Introduction to Development Economics

Q: What is Development Economics?

- Traditional economics, taught in introductory textbooks, is concerned primarily with the efficient, least-cost allocation of scarce resources and with the optimal growth of these resources over time.

- Development economics, on the other hand, deals with the <u>economic, social, political and institutional mechanisms</u> necessary to bring about rapid and large-scale improvements in levels of living, in addition to being concerned with the efficient allocation of scarce or idle resources and with their sustained growth over time.

- In developing countries,

-most markets are highly imperfect,

-consumers and producers have limited information,

-major structural changes are taking place, and

-disequilibrium situations often prevail.

There are concerns such as

-unifying the nation,

-replacing foreign advisors with local decision makers,

-resolving tribal or ethnic conflict, or

-preserving religious and cultural traditions.

At the individual level, family, clan, religious or tribal considerations may take precedence over utility or profit maximization calculations.

- Therefore, development economics

  "*must be concerned with the economic, cultural and political requirements for effecting rapid structural and institutional transformations of entire societies in a manner that will most efficiently bring the fruits of economic progress to the broadest segments of the population.*"

- <u>Question:</u>

  How should we measure the degree of development a country has at a given point in time? What should be our yardstick?

  One yardstick is per capita income.

- International agencies classify countries according to their levels of gross national income per capita.

- Based on 2008 GNI per capita in US dollars,

the groups are:

1. Low income, $975 or less;

2. Middle income:

    a) Lower middle income, $976–3,855;

    b) Upper middle income, $3,856–11,905; and

3. High income, $11,906 or more.
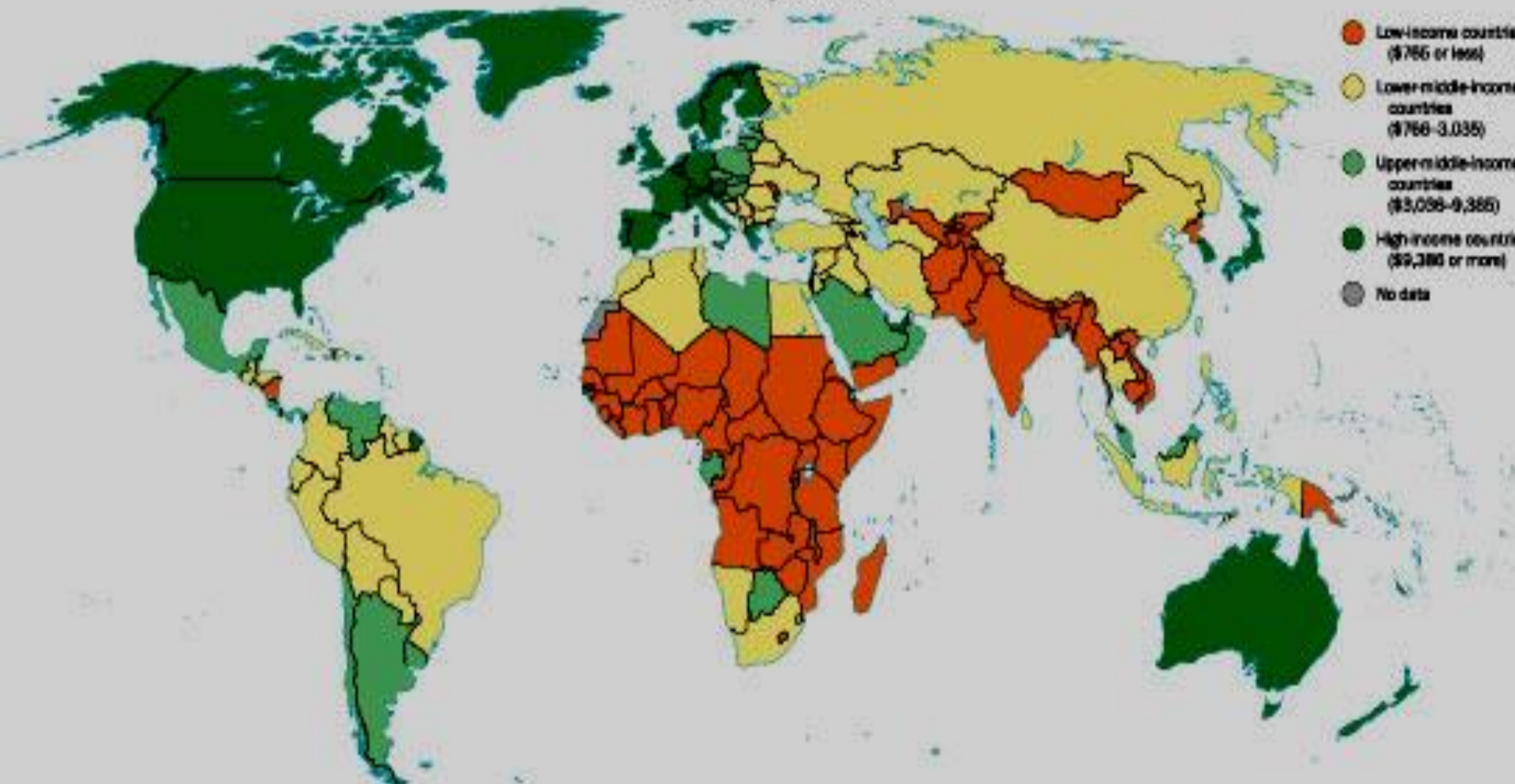
	Country	Per capita GNI (in US$)
High income	Norway	87 070
	Luxembourg	84 890
	Switzerland	65 330
	Denmark	59 130
	Sweden	50 940
	Netherlands	50 150
	Ireland	49 590
	United States	47 580
	Iceland	40 070
	Kuwait	38 420
	Japan	38 210
	Israel	24 700
	Slovenia	24 010
	Cyprus	22 950
	Trinidad and Tobago	16 540
	Slovak Republic	14 540
	Estonia	14 270
	Croatia	13 570
	Hungary	12 810

