

Inequality and Economic Performance: Evidence from Africa?

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I. A brief review of the literature - theory

- Inequality has been hypothesized to affect economic growth through various mechanisms:
 - Savings
 - Kaldor (1957)
 - Political economy
 - Alesina and Rodrik (*QJE*, 1994)
 - Persson and Tabellini (*AER*, 1994)
 - Bénabou (*AER*, 2000)
 - Credit constraints and investment indivisibilities
 - Banerjee and Newman (*JPE*, 1993)
 - Galor and Zeira (*REStud*, 1993)
 - Aggregate demand
 - Matsuyama (*JPE*, 2002)
 - Fertility
 - De la Croix and Doepke (*AER*, 2003)
 - Moav (*EJ*, 2005)

I. A brief review of the literature - empirics

- **Phase 1 - cross-section results:** inequality is bad for growth
- Alesina and Rodrik (1994)
- Persson and Tabelini (1994)
- Deininger and Squire (1998)

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TABLE I
GROWTH REGRESSIONS FOR 1960–1985

	High-quality sample (<i>N</i> = 46)		Largest possible sample (<i>N</i> = 70)		Largest possible sample			
	OLS (1)	TOLS (2)	OLS (3)	TOLS (4)	<i>(N</i> = 49)		<i>(N</i> = 41)	
					OLS (5)	OLS (6)	OLS (7)	OLS (8)
Const.	3.60 (2.66)	8.66 (3.33)	1.76 (1.50)	6.48 (2.93)	3.71 (3.86)	6.22 (4.69)	6.24 (4.63)	6.21 (4.61)
GDP60	-0.44 (-3.28)	-0.52 (-3.17)	-0.48 (-3.37)	-0.58 (-3.47)	-0.38 (-3.61)	-0.38 (-3.25)	-0.39 (-3.06)	-0.38 (-2.95)
PRIM60	3.26 (3.38)	2.85 (2.43)	3.98 (4.66)	3.70 (3.72)	3.85 (4.88)	2.66 (2.66)	2.62 (2.53)	2.65 (2.56)
GINI60	-5.70 (-2.46)	-15.98 (-3.21)	3.58 (-1.81)	-12.93 (-3.12)		-3.47 (-1.82)	-3.45 (-1.79)	-3.47 (-1.80)
GINILND					-5.50 (-5.24)	-5.23 (-4.38)	-5.24 (-4.32)	-5.21 (-4.19)
DEMOC* GINILND							0.12 (0.12)	
DEMOC								0.02 (0.05)
\bar{R}^2	0.28	0.27	0.25	0.26	0.53	0.53	0.51	0.51

The dependent variable is average per capita growth rate over 1960–1985. *t*-statistics are in parentheses. Independent variables are defined as follows:

- GDP60: Per capita GDP level in 1960
- PRIM60: Primary school enrollment ratio in 1960
- GINI60: Gini coefficient of income inequality, measured close to 1960 (see Appendix for dates)
- GINILND: Gini coefficient of land distribution inequality, measured close to 1960 (see Appendix for dates)
- DEMOC: Democracy dummy.

Two-stage least squares regressions use GDP60, PRIM60, literacy rate in 1960, infant mortality in 1965, secondary enrollment in 1960, fertility in 1965, and an Africa dummy as instruments.

Table from Alesina and Rodrik (1994) →

I. A brief review of the literature - empirics

- Phase 2:

Forbes (2000): With panel data, (recent) inequality is good for growth:

TABLE 3—REGRESSION RESULTS: ALTERNATE ESTIMATION TECHNIQUES

Estimation method	Five-year periods				Ten-year periods: fixed effects (5)
	Fixed effects (1)	Random effects (2)	Chamberlain's π -matrix (3)	Arellano and Bond (4)	
<i>Inequality</i>	0.0036 (0.0015)	0.0013 (0.0006)	0.0016 (0.0002)	0.0013 (0.0006)	0.0013 (0.0011)
<i>Income</i>	-0.076 (0.020)	0.017 (0.006)	-0.027 (0.004)	-0.047 (0.008)	-0.071 (0.016)
<i>Male Education</i>	-0.014 (0.031)	0.047 (0.015)	0.018 (0.010)	-0.008 (0.022)	-0.002 (0.028)
<i>Female Education</i>	0.070 (0.032)	-0.038 (0.016)	0.054 (0.006)	0.074 (0.018)	0.031 (0.030)
<i>PPP</i>	-0.0008 (0.0003)	-0.0009 (0.0002)	-0.0013 (0.0000)	-0.0013 (0.0001)	-0.0003 (0.0003)
R^2	0.67	0.49			0.71
Countries	45	45	45	45	45
Observations	180	180	135	135	112
Period	1965–1995 ^a	1965–1995 ^a	1970–1995	1970–1995	1965–1995

