

# Global Inequalities: Trends, Concerns, and the Case for Equal Opportunity

20 Nov. 2024

Université Paris Cité

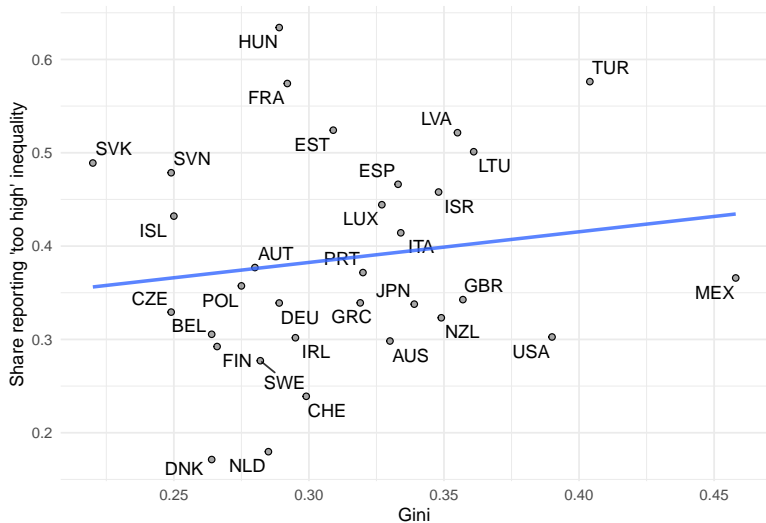
Centre d'Études du Vivant  
Cycle de Conférences '*Les Universales*'

*Paolo Brunori - UNIFI & London School of Economics*

# This presentation

- What happened to inequality?
- What inequality implies for economic growth?
- Are inequalities are alike?
- Is equal opportunity a useful paradigm to inspire future societies?

# Inequality 'misperception'

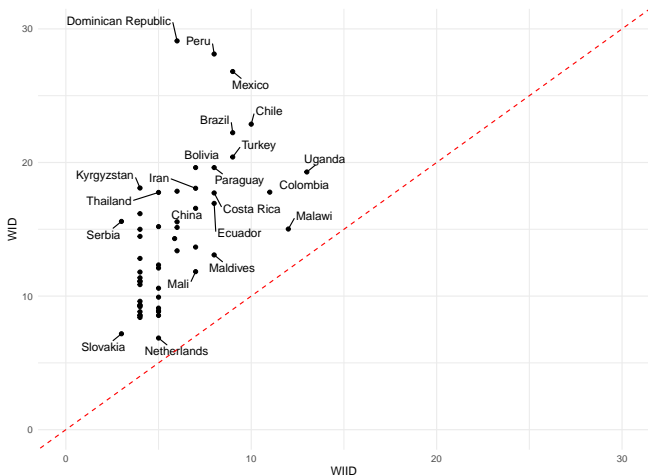


Source: OECD (2020)

# Reasons to misperceive

- Attitude, concerns and perception are mixed;
- Expectations matter;
- Reference population is unclear;
- Inequality is a complex phenomenon.

# Inequality in inequality measures (WID Vs WIID)

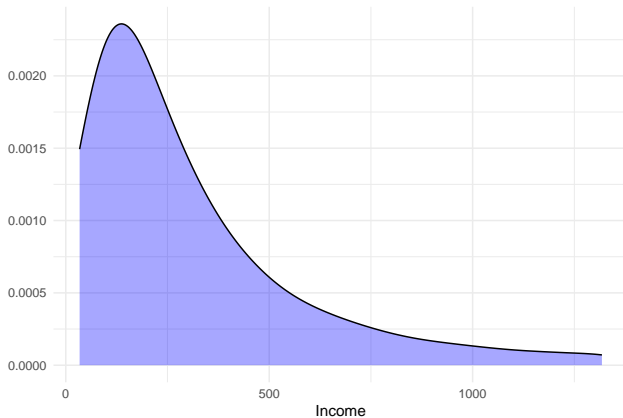


Source: Ferreira (2023)

