



Understanding global and local inequalities: an EU-AFD initiative

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Global Inequality: Trends and Issues

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Introduction

Opening remarks

- Thank you!
- Issue of inequality has been core and centre in the research agendas of UNU-WIDER since the very beginning in 1985 (more than 1,300 entries on the WIDER web-site: <https://www.wider.unu.edu/>)
- Three examples:
 - The World Income Inequality Data Base (WIID)
 - The September 2014 WIDER development conference on inequality measurement, trends, impacts and policies: <http://www1.wider.unu.edu/inequalityconf/>
 - Ongoing project on inequality in the developing giants: China, India, South Africa, Brazil, Mexico

What do people have in mind?

- Income inequality attracts a lot of attention in media and elsewhere (the SDGs for example): but what do people have in mind/discuss?
- Take Vietnam as illustration: Annual aggregate growth of **6.9%** per year for 30 years
 - Recall: $T \times G = 69 \Rightarrow$ doubling time 10 years
- Three individuals in 1986, 1996, 2006 and 2016:
 - Individual 1: 1986: 400; 1996: 800; 2006: 1,600; 2016: 3,200
 - Individual 2: 1986: 800; 1996: 1,600; 2006: 3,200; 2016: 6,400
 - Individual 3: 1986: 1,600; 1996: 3,200; 2006: 6,400; 2016: 12,800
- **Absolute** progress, **absolute** inequality and **relative** inequality

Global inequality: relatively lower, absolutely higher

In RoIW with Miguel Niño-Zarazúa and Laurence Roope

Aims

1. What are the most recent trends in global inequality (among all people independently where they live)? Has global inequality increased or declined?
2. Have these trends been homogenous across regions and countries?
3. Is the picture of global inequality trends using standard 'relative' measures of inequality consistent with the picture using 'absolute' measures?

Relative versus absolute measures

- The predominant **‘relative’** inequality measures (such as the Gini Index): values remain unchanged when every income in an income distribution is **uniformly scaled** up or down by the same proportionate factor
- The less commonly used **‘absolute’** inequality measures (such as the Standard Deviation and Absolute Gini): values remain unchanged when every income in an income distribution has the **same income** added to, or subtracted from, it

