

Introduction - Week 3

ECON1910 - Poverty and distribution in developing countries

Readings: Ray chapter 1 and 2; and "The Economic Lives of the Poor"

18. January 2011

Road map of today's lecture

- 1 Introduction to the study of "development economics"
- 2 Overview of Economic Development
- 3 The Economic Lives of the Poor
- 4 Overview of rest of the course
- 5 How to use and access statistical resources?

Why development economics as a separate field of study?

- Many markets missing: labor, financial, insurance
- Institutions and public infrastructure may be missing: property rights, laws, transportation
- Development taking place when there is a developed world elsewhere: aid dependency, technology transfer
- History of colonialism

What is developing countries?

- 2008 World Bank income classification
 - ① Less than \$975 per capita - Low income
 - ② \$976-\$3,855 - Lower middle income
 - ③ \$3,856-\$11,905 - Upper middle income
 - ④ Over \$11,905 - High income economies
- When we talk about the developing world, we refer to those in the group of low and middle-income countries.

What is economic development?

By the problem of economic development I mean simply the problem of accounting for the observed pattern, across countries and across time, 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.

R. E. Lucas (1988)

What is economic development?

We should never lose sight of the ultimate purpose of the exercise, to treat men and women as ends, to improve the human conditions, 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.

P. P. Streeten (1994)

Indicators of the level of development

- Gross national income per capita (GNI per capita) (until recently called Gross National Product (GNP))
 - A measure of the nation's income, what is earned by its residents.
- Gross domestic product per capita (GDP per capita)
 - A measure of the country's output, the value of what is produced within its borders.
- Measures of the equality of income distributions
 - E.g. the proportions of income earned by different income groups of the population; Gini coefficient
- Direct welfare (quality-of-life) indicators
 - E.g. Life expectancy, infant or young-child death rates, rates of adult illiteracy, proportions of population below poverty lines, etc.

Comparing Income across Countries

Exchange rate method

- Per capita incomes are expressed in yuan, dollars, kroner, pound and in the many other world currencies.
- To facilitate comparison, each country's income (in local currency) is converted into a common currency (typically U.S. dollars) and divided by that country's population to arrive at a measure of per capita income.
- This conversion scheme is called the exchange rate method.

Comparing income across countries

Exchange rate method

Example - 2000	USA	Norway	China
GDP per capita LCU	34605.84	329824	7858
Official exchange rate (LCU per US\$)	1	8.80	8.28
GDP per capita US\$	34605.84	37480	949

Comparing income across countries

Purchasing-power-parity (PPP) rates

- Prices for many goods are not appropriately reflected in exchange rates.
- Exchange rates are just prices, and the levels of these prices depends only on commodities (including capital) that cross international borders.
- Currencies' purchasing powers do not closely follow their exchange-rates
 - 8 kroner may exchange for a dollar, but 8 kroner may buy more or less in Norway than a dollar in the US.
 - 8 yuan may exchange for a dollar, but 8 yuan may buy more or less in China than a dollar in the US.
 - A U.S. dollar exchanged and spent in Norway will buy less haircuts than a dollar spent in the United States
 - A U.S. dollar exchanged and spent in China will buy more haircuts than a dollar spent in the United States

