

## LECTURE 19: GDP I

- I. Definition of GDP
  - a. *Gross Domestic Product* (GDP) is the total (gross) market value of all final goods and services produced within a country's borders in a year.
    - i. This is useful in estimating the size of a country's economy and, by comparing it to the previous year's GDP, if and how much the economy is growing.
- II. A manufacturing game
- III. GDP dissected
  - a. GDP focuses on *goods and services*: objects people buy and tasks people perform for others (like going to the doctor). It does not include charitable giving and favors done for others.
  - b. GDP adds together the *market value* of all goods and services, or all the prices of all goods and services sold.
    - i. This allows us to capture the value of the good, including its component parts. The wheat used to make \$3 worth of bread cannot be worth more than \$3...unless the baker is a very poor businessperson. But they won't be around for very long.
  - c. GDP only considers *final* goods or service, or items that are not usually transformed into other items. Microchips aren't counted but computers are. If microchips were counted, its value would be counted twice (once for leaving the microchip factory, and once as part of the computer).
    - i. Goods like microchips are considered *intermediary goods* (as opposed to final goods).
  - d. GDP only considers when the good or service is *produced*. Objects sold in the secondary market (e.g. a used car, an old house, the Pokémon cards you found in your closet) are not included in GDP. Claims to a financial asset, such as a stock or a bond, are similarly not included. One person sells their share of Company A to another person; the amount and value of Company A's assets didn't change.
  - e. GDP is *confined to a country* and includes the economic activity within that country's borders. If an immigrant works temporarily in the United States, their work increases the U.S.'s GDP. If an

American travels to another country to work, their work *does not* increase the U.S.'s GDP.

- i. *Gross National Product* (GNP) follows production based on permanent residents rather than a country's borders. Most of the time, GNP and GDP are very similar but GDP has evolved to be the more common measurement.
- f. GDP is also *confined to a year*, like an annual salary. The Bureau of Economic Analysis also calculates it on a per-quarter basis but the yearly GDP is the most common measure.
- i. One of the nice things about GDP on a yearly basis rather than a quarter is that we get a big picture for the whole year. Quarterly GDP tends to be high in the winter and summer and tends to be lower in the fall and spring.
  - ii. This, in turn, makes it easy to calculate growth rates:

$$\text{Growth rate (\%)} = \left( \frac{GDP_{\text{now}} - GDP_{\text{before}}}{GDP_{\text{before}}} \right) (100)$$

For example, if GDP was \$13.67 trillion in 2012 and 13.44 in 2011<sup>1</sup>, then the growth rate was  $(13.67 - 13.44) / (13.44) (100) = (0.23) / (13.44) (100) = \text{about } 1.71\%$

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<sup>1</sup> <http://www.multpl.com/us-gdp-inflation-adjusted/table>