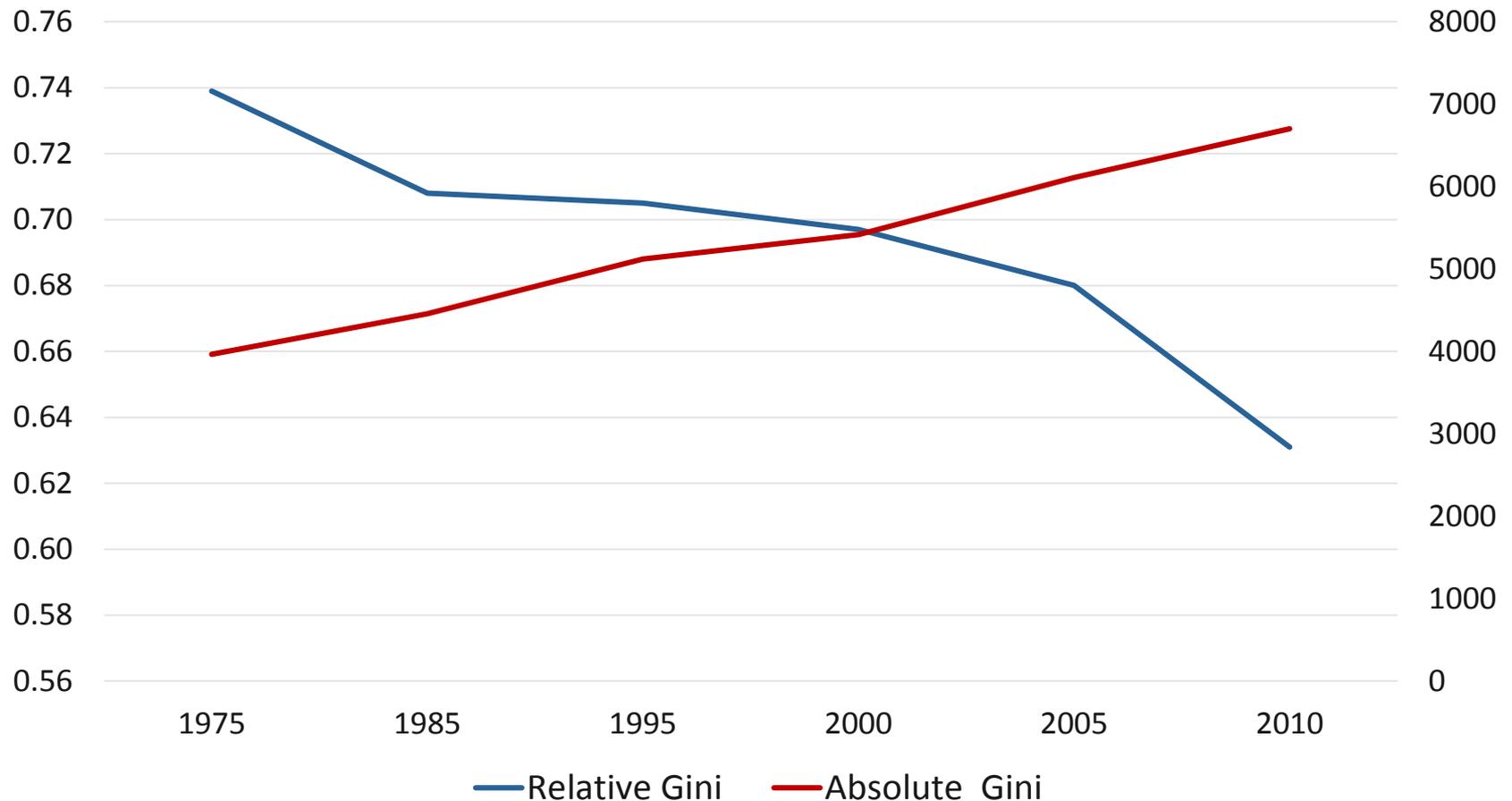
Data

Data

- We employ quintile data from the latest version of the UNU-WIDER [World Income and Inequality Database \(WIID\)](#): the longest and most comprehensive database of income distributions available

General results

Trends in global inequality from a relative and an absolute perspective



What happened across world regions?

- In contrast to global inequality, we find substantial differences across world regions
- Both relative and absolute inequality increased substantially and steadily throughout 1975–2010 in North America, Europe and Central Asia, South Asia and sub-Saharan Africa, with some ups and downs along the way according to relative inequality
- Absolute inequality rose in Latin America, East Asia and the Pacific, while relative inequality fell in those regions

Relative 'within' regional inequality

- Within each region we also observe important variations. **In Europe, for example:**
- Some countries have experienced a **steep rise** in inequality since the 2000s: Denmark, Sweden, France and Bosnia and Herzegovina
- Other countries have observed a **decline in inequality** throughout the 2000s: Belgium, Italy, Norway, and Ireland
- Some countries have experienced a **relatively flat trend** in domestic inequality throughout the 2000s: United Kingdom, Finland, and Czech Republic
- Some countries have experienced a **decline** in inequality during the 1990s and until the mid-2000s but then a **clear increase in inequality** after the 2008 financial crisis: Greece, Slovenia, Spain, Bulgaria, Malta, Slovak Republic
- Other countries have experienced first a **rise in inequality**, and then a **fall in inequality** since the 2008 financial crisis: Netherlands, Switzerland, Iceland, Poland, Hungary, Romania

Counterfactual scenarios – an example

Counterfactual scenarios

- **Counterfactual scenario 1:** All countries assumed to have their actual incomes per capita and population sizes in 2010, but suppose that instead of their actual domestic distributions of income, all countries had the same quantile shares as those of Sweden in 2010
- Sweden has had historically one of the lowest relative income inequalities in the world, reflecting a very unique social and economic model of redistribution
- **Counterfactual scenario 2:** Same as scenario 1, except that all countries are assumed to follow a Rawlsian ‘maximin’ approach, i.e. income growth always occurred below the median individual