		Country	Per capita GNI (in US$)
Middle income	Upper middle income	Poland	11 880
		Libya	11 590
		Mexico	9 980
		Russian Federation	9 620
		Chile	9 400
		Turkey	9 340
		Romania	7 930
		Brazil	7 350
		Malaysia	6 970
		Botswana	6 470
		Lebanon	6 350
		Bulgaria	5 490
		Belarus	5 380
		Jamaica	4 870
		Bosnia and Herzeg.	4 510
		Algeria	4 260
		Macedonia	4 140
		Fiji	3 930

		Country	Per capita GNI (in US$)
Middle income	Lower middle income	Albania	3 840
		Azerbaijan	3 830
		Iran	3 540
		Angola	3 450
		Armenia	3 350
		Guyana	1 420
		Nigeria	1 160
		India	1 070
		Papua New Guinea	1 010
		Pakistan	980

	Country	Per capita GNI (in US$)
Low income	Senegal	970
	Yemen	950
	Zambia	950
	Uzbekistan	910
	Vietnam	890
	Rwanda	410
	Nepal	400
	Burundi (lowest)	140

GNI per capita, 2003

- Low-income countries ($766 or less)
- Lower-middle-income countries ($766–3,035)
- Upper-middle-income countries ($3,036–9,385)
- High-income countries ($9,386 or more)
- No data

The history of the economic view of development:

- Income per capita: Traditionally, the levels and growth rates of real per capita income have been used as indicators of overall economic well-being of a population.

- Development was also seen as the planned change in the structure of production and employment, such as the decline in the share of agriculture and increase in the share of manufacturing and services.

- As a result, development strategies usually aimed rapid industrialization at the expense of agriculture and rural development.

  Generally speaking, development was seen mainly as growth, with the underlying belief that the benefits of growth would "trickle down" to the disadvantaged members of the population in terms of increased economic opportunities for higher income and better distribution.

- In the 1950s, 60s and the 70s, many countries reached their growth goals without much change in the living conditions of many people. During the 1970s, the definition of development was expanded to include reduction or elimination of poverty, inequality and unemployment along with growth. This can be rephrased as "redistribution from growth".

- In the 1980s and 90s the growth rates turned negative in many developing countries and governments facing foreign debt problems began cutting back on their social and economic programs. Therefore the situation became worse for many developing countries. In the 1990s the U.S. and the U.K. enjoyed record-high growth rates while in some parts of the world (in sub-Saharan Africa) average incomes declined.

- The World Bank changed the growth perspective that it maintained in the 1980s to a much broader definition.

