<u>Chapter 2: Economic Development: Overiew</u>

2.1 Introduction:

What is "development economics"?
(From Todaro, Ch.1)

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 economic, social, political and institutional mechanisms 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, unlike in developed 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 are countries classified according their level of development?

International agencies, including the OECD, UN and the IBRD (known as the World Bank) classify countries according to their levels of gross national income per capita.

The following table shows the classification that is based on 2008 GNI per capita in US dollars. (It can be obtained from the World Bank website (data & research, Data, classification of economies)).
The groups are: low income, $975 or less; lower middle income, $976–3,855; upper middle income, $3,856–11,905; and high income, $11,906 or more.

Generally speaking, the developing countries are those with low or middle incomes. Some high-income countries are sometimes classified as developing countries. In these countries, significant parts of the population remain uneducated or in poor health. (Will talk more on this later.)

		Country	Per capita GNI (in US$)
High income		Norway	87070
		Luxembourg	84890
		Switzerland	65330
		Denmark	59130
		Sweden	50940
		Netherlands	50150
		Ireland	49590
		United States	47580
		Iceland	40070
		Kuwait	38420
		Japan	38210
		Israel	24700
		Slovenia	24010
		Cyprus	22950
		Trinidad and Tobago	16540
		Slovak Republic	14540
		Estonia	14270
		Croatia	13570
		Hungary	12810
Middle income	Upper middle income	Poland	11880
		Libya	11590
		Mexico	9980
		Russian Federation	9620
		Chile	9400
		Turkey	9340
		Romania	7930
		Brazil	7350
		Malaysia	6970
		Botswana	6470
		Lebanon	6350
		Bulgaria	5490
		Belarus	5380
		Jamaica	4870
		Bosnia and Herzeg.	4510
		Algeria	4260
		Macedonia	4140
		Fiji	3930
	Lower middle income	Albania	3840
		Azerbaijan	3830
		Iran	3540
		Angola	3450
		Armenia	3350
		China	2770
		Guyana	1420
		Nigeria	1160
		India	1070
		Papua New Guinea	1010

		Pakistan	980
Low income		Senegal	970
		Yemen	950
		Zambia	950
		Uzbekistan	910
		Vietnam	890
		Rwanda	410
		Nepal	400
		Burundi (lowest)	140

Source: http://siteresources.worldbank.org/DATASTATISTICS/Resources/GNIPC.pdf

We should mention that there is a wide income range within the group of developing countries, which hints that this group is heterogeneous. Therefore, a study of the diversity of developing countries requires an examination of the following eight components:

1. Country size: Large size has advantages of diverse resource endowment, large potential markets and more local sources of materials and products; whereas it creates problems of administrative control, national cohesion and regional imbalances. (Note that a country's size, per capita income and the degree of income inequality are not necessarily related.)

2. Historical background: Most African and Asian countries were colonies of Western European countries. This experience had a profound effect on the colonized countries since their economic structures and institutions were modeled after the colonialist. As Acemoglu, Johnson and Robinson (2001)[1] explain, Europeans adopted very different colonization policies in different colonies, with different associated institutions. In places where Europeans faced high mortality rates, they could not settle and they were more likely to set up extractive institutions. These early institutions persisted to the present.

   Here are some of the former colonies:

Colonialist	**Colonies (current country names)**
Britain	Canada, United States, Australia, New Zealand, Hong Kong, Hawaii, Malaysia, Philippines, Belize, Bahamas, Barbados, Jamaica, Nigeria, South Africa, Ghana, Somalia, Egypt, Iraq, Kuwait, Qatar, Bangladesh, India, Nepal
France	Canada, United States, Algeria, Cameroon, Congo, Mali, Togo, Ivory Coast, Mauritania, Morocco, Niger, Senegal, Chad, Tunisia,

[1] "The Colonial Origins of Comparative Development: An Empirical Investigation," *American Economic Review*.

