Lecture 5: Measuring a Nation’s Wealth

Rob Godby
University of Wyoming
Macroeconomics is the study of the economy as a whole. Its goal is to explain the economic changes that affect many households, firms, and markets at once.

Microeconomics is the study of how individual households and firms make decisions and how they interact with one another in markets.

- Usually analysis abstracts to consider the economy as a whole versus considering all markets individually
Understanding the Economy

- Identify the important areas:
  - Total output (and income)
  - The average of prices
  - Resource employment

- Measure the important areas using:
  - Real Gross Domestic Product
  - Consumer Price Index
  - Monthly unemployment rate
The Circular-Flow Diagram

Product Market

Households

Businesses

Market for Factors of Production
Two Methods of Computing An Economy’s Income

■ Expenditure Approach:
  ◆ Sum the total expenditures by households (from the top portion of the circular flow).

■ Resource Cost or Income Approach:
  ◆ Sum the total wages and profit paid by firms for resources (from the bottom portion of the circular flow).
The Economy’s Income and Expenditure

- When judging whether the economy is doing well or poorly, it is natural to look at the total income that everyone in the economy is earning.

- For an economy as a whole, income must equal expenditure.

- The forces of supply and demand determine the market equilibrium price and quantity that is produced and exchanged.
A measure of the income and expenditures of an economy is *Gross Domestic Product (GDP)*. 

- *Gross Domestic Product* measures:
  - an economy’s **total expenditure** on newly produced goods and services and the **total income** earned from the production of these goods and services
Gross Domestic Product

The total market value of all final goods and services produced during a given period of time within a country, region, or state.
Important Features of GDP

① Output is valued at market determined prices.
② Output is measured in dollar terms.
③ GDP records only the output of final goods. We want to “count” production only once.
④ Represents the amount of money one would need to purchase a year’s worth of the economy’s production of all final goods (i.e. U.S. GDP in 1996 = $7,576,000,000,000).
What Is and What Is Not Counted in GDP?

- GDP includes all items produced in the economy and sold legally in markets.
- GDP does not include items produced and consumed at home and never enter the marketplace. It does not include items produced and sold illicitly, such as illegal drugs.
Gross National Product

The total market value of all final goods and services produced during a given period of time by the nation’s residents, regardless of the place produced.
Two Other Measures of Income

- **Personal Income:**
  - The income that households and non-corporate businesses receive.

- **Disposable Personal Income:**
  - The income that household and non-corporate businesses have left after taxes.
The Components of GDP

- GDP \( (Y) \) is the sum of:
  - Consumption \( (C) \)
  - Investment \( (I) \)
  - Government Purchases \( (G) \)
  - Net Exports \( (NX) \)

\[
Y = C + I + G + NX
\]
The Four Components of GDP

- **Consumption (C):**
  - Is the spending by households on goods and services
  - e.g. buying clothing, food, movie tickets

- **Investment (I):**
  - Is the purchases of capital equipment and structures
  - e.g. factory, houses, etc.
The Four Components of GDP

- **Government Purchases (G):**
  - Includes spending on goods and services by local, state and federal governments (e.g. roads, police, etc.).
  - Does not include *transfer payments*, because it is not made in exchange for currently produced goods or services.

- **Net Exports (NX):**
  - Exports minus imports.
GDP Components of Measurement

Consumption 69 %
GDP Components of Measurement

Consumption 69%
Investment 13%
GDP Components of Measurement

- Consumption: 69%
- Investment: 13%
- Government Spending: 19%
GDP Components of Measurement

Consumption: 69%

Investment: 13%

Government Spending: 19%

Net Exports: -1%
Real versus Nominal GDP

- GDP is the market value of the economy’s current production, referred to as *Nominal GDP*.
- *Real GDP* measures any given year’s total output in “constant” prices.
- An accurate view of the economy requires adjusting nominal to real GDP, using the *GDP Price Deflator*. 
GDP Price Deflator

- The **GDP Price Deflator** is a price index that uses a bundle of all final goods and services.
  - It tells us the rise in nominal GDP that is attributable to a rise in prices.

- **Converting Nominal GDP to Real GDP:**

\[
\text{Real GDP}^{19xx} = \frac{\text{Nominal GDP}^{19xx}}{\text{GDP Price Deflator}^{19xx}} \times 100
\]
GDP and Economic Well-Being

- **GDP/Person** tells us the income and expenditure of the average person in the economy (also called per capita GDP).
  - It is a “good” measure of the material well-being of the economy as a whole.
  - *More Real GDP* indicates a higher material standard of living by being able to consume more goods and services.
  - It is *NOT intended* to be a measure of happiness or quality of life.
GDP and Economic Well-Being

Some factors and issues *not* in GDP that lead to the “well-being” of the economy:

- Factors that contribute to a good life such as *leisure*.
- Quality of the *environment*.
- The value of *activities* that take place outside of the markets, e.g. volunteer work and child-rearing.
Summary:

- GDP is used to measure a nation’s wealth in dollars.
- GDP measures both total income and total expenditure in an economy.
- GDP can be measured in nominal or real terms.
- The GDP Deflator is used to convert nominal to real GDP.
- \( GDP = C + I + G + NX \)
- GDP is limited as a measure of well-being.