INFLATION

Measuring the cost of living: The CPI versus the PCE price index

While the consumer price index (CPI) and the personal consumption expenditures (PCE) price index both measure price changes faced by consumers, they differ in several ways.

The CPI has been published since 1919 and is relied on for cost-of-living adjustments to Social Security and other income payments.

The PCE price index has been tracked since 1959 and has been the Federal Reserve's preferred inflation measure since 2000. When the Fed established its 2 percent inflation goal in 2012, it defined the target in terms of "the annual change in the price index for personal consumption expenditures (PCE)."

THE DIFFERENCES

While the CPI and the PCE price index frequently move together, CPI inflation tends to run higher over time.

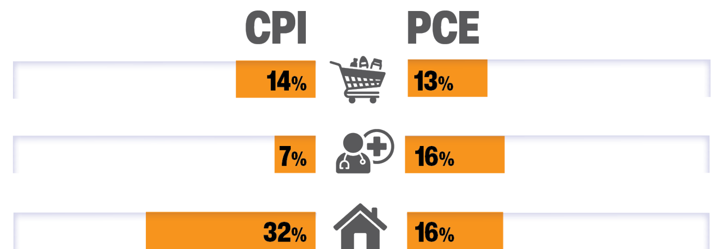
For example, since 2000, annual CPI inflation, on average, has been 0.39 percentage points higher than PCE inflation.

THREE FACTORS IN HOW THEY'RE CONSTRUCTED ACCOUNT FOR MOST OF THIS VARIATION.

Scope: The CPI is limited to out-of-pocket spending on goods and services by urban households. The PCE price index extends its coverage to rural households and includes spending on consumers' behalf, like for employer-provided health insurance, Medicare, and Medicaid.

Different weights: Weights reflect the proportion of consumers' total spending on an item. Many weights in the CPI and PCE price index are similar, such as those for food. But many other weights are different.

Two big differences are for healthcare and shelter. Because the PCE price index includes third-party payments for healthcare made on behalf of households, the PCE weight for that item is higher compared to in the CPI. On the other hand, the larger number of goods and services in the PCE price index means that housing has a lower weight compared to in the CPI.



Formula: The formula for the PCE price index uses weights that are updated monthly, while weights in the CPI formula are updated annually. The regularly updated weights in the PCE formula are timelier for picking up changes in consumption patterns, such as when households react to higher grocery prices by substituting hamburger for steak. This ability to detect consumer responses to price changes, especially the substitution toward cheaper options, helps explain why PCE inflation tends to run lower than CPI inflation.

WHY DOES THE FED PREFER THE PCE PRICE INDEX?

The PCE price index offers a broader and more comprehensive measure of inflation and more quickly picks up adjustments in consumers' choices in response to price changes.

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