# Chapter 5

# **Poverty, Inequality, and Development**

# Distribution and Development: Seven Critical Questions

- What is the extent of relative inequality, and how is this related to the extent of poverty?

- Who are the poor?

- Who benefits from economic growth?

- Does rapid growth necessarily cause greater income inequality?

- Do the poor benefit from growth?

Distribution and Development: Seven Critical Questions

- Are high levels of inequality always bad?
- What policies can reduce poverty?

# 5.1 Measuring Inequality and Poverty

- Measuring Inequality
  - Size distributions (quintiles, deciles)
  - Lorenz curves
  - Gini coefficients and aggregate measures of inequality

## Size distributions (quintiles, deciles)

Acommon method is to divide the population into successive quintiles (fifths) or deciles (tenths) according to ascending income levels and then determine what proportion of the total national income is received by each income group.

Common measure of income inequality that can be derived from column 3 is the *ratio of the incomes received by the top 20% and bottom 40% of the population.*

This ratio, sometimes called a Kuznets ratio after Nobel laureate Simon Kuznets, has often been used as a measure of the degree of inequality between high- and low-income groups in a country. In our example, this inequality ratio is equal to 51 divided by 14, or approximately 3.64.

# Table 5.1  Typical Size Distribution of Personal Income in a Developing Country by Income Shares—Quintiles and Deciles

| Individuals | Personal Income (money units) | Share of Total Income (%) | |
| --- | --- | --- | --- |
| | | Quintiles | Deciles |
| 1 | 0.8 | | |
| 2 | 1.0 | | 1.8 |
| 3 | 1.4 | | |
| 4 | 1.8 | 5 | 3.2 |
| 5 | 1.9 | | |
| 6 | 2.0 | | 3.9 |
| 7 | 2.4 | | |
| 8 | 2.7 | 9 | 5.1 |
| 9 | 2.8 | | |
| 10 | 3.0 | | 5.8 |
| 11 | 3.4 | | |
| 12 | 3.8 | 13 | 7.2 |
| 13 | 4.2 | | |
| 14 | 4.8 | | 9.0 |
| 15 | 5.9 | | |
| 16 | 7.1 | 22 | 13.0 |
| 17 | 10.5 | | |
| 18 | 12.0 | | 22.5 |
| 19 | 13.5 | | |
| 20 | 15.0 | 51 | 28.5 |
| Total (national income) | 100.0 | 100 | 100.0 |

# Figure 5.1  The Lorenz Curve
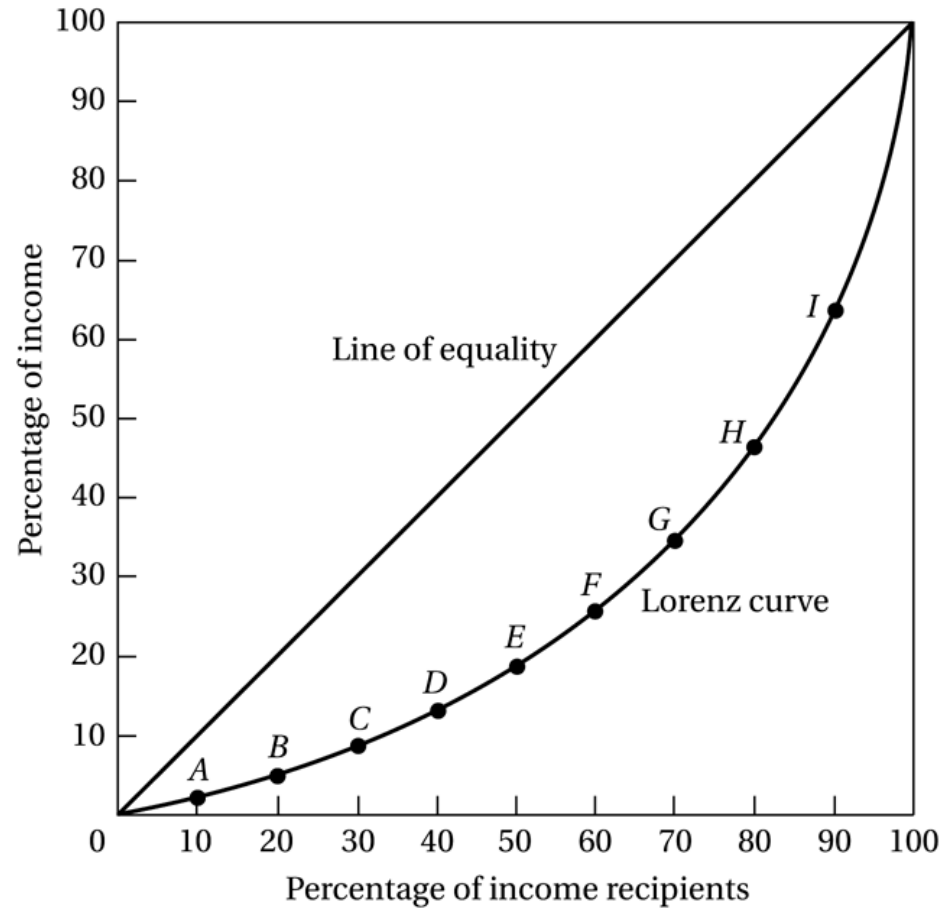
# Lorenz Curves

- The numbers of income recipients are plotted on the horizontal axis, not in absolute terms but in cumulative percentages.

- The vertical axis shows the share of total income received by each percentage of population. It is also cumulative up to 100%, meaning that both axes are the same length.

- the Gini coefficient for countries with highly unequal income distributions typically lies between 0.50 and 0.70, while for countries with relatively equal distributions, it is on the order of 0.20 to 0.35.

# Figure 5.2  The Greater the Curvature of the Lorenz Line, the Greater the Relative Degree of Inequality
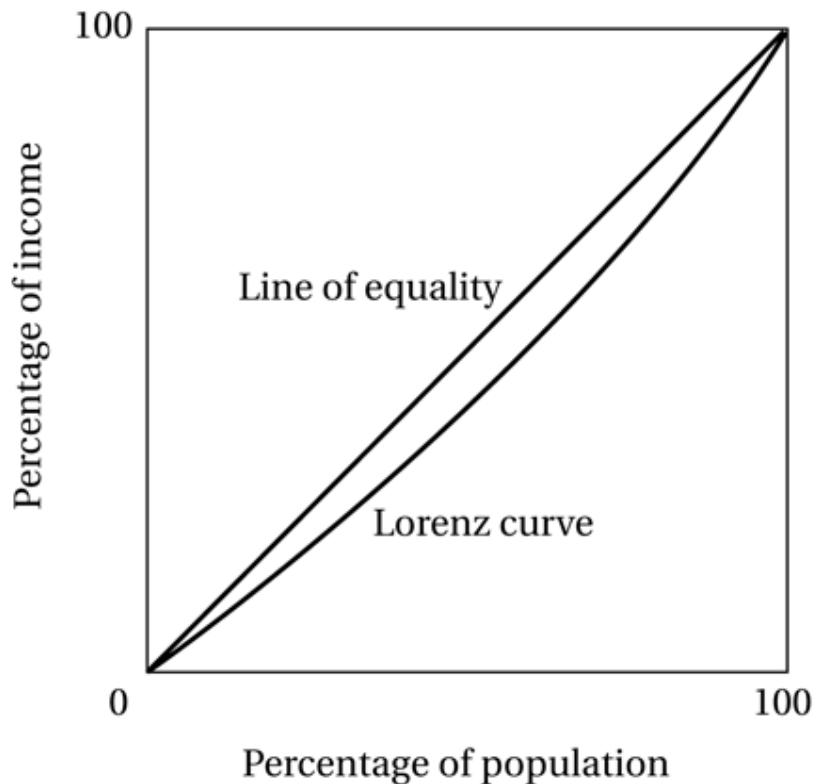


(a) A relatively equal distribution
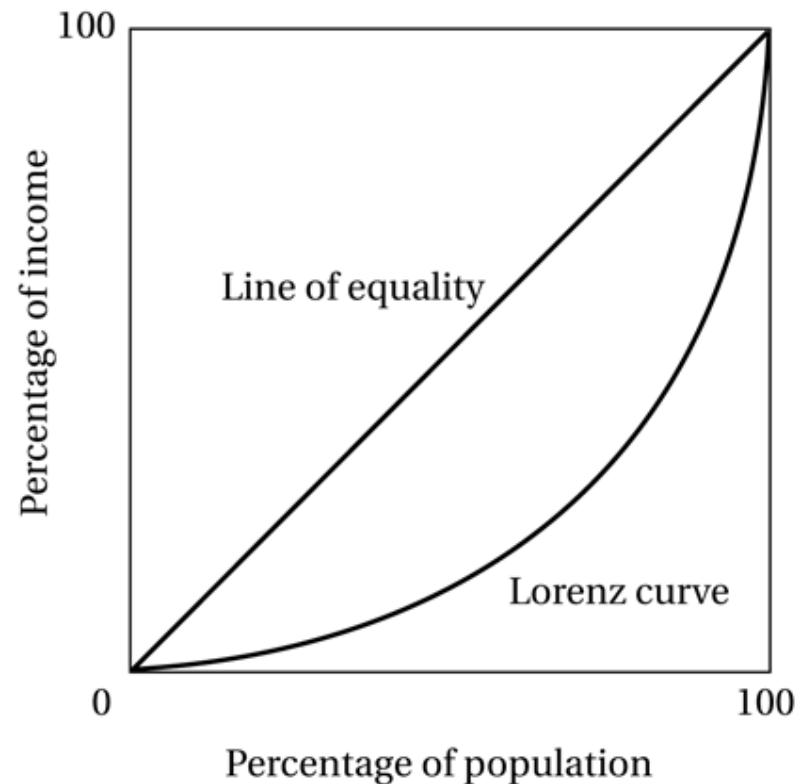
(b) A relatively unequal distribution