	Madagascar, Lebanon, Syria
Spain	Costa Rica, El Salvador, United States, Guatemala, Honduras, Mexico, Nicaragua, Argentina, Chile, Ecuador, Colombia, Paraguay, Uruguay, Philippines
Portugal	Barbados, Brazil, Mozambique, Angola
Belgium	Rwanda, Burundi, Congo

3. Physical and human resources: Physical resources include land, minerals and other raw materials; human resources mean the number of people and their skill level. These resources influence the growth potential of countries; however, their abundance does not guarantee development success. Conflict over the profits from these resources often leads to social tensions, undemocratic governance and high inequality. This is called the curse of natural resources. Geography and climate can also play a role in the development process. Coastal economies perform better than land-locked ones and temperate zone countries better than tropical zone countries. As far as human resources are concerned, along with the number of people and their skills, other factors such as their willingness to work and innovate and desire for self-improvement matter.

4. Ethnic and religious composition: As the cold war between the United States and the Former Soviet Union ended, ethnic, tribal and religious conflict accelerated. The decrease in the influence of these countries triggered a revival of internal conflicts, One tends to think that, the greater the ethnic and religious diversity of the country, the more likely that there is conflict and political instability. Note that some of the most successful countries (in terms of growth performance) have culturally homogeneous societies. South Korea, Taiwan, Singapore and Hong Kong are examples. Yet, in the United States, diversity is often cited as a source of creativity and innovation. Therefore, we cannot say that diversity alone is responsible from development failures.

5. Relative importance of public and private sectors and civil society:
   Most developing countries have mixed economic systems, in which the shares of public and private sectors and their importance are determined mostly by historical and political factors. In general, Latin American and Southeast Asian countries have larger private sectors than South Asian and African countries. The 15 former Soviet Union countries have moved from centrally-planned to more market-oriented economies. The effects of economic policies naturally depend on the share of the two sectors. Apart from these two sectors, there is a third one with an increasing appreciation, the citizen sector (usually called non-governmental organizations, but also referred to as non-profit or voluntary organizations). Relying only on the former two sectors has been compared to sitting on a two-legged stool. Some NGOs have become key players in global affairs (for ex. Campaign to Ban Landmines, Doctors without Borders). Developed countries have vibrant civil societies that play key roles in social innovation and development. Their main advantages include innovative program design, program flexibility, targeted public goods provision, common property management, trust and credibility and advocacy activities. Developing

countries that have strong NGO sectors have often been able to make better progress in development.

6. Nature of industrial structure
   There are deep contrasts in the industrial structures of developing countries; i.e. the shares of primary, secondary and tertiary sectors in employment and in GDP. Development strategies may vary from one country to the next depending on the structure and degree of interdependence among these three sectors. (Find the shares of agriculture, manufacturing and services in GDP and employment for various developing countries.)

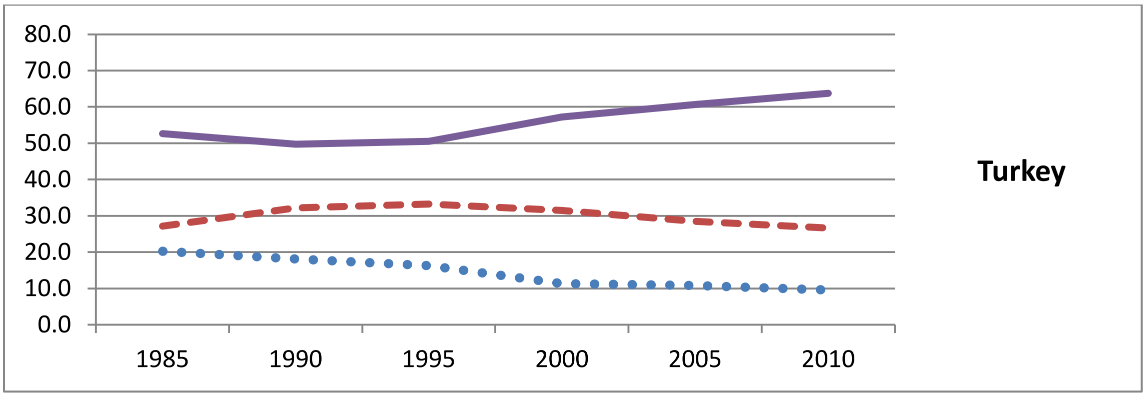


Figure 1. Shares of agriculture, industry and services in the value added.
Source: World Bank. (http://databank.worldbank.org/ddp/home.do?Step=1&id=4)

