Poverty, Inequality and Growth: 
Debates, Theories and Evidence

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“Even though the world is incomparably richer than ever before, ours is also a world of extraordinary deprivation and staggering inequality.” (Amartya Sen)
Debates about poverty and inequality in the world

• The extent of poverty and inequality in the world and how it is changing holds clues for some important ongoing debates about development policy.

• The longstanding debate about globalization is (in part) a debate about its distributional consequences.
One side of this debate:

“Growth really does help the poor: in fact it raises their incomes by about as much as it raises the incomes of everybody else. . globalization raises incomes, and the poor participate fully.” (The Economist)

“Evidence suggests that no one has lost out to globalization in an absolute sense.”

“Growth is sufficient. Period” (Surjit Bhalla, Imagine There’s No Country, Institute for International Economics, Washington DC)
The opposing view:

“There is plenty of evidence that current patterns of growth and globalization are widening income disparities and hence acting as a brake on poverty reduction.” (Justin Forsyth, Oxfam UK..)

“Globalization policies have contributed to increased poverty, increased inequality between and within nations” (International Forum for Globalization.)

• What are we to make of these differing views?
• Are they due to different data or different interpretations of the same data?
Outline of Lecture

1. Concepts and measures
2. Theories of distribution and growth
3. Evidence from cross-country comparisons
4. Some implications for policy
1. Concepts and measures

Confusion galore!

“inequality”
“pro-poor growth”
“poverty”
What do we mean by “inequality”?

One can find different definitions in public debates and policy discussions.
The standard axioms for an inequality measure are not universally accepted

**Axiom 1: Anonymity**: it does not matter who has which income level.
**Axiom 2: The (Pigou-Dalton) Transfer Principle**: transferring income from the poor to the rich must increase inequality.
**Axiom 3: Income scale independence**: multiplying all incomes by a constant does not change the inequality measure.

**Axiom 4: Population replication independence**: simply replicating the original population cannot increase inequality.
**Axiom 5: Decomposability**: total inequality = inequality between groups + inequality within groups.

The standard axioms for an inequality measure are not universally accepted

**Axiom 1: Anonymity**: it does not matter who has which income level.  **But it does matter in reality!**

**Axiom 2: The (Pigou-Dalton) Transfer Principle**: transferring income from the poor to the rich must increase inequality.

**Axiom 3: Income scale independence**: multiplying all incomes by a constant does not change the inequality measure. => Relative inequality measures; but absolute gaps also matter!

**Axiom 4: Population replication independence**: simply replicating the original population cannot increase inequality.

**Axiom 5: Decomposability**: total inequality = inequality between groups + inequality within groups. **Group identities may matter more than this allows.**

Relaxing scale independence: Relative vs. absolute inequality

• Relative inequality is about ratios; absolute inequality is about differences.
  – State A: two incomes $1,000 and $10,000 per year
  – State B: these rise to $2,000 and $20,000
  – Ratio is unchanged but the “rich” can buy 10 times more from the income gains in state B than can the “poor”

• One is not right and the other wrong. Indeed, 40% of participants in surveys of students view inequality in absolute terms.

• Whether one thinks about inequality as absolute or relative matters greatly to one’s views on the distribution of the gains from growth.
Two Gini indices of inequality

**Relative Gini index**

\[ G^r = \frac{1}{2n^2} \sum \sum \left| \frac{y_i}{\bar{y}} - \frac{y_j}{\bar{y}} \right| \]

**Absolute Gini index**

\[ G^a = \frac{1}{2n^2} \sum \sum |y_i - y_j| \]
Relaxing anonymity is harder

- Consider:
  - State A: two incomes $1,000 and $10,000 per year
  - State B: these are swapped to $10,000 and $1,000
- Both relative and absolute inequality is the same.
- Yet the poorest person in State A has gained enormously, while the richest has become the poorest.
- Relaxing anonymity typically calls for longitudinal ("panel" or retrospective) data observing incomes over time for the same people.
What do we mean by “pro-poor growth”?

