generate more and better sources of income and employment. Under the right conditions, agriculture and natural resources can set the basis for industrialisation and kickstart structural transformation (see for example Jourdan, 2013 and Newfarmer et al., 2019).

This paper focuses on two distinct industries: horticultural processing and wood and furniture. These industries rely on resources – both natural and labour – that are abundant in the country. At present, their potential is huge, but largely untapped. With the right policy mix in place, other developing countries such as Malaysia and Vietnam became world leaders in these industries. In Africa, Ethiopia is making great strides in agriculture-led industrialisation. This project tries to understand how this was achieved and which policy options Tanzania has today.

Overview of the research

Our project shows that while abundant in the natural resources needed to fuel agro-processing, Tanzania's agro-processing activities are currently very limited. Apart from a handful of larger companies, the vast majority

^{1.} This figure is obtained as the average GDP per capita annual growth rate for the period 2009-2018, based on constant 2010 prices (World Development Indicators, last accessed: 26/09/2018). It should be noted here that for the year 2017 the government of Tanzania estimated a growth rate of 7.1% (based on constant 2007 prices). For the same year, the World Bank's estimate in 2010 constant prices is 3.6%.

of local firms are small, informal, and inefficient. Their small scale and low technological profile, compounded by low capacity utilisation, severely hinder their ability to increase production and improve the quality of their products. For example, according to the information collected in our fieldwork, Tanzanian farmers produce an average of 6-7 tons of maize per hectare whereas growers in competitor countries, such as Zimbabwe and South Africa, reach average levels of 10-11 tons of output per hectare. Similarly, in the furniture industry, interviewees report that the vast majority of furniture processing activities are still done by hand.

Beyond the constraints created by the small scale of production and limited use of modern production techniques and technology, our fieldwork indicates that local firms suffer from infrastructure bottlenecks, limited availability of high-quality inputs and skilled labour, difficulties in accessing credit, and an unpredictable regulatory and fiscal framework. For example, limited capacity seems to remain as to the application of standards and the certification of firms and products, an important element for food processing. Moreover, according to the firms interviewed, the processing of work permit applications still requires lengthy bureaucratic procedures. This makes it difficult for entrepreneurs and managers to hire skilled workers from abroad, which are scarce in Tanzania.

Our analysis of the industrial policy of Tanzania evidences that although the government has outlined its vision and goals for structural transformation and socio-economic development in various policy documents, existing policy falls short of designing a comprehensive strategy that details the industrial policy tools that will actually "do the job". In the case of the two sectors of interest here, some of the policy documents explicitly mention agro-processing as a key industry for the country. However, the only form of support mentioned is the establishment of Special Economic Zones (SEZs). The inadequate support offered by the Tanzanian government to these industries is evidenced also in sectoral studies, for example on the palm oil industry, in our fieldwork and in production data.

Policy recommendations

• SEZs by themselves cannot accomplish the task: industrial targeting requires a carefully designed policy mix. SEZs, as well as other instruments such as export processing zones and industrial zones, have proved to be successful in stimulating investment and creating new industries. In order to be effective in the long run, however, they need to be part of a more comprehensive strategy which might include, for example, instruments of trade policies as well as science, technology, and innovation policies. Such strategies are designed as bundles of industrial policy instruments that reinforce each other and create the right set of incentives for productive investment. In the furniture

industry in Vietnam, for example, the government established export processing zones and industrial zones, and at the same time facilitated firms' access to credit, encouraged exports through export credits and other forms of subsidies, and promoted adherence to international quality standards.

• Even in so-called low-tech sectors, science, technology, product quality, and innovation must be key priorities. Governments cannot only be a provider of public goods and tax rebates, but also need to be a strategic player in the industry, promoting technological advances and actively contributing to the design of business strategies that aim at achieving high-quality production and sustained competitive advantages. Science, technology, and innovation are of critical importance in high-tech as well as low-tech industries. For example, Malaysia, one of the worldleading exporters of palm oil, has encouraged science, technology, and innovation since the early 1960s, establishing exchange programmes with foreign universities, founding research centres and universities, offering R&D subsidies and incentives for training and human capital formation, and providing public funding for the development of new technologies and products.

Policies to stimulate productive investment	 Credits and tax exemptions on capital investments Credit guarantee schemes Incentives to production of machineries Supplier development programs and finance
Policies to stimulate trade and upgrading in value chains	 Export credits and tax incentives to exporters Trade promotion programmes and organization of trade fairs Creation of excellence label Export duties and bans
Policies to stimulate science, technology, and innovation	 Establishment of universities, research institutes, and exchange programs with foreign universities Licensing of publicly funded innovations to private firms Promotion of joint ventures between foreign and domestic firms

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