  In its 1991 World Development Report, it declared:

  "The challenge of development… is to improve the quality of life. Especially in the world's poor countries, a better quality of life generally calls for higher incomes— but it involves much more. It encompasses as ends in themselves better education, higher standards of health and nutrition, less poverty, a cleaner environment, more equality of opportunity, greater individual freedom, and a richer cultural life."
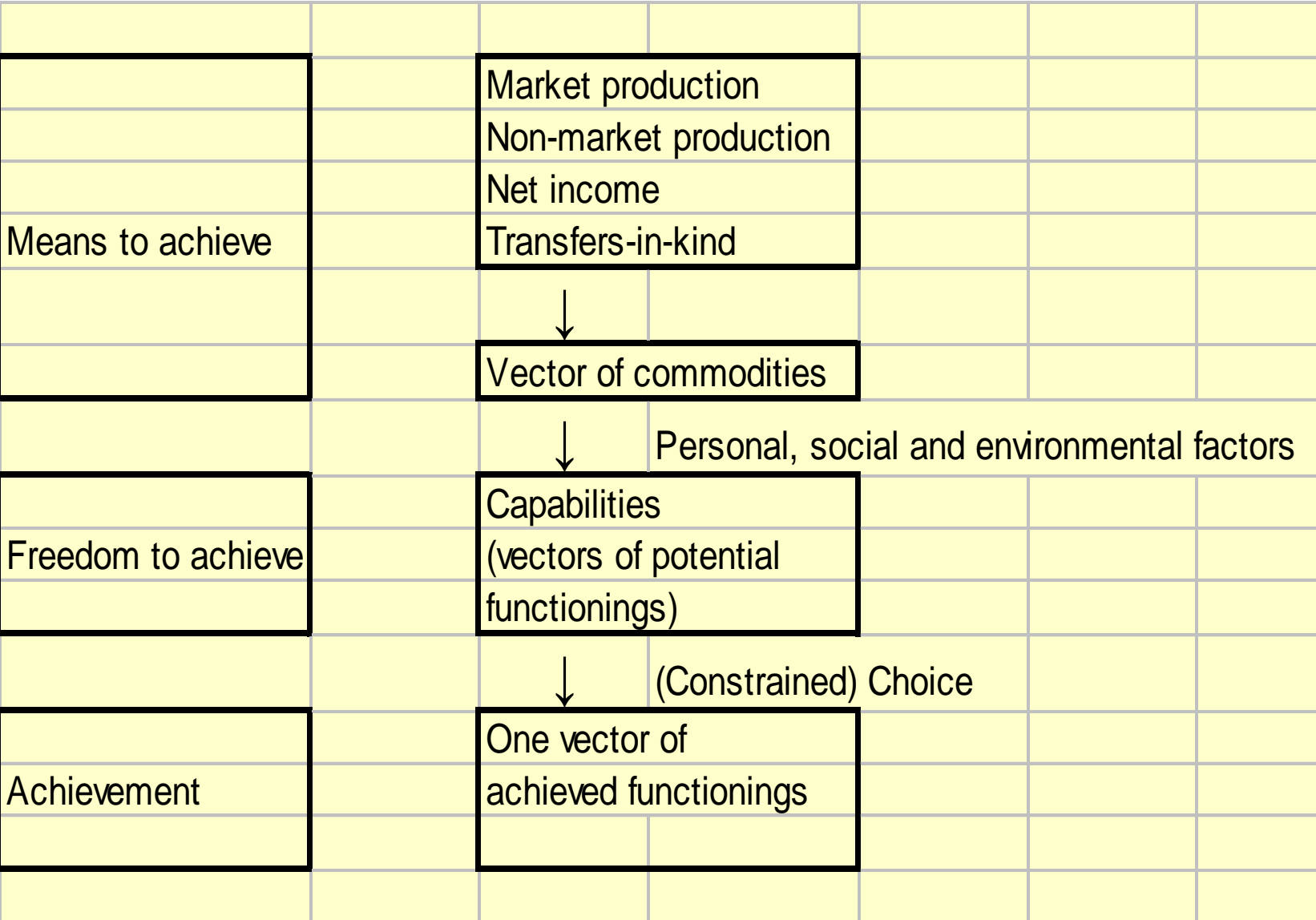
Amartya Sen's "Capabilities" Approach:

- The major components of the capability approach are *functionings* and *capabilities*.

  Functionings are defined as the "beings and doings" of a person, whereas a person's capability is "the various combinations of functionings that a person can achieve.

