

An African Growth Miracle or African Stagnation?

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Abstract

Introduction and Problem Statement

Until recently, the conventional wisdom on poverty and growth in Sub-Saharan Africa was that economic growth has been concentrated in a few countries and that mostly the rich in these countries have benefitted from it. Poverty rates stagnated at relatively high levels, and the number of poor people increased due to population growth.

Two recent papers challenge this conventional wisdom. Xavier Sala-i-Martin and Maxim Pinkovskiy (2010) and Alwyn Young (2010) both find that economic growth in Africa has been remarkably high and led to significant reductions in poverty. Interestingly, both papers differ widely in their approaches but lead to very similar conclusions:

Sala-i-Martin and Pinkovskiy estimate income distributions from aggregate statistics, e.g. GDP per capita and the GINI coefficient. They find that most African countries started a growth spurt around 1995, which led to a tremendous decline in poverty. On average, both according to the \$1 and \$2 definition, poverty rates fell by around 10 percentage points between 1995 and 2005. The reduction of poverty happened broadly across all African countries and cannot be explained by a number of large countries or geographic and historical characteristics. The numbers of Sala-i-Martin and Pinkovskiy should be interpreted with great caution, because the method does not allow attaching any level of significance to the estimates. Their results are certainly very crude estimates of poverty and inequality in Africa, and in fact we have no idea how crude they really are.

Young provides a more micro-founded assessment of the same research question. He uses the Demographic and Health Surveys (DHS) to estimate household consumption consisting of (1) durable goods, (2) housing conditions, (3) children's nutrition and health, and (4) household time and family economics. He finds that household consumption in Sub-Saharan Africa has been growing at an average annual rate between 3.2 and 3.8 percent since 1990. This is three and a half to four times higher than the figures that are reported in international macroeconomic statistics (e.g. the Penn World Tables). The results are not driven by any of the product groups, for each of the product groups the growth rate in the DHS data is at least twice as high as the growth rate in the international macroeconomic statistics.

The construction of the consumption index is the crucial part in Young's analysis. His conclusions are potentially driven by preference changes, price changes, and the accumulation of assets. The aim of the paper is to test to what extent this is really the case and whether or not one still finds an African growth miracle after controlling for these factors.

Outline of research:

Data:

We use DHS data to construct an asset index at the household level. The DHS data are available for more than 40 countries within at last two and up to four waves per country between 1990 and 2010. Further, we use data on GDP per capita from the Penn World Tables and data on economic inequality from UNU-WIDER to construct national income distributions.

Methodology:

We apply an asset index approach in defining well-being proposed by Filmer and Scott (2008) and Sahn and Stifel (2003). The main idea of this approach is to construct an aggregated unidimensional index over the range of different dichotomous variables of household assets (e.g. possession of radio, TV, refrigerator, wall material, floor material etc.) capturing housing durables and information on the housing quality that indicate the material status (welfare) of the household. We construct the asset index for different settings (pooled for the latest survey year and country by country) to control for possible inter-temporal differences in the weights of the asset index.

We estimate national income distributions with the methodology of Holzmann, Vollmer and Weisbrod (2007). Then we link the asset distribution with the income distribution assuming that the rank order of households is the same in both distributions. This provides us with a simulated income distribution for each country and period based on the asset index distribution, for which we can then calculate the 1 and 2\$ poverty rates.