

Last Session

- Solutions to last handout posted on johnstrommeuw.wordpress.com
- Some data on C, G, Ex, Im as % of total GDP: (source: world bank and IMF)

| | HH Consumption | Gov Consumption | Imports | Exports | GDP (PPP) per capita |
|--------|----------------|-----------------|---------|---------|----------------------|
| USA | 68.4 | 14.7 | 16.6 | 13.5 | \$54,597 |
| Norway | 40.6 | 21.9 | 29.5 | 38.7 | \$66,937 |
| Kuwait | 28.2 | 19.4 | 31.3 | 67.9 | \$71,020 |

Goals for this session

- Look at nuances of GDP measurement (Classify transactions as C, G, I, or NX)
- Define and calculate GDP deflator, use it to move from Nominal to Real GDP
- Real GDP vs. Real (chain-weighted) GDP vs. Nominal GDP
- Note: You do not need to memorize the formula for calculating real chain-weighted GDP. However you will need to know the basic economics behind the switch to the chain-weighted estimate, and the political implications of this switch.

Problems from Chapter Five in our textbook

2. Section 2

- 2.1. When calculating GDP using the production method, which of the following would you not include?
 - A. Consumption
 - B. Investment
 - C. Value Added
 - D. Government Purchases
 - E. Net Exports
- 2.2. What part of government spending is excluded from GDP because it does not correspond to goods and services currently being produced?
 - A. National Defense
 - B. Transfer Payments
 - C. Education
 - D. Purchases of Police Cars
- 2.3. When we subtract depreciation from gross investment, we arrive at _____.
- 2.4. A trade surplus occurs when _____ exceed _____.

- 2.5. **GDP Statistics and Unemployed Workers:** In Economy A, the government puts workers on the payroll who cannot find jobs for long periods, but these employees do no work. In Economy B, the government does not hire any long-term unemployed workers, but gives them cash grants. *Comparing the GDP statistics between the two otherwise identical economies, what can you determine about measured GDP and the actual level of output in each economy?*
- 2.6. **Health-Care Subsidies:** When the federal government provides subsidies for individuals to buy health care, *is this included in the federal budget? Is it included in GDP?*
- 2.7. **Buying a foreign car** Explain why buying a foreign car made abroad for \$50,000 increase consumption by \$50,000 but does not increase GDP.
- 2.8. **Depreciation and your new car:** You just bought a new car for \$23,000. After a year, you decide that you need a slightly bigger car. But when you think about selling it, you can only get \$19,000 for it. This is depreciation. *Describe several reasons why your car has depreciated in value. When you sell your car, does this result in a \$19,000 addition to GDP?*
- 2.9. **Investment Spending vs Intermediate Goods:** A publisher buys paper, ink and computers to produce textbooks. *Which of these purchases is included in investment spending? Which are intermediate goods?*

3. GDP Deflator

- Price Deflator: Measure of the price level. Convert between **nominal** and **real** values
- $\text{Nominal GDP} / (\text{Price Deflator} / 100) = \text{Real GDP}$

4. Section 4

- 4.1. The GDP deflator is calculated for any given year by dividing nominal GDP by _____ GDP and multiplying by 100.
- 4.2. **True/False:** If the base year is 2010, the real and nominal GDP in 2010 will be equal.
- 4.3. **True/False:** Measured price changes do not depend on the particular base year chosen when calculating:
- A. The traditional GDP deflator
 - B. The chain-weighted GDP deflator
 - C. Real GDP
- 4.4. **True/False:** Real GDP is always a greater number than nominal GDP.
- 4.5. **Calculating Real GDP, Price Indices, and Inflation:** Using data from the following table, answer the following questions:
- A. Calculate real GDP using prices from 2011. By what percent did real GDP grow?
 - B. Calculate the value of the price index for GDP for 2012 using 2011 as the base year. By what percent did prices increase?

| | Quantities Produced | | Prices | |
|------|---------------------|----------------|--------|----------------|
| | CDs | Tennis Rackets | CDs | Tennis Rackets |
| 2011 | 100 | 200 | \$20 | \$110 |
| 2012 | 120 | 210 | \$22 | \$120 |

- 4.6. Repeat 4.5 but use 2012 prices.