# Figure 5.3  Estimating the Gini Coefficient



Gini coefficient = $\dfrac{\text{shaded area } A}{\text{total area } BCD}$

Line of equality

$A$

Lorenz curve

Percentage of income

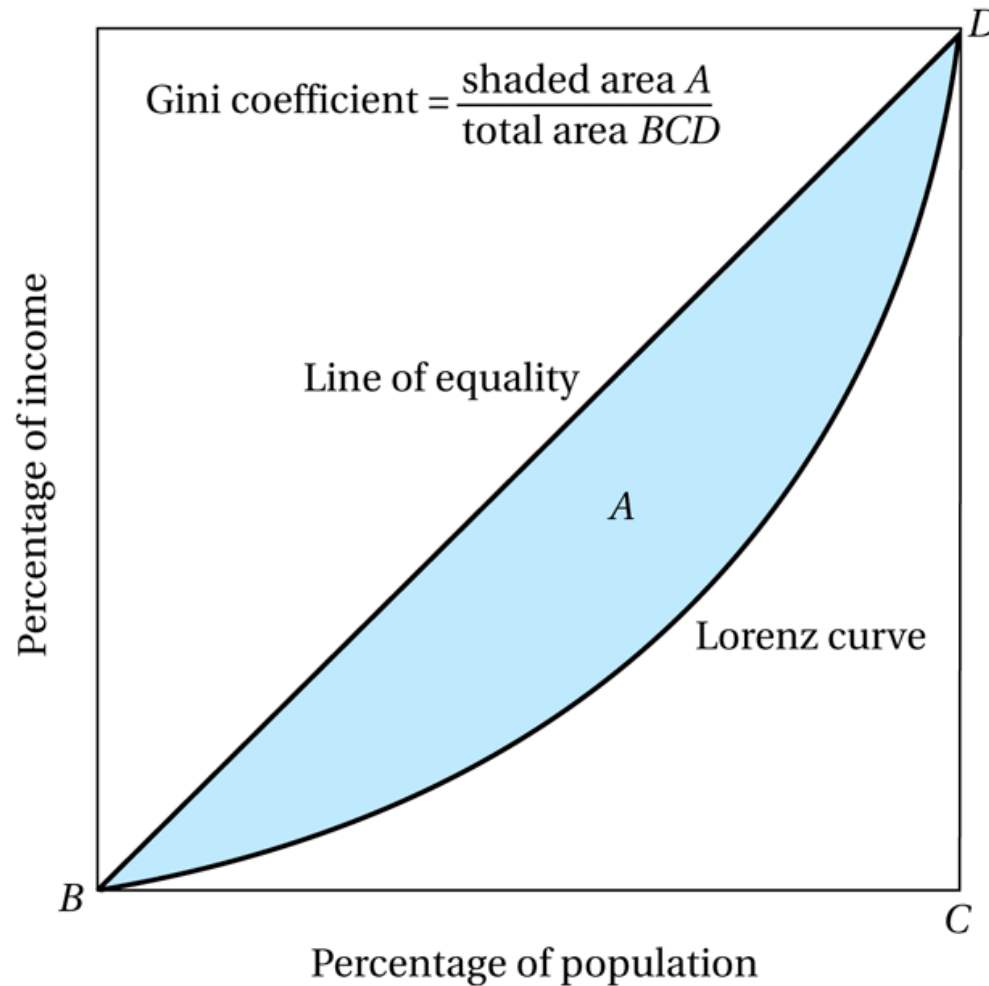Percentage of population

$B$   $C$   $D$

# Figure 5.4  Four Possible Lorenz Curves

Whenever two Lorenz curves cross, such as curves B and C, the Lorenz criterion states that we "need more information" or additional assumptions before we can determine which of the underlying economies is more equal. The curve B represents a more equal economy, since the poorest are richer, even though the richest are also richer (and hence the middle class is "squeezed").
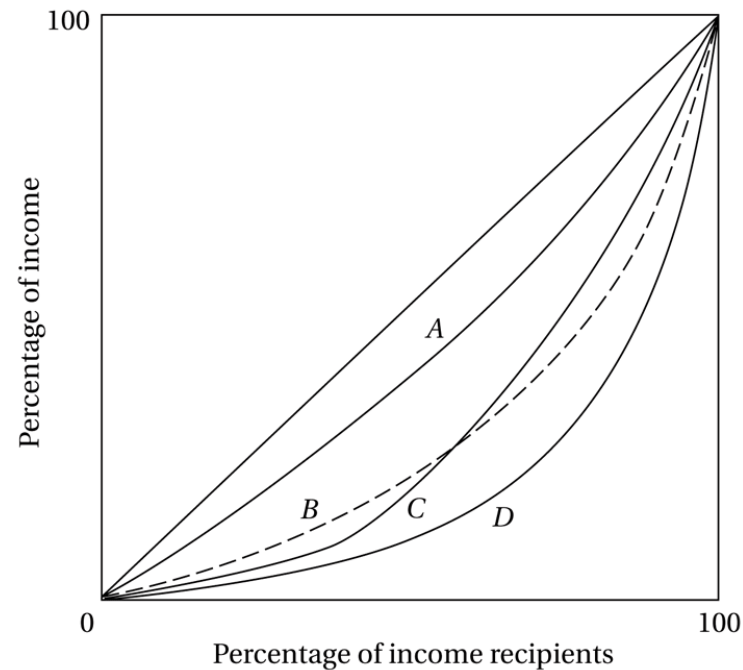
- Gini coefficient is among a class of measures that satisfy four highly desirable properties:

1. The **anonymity principle** simply means that our measure of inequality should not depend on who has the higher income; for example, it should not depend on whether we believe the rich or the poor to be good or bad people.

2. The **scale independence principle** means that our measure of inequality should not depend on the size of the economy or the way we measure its income.

3. The **population independence principle** is somewhat similar; it states that the measure of inequality should not be based on the number of income recipients.

4. The **transfer principle** (called the Pigou-Dalton principle); it states that, holding all other incomes constant, if we transfer some income from a richer person to a poorer person (but not so much that the poorer person is now richer than the originally rich person), the resulting new income distribution is more equal.

# 5.1 Measuring Inequality and Poverty
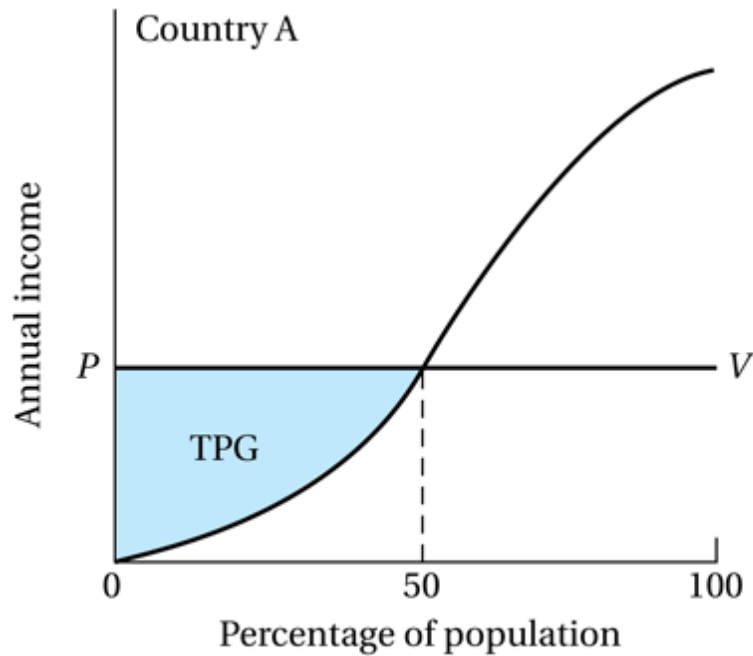
- ## Measuring Absolute Poverty

The situation of being unable or only barely able to meet the subsistence essentials of food, clothing, and shelter.

- Headcount Index: *H/N*

- Where *H* is the number of persons who are poor and N is the total number of people in the economy

- Total poverty gap:

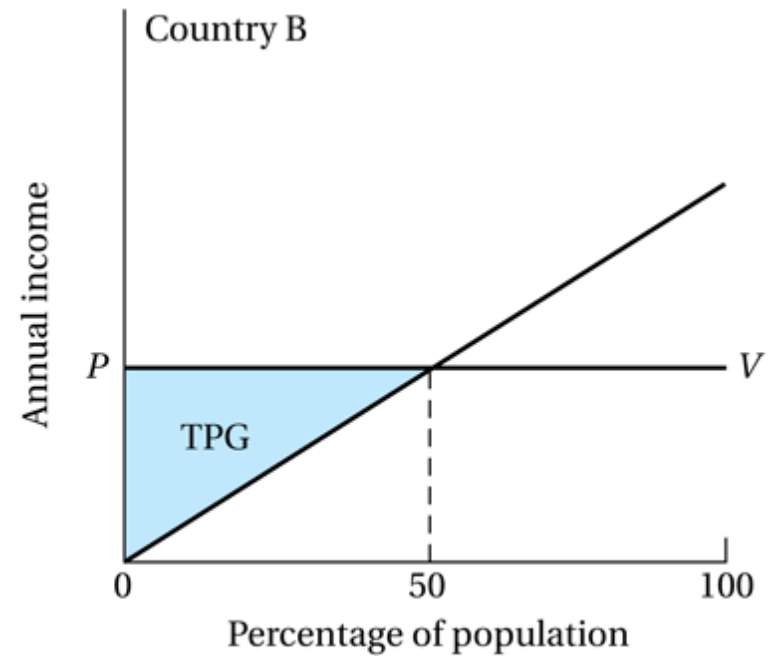$$TPG = \sum_{i=1}^{H}(Y_p - Y_i)$$

- Where $Y_p$ is the absolute poverty line; and $Y_i$ the income of the *i*th poor person

