

Development Economics

Slides 1

Debraj Ray, NYU

What's Development Economics?

Robert Lucas on economic development:

“By the problem of economic development I mean simply the problem of accounting for the observed pattern, across countries and across time, in levels and rates of growth of per capita income. This may seem too narrow a definition, and perhaps it is, but thinking about income patterns will necessarily involve us in thinking about many other aspects of societies too, so I would suggest that we withhold judgement on the scope of this definition until we have a clearer idea of where it leads us.”

What's Development Economics?

Paul Streeten on economic development:

“[W]e should never lose sight of the ultimate purpose of the exercise, to treat men and women as ends, to improve the human condition, to enlarge people's choices. [A] unity of interests would exist if there were rigid links between economic production (as measured by income per head) and human development (reflected by human indicators such as life expectancy or literacy, or achievements such as self-respect, not easily measured). But these two sets of indicators are not very closely related.”

World Income Distribution

- **2025, World \$117.0t, population 8.22b. Average \$14,244** GNI per capita
- World Bank, 2025; <https://data.worldbank.org/>.
- **Low income countries:** under \$1,175. Many African countries, others such as Afghanistan. Around upper edge: Rwanda, Uganda, Mali and Ethiopia.
[2025] **767m people, total income 0.62t, average \$811.**
- **Low middle-income countries** \$1,176–\$4,635; members include India, Bangladesh, Nicaragua, and Nigeria. Around upper edge: Bolivia, Morocco or Tunisia.
[2025] **2.95b people, total income 7.33t, average \$2,488.**

World Income Distribution

- **Upper middle-income countries** \$4,636–\$14,375. Richer Latin American economies (Brazil, Mexico), Georgia, South Africa and Malaysia, with China and Montenegro at the upper edge.

[2025] **3.08b people, total income 33.68t, average \$10,938.**

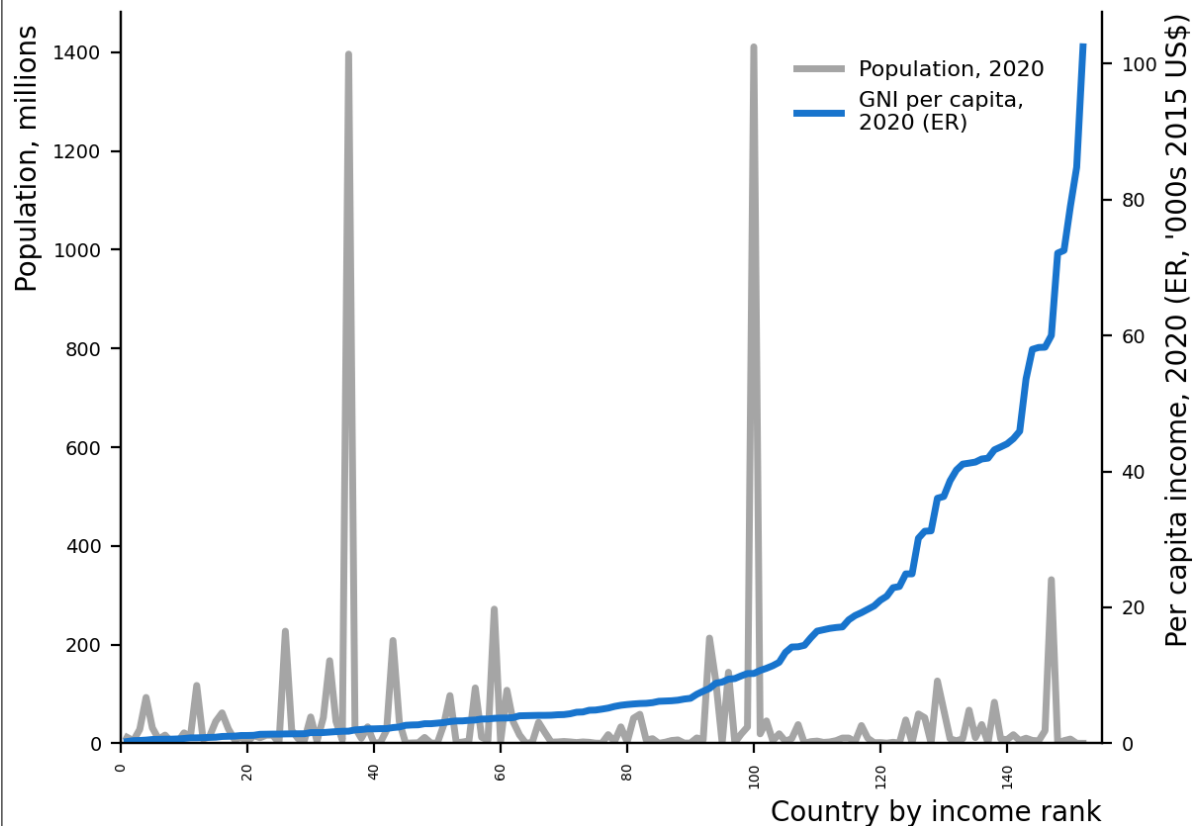
- **High income countries**, above \$14,375. US, Western and Northern Europe, Japan, Singapore, some Middle East countries.