Comparing income across countries

Purchasing-power-parity (PPP) rates

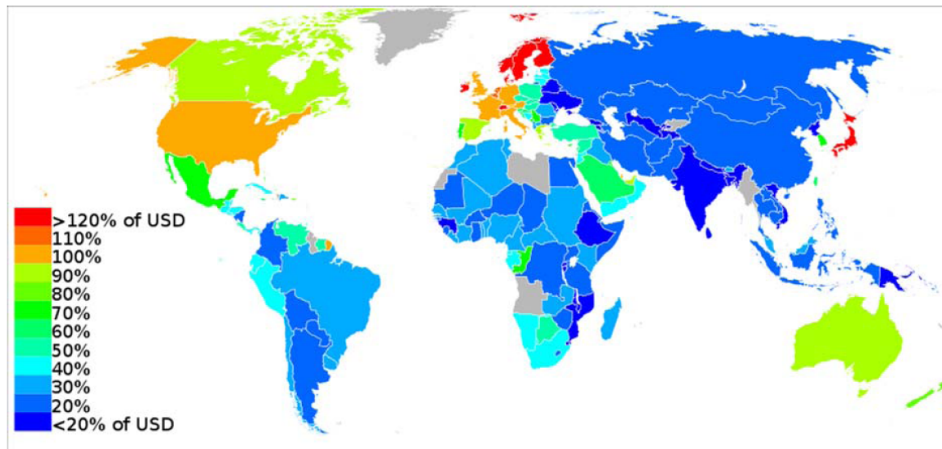
- The PPP-dollar rate for kroner would be the number of US dollars that would buy the same bundle of goods in the States as kroner would buy in Norway.
- International prices are constructed for an enormous basket of goods and services by averaging the prices for each such good and services over all different countries.
- National income for a country is then estimated by valuing its output at these international prices.

Comparing income across countries

Purchasing-power-parity (PPP) rates

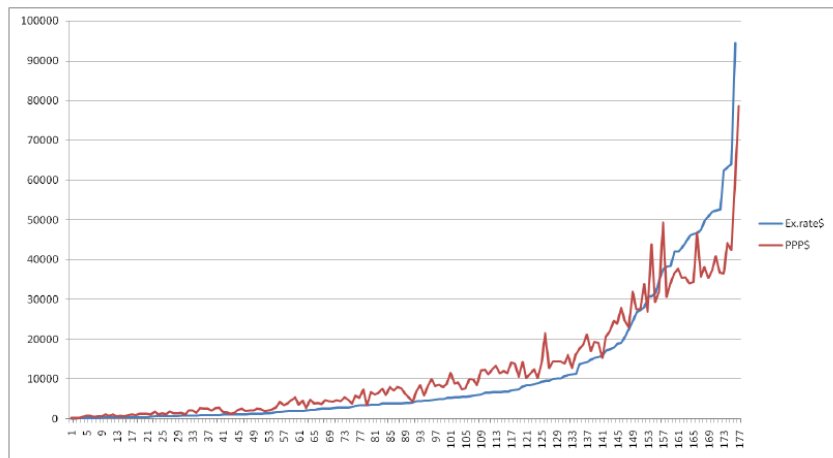
Example - 2000	USA	Norway	China
GDP per capita LCU	34605.84	329824	7858
GDP per capita US\$	34605.84	37480	949
GDP per capita, PPP (international \$)	34605.84	36084	2357
Official exchange rate (LCU per US\$)	1	8.80	8.28
PPP conversion factor (GDP)	1	1.04	0.40
PPP conversion factor, (LCU per international \$)	1	9.14	3.33

Purchasing Power Parity (PPP)



Cross-Country differences

PPP versus exchange rate measures of GDP, 2008. Source WDI



Countries in Order of Increasing Per Capita Income, 2008 (Exchange rate method)

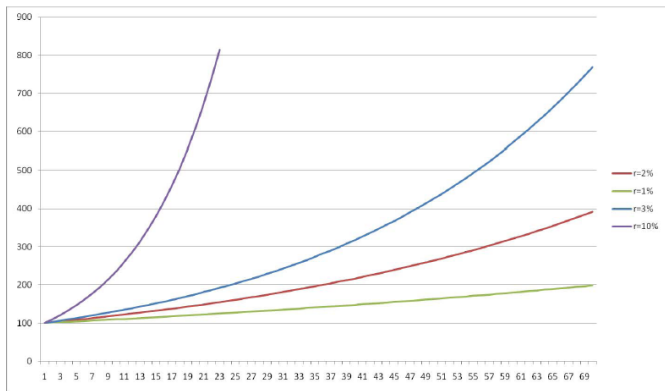
Cross-Country differences

Income per capita

- Huge differences in income per capita between countries
- PPP estimates of per capita income go some way towards reducing the astonishing disparities in the world distribution of income, but certainly not all the way.
- Measured in PPP dollars, developing countries do better relative to richer countries than if measured in exchange rate dollars.

