

L8: Inequality, Poverty and Development: The Evidence

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RECAP: Measuring Inequality and Poverty

- We reviewed conceptual and statistical issues in measuring living standards of households
- Given data on living standards of each household, we obtain a frequency distribution
- Poverty measured by head count ratio or poverty gap ratio, given a poverty line (international standard of \$1.25 a day)
- Inequality measurement is more complex
- Lorenz curves provide partial, graphical measure; Gini coefficient and CV are numerical, scalar measures

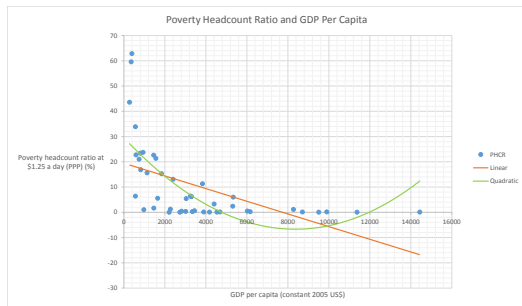
This Lecture: Facts Concerning How Inequality and Poverty Vary with Development

- Cross-section: how do inequality, poverty vary between poor, middle income and rich countries? Spatially?
- Time-series/longitudinal: how do they change for a given country as it develops?
- What policy-relevant inferences can we draw from these facts?

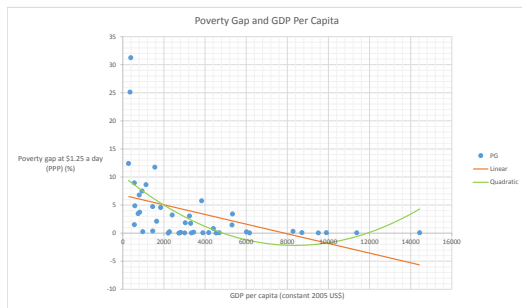
Poverty-Development Correlation

- **Poverty Fact 1:** *There is a robust negative correlation between poverty rates and pci*
- Both across countries at a point of time, and over time
- Irrespective of how poverty is measured: HCR, PGR, different poverty lines

Cross-Country HCR-PCI Regression, 2008 data, 48 Low and Middle Income Countries



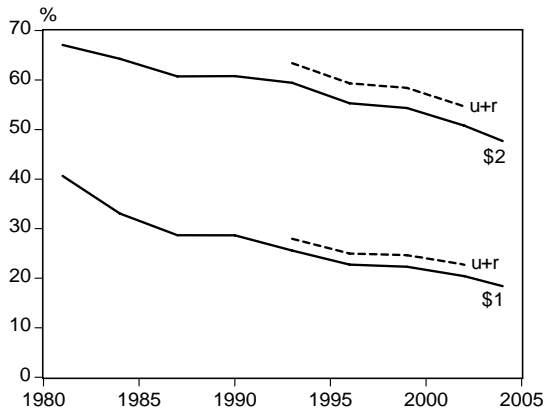
Cross-Country PGR-PCI Regression, 2008 data, 48 Low and Middle Income Countries



Poverty HCR, World Average, Changes Since 1980

Figure 1: Evolution of poverty measures over time, 1981-2004

(a) Headcount indices

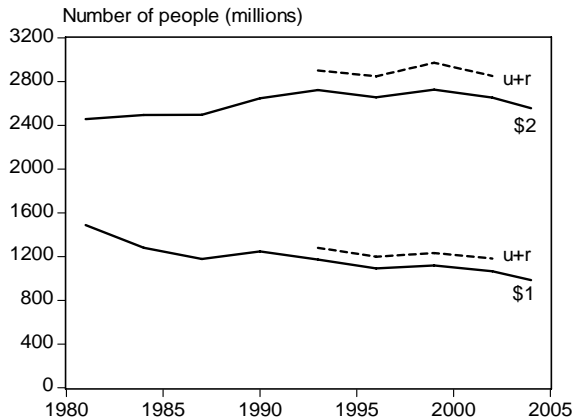


Poverty Facts, contd.

