



## Global Inequality: Trends and Issues by Finn Tarp



UNITED NATIONS  
UNIVERSITY  
**UNU-WIDER**

Engagement on Strategies to Overcome Inequality in South Africa; 1-2 June 2017 – Kievietskroon Country Lodge, Pretoria, South Africa

# Introduction

# Opening remarks

- The September 2014 WIDER development conference on inequality measurement, trends, impacts and policies
- See <http://www1.wider.unu.edu/inequalityconf/>

# WIDER YouTube

Opening welcome  
Finn Tarp



# [www.wider.unu.edu](http://www.wider.unu.edu)

- Please do take note of the wealth of information, available on the WIDER web-site.
- This includes the opening keynote by Marcelo Côrtes Neri (then Minister of Strategic Affairs of Brazil) from the September 2014 conference.

**A few points of reference**

# Viet Nam is illustrative

- Annual aggregate growth of **6.9%** per year for 30 years: what does it mean?
  - $T \times G = 69 \rightarrow$  doubling time 10 years
- Vietnam in 1986, 1996, 2006 and 2016:
  - 1986: 400; 1996: 800; 2006: 1,600; 2016: 3,200
  - 1986: 800; 1996: 1,600; 2006: 3,200; 2016: 6,400
  - 1986: 1,600; 1996: 3,200; 2006: 6,400; 2016: 12,800
- **Absolute** progress versus **relative** inequality

# WDR 2006 (1)

- The dichotomy between policies for growth and policies specifically aimed at equity is **false**
- The distribution of opportunities and the growth process are **jointly determined**

# WDR 2006 (2)

- Sound policy can involve redistributions of influence, advantage or subsidies **away from** dominant groups
- ‘Good’ redistribution may not always be **directly** to the poor (trade-offs)
- Debates around ‘redistribution with growth’ versus ‘basic human needs’ keep looming in the background

# A broader perspective

- From classical economics to a more nuanced, **wider** position:
  - Many channels through which inequality may affect growth and development **negatively**
  - Equity both an **end** and a **means**
  - **No rejection** of the competitive market (and the need for incentives to work)
- Recall the discussion about the Kuznets **inverted-U**

**A UNU-WIDER study entitled  
Global Inequality: relatively  
lower, absolutely higher  
With Miguel Niño-Zarazúa and  
Laurence Roope  
Published in ROIW**

# Aims

1. What are the most recent trends in global inequality? Has global inequality increased or declined?
2. Have these trends been homogenous across regions?
3. Is the picture of global inequality trends using standard 'relative' measures of inequality consistent with the picture using 'absolute' measures?

# Relative versus absolute

- 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.

# An intuitive approach

- From a normative perspective **relative** and **absolute** inequality measures have been described as respectively ‘**rightist**’, and ‘**leftist**’, measures
- In the presence of income-growth:
  - Viewing interpersonal disparities in terms of the ratio of incomes can be construed as reflecting a **conservative** judgement
  - Viewing disparities in terms of the absolute difference in incomes can be construed as reflecting a **radical** judgement