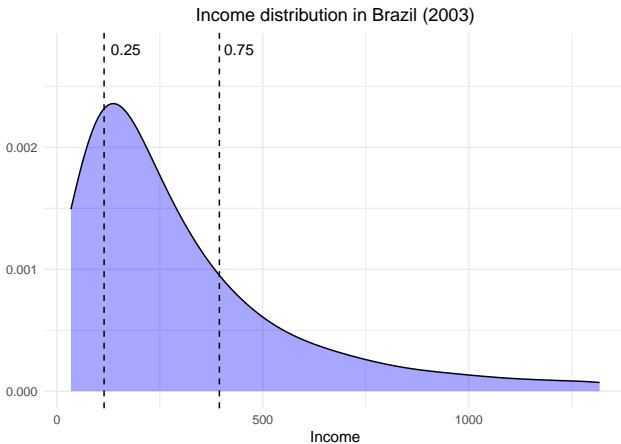
# The Growth Incidence Curve

- Since Ravallion and Chen (2003) GIC is a popular tool to understand changes in inequality;
- GIC plots the growth experienced between two point in time for each quantile of the income distribution:
- GIC is generally anonymous: bottom 10% yesterday is compared to bottom 10% today.

Income distribution in Brazil (2003)

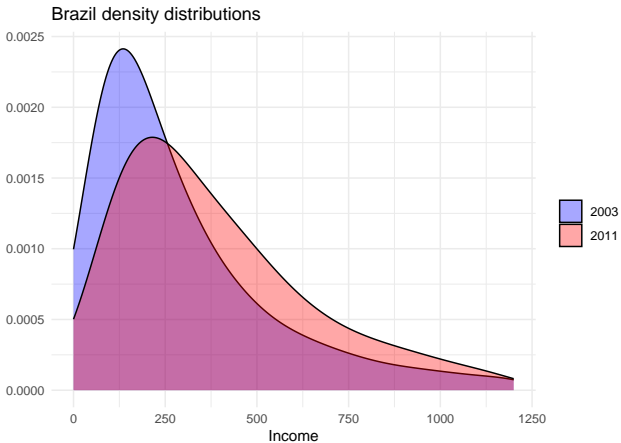


*Source: World Bank LAC Equity Lab 2024*

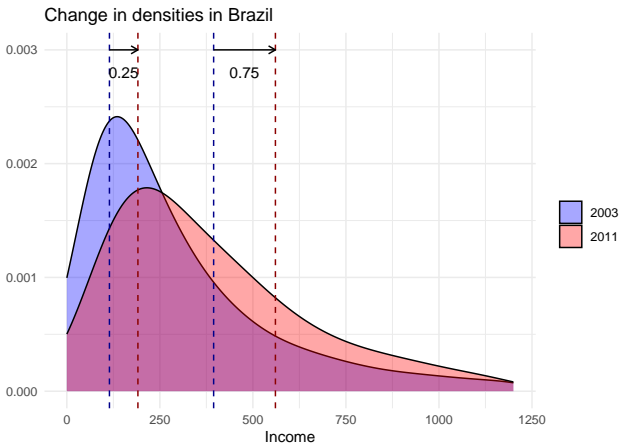


*Source: World Bank LAC Equity Lab 2024*

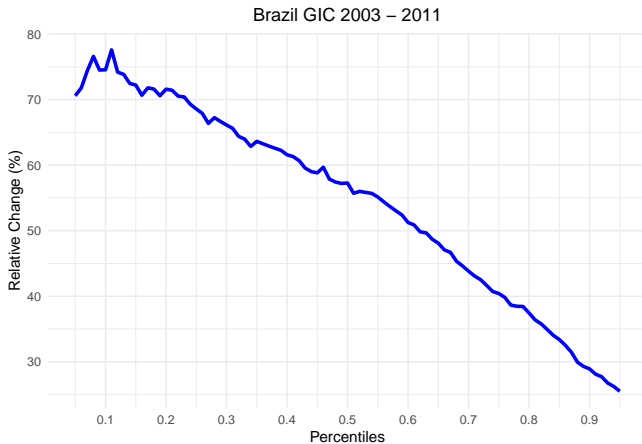