[2025] **1.42b people, total income 75.40t, average \$52,957.**

World Income Distribution

- Low + low middle: 3.71b: **45% of world population**
- But they have just **6.8% of world income.**
- **How rich is Switzerland** (\$110,330)?
- 6–8 times as rich as Chile (\$16,960) or China (\$14,230)
- about 40 times as rich as Bangladesh (\$2,840) or India (\$2,760)
- over 150 times as rich as the Democratic Republic of Congo (\$720).

Population and Per Capita GNI (exchange rate method), 2020



Corrections

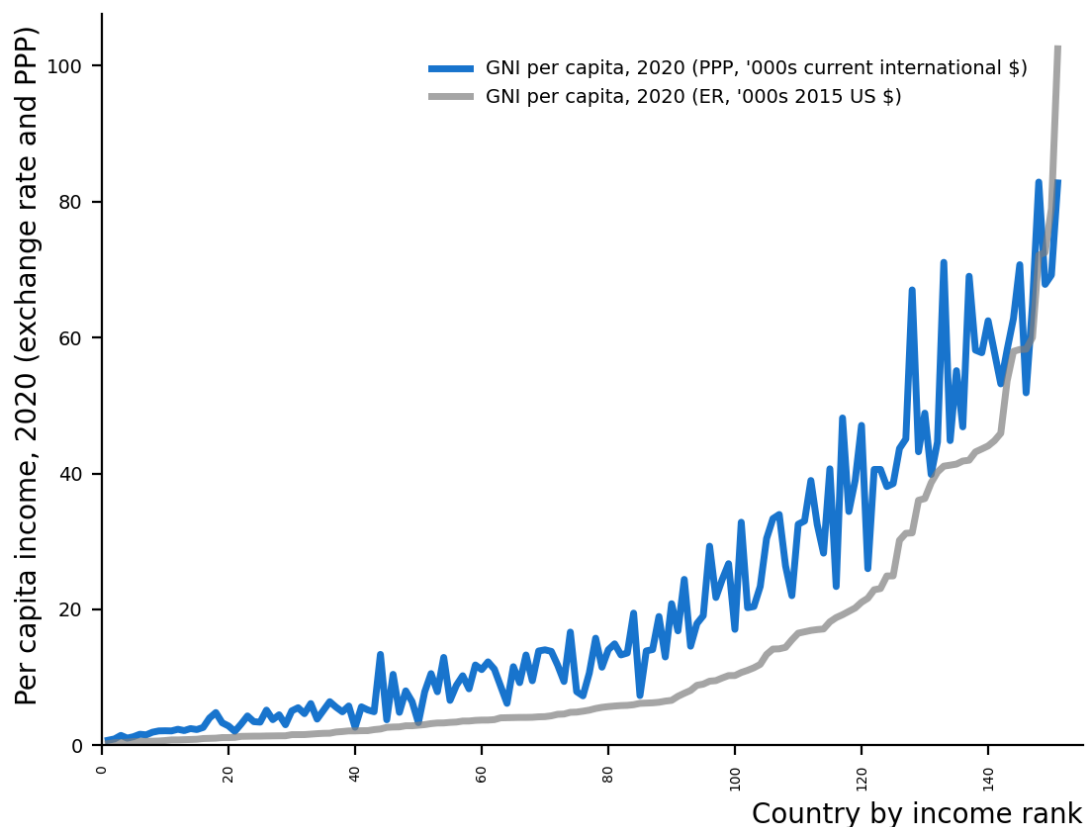
- **Underreporting** of income (tax evasion, subsistence production)
- **Distorted pricing** (monopolies or oligopolies, public sector companies).
- **Externalities**: pollution, environmental damage, resource depletion.
- **Purchasing Power Parity and the International Comparison Program**
- Read about PPP here:

<https://www.worldbank.org/en/programs/icp>

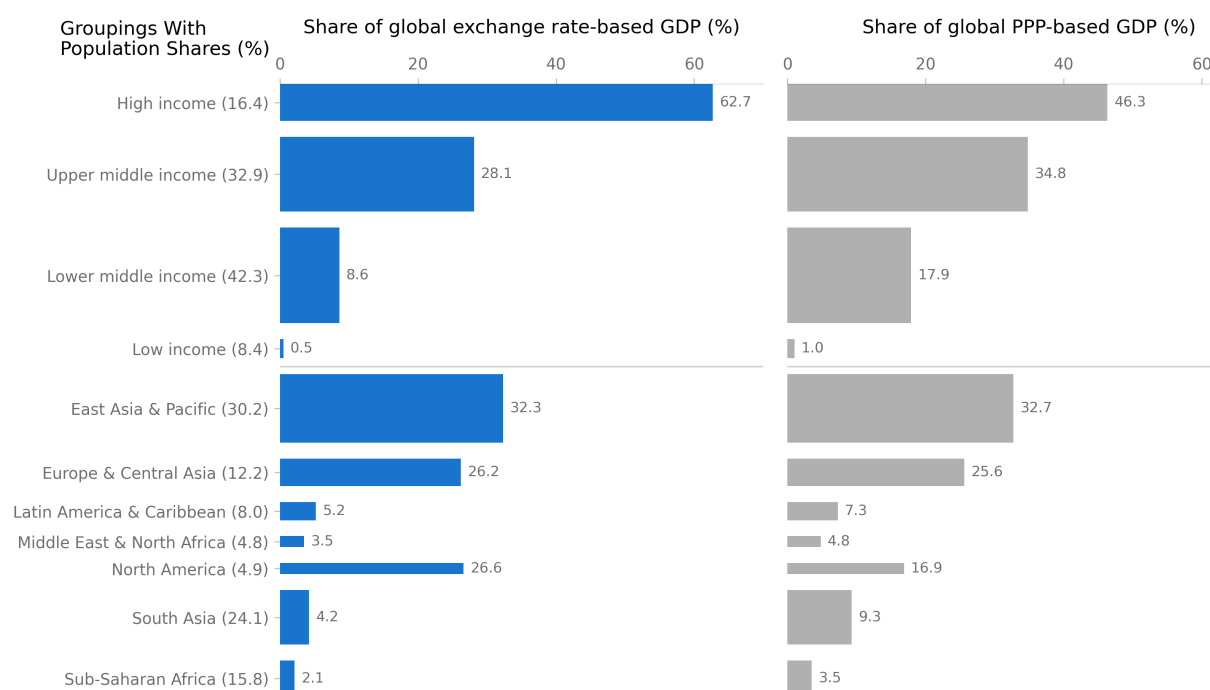
PPP Versus Exchange-Rate GNI Per Capita

- With this adjustment, world per-capita income rises to \$25,517 (2025)
 - A big change from \$14,244.
 - Low + lower-middle now earn 16.1% of the world's GNI (PPP).
 - Better than 6.8%, but still dramatically low.

PPP Versus Exchange-Rate GNI Per Capita



PPP Versus Exchange-Rate GDP Per Capita



Richest and Poorest 10% of Nations Relative to World Average

GDP per capita PPP (World Bank Database)

	1990	1995	2000	2005	2010	2015	2020	2025
top 10%/World av	5.20	5.31	5.38	5.18	4.57	4.23	4.01	3.87
bottom 10%/World av	0.12	0.11	0.10	0.11	0.11	0.11	0.11	0.09

In 2010, richest US State was Alaska and the poorest was Mississippi, and the ratio of per capita incomes worked out to slightly over 2!