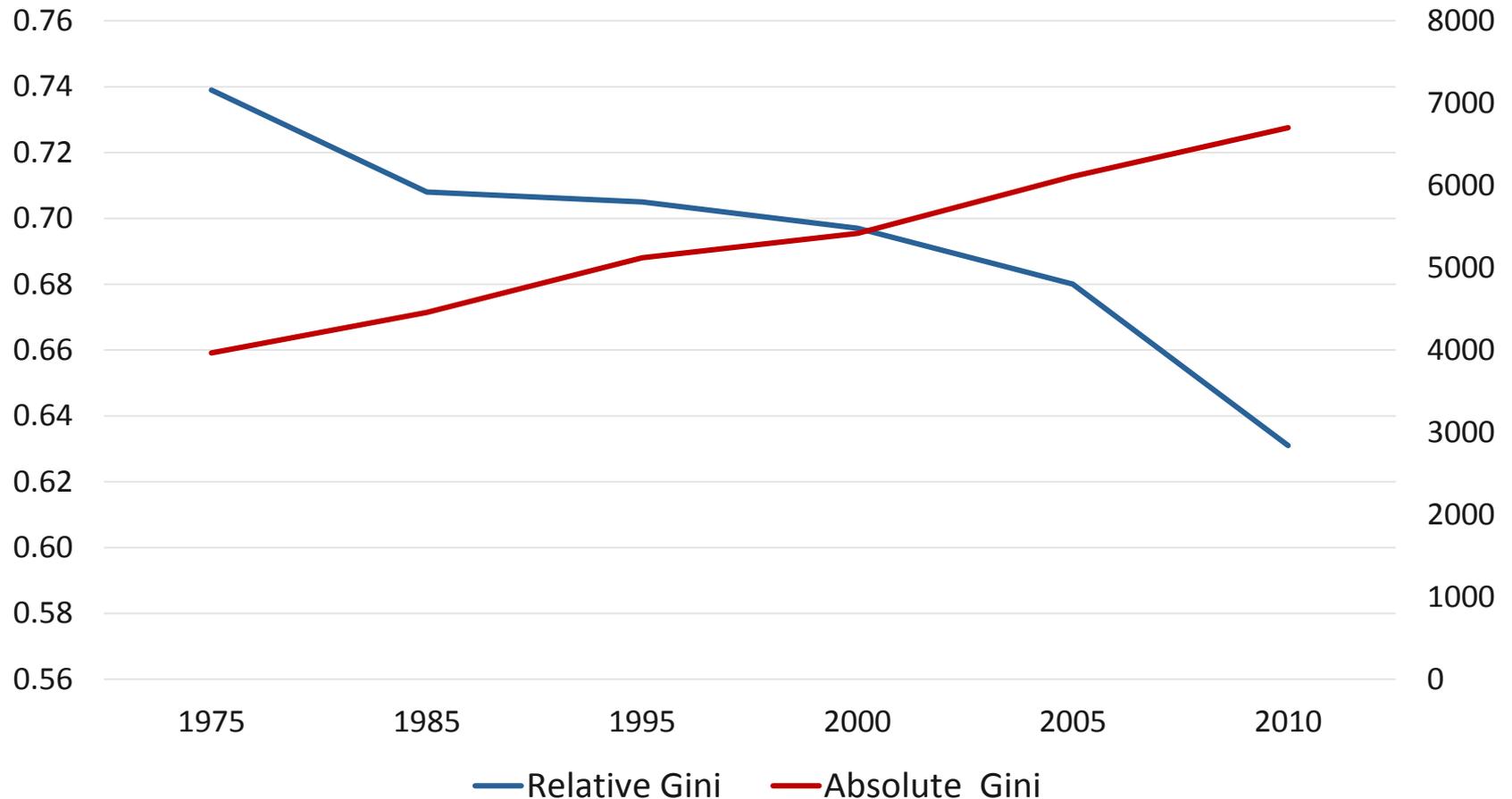
**Data**

# 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

# General results

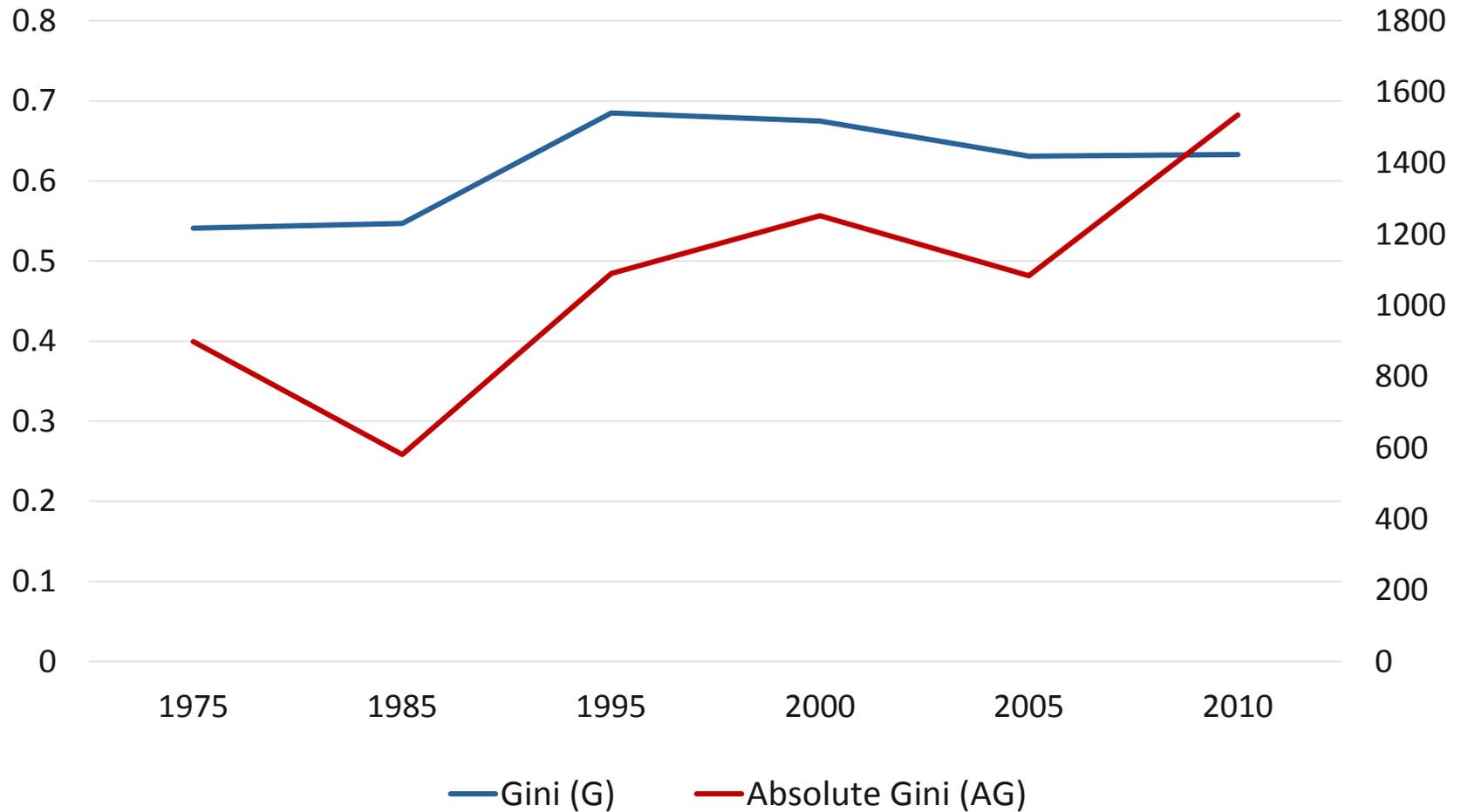
# Trends in global inequality from a relative and absolute perspective



