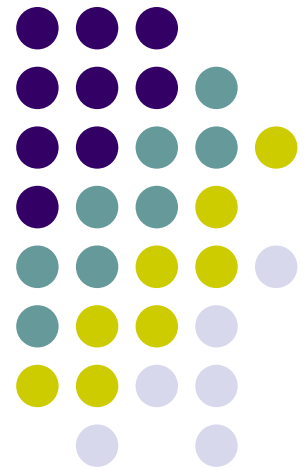
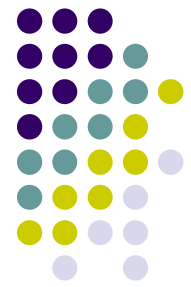


# Introduction to Economics of Development

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Basic Concepts





# Growth vs. Development

- What is economic growth?
  - Rise of national income (Y)
  - Measured by growth rate of GDP/GNP

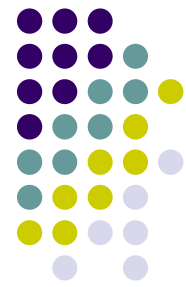
$$g_t = (Y_t - Y_{t-1}) / Y_{t-1} = \Delta Y_t / Y_{t-1}$$

- What is economic development?
  - Besides growth, it also includes improvements in health, education, and other aspects of human welfare.
  - Amartya Sen, “The goal of development is to expand the capabilities of people to live the lives they choose to lead”.
    - Capabilities
    - Choices: liberty, “free to choose”
  - Note there is no mention of “equality”, although it is a major concern for many countries. Why? And what is the difference between *equity* and *equality*?
    - Equity: equal access, providing “means to the end”
    - Equality: equal distribution, emphasizing “the end” only, distorts work incentives



# Growth vs. Development

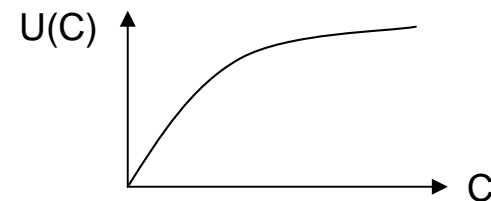
- Development is different from growth. It has broader and deeper meanings.
- Relationship between the two:
  - Growth is necessary but not sufficient condition of development.
  - Growth  $\leftarrow$  Development, i.e., development always comes with growth, no growth no development.
  - Growth  $\nrightarrow$  Development, i.e., growth alone does not guarantee development.



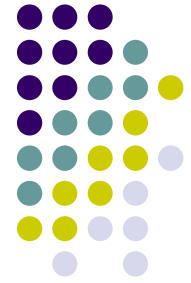
# Growth vs. Development

- Economic growth could be driven by government's grandiose goal or ruler's (dictator's) personal ambitions rather than improving welfare for all.
- High growth today could be the result of over-saving or over-investment. In other words, consumers sacrifice their consumption today in exchange for a higher growth rate.

- Consumption in utility function



- Intergenerational impact: analogous to parent/child spending decisions
  - Oversaving today: parents sacrifice, children benefit
  - Overconsuming today: parents borrow to spend, children left to pay for the debt
    - Budget deficits → higher taxes in the future
  - It's about intergenerational fairness.
- High growth country may have huge inequality among people: the problem of “the rich get richer, the poor get poorer”. Don't be fooled by the average number.