  Capability is thus a set of vectors of functionings, reflecting the person's freedom to lead one type of life or another"

- A functioning is an achievement, whereas a capability is the ability to achieve. Functionings are, different aspects of living conditions. Capabilities, in contrast, are notions of freedom: what real opportunities you have regarding the life you may lead.

- Example of two persons who both don't eat enough to enable the functioning of being well-nourished:

  The first person is a victim of a famine in Ethiopia, while the second person decided to go on a hunger strike in front of the Chinese embassy in Washington to protest against the occupation of Tibet.

Means to achieve		Market production
		Non-market production
		Net income
		Transfers-in-kind

$\downarrow$

Vector of commodities

$\downarrow$ Personal, social and environmental factors

| Freedom to achieve | | Capabilities (vectors of potential functionings) |

$\downarrow$ (Constrained) Choice

| Achievement | | One vector of achieved functionings |

- The conversion factors determine how a person can convert commodities into capabilities and functionings:

  - *Personal factors*: Metabolism, physical condition, sex, reading skills, intelligence etc. (Examples: The nutritional needs of pregnant women are different from the needs of the elderly. A bicycle is of no use to a disabled person, a book has little use to an illiterate person)

  - *Social factors*: Public policies, social norms, discriminating practices, gender roles, societal hierarchies, power relations etc. (Example: A car is of no use to a woman in a society in which it is not considered appropriate for a woman to drive without an accompanying man.)

  - *Environmental factors*: Climate, infrastructure, institutions, public goods etc. (Example: A bike is of no use where there are no paved roads. A coat is of little use in the tropical areas.)

- In principle we should be concerned with people's real freedoms (with their capability to function) and not with their achieved functionings.

- The approach emphasizes functional capabilities instead of utility or access to resources.

- Poverty is understood as capability-deprivation.

The Millennium Development Goals:

1. Eradicate extreme poverty and hunger
2. Achieve universal primary education
3. Promote gender equality and empower women
4. Reduce child mortality
5. Improve maternal health
6. Combat HIV/AIDS, malaria and other diseases
7. Ensure environmental sustainability
8. Develop a global partnership from development

Income and Growth

Problems in measuring national income:

- Problem of underestimation of income (Prodn for own cons included but may not be measured adequately. Child care at home, voluntary work, illegal or black market activities not included in GDP)

- The problem of using exchange rates to measure income

- The problem of using market prices (imputations may be needed: value of employed provided meals, owner occupied housing, public goods)

There are basically two ways of comparing income at the international level:

- The exchange rate method: Each country's income is converted to a common currency (typically US dollars).
- The purchasing power parity (PPP) method: Rationale for using this method:

  - Exchange rates fluctuate too much from year to year.

  - A more severe problem is that prices of many goods (the nontraded goods, such as infrastructure and many services) are not appropriately reflected in exchange rates.

- The main idea behind PPP calculations is to estimate the correct international prices of goods and services. This has been done by the United Nations International Comparison Program.

- As a first step, a set of benchmark countries is selected and data on prices of 400-700 items in 150 expenditure categories in each country are collected. The price of each item is divided by its price in the US, yielding a relative price for all of these items. Then, for each expenditure category, an average relative price is calculated. This gives us 150 relative prices for each country.

- Next, the national currency expenditure $p_{ij}q_{ij}$ on each 150 expenditure category is obtained from each country.

  Then, quantities are estimated.

  This is done by dividing the national currency expenditure by its relative price, which yields

  $$\frac{p_{ij}\, q_{ij}}{p_{ij}\, / \, p_{US}} = q_{ij}\, p_{US}$$

  We can obtain the quantities in each category, since the US prices are known.

- In the final step, the international relative price for each expenditure category is obtained.

  The international relative price is the weighted average of relative prices in all countries in the set.

  The quantities obtained earlier from the expenditure data are now valued at international prices, which gives us the value of national output at these prices.

- The purchasing power parity (PPP) of a country is defined as the ratio of its domestic currency expenditures to the international price value of its output.