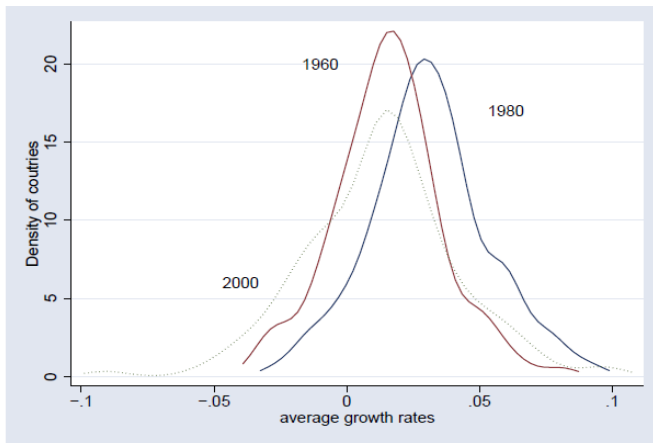
- How could some countries be so many times richer than others?
- The answer lies in differences in growth rates.
 - A country with a growth rate of 1% would double its income in about 70 years.
 - A country with a growth rate of 2% would double its income in about 35 years
 - A country with a growth rate of 10% would double its income in about 7 years

Growth illustration



Illustration

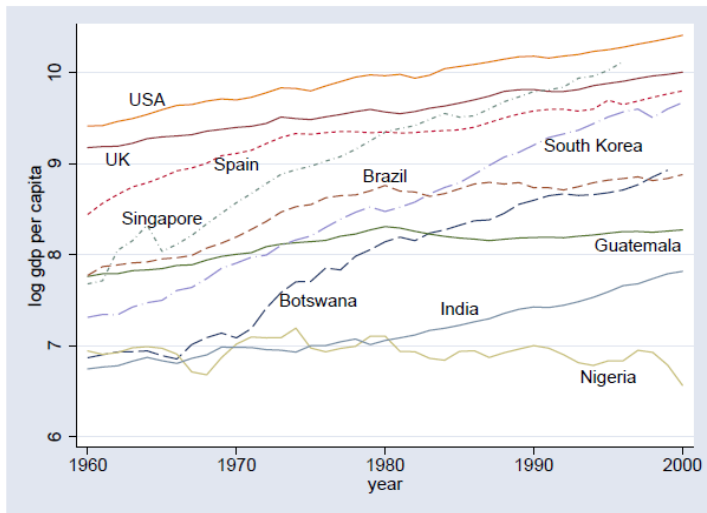
Income Differences and Growth



The distribution of countries according to the growth rate of GDP per worker (PPP-adjusted) in 1960s, 1980s, and 2000.

Source: Penn World Tables/Acemoglu 2008

Income Differences and Growth



The Evolution of income per capita in selected countries, 1960-2000. Source: Penn World Tables/Acemoglu 2008

Cross-Country differences

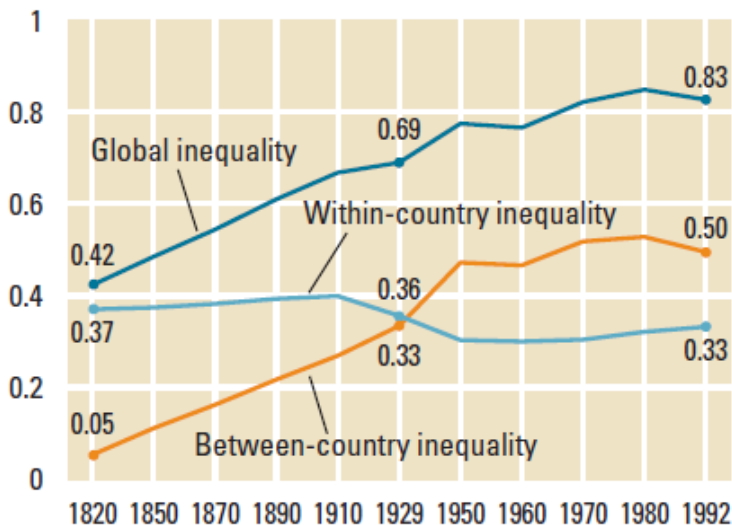
Income per capita

- There have been substantial changes in incomes for many countries.
 - A huge rise of East Asia.
 - Almost no change for sub-Saharan Africa.
- Middle-income countries have higher mobility in the income distribution among countries than either the poorest or the richest countries