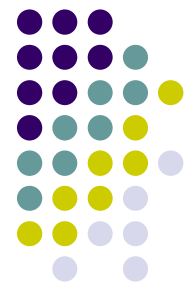


# Growth vs. Development

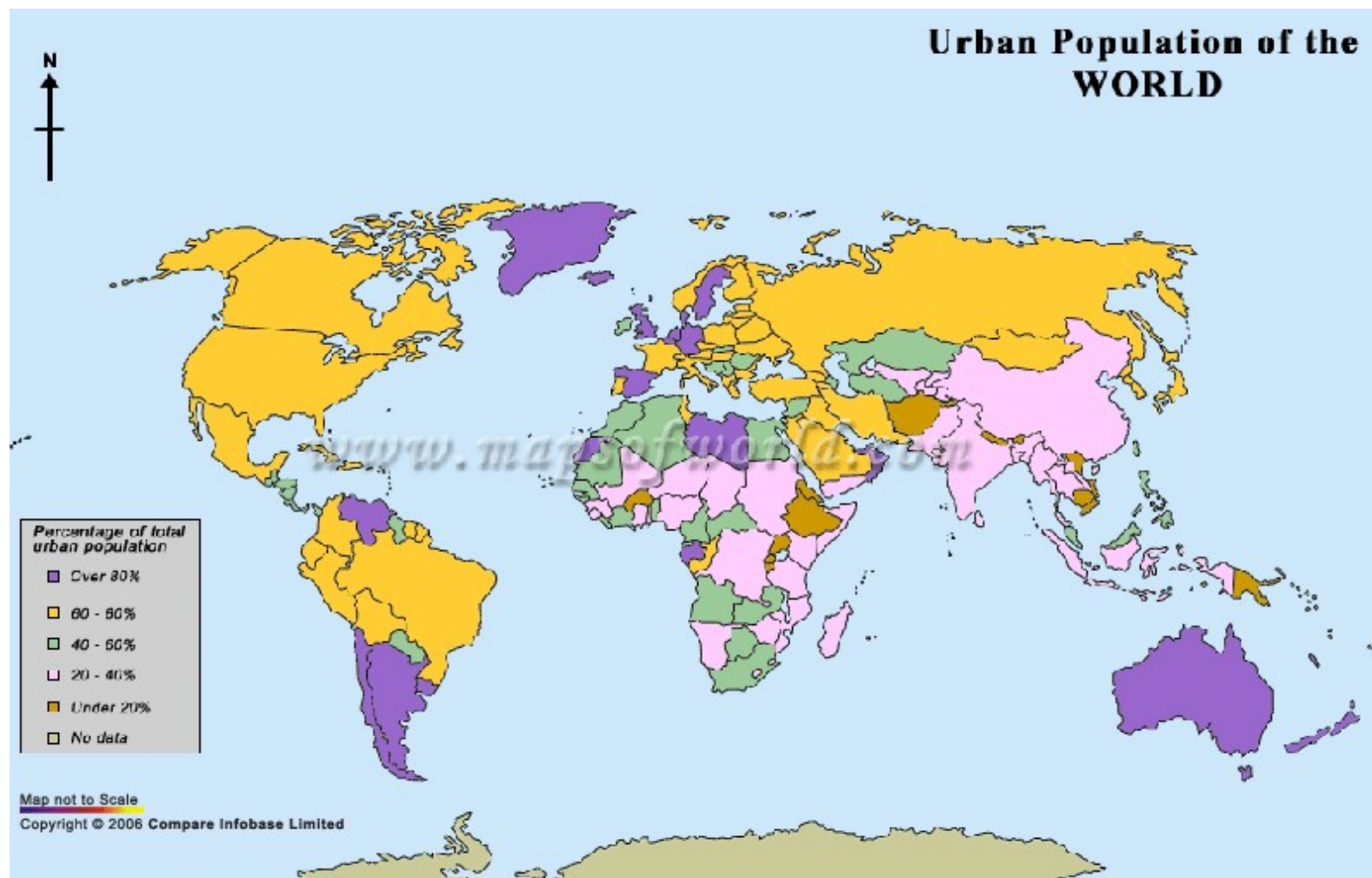
- Two of the most important structural changes accompanying economic development:
  - Industrialization
    - Decreasing role of agricultural sector
    - Increasing role of industrial sector
    - Post-industrialization: increasing role of service sectors

	service sector	Industrial sector	Agri sector
US:	79%	-20%	-1%
Germany:	70%	-29%	-1%
Mexico:	70%	-26%	-4%
China:	40%	-48%	-12%
India:	54%	-28%	-18%
Somalia:	25%	-10%	-65%
  - Urbanization
    - In the process of industrialization, farmers leave their land and go to city for industrial jobs, and settle down in the city.
    - Urbanization rate 2003:

US:	78%	Germany: 88%	Mexico: 75%
China:	39%	India: 28%	Somalia: 29%
    - The world average urbanization rate is close to 50%

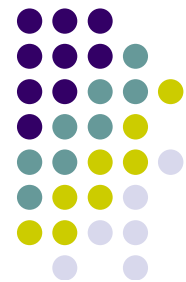


# World in Development: Urbanization





# What's happening 01/22/08



## Fed Slashes Rates Amid Global Selloff



### U.S. Stocks Sink in Early Trading but Rebound From Worst Levels

**THE FEDERAL RESERVE CUT** the fed-funds rate by three-quarters of a percentage point to 3.5%, trying to take on global fears of a U.S. recession. That's the Fed's biggest single move on rates since a three-quarter point increase in November 1994. **U.S. stocks traded** lower after two days of relentless selling in overseas markets, but rebounded from their opening lows. The Dow industrials had traded down more than 400 points early in the day.