- **Poverty Fact 2:** *Despite sharp fall in poverty since 1980, one in six people in the world still live below \$1/day*
- Reduction in absolute number in poverty has been much less sharp than in HCR
- So there is still some way to go in eliminating poverty

Absolute Number of People in Poverty, Changes Since 1980

(b) Number of people below poverty lines



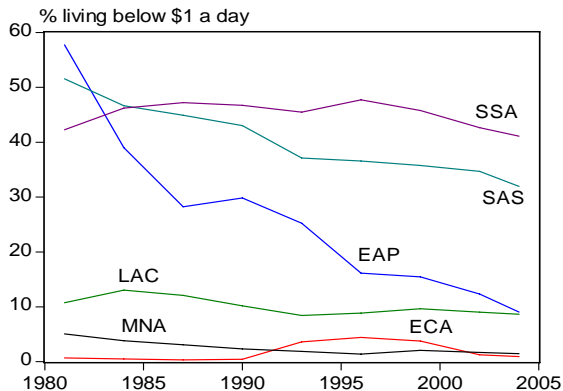
Poverty Facts, contd.

- **Poverty Fact 3:** *Poverty is highly concentrated geographically: in Sub-Saharan Africa and South Asia*
- China has achieved impressive reduction in poverty rates since 1980

Poverty HCR By Region, Changes Since 1980

Figure 2: Poverty measures by region 1981-2004

(a) Headcount index



Poverty Facts, contd.

- **Poverty Fact 4:** *Within countries, poverty is much higher in rural areas, compared with urban areas*
- Hence poverty reduction strategies have to focus on rural population in SS Africa and S Asia

Table : Urban and Rural Poverty (HCR), 2002

| Region | Urban | Rural |
|---------------------|-------|-------|
| East Asia & Pacific | 2.2 | 19.8 |
| of which, China | 0.8 | 22.4 |
| South Asia | 34.6 | 40.3 |
| of which, India | 39.3 | 43.6 |
| S-S Africa | 40.4 | 50.9 |
| Total, World | 13.2 | 29.7 |

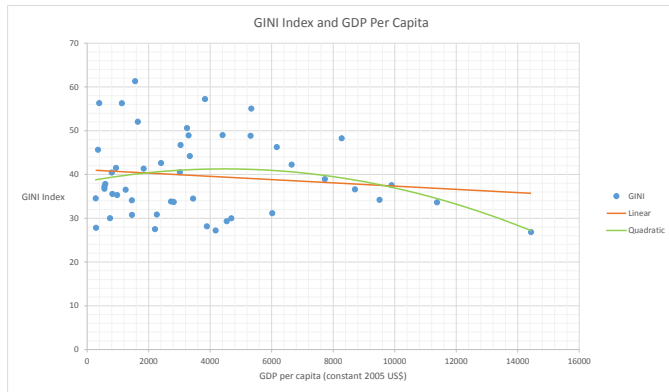
Reasons why Poverty Declines with Rising PCI

- Most of the poor have no assets (land, education, financial assets), apart from their labor power
- Poverty rates are thus related closely to employment and wage rates of unskilled workers
- Rising PCI raises demand for unskilled workers
- while shrinking their supply (reducing population growth rates, raising education and urbanization)
- *In absolute terms*, the poor become better off
- How about in relative terms — inequality development relation? Much more complex

Inequality-Development Facts: the Kuznets Curve

- In 1953, Simon Kuznets proposed an inverted-U relation between inequality and development
- He used the Kuznets ratio: share of richest 20% relative to poorest 60%
- Data for 18 countries showed an inverted-U relationship with p.c.i
- E.g., Sri Lanka 1.67, India 1.96, Puerto Rico 2.33, US 1.39, UK 1.25

KUZNETS CURVE, 2008 data, 48 Low and Middle Income countries



Kuznets Curve, contd.