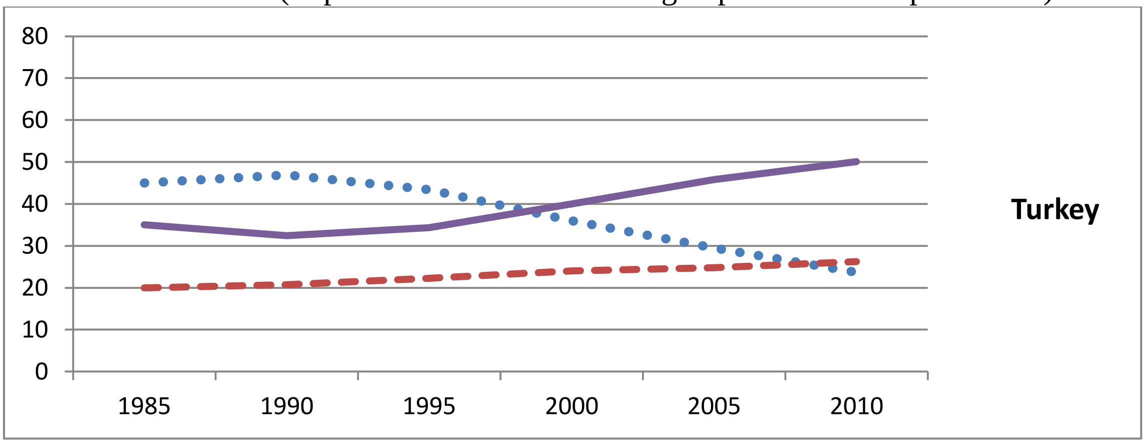


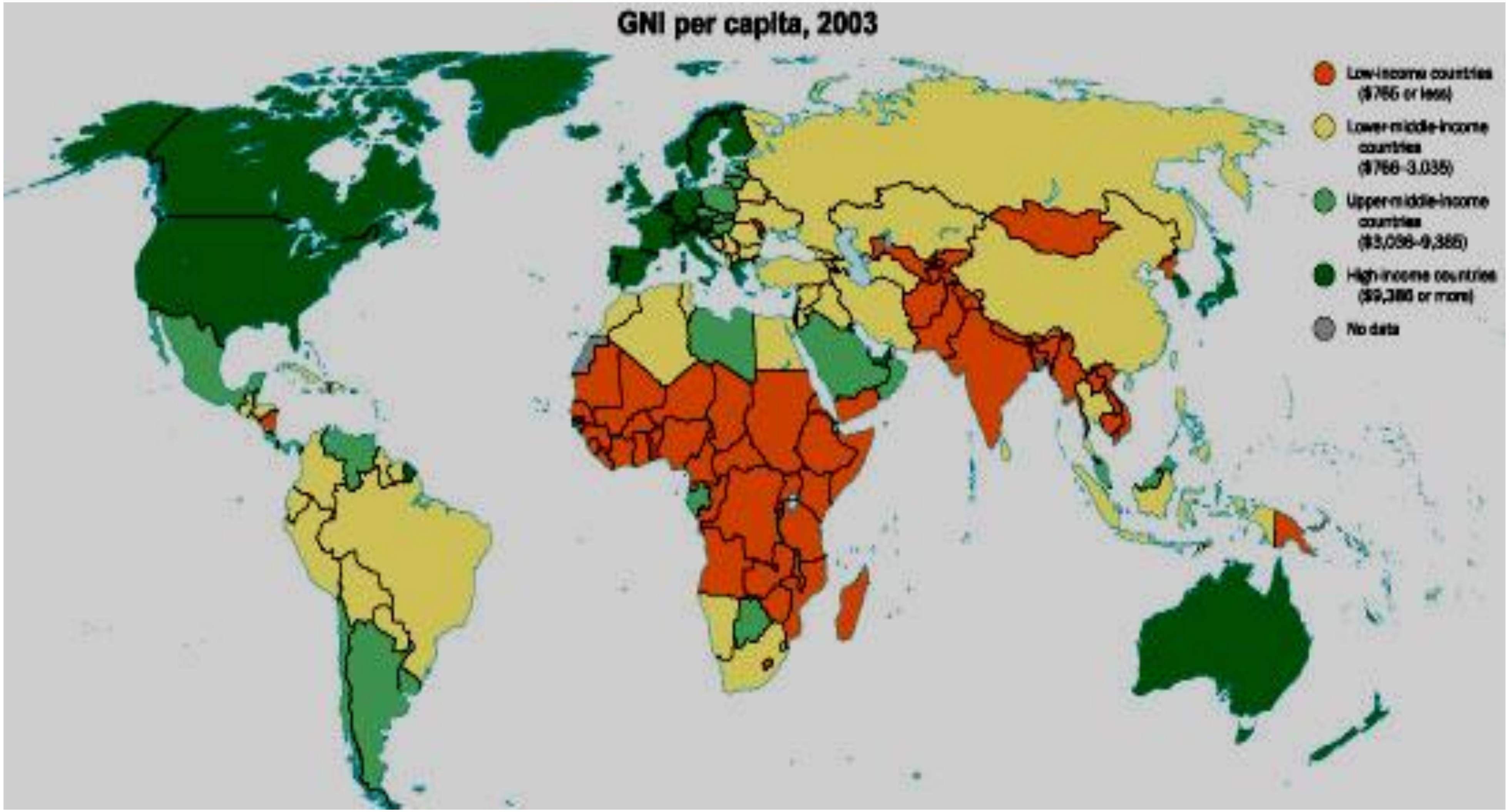
Figure 2. Shares of agriculture, industry and services in employment.
Source: World Bank. (http://databank.worldbank.org/ddp/home.do?Step=1&id=4)
Note: Dotted line: Agriculture; Dashed line: Industry; Solid line: Services

7. The degree of dependence on external economic and political forces: For most developing countries this dependence is substantial and it touches every facet of life. Most small countries depend on foreign investment and trade with developed countries. and Almost all small developing countries are depend on importing capital-intensive production technologies. There is also the international transmission of education systems, governance values, consumption patterns and attitudes toward life, work and self. The degree of dependence certainly affects the ability of developing countries to determine their own destiny.

8. The distribution of power in the nation, its social and political structures, and underlying institutions (i.e. rules of the game). Most developing countries are ruled directly or indirectly by small and powerful elites (large landowners, wealthy industrialists, oil sheiks, bankers, foreign manufacturers, the military, trade unionists.)

Despite these differences, most developing countries share some common characteristics: low levels of living; low levels of productivity; high rates of population growth and dependency burden; dependence on agricultural production and primary-product exports; prevalence of imperfect markets and limited information; dominance, dependence and vulnerability in international relations.

Consistent with these characteristics, they share some common goals: Reduction of poverty, inequality and unemployment; provision of minimum levels of education, health and housing services to every citizen; broadening of economic and social opportunities; and forming a unified state.


GNI per capita, 2003
Low-income countries ($765 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

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

- Access to a variety of commodities (food, clean water, shelter, clothing etc.) and services (health, education etc.)

A minimal requirement for development is that the physical quality of life be high.
Is this sufficient?
What else are needed?

- Tolerable levels of inequality
- Political rights and freedoms,
- Intellectual and cultural development,
- A low crime rate

and so on.