- The international disparity of national income is only one indication that something is fundamentally askew with global development.
- There is also astonishing inequalities within countries.

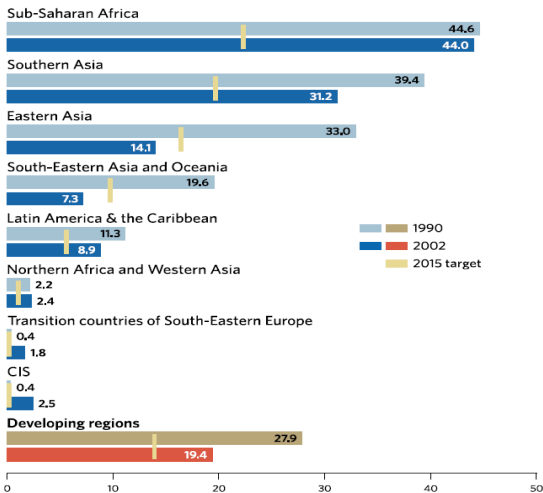
Cross-country differences - Inequality

Mean log deviation



Other development indicators - Poverty

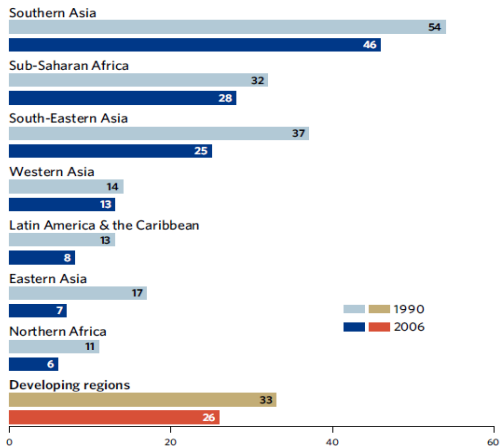
Proportion of people living on less than \$1 a day, 1990 and 2002
(Percentage)



Source: United Nations Millennium Development Goals 2006

Other development indicators - Poverty

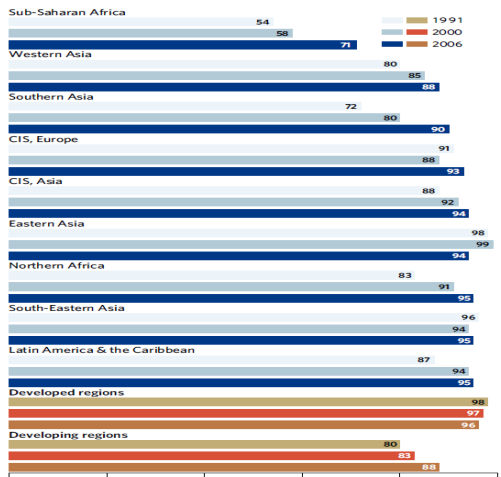
Proportion of children under age five who are underweight, 1990 and 2006
(Percentage)



Source: United Nations Millennium Development Goals 2008

Other development indicators - Schooling

Total net enrolment ratio in primary education*, 1990/1991, 1999/2000 and 2005/2006 (Percentage)

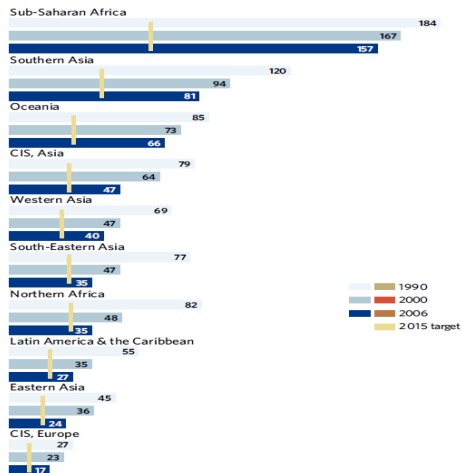


*Number of pupils of the theoretical school-age group for primary education, enrolled either in primary or secondary education, expressed as a percentage of the total population in that age group.

