2024 DINA UPDATE FOR AFRICA

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2024 DINA Update for countries of the Africa region

Technical Note

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Method

For inequality estimates in Sub-Saharan African countries, we depart from data on consumption inequality from the PIP (Poverty and Inequality Platform, World Bank)[1].

This database comprises information from nationally representative household surveys on the distribution of consumption, a better approximation of permanent income in areas with prevalent agrarian self-employment, and, thus, a more accurate measure of income inequality. We then apply several steps to transform this measure of the distribution of consumption inequality into year-country measures of inequality in pre-tax national income.

From consumption to income profiles

Using the method described in Chancel et al. (2023), we adjust the consumption measures to transform them into income measures, based on estimates of consumption-income profiles.

From post-tax to corrected pre-tax disposable income

Survey data underrepresents the income of high earners, and presents estimates of income net of tax. In order to adjust for these two facts, we use information from countries in SSA where we have both survey and tax tabulations (Côte d'Ivoire, South Africa) and the method delineated in Blanchet, Flores and Morgan (2022) to transform survey post-tax income data into corrected pre-tax estimates.

From disposable to national income

Then, we take into account several additional components of national income, notably capital income (including taxes on production and retained earnings). We lack this data in Africa and thus adjust following a conservative hypothesis, distributing the remaining part of national income in proportion of individual income at equal rates across the population.

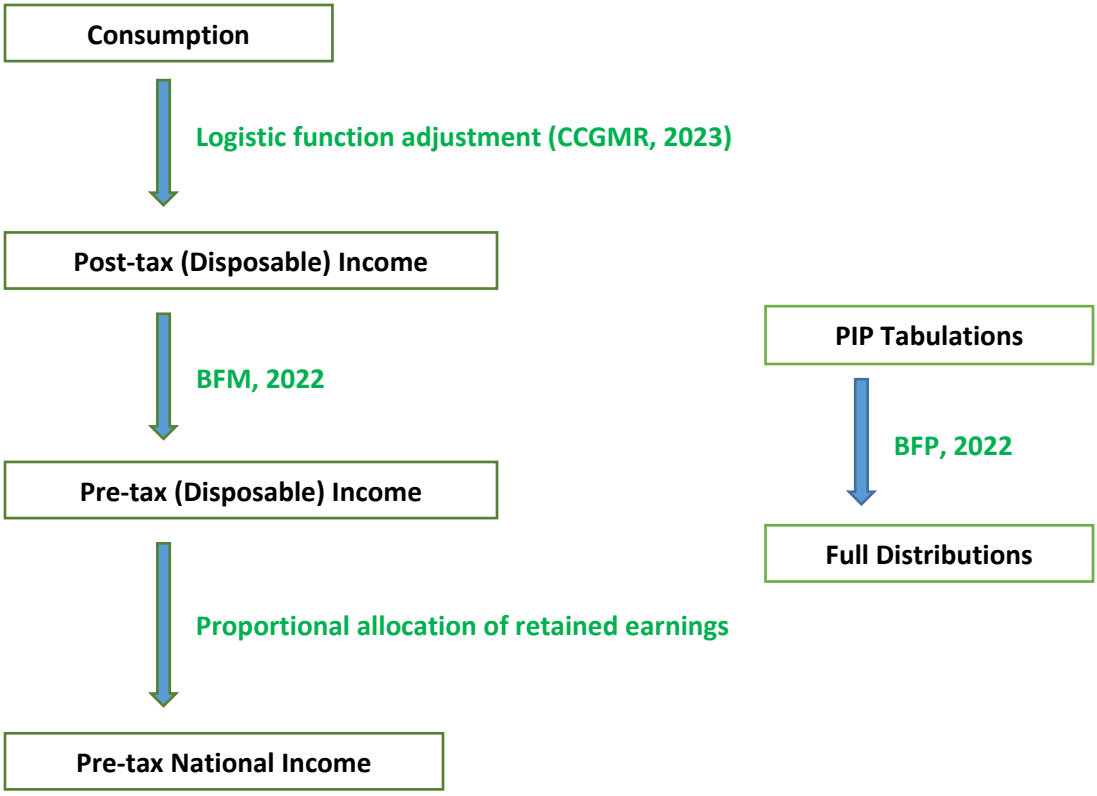
From tabulations to full distribution

Finally, in order to transform these tabulations at the infra-percentile level to the full distribution, we apply a non-parametric method that produces smooth and realistic generalized Pareto curves (Blanchet, Fournier and Piketty, 2022)

Fig. 1 delineates this methodology for the countries where we use PIP.

[1] We download PIP per centile from the WB API. We check for monotonical increase of income per percentile in the raw database, which leads to keeping 75% of country-years of the Sub-Saharan African region.

Figure 1 : From PIP to DINA



PIP replaced Povcalnet in spring 2022. The changes are decribed in World Bank, 2022 and the newest update in World Bank, 2024. Fig. 2 in the Appendix provides the most recent datapoints for each country, as well as the additions relative to the previous DINA. An important point we want to highlight is that the estimate for Somalia was dropped in later versions. For this country, as well as other ones for which data is missing, we follow the standard WIL procedure and impute the distribution of national income from the distribution in other countries from the subregion:

- Eritrea <= Ethiopian inequality
- Equatorial Guinea <= Middle Africa inequality
- Western Sahara <= Mauritania inequality.
- Somalia <= Eastern African inequality

Outlook

We are currently working toward integrating recent work using harmonized household survey data on 8 West African countries (Robilliard, 2023), and efforts to secure fiscal data and integrate it into the WID are underway in Senegal, Rwanda and Uganda.

References

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Chancel, L., Cogneau, D., Gethin, A., Myczkowski, A., & Robilliard, A. S. (2023). Income inequality in Africa, 1990–2019: Measurement, patterns, determinants. *World Development*, *163*, 106162.

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1. Most recent data points for all countries in Sub-Saharan Africa

Country	Last year available	Country	Last year available
Angola	2018	Madagascar	2012
Benin	**2021**	Malawi	2019
Botswana	2015	**Mali**	**2021**
Burkina Faso	**2021**	**Mauritania**	**2019**
Burundi	**2020**	Mauritius	2017
Cameroon	**2021**	**Mozambique**	**2019**
Cape Verde	2015	Namibia	2015
Central African Republic	**2021**	**Niger**	**2021**
Chad	**2022**	Nigeria	2018
Comoros	2014	Rwanda	2016
Congo	2011	**Sao Tome et Principe**	**2017**
Cote d'Ivoire	**2021**	**Senegal**	**2021**
Democratic Republic of Congo	**2020**	**Seychelles**	**2018**
Djibouti	2017	Sierra Leone	2018
Eritrea	NSDA	Somalia	NSDA
Ethiopia	2015	South Africa	2014
Equatorial Guinea	NSDA	South Sudan	2016
Gabon	2017	Sudan	2014
Gambia	**2020**	Swaziland	2016
Ghana	2016	Tanzania	2017
Guinea	2018	**Togo**	**2021**
Guinea-Bissau	**2021**	**Tunisia**	**2021**
Kenya	**2021**	Uganda	2019
Lesotho	2017	Western Sahara	NSDA
Liberia	2016	**Zambia**	**2022**
		Zimbabwe	2017

Note: Bold indicates a new point compared to the previous update.