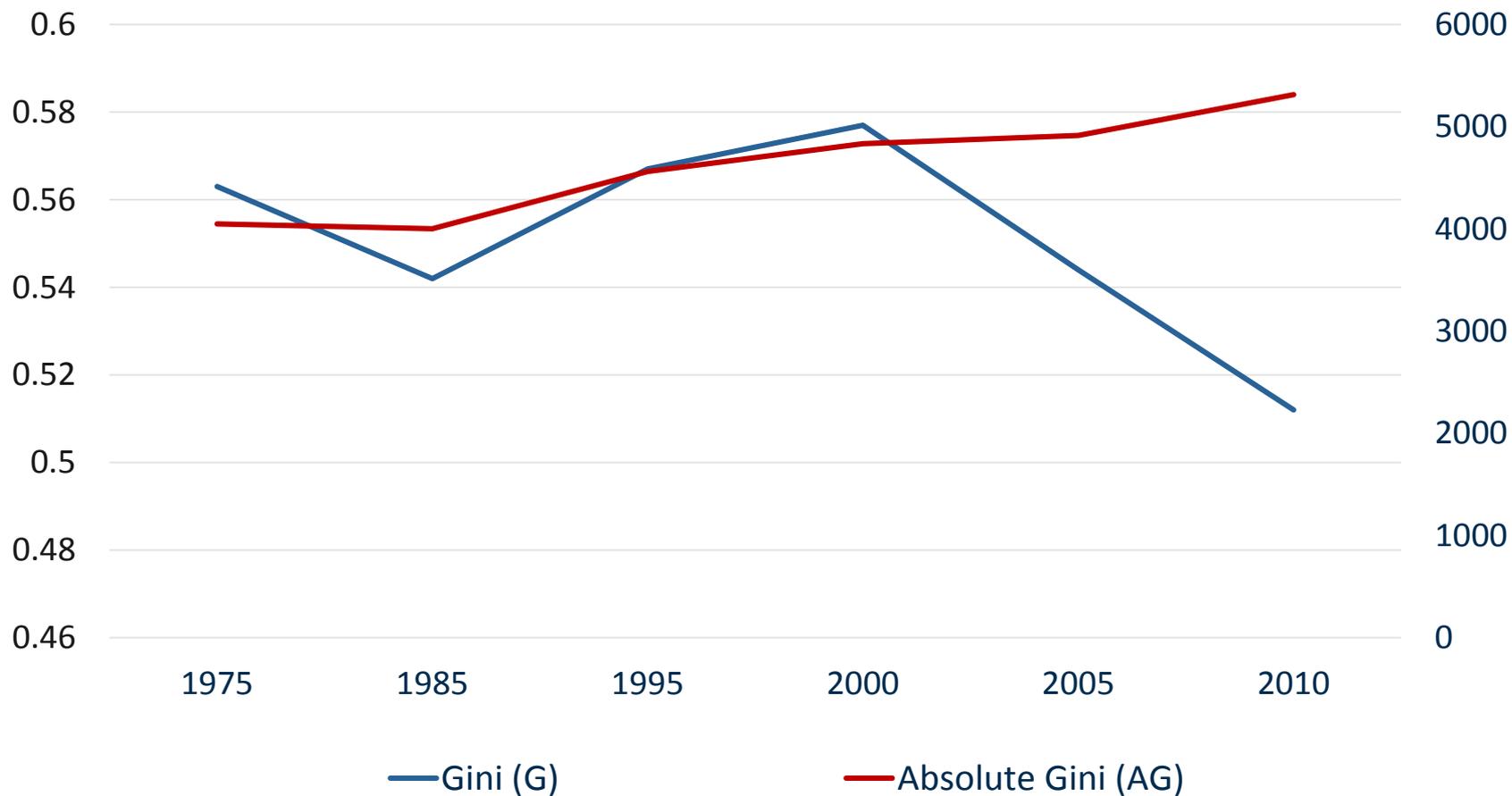
# What has happened across world regions?