Source: United Nations Millennium Development Goals 2008

Other development indicators - Child Mortality

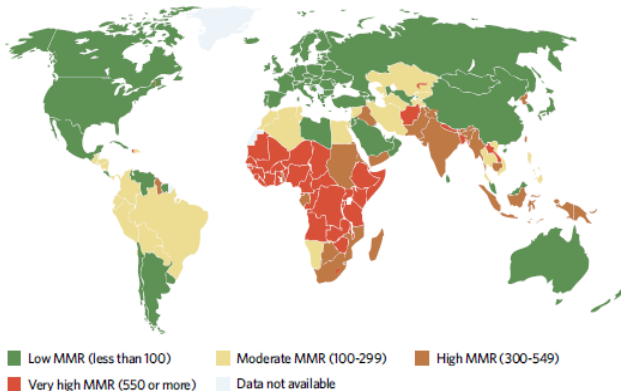
Under-five mortality rate per 1,000 live births, 1990, 2000 and 2006



Source: United Nations Millennium Development Goals 2008

Other development indicators - Health

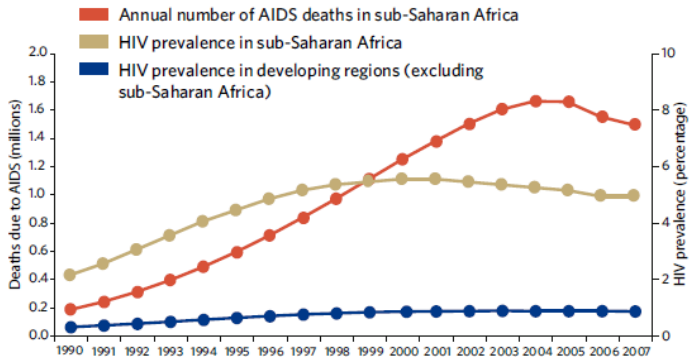
Maternal deaths per 100,000 live births, 2005



Source: United Nations Millennium Development Goals 2008

Other development indicators - Health

HIV prevalence in adults aged 15-49 years in developing regions and in sub-Saharan Africa (Percentage) and number of AIDS deaths in sub-Saharan Africa (Millions), 1990-2007



Source: United Nations Millennium Development Goals 2008

An index of human development

HDI (Human Development Index)

- The United Nations has published the Human Development Report since 1990
- One objective of this Report is to combine indicators into a single index, which is known as the human development index (HDI)
- The HDI has three components:
 - 1 Life expectancy at birth.
 - 2 A measure of educational attainment of the society.
 - 1 Average of adult literacy (with weight 2/3);
 - 2 Combination of enrollment rates in primary, secondary and tertiary education (with weight 1/3)
 - 3 A measure of per capita income in PPP \$

Human Development Index

Table 1: **Three dimensions of the HDI, indicators and corresponding goalposts**

Dimension	Indicator	Maximum value	Minimum value
A long and healthy life	Life expectancy at birth	85	25
Knowledge	Adult literacy rate (%)	100	0
	Combined gross enrolment ratio (%)	100	0
A decent standard of living	GDP per capita (PPP \$US)	40,000	100

Source: United Nations - Cracking the HDI. See

http://www2.undprcc.lk/resource_centre/pub_pdfs/P1027.pdf

$$\text{HDI} = 1/3(\text{Life Expectancy Index}) + 1/3(\text{Education Index}) + 1/3(\text{GDP Index})$$