→ *"Multidimensionality"*

A short history of the economic view of development: (From Todaro, Ch.1)

Traditionally, the levels and growth rates of *real per capita income* (GNI (gross national income), GNP (gross national product), or GDP (gross domestic product)) 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, when many countries reached their growth goals without much noticeable change in the living conditions of the masses of people lead to suspicions about the definition of development. During the 1970s, development specialists and policy makers expanded the definition of development 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 United States and the United Kingdom 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.”

<u>Amartya Sen’s “Capabilities” Approach:</u>
(From Todaro, Ch.1)

According to Sen, income and wealth are not ends in themselves but instruments for other purposes. What matters is not the things that a person has (measured by income and/wealth), or the feelings these provide (measured by utility), but what a person is/can be and does/can do. For example, a book is of little value to an illiterate person. Or, a person with parasites will be able to extract less nourishment from food than a healthy person.

(From Robeyns, 2003, “The Capability Approach: An Interdisciplinary Introduction”)
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” (Sen 1992). A person’s functionings and her capability are closely related but distinct.

“A functioning is an achievement, whereas a capability is the ability to achieve. Functionings are, in a sense, more directly related to living conditions, since they *are* different aspects of living conditions. Capabilities, in contrast, are notions of freedom, in the positive sense: what real opportunities you have regarding the life you may lead” (Sen 1987: 36). To illustrate the difference between functioning and capability, consider Sen’s 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. Although both persons lack the functioning of being well-nourished, the freedom they had to avoid being hungry is crucially distinct. To be able to make this distinction, we need the concept of capability, i.e. the functionings that a person *could* have achieved. While both hungry people lack the achieved functioning of being well-nourished and hunger-free, the protester in Washington has the capability to achieve this functioning which the Ethiopian person lacks. Another example is a boxer who gets beaten up during a boxing game versus a women who is a victim of domestic violence.

Follow this diagram for an illustration of the main concepts:

	Market production	
	Non-market production	
	Net income	
Means to achieve	Transfers-in-kind	
	↓	
	Vector of commodities	
	↓	Personal, social and environmental factors
	Capabilities	
Freedom to achieve	(vectors of potential	
	functionings)	
	↓	(Constrained) Choice
	One vector of	
Achievement	achieved functionings	

The conversion factors mentioned above 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.)

Because of these factors, Sen thinks that it is not appropriate to measure well-being by levels of consumption of goods and services, since this approach regards commodities as ends in themselves rather than as means to an end. In principle, we should be concerned with people's real freedoms, that is, with their capability to function, and not with their achieved functionings. For example, if we are focusing on the capability of bodily integrity, we will not be concerned with a boxer who deliberately puts his body at danger of being beaten up and reduces his level of achieved functioning, but we are concerned about the woman who is subject to domestic violence.

Over the past two decades, Sen's views have become very popular among economists and other social scientists. His analysis has also led to the development of the Human Development Index.

We can therefore conclude that there are three main components that serve as the conceptual basis and practical guideline for the meaning of development:

1. Sustenance: The ability to meet basic needs
2. Self-esteem: To be a person

3. Freedom from servitude: to be able to choose

The Millennium Development Goals:
In 2000, the 189 members of the United Nations adopted eight Millennium Development Goals (MDGs), which were developed in consultation with the developing countries and with key international agencies, including the WB, the IMF, the OECD and the WTO. These goals are:

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 for development

From the above discussion, it is clear that looking at a measure such per capita GDP is not sufficient to measure the degree of development. Nevertheless, there is a belief that universal features of economic development (health, life expectancy, literacy etc.) follow in some natural way from the growth of per capita GDP with the passage of time.

Without ignoring the basic features of development, in this course, we will focus on the level and distribution of material well-being.

2.2 Income and Growth

Problems in measuring national income:

1. *Problem of underestimation of income:* This is common in developing countries. There are two main reasons for this: Underreporting (for tax evasion for instance), and not reporting output produced for self-consumption (mostly in rural areas, where the majority of the population live in developing countries).