- 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

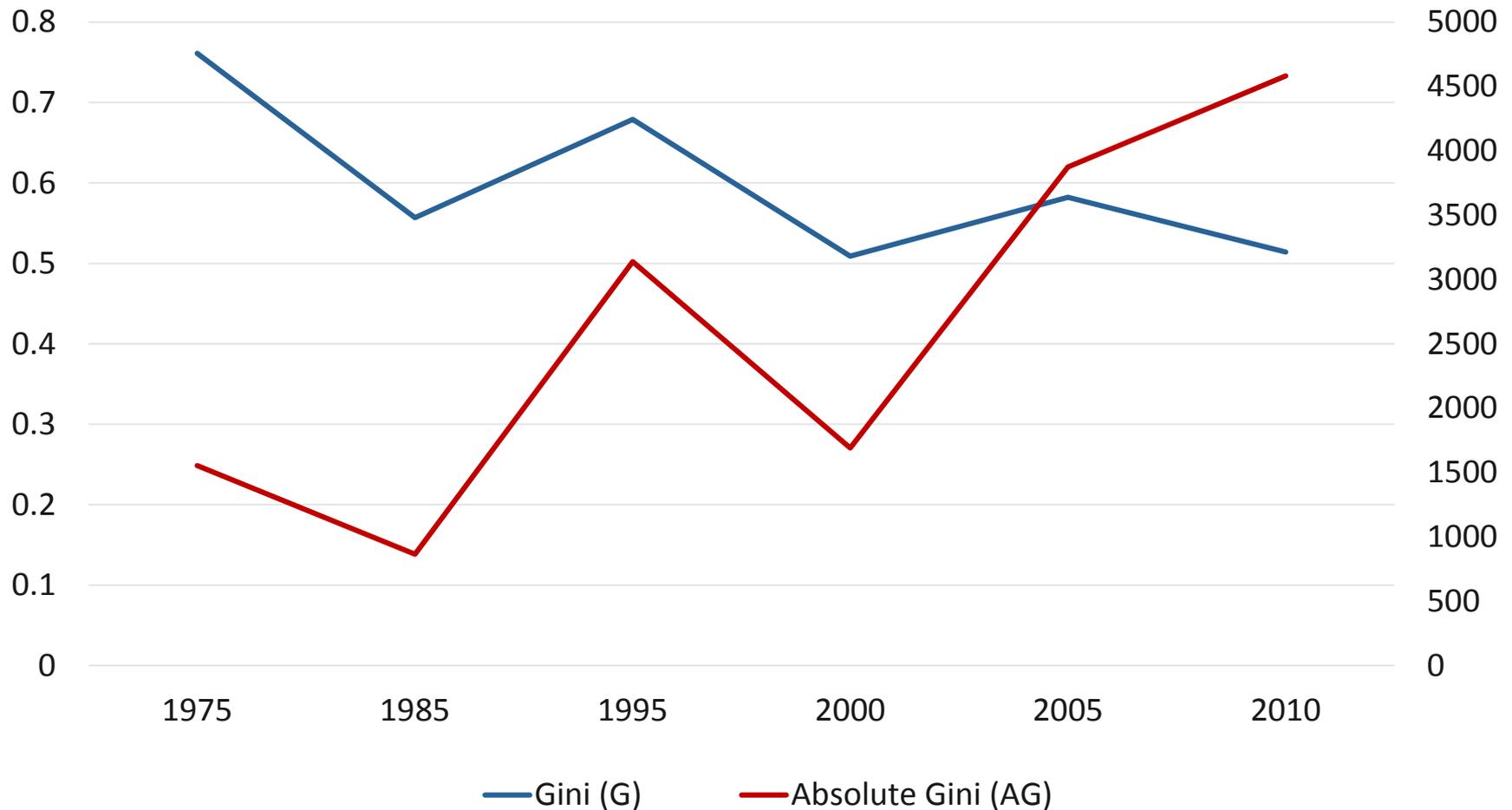
# Sub-Saharan Africa



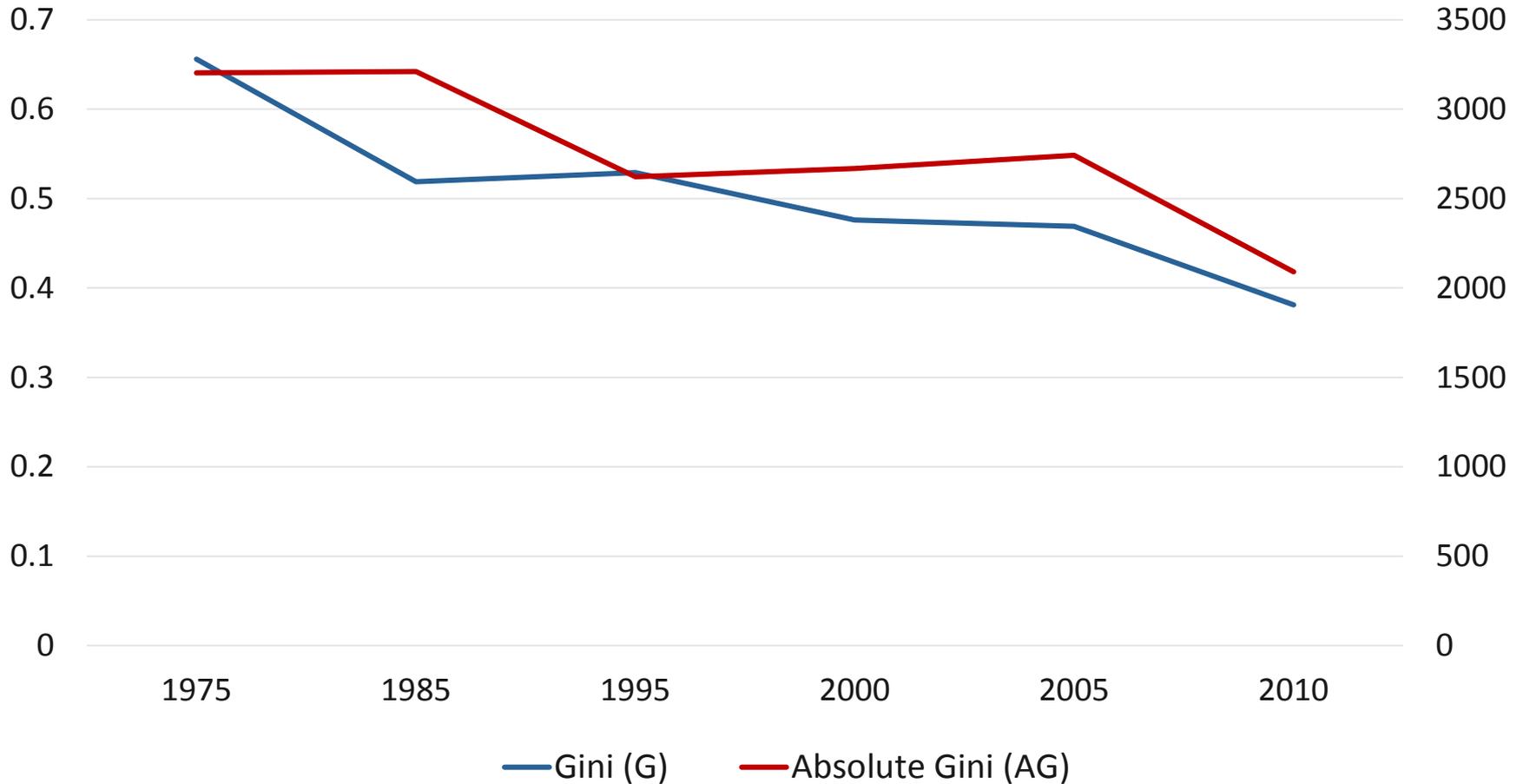
# Latin America and the Caribbean



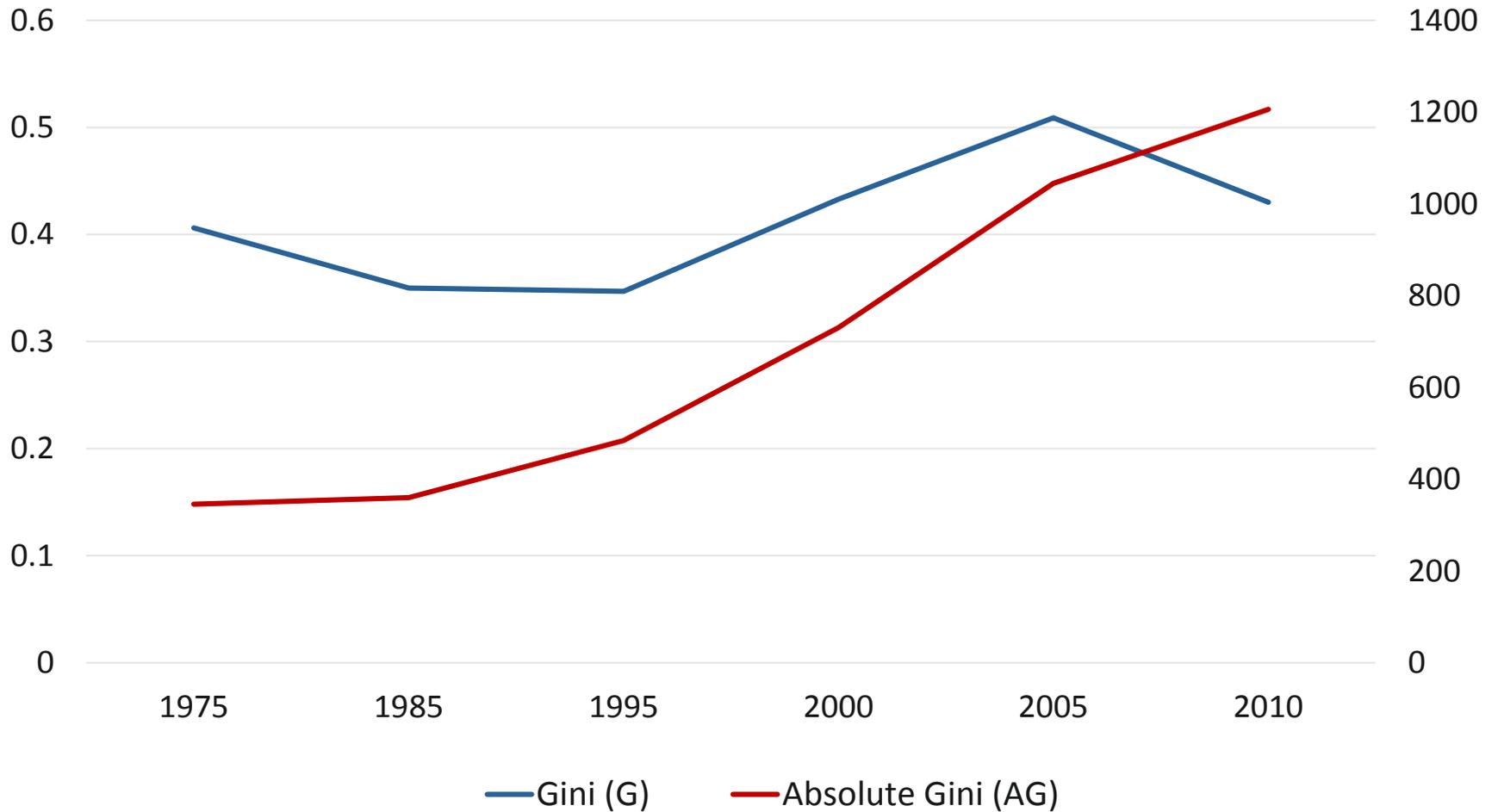
# East Asia and the Pacific



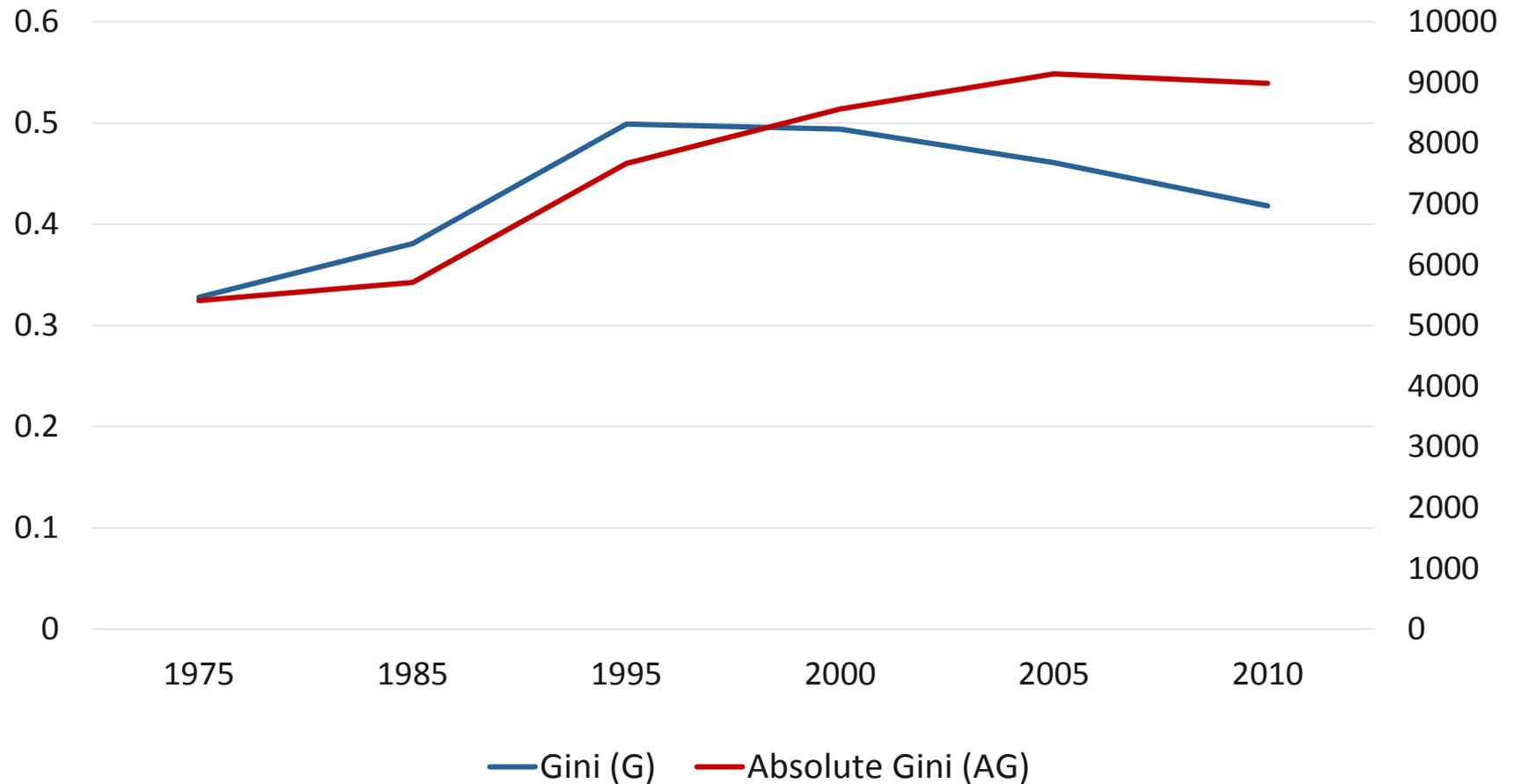
# Middle East and North Africa



# South Asia



# Europe and Central Asia



# 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 are assumed to have their actual incomes per capita and population sizes in 2010. However, we suppose that instead of their actual domestic distributions of income, all countries have 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:** It is the 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 |
|--------------------------|----------------|--------------------------|--------------------------|
| <b>Absolute measures</b> |                |                          |                          |
| Standard Deviation       | 10,184         | 13,898                   | 11,861                   |
| Absolute Gini            | 3,964          | 6,043                    | 5,569                    |
| <b>Relative measures</b> |                |                          |                          |
| Gini                     | 0.739          | 0.569                    | 0.524                    |
| Coeff. Of Variation      | 1.899          | 1.309                    | 1.117                    |