- 1 Life Expectancy Index = $(\text{actual value} - \text{minimum value}) / (\text{maximum value} - \text{minimum value})$
- 2 Education Index = $2/3(\text{Adult Literacy Index}) + 1/3(\text{Gross Enrolment Index})$
 - 1 Adult Literacy Index = $(\text{actual value} - \text{minimum value}) / (\text{maximum value} - \text{minimum value})$
 - 2 Gross Enrolment Index = $(\text{actual value} - \text{minimum value}) / (\text{maximum value} - \text{minimum value})$
- 3 GDP Index = $[\log(\text{actual value}) - \log(\text{minimum value})] / [\log(\text{maximum value}) - \log(\text{minimum value})]$

Human Development Index

The 10 countries ranking highest

Rank	Country	HDI	Difference GDP per capita rank and HDI rank
1	Norway	0.971	4
2	Australia	0.970	20
3	Iceland	0.969	16
4	Canada	0.966	14
5	Ireland	0.965	5
6	Netherlands	0.964	8
7	Sweden	0.963	9
8	France	0.961	17
9	Switzerland	0.960	4
10	Japan	0.960	16

A positive figure of the difference indicates that the HDI rank is higher than the GDP per capita (PPP US\$) rank; a negative figure, the opposite.

Human Development Index

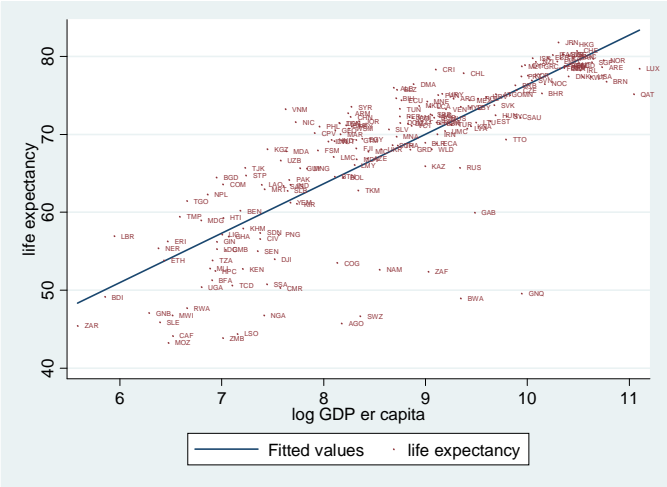
The 10 countries ranking lowest

Rank	Country	HDI	Difference GDP per capita rank and HDI rank
182	Niger	0.340	-6
181	Afghanistan	0.352	-17
180	Sierra Leone	0.365	-5
179	Central African Republic	0.369	-5
178	Mali	0.371	-16
177	Burkina Faso	0.389	-16
176	Congo (Democratic Republic)	0.389	5
175	Chad	0.392	-24
174	Burundi	0.394	6
173	Guinea-Bissau	0.396	5

A positive figure of the difference indicates that the HDI rank is higher than the GDP per capita (PPP US\$) rank; a negative figure, the opposite.