Results

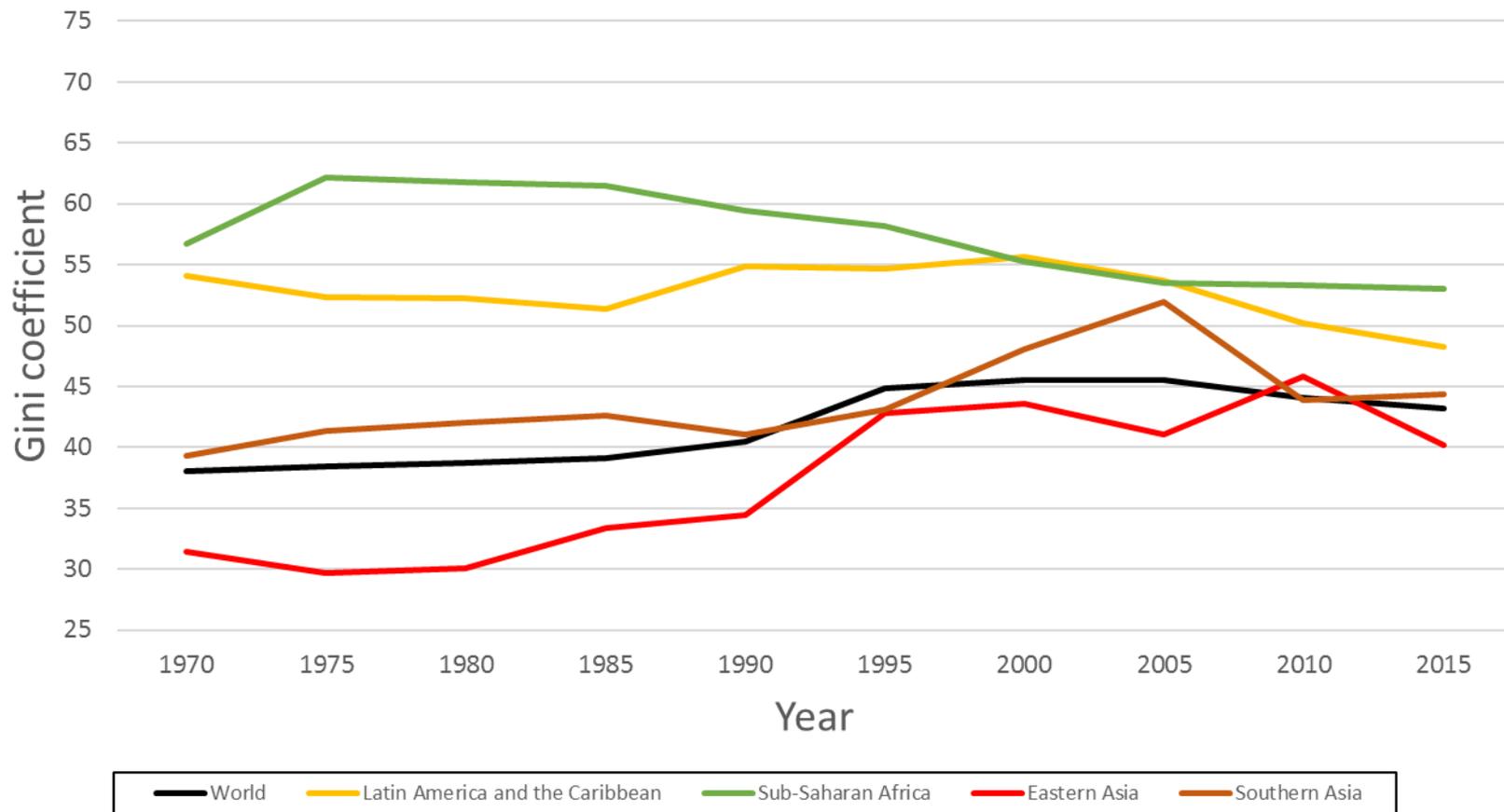
Inequality Measure	Values in 1975	Counterfactual 1 In 2010	Counterfactual 2 In 2010
Absolute measures			
Standard Deviation	10,184	13,898	11,861
Absolute Gini	3,964	6,043	5,569
Relative measures			
Gini	0.739	0.569	0.524
Coeff. of Variation	1.899	1.309	1.117