Notes: Dependent variable is average annual per capita growth. Standard errors are in parentheses. R^2 is the within- R^2 for fixed effects and the overall- R^2 for random effects.

^a Estimates are virtually identical for the period 1970–1995 (with 135 observations).

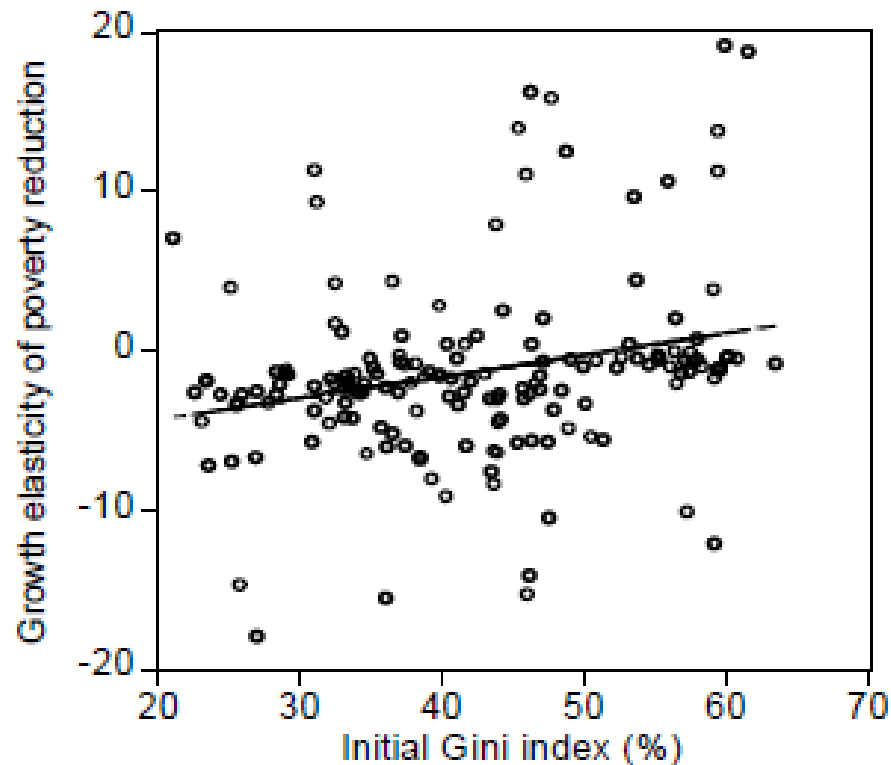
I. A brief review of the literature - empirics

Phase 3:

- Easterly (2007):
 - Inequality, instrumented by agricultural endowments, hurts growth
- Berg, Ostry and Zettelmeyer (2012):
 - Inequality reduces the duration of high-growth spells
- Ravallion (2012):
 - Initial poverty, rather than inequality, is negatively associated with economic growth (and also with the growth elasticity of poverty)
- Marrero and Rodriguez (2013):
 - When total income inequality is decomposed into “inequality of effort” and inequality of opportunity, the latter is negatively associated with subsequent growth
- Ferreira, Lakner, Lugo and Özler (2014):
 - Investigate the relationship between I. Op. and growth across countries (36 in HHS sample, 43 in DHS sample), using a variety of specifications. Fail to find robust results, but overall inequality always negative and often significant.

What about the “quality” of growth?