# Figure 5.6  Measuring the Total Poverty Gap



(a) A relatively large poverty gap

(b) A relatively small poverty gap

# 5.1 Measuring Inequality and Poverty

- Measuring Absolute Poverty
  - Average poverty gap (APG):

$$APG = \frac{TPG}{N}$$

  - Where N is number of persons in the economy
  - TPG is total poverty gap
  - Note: normalized poverty gap, NPG = APG/$Y_p$

# 5.1 Measuring Inequality and Poverty

- Measuring Absolute Poverty
  - Average income shortfall (AIS):

$$AIS = \frac{TPG}{H}$$

  - Where H is number of poor persons
  - TPG is total poverty gap
  - Note: Normalized income shortfall, NIS = AIS/$Y_p$

# 5.1 Measuring Inequality and Poverty

- ## Measuring Absolute Poverty (continued)
  - The Foster-Greer-Thorbecke (FGT) index:

  $$P_\alpha = \frac{1}{N} \sum_{i=1}^{H} \left( \frac{Y_p - Y_i}{Y_p} \right)^{\alpha}$$

  - *N* is the number of persons, *H* is the number of poor persons, and $\alpha \geq 0$ is a parameter
  - When $\alpha = 0$, we get the headcount index measure
  - When $\alpha = 2$, we get the "$P_2$" measure

  $$P_2 = \left( \frac{H}{N} \right) [\mathrm{NIS}^2 + (1 - \mathrm{NIS})^2 (\mathrm{CV}_P)^2]$$

The impact on measured poverty of a gain in income by a poor person increases in proportion to the distance of the person from the poverty line.

For example, raising the income of a person from a household living at half the per capita poverty line by, say, one penny per day would have five times the impact on poverty reduction as would raising by the same amount the income of a person living at 90% of the poverty line.

$P2$ increases whenever $H/N$, NIS, or CV$p$ increases.

Note from the formula that there is a greater emphasis on the distribution of income among the poor (CV$p$) when the normalized income shortfall is small and a smaller emphasis when the NIS is large.

$P2$ has become a standard of income poverty measure used by the World Bank and other agencies.

# 5.1 Measuring Inequality and Poverty

- Measuring Absolute Poverty
  - The Newly Introduced Multidimensional Poverty Index

# The Multidimensional Poverty Index (MPI)

- Identification of poverty status through a *dual cutoff*:

- First, cutoff levels within each dimension (analogous to falling below a poverty line for example $1.25 per day for income poverty);

- Second, cutoff in the number of dimensions in which a person must be deprived (below a line) to be deemed *multidimensionally* poor.

- MPI focuses on deprivations in health, education, and standard of living; and each receives equal (that is one-third of the overall total) weight.

# MPI Indicators

- Health - two indicators with equal weight - whether any child has died in the family, and whether any adult or child in the family is malnourished – weighted equally (each counts as one-sixth toward the maximum deprivation in the MPI)

- Education - two indicators with equal weight - whether no household member completed 5 years of schooling, and whether any school-aged child is out of school for grades 1 through 8 (each counts one-sixth toward the MPI).

- Standard of Living, equal weight on 6 deprivations (each counts as 1/18 toward the maximum): lack of electricity; insufficiently safe drinking water; inadequate sanitation; inadequate flooring; unimproved cooking fuel; lack of more than one of 5 assets – telephone, radio, TV, bicycle, and motorbike.

# Interaction of the deprivations?

- Building the index from household measures up to the aggregate measure (rather than using already-aggregated statistics), MPI approach takes account of multiplied or interactive harm (complementarity) done when multiple deprivations are experienced by the *same individual or family*

- The MPI approach assumes an individual's lack of capability in one area can only to a degree be made up by other capabilities – capabilities are treated as substitutes up to a point but then as complements.

# Computing the MPI

- The MPI for the country (or region or group) is then computed

- A convenient way to express the resulting value is H*A, i.e.,

- The product of the headcount ratio $H$ (the percent of people living in multidimensional poverty), and the average intensity of deprivation $A$ (the percent of weighted indicators for which poor households are deprived on average).

- The adjusted headcount ratio $HA$ is readily calculated

- HA satisfies some desirable properties. Important example -

- *Dimensional monotonicity*: If a person already identified as poor becomes deprived in *another* indicator she is measured as even *poorer* - not the case using a simple headcount ratio.

# Table 5.2  MPI Rankings and Poverty Headcounts for Selected Countries

| Country | Year | MPI Value | MPI Rank | $H_M$ (proportion of poor) | A (average intensity of deprivations) | Income Poverty — $1.25 a Day (proportion of poor) Value | Rank | Income Poverty — $2 a Day (proportion of poor) Value | Rank |
|---|---|---|---|---|---|---|---|---|---|
| Kazakhstan | 2006 | 0.002 | 7 | 0.006 | 0.369 | 0.031 | 23 | 0.172 | 29 |
| Thailand | 2005 | 0.006 | 16 | 0.016 | 0.385 | 0.020 | 1 | 0.115 | 20 |
| Ecuador | 2003 | 0.009 | 24 | 0.022 | 0.416 | 0.047 | 26 | 0.128 | 23 |
| Mexico | 2006 | 0.015 | 29 | 0.040 | 0.389 | 0.020 | 1 | 0.048 | 16 |
| Brazil | 2003 | 0.039 | 39 | 0.085 | 0.460 | 0.052 | 29 | 0.127 | 21 |
| Colombia | 2005 | 0.041 | 40 | 0.092 | 0.441 | 0.160 | 42 | 0.279 | 35 |
| Dominican Republic | 2000 | 0.048 | 42 | 0.111 | 0.433 | 0.050 | 28 | 0.151 | 27 |
| China | 2003 | 0.056 | 44 | 0.125 | 0.449 | 0.159 | 41 | 0.363 | 41 |
| Viet Nam | 2002 | 0.075 | 50 | 0.143 | 0.525 | 0.215 | 50 | 0.484 | 51 |
| Indonesia | 2007 | 0.095 | 53 | 0.208 | 0.459 | 0.075 | 31 | 0.490 | 52 |
| Ghana | 2008 | 0.140 | 57 | 0.301 | 0.464 | 0.300 | 57 | 0.536 | 56 |
| Zimbabwe | 2006 | 0.174 | 60 | 0.385 | 0.452 | | | | |
| Bolivia | 2003 | 0.175 | 61 | 0.363 | 0.483 | 0.196 | 46 | 0.303 | 38 |
| Nicaragua | 2001 | 0.211 | 64 | 0.407 | 0.519 | 0.158 | 40 | 0.318 | 40 |
| Lao | 2006 | 0.267 | 68 | 0.472 | 0.565 | 0.440 | 46 | 0.768 | 73 |
| Pakistan | 2007 | 0.275 | 70 | 0.510 | 0.540 | 0.226 | 53 | 0.603 | 59 |
| Yemen | 2006 | 0.283 | 71 | 0.525 | 0.539 | 0.175 | 43 | 0.466 | 49 |
| Bangladesh | 2007 | 0.291 | 73 | 0.578 | 0.504 | 0.496 | 71 | 0.813 | 80 |
| India | 2005 | 0.296 | 74 | 0.554 | 0.535 | 0.416 | 64 | 0.756 | 70 |
| Kenya | 2003 | 0.302 | 76 | 0.604 | 0.500 | 0.197 | 47 | 0.399 | 43 |
| Haiti | 2006 | 0.306 | 77 | 0.573 | 0.533 | 0.549 | 76 | 0.721 | 67 |
| Côte d'Ivoire | 2005 | 0.320 | 78 | 0.522 | 0.614 | 0.233 | 55 | 0.468 | 50 |
| Nepal | 2006 | 0.350 | 82 | 0.647 | 0.540 | 0.551 | 77 | 0.776 | 76 |
| Tanzania | 2008 | 0.367 | 84 | 0.653 | 0.563 | 0.885 | 93 | 0.966 | 93 |
| DR Congo | 2007 | 0.393 | 88 | 0.732 | 0.537 | 0.592 | 79 | 0.795 | 77 |
| Madagascar | 2004 | 0.413 | 91 | 0.705 | 0.585 | 0.678 | 86 | 0.896 | 87 |
| Angola | 2001 | 0.452 | 93 | 0.774 | 0.584 | 0.543 | 89 | 0.900 | 88 |
| Ethiopia | 2005 | 0.582 | 103 | 0.900 | 0.647 | 0.390 | 62 | 0.775 | 75 |
| Niger | 2006 | 0.642 | 104 | 0.927 | 0.693 | 0.659 | 85 | 0.856 | 85 |

# Multidimensional poverty tells a different story than income poverty

- The results showed that knowing income poverty is not enough if our concern is with multidimensional poverty.

- Multidimensionally, Bangladesh is substantially less poor - but Pakistan substantially poorer - than would be predicted by income poverty

- Ethiopia is far more multidimensionally poor, and Tanzania much less so, than predicted by income poverty.

- Most Latin American countries e.g. Brazil rank worse on multidimensional poverty than on income poverty; but Colombia's income and MPI poverty ranks are about same.