Lots of Movement Within the Distribution

■ World GDP growth per capita:

- 1.6% per year 1970–2010
- 1.5% per year 2011–2020
- 3.1% over 2020–2025
- Asia
- Latin America
- sub-Saharan Africa

Asia

■ East Asia danced to a tune all its own.

■ 1960–1990:

Japan 5.1%, S. Korea 7.7%, Hong Kong 5.9% (from 1970), Indonesia 3.0%, Malaysia 4.1%, Singapore 6.4%, Thailand 5.1%

■ 1990–2010, slower:

Japan < 1%, rest in the 3s and 4s (not counting Korea, China and later India).

■ 2011–2020:

Japan 0.7%, Indonesia 3.3%, Malaysia 2.1%, Thailand 1.9% ...

■ 2020–2025:

Japan 1.8%, Indonesia 4%, Malaysia 4%, Thailand 2.4% ...

Asia

	China!	India!
1990–2000	9.3%	3.5%
2001–2010	10.2%	5.3%
2011–2020	6.0%	3.9%
2021–2025	4.7%	6.4%

Latin America

- **1960–1980:** 3.1%
- **1980–1990:** the “lost decade,” -0.6% ($\approx$ -6% overall)

Argentina -2.3%, Brazil -0.5%, Mexico -0.3%, Peru -3.3%, Uruguay -0.5%.

Only Chile (1.3%) and Colombia (1.2%) higher in 1990 relative to 1980.

- **1990–2000:** around world average

Exceptions Chile (4.8%), and Argentina (2.7%).

Latin America

- **2000–2010:** much better, average close to 2%

Argentina 2.3%, Brazil 2.6%, Chile 3.2%, Peru 4.6%, Uruguay 2.9%. Mexico not so well at -0.2%.

- **2011–2020:** a second lost decade, -0.4% per year

Argentina -2.3%, Brazil -0.8%, Chile 0.4%, Peru 0.7%, Uruguay 0.7%.

Mexico -0.4%.

- **2020–2025:** 3.0% per year

Argentina 3.1%, Brazil 2.9%, Chile 3.3%, Peru 3.4%, Uruguay 3.3%. Mexico 2.1%

(recovery from Covid-19)

Sub-Saharan Africa

- **1980–1990:** decline at 1.6% annual

Nigeria -3.2%, Tanzania 0.1%, Rwanda -1.2%, DR Congo -2.3%,

Zimbabwe 0.7%, Kenya 0.4%

- **1990–2000:** decline at 0.7% annual

Nigeria -1.0%, Tanzania (stagnation), Uganda 3.2%, Rwanda -1.0%, DR

Congo -8.6%!, Zimbabwe (stagnation), Kenya -1.1%

- **2000–2010:** better, with growth at 2.7%

Nigeria 5.0%, Tanzania 3.7%, Uganda 4.2%, Rwanda 5.8%, DR Congo 1.7%,

Zimbabwe -4.5%!, Kenya (some recovery)

Sub-Saharan Africa

- **2011–2020:** stagnation, -0.1%

Nigeria -0.7%, Tanzania 2.4%, Uganda 1.3%, Rwanda 3.4%, DR Congo 2.1%,
Zimbabwe 0.4%, Kenya 1.8%