*Source: World Bank LAC Equity Lab 2024*

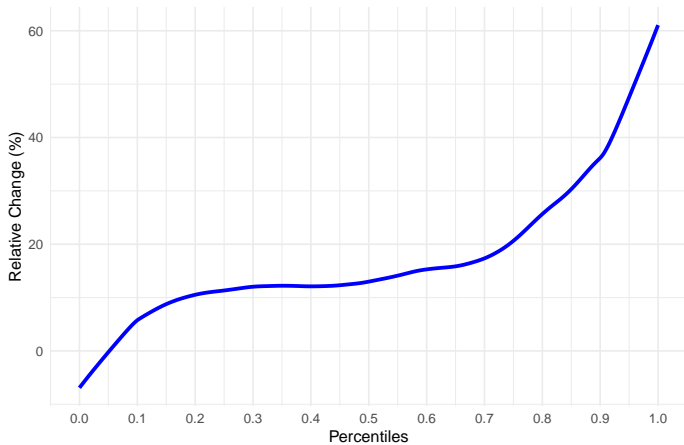


*Source: World Bank LAC Equity Lab 2024*



*Source: World Bank LAC Equity Lab 2024*

### USA GIC 1980 – 1990



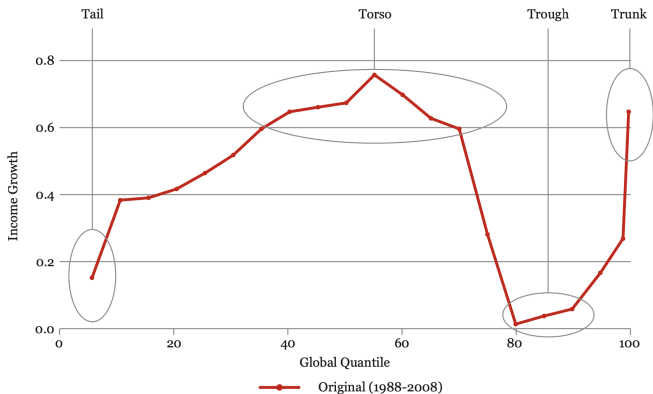
*Source: Berman and Bourguignon (2023)*

# Global change in inequality



# Lakner & Milanovic's elephant (2013)

Figure 1. Original Elephant Chart



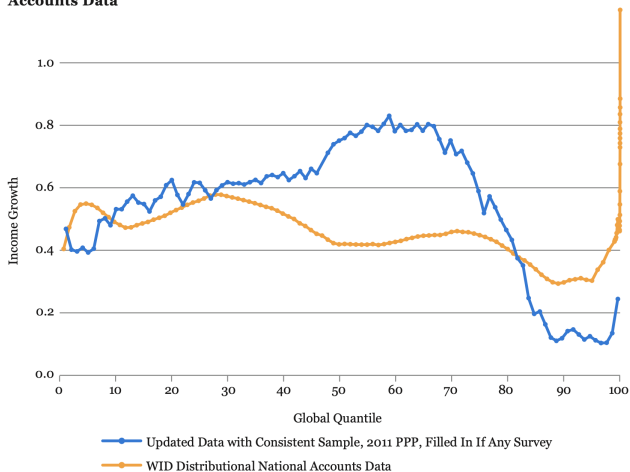
Source: *Kharas & Seidel (2018)*

# Elephant revisited

- Anonymity;
- Limited unbalanced panel of surveys;
- Poorest countries entering in the analysis;
- Top income underreported.