Per capita income and human development

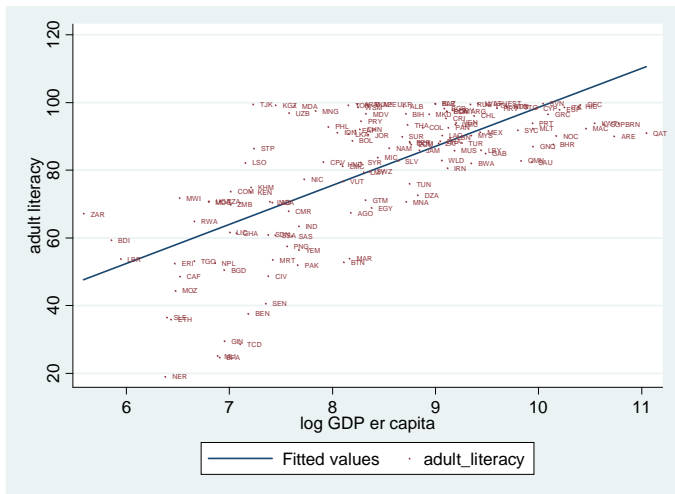
Income per capita and life expectancy



Data: WDI. Average for 2000-2008

Per capita income and human development

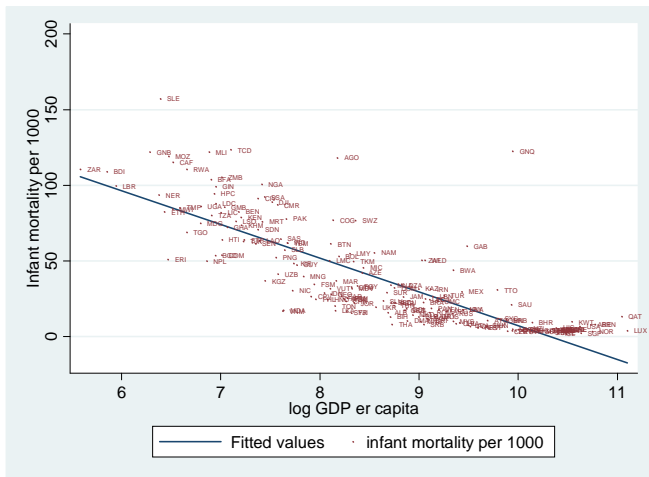
Income per capita and adult literacy



Data: WDI. Average for 2000-2008

Per capita income and human development

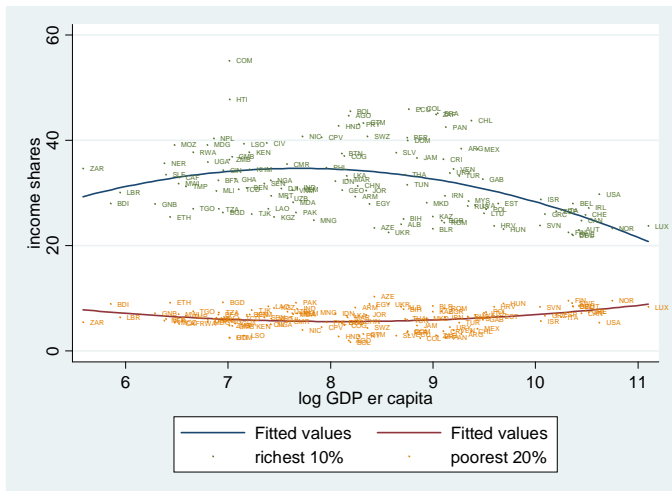
Income per capita and infant mortality



Data: WDI. Average for 2000-2008

Per capita income and human development

Income per capita and inequality



Data: WDI. Average for 2000-2008

Cross-country differences - Inequality

- Income is more unequally distributed in developing countries than in developed countries.
- Income distribution is particularly bad in middle-income countries.

Some structural characteristics of developing countries

- Agricultural activity accounts for significant fractions of occupations in developing countries.
- The rates of rural-urban migration are very high.
- Developing countries are largely exporters of primary products.
- The import mix of developing countries is however, more similar to that of developed countries.

The Economic Lives of the Poor

Banerjee and Duflo (2007) Journal of Economic Perspective

- The 1990 World Development Report defined the "extremely poor" people of the world as those who are currently living on no more than \$ 1 per day per person, measured at the 1985 (PPP) exchange rate.
- In 1993, the poverty line was updated to \$ 1.08 per person per day at the 1993 PPP exchange rate, which is the line used in this paper.
- The available evidence on the economic lives of the poor is incomplete in many ways, but a number of recent data sets and new research have added a lot to what we know about their economic lives.
- This article is based on household surveys conducted in 13 countries.