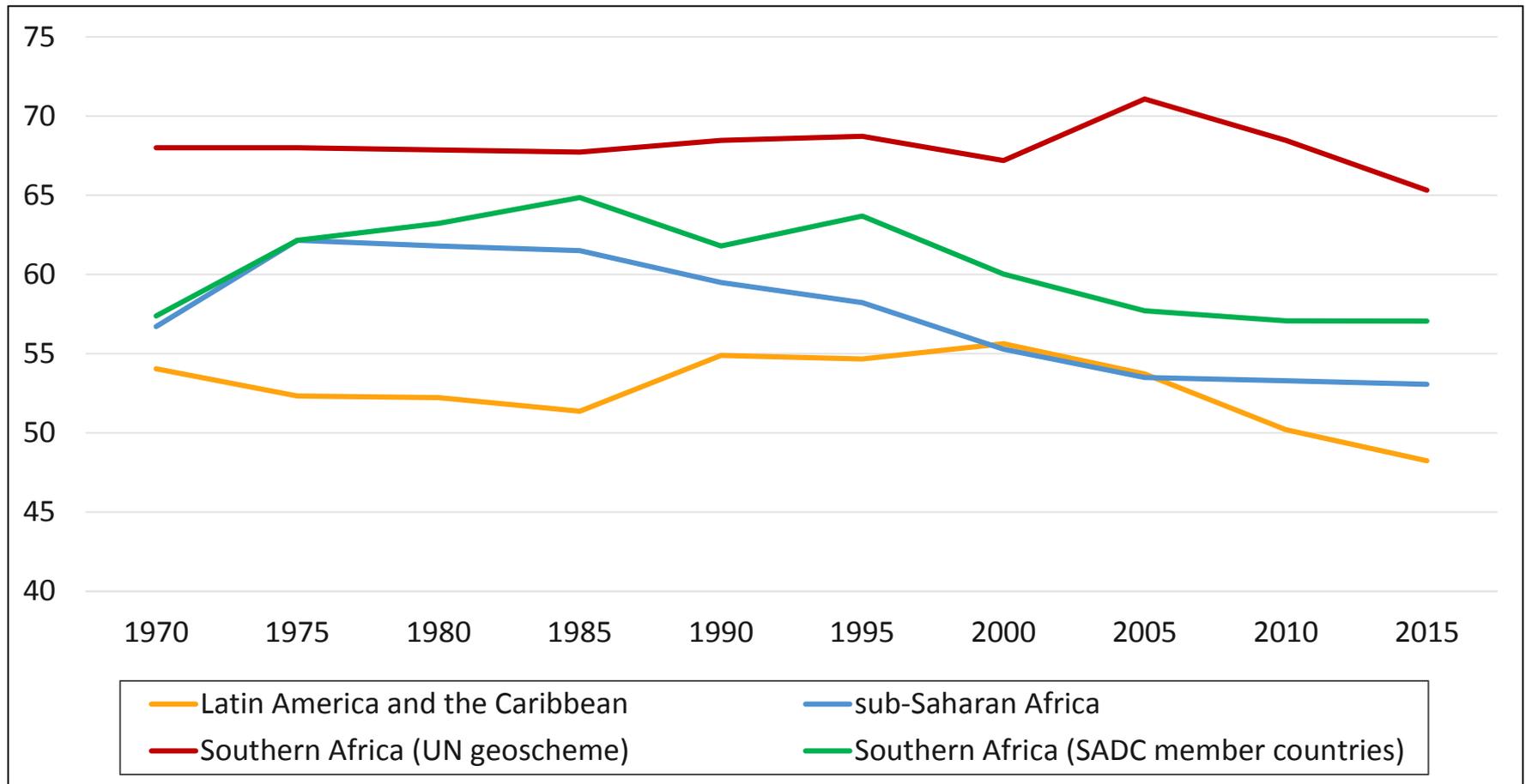
**Most recent trends in  
sub-Saharan Africa  
and Latin America –  
based on the WIID**

# Income inequality trends in SSA

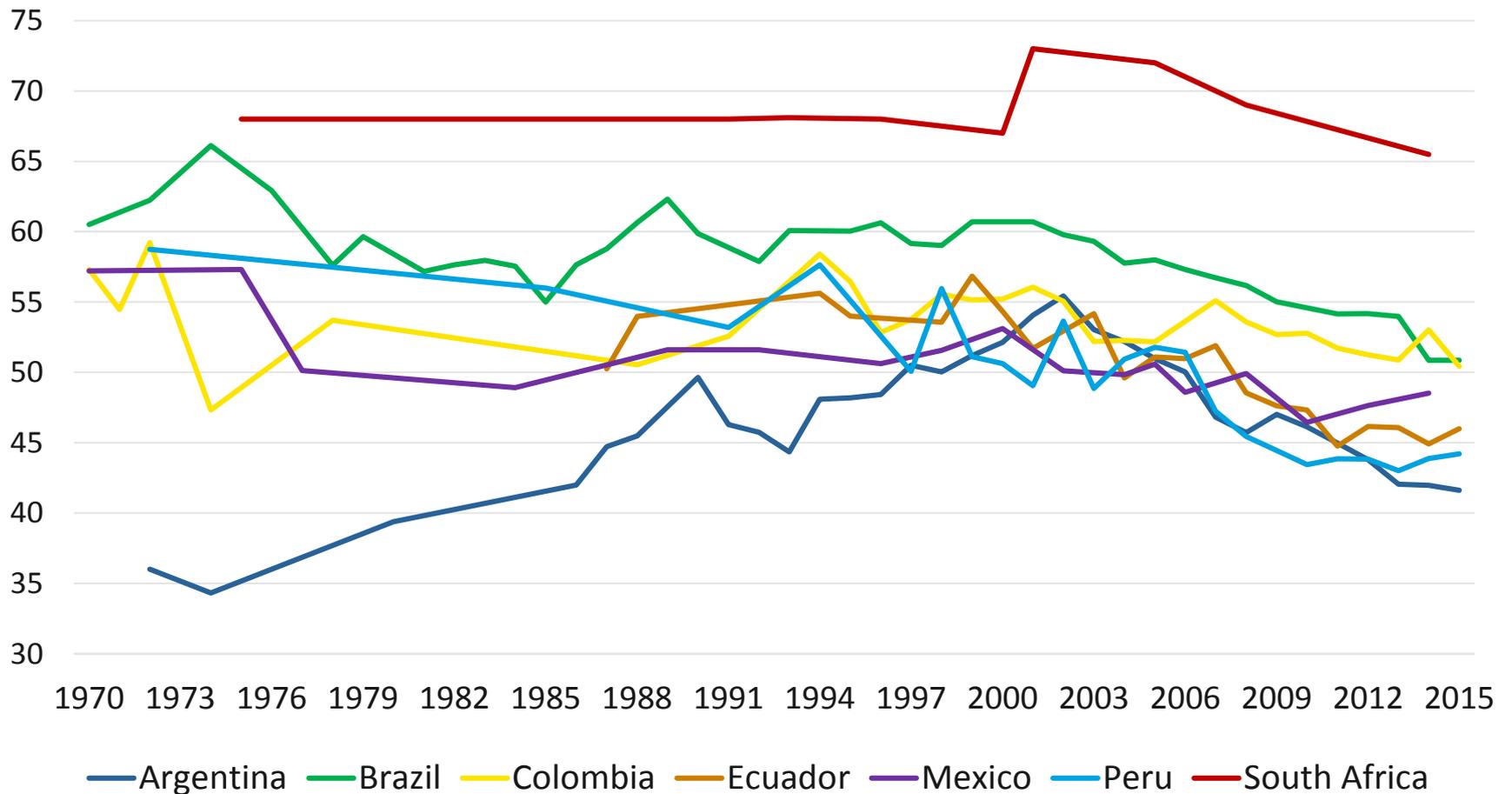
- **Sub-Saharan Africa remains the most unequal region in the world**
- **BUT, there is a lot of heterogeneity within the region:**
  - Some countries have experienced an increase in income inequality (Botswana, Ghana, Kenya, Mauritius, Uganda)
  - A few countries have observed a U-shaped Gini, reaching 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