Again, two very different definitions found in recent literature and policy debates
**Definition 1**: Pro-poor growth = growth with pro-poor redistribution

- Changes in distribution are poverty reducing, i.e., poverty falls by more than one would have expected holding distribution constant (1).

=> A negative “redistribution component” in the Datt-Ravallion (2) decomposition for changes in poverty.
  - Let \( P(\mu, L) \) = poverty measure with mean \( \mu \) and a vector of parameters, \( L \), describing the Lorenz curve.
  - The change in poverty between dates 1 and 2 (say) is “pro poor” if \( P(\mu^r, L_2) < P(\mu^r, L_1) \) for some fixed \( \mu^r \)

Further reading:
However, ...

• By this definition, distributional changes can be “pro-poor” with no absolute gain to the poor, or even falling living standards for poor people.

• Equally well, “pro-rich” distributional shifts may have come with large absolute gains to the poor.
**Definition 2**: Pro-poor growth is growth that benefits poor people.

Growth is pro-poor if and only if it accompanies a reduction in an agreed measure of poverty.*

*But what measure of poverty?*

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The Watts Index of poverty...

- is the mean proportionate poverty gap of the poor:

\[ P_t^W = E[\ln(z / y_t(p)) | p \leq H_t] \]

where: the **headcount index** is \( H_t = F_t(z) \), \( z \) = poverty line; \( y_t(p) \) is the quantile function (inverse of \( p = F_t(y_t) \)).

- This satisfies all accepted axioms for poverty measurement including: **focus axiom**, **monotonicity axiom**; **transfer axiom**, **transfer-sensitivity** and **subgroup consistency** (2).

Further reading:
A measure of pro-poor growth consistent with the Watts index

The “rate of pro-poor growth” is the mean growth rate of the poor:

\[ g_t^H = E[g_t(p) \mid p \leq H_t] \]

= area under the growth incidence curve (GIC) up to \( H \) normalized by \( H \). The GIC:

\[ g_t(p) = \ln(y_t(p) / y_{t-1}(p)) \]

where \( y_t(p) \) is the quantile function: \( y_t = F_t^{-1}(p) \)

Interpreting the rate of pro-poor growth

1. Rate of pro-poor growth = ordinary growth rate times a distributional correction, given by the ratio of the actual change in the Watts index to a counterfactual with no change in inequality:

\[ g_t^H = \left[ \frac{dP_t^W}{dP_t^{W*}} \right] g_t \]

\[ dP_t^W = -\left( \int g_t(p)dp \right) dt \]

\[ dP_t^{W*} = -H_t g_t dt \]

**Definition 1**: Distribution correction \( > 1 \)

**Definition 2**: Rate of pro-poor growth \( > 0 \)

2. Rate of pro-poor growth = the growth rate giving the same rate of poverty reduction as observed but with no change in inequality.
Note: $g^H$ is not the growth rate in the mean income of the poor

... which does not satisfy either the monotonicity or transfer axioms.

• If an initially poor person above the mean escapes poverty then the growth rate in the mean for the poor will be negative; yet poverty has fallen.
• This problem is avoided if one fixes $H$;
• but then the measure fails the focus and transfer axioms.
What do we mean by “poverty”?

Yet again one can find two different definitions in public debates and policy discussions.
Definition 1: Absolute poverty in the developing world

- **At country level:** all developing countries use poverty lines that aim to have the same real value at different dates and places.
  - Typically anchored to nutritional requirements for good health and normal activities

- **At the global level,** the World Bank’s widely-used “$1-a-day” line is absolute in that it aims to have the same purchasing power in different countries and at different dates.
Definition 2: Relative poverty in the developed world

The more common practice in most OECD countries and Eurostat has been to set the poverty line as a constant proportion—typically 40-60%—of the (date and country-specific) mean or median income:

\[ Z_i = k M_i \quad (0 < k < 1) \]

We can call this a strongly relative poverty line.
Past arguments for strongly relative measures

1. **Welfarist justification** claims that people attach value to their income relative to the mean in a given society and that poverty lines should be interpreted as a **money metric of utility**. “Relative deprivation.”