The Economic Lives of the Poor

Description of Data Sets

Country	Source	Year	Avg. monthly consumption per capita (In PPP\$)	Households (HHs) living on less than			
				\$1.08 per person per day		\$2.16 per person per day	
				Number surveyed	Percent of total surveyed HHs	Number surveyed	Percent of total surveyed HHs
Cote d'Ivoire	LSMS	1988	664.13	375	14%	1,411	49%
Guatemala	GFHS	1995	301.92	469	18%	910	34%
India-Hyderabad	Banerjee-Duflo- Glennerster	2005	71.61	106	7%	1,030	56%
India-Udaipur	Banerjee-Deaton- Duflo	2004	43.12	482	47%	883	86%
Indonesia	IFLS	2000	142.84	320	4%	2,106	26%
Mexico	MxFLS	2002	167.97	959	15%	2,698	39%
Nicaragua	LSMS	2001	117.34	333	6%	1,322	28%
Pakistan	LSMS	1991	48.01	1,573	40%	3,632	83%
Panama	LSMS	1997	359.73	123	2%	439	6%
Papua New Guinea	LSMS	1996	133.38	185	15%	485	38%
Peru	LSMS	1994	151.88	297	7%	821	20%
South Africa	LSMS	1993	291.33	413	5%	1,641	19%
Tanzania	LSMS	1993	50.85	1,184	35%	2,941	73%
Timor Leste	LSMS	2001	64.42	662	15%	2,426	51%

The Economic Lives of the Poor

The living arrangements of the poor

- The typical extremely poor family tends to be large.
- These families have a large number of children.
- The poor of the world are very young.
- The ratio of the number older people (over age 51) to the number of people of "prime-age" (21-50) tends to be between 0.2 and 0.3.

The Economic Lives of the Poor

How the poor spend their money

- The average poor person does not seem to put every available penny into buying more calories.
- Among the 13 countries, food typically represents from 56 to 78 percent of consumption among rural households, and 56 to 74 percent in urban areas.
- Among the nonfood items alcohol and tobacco show up prominently.
- Spending on festivals is an important part of the budget for many poor households.
- The poor households spend very little on forms of entertainment that is common in high-income countries.

The Economic Lives of the Poor

The ownership of assets

- The share of people who own radios, television and bicycles varies significantly across poor countries.
- Among productive assets, land is the one that many people in the rural surveys seem to own.
- Apart from land, extremely poor households in rural areas tend to own very few durable goods, including productive assets.

The Economic Lives of the Poor

Health and Well-being

- Consume low levels of calories.
- Low "body mass index".
- Anemic
- Frequently sick or weak.
- Levels of self-reported happiness or self-reported health levels are not particularly low.
- Report being under a great deal of stress.

The Economic Lives of the Poor

Investment in education

- The extremely poor spend very little on education.
- This is not because the children are out of school.
- In 12 of the 13 countries, at least 50 percent of both boys and girls aged 7 to 12 in extremely poor households are in school.
- Children in poor households typically attend public schools or other schools that do not charge a fee.

The Economic Lives of the Poor

How the poor earn their money

- A substantial fraction of the poor act as entrepreneurs.
- Many poor households have multiple occupations.
- Temporary migration to work.
- Lack of specialization.

The Economic Lives of the Poor

Markets and the economic environment of the poor

- Very few of the poor households get loans from a formal lending source.
- The main source of borrowed funds come from relatives, shopkeepers, and other villagers.
- There is a lack of access to reliable savings accounts.
- Even participating in semiformal savings institutions is not nearly as common among the poor as one might have expected.
- The poor have little access to formal insurance.
- Land records in developing countries are often incomplete and many people do not have titles to their land which makes it harder to sell or mortgage the land.

Overview of rest of the course

Week	Topic	Readings
3	Introduction	R: 1 and 2; "The economic lives of the poor"
4	Economic Growth	R: 3
5	Economic Growth	R: 3; B: 5
6	Economic growth	R: 4
7	Migration	R: 10; B: 8
8	Measuring Inequality	R: 6
9	Inequality and development	R: 7, B: 4 and 12
10	Poverty and development	R: 8
11	Institutions and development	B: 2 and 3 and "Institutions as a fundamental cause of long-run growth"
12	Institutions and development	B: 2 and 3 and "Institutions as a fundamental cause of long-run growth"
13	International trade	R: 16 and 17
14	International trade	R: 16 and 17
15	Open	