- [Asia: Hong Kong, Japan Plunge](#) | [Europe: Mixed Markets](#) | [Photos](#)
- [Data: Markets Overview](#) | [Treasury's](#) | [Forex](#) | [Crude](#)
- [Economists React: 'Not an Instant Fix' for Slump](#) | [FOMC statement](#)
- [Deals Blog: M&A's Apocalypse Now?](#)
- [Vote/Discuss: Is the Fed's cut too much, about right, or not enough?](#)

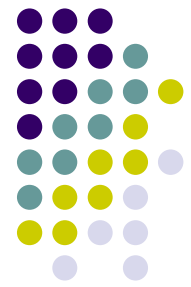




# Measuring Economic Growth

- GDP fundamentals
- GDP vs. GNP
- Nominal vs. PPP
- Traditional GDP vs. new measurement





# Measuring Economic Growth

- GDP Fundamentals

- Components of GDP:

$$\mathbf{GDP = C + I + G + (X-M)}$$

C: private consumption      I : investment

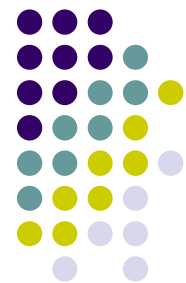
G: government expenditure

X: Exports,    M: Imports,    X-M: Net Exports

- Income approach to GDP calculation: sum of all sources of income

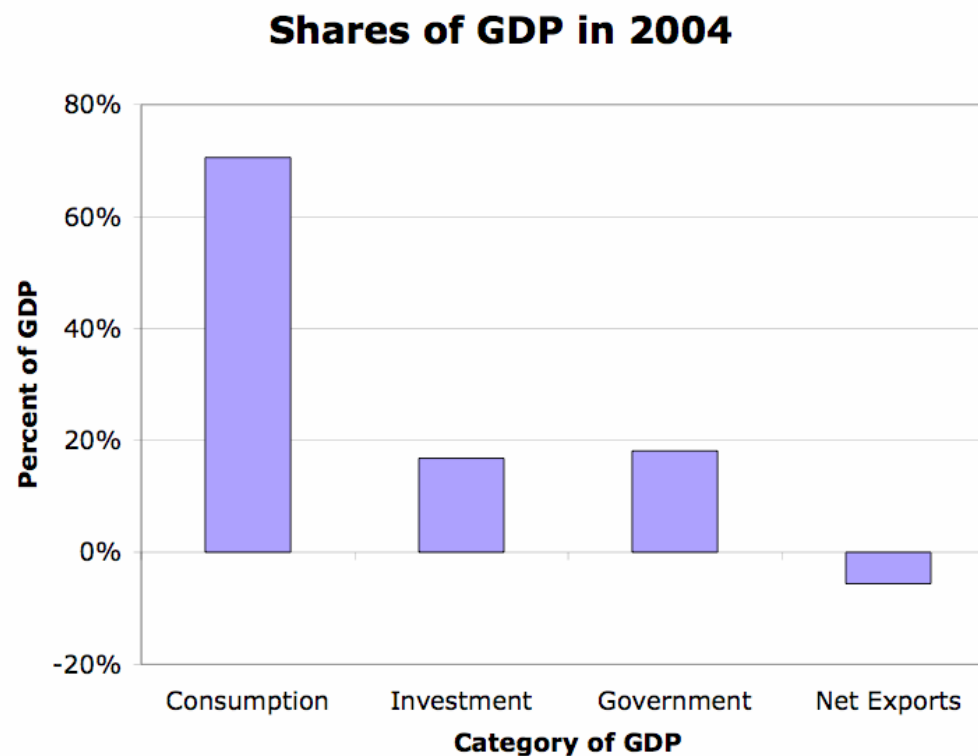
$$\mathbf{GDP = W + P + R + I + SA}$$

W: wages, P: profits, R: rents, I: interests, SA: statistical adjustments



# Measuring Economic Growth

- GDP Fundamentals
  - Components of GDP:





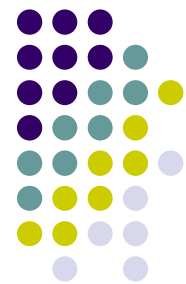
# Measuring Economic Growth

- GDP Fundamentals
  - What is left out?
    - Current GDP only measures market transactions
    - Housework is not included (excl. paid housework)
      - Not market transacted
      - Hard to measure the output
    - Non-marketed agricultural output
      - May cause serious downward bias for poor agricultural countries
    - “Black Market” transactions (shadow economy, underground economy)
      - Smugglings
      - Illegal drugs
      - Prostitutions

# Measuring Economic Growth



- GDP vs. GNP
  - Gross Domestic Product: a concept of territory
    - Sum of all income earned from people residing in a country *regardless of their nationalities*.
  - Gross National Product: a concept of nationality
    - Sum of all income from people with the same nationality *regardless where they are residing*.
  - GDP and GNP can differ a lot:
    - Cayman Islands:  $GDP \gg GNP$
    - Bulgaria:  $GDP < GNP$



# Measuring Economic Growth

- GDP: Nominal vs. PPP

- PPP (Purchasing Power Parity): The long term equilibrium exchange rate should equal the ratio of the prices in different countries for the same goods/services.