**Most recent trends – based
on the WIID**

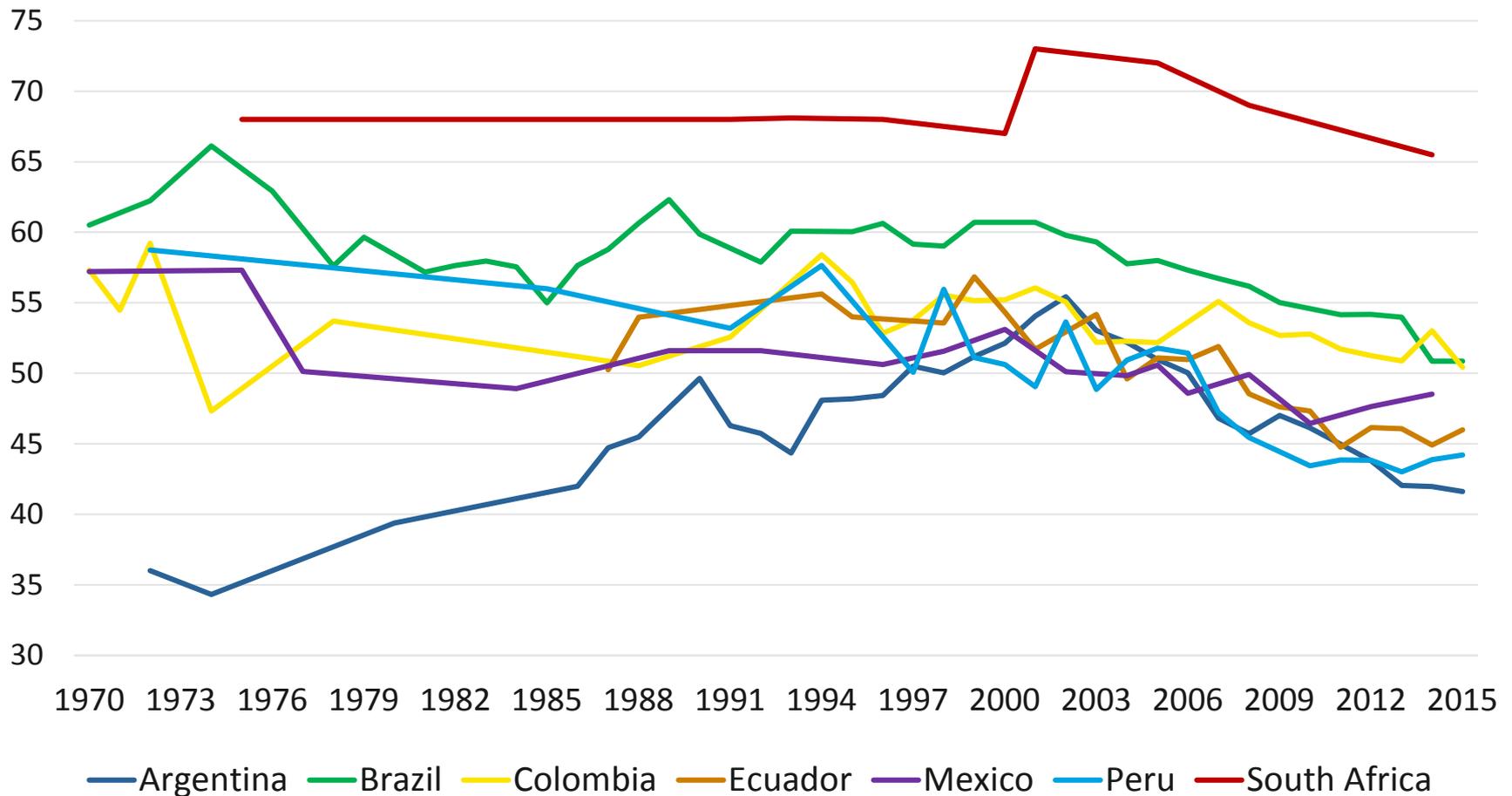
Income inequality in SSA

- **Sub-Saharan Africa remains the most unequal region in the world**
- **BUT**, there is a lot of heterogeneity within the region:
 - Some countries have experienced an increase in income inequality (Botswana, Ghana, Kenya, Mauritius, Uganda)
 - A few countries have observed a U-shaped Gini, reaching an inflection point in the early 2000s (Nigeria, Tanzania, Zambia, Malawi)
 - Other countries have experienced a marginal decline in income inequality since the 2000s (Cameroon, Ethiopia, Gambia, Lesotho, Mali, Niger, Senegal, S. Leone, Swaziland and South Africa)
- **Southern Africa account for a large share of the level of income inequality in the sub-Saharan region**

