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ECONOMIC Synopses

Decomposing the Low PCE Inflation Rate

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The personal consumption expenditures (PCE) price index is a popular measure for calculating U.S. inflation rates. Produced monthly by the Bureau of Economic Analysis (BEA), the index reflects the prices consumers in the United States pay for goods and services; the PCE inflation rate is the percentage change in the index over time. Since 2012, Federal Reserve policymakers have defined price stability as a 2 percent PCE inflation rate. However, throughout most of the current economic expansion, the PCE inflation rate has fallen short of this target and the average PCE inflation rate of the previous expansion.[1] Some policymakers worry that this dampened inflation rate reflects weak demand in the U.S. economy.

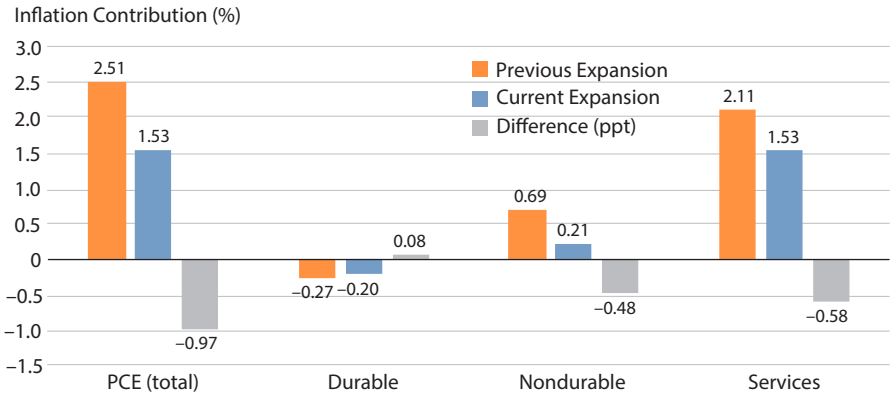
> The current low PCE inflation rate can largely be attributed to energy, health care, and housing.

In this essay, we break down the overall PCE inflation rate into its components to compare the inflation rates of the current and previous expansions and identify the drivers of the current low rate. The three PCE index categories are durable goods, which include long-lived products such as motor vehicles and televisions; nondurable goods, which include items such as clothes and gasoline; and services, which include health care and housing expenditures. The inflation contribution of each category is approximated by multiplying its inflation rate by its consumption share. The sum of the inflation contributions of each category is about equal to the overall PCE inflation rate.

The orange and blue bars in Figure 1 indicate the inflation contributions of each category during the previous and current expansions, respectively; the gray bars show the difference between the two. In both periods, the services category contributed the most to the overall PCE inflation rate. This contribution reflects both higher average inflation rates for services (such as medical care) and the high share of spending consumers direct toward services.[2] The overall PCE inflation rate is almost 1 percentage point (ppt) lower in the current expansion than in the previous expansion: The declines in the services inflation contribution (–0.58 ppts) and the nondurable goods inflation contribution (–0.48 ppts) drive the overall reduction. Meanwhile, the inflation contribution of durable goods actually increased a bit during the current expansion. That is, prices of durable goods did not fall quite as fast.

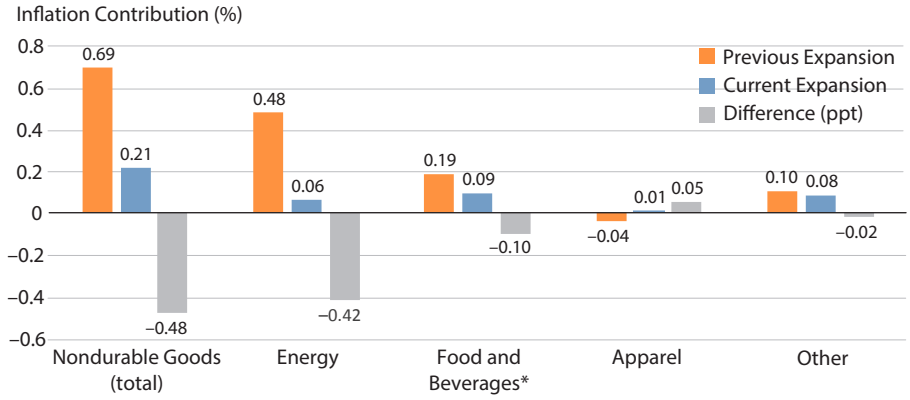
Next we decompose the nondurable goods and services categories into the inflation contributions of their subcate-

