Research Department
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Which Inflation Rate?

Early reports on second-quarter GNP results headlined the news that inflation was accelerating again. In the *Wall Street Journal's* words, "Prices, as measured by a GNP index that is considered the broadest gauge of inflation, rose at a 4.7-percent annual pace in the latest quarter, significantly faster than the first quarter's 3.2-percent rate." But buried in the body of those news stories were reminders that the GNP index, in this case at least, could be somewhat misleading in its description of the present price situation. Another look at the underlying data would suggest a continuation of the earlier deceleration of prices.

Virtues of GNP index

The GNP index—more precisely, the GNP implicit price deflator—nonetheless has several decided virtues. It is much broader in coverage than the traditional wholesale and consumer price indexes, incorporating as it does elements of those indexes as well as other price series (construction, government purchases, etc.). At present, the wholesale index includes data for only about one-fifth of the more than 700 industries making up the economy, while the consumer index measures the price decisions of only about 55 percent of the nation's spending units.

The GNP index also represents an up-to-date composition of the nation's purchases of goods and services. In this index, the weights on the prices of different goods are the same as their current weights in real GNP. Thus, if personal consumption rises from the present 64 percent to (say) 65 percent of real GNP, its weight in the price index will rise correspondingly. In contrast, the consumer price index uses outdated weights derived mainly from a 1960-61 survey of consumer expenditures. The Bureau of Labor Statistics is now revising the CPI to take care of that problem, but in the meantime, shifts in the consumer series are sometimes misinterpreted because of the lack of proper weighting.

Fixed-weight indexes, such as the WPI and the CPI, also have a basic structural flaw. If the price of one item in the marketbasket rises while all other prices remain stable, a fixed-weight index will rise in proportion to the importance of that item in the index. But this rise clearly overstates how much people are hurt by the price increase, because they will purchase less of that item than before, and consequently, release income to buy more of other goods. Only a moving-weight index like the GNP index can capture the effect of this substitution of relatively inexpensive for expensive goods.

Virtues of spending index

The GNP index, on the other hand, has one drawback that is not shared by the traditional price indexes—it measures the average price of the country's *output*, instead of the

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average price of *expenditures* on a marketbasket of goods and services. Thus it would be worthwhile to construct an index which provides a better measure of the final demand of American purchasers. This can be done by pricing gross final spending (GFS), instead of pricing the usual output measure. (GNP).

Spending includes imported goods, which are obviously not American output, but it excludes the exports that go elsewhere. Moreover, spending excludes additions to inventory, because these additions are not part of anyone's final demand. Thus GFS equals GNP less the change in business inventories and less net exports (i.e., exports minus imports). GFS is normally (but not always) slightly smaller than GNP. Last quarter it was $22 billion smaller ($1651 vs. $1673 billion) but in the first quarter of 1975 it was $7 billion larger, reflecting the impact of a large recession-induced negative change in business inventories.

While GFS and GNP are roughly equivalent in size, GFS is much more stable because of the volatility of the items that are left out of that measure—inventory change and net exports. In fact, those items have accounted for almost all of the sharp changes in GNP composition we have experienced in the last ten years, which means that a price index based on final spending will not suffer from such compositional changes. Consequently, a price index of this type, by excluding several volatile output components, provides a more direct and precise measure of actual changes in American spending than the GNP output measure.

Trends in spending index

The price history of the last several years looks somewhat different—and somehow more logical—when we consider changes in the spending index rather than in the output index. First, the rise in double-digit inflation rates occurred in the spending index at the time one would expect, when the sharp OPEC price increases were imposed in late 1973 and early 1974. In contrast, the rise in the GNP index to double-digit rates was delayed until the second quarter of 1974, because the post-embargo upsurge in oil imports wasn't felt in GNP until that time.

Secondly, inflation rates fell somewhat faster from their 1974 peaks in the spending index than in the GNP

index. The GFS price index decelerated from a 13.1-percent rate of increase in the third quarter of 1974 to a 7.9-percent rate of increase in the first quarter of 1975, while the GNP index moved from a 12.4-percent to a 10.0-percent rate of increase over the same period. The deceleration in the GNP index apparently was delayed by the massive inventory run-off associated with the recession trough.

More importantly, the path of deceleration in the past year has been much smoother in the spending index than in the GNP index. The GFS index showed a continuing gentle slide from 6.3 percent in the final quarter of 1975 to 4.7 percent and then to 4.4 percent in the first two quarters of this year. In contrast, the GNP index sank from 7.1 percent to 3.2 percent in the first quarter of this year, and then rose to 4.7 percent in the second quarter, largely because of shifts in the inventory and foreign-trade sectors that are not included in the spending index. In other words, neither the low first-quarter inflation rate nor the second-quarter rebound in the GNP index reflected price movements which the nation's spending units actually faced.

Little difference?

On balance, over the past three years, the average price of U.S. output (the GNP price index) has risen 0.8 percent less than the average price of U.S. spending (the GFS price index). This relatively small difference may be viewed as the net impact on this country of the large movements in world commodity prices over the three-year period. Over time, inventories will enter the spending index as well as the output index, because they are meant to be sold eventually. Thus, the only long-term difference is that the output index includes the price of U.S. exports while the spending index includes the price of U.S. imports.

Over the short run, however, the use of a spending index tends to give a more accurate (and more logical) indication of the actual course of prices paid by the nation's spending units. Official spokesmen, using the GNP index, have tried to convey the same message by explaining the underlying price shifts affecting the various GNP components. But their message frequently is lost on headline readers, which suggests another reason for using an index that concentrates on final spending patterns.

Larry Butler