- Big Mac Index

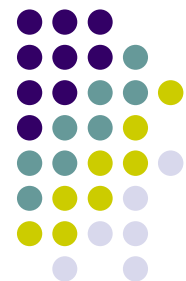
*The Economist's* Big Mac index is based on the theory of purchasing-power parity (PPP) according to which exchange rates should adjust to equalize the price of a basket of goods and services around the world. **Our basket is a burger: a McDonald's Big Mac.**



## A feast of burgeronomics

The Big Mac index

	Big Mac prices		Implied PPP* of the dollar	Actual dollar exchange rate Jan 31st	Under (-)/over (+) valuation against the dollar, %
	In local currency	in dollars			
United States†	\$3.22	3.22			
Argentina	Peso 8.25	2.65	2.56	3.11	-18
Australia	A\$3.45	2.67	1.07	1.29	-17
Brazil	Real 6.4	3.01	1.99	2.13	-6
Britain	£1.99	3.90	1.62†	1.96†	+21
Canada	C\$3.63	3.08	1.13	1.18	-4
Chile	Peso 1,670	3.07	519	544	-5
China	Yuan 11.0	1.41	3.42	7.77	-56
Colombia	Peso 6,900	3.06	2,143	2,254	-5
Costa Rica	Colones 1,130	2.18	351	519	-32
Czech Republic	Koruna 52.1	2.41	16.2	21.6	-25
Denmark	DKr27.75	4.84	8.62	5.74	+50



# Measuring Economic Growth

- GDP: Nominal vs. PPP
  - PPP: Purchasing Power Parity
    - Better yet: [iPod index](#)

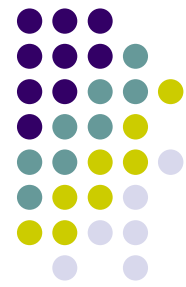
## Overall analysis

CommSec iPod nano index  
2 gigabytes, US dollars  
January 2007

Brazil	\$327.71	Italy	\$192.86
India	\$222.27	Germany	\$192.46
Sweden	\$213.03	China	\$179.84
Denmark	\$208.25	Korea	\$176.17
Belgium	\$205.81	Switzerland	\$175.59
France	\$205.80	NZ	\$172.53
Finland	\$205.80	Australia	\$172.36
Ireland	\$205.79	Taiwan	\$164.88
UK	\$195.04	Singapore	\$161.25
Austria	\$192.86	Mexico	\$154.46
Netherlands	\$192.86	US	\$149.00
Spain	\$192.86	Japan	\$147.63
		Hong Kong	\$147.63
		Canada	\$144.20