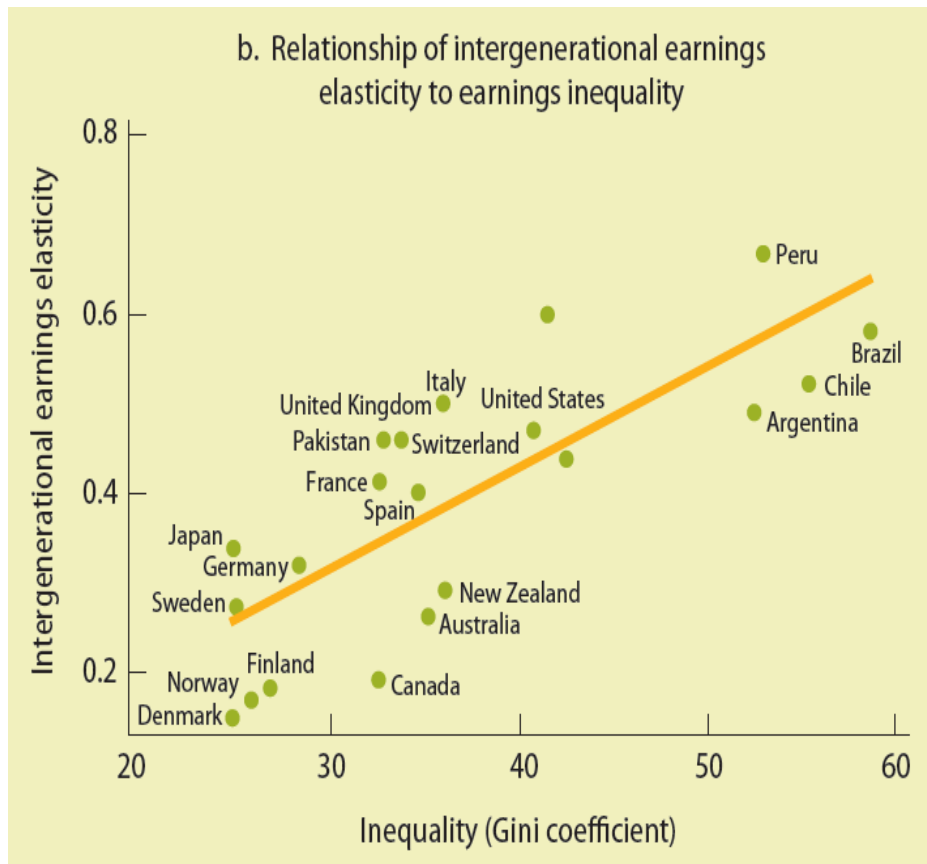
- Higher initial inequality attenuates the poverty-reducing power of economic growth.



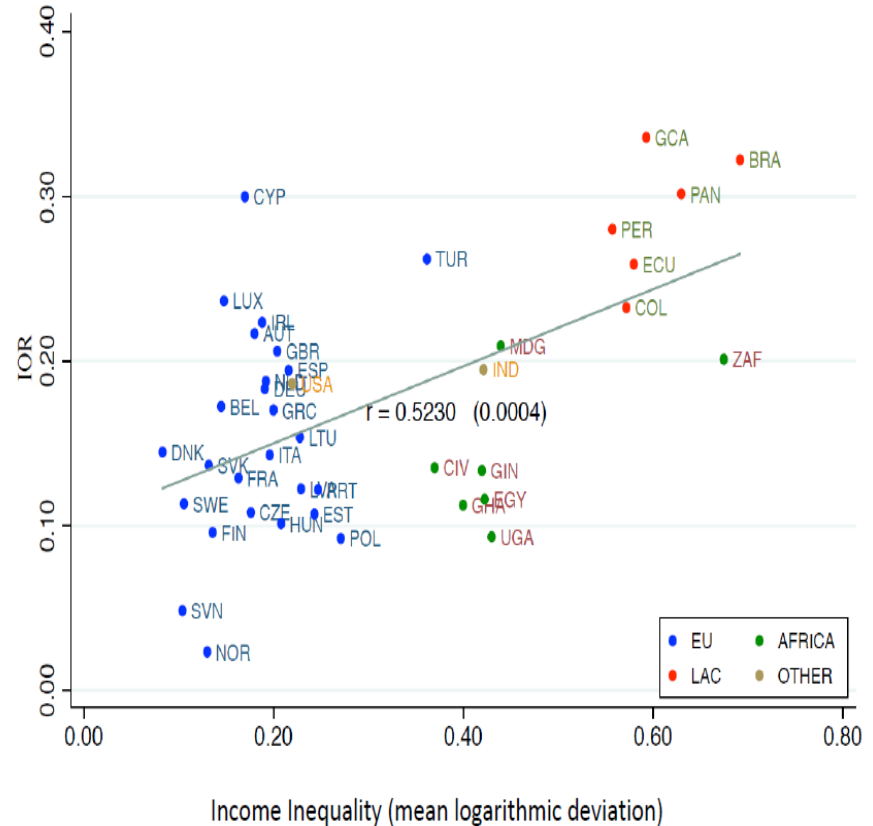
Source: Ravallion 20007

What about the “quality” of growth?