# 5.2 Poverty, Inequality, and Social Welfare

- What's So Bad about Extreme Inequality?
- Dualistic Development and Shifting Lorenz Curves: Some Stylized Typologies
  - Traditional sector enrichment (see Figure 5.7)
  - Modern sector enrichment (see Figure 5.8)
  - Modern sector enlargement (see Figure 5.9)

# Figure 5.7  Improved Income Distribution under the Traditional-Sector Enrichment Growth Typology
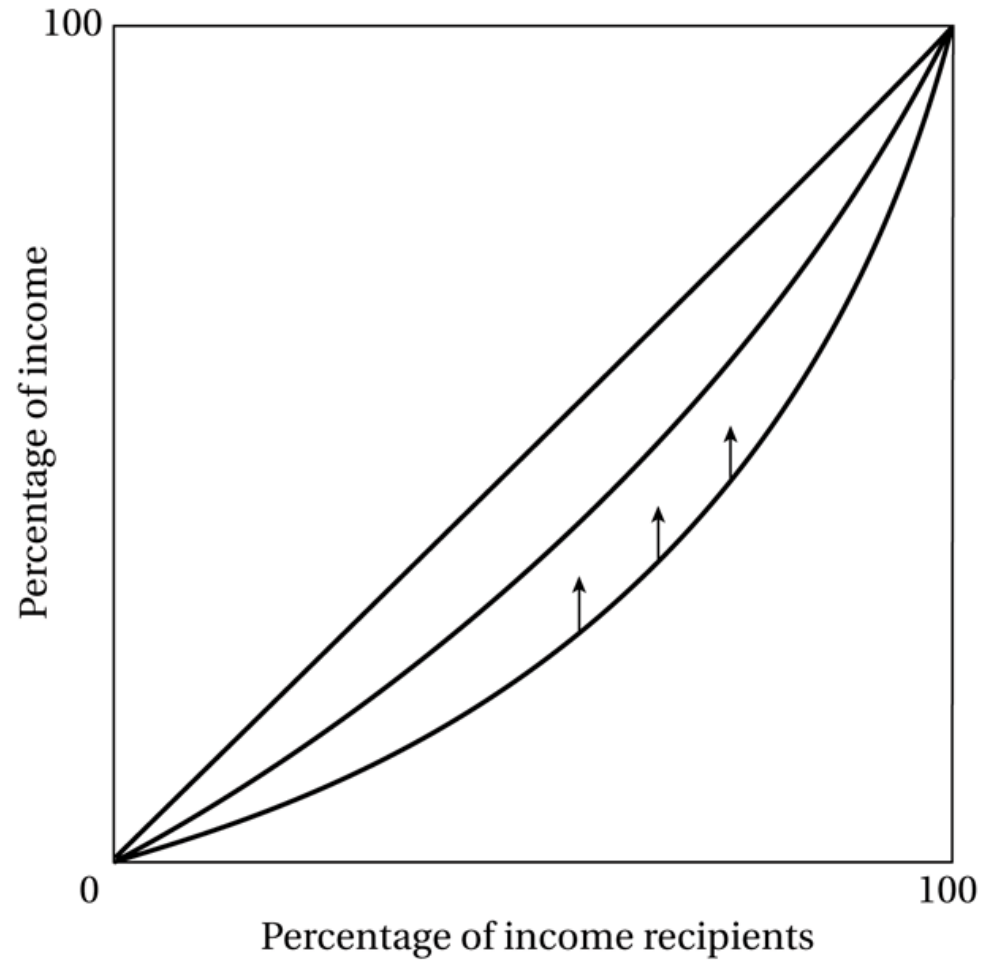
# Figure 5.8  Worsened Income Distribution under the Modern-Sector Enrichment Growth Typology
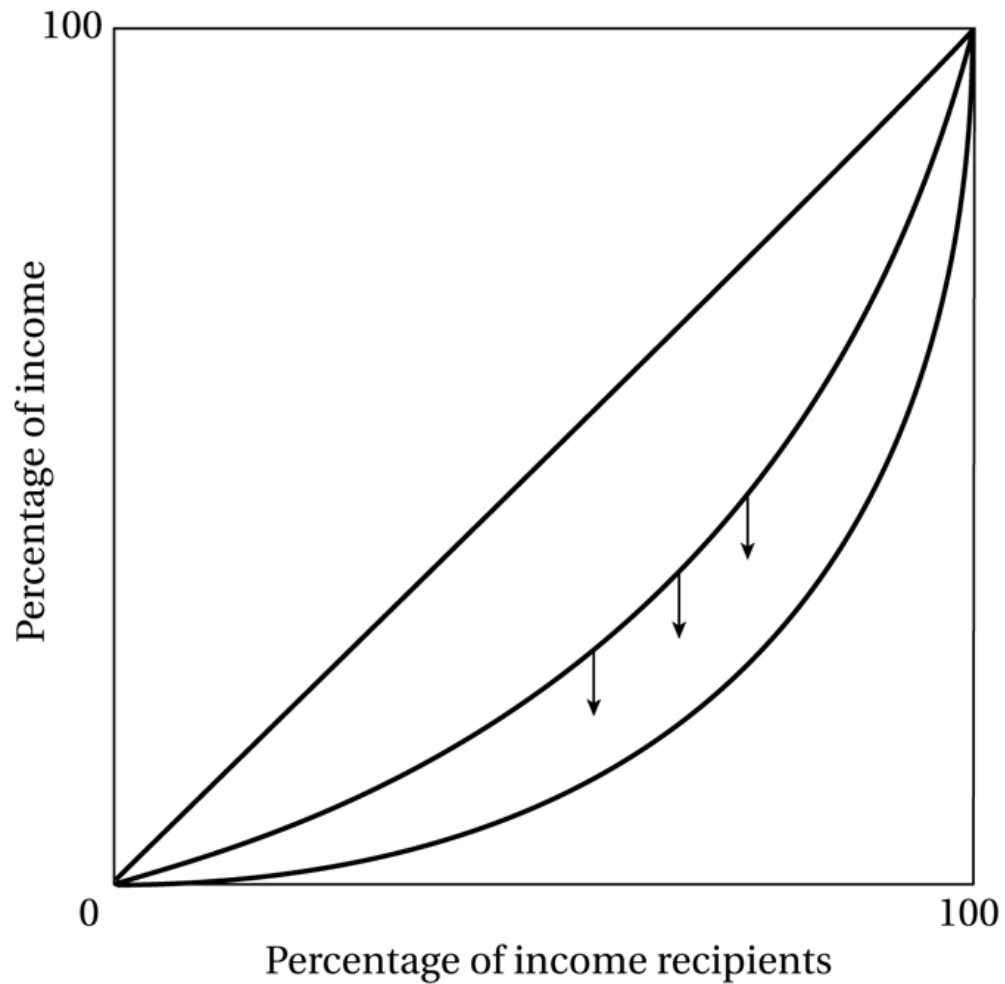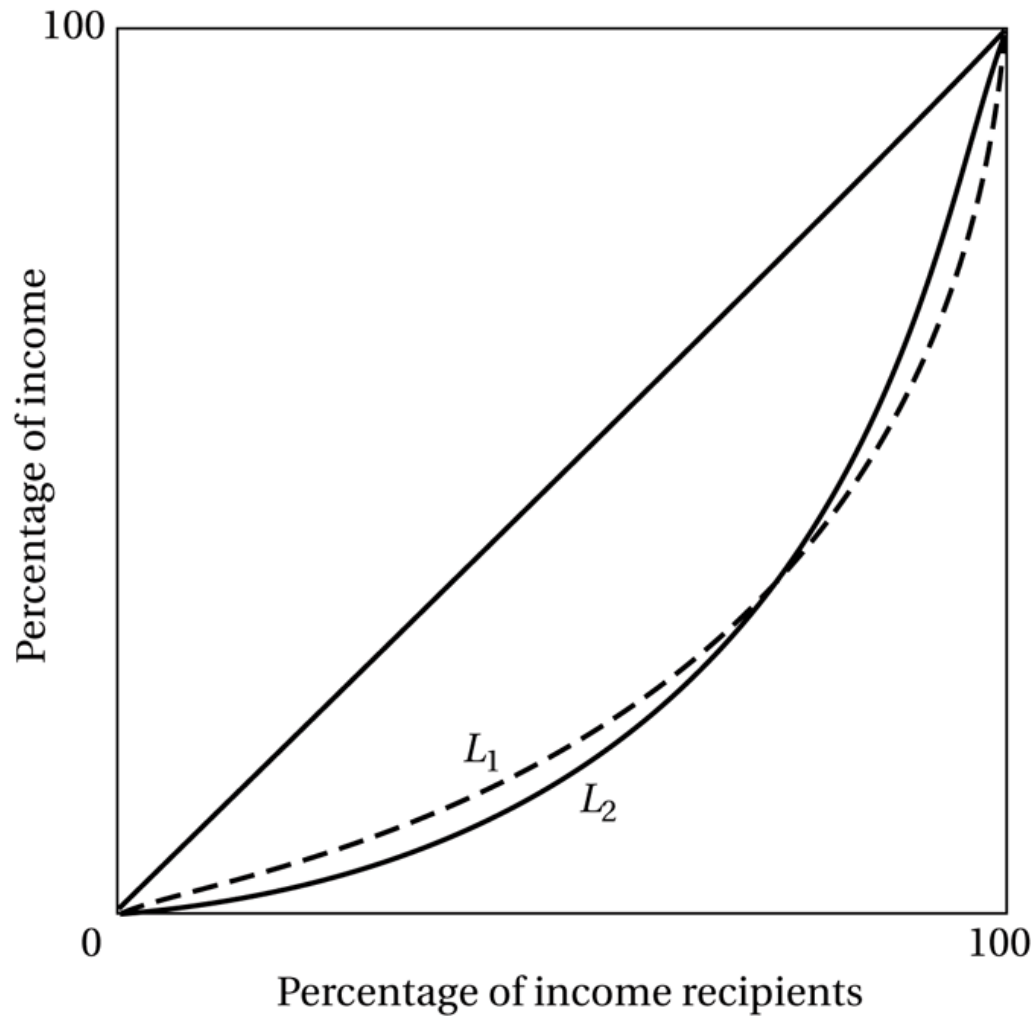
# Figure 5.9  Crossing Lorenz Curves in the Modern-Sector Enlargement Growth Typology

