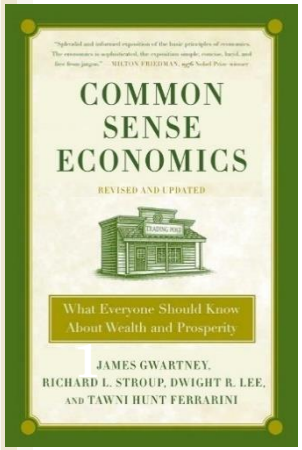
Module B: Macroeconomic indicators



Common Sense Economics ~ What Everyone Should Know About Wealth and Prosperity

http://CommonSenseEconomics.com/

Turn on the learning light!

Module B: Macroeconomic Indicators

- Concepts Covered:
  - Gross Domestic Product
  - Price indexes
  - Inflation
  - Unemployment
- Supplements:
  - Reading: Consumer Price Index and Measurement of Inflation
  - Reading: Gross Domestic Product (GDP): What Is It and How Is It Measured?
  - Reading: What Is the Unemployment Rate and How Is It Measured?

Gross Domestic Product (GDP)

What Is It and How Is It Measured?

GDP: A Measure of Output

- **Gross Domestic Product (GDP):** The market value of final goods and services produced within a country during a specific time period, usually a year.

- GDP is the most widely used indicator of economic performance.

What Counts Toward GDP?

- Only final goods and services count.
  - Sales at intermediate stages of production are not counted as their value is embodied within the final-user good.
  - Including goods at intermediate stages of production would result in double counting.
- Only transactions involving production count.
  - Financial transactions and income transfers are excluded because they do not reflect actual production.
- Only production within the geographic borders of the country is counted.

What Counts Toward GDP? continued…

- Only those goods produced during the current period are counted.
  - Thus, the purchase and sale of goods produced during earlier years are not counted in this year's GDP.

- Government purchases of goods and services are counted in GDP, but transfer payments are not.

GDP Comparisons Across Time

- When making GDP comparisons across time, it is important to adjust for changes in the general level of prices.
- The formula for converting nominal GDP into real GDP measured in terms of base year prices is:

$$\text{Real GDP} = \frac{\text{Nominal GDP} \times 100}{\text{GDP Deflator}}$$

- When comparing GDP across time, using real GDP rather than nominal GDP is important. The real GDP figures factor out changes in the general level of prices, leaving only changes in the actual output of goods and services produced.

Consumer Price Index (CPI) and Measurement of Inflation

What is the CPI and how is it used to measure inflation?

Real and Nominal Values

- The term "real" means adjusted for inflation.

- **Price indexes** are use to adjust income and output data for the effects of inflation.
  - A **price index** measures the cost of purchasing a market basket (or "bundle") of goods at a point in time relative to the cost of purchasing the same market basket during an earlier reference (or base) period.

Key Price Indexes

- The two most commonly used price indexes are the Consumer Price Index (CPI) and the GDP Deflator.

- **Consumer Price Index:** measures the impact of price changes on the cost of a typical bundle of goods and services households purchase

- **GDP Deflator:** designed to measure the change in the average price of the market basket of goods included in GDP

Price Indexes and the Base Year

- A base year is chosen and the price index for that year is assigned a value of 100. Price indexes for other years are always relative to this base year. If the general level of prices during a year is higher than during the base year, the price index for the year will be proportionally greater than 100.
  - For example, if prices in a subsequent year (year 2) were 50 percent higher than the base year, the price index for year 2 would equal 150.

Price Indexes and the Base Year continued…

- If the general level of prices during an earlier year is lower than the base year, the price index for the year will be proportionally lower than 100.
  - For example, if prices during an earlier year were 10 percent lower than the base year, the price index for the earlier year would be 90.

What is Inflation?

- **Inflation** is an increase in the general level of prices.
  - It is typically calculated annually.

- Inflation can be calculated using either the CPI or the GDP deflator.
- The rate of inflation is calculated as:

$$\text{Inflation rate (\%)} = \frac{\text{This year's price index} - \text{Last year's price index}}{\text{Last year's price index}} \times 100$$

Adjusting For Price Changes Across Time

- Converting Current Nominal Values to the Price Level of An Earlier Year
- In order to convert nominal figures of a later year to the purchasing power of an earlier year, you merely deflate the later figures by multiplying them by the ratio of the price index in the earlier year divided by the price index in the later year. This formula is:

$$\text{Figure}_{\text{earlier \$}} = \text{Figure}_{\text{current \$}} \times \frac{\text{Price level}_{\text{earlier year}}}{\text{Price level}_{\text{current year}}}$$

Adjusting For Price Changes Across Time continued…

- Converting Nominal Values From an Earlier Year to the Price Level of the Current Year
- In order to convert nominal figures of an earlier year to the purchasing power of the current year, you merely inflate the figures of the earlier year by multiplying them by the ratio of the price index in the current year divided by the price index in the earlier year. This formula is:

$$\text{Figure}_{\text{current \$}} = \text{Figure}_{\text{earlier \$}} \times \frac{\text{Price level}_{\text{current year}}}{\text{Price level}_{\text{earlier year}}}$$

Unemployment Rate

What is it and How Is It Measured?

Labor Market Classifications

- **Employed:** a person (16 years and older) who is:
  - working for pay at least one hour per week,
  - self employed, or
  - working 15 hours or more each week without pay in a family-operated enterprise.

- **Unemployed:** a person not currently employed who is:
  - actively seeking a job, or
  - waiting to begin a job, or
  - on layoff, waiting to return to a previous job.

Labor Market Classifications continued…

- **Civilian labor force:** civilians (16 years and older) who are either:
  - employed or
  - unemployed.

- **Not in the labor force:** persons (16 years and older) who are:
  - neither employed nor unemployed (such as retirees, students, homemakers, or disabled persons).

Three Labor Market Indicators

- The **labor force participation rate** is the number of persons in the civilian labor force (including both the employed and unemployed) as a percentage of the civilian non-institutionalized population 16 years of age and over.

$$\text{Labor Force Participation Rate (\%)} = \frac{\text{\# in the Labor Force}}{\text{Civilian population (16+)}} \times 100$$

Three Labor Market Indicators continued…

- The **unemployment rate** is the number of persons unemployed expressed as a percentage of the labor force.

$$\text{Unemployment Rate (\%)} = \frac{\text{\# unemployed}}{\text{\# in civilian labor force}} \times 100$$

- The **employment to population ratio** is the number of persons employed expressed as a percentage of the population sixteen years old and over.

$$\text{Employment to Population Ratio (\%)} = \frac{\text{\# employed}}{\text{Civilian population (16+)}} \times 100$$

Three Types of Unemployment

- **Frictional Unemployment:** caused by imperfect information
- Occurs because:
  - employers are not aware of all available workers and their qualifications, and
  - available workers are not fully aware of all the jobs being offered by employers.

Three Types of Unemployment continued…

- **Structural Unemployment:** reflects an imperfect match of employee skills to skill requirements of the available jobs
  - Also, it reflects structural and demographic characteristics of the labor market.

- **Cyclical Unemployment:** reflects business cycle conditions
  - When there is a general downturn in business activity, cyclical unemployment increases.

Why Unemployment Matters

- Measures of unemployment are important because they help gauge the overall health of a country's economy.