

09 - Inflation and You

Dr. Robert Lowe

Division of Mathematics and Computer Science
Maryville College

- Inflation is a continuous increase in price over time.
- There are two main types of inflation:
 - **Demand Pull Inflation:** As demand for a good or set of goods increases, so does its price.
 - **Cost Push Inflation:** As prices rise, companies must protect their profit margin by raising prices.
- We will discuss the economic causes and implications of inflation in more detail in the next lecture.

Consumer Price Index

- Assuming that prices remain roughly proportional, prices can be converted between years.
- A consumer price index relates average prices to some base year. These are computed by tracking prices of a selection of goods between two years.
- The base year is assigned a price index of 100. The proportional relationship is:

price in a given year : price in base year :: CPI for given year : 100

- Discuss: What relationship does CPI have to percent?

Base Years

- For convenience, CPI's are usually standardized to a base year. All prices are compared to prices on this year.
- The standard base year, as defined by the United States Bureau of Labor Statistics uses the average prices over the range 1982-1984 as the standard base year. (This is called a chained base year.)
- Given the CPI in year a and year b, the following proportion will hold:

price in year a : price in year b :: CPI in year a : CPI in year b

Problems and Discussion

- 1 Compute the beef index price based on the 1971 advertisement from A&P.
- 2 Convert the 1971 based beef index to a 1982-1984 based index. How does this compare to the actual Depart of Labor Statistics CPI for 1971?
- 3 If a college textbook has a list price of \$12.95 in 1971, what should its price be in 2018?
- 4 Look up the list price of Hopcroft and Ullman's *Introduction to Automata Theory, Languages, and Computation*. This is the book from the previous question. Has it kept pace with inflation or has it outperformed it? What could account for this?
- 5 Examine the CPI chart for the years 1913-2018. How does the CPI compare to major events in US history?