# Elephant revisited

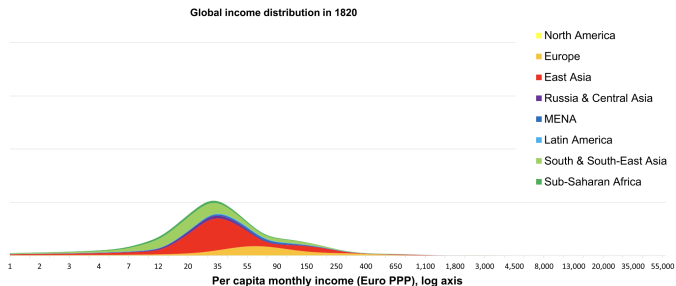
**Figure 7. Growth Incidence Curve Using Survey Data versus Distributed National Accounts Data**



*Source: Kharas & Seidel (2018)*

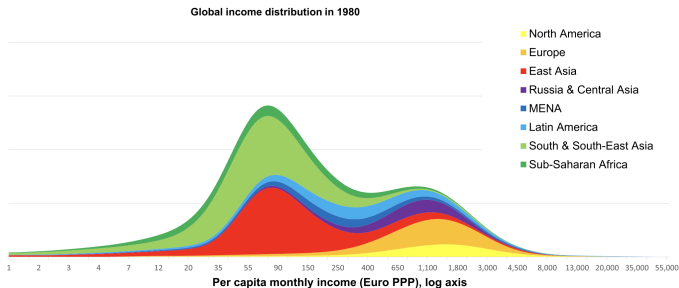


# Taking a longer perspective (1820)



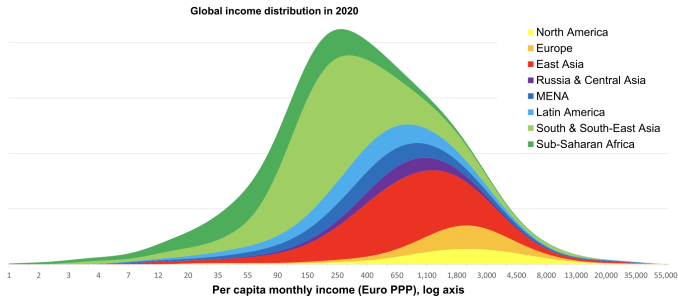
*Source: Chancel & Piketty (2021)*

# Taking a longer perspective (1980)



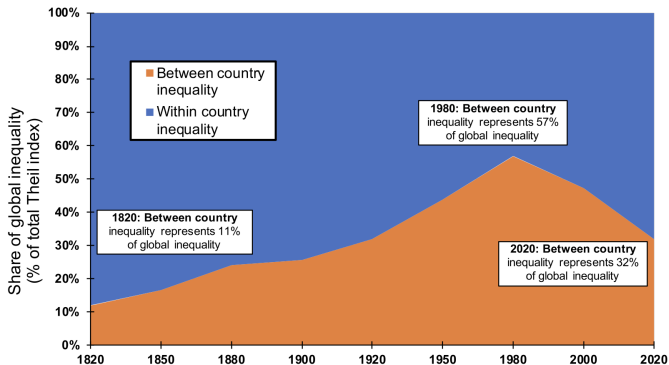
*Source: Chancel & Piketty (2021)*

# Taking a longer perspective (2020)



*Source: Chancel & Piketty (2021)*

# Taking a longer perspective (1820-2020)

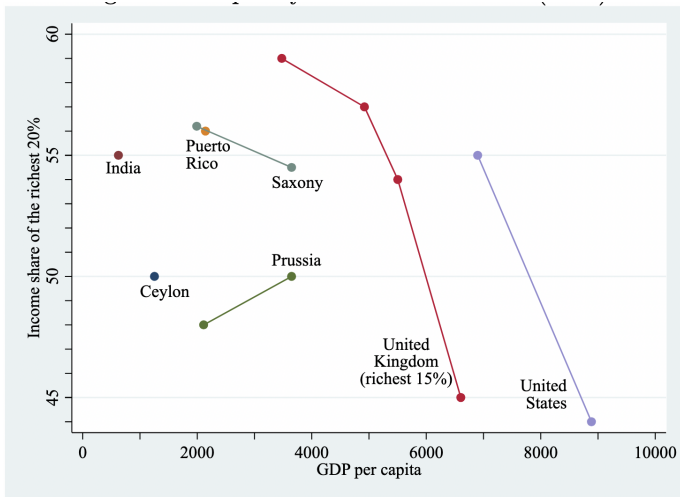


Source: Chancel & Piketty (2021)

## From global to national perspective

- Inequality has increased in the last 30-40 years in key countries;
- Declining substantially in others (World Bank, 2016);
- Challenging “Washington consensus” about inequality and economic development (Kuznet, 1995).