## Gini coefficient (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 (Alvaredo 2009)
- Ignoring top incomes can generate substantial measurement errors and affect not only the levels, but also the trends of income inequality
- There have been important 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

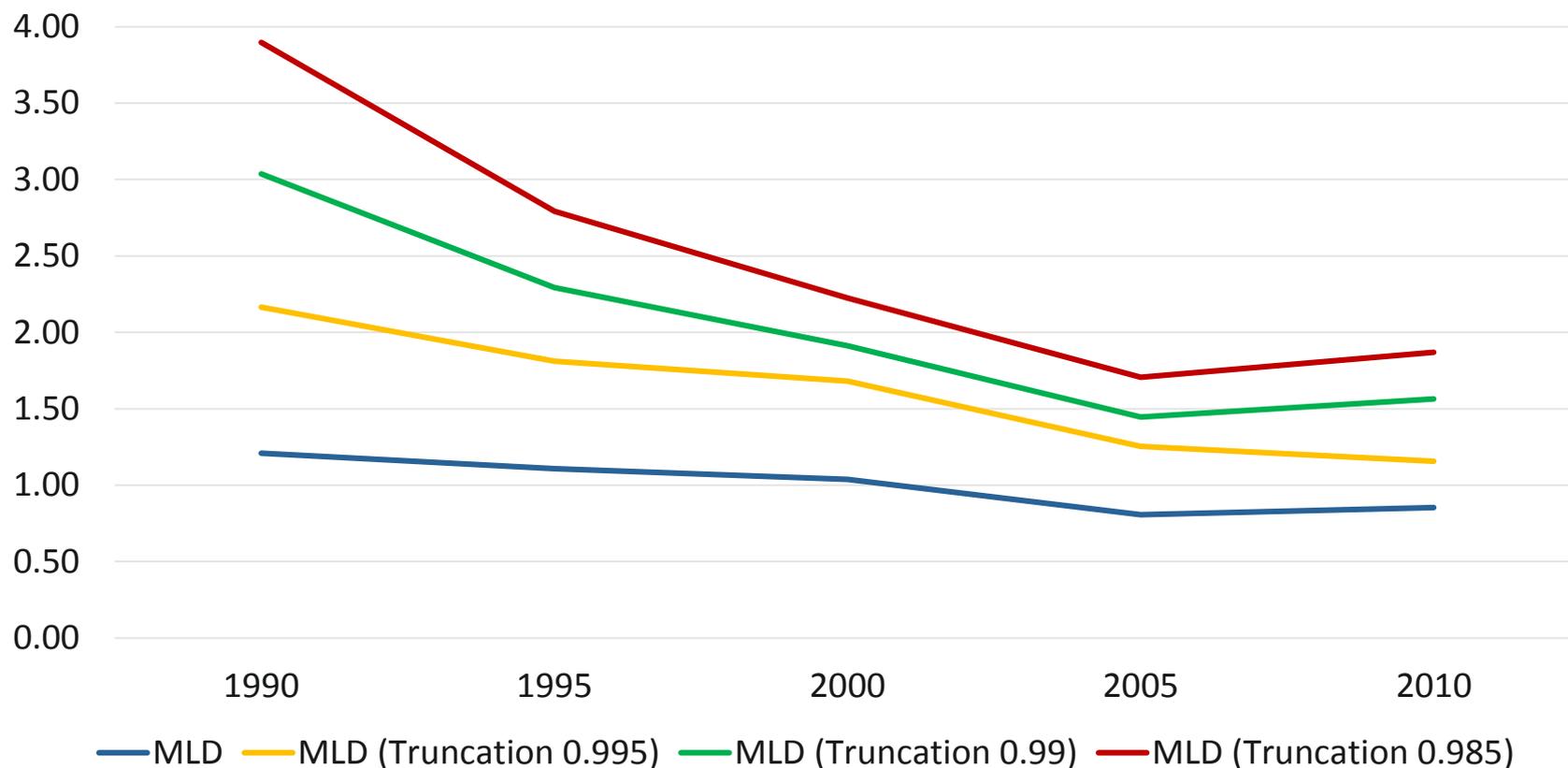
# What Do Jorda and Niño-Zarazúa find?

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

|       |            | 1990   | 1995   | 2000   | 2005   | 2010   | 1990-2000<br>Change (%) | 2000-2010<br>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%                  |

In 2010, undersampling the richest in HH surveys generate a **downward bias in global inequality estimates** that ranged between 17% and 38%

# 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
2. We find 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

# 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
- 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 inequality has 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!
- Would different policies have managed this without the increase in absolute inequality?



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