- Higher inequality is also associated with lower economic mobility and higher inequality of opportunity...



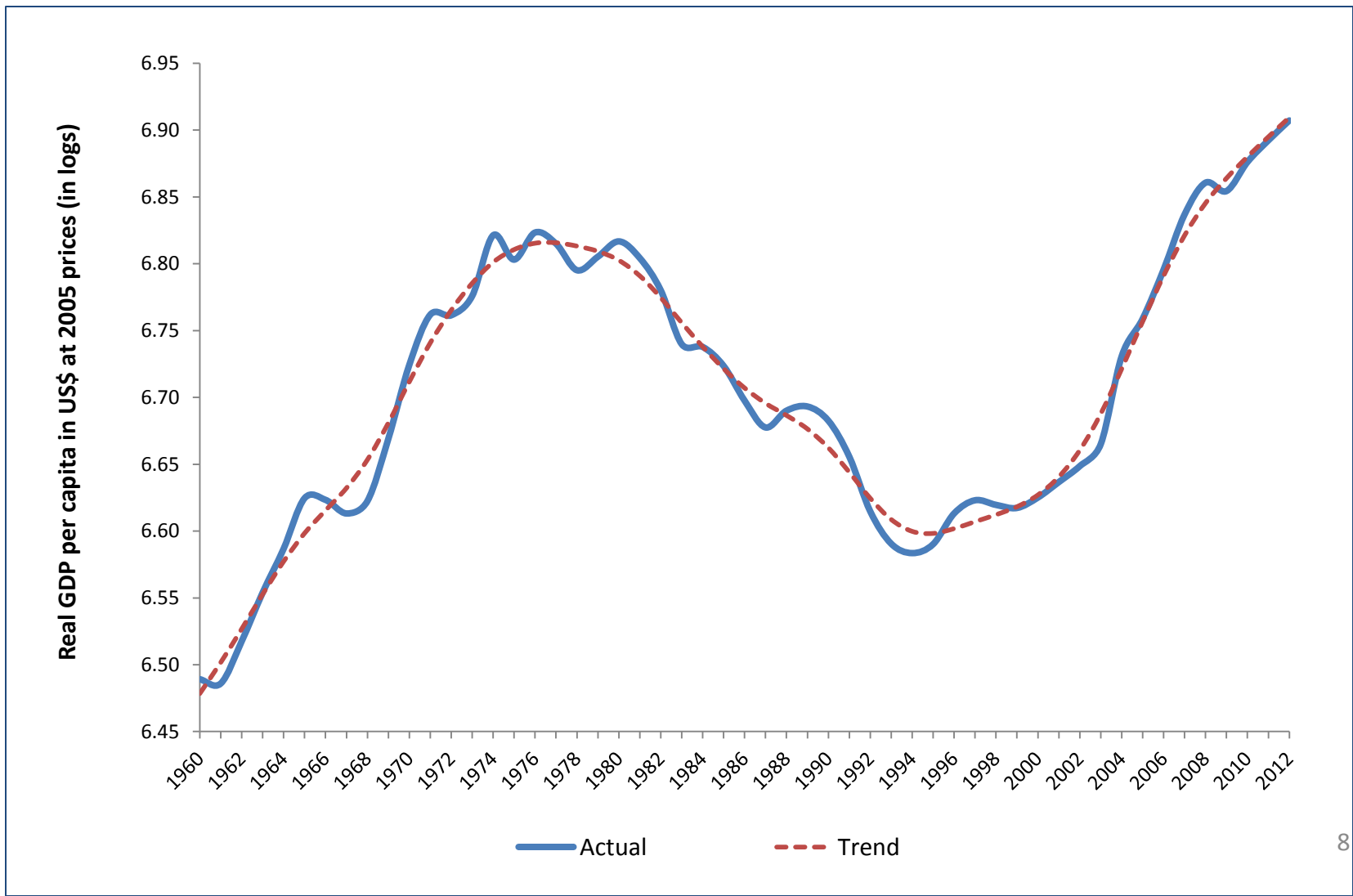
Source: Ferreira et al. (2013), building on Corak (2013)