Income inequality in selected regions 1970–2015 (population-weighted)



Gini trends in selected countries



The effect of omitted top incomes on inequality estimates

Omitted top incomes

- Widely recognized that the highest income earners are significantly undersampled in household surveys
 - Ignoring top incomes can generate substantial measurement errors and affect not only the levels, but also the trends of income inequality
 - There have been innovations in both: i) **data generation** (e.g. World Wealth and Income Database (WID) that includes top income shares from tax records, and ii) **analytical methods** that account for the bias from missing top incomes in the estimation of income inequality
 - Unfortunately, tax data remains very limited for most countries
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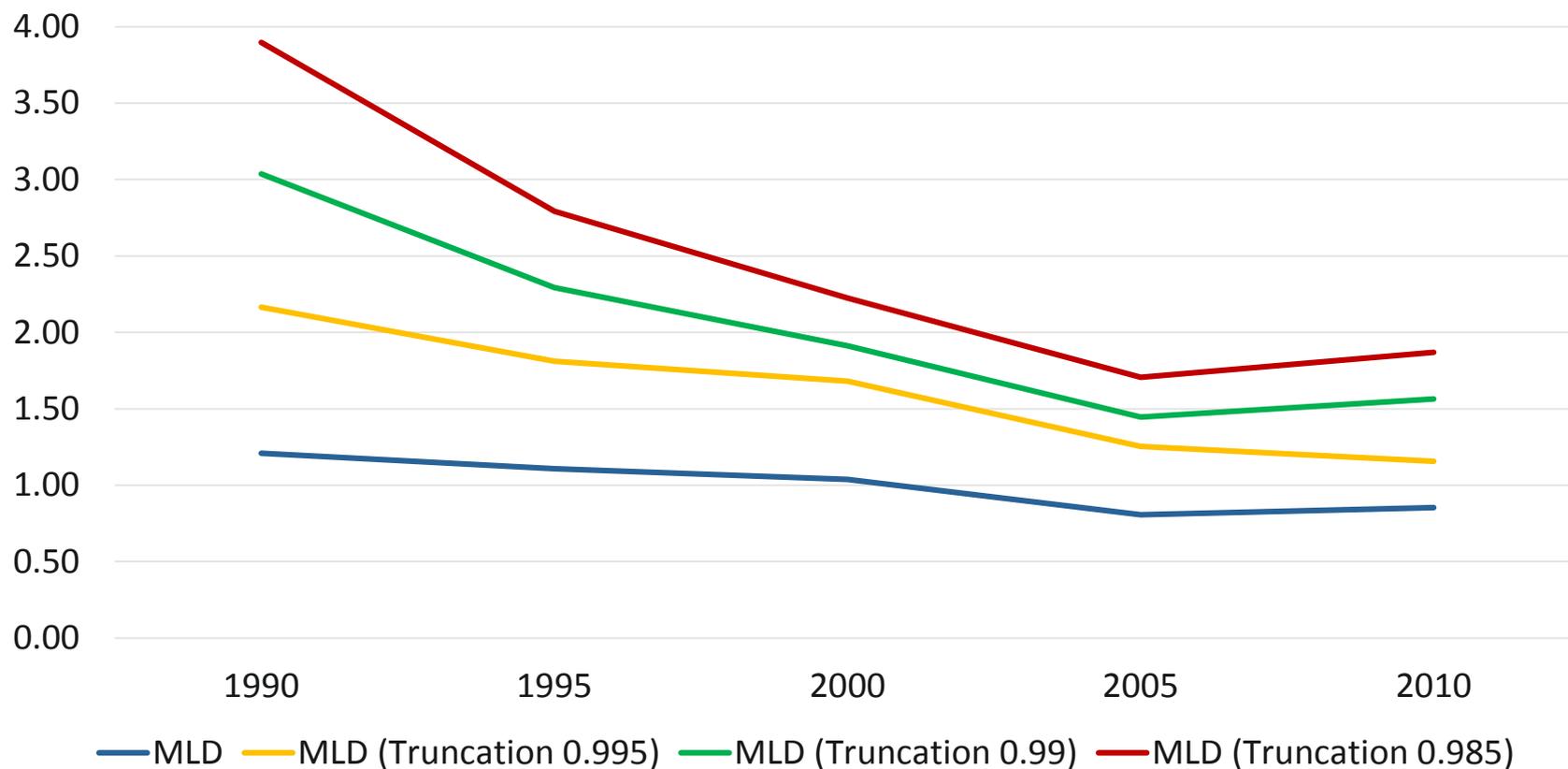
What Do Jorda and Niño-Zarazúa find?