# Original Kuznet 'curve' (1955)



Source: Gallup (2012)

# Why inequality can foster growth?

- Equality-efficiency trade-off (Mirrlees, 1971);
- Unequal propensity to save and growth (Kaldor, 1957);
- Shared view: trickle-down mechanisms.

# Why inequality can hamper growth?

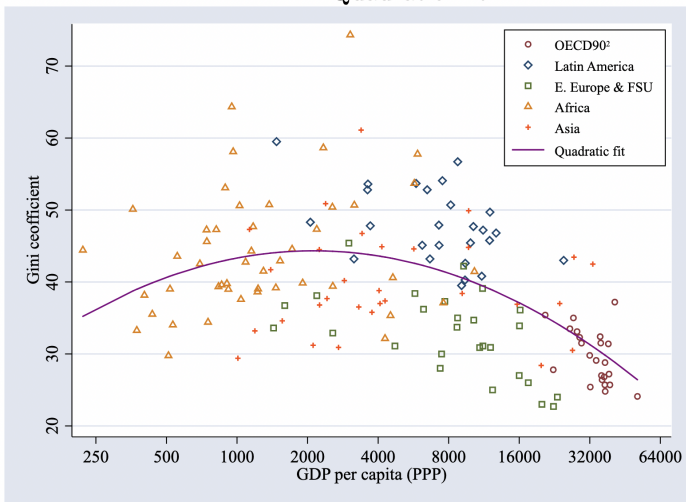
- Inequality cause people to pursue activities outside markets (Alesina et al., 1996);
- Credit market imperfection limit investment for credit-constrained individuals (Galor and Zeira, 1993);
- Power concentration in the political process reduce economic prosperity (Acemoglu et al., 2001).



## Inequality and growth: early empirical studies

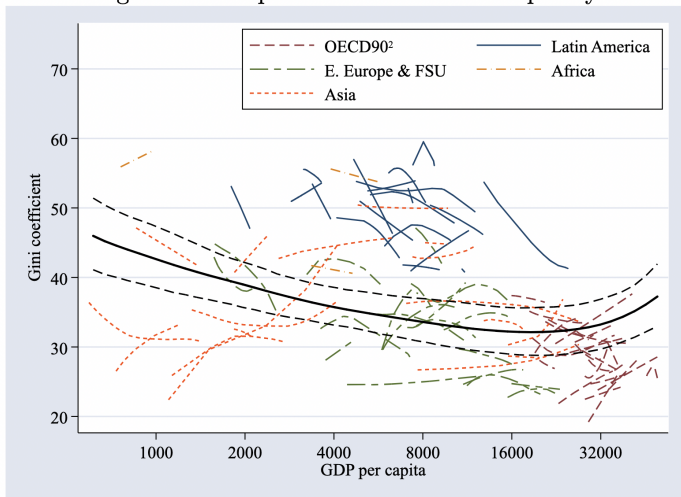
- Early studies assuming a linear relationship between (real GDP per capita growth  $\sim$  Gini);
- Negative sign in a (cross-section) set of countries.
- Improved data (WIID), non-linear models and panel analysis produced mixed results.

# Inequality and growth



Source: Gallup (2012)

# Inequality and growth



Source: Gallup (2012)

# The 'cholesterol hypothesis'

*Is all economic inequality bad? Is zero the optimal amount of income inequality? Or, like cholesterol, might there be better and worse forms of inequality?*

Francisco Ferreira (2019)

## Not all inequalities are the same: opinion surveys

- Compensation for innate circumstances but not for effort;
- Depending on domain: reward for effort/choices and some innate characteristics;
- Depending on age: from egalitarian to meritocratic.

## Not all inequalities are the same: experiments

- Dictator game/Ultimatum game after a phase of production;
- Randomly assigned return to observable effort;
- Redistribution is consistent with compensation for luck.