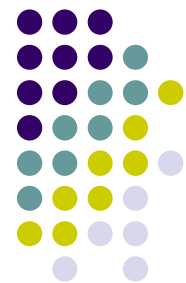






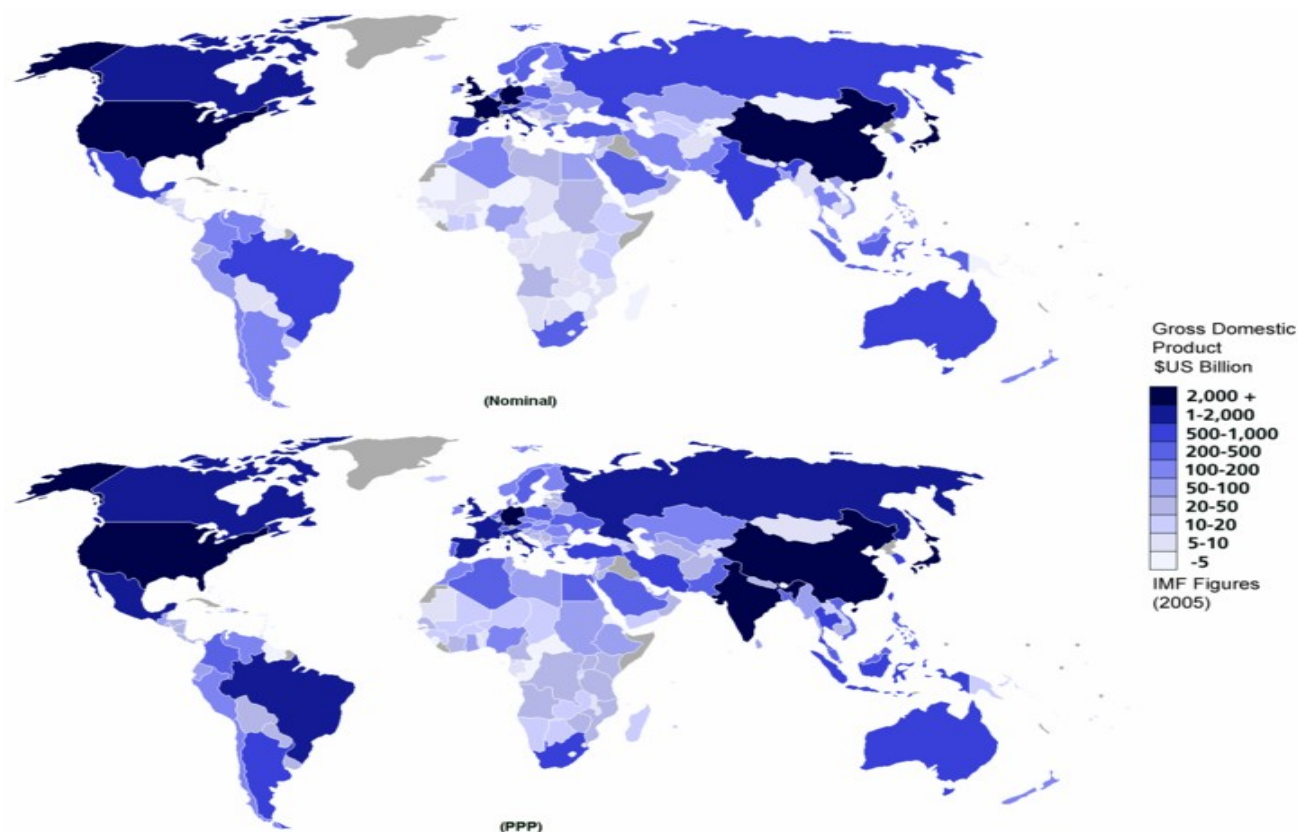
# Measuring Economic Growth

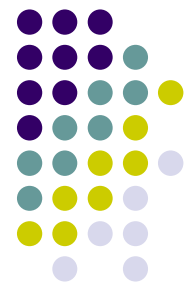
- GDP: Nominal vs. PPP
  - PPP: Purchasing Power Parity
    - Big Mac Index: not traded
      - Worker's wages in different countries are different
    - iPod Index
      - Tradable goods
      - Various market barriers
      - Market power of buyers/retailers
      - Information asymmetry
    - The “real” PPP exchange rate calculation
      - Takes into account a broad range of goods and services
      - Including both tradable and non-tradable goods/services
      - Should be updated frequently



# Measuring Economic Growth

- GDP: Nominal vs. PPP





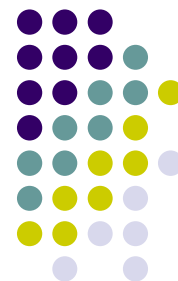
# Measuring Economic Growth

- GDP: Nominal vs. PPP
  - What difference it makes:



→ “prices tend to be lower in poor countries, so a dollar of spending is worth more”.

→ Currencies in developing countries often have bigger purchasing power, thus GDP expressed in PPP is often bigger than nominal GDP.



# Measuring Economic Growth

- Traditional GDP vs. new measurement
  - Income vs. wealth
    - GDP/GNP measures annual income flow
    - Wealth measures accumulated income over the years, and it also includes investment returns (returns from stocks and bonds, etc.)
  - What are the new developments?
    - Stiglitz: “Net” National Product (NNP)


“...that GDP must be reduced to take into account the depletion of natural resources and the degradation of the environment - just as a company must depreciate both its tangible and intangible assets”.
    - Other measurements that take into account a basket of indicators, similar to the concept of HDI.








































# Measuring Economic Development

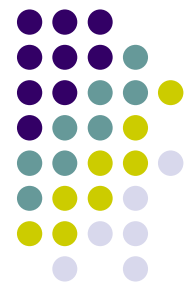
- **Human Development Index (HDI)**
  - Simple average of three measures, then rank them:
    - Life expectancy
    - Education
    - GDP

## Top fifty countries (HDI range from 0.968 down to 0.843)

 This short section requires *expansion*.