2. **Non-welfarist** (“capabilities”) justification: poverty lines should allow for differences in the **cost of social inclusion**, • This can be defined as the expenditure needed to cover certain commodities assuring that a person can participate with dignity in customary social and economic activities.

Welfarist interpretation: Disutility of relative deprivation

- Welfare depends on relative income:
  \[ U = U(Y, Y/M) \]
  \( Y = \) own income; \( M = \) mean income; \( U_Y > 0; U_{Y/M} > 0 \)
- The poverty line (\( Z \)) is “absolute” in the welfare space, but “relative” in consumption space:
  \[ \overline{U}_z = U(Z, Z/M) \]
- Inverting gives the poverty line as a function of the mean:
  \[ Z = Z(M, \overline{U}_z) \quad 0 < \frac{\partial \ln Z}{\partial \ln M} = \frac{1}{1 + M \cdot MRS} < 1 \]
  (where \( MRS = U_Y/U_{Y/M} \))
- Elasticity of the poverty line to mean is in \([0,1]\) interval
- \( \eta \) is increasing in \( M \) if (and only if) the elasticity of the \( MRS \) with respect to \( M \) is less than -1.
The perverse welfare assumption of strongly relative lines

- Strongly relative lines imply that people care only about relative income; no value on own income!

\[ U = U(Y / M) \]

\[ \overline{U}_z = U(Z / M) \]

\[ \Rightarrow Z = f(\overline{U}_z)M \ (f'(\overline{U}_z) > 0) \]
Non-welfarist interpretation: Capabilities and the cost of social inclusion

• Amartya Sen has argued that “capabilities” should be seen as absolute; “…an absolute approach in the space of capabilities translates into a relative approach in the space of commodities”.

• Following Tony Atkinson and Francois Bourguignon we can think of poverty as having both absolute and relative aspects in the income space.
  – The former is a failure to attain basic survival needs, with associated capabilities of being adequately nourished and clothed for meeting the physical needs of survival and normal activities.
  – On top of this, a person must also satisfy social needs, which depend crucially on the prevailing living standards in the place of residence.

• Atkinson-Bourguignon: To be non-poor one needs to be neither absolutely poor (“survival” capabilities) nor relatively poor (social inclusion capabilities).
It can be agreed that certain forms of consumption serve an important social role

• Famously, Adam Smith pointed to the social-inclusion role of a linen shirt in eighteenth century Europe:
  “..a creditable day-labourer would be ashamed to appear in public without a linen shirt, the want of which would be supposed to denote that disgraceful degree of poverty which, it is presumed, nobody can well fall into without extreme bad conduct.”

• Anthropologists have often noted the social roles played by festivals, celebrations, communal feasts, clothing
  – Seemingly high expenditures on celebrations and festivals by very poor people in survey data for a number of countries (Rao, Banerjee-Duflo).
  – Clothing can also serve a social role; conspicuous “designer label,” which he interpreted as status-seeking behavior.
  – Qat in Yemen “refusing to take qat is tantamount to accepting ostracisation” (Milanovic, 2008, p.684)
However, the social role of consumption does **not** imply strongly relative poverty lines

- The key assumption of strongly relative measures is that the cost of inclusion is a constant proportion of mean income.

- That is hardly plausible. The social-inclusion needs of very poor people may well be low, but it is difficult to see why they would go to zero in the limit.
  - Presumably a socially acceptable linen shirt would not have cost any less for the poorest person in eighteenth century Europe as for someone living at the poverty line.
  - Very poor people are highly constrained in spending on things that facilitate their social inclusion, but that does not mean that their inclusion needs are negligible.
Weakly vs. strongly relative lines

Social inclusion cost for poorest; e.g., Adam Smith’s linen shirt, which costs just as much for the poorest.
3. Theories of growth and distribution
The two-way relationship:

**Growth** $\rightarrow$ **distributional change** (higher inequality initially $+$ lower poverty)

**High poverty and inequality** $\rightarrow$ **low growth**

$\rightarrow$ **slow progress against poverty**
Does growth come with rising inequality?
Does growth reduce poverty?
The Kuznets Hypothesis

• Relative inequality increases in the early stages of growth in a developing country but begins to fall after some point,

• i.e., the relationship between inequality (on the vertical axis) and average income (horizontal) is predicted to trace out an inverted U.