# 5.2 Poverty, Inequality, and Social Welfare

- Kuznets' Inverted-U Hypothesis

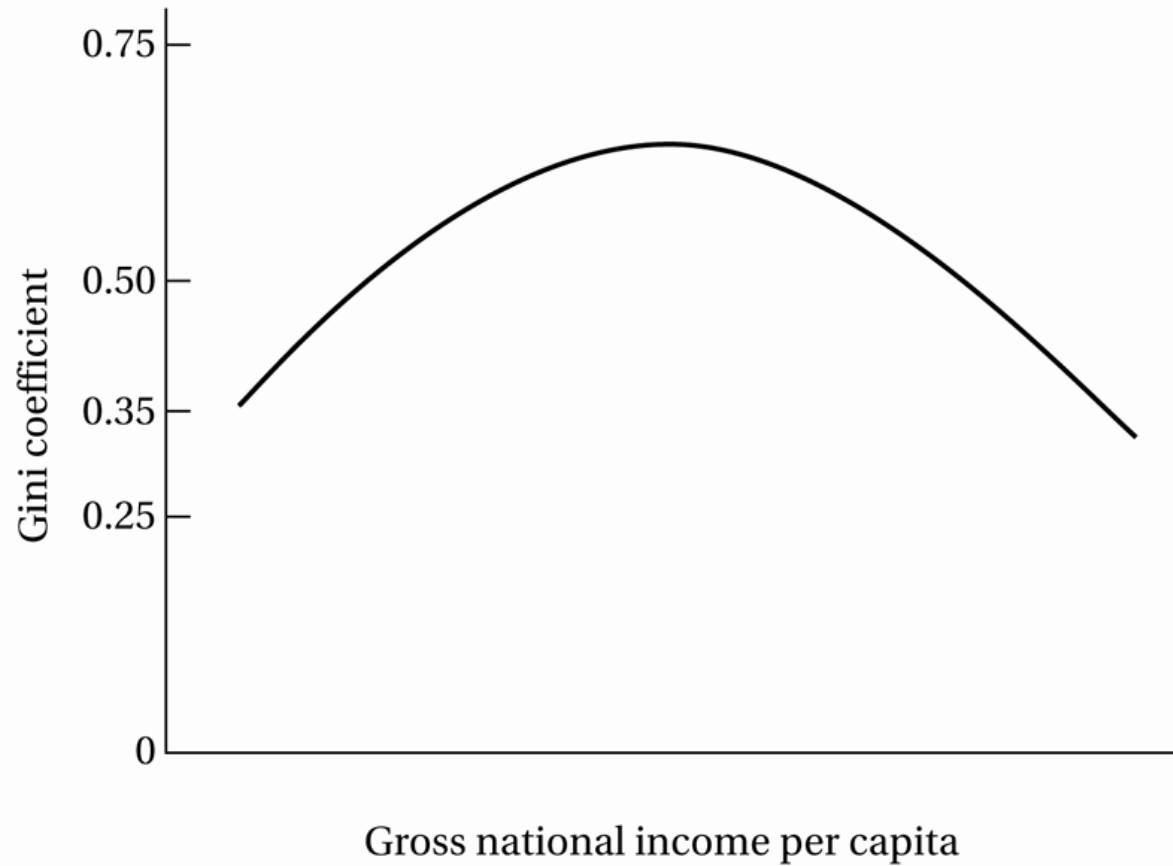# Figure 5.10 The "Inverted-U" Kuznets Curve

# Table 5.3  Selected Income Distribution Estimates

| Country | Lowest 10% | Quintile | | | | | | Highest 10% | Year |
|---|---|---|---|---|---|---|---|---|---|
| | | 1st | 2nd | 3rd | 4th | 5th | | | |
| Bangladesh | 4.3 | 9.4 | 12.6 | 16.1 | 21.1 | 40.8 | | 26.6 | 2005 |
| Brazil | 1.1 | 3.0 | 6.9 | 11.8 | 19.6 | 58.7 | | 43.0 | 2007 |
| China | 2.4 | 5.7 | 9.8 | 14.7 | 22.0 | 47.8 | | 31.4 | 2005 |
| Colombia | 0.8 | 2.3 | 6.0 | 11.0 | 19.1 | 61.6 | | 45.9 | 2006 |
| Costa Rica | 1.6 | 4.4 | 8.5 | 12.7 | 19.7 | 54.6 | | 38.6 | 2007 |
| Guatemala | 1.3 | 3.4 | 7.2 | 12.0 | 19.5 | 57.8 | | 42.4 | 2006 |
| Honduras | 0.7 | 2.5 | 6.7 | 12.1 | 20.4 | 58.4 | | 42.2 | 2006 |
| India | 3.6 | 8.1 | 11.3 | 14.9 | 20.4 | 45.3 | | 31.1 | 2005 |
| Jamaica | 2.1 | 5.2 | 9.0 | 13.8 | 20.9 | 51.2 | | 35.6 | 2004 |
| Namibia | 0.6 | 1.5 | 2.8 | 5.5 | 12.0 | 78.3 | | 65.0 | 1993 |
| Pakistan | 3.9 | 9.1 | 12.8 | 16.3 | 21.3 | 40.5 | | 26.5 | 2005 |
| Peru | 1.3 | 3.6 | 7.8 | 13.0 | 20.8 | 54.8 | | 38.4 | 2007 |
| Philippines | 2.4 | 5.6 | 9.1 | 13.7 | 21.2 | 50.4 | | 33.9 | 2006 |
| South Africa | 1.3 | 3.1 | 5.6 | 9.9 | 18.8 | 62.7 | | 44.9 | 2000 |
| Tanzania | 3.1 | 7.3 | 11.8 | 16.3 | 22.3 | 42.3 | | 27.0 | 2001 |
| Zambia | 1.3 | 3.6 | 7.8 | 12.8 | 20.6 | 55.2 | | 38.9 | 2005 |
| Japan | 4.8 | 10.6 | 14.2 | 17.6 | 22.0 | 35.7 | | 21.7 | 1993 |
| United States | 1.9 | 5.4 | 10.7 | 15.7 | 22.4 | 45.8 | | 29.9 | 2000 |

# Table 5.4  Income and Inequality in Selected Countries

| Country | Income Per Capita (U.S. $, 2008) | Gini Coefficient | Survey Year for Gini Calculation |
|---|---|---|---|
| **Low Income** | | | |
| Ethiopia | 280 | 29.8 | 2005 |
| Mozambique | 380 | 47.1 | 2003 |
| Nepal | 400 | 47.3 | 2004 |
| Cambodia | 640 | 40.7 | 2007 |
| Zambia | 950 | 50.7 | 2005 |
| **Lower Middle Income** | | | |
| India | 1,040 | 36.8 | 2005 |
| Cameroon | 1,150 | 44.6 | 2001 |
| Bolivia | 1,460 | 57.2 | 2007 |
| Egypt | 1,800 | 32.1 | 2005 |
| Indonesia | 1,880 | 37.6 | 2007 |
| **Upper Middle Income** | | | |
| Namibia | 4,210 | 74.3 | 1993 |
| Bulgaria | 5,490 | 29.2 | 2003 |
| South Africa | 5,820 | 57.8 | 2000 |
| Argentina | 7,190 | 48.8 | 2006 |
| Brazil | 7,300 | 55.0 | 2007 |
| Mexico | 9,990 | 51.6 | 2008 |
| **Upper Income** | | | |
| Hungary | 12,810 | 30.0 | 2004 |
| Spain | 31,930 | 34.7 | 2000 |
| Germany | 42,710 | 28.3 | 2000 |
| United States | 47,930 | 40.8 | 2000 |
| Norway | 87,340 | 25.8 | 2000 |

*Source:* World Bank, *World Development Indicators, 2010* (Washington, D.C.: World Bank, 2010), tabs. 1.1 and 2.9.