Source: Brunori et al. (2013)

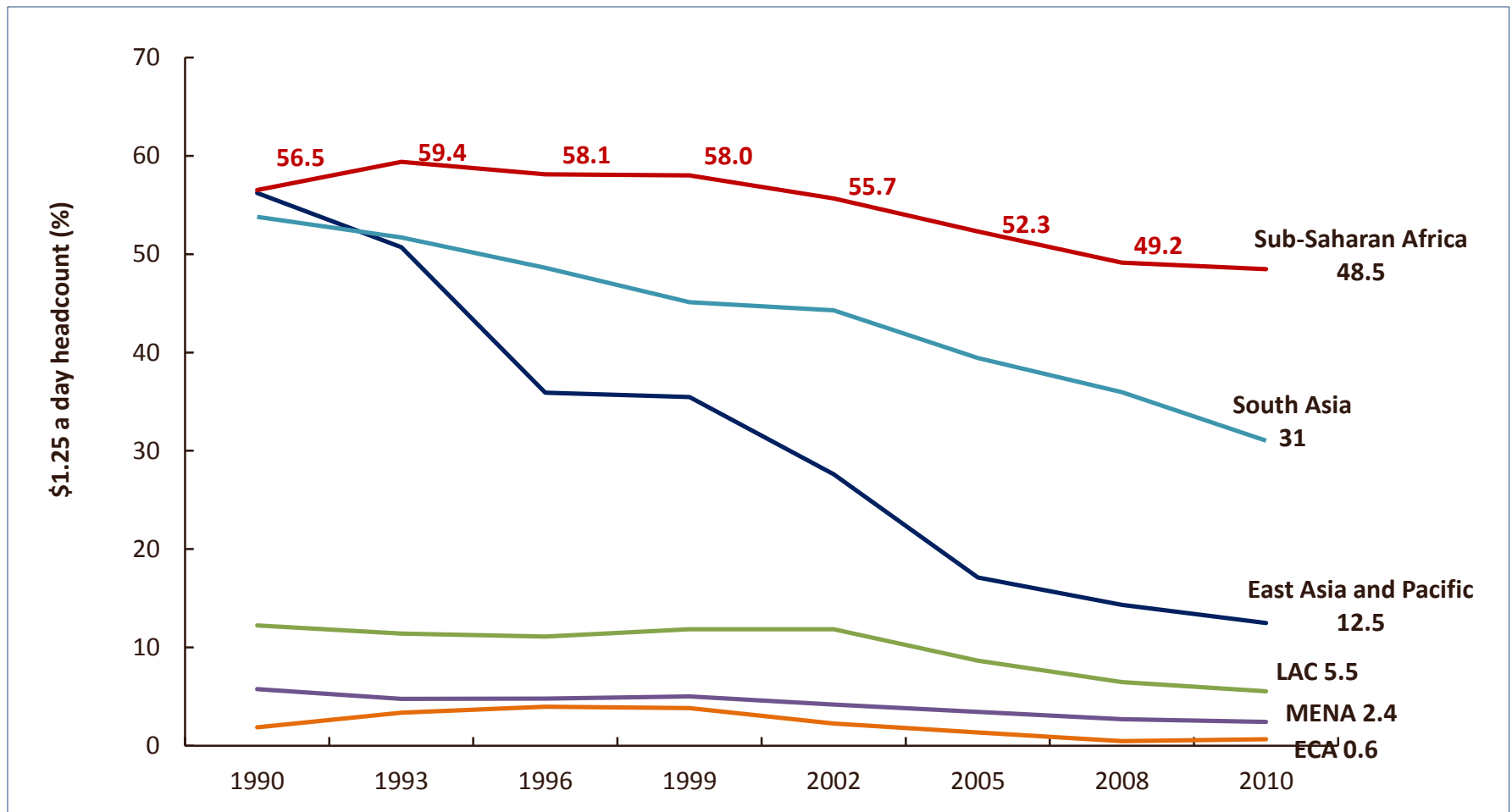
II. Evidence from Africa?

Real growth in GDP per capita since 1994, reversing two lost decades.



