Price Level Measures

The CPI and Other Price Level Measures

The CPI is a **cost of living index** , which is a measure of the change in the amount of money that people need to spend to achieve a given standard of living. However, the CPI is not a perfect measure of the cost of living because it does not try to measure all the changes in the cost of living and the components that are measured are not always measured accurately.

Sources of Bias in the CPI

In recent years, economists have paid considerable attention to the fact that the change in the total cost of buying a fixed basket of goods and services over time is conceptually not the same. This occurs because the change in the cost of living represents how much more it would cost for a person to provide an equal level of satisfaction.

CPI has four biases that lead it to **overstate** the inflation rate. The biases are:

- *New Goods Bias* : New goods are often more expensive than the goods they replace.
- *Quality Change Bias* : Sometimes price increases reflect quality improvements (safer cars, improved health care) and should not be counted as part of inflation.
- *Commodity Substitution Bias* : Consumers substitute away from goods and services with large relative price increases.
- *Outlet Substitution Bias* : When prices rise, people use discount stores more frequently and convenience stores less frequently.

The Magnitude and Consequences of the Bias

- The Boskin Commission in 1996 estimated the bias overstates the inflation rate by about 1.1 percentage points a year.
- Many contracts and payments are indexed to the CPI. If the CPI is biased, then these contracts are distorted because they incorrectly account for inflation.
- Many government outlays, such as Social Security payments, are linked to the CPI. If the CPI is biased upward, then government outlays increase more than what is required to offset inflation. Taxes are also indexed to the CPI so that the incomes for which tax rates rise are adjusted to take account of inflation. The upward bias means that adjustments are biased upward so that the government collects less tax revenues.
- To reduce the bias, the BLS has decided to undertake consumer spending surveys more frequently.

Alternative Measures of the Price Level and Inflation Rate

- The **GDP price index** (also called the GDP deflator) is an average of the current prices of all the goods and services in GDP expressed as a percentage of base-year prices. The GDP price index includes prices of *all* the goods and services in GDP: consumption expenditure, investment, government expenditure, exports, and imports. The GDP price index is broader than the CPI, but is **not perfect** because it still suffers from the CPI's biases since the CPI is used to help construct real GDP. It also suffers from the fact that it accounts only for *domestically* produced goods and services, while CPI takes into account the consumption of all goods consumed by the typical urban consumer, including the ones that were not produced domestically.
- The **PCE price index** is an average of the current prices of the goods and services in the consumption expenditure part of GDP expressed as a percentage of base-year prices.
- The percentage change in the PCE price index, excluding food and energy, measures the **core inflation rate** . Food and energy prices fluctuate much more than other prices and their changes can obscure the underlying trends in prices.
- Over time, the CPI and PCE indices move up and down in similar ways, but the previously discussed biases cause the CPI to rise slightly more rapidly than the PCE indices. (15)

A Brief Discussion

Some people, including the media, often don't understand why core inflation is a useful measurement. They might assume that it is a way for the government or economists to "trick" people into thinking inflation is not as high by removing food and energy prices, which obviously do play a role in people's expenditures.

Economists, on the other hand, believe that it is important to identify that food and energy prices can be extremely volatile, especially as a function of weather and global politics. Not only does this volatility complicate the analysis of other price changes, but from a *policy perspective* core inflation measurements may serve as a better guide than overall inflation.

Food and energy price changes that are the result of changes in weather and global politics are largely outside of the influence of policies. Therefore, it may make sense to ignore food and energy price changes and focus on core inflation when designing policies, since it's that underlying inflation that may be a reflection of the functioning of the economy and economic policies, as opposed to external factors which cannot be controlled. This is why policymakers (especially the Federal Reserve) tend to focus more on core inflation when designing policies. (15)

LICENSES AND ATTRIBUTIONS