# Figure 5.11 Kuznets Curve with Latin American Countries Identified
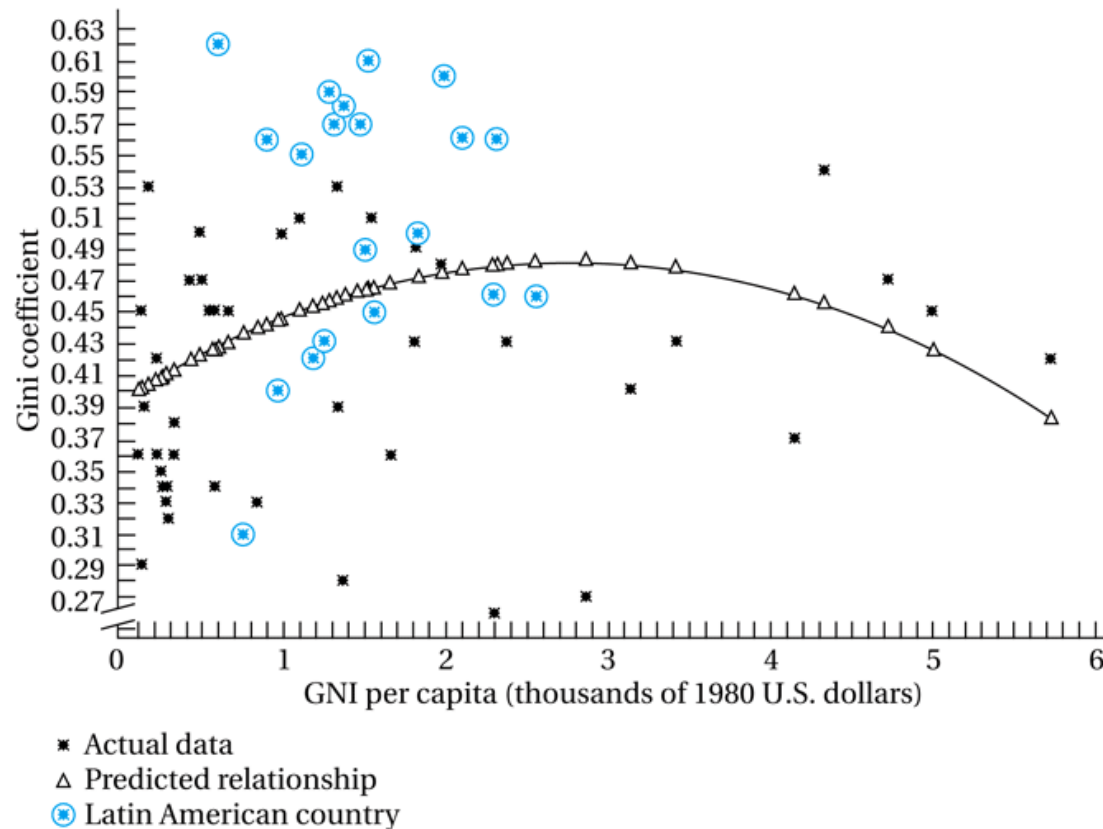


Source: Gary S. Fields, *Distribution and Development: A New Look at the Developing World* (Cambridge, Mass.: MIT Press, 2001), ch. 3, p. 46. © 2001 Massachusetts Institute of Technology, by permission of The MIT Press.

# Figure 5.12  Plot of Inequality Data for Selected Countries
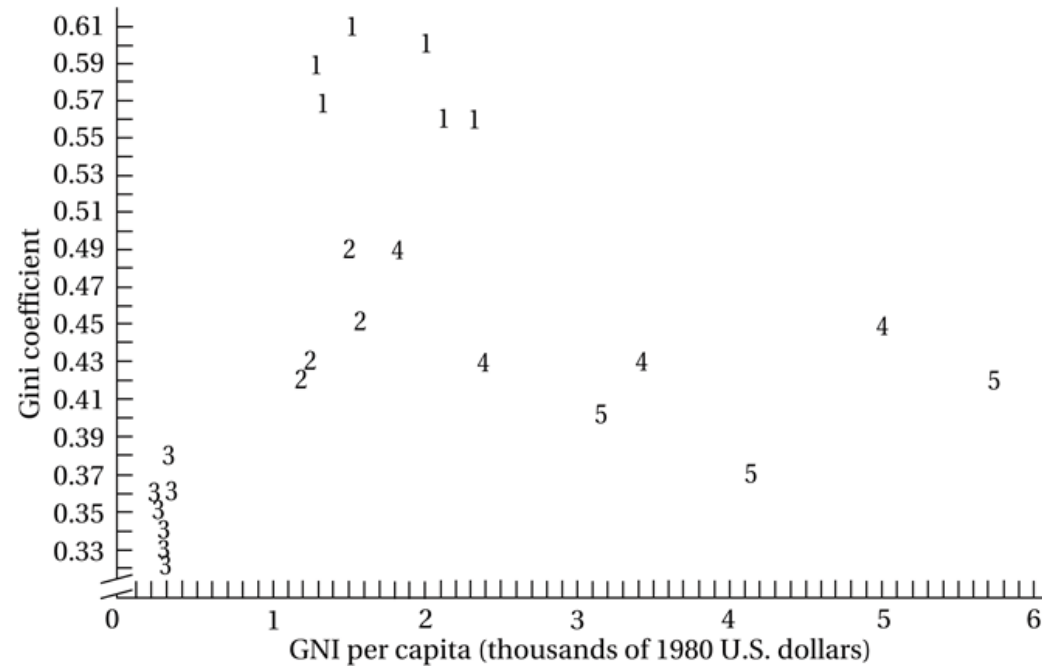


1 = Brazil
2 = Costa Rica
3 = Pakistan
4 = Hong Kong
5 = Singapore

# 5.2 Poverty, Inequality, and Social Welfare

- Growth and Inequality

# 5.3 Absolute Poverty: Extent and Magnitude

- ## Progress on Extreme Poverty
  - Clear progress on $1.25-a-day headcount
  - Less clear progress on $2.00-per-day headcount (see Figure 5.14)
  - Incidence of extreme poverty is uneven

  - ## Relationship between Growth and Poverty
  - Association between growth and poverty reduction
  - When it is inclusive, growth reduces poverty
  - Lower extreme poverty may also lead to higher growth

# Figure 5.13  Long-Term Economic Growth and Income Inequality
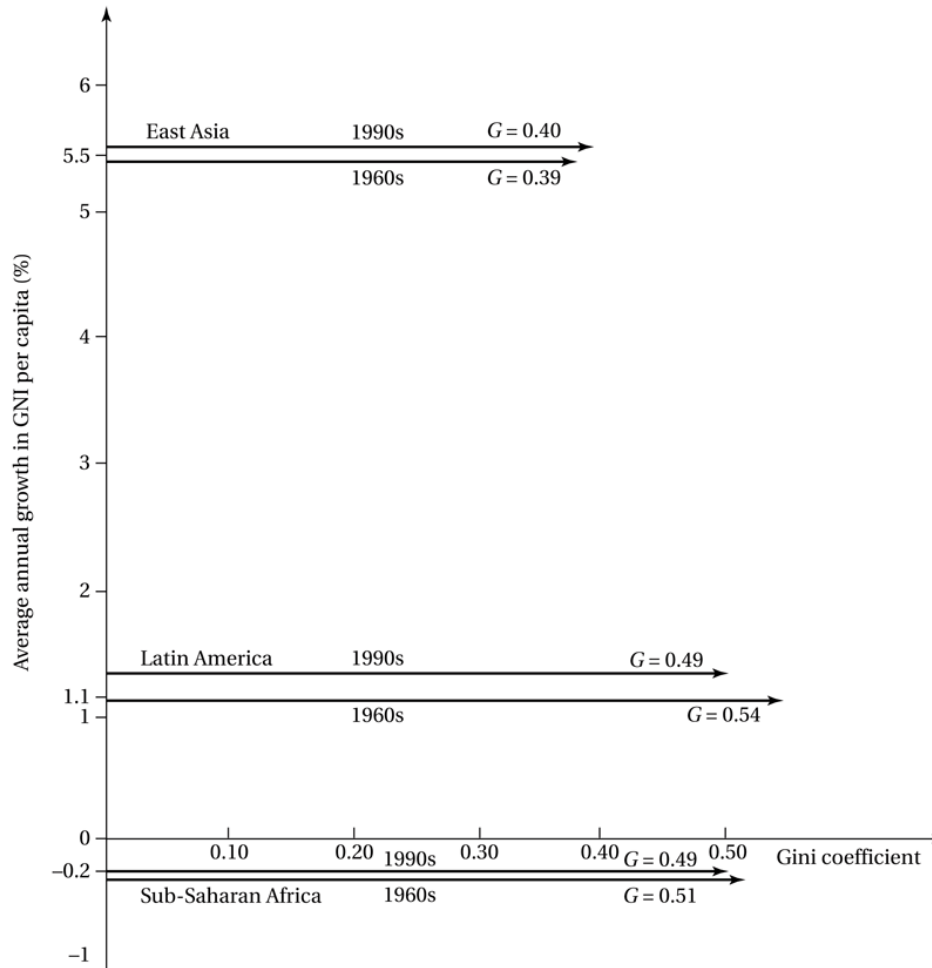


Sources: World Bank, *World Development Indicators, 1998* (Washington, D.C.: World Bank, 1998), tab. 1.4; *Economist*, October 19, 1996, p. 82.

