Handout for March 2026 Newsletter
Teaching about the CPI basket with FRED data

Purpose.

1. Create a graph of consumer price index (CPI) data.
2. Add a second series to the graph.
3. Change the data frequency.
4. Change the units to year-over-year growth rates.
5. Describe and discuss patterns in CPI inflation.

Pedagogical Rationale. This assignment requires that you first look for data and plot them into a line graph. Next, you will add a second data series to the graph. Next, you will change the data frequency and units. Lastly, you will describe and discuss patterns in the data over time. These tasks will develop your proficiency in searching for, transforming, and interpreting data.

Grading. Your grade will be determined by (a) how precisely you complete the search and transformation data tasks and (b) how accurately you interpret the data.

Steps to Search for and Transform the Data.

1. Access https://fred.stlouisfed.org/ and search for "Consumer Price Index for All Urban Consumers: All Items in U.S. City Average."
2. Select "Index 1982-1984=100, Seasonally Adjusted."
3. Click on "Edit Graph."
4. Select the "Add Line" tab and search for "Harmonized Index of Consumer Prices: All-Items HICP for United States."
5. Use the "Units" drop-down menu to select "Percent Change from Year Ago." Click on "Copy to All."
6. Use the "Frequency" drop-down menu to select "Annual." Click on "Copy to All."
7. Select the "Format" tab and use the "Graph type" drop-down menu to select "Bar."

Writing Prompts. Answer the following questions:

1. Consider these facts:
    a. The blue bars represent the annual consumer price index (CPI) inflation rate. The CPI estimates price changes for the noninstitutional urban population. It doesn't include the rural/nonmetropolitan population in its coverage.
    b. The green bars represent the harmonized index of consumer prices (HICP). The HICP inflation rate estimates price changes for the entire population, both urban and rural. And, unlike the CPI, it excludes cost measures of owner-occupied housing.
2. Compare the two inflation rates. Is either one consistently higher than the other?
3. Notice the years when inflation rates were above 3 percent. The HICP inflation rates were frequently higher than the CPI inflation rates. How could the methodologies used to calculate each price index help explain that difference?