

2022

## IARIW-TNBS Conference on “Measuring Income, Wealth and Well-being in Africa”

Paper Prepared for the IARIW-TNBS Conference, Arusha Tanzania April 14-15, 2022

### Africa’s Manufacturing Renaissance: Is it Reducing Poverty?

Gaaitzen de Vries (Groningen Growth and Development Centre (GGDC), University of Groningen, Netherlands), Abdul Erumban (Groningen Growth and Development Centre (GGDC), University of Groningen, Netherlands)

Historically, the reallocation of workers from low-productive traditional to high-productive modern activities has driven improvements in living standards. When resources shift from traditional agriculture to modern sectors, such as manufacturing, aggregate productivity increases. McMillan and Rodrik (2011) call this ‘growth-enhancing’ structural change. However, the impact of such growth-enhancing structural change on economic well-being and poverty reduction is subject to debate. For instance, most of the poor are involved in agriculture, so an expansion of output in modern urban activities need not substantially impact rural poverty (Winters, 2002; Christiaensen et al. 2011).

Whether changes in sectoral output relate to poverty reduction depends on i) the sector’s growth performance, ii) the size of the sector in the aggregate economy, iii) the indirect impact on growth in other sectors, and most importantly iv) the extent to which poor people participate in the sector. When economic production shifts to modern activities, the poor are often not flexible to move along to more productive sectors of the economy due to lack of skills or other barriers. Therefore, the net poverty-reducing impact of structural change is an empirical question.

This paper develops and implements a framework that links poverty to sectoral growth. It uses new data to examine how the different effects play out in reducing poverty in Sub-Saharan Africa. Poverty data from the World Bank’s PovCalNet is combined with the new GGDC/UNU-WIDER Economic Transformation Database (ETD) (de Vries et al. 2021).

The ETD provides consistent time series of employment, real and nominal value added by twelve sectors of the economy in fifty-one countries, annually for the period from 1990 to 2018. It includes eighteen Sub-Saharan African, and further twenty Asian, nine Latin American, and four Middle-East and North African (MENA) countries at varying levels of economic development. Therefore, the ETD allows us to examine how the effect of structural change on poverty in Africa compares to Asia and Latin America. The ETD has been constructed from an

in-depth investigation of the availability and usability of national statistics on a country-by-country basis, documented in de Vries et al. (2021), and made publicly available.

Using the ETD, Kruse et al. (2021) confirm widespread de-industrialization in Africa until the early 2000s. But the trend reversed thereafter. They document a manufacturing renaissance, namely an expansion of manufacturing output and employment for many countries in Asia, and Sub-Saharan Africa (see also Lopes and te Velde, 2021). The share of manufacturing workers increased considerably in Asia and Africa during 2010-2018. Although the share of manufacturing activity in Africa is below Asia and Latin America, the trend is clearly upward.

Using a shift-share decomposition method, this paper finds the manufacturing sector contributes to aggregate growth in Africa because of its higher productivity level. However, workers are not gainfully employed as the marginal productivity of these additional workers is low, holding back productivity growth rates. It appears workers are absorbed in small-scale manufacturing activities. This further signifies the importance of elucidating the relationship between structural change and poverty.

The impact of sectoral growth on poverty reduction is not equal across sectors (World Bank, 2000). Christiaensen et al. (2011) provide a conceptual framework to estimate the poverty elasticity, defined as the ratio of the change in poverty to the proportionate change in per worker income.

In this paper, we extend the conceptual framework in Christiaensen et al. (2011) to account for sectoral differences in their poverty reducing impact. We use accounting identities of the shift-share method to rewrite the growth in output per worker as a share weighted sum of sectors building on the pioneering work in Ravallion and Datt (1996). An important feature of our approach is to allow the shift in employment across sectors to play an essential role for the poverty-reducing effect of sectoral growth, rather than the shift in production per se.

Based on this novel conceptual framework, we derive an appropriate empirical specification to test whether the sectoral sources of growth matter for poverty reduction (using different measures of poverty). This allows us to examine how different effects play out in terms of poverty reduction across countries in Sub-Saharan Africa, and in comparison to other developing countries in Asia and Latin America. Preliminary findings suggest that Africa's manufacturing renaissance is not significantly related to poverty reduction, but productivity growth in agriculture is reducing the number of Africa's poor.

## References

- Christiaensen, L., Demery, L., & Kuhl, J. (2011). "The (evolving) role of agriculture in poverty reduction—An empirical perspective." *Journal of Development Economics*, vol. 96(2), 239-254.
- Kruse, H., E. Mensah, K. Sen, and G. J. de Vries (2021). "A manufacturing renaissance? Industrialization trends in the developing world" UNU-WIDER working paper 28/2021.

Lopes, C., and D.W. te Velde (2021). "Structural Transformation, Economic Development and Industrialization in Post-Covid-19 Africa." INET working paper, January 2021.

McMillan, M.S. and Rodrik, D. (2011). "Globalization, structural change and productivity growth." National Bureau of Economic Research working paper #17143.

Ravallion, M., Datt, G. (1996). "How important to India's poor is the sectoral composition of economic growth?" World Bank Economic Review, vol. 10 (1), 1–25.

de Vries, Gaaitzen, Linda Arfelt, Dorothea Drees, Mareike Godemann, Calumn Hamilton, Bente Jessen-Thiesen, Ahmet Ihsan Kaya, Hagen Kruse, Emmanuel Mensah and Pieter Woltjer (2021). "The Economic Transformation Database (ETD): Content, Sources, and Methods". WIDER Technical Note 2/2021.' DOI: 10.35188/UNU-WIDER/WTN/2021-2

Winters, L.A. (2002). "Trade liberalisation and poverty: what are the links?" World Economy, 25(9), pp.1339-1367.

World Bank (2000). The Quality of Growth. Oxford University Press, Oxford.