# Figure 5.14  Global and Regional Poverty Trends
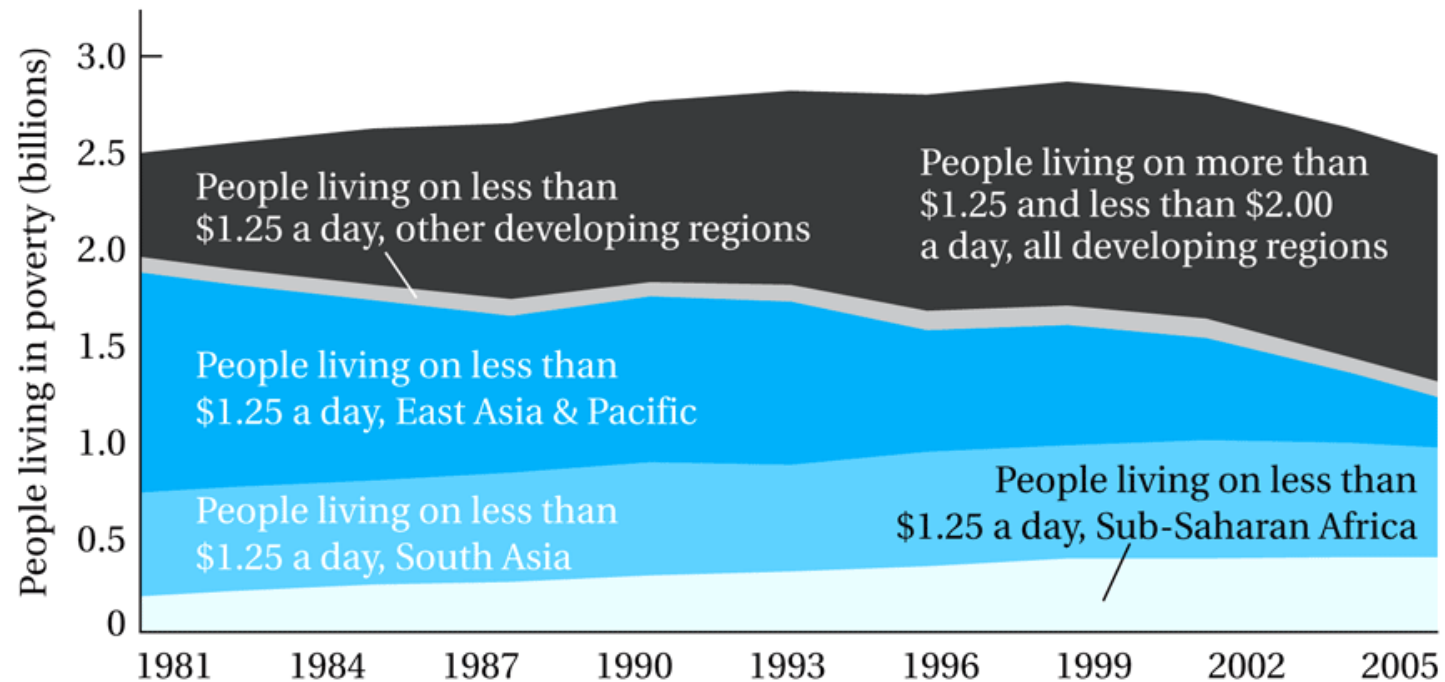


Source: PovcalNet and World Bank, *World Development Indicators 2010*, fig. 2.8a, p. 91.

# Table 5.5  Regional Poverty Incidence, 2005

| Region | Headcount Ratio | Poverty Gap | Squared Poverty Gap |
|---|---|---|---|
| **Regional Aggregation at $1.25 per Day** | | | |
| East Asia and the Pacific | 16.78 | 4.04 | 1.40 |
| Europe and Central Asia | 3.65 | 1.05 | 0.47 |
| Latin America and the Caribbean | 8.22 | 2.75 | 1.46 |
| Middle East and North Africa | 3.60 | 0.78 | 0.30 |
| South Asia | 40.34 | 10.29 | 3.64 |
| Sub-Saharan Africa | 50.91 | 20.74 | 11.05 |
| Total | 25.19 | 7.5 | 3.22 |
| **Regional Aggregation at $2 per Day** | | | |
| East Asia and the Pacific | 38.64 | 12.94 | 5.80 |
| Europe and Central Asia | 8.84 | 2.97 | 1.43 |
| Latin America and the Caribbean | 17.12 | 6.45 | 3.41 |
| Middle East and North Africa | 16.85 | 4.03 | 1.50 |
| South Asia | 73.91 | 28.70 | 13.81 |
| Sub-Saharan Africa | 72.85 | 36.39 | 22.42 |
| Total | 47.00 | 18.51 | 9.43 |

*Source:* World Bank, "PovcalNet," http://iresearch.worldbank.org/PovcalNet.

# Table 5.6  Poverty Incidence in Selected Countries

| Country | Year | Per Capita Monthly Income (2005 PPP) | Headcount Ratio (%) | Poverty Gap (%) | Squared Poverty Gap (%) | Gini Index (%) |
|---------|------|--------------------------------------|---------------------|-----------------|-------------------------|----------------|
| Incidence at $1.25 a Day; Poverty Line at 38 | | | | | | |
| Bangladesh | 2005 | 48.27 | 50.47 | 14.17 | 5.20 | 33.22 |
| Benin | 2003 | 52.77 | 47.33 | 15.73 | 6.97 | 38.62 |
| Brazil | 2007 | 346.64 | 5.21 | 1.26 | 0.44 | 55.02 |
| Burkina Faso | 2003 | 46.85 | 56.54 | 20.27 | 9.38 | 39.6 |
| China—Rural | 2005 | 71.34 | 26.11 | 6.46 | 2.26 | 35.85 |
| China—Urban | 2005 | 161.83 | 1.71 | 0.45 | 0.24 | 34.8 |
| Côte d'Ivoire | 2002 | 101.11 | 23.34 | 6.82 | 2.87 | 48.39 |
| Guatemala* | 2006 | 191.7 | 12.65 | 3.83 | 1.63 | 53.69 |
| Honduras* | 2006 | 184.45 | 18.19 | 8.19 | 5.00 | 55.31 |
| India—Rural | 2004 | 49.93 | 43.83 | 10.66 | 3.65 | 30.46 |
| India—Urban | 2004 | 62.43 | 36.16 | 10.16 | 3.80 | 37.59 |
| Indonesia—Rural | 2005 | 62.79 | 24.01 | 5.03 | 1.61 | 29.52 |
| Indonesia—Urban | 2005 | 89.1 | 18.67 | 4.06 | 1.29 | 39.93 |
| Madagascar | 2005 | 44.82 | 67.83 | 26.52 | 13.23 | 47.24 |
| Mexico | 2006 | 330.37 | 0.65 | 0.13 | 0.05 | 48.11 |
| Mozambique | 2002 | 36.58 | 74.69 | 35.4 | 20.48 | 47.11 |
| Nicaragua* | 2005 | 151.18 | 15.81 | 5.23 | 2.54 | 52.33 |
| Nigeria | 2003 | 39.46 | 64.41 | 29.57 | 17.2 | 42.93 |
| Pakistan | 2004 | 65.76 | 22.59 | 4.35 | 1.28 | 31.18 |
| Peru | 2006 | 216.82 | 7.94 | 1.86 | 0.61 | 49.55 |
| Philippines | 2006 | 98.99 | 22.62 | 5.48 | 1.74 | 44.04 |
| Rwanda | 2000 | 33.76 | 76.56 | 38.21 | 22.94 | 46.68 |
| Senegal | 2005 | 66.86 | 33.5 | 10.8 | 4.67 | 39.19 |

# Table 5.6  Poverty Incidence in Selected Countries (continued)

| Country | Year | Per Capita Monthly Income (2005 PPP) | Headcount Ratio (%) | Poverty Gap (%) | Squared Poverty Gap (%) | Gini Index (%) |
|---|---|---|---|---|---|---|
| Incidence at $2 a Day; Poverty Line at 60.84 | | | | | | |
| Bangladesh | 2005 | 48.27 | 80.32 | 34.35 | 17.55 | 33.22 |
| Benin | 2003 | 52.77 | 75.33 | 33.51 | 18.25 | 38.62 |
| Brazil | 2007 | 346.64 | 12.70 | 4.15 | 1.85 | 55.02 |
| Burkina Faso | 2003 | 46.85 | 81.22 | 39.26 | 22.58 | 39.60 |
| China—Rural | 2005 | 71.34 | 55.63 | 19.47 | 8.94 | 35.85 |
| China—Urban | 2005 | 161.83 | 9.38 | 2.12 | 0.81 | 34.8 |
| Côte d'Ivoire | 2002 | 101.11 | 46.79 | 17.62 | 8.78 | 48.39 |
| Guatemala* | 2006 | 191.7 | 25.71 | 9.63 | 4.84 | 53.69 |
| Honduras* | 2006 | 184.45 | 29.73 | 14.15 | 8.91 | 55.31 |
| India—Rural | 2004 | 49.93 | 79.53 | 30.89 | 14.69 | 30.46 |
| India—Urban | 2004 | 62.43 | 65.85 | 25.99 | 12.92 | 37.59 |
| Indonesia—Rural | 2005 | 62.79 | 61.19 | 19.55 | 8.27 | 29.52 |
| Indonesia—Urban | 2005 | 89.1 | 45.85 | 14.85 | 6.39 | 39.93 |
| Madagascar | 2005 | 44.82 | 89.62 | 46.94 | 28.5 | 47.24 |
| Mexico | 2006 | 330.37 | 4.79 | 0.96 | 0.31 | 48.11 |
| Mozambique | 2002 | 36.58 | 90.03 | 53.56 | 36.00 | 48.07 |
| Nicaragua* | 2005 | 151.18 | 31.87 | 12.26 | 6.44 | 52.33 |
| Nigeria | 2003 | 39.46 | 83.92 | 46.89 | 30.8 | 42.93 |
| Pakistan | 2004 | 65.76 | 60.32 | 18.75 | 7.66 | 31.18 |
| Peru | 2006 | 216.82 | 18.51 | 5.95 | 2.54 | 49.55 |
| Philippines | 2006 | 98.99 | 45.05 | 16.36 | 7.58 | 44.04 |
| Rwanda | 2000 | 33.76 | 90.3 | 55.69 | 38.5 | 44.11 |
| Senegal | 2005 | 66.86 | 60.37 | 24.67 | 12.98 | 39.19 |