Estimation of the PPP exchange rate
A very simple example

Country	Production of Televisions per Capita	Production of Haircuts per Capita	Price of Televisions in Local Currency	Price of Haircuts in Local Currency	GDP per Capita in Local Currency
Richland	4	40	10	2	120
Poorland	1	10	10	1	20

1) Build a standardized basket of goods: 1 TV, 10 haircuts
      Price of the basket in Richland = 30 liras
      Price of the basket in Poorland = 20 liras
2) PPP exchange rate :   3 Rl liras= 2 Pl liras
3) With this exchange rate, GDP Poorland = 30 liras
      1/6 difference reduced to 1/4 difference

Country	GNI per capita in US dollars, 2002		
	(1) Exchange rate method	(2) PPP method	(2)/(1)
Argentina	4220	10190	2.41
Bangladesh	380	1770	4.66
China	960	4520	4.71
Zambia	340	800	2.35
South Korea	9930	16960	1.71
United States	35400	36110	1.02
India	470	2650	5.64

The eight largest economies of the world in 1993.		
	Exchange rate method	**PPP method**
1	United States	United States
2	Japan	China
3	Germany	Japan
4	France	Germany
5	Italy	India
6	United Kingdom	France
7	Spain	Italy
8	Canada	United Kingdom

One very important observation:

Regardless of the method used, we reach the basic observation that the world income distribution is highly skewed.

- According to the World Development Report (1996), 20% of the world income was generated by low- and middle-income countries, where 85% of the world's population lives.

- Over the period 1960-85, the richest 5% of the world earned a per capita income that was about 29 times the per capita income in the poorest 5%.

Question: Has the world income distribution changed? Have poor countries remained poor?

	1/4	1/2	1	2	>2
1/4	76	12	12	0	0
1/2	52	31	10	7	0
1	9	20	46	26	0
2	0	0	24	53	24
>2	0	0	0	5	95

Some observations on world income inequality:

1) Over the 1960-85 period, the relative distribution of world income has been quite stable. Even with PPP correction, the richest 5% had a level of per capita income that was about 29 times the per capita income of the poorest 5%.

2) Although the overall distribution has remained stationary, there have been movements within the world income distribution. East Asian economies experienced a rise while countries in sub-Saharan Africa and Latin America experienced a fall.

3) Based on the observation that countries change their relative position, we can say that there are no ultimate traps in development. However, a history of wealth or poverty tells us something about the country's future. Mobility is the highest in the middle of the distribution.

4) In fact, poor countries have some advantages in development.

- Learning from the mistakes of developed countries.

- Imitating the technologies in developed countries without having to pay for their creation.

- Attracting capital by offering a higher rate of profit. Therefore, the observation that history matters in keeping persistent differences is not so obvious and needs a good explanation.
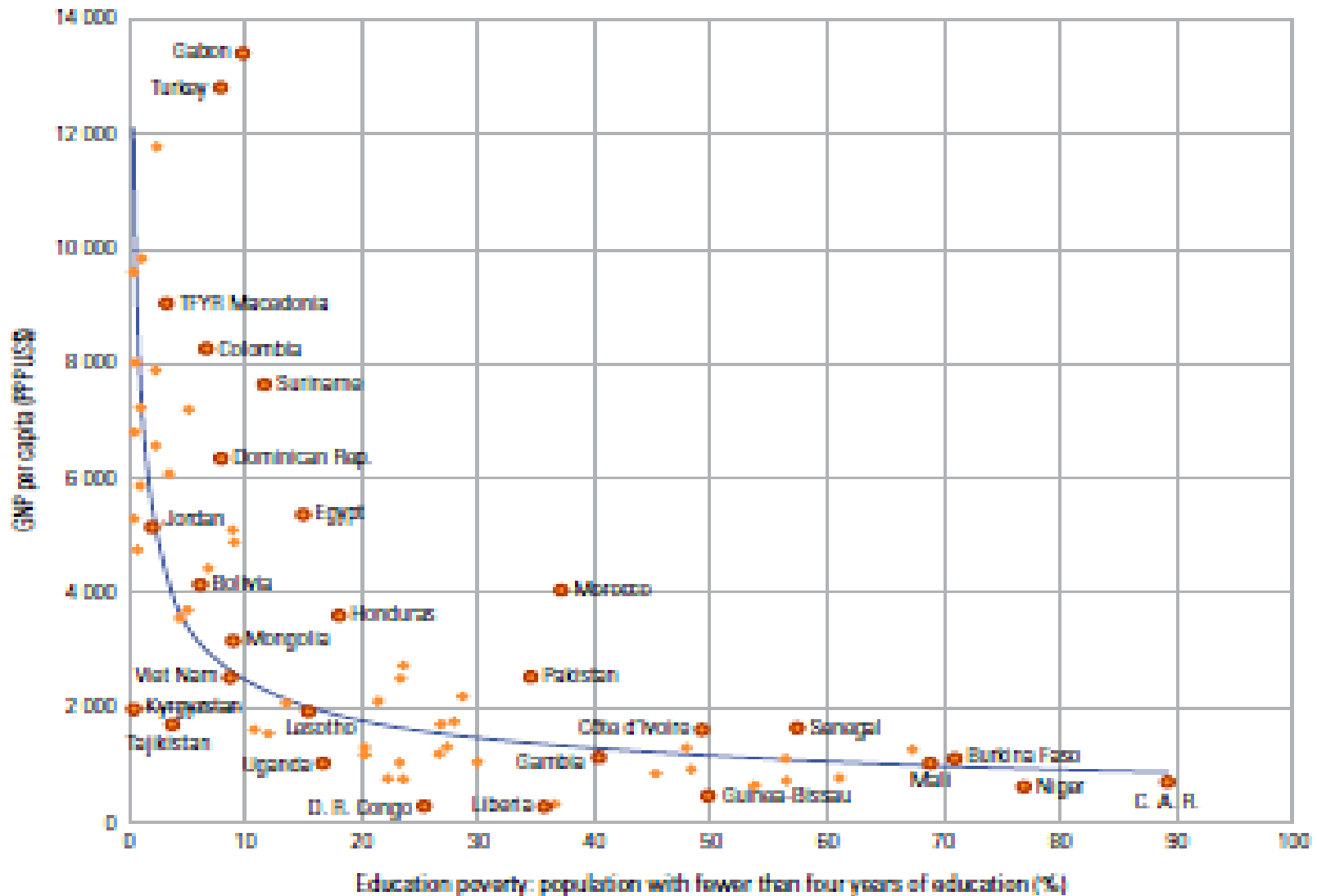
Human Development Index:

	Guatemala	Sri Lanka	
Per capita income, 1993 PPP	3350	2990	
Share of poorest 40%	8	22	
Share of richest 20%	63	39	
Life expectancy (years)	65	72	
Infant mortality rate per 1000	48	18	
Adult literacy rate (%)	54	89	

- Human Development Index has three components:

- Income (per capita income, PPP),

- Education, and

- Health

See HDI country list

Figure 3.3: Education poverty falls with rising income – but the association varies

GNP per capita and % of the population aged 17 to 22 with fewer than four years of education

Stiglitz-Sen-Fitoussi Report- 2009
(available on the internet)

- A report written by a commission of economists and social scientists. The members of the Commission represent a broad range of specialisations, from national accounting to the economics of climate change.

- The members have conducted research on social capital, happiness, health and mental well-being.

Main messages:

- The report distinguishes between an assessment of current well-being and an assessment of sustainability, whether this can last over time.

- Current well-being has to do with both economic resources, such as income, and with non-economic aspects of peoples' life (what they do and what they can do, how they feel, and the natural environment they live in).

- Whether these levels of well-being can be sustained over time depends on whether stocks of capital that matter for our lives (natural, physical, human, social) are passed on to future generations.

- Some members of the Commission believe that one of the reasons why the recent crisis took many by surprise is that our measurement system failed us or market participants and government officials were not focusing on the right set of statistical indicators.

- Neither the private nor the public accounting systems were able to deliver an early warning. It is also clear that some of the performance was a "mirage", profits that were based on prices that had been inflated by a bubble.

- Perhaps, had there been more awareness of the limitations of standard metrics, like GDP, there would have been less euphoria over economic performance in the years prior to the crisis; metrics which incorporated assessments of sustainability (e.g. increasing indebtedness) would have provided a more cautious view of economic performance.

- Measuring production – a variable which among other things determines the level of employment – is essential for the monitoring of economic activity. The growing share of services and the production of increasingly complex products make the measurement of output and economic performance more difficult than in the past.
- Governments play an important part in today's economies. Currently, we cannot measure government output well. Need methodological adjustments.

- Need to shift emphasis from measuring economic production to measuring people's well-being. Because, there appears to be an increasing gap between the information contained in aggregate GDP data and what counts for common people's well-being.

- Recommendation 1: When evaluating material well-being, look at income and consumption rather than production.

- Recommendation 2: Emphasize the household perspective.

- Recommendation 3: Consider income and consumption jointly with wealth.

- Recommendation 4: Give more prominence to the distribution of income, consumption and wealth.

- Recommendation 5: Broaden income measures to include non-market activities (Important: Time use accounts: home production, leisure).