II. Evidence from Africa?

- But poverty reduction rates remain disappointing: In the last twenty years, extreme poverty fell by 8% in Africa, compared to 44% in East Asia.

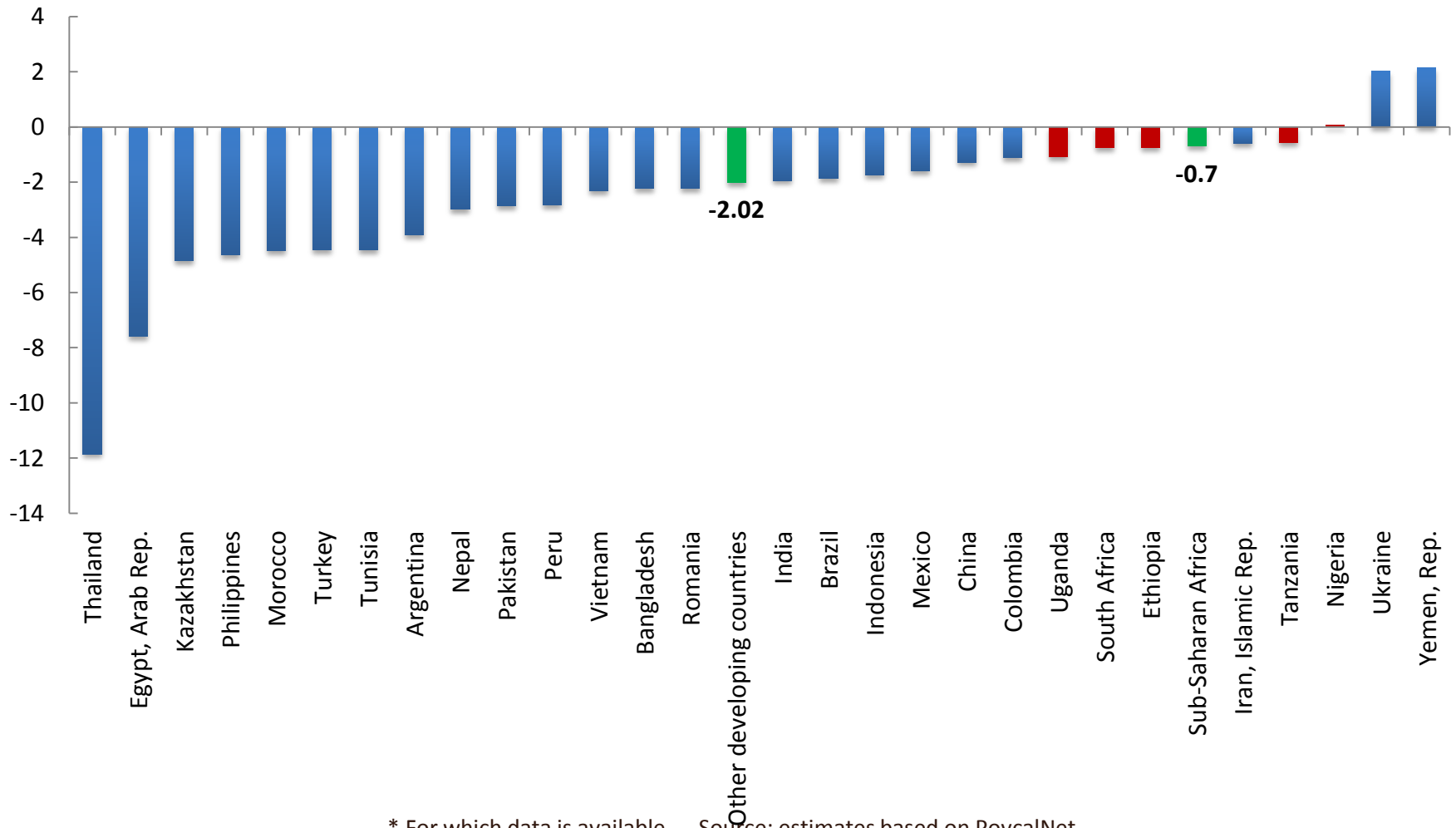


Source: PovcalNet.