## Not all inequalities are the same: moral philosophy and normative economics

- Since Rawls (1971) from equality of welfare to equality of primary goods;
- The 'inequality of what' debate in the '80s: Arneson, Cohen, Dworkin, Sen.
- Should people be held responsible for their preferences?
- Normative economics: Marc Fleurbaey, John Roemer theories of equal opportunity.

# Roemer's Model (1998)

$$y_i = f(\mathbf{C}_i, e_i) + u_i$$

- $y_i$ : individual's  $i$  outcome;
- $\mathbf{C}_i$ : circumstances beyond individual control;
- $e_i$ : effort;
- $u_i$ : random component.



# Romer's society

$c_1$	$c_2$	$e = L$	$e = M$	$e = H$
$W$	$F$	$y_{1,L}$	$y_{1,M}$	$y_{1,H}$
$W$	$M$	$y_{2,L}$	$y_{2,M}$	$y_{2,H}$
$B$	$F$	$y_{3,L}$	$y_{3,M}$	$y_{3,H}$
$B$	$M$	$y_{4,L}$	$y_{4,M}$	$y_{4,H}$

Type

Tranche

# Romer's society

$c_1$	$c_2$	$e = L$	$e = M$	$e = H$
$W$	$F$	$y_{1,L}$	$y_{1,M}$	$y_{1,H}$
$W$	$M$	$y_{2,L}$	$y_{2,M}$	$y_{2,H}$
$B$	$F$	$y_{3,L}$	$y_{3,M}$	$y_{3,H}$
$B$	$M$	$y_{4,L}$	$y_{4,M}$	$y_{4,H}$

Type

Tranche

# Equality of opportunity (EOp)

- Ignoring the random component:

$$e_i = e_j \cap C_i = C_j \rightarrow y_i = y_j, \forall i, j \in 1, \dots, n$$

- Equality of opportunity is satisfied if:

$$e_i = e_j \rightarrow y_i = y_j, \forall i, j \in 1, \dots, n$$

$\Rightarrow$  Inequality of opportunity (IOp) = within-tranche inequality (ex-post)

# How can we measure effort?

- Roemer's identification strategy, two assumptions:

1 orthogonality:  $e \perp C$

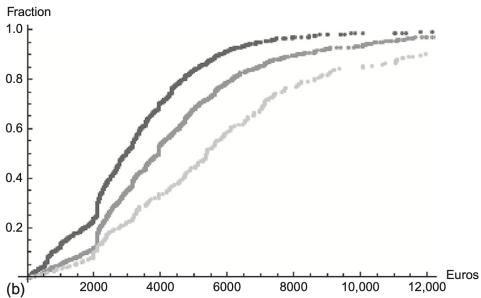
2 monotonicity:  $\frac{\partial f}{\partial e} \geq 0$

## Level of effort Vs. degree of effort

*Thus, in comparing efforts of individuals in different types, we should somehow adjust for the fact that those efforts are drawn from distributions which are different, a difference for which individuals should not be held responsible.*

