

Modernizing Inflation Measurements

We need to modernize the methods used to gauge consumer prices.

By Ryan James Boyle



No economic topic has commanded more attention this year than inflation. Higher prices are the leading concern for consumers, investors, businesses and policymakers. With so many eyes following it, now may be an inopportune time to observe that the calculation of inflation is in desperate need of repair.

The goal of a consumer price index (CPI) is to approximate the cost of living. In the U.S., the Bureau of Labor Statistics (BLS) assembles the CPI by sampling a vast amount of data in the field. Prices are collected by surveying retailers (or landlords, for housing estimates).

Traditionally, these surveys were performed by BLS agents directly visiting stores to observe prices on shelves. Amid pandemic shutdowns, this practice was suspended. Where possible, prices have been backfilled using surveys by telephone or email, or manual review of prices posted online. But this has been an inconsistent means of collecting data.

Once prices are gathered, they are assembled into a basket with weights that reflect typical consumer expenditures. These weights are assigned by surveying consumers: some are interviewed directly, while others keep a diary of all purchases over a two-week period. During the pandemic, in-person interviews were suspended, and the movement to telephone-only interviews reduced response rates.

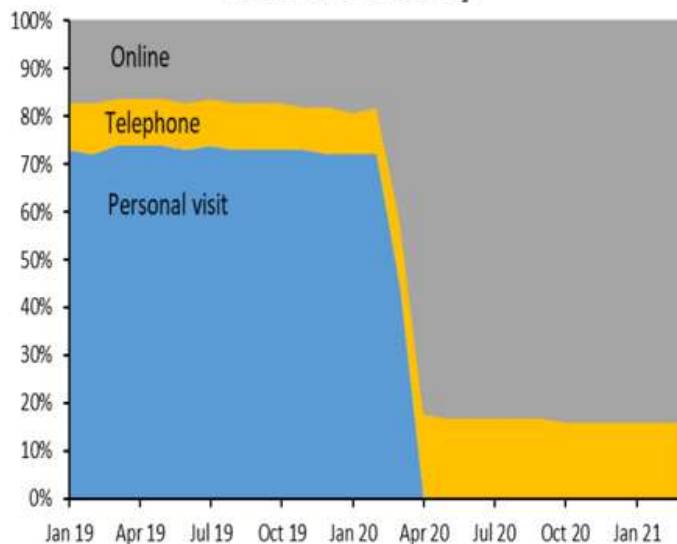
The U.S. CPI methodology was considered the gold standard when it launched in 1978. It performed well for decades thereafter, but it is showing its limitations. Basket weights are refreshed every two years, but as we have recently experienced, consumer behaviors can shift significantly in a much shorter time. (The basket itself is showing its age, including categories like photographic film, video tape rental and stationery supplies.) Meanwhile, the share of online purchase activity has grown, but the conventional retail focus of the BLS approach has excluded this channel.

To address these limitations, the BLS and Department of Labor commissioned an independent study from the National Academies of Science, Engineering and Medicine (NASEM) to improve the CPI methodology. The 159-page [report](#) offered the following recommendations:

- Explore big data approaches to capture prices automatically. Online shopping portals can be scraped (that is, read programmatically) to learn offered prices. Market data vendors collect cash register data from retailers directly and could provide exact, timely point-of-sale records to BLS. While not free, these vendors may be more cost-effective than employing surveyors.
- Revise the panel approach to determine baskets by using sources like payment card transactions to gauge consumer expenditures.
- Use alternative data to index hard-to-measure categories like healthcare and housing.

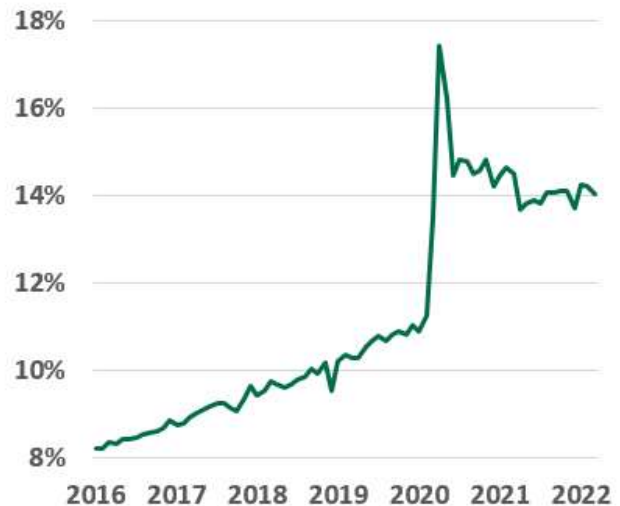
Consumer price measurements are in desperate need of updating.

**Data Collection Channels for
CPI Price Survey**



Sources: BLS, NASEM, Census Bureau, Haver Analytics

**Electronic Shopping Share of
Retail Sales**



The NASEM researchers also proposed creating separate indices by consumers' income tiers. The experience of inflation is uneven, with lower-income workers often exposed to higher prices. This would build on the existing sub-indices for specific geographic regions and for "wage earners and clerical workers."

In response, the **BLS committed** to working on each of NASEM's recommendations, starting with a plan to reweight the basket annually instead of every two years. Complete redevelopment of a well-seasoned methodology should not be done in haste, but when better approaches are available, they should be incorporated.

None of this is meant to cast doubt on recent trends in the CPI. There is no question that prices are rising, and new computation methods are unlikely to produce significant changes in measured inflation. But efforts to improve price measures will make them more useful going forward.

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