Figure 1
PCE Inflation Rate Decomposition



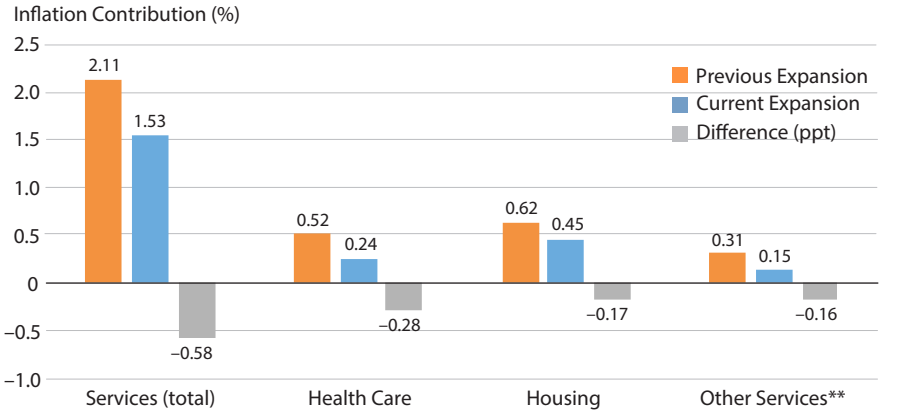
SOURCE: BEA and authors' calculations.

Figure 2
Nondurable Goods Inflation Decomposition



NOTE: *Food and beverages purchased for off-premises consumption.
SOURCE: BEA and authors' calculations.

Figure 3
Services Inflation Decomposition*



NOTE: *The three subcategories with the largest changes in inflation contribution are included in this figure.
**The "Other Services" category includes a variety of services such as educational services, communication services, and religious activities.
SOURCE: BEA and authors' calculations.

gories and compare the two expansions (Figures 2 and 3). For nondurable goods, the reduction in the total inflation contribution from the previous to the current expansion comes almost entirely from the energy subcategory (–0.42 ppts), which includes utilities and gasoline. For services, the reduction comes from a variety of sources, primarily health care expenditures (–0.28 ppts), followed by housing expenditures (–0.17 ppts). Note, however, that the reductions in the inflation contributions from these categories do not imply falling prices for these expenditures. Rather, the current-expansion inflation rates are simply lower than the previous-expansion inflation rates. In sum, these results demonstrate that the current low PCE inflation rate can largely be attributed to the reduction in inflation contributions from the energy, health care, and housing subcategories.

Although a below-target inflation rate may reflect weak demand for goods and services in the economy, it can also be driven by a strong supply of goods and services. In the case of a strong supply, policymakers typically have less cause for concern. Our analysis cannot determine whether the observed inflation reductions are caused by supply- or demand-side factors. However, our analysis does open the question of what factors might be at play. For example, the reduced energy inflation rate could be influenced by the wide adoption of hydro-fracking technology in the United

States over the past decade. This new technology could be lowering the cost of oil production and thus depressing the inflation rate in the energy sector. More research is needed to determine what specific supply- or demand-side factors are driving the current low PCE inflation rate. ■

Notes

[1] Per the National Bureau of Economic Research, the previous expansion was December 2000 to December 2007 and the current expansion began in June 2009. For this analysis, we identify the previous expansion period as January 2002 to December 2007 and the current expansion period as July 2009 to May 2019. We use annual inflation rate data at a monthly frequency.

[2] The consumption share for services is about 68 percent. (This number is not explicitly represented in the figure.)

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