# 5.4 Economic Characteristics of High-Poverty Groups

- Rural poverty

- Women and poverty

- Ethnic minorities, indigenous populations, and poverty

# Table 5.7  Poverty: Rural versus Urban

| Region and Country | Survey Year | Percentage below National Poverty Line | | |
|---|---|---|---|---|
| | | Rural Population | Urban Population | National Population |
| **Sub-Saharan Africa** | | | | |
| Benin | 2003 | 46.0 | 29.0 | 39.0 |
| Burkina Faso | 2003 | 52.4 | 19.2 | 46.4 |
| Cameroon | 2007 | 55.0 | 12.2 | 29.9 |
| Malawi | 2005 | 55.9 | 25.4 | 52.4 |
| Tanzania | 2001 | 38.7 | 29.5 | 35.7 |
| Uganda | 2006 | 34.2 | 13.7 | 31.1 |
| Zambia | 2004 | 72.0 | 53.0 | 68.0 |
| **Asia** | | | | |
| Bangladesh | 2005 | 43.8 | 28.4 | 40.0 |
| India | 2000 | 30.2 | 24.7 | 28.6 |
| Indonesia | 2004 | 20.1 | 12.1 | 16.7 |
| Uzbekistan | 2003 | 29.8 | 22.6 | 27.2 |
| Vietnam | 2002 | 35.6 | 6.6 | 28.9 |
| **Latin America** | | | | |
| Bolivia | 2007 | 63.9 | 23.7 | 37.7 |
| Brazil | 2003 | 41.0 | 17.5 | 21.5 |
| Dominican Republic | 2007 | 54.1 | 45.4 | 48.5 |
| Guatemala | 2006 | 72.0 | 28.0 | 51.0 |
| Honduras | 2004 | 70.4 | 29.5 | 50.7 |
| Mexico | 2004 | 56.9 | 41.0 | 47.0 |
| Peru | 2004 | 72.5 | 40.3 | 51.6 |

*Source:* World Bank, *World Development Indicators, 2010* (Washington, D.C.: World Bank, 2010), tab. 2.7.

# Table 5.8  Indigenous Poverty in Latin America

| Population below the Poverty Line (%), Early 1990s | | | Change in Poverty (%), Various Periods | | |
|---|---|---|---|---|---|
| Country | Indigenous | Nonindigenous | Period | Indigenous | Nonindigenous |
| Bolivia | 64.3 | 48.1 | 1997–2002 | 0 | −8 |
| Guatemala | 86.6 | 53.9 | 1989–2000 | −15 | −25 |
| Mexico | 80.6 | 17.9 | 1992–2002 | 0 | −5 |
| Peru | 79.0 | 49.7 | 1994–2000 | 0 | +3 |

*Sources:* Data for left side of table from George Psacharopoulos and Harry A. Patrinos, "Indigenous people and poverty in Latin America," *Finance and Development* 31 (1994): 41, used with permission; data for right side of table from Gillette Hall and Harry A. Patrinos, eds., *Indigenous Peoples, Poverty, and Human Development in Latin America, 1994–2004* (New York: Palgrave Macmillan, 2006).

# 5.5 Policy Options on Income Inequality and Poverty: Some Basic Considerations

- ## Areas of Intervention
  - Altering the functional distribution
  - Mitigating the size distribution
  - Moderating (reducing) the size distribution at upper levels
  - Moderating (increasing) the size distribution at lower levels

- Policy options
  - Changing relative factor prices
  - Progressive redistribution of asset ownership
  - Progressive taxation
  - Transfer payments and public provision of goods and services

# 5.6 Summary and Conclusions:  The Need for a Package of Policies

- Policies to correct factor price distortions

- Policies to change the distribution of assets, power, and access to education and associated employment opportunities

- Policies of progressive taxation and directed transfer payments

- Policies designed to build capabilities and human and social capital of the poor

# Concepts for Review

- Absolute poverty
- Asset ownership
- Character of economic growth
- Decile
- Disposable income
- Factor share distribution of income
- Factors of production

- Foster-Greer-Thorbecke (FGT) index
- Functional distribution of income
- Gini coefficient
- Headcount index
- Income inequality
- Indirect taxes
- Kuznets curve
- Land reform

# Concepts for Review (cont'd)

- Lorenz curve
- Multidimensional poverty index (MPI)
- Personal distribution of income
- Progressive income tax
- Public consumption
- Quintiles
- Redistribution policies
- Regressive tax

- Size distribution of income
- Subsidy
- Total poverty gap (TPG)
- Workfare programs

- Choice of techniques

- Factor Price distortions and appropriate technology

- Possibilities of Labor-Capital substitution

# Figure A5.1.1  Choice of Techniques: The Price Incentive Model
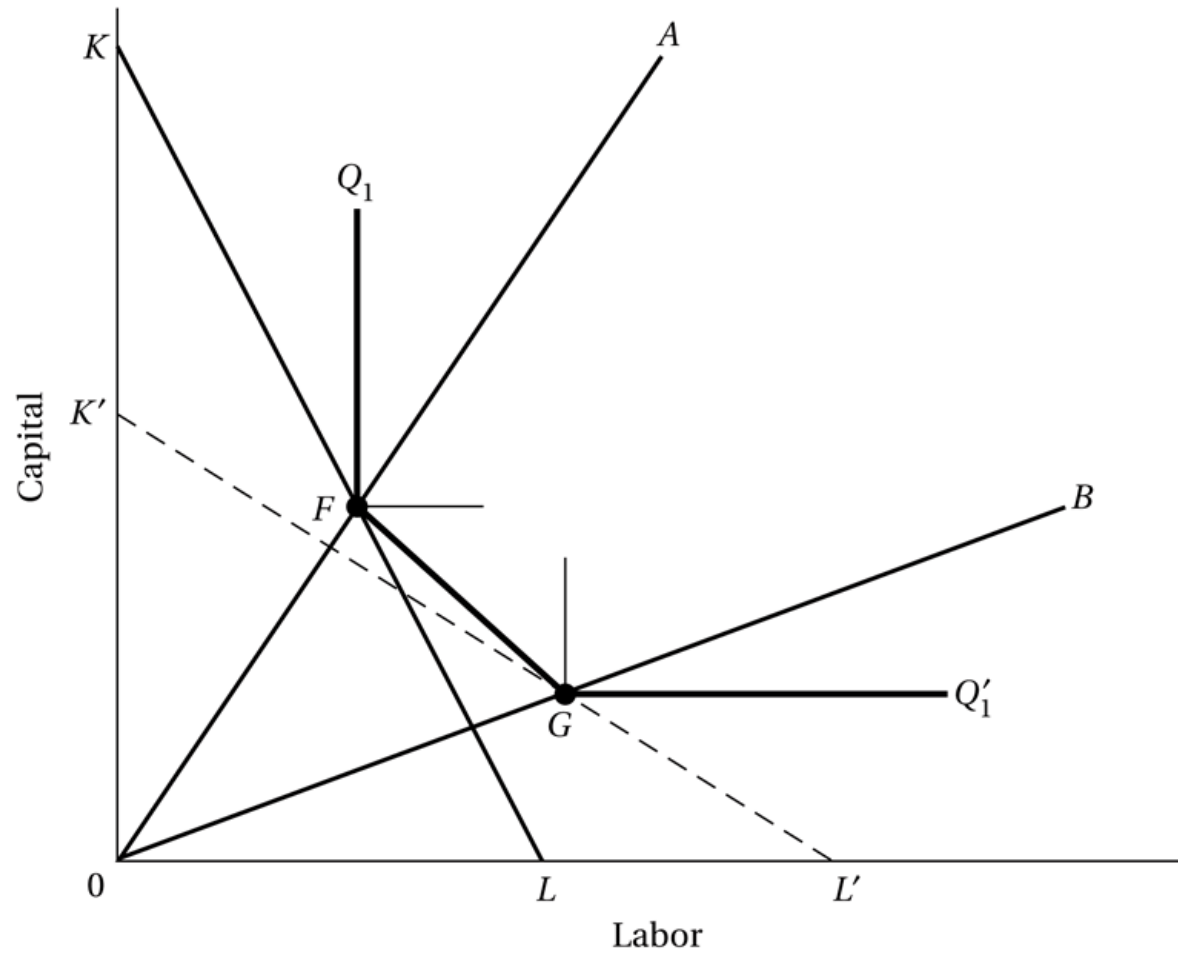
# Appendix 5.2: The Ahluwalia-Chenery Welfare Index

- Constructing poverty-weighted index of social welfare

# Table A5.2.1 Income Distribution and Growth in the Twelve Selected Countries

| Country | Income Growth | | | Annual Increase in Welfare | | |
|---|---|---|---|---|---|---|
| | Upper 20% | Middle 40% | Lowest 40% | GNI Weights | Equal Weights | Poverty Weights |
| Brazil | 6.7 | 3.1 | 3.7 | 5.2 | 4.1 | 3.5 |
| Colombia | 5.2 | 7.9 | 7.8 | 6.2 | 7.3 | 7.8 |
| Costa Rica | 4.5 | 9.3 | 7.0 | 6.3 | 7.4 | 7.8 |
| El Salvador | 3.5 | 9.5 | 6.4 | 5.7 | 7.1 | 7.4 |
| India | 5.3 | 3.5 | 2.0 | 4.2 | 3.3 | 2.5 |
| Mexico | 8.8 | 5.8 | 6.0 | 7.8 | 6.5 | 5.9 |
| Panama | 8.8 | 9.2 | 3.2 | 8.2 | 6.7 | 5.2 |
| Peru | 3.9 | 6.7 | 2.4 | 4.6 | 4.4 | 3.8 |
| Philippines | 5.0 | 6.7 | 4.4 | 5.5 | 5.4 | 5.2 |
| South Korea | 12.4 | 9.5 | 11.0 | 11.0 | 10.7 | 10.5 |
| Sri Lanka | 3.1 | 6.3 | 8.3 | 5.0 | 6.5 | 7.6 |
| Taiwan | 4.5 | 9.1 | 12.1 | 6.8 | 9.4 | 11.1 |