Implications for poverty and growth

- Under the Kuznets Hypothesis, absolute poverty will tend to fall with growth.

- **Stage 1**: Rising inequality, but this will not be sufficient to eliminate gains to the poor from growth, given that it comes through higher incomes (with no losses, i.e., first-order dominance).

- **Stage 2**: Falling inequality will magnify the impact of growth on poverty.
High poverty and inequality
=> Low growth?

Does inequality impede growth?
Does poverty impede growth?
Is poverty self-perpetuating?
Theories of distribution-dependent growth

• Inequality restricts efficiency-enhancing cooperation amongst people, such that public goods needed for growth are underprovided or efficiency-enhancing policy reforms are blocked (Bardhan et al., 2000; Rajan, 2009).

• Political-economy models of redistribution argue that high inequality leads democratic governments to implement distortionary redistributive policies, e.g., Alesina and Rodrik (1994).
Theories based on credit-market failures

- Market failure attributed to information asymmetries, notably that lenders are imperfectly informed about borrowers.

- Key analytic feature: a suitably nonlinear relationship between an individual’s initial wealth and her future wealth (the “recursion diagram”).
  - With diminishing marginal products of capital, the mean future wealth will be a quasi-concave function of the distribution of current wealth.
  - Thus higher current inequality implies lower future mean wealth at a given value of current mean wealth, i.e., lower growth.
A neglected implication of such models: Poverty also impedes growth

Some theoretical models => Poverty itself can impede growth and (hence) poverty reduction

1. Lasting (adverse) productivity effects of poor nutrition, esp., in childhood (Dasgupta and Ray, 1986; Cunha and Heckman, 2007).

2. Lopez and Servén (2009) introduce a subsistence consumption requirement into the utility function in the model of Aghion et al. (1999) and show that higher poverty incidence (failure to meet the subsistence requirement) implies lower growth.
Implications of borrowing constraints

3. Banerjee and Duflo (2003 *) provide a simple but insightful growth model with a borrowing constraint.
   – Those with sufficient wealth will reach their unconstrained optimum, equating the marginal product of capital with the interest rate.
   – But the “wealth poor,” for whom the borrowing constraint is binding, will not be able to do so.
   – Banerjee and Duflo show that higher inequality in such an economy implies lower growth.

• However, their model also implies that higher current wealth poverty for a given mean also implies lower growth (**).

• In the Banerjee-Duflo model an unambiguously higher initial headcount index of poverty holding the initial mean constant implies a lower growth rate.

Nonlinear dynamics:
Inequality and poverty handicap growth

\[ w_{t+1} = \phi(w_t) \]

Unique equilibrium

Multiple equilibria
4. Evidence from cross-country comparisons

Does growth come with rising inequality?
Does growth reduce poverty?
Does high inequality and/or high poverty impede growth?
What is happening to aggregate poverty and inequality?
Testing the Kuznets Hypothesis

• Common formulation:

\[ Gini_{it} = \beta_0 + \beta_1 \ln Y_{it} + \beta_2 (\ln Y_{it})^2 + \gamma Z_{it} + \epsilon_{it} \]

• If the KH holds then we expect \( \beta_1 > 0 \) and \( \beta_2 < 0 \) and that \( -\beta_1/(2\beta_2) \) is within the range of the data.

• Typical control variables (\( Z \)) in the literature: socialist dummy, government transfers, share of state sector employment, external openness, age structure of population.
A simple quadratic relationship between Gini and GDI per capita, 1950-2000

Pooled countries and dates; n=1,000
• A weak inverted U relationship (more than 1000 Ginis)
• Huge variability in inequality; $R^2$ only 0.08
• The upward sloping part of the curve particularly hard to discern
• Turning point is quite unstable; here about $PPP$ 2,000 (level of Senegal or Zimbabwe)
• Even this weak inverted U vanishes with country fixed effects.

