

Class Outlines
August 28, 2001 and August 30, 2001

August 28, 2001

- I. Review
- II. To describe prices in the economy we use price indexes.
 - a. GDP deflator – uses the goods that are part of GDP to construct an index number that allows us to compare how prices have changed in general over time.
 - b. Consumer Price Index (CPI) – similar to the GDP deflator, except the CPI uses goods that comprise the consumption component of GDP.
- III. Calculating inflation and real GDP.
 - a. To calculate inflation, let P_t describe the price index today, and let P_{t-1} denote the price level for the past. Then inflation (π_t) is calculated as follows:
 - i. $\pi_t = ((P_t - P_{t-1}) / P_{t-1}) * 100$
 - ii. In class, we looked at an example, where we calculated inflation between 1960 and 1998.
 - b. To calculate real GDP, we need a base year. Suppose we want to calculate the real GDP in 1998 by using constant 1982 dollars. We use the following formula:
 - i. Real GDP (in constant 1982 dollars) = nominal GDP in 1998 * [(CPI in 1982) / (CPI in 1998)]
 - ii. In class, we looked at an example where we compared real GDP between 1960 and 1998 using the numbers from the CPI above.
- IV. Growth.
 - a. To calculate economic growth, we use the change in real GDP.
 - i. If the change in real GDP is positive, we are said to be in an expansion.
 - ii. If the change in real GDP is negative (technically, for at least two consecutive quarters), we are said to be in a recession.
- V. Unemployment
 - a. The unemployment rate (u) is equal to the total numbers of workers who are unemployed (U) divided by the total labor force (L).
 - i. To be in the labor force, one has to be either already employed (in any capacity) or actively seeking a job.

- ii. The definition of the labor force does not account for workers who would be willing to work, but give up looking for a job because they can't find one. Such workers are said to be discouraged workers.
- iii. We can get an idea of whether or not there are a large number of workers who are unemployed by looking at the labor force participation rate, which is defined as the total number of eligible citizens who are in the labor force divided by the population.

VI. Math Review

- a. We looked at example of the types of relationships we will consider throughout the course.

August 30, 2001

I. Why are economists so concerned with inflation?

- a. Inflation does not affect all prices and wages the same. This can lead to problems with income distribution.
- b. Inflation leads to distortions. Example: bracket creep (with respect to taxes).
- c. Inflation, and particularly volatile inflation, can alter the outlook for long term projects. Investment is less certain when inflation alters the variability of expected payoffs.

II. The Goods Market (Chapter 3)

- a. Decomposition of GDP
 - i. Consumption
 - ii. Investment
 - 1. residential investment
 - 2. non-residential investment
 - 3. inventory investment
 - iii. Government spending (does not include transfer payments such as welfare).
 - iv. Net exports (exports minus imports)
 - 1. if $X > M$ (trade surplus)
 - 2. if $X < M$ (trade deficit)
- b. Assumptions
 - i. Consumption is determined by disposable income
 - ii. Investment (for now) is taken as given/exogenous
 - iii. Government spending is taken as given/exogenous

- iv. Net Exports are assumed to be zero (which would be the case if we lived in a “closed economy”).
 - v. Producers are willing to supply any amount output that people wish to buy at existing prices.
- c. The Demand for Output
- i. Under the assumptions above, we have the following functions for the demand for output:
 - 1. consumption demand = $c_0 + c_1(Y_t - T_t)$
 - 2. investment demand = \underline{I}
 - 3. government spending = \underline{G}
 - ii. This yields the following formula for demand for GDP:
 - 1. $D_{GDP} = c_0 + c_1(Y_t - T_t) + \underline{I} + \underline{G}$
 - iii. In equilibrium supply equals demand. Taking supply as simply equal to total production in the economy (Y_t), yields the following equilibrium condition:
 - 1. $Y_t = c_0 + c_1(Y_t - T_t) + \underline{I} + \underline{G}$