II. Evidence from Africa?

Growth Elasticity of Poverty Reduction, 2000-2010

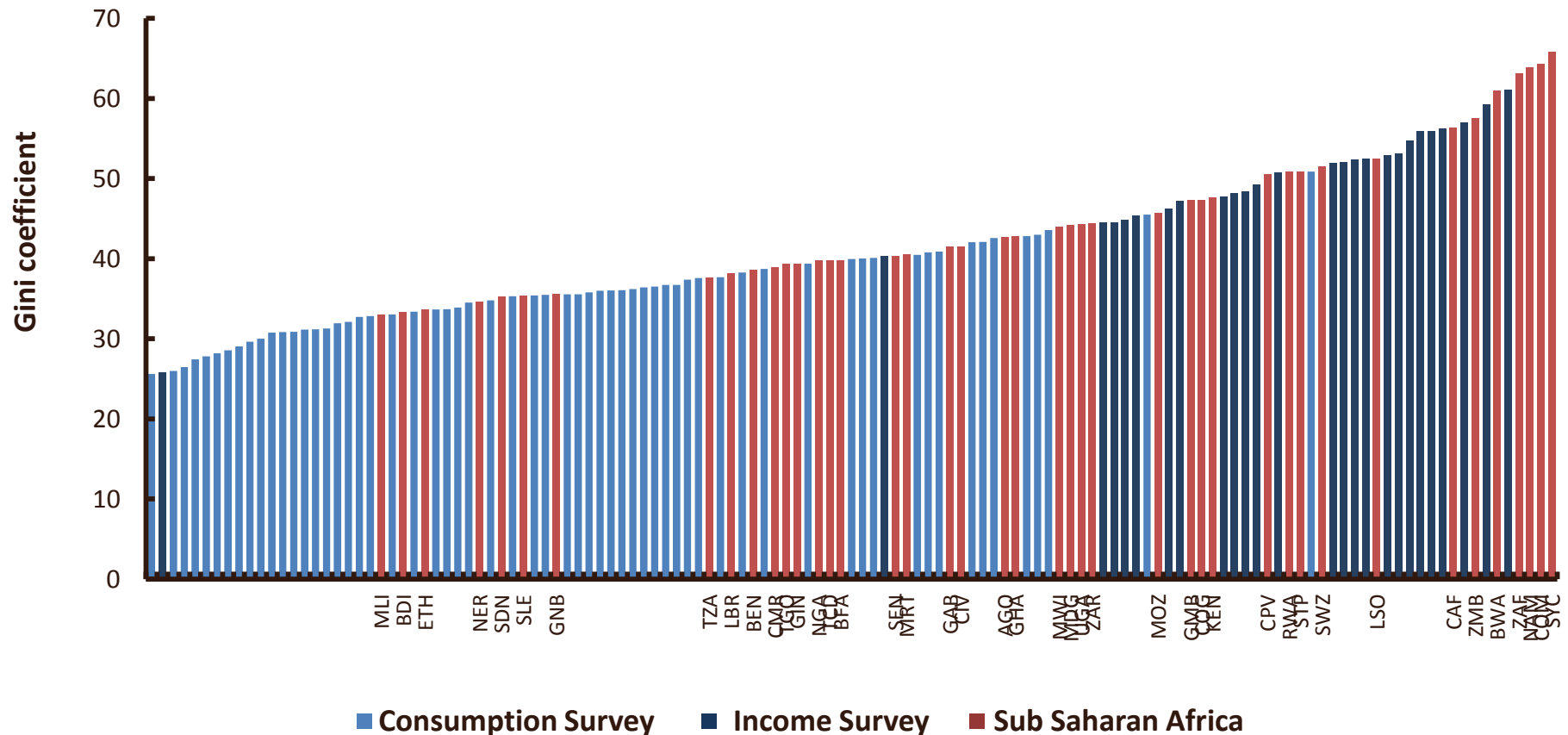
Five most populous countries by region*, except Poland and Sri Lanka.



* For which data is available. Source: estimates based on PovcalNet.

