- the distinction between economic growth and economic development:
  - economic growth – takes place when there is a sustained (ongoing for at least 1-2 years) increase in a country's output (as measured by GDP or GNP) or in the per capita output (GDP or GNP per person) – the growth of GDP per capita or GNP per capita is a better indicator of growth than GDP or GNP because if the population grows faster than output, output (GDP or GNP) could grow while output per person (GDP or GNP per capita) falls – in this case it is misleading to say "growth" is occurring
  - economic development – occurs when the standard of living of a large majority of the population rises, including both income and other dimensions like health and literacy
  - the reason for this distinction between economic growth and economic development is because of the way income is distributed:
    - it is possible for a nation's economic output per person to increase (growth), but a large number of people can have their income decrease at the same time if the increase in output is earned by a small percentage of the population
    - for example, if 80% of the population is in traditional agriculture and 20% are in the modern sector then the average income per person can increase due to large gains by the modern sector minority but the income of the 80% of the population in the traditional sector can simultaneously be falling over time
    - thus an increase in GDP per capita is insufficient to say development is occurring
  - development occurs when income increases along with other standards of living (reduced mortality rates, lower illiteracy, increased in education, increase in life expectancy)
  - for example, in a hypothetical nation where the majority of people are nomadic and rely on traditional agriculture - if a foreign firm exploits a discovery of oil in this nation and there is no accompanying increase in schooling, literacy, health etc. then growth may occur but not development
  - note that "standard of living" is a somewhat a vague term that requires a more precise definition to be made operational
  - also, it is unclear what percent of people in an economy must have a rising standard of living for "development" to be said to be occurring – there is judgement involved
- historical context of economic development:
  - the experience of economic development in the modern world is unprecedented
  - a simple, static view of the world observes that 1/5 to 2/5 of the world is relatively rich and has a high standard of living, 3/5 to 4/5 of the world is poor while the gap between the rich and poor countries is growing; though this may be a realistic picture of the past 30-50 years, it is not true if a longer period of time is considered
  - no economic development occurred before the Industrial Revolution and all countries had large majorities of their populations near the subsistence level (just enough to eat and stay moderately healthy)
  - economic development has led to a fairly high level of prosperity
  - modern economic development is a process of technological development (in power and transportation, for example) and institutional change (such as the development of the modern market economy)
  - it is hard to separate the development of capitalist institutions and technological development because institutions promoted technological development

- the diffusion of the Industrial Revolution was geographically unequal – it started in the late 18th century in Britain then spread to Germany and the United States, then continued to other countries by the late 19th century, and reached the rest of the world in the 20th century

- around 1970 the underdevelopment of the less developed countries (South) was attributed by some to their exploitation by the developed countries (the North), and true development was thought to be impossible for the South under the existing structure of the world economy
  - the facts have not born out the latter view point
  - since 1960 and 1970 some non-European countries have experienced modern economic growth (such as South Korea) and this has continued to spread
  - there is less of a general distinction between developed and developing countries, more of a continuum from low to low-middle to upper-middle to high income countries
- differences between rich and poor countries (the "glass half-empty, half-full" theme):
  - overall over the last 50 years the gap between developed and developing countries has grown even though development and growth has occurred in many developing countries
  - between 1960-1995 the GDP per capita in developing countries grew at an average rate of 1.3% per year (some experienced higher average growth rates, such as China, Indonesia, and South Korea); this led to improvements in living standards
  - between 1960-1995 the GDP per capita in developed countries grew at an average rate of 2.4%
  - between 1820-1870 during the Industrial Revolution Great Britain's GDP/capita grew at an average annual rate of 1.2% per year (the highest economic growth of all countries during the early Industrial Revolution) – note that this is LESS than the growth rate of developing countries between 1960-1995
  - before 1960 the estimated rate of growth in developing countries was 0% (for example, China between 1850 and 1950)
  - other indicators of development:

	1960	1996
Average life expectancy at birth in developing countries	50.5	63.5
Infant mortality rate (number of infants per thousand that die in their first year of life) in developing countries	123	55

- the growth rate – what it means:
  - the growth rate between two years, such as 1960 and 1961, is given by the formula:

$growthrate = \frac{GDP_{1961} - GDP_{1960}}{GDP_{1961}}$, where GDP_{1960} is the GDP in 1960 and GDP_{1961} is the GDP in 1961

  - for example, if the rate of growth between 1960 and 1961 is 1.3%, then to find the GDP in 1961, multiply the GDP in 1960 by 1.013:

$GDP_{1961} = 1.013 \times GDP_{1960}$

  - note that the growth rate is given in per year terms (so if the growth rate is 1.3%, the economy grows an average of 1.3% every year)
  - in order to figure out the GDP over a longer period of time, say between 1960 and 1965 (a period of 5 years):

$$GDP_{1965} = GDP_{1960} \times (1.013)^5$$

notice that the growth rate is the average annualized rate (exactly 1.3% growth probably doesn't occur every year; it is the average annual growth rate or more exactly, the rate that would generate the end year result if one growth rate had obtained for the entire time)

• the growth rate is the rate of growth per year, so if a country grows at 1.3% per year for 10 years then it will grow at 1.3% each year and not a total of 1.3% over the entire 10 years

• an example of growth rates – starting at an income of $100 per capita and growing at 1.3% per year:

1st year: $100
2nd year: $100 x 1.013 = $101.30
3rd year: $100 x $(1.013)^2$ = $102.62
…
10th year: $100 x $(1.013)^{10}$ = $113.79

so there is about 13-14% total growth after 10 years

• a comparison of growth rates:

Growth rate	Doubling time of income
1.3%	About 50 years (around 3 generations)
2.0%	A little over 30 years
3.0%	A little less than 25 years
8.0%	Less than 10 years

• notice that, for example, if 1.3% is given as the annual growth rate per year over a 10 year period, that the growth rate was probably not 1.3% every year, but averages out to be 1.3% per year over the entire period

• what growth rates are feasible?
  • some countries have averaged about 6% a year over a couple of decades
  • the fastest growing countries have grown at about 6% a year or higher
  • developed countries as a whole have never had a greater than 4.0% growth rate for more than one decade

• most countries have had an increase in their standard of living as measured by various indicators:
  • life expectancy
  • infant mortality
  • income
  • adult literacy (in developing countries: 1960 – 46.6%, 1996 – 70%)
  • gains have occurred in even the poorest countries and poorest regions
  • an improvement in indicators will occur if looking at a long enough period (20-30 years or so)

- the income gap between the richest and the poorest country from a study done by Lant Pritchitt from World Bank:

Year	Ratio between incomes of richest and poorest country
1870	8.7:1
1960	38.5:1
1990	45.2:1

    - this ratio is less extreme if groups of countries are looked at (for example, the 10 richest and the 10 poorest)
    - the poorest countries are not getting poorer (they might be about the same as before with much of the population at a subsistence level) – thus, the gap is not increasing because the poor countries are growing poorer, but rather because the level achieved by the richest country keeps increasing
- statistics from the World Bank (the world's most important and influential development agency – it gives loans and development advice to developing countries):
    - at the end of the 1990s an estimated 1.1 billion people (about 1/6 of the world population) lived on $1 per day or less (on an annual income of less than $365); an income of $1 or less per day indicates severe poverty
    - about 2 billion people live on less than $2 per day
    - these figures include poor countries and some less poor developing countries with severe income inequality
    - tens of millions of children are malnourished (40% of children less than 5 in India and Pakistan)
    - 72% of people in Papua New Guinea, 50% of people in Zambia, 52% of people in Nepal, and 36% of people in Argentina do not have access to safe drinking water
- developing countries are defined as all countries below the standard of the industrialized group of countries:
    - industrialized countries (high income countries) are members of the OECD (Organization for Economic Cooperation and Development)
    - this used to include Western Europe, the United States, Australia, Japan, New Zealand, and Canada but more countries have joined

• statistics by the World Bank's classification of countries by income (from 1997):