The most serious critique: With greater time series evidence, we find that very few developing countries have followed the prediction of KH.*

Changes in relative inequality are uncorrelated with growth

1. Across 120 spells (between two surveys), virtually zero correlation between changes in inequality (the log Gini index) and economic growth (change in the log of the survey mean or PCE).*  *Figure=>

2. Mean income of the poorest 20% (say) has a regression coefficient of about one on the overall growth rate**

Further reading:
r = -0.13
So growth is **typically** “pro-poor” by definition 2.
The extent to which growth is pro-poor has varied enormously between countries and over time

- A 1% rate of growth will bring anything from a modest drop in the poverty rate of 0.6% to a more dramatic 3.5% annual decline (95% CI).
- There have been plenty of cases of rising inequality during spells of growth. Indeed, inequality increases about half the time.

Distribution-neutrality on average does not mean that distribution is unchanging; in fact, it changes a lot

- Large fluctuations in measured inequality even when no long-run trend
- Some of this is measurement error; noise in inequality data
- But even seemingly small changes in a Gini index (say) can mean large welfare changes for the poor
What is happening to average household income between the surveys?

<table>
<thead>
<tr>
<th>What is happening to relative inequality?*</th>
<th>Falling</th>
<th>Rising</th>
</tr>
</thead>
</table>
| Rising                                    | 16% of spells  
Poverty is rising at a median rate of 14.3% per year | 30% of spells  
Poverty is falling at a median rate of 1.3% per year |
| Falling                                   | 26% of spells  
Poverty is rising at a median rate of 1.7% per year | 27% of spells  
Poverty is falling at a median rate of 9.6% per year |

* Relative Gini index
“Distribution-neutrality” does not mean that incomes of the poor rise “by about as much as everybody else”

• Given existing inequality, the rich will capture a much larger share of the gains from growth than the poor.

• The income gain to the richest 10% in India will be four times higher than the gain to the poorest 20%; 15+ times higher in South Africa.

Same data, but very different pictures

**Relative Gini**

- Annualized change in relative Gini index
- Annualized change in log mean

**Absolute Gini**

- Annualized change in absolute Gini index
- Annualized change in log mean

A less unequal world?
Absolute vs relative inequality

High inequality is an impediment to pro-poor growth

Mean elasticity close to zero in high inequality countries
High inequality is an impediment to pro-poor growth

- Even when inequality is not changing, it matters to the rate of poverty reduction
- It is not the rate of growth that matters, but the distribution-corrected rate of growth

\[
\text{Rate of poverty reduction} = \left[ \text{constant} \times (1 - \text{inequality})^2 \right] \times \text{growth rate}
\]

- Higher levels of inequality have progressively smaller impacts on the elasticity as inequality rises

Rate of poverty reduction with a 2% rate of growth in per capita income and a headcount index of 40% 

- **Low-inequality country** (Gini=0.30): the headcount index will be halved in **11 years**.

- **High inequality country** (Gini=0.60): it will then take **35 years** to halve the initial poverty rate.

- **Note**: the argument works in reverse: high inequality protects the poor from negative macro shocks.
Does high inequality and/or high poverty impede growth?
Past evidence on growth and inequality

• Empirical support from cross-country growth regressions for the view that a Gini index of inequality impedes growth at country level.
• However, not all the evidence has been supportive; also see Li and Zou (1999), Barro (2000) and Forbes (2000).
• The main reason why these studies have been less supportive appears to be that they have allowed for country-level fixed effects. Limited power for FE models with these data.
But is it inequality or poverty that matters?