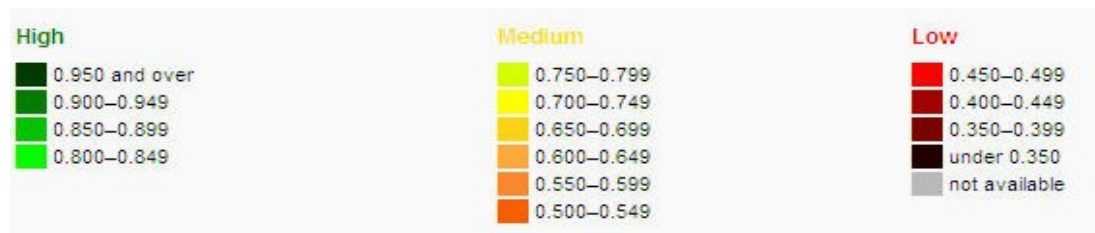
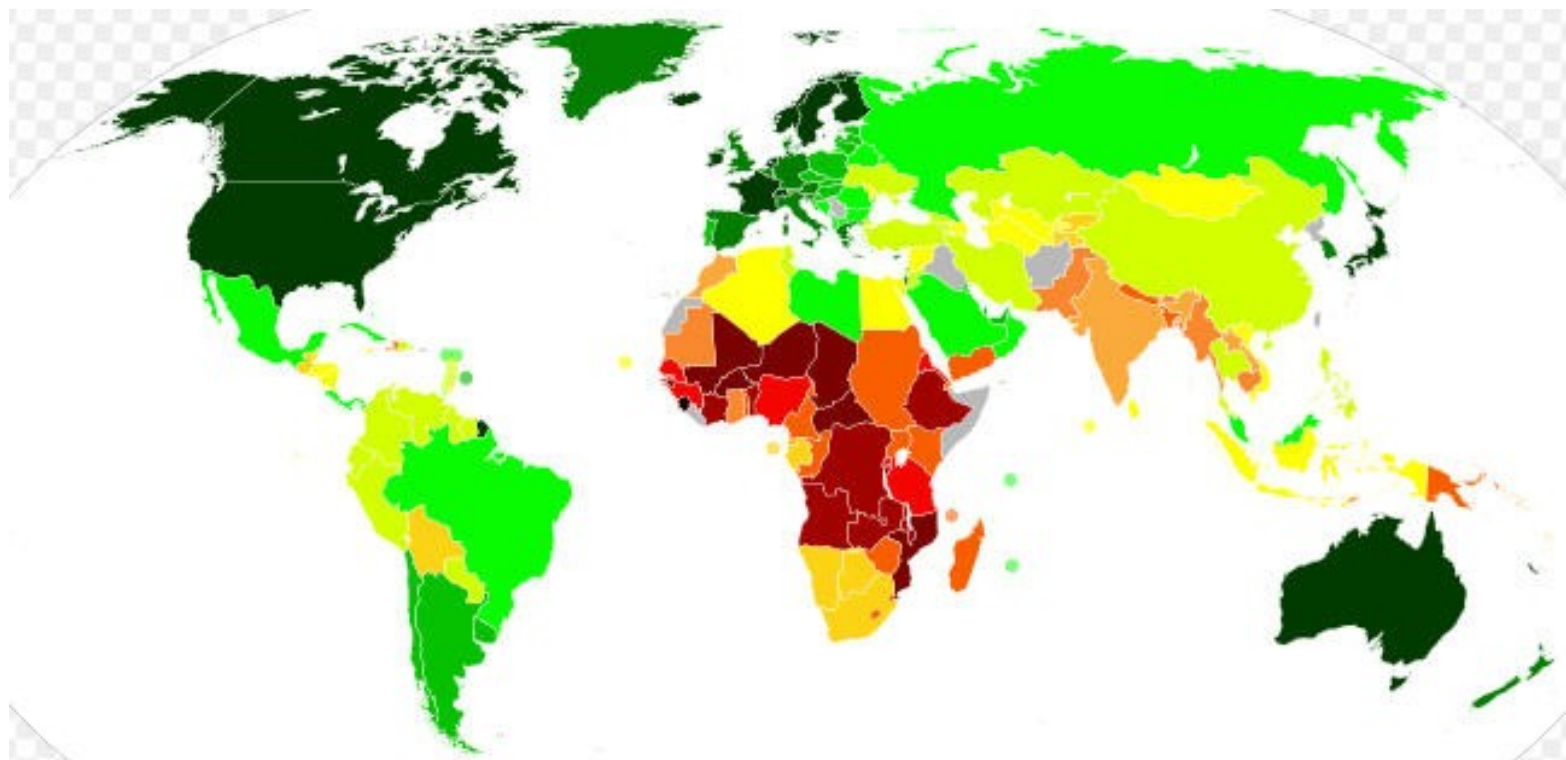
1.  Iceland 0.968 (▲ 1)	18.  Luxembourg 0.944 (▼ 6)	35.  Qatar 0.875 (▲ 11)
2.  Norway 0.968 (▼ 1)	19.  New Zealand 0.943 (▲ 1)	36.  Hungary 0.874 (▼ 1)
3.  Australia 0.962 (→)	20.  Italy 0.941 (▼ 3)	37.  Poland 0.870 (→)
4.  Canada 0.961 (▲ 2)	21.  Hong Kong 0.937 (▲ 1)	38.  Argentina 0.869 (▼ 2)
5.  Ireland 0.959 (▼ 1)	22.  Germany 0.935 (▼ 1)	39.  United Arab Emirates 0.868 (▲ 10)
6.  Sweden 0.956 (▼ 1)	23.  Israel 0.932 (→)	40.  Chile 0.867 (▼ 2)
7.  Switzerland 0.955 (▲ 2)	24.  Greece 0.926 (→)	41.  Bahrain 0.866 (▼ 2)
8.  Japan 0.953 (▼ 1)	25.  Singapore 0.922 (→)	42.  Slovakia 0.863 (→)
9.  Netherlands 0.953 (▲ 1)	26.  South Korea 0.921 (→)	43.  Lithuania 0.862 (▼ 2)
10.  France 0.952 (▲ 6)	27.  Slovenia 0.917 (→)	44.  Estonia 0.860 (▼ 4)
11.  Finland 0.952 (→)	28.  Cyprus 0.903 (▲ 1)	45.  Latvia 0.855 (→)
12.  United States 0.951 (▼ 4)	29.  Portugal 0.897 (▼ 1)	46.  Uruguay 0.852 (▼ 3)
13.  Spain 0.949 (▲ 6)	30.  Brunei 0.894 (▲ 4)	47.  Croatia 0.850 (▼ 3)
14.  Denmark 0.949 (▲ 1)	31.  Barbados 0.892 (→)	48.  Costa Rica 0.846 (→)
15.  Austria 0.948 (▼ 1)	32.  Czech Republic 0.891 (▼ 2)	49.  The Bahamas 0.845 (▲ 3)
16.  United Kingdom 0.946 (▲ 2)	33.  Kuwait 0.891 (→)	50.  Seychelles 0.843 (▼ 3)
17.  Belgium 0.946 (▼ 4)	34.  Malta 0.878 (▼ 2)	