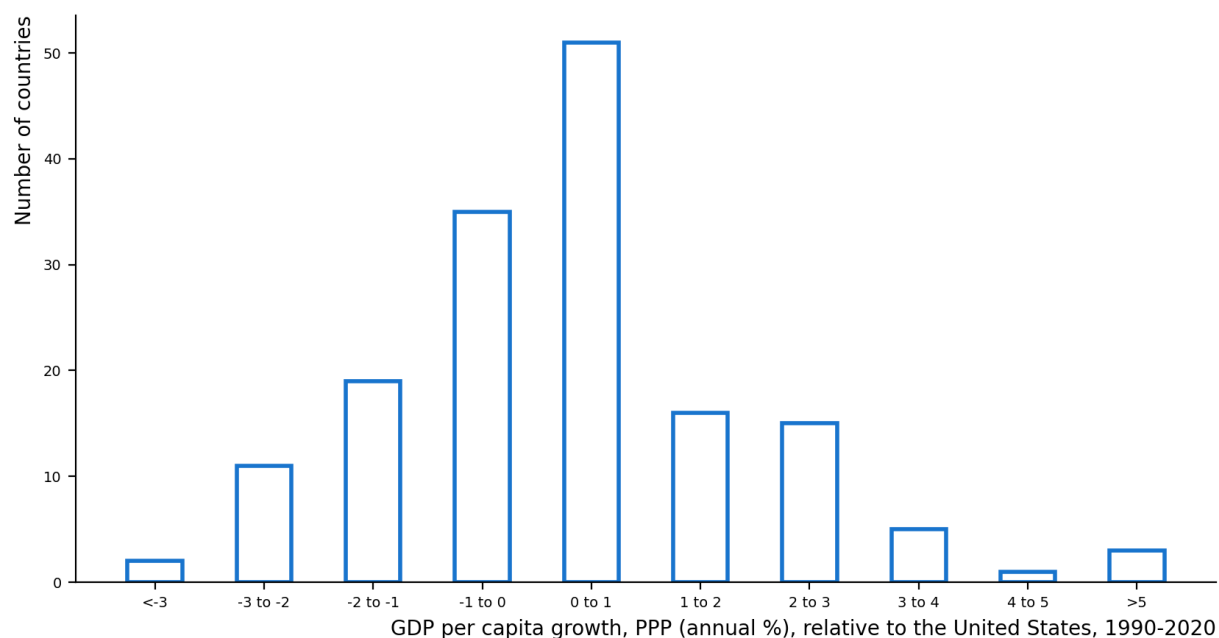
- **2020–2025:** growth at 1.2%

Nigeria 1.2%, Tanzania 2.1%, Uganda 2.2%, Rwanda 6.3%!, DR Congo 3.8%,
Zimbabwe 4.1%, Kenya 3.5%

Lots of Movement Within the Distribution

- **OECD:** 20 original members, eighteen additions. All the developed countries, a few middle-income countries also members.
- **1970–1990,** OECD growth a bit over 2.3%
- **1990–2000** 1.9%, higher than world average
- **2000–2010** Under world average at 1.0%
- **2011–2020** Under world average at 0.8%
- **2020–2025** Under world average at 2.5%
- The **United States** mirrors OECD reasonably well:
 - 2.2% over 1970–1990
 - about 2.2% in 1990–2000
 - 0.8% in 2000–2010, 1.3% in 2011–2020, and 2.7% in 2020–2025

Movement Relative to the United States, 1990–2020



- 72 out of 158 countries moved up or down by 1% per year or more relative to the United States.

Doubling Times

- $[1 + (r/100)]^T = 2.$
- So $T \ln_e[1 + (r/100)] = \ln_e 2.$
- But $\ln_e 2 \simeq 0.7$, and for small x , $\ln_e(1 + x) \simeq x.$
- A good approximation: 70 divided by the annual % rate of growth.

Doubling Times

Some Examples

- Netherlands at 0.2% over 1347–1807 would double every 350 years.
- UK would double every 150 years (1700–1870)
- The United States took 47 years, mid-19th century ...
- ...and it took under 35 years (mid-20th century)
- Brazil doubled in 18 years (from 1961)
- Korea doubled in 11 years (from 1966)
- China is doubling every 7–9 years (from 1980)

Mobility Matrix, 1990–2025

- World average income (PPP, current int'l \$): \$5,612 in 1990, \$25,704 in 2025.
- Categories (relative to that year's world average) 1: $<1/4$; 2: $1/4$ – $1/2$; 3: $1/2$ –1; 4: 1–2; 5: >2 .

Obs	Cat	①	②	③	④	⑤
36	①	75	14	6	5	0
32	②	38	47	12	3	0
35	③	0	17	49	31	3
32	④	0	0	31	53	16
40	⑤	0	0	8	10	82

Summary

- Over 1990–2025, the *relative* distribution of world income looks like this:
 - Richest 10% of nations 5 times the world average, sliding down to around 3.9
 - Poorest 10% steady at around 10% of the same average.
- But lots of movement within the distribution.
 - Rise of Asia: Japan, then China and now India
 - Languishing of sub-Saharan Africa
 - Relatively slow growth in many parts of Latin America

Summary

- No ultimate traps to development:
 - 72 out of 158 countries went up or down by 1% or more per year over 1990–2020, relative to the United States.
 - But stickiness at the ends: mobility matrix.
- That history matters this way deserves an explanation:
 - Convergence vs divergence