• Recall that some growth theories suggest that it is high initial poverty at given mean that matters rather than inequality per se.
  – Theories based on borrowing constraints
  – Theories postulating a lasting (adverse) productivity effect of poor nutrition, esp., in childhood
Poverty and growth

• Benchmark regression:

\[ g_i(\mu_{it}) = 0.262 - 0.039 \ln \mu_{it-\tau} - 0.020 \ln H_{it-\tau} + \hat{e}_{it} \]

(8.470)  (-8.410)  (-5.513)

where \( g_i(\mu_{it}) = \ln(\mu_{it} / \mu_{it-\tau}) / \tau \)

Note: The regression is consistent with a derivative of current mean with respect to lagged mean that is less than unity, but fades toward zero at sufficiently long gaps between survey rounds.
Poverty and growth

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### Encompassing regressions

**Complete specification:**

\[ g_i(\mu_{it}) = \alpha + \beta \ln \mu_{it-\tau} + \gamma \ln H_{it-\tau} + \pi X_{it-\tau} + \nu_{it} \]

<table>
<thead>
<tr>
<th></th>
<th>(1) Survey Means</th>
<th>(2) Growth rates based on: Consumption from national accounts</th>
<th>(3) Survey Means</th>
<th>(4) Consumption from national accounts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>0.446</td>
<td>0.623</td>
<td>0.259</td>
<td>0.635</td>
</tr>
<tr>
<td></td>
<td>(0.831)</td>
<td>(1.255)</td>
<td>(1.318)</td>
<td>(1.298)</td>
</tr>
<tr>
<td>Initial mean ( for (1) and (3) and for (2) and (4))</td>
<td>-0.057***</td>
<td>-0.034***</td>
<td>-0.050**</td>
<td>-0.034***</td>
</tr>
<tr>
<td>Poverty rate ($2 a day)</td>
<td>-0.027***</td>
<td>-0.018***</td>
<td>-0.025**</td>
<td>-0.017***</td>
</tr>
<tr>
<td></td>
<td>(-5.536)</td>
<td>(-3.239)</td>
<td>(-5.991)</td>
<td>(-3.310)</td>
</tr>
<tr>
<td>Gini index</td>
<td>-0.018</td>
<td>-0.076*</td>
<td>-</td>
<td>-0.078*</td>
</tr>
<tr>
<td></td>
<td>(-0.372)</td>
<td>(-1.727)</td>
<td>-</td>
<td>(-1.800)</td>
</tr>
<tr>
<td>Income share of middle three quintiles</td>
<td>-0.117</td>
<td>-0.167**</td>
<td>-0.084**</td>
<td>-0.169**</td>
</tr>
<tr>
<td></td>
<td>(-1.505)</td>
<td>(-2.183)</td>
<td>(-4.245)</td>
<td>(-2.244)</td>
</tr>
<tr>
<td>Share of population in Western middle class</td>
<td>-0.127</td>
<td>-0.154***</td>
<td>-0.144**</td>
<td>-0.152***</td>
</tr>
<tr>
<td></td>
<td>(-2.781)</td>
<td>(-3.545)</td>
<td>(-3.005)</td>
<td>(-3.572)</td>
</tr>
<tr>
<td>The miser index (x100)</td>
<td>0.066</td>
<td>0.018</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>(1.108)</td>
<td>(1.038)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Primary school enrolment rate (log)</td>
<td>0.007</td>
<td>0.002</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>(0.729)</td>
<td>(0.253)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Life expectancy (log)</td>
<td>0.112***</td>
<td>0.147***</td>
<td>0.110**</td>
<td>0.151***</td>
</tr>
<tr>
<td></td>
<td>(2.795)</td>
<td>(3.894)</td>
<td>(3.122)</td>
<td>(4.164)</td>
</tr>
<tr>
<td>Price of investment (log)</td>
<td>-0.013***</td>
<td>-0.015***</td>
<td>-0.014**</td>
<td>-0.017***</td>
</tr>
<tr>
<td></td>
<td>(-2.482)</td>
<td>(-3.099)</td>
<td>(-2.827)</td>
<td>(-3.246)</td>
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<tr>
<td><strong>N</strong></td>
<td>0.539</td>
<td>0.503</td>
<td>0.531</td>
<td>0.502</td>
</tr>
<tr>
<td><strong>R²</strong></td>
<td>89</td>
<td>85</td>
<td>89</td>
<td>85</td>
</tr>
</tbody>
</table>

**Notes:**

- **N:** Number of observations.
- **R²:** Coefficient of determination.
Given these country experiences:

*What has been happening to inequality poverty in the developing world?*
Rising inequality in many developing countries

- Overall decline in inequality in the developing world, but not within countries
- Inequality increases about half the time during spells of growth.
- Rising inequality on average (more so in some regions than others).
- This is attenuating gains to the poor from growth.
What has been happening to poverty in the aggregate?