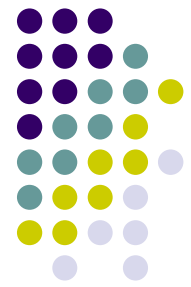


# Measuring Economic Development

- Human Development Index (HDI)







# Measuring Economic Development

- Critiques of HDI

- Why three factors only?

- What about housing quality, pollution, tax rates, adult life expectancy, crime rates, unemployment, inflation, quality and variety of goods and services, economic growth, and quality of education?

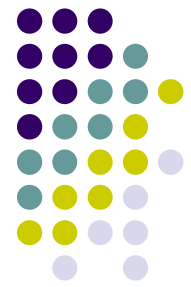
- Why equal weight for each factor?

- Posner's critique

“a general problem with rankings, is that from a sensible evaluative standpoint *the distance between ranks is more important than the number of ranks* that separate two countries”.

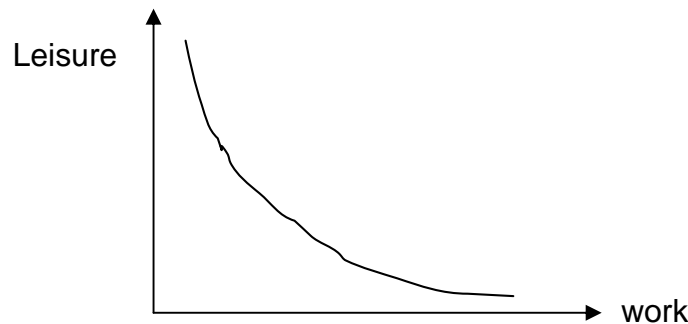
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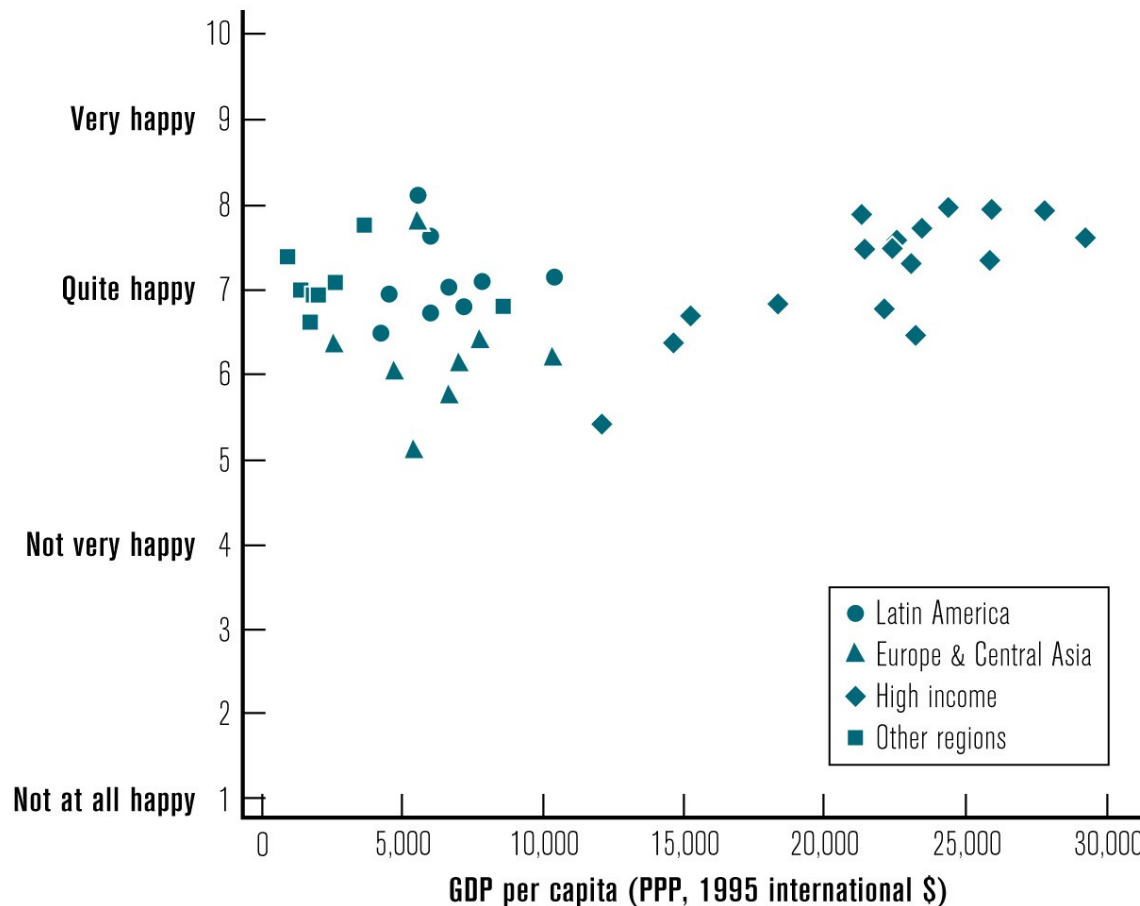
# Is Economic Growth Desirable?

- Trade-off between leisure and work



- Growth, development  $\neq$  happiness
  - Normally, we would expect: richer  $\rightarrow$  happier
  - In reality, rich countries have not grown much happier as they have grown richer.
  - Happiness is related to fairness
  - Happiness is related to your relative position in a society

# Money For Nothing?



- |                 |                 |
|-----------------|-----------------|
| 1. Puerto Rico  | 26. Argentina   |
| 2. Mexico       | 27. Vietnam     |
| 3. Denmark      | 28. Chile       |
| 4. Colombia     | 29. Indonesia   |
| 5. Ireland      | 30. Philippines |
| 6. Iceland      | 31. Taiwan      |
| 7. N. Ireland   | 32. Brazil      |
| 8. Switzerland  | 33. Spain       |
| 9. Netherlands  | 34. Israel      |
| 10. Canada      | 35. Italy       |
| 11. Austria     | 36. Portugal    |
| 12. El Salvador | 37. E. Germany  |
| 13. Venezuela   | 38. Slovenia    |
| 14. Luxembourg  | 39. Japan       |
| 15. U.S.        | 40. Czech Rep   |
| 16. Australia   | 41. S. Africa   |
| 17. New Zealand | 42. Croatia     |
| 18. Sweden      | 43. Greece      |
| 19. Nigeria     | 44. Peru        |
| 20. Norway      | 45. China       |
| 21. Belgium     | 46. Morocco     |
| 22. Finland     | 47. S. Korea    |
| 23. Singapore   | 48. Iran        |
| 24. W. Germany  | 49. Poland      |
| 25. France      | 50. Turkey      |

**FIGURE 2.5** “How Happy Are You, Taking All Things Together?” Cross-Country Evidence (1995–2002)

*Economics of Development*, 6th Edition  
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