II. Evidence from Africa?

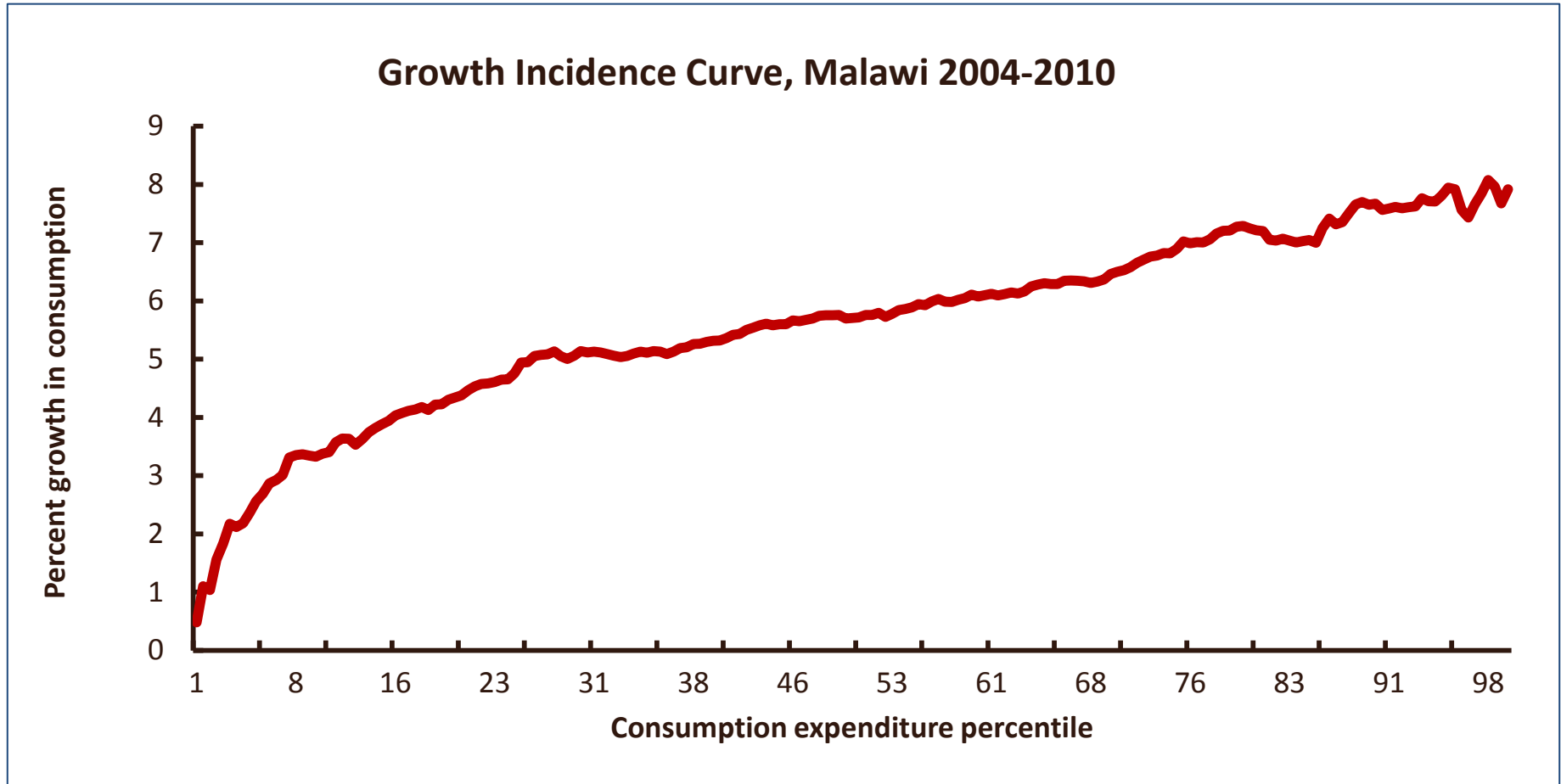
Consumption or income inequality levels vary a great deal across Africa. Seven of the ten most unequal countries in the world today are in SSA.



Source: PovcalNet, most recent survey available.

II. Evidence from Africa?

There is also inequality in the growth process itself.



Source: estimates based on household surveys from "Survey-based Harmonized Indicator Program (SHIP)"

Parting thoughts

1. On balance, the cross-country evidence is suggestive (rather than conclusive) of a negative association between inequality and growth.
 - This is particularly true for inequality “at the bottom”, and/or poverty.
2. But there is stronger evidence that higher inequality is associated with “lower-quality” growth:
 - Less stability; lower growth elasticity of poverty; less intergenerational mobility; more inequality of opportunity.
3. In Africa, lowering inequalities of wealth, access and opportunity is essential for reducing poverty and improving well-being:
 - Top and bottom