• With aggregate economic growth in the developing world since 1980 we have seen a trend decline in the incidence of poverty.
• Falling absolute numbers of extreme poor (<$1.25 a day) but rising numbers living between $1.25 and $2, and less progress in reducing the number living under $2.
• Why $1.25 a day?
National poverty lines for developing countries plotted against mean consumption using consumption PPPs for 2005

Note: Fitted values use a lowess smoother with bandwidth=0.8

OLS elasticity=0.66

$1.25 a day
Progress for the poorest in the aggregate

The % below $1.25 a day was halved, falling from 52% to 22% over 1981-2008.

– Trend decline of one % point per year.
– At this rate, the developing world as a whole has achieved the first Millennium Development Goal.

• Number of poor fell by 600 million, from 1.9 billion to 1.3 billion
• Poverty rate fell in all years
• Robust to choice of poverty line

The regional picture: uneven progress

Numbers of poor by region ($1.25 a day)

Population living under $1.25/day (millions)

- South Asia
- Sub-Saharan Africa
- East Asia
- Rest of the World
What about relative poverty?

Global (weakly) relative poverty lines

$$Z_i \equiv \max[\$1.25, \, \$0.60 + M_i / 3] = \$0.60 + \max[\$0.65, M_i / 3]$$

Excellent fit with data on national lines
Not just about success in China!

- Since 2000 we have seen a marked acceleration in poverty reduction outside China.
- Ratification of MDGs at Millennium Summit of 2000? Maybe, but very hard to say.
A tale of three regions

Headcount index (% below $1.25 a day)

East Asia
Africa
South Asia

Optimistic trajectories going forward

Maintaining the new path of poverty reduction since 2000:

• Lower bound (absolute poverty):
  – 19% this year (1.1 billion)
  – 14% in five years (0.9 billion)
  – 9% in 10 years (0.6 billion)
  – 3% by 2027—1 billion people lifted out of poverty!

• Upper bound (absolute + relative):
  – 46% this year (2.7 billion)
  – 44% in five years (2.7 billion)
  – 42% in 10 years (2.7 billion)

• The increase in numbers of relatively poor is expected to stabilize.
5. Conclusions:
Some implications for attacking poverty
Absolute versus relative?

Poverty

- Policy makers should **not** frame the problem of measuring poverty as a choice between “absolute” and “relative” measures.
- Rather they should be thought of as lower and upper bounds to the (unknown) absolute measure in the space of welfare. **Both measures are needed.**

Inequality

- Recognize that some people understand inequality differently to others. Absolute vs relative inequality.
- Debates often reflect these differences; “ships passing in the night.”
Should policy-makers be worried about rising inequality?

• Possibly it is inevitable to some degree. Arthur Lewis: “Development must be inegalitarian because it does not start in every part of the economy at the same time.”

• However, policy makers aiming for pro-poor economic growth should be concerned about those inequalities that impede prospects for poverty reduction.
How to achieve more pro-poor growth?

Literature and policy discussions point to the need to:

• Develop human and physical assets of poor
• Help make markets work better for the poor, esp., for credit and labor
• Removing biases against the poor in public spending, taxation, trade and regulation
• Promote agriculture and rural development; invest in local public goods in poor areas
• Provide an effective safety net; short term palliative or key instrument for long-term poverty reduction?
“Growth is sufficient” misses the point

• Those who say that growth is not enough are not saying that growth does not help.
• Heterogeneity in the impact of growth on poverty holds clues as to what else needs to be done on top of promoting economic growth.
• Rapid poverty reduction requires a combination of:
  – growth-promoting economic reforms with
  – the right social-sector programs and policies to help the poor participate fully in the opportunities unleashed by growth
• However, the political economy can make both sets of reforms difficult, especially in highly unequal societies. This is also true in democracies.