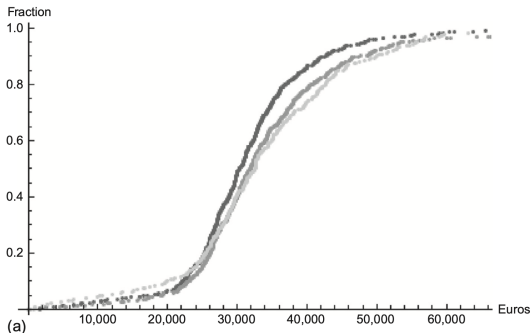
Roemer (2002) p. 458

# Roemer's IOp: Hungary



*Source: Roemer and Trannoy (2015)*

# Roemer's IOp: Denmark



*Source: Roemer and Trannoy (2015)*

## Lack of comparability

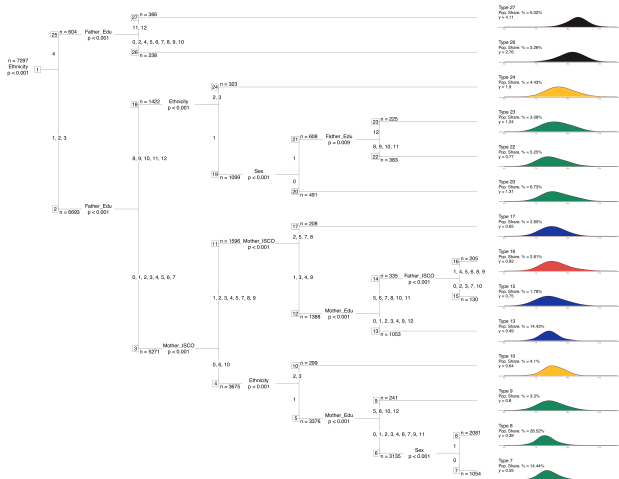
- Different circumstances considered;
- Different statistical approaches;
- Traditionally: western-centric theoretically-based origin groups/ father's earnings;
- Defendable in a data-scarce world, hard to buy in a data-abundant global age.



# A data-driven approach

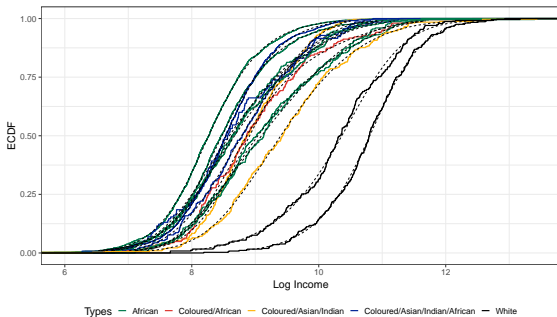
- Unknown and unknowable data-generating-process;
- But observing conditional outcome distribution covarying with circumstances is a violation of EOp;
- Supervised machine learning to obtain data-driven partition in salient types (Hothorn & Zeileis, 2023).

# Roemerian types, South Africa, 2017



Source: Brunori, Ferreira, Salas-Rojo (2023)

# South Africa IOp: 0.452 (Gini)

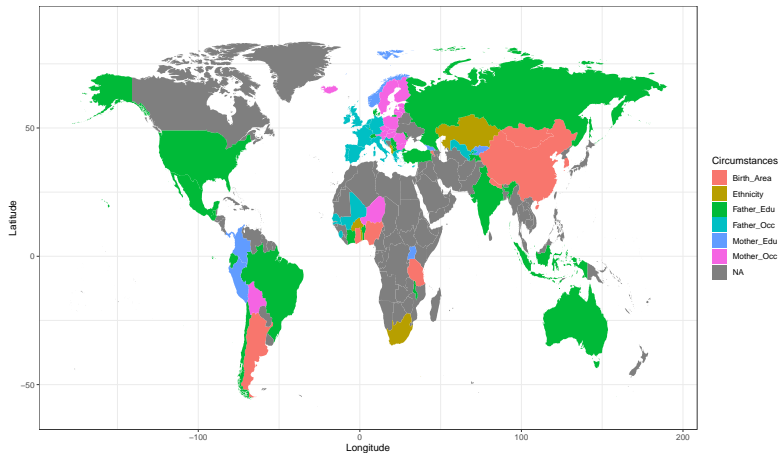


Source: Brunori, Ferreira, Salas-Rojo (2023)