2. *The problem of using exchange rates to measure income:* To facilitate comparison of incomes, each country's income is converted from the national currency to a common currency (typically US dollars) by using market exchange rates. The problem here is that prices for many goods are not reflected in exchange rates. See below.

3. *The problem of using market prices:* In theory, market prices reflect preferences as well as relative scarcities, therefore they represent the appropriate conversion scale to use. The problem here is that not all markets are perfectly competitive. Moreover, expenditure on public goods, valued at market prices may not reflect their true value

to citizens. Another point is that, national income accounts ignore costs of externalities.

There are basically two ways of comparing income at the international level: The exchange rate method and the purchasing power parity method.

- The exchange rate method: Each country's income is converted to a common currency (typically US dollars).

- The purchasing power parity (PPP) method: The exchange rate method suffers from the problem that these rates fluctuate too much from year to year. Yet, 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. This is because exchange rates are relative prices of commodities that cross international borders. The prices of nontraded goods and services do not affect exchange rates. Moreover, the prices of such goods are related to the level of development (that is, they are cheaper in poor countries than in rich countries). Therefore, using a market exchange rate to convert incomes causes an underestimation of real incomes in poor countries.

  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 national currency expenditures are divided by its relative price, which yields $\dfrac{p_{ij}q_{ij}}{p_{ij} / p_{US}} = q_{ij}\,p_{US}$. Thus, we obtain the quantities in each category q_{ij}, since p_{US} are known.

  In the next 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

Assume for simplicity that the market exchange rate between Richland and Poorland liras is one. This means that per cap income in Richland is 6 times as much as per cap income in Poorland.
Now adjust for PPP.

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) Determine the PPP exchange rate to equate the cost of the basket:
   3 Rl liras= 2 Pl liras

3) With this exchange rate, GDP in Poorland = 30 liras. As Richland is taken as the base, its GDP is still 120 liras.
   1/6 income difference is reduced to 1/4 difference

The method used in income measurement matters, especially for developing countries.

	GNI per capita in US dollars, 2002		
Country	**(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

(From the World Bank website:)
The World Bank favors the exchange rate method for comparing the relative size of economies and uses it to classify countries in low, middle and high-income categories, and to set lending eligibilities. Three-year averages of exchange rates are used to smooth effects of transitory exchange rate fluctuations.

The World Bank favors the purchasing power parity method for accurate measurement of poverty and well-being, since it more accurately reflects the real value of the goods and services.

Note: Estimates of overall economic growth are based on changes in GDP measured in constant, local currency units.

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?

Mobility matrix, 1962-1984 (Source: Quah (1993))

	1/4	½	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

The highlighted number "26" means that 26% of the countries that were between half the world average and the world average in 1962 transited to being between the world average and twice the world average.

Middle income countries have far greater mobility than either the poorest or the richest countries. For instance, 95% of countries in the ">2" category remained in the same category. Similarly, 76% of countries in the "1/4" category remained in the same category. However, less than half of average income countries kept their relative stance.

Looking at the next-to-poorest category, we see that 7% of these countries transited to incomes above the world average. But over half of them dropped to an even lower category. In general, it seems that at low levels of income, there is a downward tendency.

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. They can learn from the mistakes of developed countries. They can imitate the technologies in developed countries

without having to pay for their creation. They can attract capital by offering a higher rate of profit (think of diminishing returns to capital). Therefore, the observation that history matters in keeping persistent differences is not so obvious and needs a good explanation.

