

Productivity under Twenty Years of Structural Change in Zimbabwe's Manufacturing Sector

Remco Oostendorp (Vrije Universiteit Amsterdam)
Lawrence Edwards (University of Cape Town)
Albert Makochekanwa (University of Zimbabwe)

Rob Davies (Independent Researcher)
Neil Rankin (Stellenbosch University)

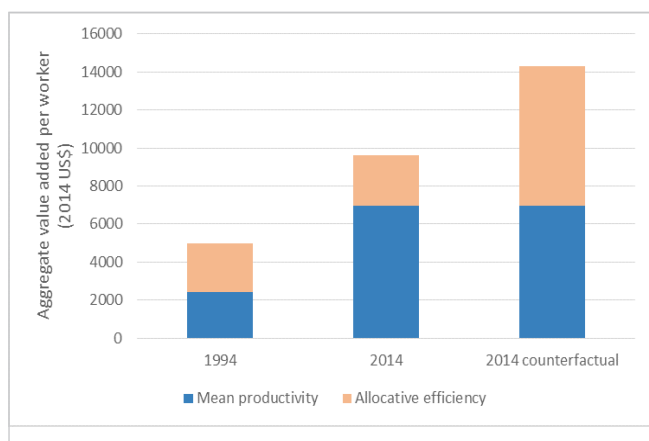


Manufacturing in Zimbabwe has undergone significant structural change in expected but also unexpected ways.

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Topic at a Glance

Since the introduction of structural adjustment policies in 1990, Zimbabwean manufacturing has been operating in an extreme volatile economic and policy environment experiencing a reversion of controls, hyperinflation, dollarization, a Fast Track Land Reform Programme as well as indigenization policies. In this project we study how the structure of Zimbabwean manufacturing sector has changed in the past 20 years, a period in which other countries typically only experience at most one major shock. A key consideration is how these changes in the structure of manufacturing have influenced aggregate productivity growth through changes in the distribution of firm characteristics, changes in firm-level productivity, and changes in allocative efficiency. The project analysis is based on a new establishment survey among around 200 manufacturing formal sector firms that was conducted in 2015 as well as the historical 1993-95 Regional Programme on Enterprise Development enterprise surveys organized by the World Bank.



Caption: Changes in aggregate manufacturing productivity in Zimbabwe, 1994-2014. The counterfactual aggregate productivity level reported for 2014 keeps allocative efficiency at its 1994 level.

New Insights

Structural adjustment is key for economic development but 'structural' change is often only observed after extended periods. This makes Zimbabwe a particularly interesting case study, as it has experienced an unusually long series of severe (adverse) economic shocks within a relative short period of time that other countries only experience, if at all, over much longer time periods. How has the structure of the manufacturing sector changed since the introduction of the structural adjustment programs in 1990s? And how are these changes related to aggregate productivity?

As part of the project a manufacturing firm survey which was undertaken in 2015 covering almost 200 formal sector firms, with at least 5 employees, in six sectors. These data form the 'endline' for the study. As 'baseline' the 1993-95 World Bank Regional Programme on Enterprise Development establishment survey is used. The analysis concentrates on the overlapping set of sectors (food processing, textile/garments/leather, woodworking/furniture, and metalworking) and locations (Harare and surrounds, Bulawayo, Gweru/Kwekwe/Redcliff, and Mutare) that are covered in both surveys.

The main findings from our study are:

The observed changes in the formal manufacturing sector in Zimbabwe over the past twenty years have been vast. As shown in the Figure, currently operating firms are on aggregate much more productive than twenty years ago. Also productivity differentials across different types of firms have been erased to a large extent, except for exporting versus non-exporting firms where the former have further increased their productivity advantage. The productivity gap of indigenous with non-indigenous firms has narrowed very significantly, closing half the productivity gap observed in the 1990s.

The formal manufacturing sector has been under great stress. Small firms have become less prevalent, suggesting that firm entry in the formal sector has become less attractive. Also, in spite of indigenization policies and the exit of many non-indigenous

firms, the proportion of non-indigenous firms has not increased in the formal sector, as indigenous entrepreneurs increasingly opt for the informal rather than formal sector.

Allocative efficiency has fallen dramatically in the past twenty years. Aggregate productivity is enhanced when resources such as labour are allocated towards high productivity firms and reduced if allocated towards low productivity firms. In Zimbabwe we find that the allocation of resources towards high productivity firms has become less efficient. The fall in allocative efficiency is not limited to specific subsectors and has occurred within almost all subsectors of the manufacturing sector when distinguished by firm size, industry, exporting status and/or ethnicity of owner. The implication for aggregate productivity of a worsening allocation of resources across firms is severe - aggregate productivity would have increased by an additional 4 600 US\$ (in 2014 prices) had allocative efficiency not dropped from its 1994 level.

In conclusion, although firms have increased their productivity levels, this has not been accompanied by an efficient reallocation of resources. Firms are surviving, but resources do not move to more productive uses.

Policy recommendations

The overall manufacturing investment climate needs to improve, especially for the formal sector. Many firms in the formal sector are just surviving and entry into the formal sector has been very low with the result that the average age of formal manufacturing firms has been increasing from 16.2 years in 1994 to almost 30.1 years in 2014. This suggests that economic policy not only needs to improve the overall manufacturing investment climate, but also make operating in the formal sector less burdensome.

Frictions in factor markets for formal manufacturing firms need to be addressed. The stark decline in allocative efficiency suggests that markets are not functioning well in terms of reallocating resources from low to high productivity firms. More research is needed to understand why the relatively productive firms are not growing more, but improved functioning of factor markets can be expected to be a necessary condition to improve allocative efficiency and thereby aggregate productivity in Zimbabwe.

Policies to strengthen the manufacturing export sector can increase aggregate productivity significantly. Exporting firms have shown remarkable resilience over the past 20 years. Their presence has changed only slightly, from 22 to 18% of all firms in spite of a loss in external competitiveness due to dollarization. Exporters are also more productive relative to other firms and this gap has widened. The increase in the export productivity gap is even more remarkable given that allocative efficiency among exporters has also fallen dramatically (and much more than among non-exporting firms), suggesting that policies to stimulate export-

ing and to improve reallocation within the export sector will have significant impacts on aggregate manufacturing productivity.

Limitations

While the analysis uncovers important structural changes in the formal manufacturing sector in Zimbabwe over the past 20 years, more research is needed to uncover the underlying drivers of change. For instance, to which extent did the age distribution of formal manufacturing firms shift because the survival chances of new firms dropped or because fewer entrepreneurs started a formal enterprise? And why did exporting firms do so much better than non-exporting firms while allocative efficiency nevertheless fell so much more in the exporting sector?

The study looks at four sectors of the manufacturing sector. Although these are key sectors, the study does not consider other manufacturing sectors and we cannot exclude the possibility that the patterns of structural change are different although we do not have prima facie reasons to assume this to be the case. Our study is more limiting in the sense that we only consider manufacturing, and it remains unclear whether similar patterns in structural change have occurred in agriculture, mining and/or services.

Finally this study is limited to the formal sector as similar (historical and representative) data on the informal manufacturing sector is lacking. Given the increasing informalization of the Zimbabwean economy more research on structural change in the informal sector (including changes in productivity levels and allocative efficiency) is expected to generate further and highly policy-relevant insights.

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