In 2010, undersampling the richest in HH surveys generate a **downward bias in global**

Global income inequality and estimated bias due to the omission of top income shares can log

		1990	1995	2000	2005	2010	1990-2000 Change (%)	2000-2010 Change (%)
MLD	Total	1.0869	1.0458	1.0488	0.9275	0.7423	-3.5%	-11.4%
	Between	0.7399	0.6392	0.6013	0.5297	0.4115	-18.7%	-17.1%
	Within	0.3470	0.4066	0.4475	0.3978	0.3308	29.0%	-2.5%
	Bias 0.995	-15.0%	-18.9%	-17.8%	-16.8%	-17.4%	-0.3%	-13.7%
	Bias 0.99	-24.1%	-28.6%	-27.2%	-29.5%	-27.8%	0.6%	-10.3%
	Bias 0.985	-31.4%	-35.9%	-36.6%	-36.0%	-32.7%	4.4%	-11.2%
	Bias 0.98	-38.7%	-40.8%	-41.9%	-42.3%	-38.1%	1.8%	-9.1%
Theil	Total	0.9338	0.9341	0.9089	0.8138	0.6577	-3.1%	-11.5%
	Between	0.6915	0.6522	0.6276	0.5429	0.4118	-9.6%	-13.4%
	Within	0.2424	0.2819	0.2813	0.2709	0.2460	12.0%	-7.8%
	Bias 0.995	-5.1%	-6.6%	-6.6%	-6.8%	-7.2%	-1.6%	-11.2%
	Bias 0.99	-8.8%	-11.1%	-11.0%	-11.8%	-12.3%	-0.7%	-10.8%
	Bias 0.985	-12.3%	-15.2%	-15.3%	-16.1%	-16.2%	0.2%	-10.6%
	Bias 0.98	-16.0%	-18.6%	-19.0%	-19.2%	-19.8%	0.5%	-10.8%

What is the effect of top incomes on income inequality in sub-Saharan Africa?



Conclusion

Results in a nutshell

1. Using standard 'relative' inequality measures, global inequality **declined** over the past three decades (but note no Lorentz dominance so an increase is possible with sufficiently strong aversion to inequality)
2. There exists substantial **heterogeneity** in inequality trends **across** and **within** regions
 - Southern Africa drives high levels of income inequality in SSA
3. When using 'absolute' inequality measures, we find that global inequality has **increased dramatically**
4. Income inequality estimates are underestimated because of the omission of top earners in household surveys (but trend?)

Discussion (1)

- Niels Bohr: argued in his complementarity theory that with observations where we believe we see the same thing we often see something different and therefore will arrive at different insights. And the point is that these insights are not necessarily contradictory or meaningless – they are, yes, complementary (and we cannot say which measure is right and which is wrong)
- So taken together, echo Atkinson and Brandolini (2010) in emphasizing how central the **choice of measure** is to any discussion of what has happened to global inequality levels during recent decades
- While relative global relative inequality would seem to have fallen steadily and quite substantially over the decades (driven by a dramatic decline in inequality between countries) it nevertheless remains staggeringly **high**

Discussion (2)

- Absolute inequality measures show global inequality increased substantially during the period 1975-2010 – growth in income in India and China had only a very modest dampening impact on the increased absolute inequality
- Over the past 35 years, relative inequality has fallen and hundreds of millions of people in the developing world have been lifted out of poverty – a major achievement!
- One may ask: Would different policies have managed this without the increase in absolute inequality? The debate should and will continue!
- The existing heterogeneity in experiences across countries/regions and time would seem to suggest that there is room of manoeuvre for policy to influence outcomes (see Ravallion ECINEQ WP 2017 – 435)



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