

## LECTURE 16: GDP II

- I. What are the biggest economies?
  - a. Naturally, more people mean more production. Simply comparing GDPs without adjusted for population is misleading.
  - b. *GDP per capita* is GDP divided by the number of people in the economy (“per capita” is Latin for “for each head”)
    - i. This is useful to determine how wealthy an average person is in a country, or the average income.
- II. Two equations
  - a. There are two ways to break down GDP to help us understand what it includes. If you’re really interested in what’s included and what isn’t check out the NIPA (National Income and Production Accounts) guidelines. ([The document is over 400 pages.](#))
  - b. The first is the *spending* approach. What did people spend their money on?

$$Y = C + I + G + NX$$

- i. Where Y is GDP;
  - ii. C is consumption (like when you buy an ice cream bar);
  - iii. I is investment (like when you buy an ice cream maker);
  - iv. G is government spending (like when the government buys some ice cream);
    1. This does not include transfers, because nothing is produced. Including them would result in double-counting.
    2. Any production the government contributes is counted by cost because a lot production is given away for free (e.g. K-12 education). The same, by the way, is true for non-profits.
  - v. NX is exports – imports: exporting ice cream increases GDP and importing ice cream decreases it (because it wasn’t produced in the U.S.).
- c. Another way to think about GDP is the *income* approach. How did people get their money?

$$Y = \textit{wages} + \textit{rent} + \textit{interest} + \textit{profit}$$

- i. Where  $Y$  is still GDP;
- ii. Wages are all the salaries of everyone in a country;
- iii. Rent includes all the money people get from physical assets;
- iv. Interest is everyone's income from keeping money in a bank;
- v. Profit is the money business owners keep after they receive revenue and pay their costs.