	% of world population	1997 average GNP per capita	1997 average GDP per capita (PPP)	% of labor force in agriculture	Life expectancy	Secondary School Enrollment	
						M	F
Low Income Countries (<$785 avg. annual income) (65 countries)	35%	$350	$1,400	65%	56	62%	49%
Lower Middle Income Countries (61 countries)	39%	$1,230	$3,760	57%	67	64%	57%
Upper Middle Income Countries (32 countries)	10%	$4,520	$7,700	26%	69	-	-
OECD (High Income) Countries	15.7%	$25,700	$22,770	5%	77	94%	92%

- low income, lower middle income, and upper middle income countries are considered developing countries
- low income countries include: India, Bangladesh, China, Ethiopia, Mali, Honduras
- lower middle income countries include: Pakistan, Bolivia, Cameroon, Philippines, Peru, Egypt
- agricultural share of the labor force:
  - the percent of the labor force in agriculture is a good indicator of the level of development and has a high correlation with income per capita (the agricultural share of the labor force is higher in less developed countries)
  - it is a structural indicator which shows the percent of activity in an economy by a sector (agriculture, mining, industry, and services are four sectors)
  - structural change is indicated by the change in the percent of the economic activity by a sector
- the life expectancy in developing countries has increased
- secondary school enrollment indicates the level of education; dividing it into male and female is suggestive of the level of social and economic development (the gap between female and male enrollment ratios is typically larger the less developed the country)

• purchasing power parity (PPP):

- in the 1970s economists considered if official income numbers were a good reflection of differences between countries
- for example, an income of $200 per year would not be enough to live in the US (not even necessities could be purchased on this income)
- thus, converting the income in one country to US dollars using the market exchange rate gives distorted numbers – the market exchange rate is not a good reflection of the purchasing power of a given currency in another country
- for instance, the market exchange rate does not include goods that cannot be internationally traded, such as food and some services

- haircuts are a classic example: for instance two equally good haircuts may cost $0.26 in India (converting using the market exchange rate) and $26 in the US
- thus, some economists at the University of Pennsylvania undertook a project to determine the real value of the income earned by people
- purchasing power parity (PPP) converts the value of a basket of goods (a consumption bundle) to its cost in a rich country (usually the US)
- because the PPP of a US dollar is equal to one US dollar by definition, there is no difference between US GDP and PPP-GDP, and because of the high share of tradables and similar price structures of developed countries, using PPP leads only to small adjustments of the incomes of high income countries
- using PPP values narrows the gap between the rich and poor countries when compared to the gap determined using market exchange rates (see tables above and below)
- thus, some of the figures used earlier may overstate the gap between developed and developing countries

• table 1-1 (page 11) – various statistics:

	1977 GNP per capita (PPP)	1977 GNP/capita (market exchange rate)
Ethiopia	$510	$110
Kenya	$1,110	$330
Senegal	$1,670	$550
China	$3,570	$860
Nigeria	$880	$260

- energy consumption per capita (kg oil equivalent) – a good indicator of development:
  - US – 8,000
  - Ethiopia – 21
  - Nigeria – 165
  - Honduras – 236
- rural population shares:
  - Ethiopia – 84%
  - Honduras – 55%
- life expectancy
- adult literacy

• terminology:
- all but the high income countries are considered to be in the developing world
- LDC (less developed countries - not lesser developed countries) vs. developed countries
- developing countries vs. developed countries
- underdeveloped countries vs. developed countries – the term "underdeveloped countries" has been used by Marxists or radical economists to suggest these countries have been made underdeveloped by richer countries but it is usually a neutral term
- North vs. South
  - countries in the South are less developed, countries in the North are more developed
  - Jeff Sachs (head of the Center for International Development at Harvard) argues that this is a misnomer because some richer countries, such as New Zealand, Argentina, Australia, and South Africa are located in the South – there

could be a relationship between geography and development (distance from the equator facilitates development, according to Sachs)

- Third World – this term originated in the Cold War period where capitalist countries were the “First World” and socialist countries were the “Second World”; this originally referred to Asia, Africa and Latin America but is now used similarly to the term LDC

- other aspects of development:
    - we will not deal with whether development is good or not although the language implies that development is good - the approach we use will favor a neutral position
    - however, development is associated with improvements in living standards, changes in political rights, etc.
    - although it can be argued that modernization and industrialization are good, we will approach it in a descriptive (positive) way