- Kuznets also referred to historical evidence for 19th century US, UK
- This was subsequently confirmed by detailed historical analysis of Lindert and Williamson
- And then by detailed cross-sectional evidence (Ahluwalia, Deininger-Squire, Paukert) using different inequality measures (Gini, CV, Lorenz curves) for 50+ countries
- Suggested that inequality has an innate tendency to rise in early stages of development, and fall later

Kuznets Curve, contd.

- Some hypotheses to explain the Kuznets curve:
- Early stages of development involve poor people moving from low income occupations (e.g., rural, uneducated) to medium/high income occupations (urban, educated), while many still remain poor
- Once the majority of the population transits to modern occupations, further movements reduce inequality
- Compounded by other factors in later development stages: extension of franchise, education and health services, progressive taxation, slowdown of population growth

Interpreting the Kuznets curve

- The Kuznets curve acquired the aura of a law of development
- And bred an attitude that increasing inequality has to be accepted in early stages as an inevitable by-product of development
- A problem which would self-correct later on
- More fundamentally, an implicit belief in one-way causation from pci growth to inequality

Perils of Interpreting Cross-sectional Correlations

- First problem: interpreting cross-sectional evidence as what we would expect any given country to experience over time
- Assumes different countries are fundamentally the same
- Analogy: diet-health correlations
- Can be addressed by longitudinal/panel studies

Whats the Longitudinal Evidence for the Kuznets Curve?

- Earlier historical evidence for 19th century for US and UK (Lindert-Williamson)
- Piketty argues that 20th century evidence does not bear out the Kuznets curve story:
 - inequality declines in 20th century France, UK, US resulted from wars and rise in progressive taxation
 - inequality has been rising in these countries since 1980s
- **Longitudinal evidence for LDCs finds no evidence of a Kuznets curve: instead a U-pattern!**

Direction of Causation?

- The popular interpretation of the Kuznets curve presumed the direction of causality to run from development to inequality
- Couldn't it be the other way around: middle income countries with high inequality develop slower, remain stuck in a state of underdevelopment?
- As in the historical accounts of the divergence between North and South America?
- Never forget: **correlations establish nothing about direction of causation, or about existence of any causation either way**

Could High Inequality Retard Development?

- Reverse causation view would lead to a radically different interpretation: need to reduce inequality to promote development
- Various ways that high inequality can retard development:
 - low education, health of workers
 - low productivity agriculture
 - lack of access to credit for new entrepreneurs
 - elites block pro-development policies
 - Populist pressure for highly redistributive policies that lower growth
 - high crime, conflict, corruption

Cross-Country Growth Regressions Again

- Alesina-Rodrik (1994) provide evidence of effect of 1960 inequality in affecting pci growth rates between 1960-85
- They control for some of the Solow-determinants of growth
- Two inequality measures: Gini for income, and for land, in a year close to 1960

Table : Dependent Variable: pci growth rate 1960-85

| Regressor | Coefficient (t-value) | Coefficient (t-value) |
|--------------------|--------------------------|--------------------------|
| 1960 pci | -0.58 (3.47) | -0.38 (2.95) |
| 1960 Prim Educ | 3.70 (3.72) | 2.65 (2.56) |
| Enrol Rate | | |
| 1960 Income Gini | -12.93 (3.12) | -3.47 (1.80) |
| 1960 Land Gini | dropped | -5.21 (4.19) |
| Democracy dummy | dropped | 0.02 (0.05) |
| Constant | 6.48 (2.93) | 6.21 (4.61) |
| n, \bar{R}^2 | 70, 0.26 | 41, 0.51 |

Summary

- While poverty rates tend to fall with growth in pci , it is hard to draw any general conclusions concerning effects on inequality
- Caution against interpreting correlations, particularly cross-sectional correlations, as reflecting causal relations
- Correlations could result from causality in different directions, or reflect effect of omitted variables

Summary, contd.

- In particular, inequality and poverty could affect growth, as well as the other way around
- Hence policy measures to reduce poverty and inequality could be important ways to raise pci growth rates
- We shall examine sector-specific evidence later in this course: pro-growth effects of health, education, land reform, financial sector policies