# Globale Estimates of Opportunity and Mobility (GEOM)

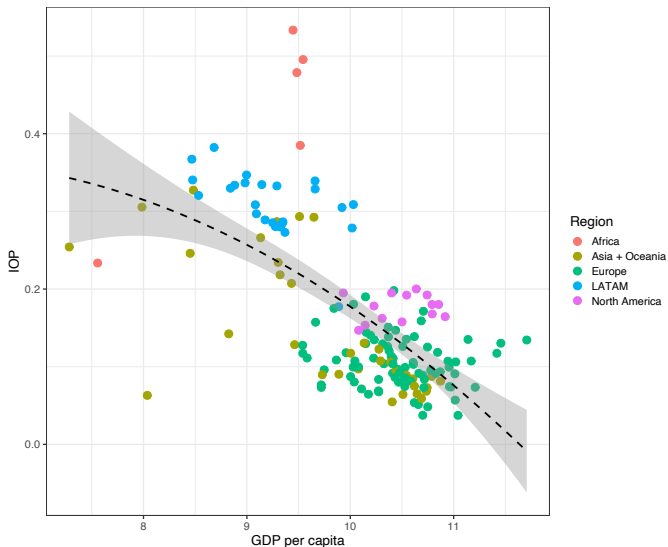
- Minimum common set of circumstances: sex, parental education, parental occupation + a country specific variable of origin (place of birth, race/ethnicity, caste);
- Outcome: household equivalized income or per capita consumption;
- Coverage: 75 countries, about 70% of of the world population.

# GEOM (most predictive circumstance)



Source: GEOM (2024)

# IOP as bad cholesterol?



Note: only estimates based on income are included. *Source: GEOM (2024)*

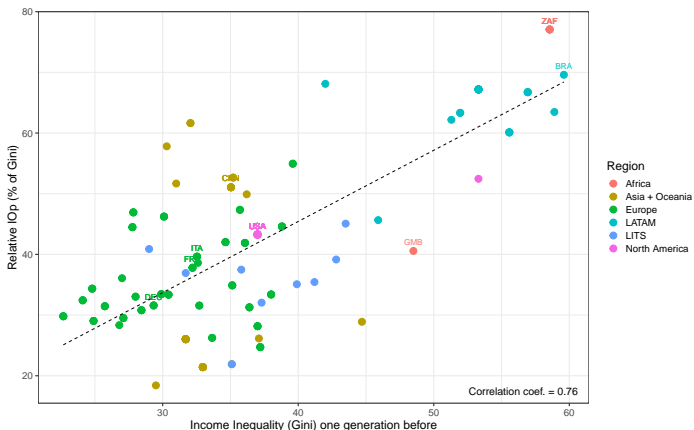
# Is EOp enough for the troubled times ahead?

- No!
- Two critical issues: it says nothing about 'fair reward', has been declined in terms of resources-expensive outcomes.
- But may help.

# Additional material



# Is inequality today tomorrow IOp?



This is a version of the Great Gatsby Curve originally proposed by Corak (2013).

Source: GEOM (2024)

## References

- Kharas, H., & Seidel, B. (2018). *What's happening to the world income distribution? The elephant chart revisited*. Brookings Global Economy & Development Working Paper No. 114.
- Baselgia, E. , Foellmi, R. (2022). *Inequality and growth: a review on a great open debate in economics*. WIDER Working Paper 2022/5. Helsinki: UNU-WIDER.
- Roemer, John E., and Alain Trannoy. (2016). *Equality of Opportunity: Theory and Measurement*. Journal of Economic Literature, 54 (4): 1288-1332.
- Brunori, P., and Ferreira, F. H. G., and Salas-Rojo, P. (2023). *Inherited Inequality: A General Framework and a Beyond-Averages Application to South Africa*. IZA Discussion Paper No. 17203.

# Equality of opportunity in the political agenda

*First, that the pursuit of equality itself is a mirage. What's more desirable and more practicable than the pursuit of equality is the pursuit of equality of opportunity.*

Speech to the Institute of SocioEconomic Studies  
New York, September 15, 1975

# Equality of opportunity in the political agenda

*Socialismo significa justicia social e igualdad, pero igualdad de derechos, de oportunidades, no de ingresos.*

Speech at the Asamblea Nacional del Poder Popular  
La Habana, July 11, 2008

## Equality of opportunity in the political agenda

*“I have fought against white domination, and I have fought against black domination. I have cherished the ideal of a democratic and free society in which all persons live together in harmony with equal opportunities.”*

Nelson Mandela, 1990

# Equality of opportunity in the political agenda

*“L’égalité rpublicaine, c’est l’égalité devant la loi, l’égalité des droits et des devoirs, c’est l’égale dignité des personnes, c’est l’égalité des chances.”*

Nicolas Sarkozy, 2008