Figure III.A: The WDI and Individual Country Distributions in 1970

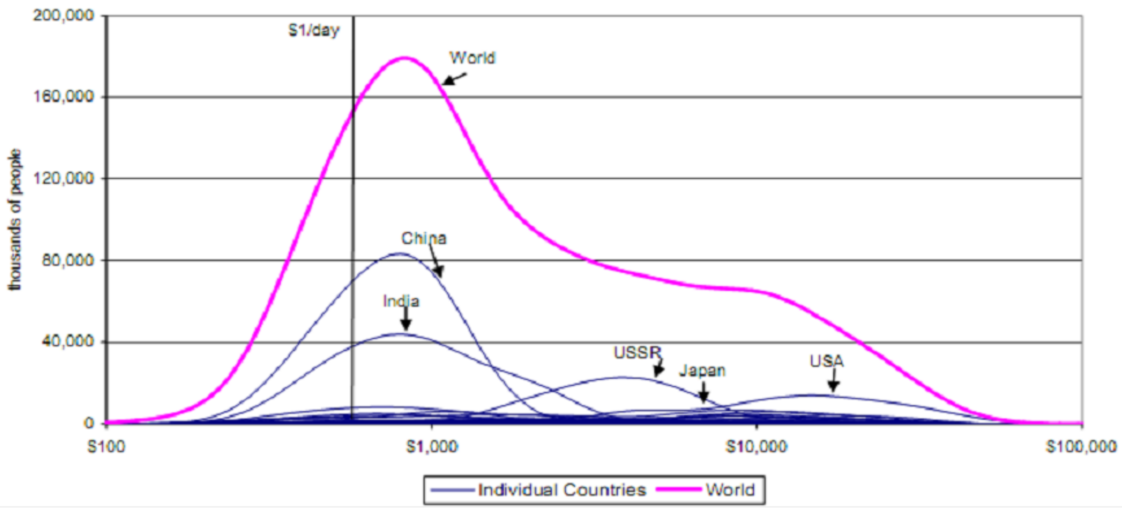
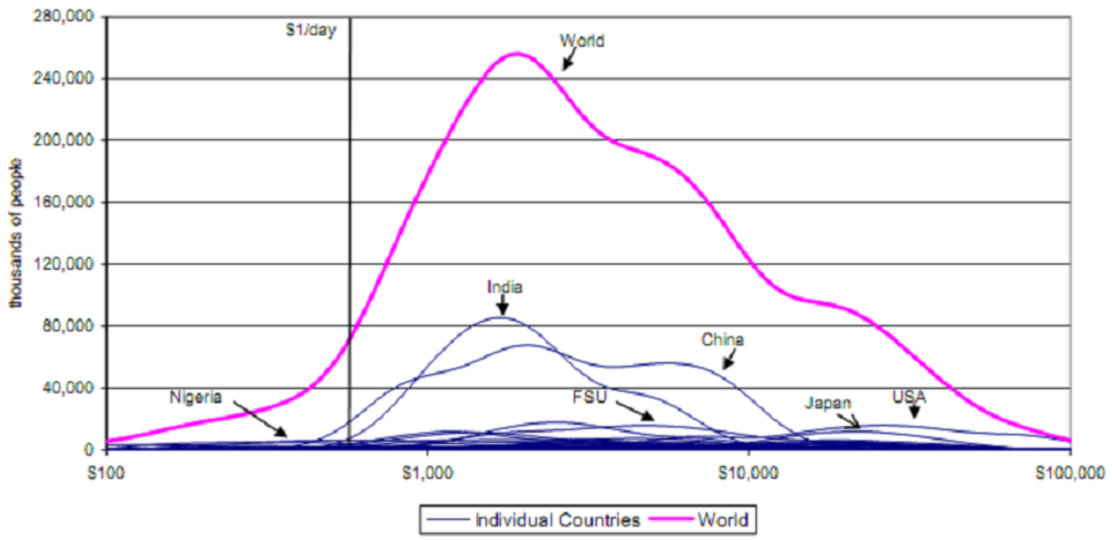


Figure III.B: The WDI and Individual Country Distributions in 2000



World income inequality in 1970 and 2000.

Source: Xavier Sala-i Martin (2002)

<u>Question:</u> How does inequality change over the development process?
Plot inequality measures versus per capita incomes in countries at different stages of development.

Will see later: Kuznets Curve.

<u>See additional notes for Human Development Index</u>