The Consumer Price Index and Public Policy

Joint Economic Committee Republicans

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On December 4, 1996 a commission of five economists headed by former Bush Administration Council of Economic Advisers (CEA) chairman Michael Boskin issued its report on the Consumer Price Index (CPI) to the Senate Finance Committee. The report, *Toward a More Accurate Measure of the Cost of Living* , suggests that the current CPI may overstate inflation by between 0.8 to 1.6 percentage points annually. The commission concluded that the most reasonable point estimate of this overstatement is 1.1 percentage points per year.

This conclusion will spark a controversy because the CPI is used to inflation index social security, military retirement, and several other entitlement programs. Less often noted is its use to index parts of the income tax including tax brackets, personal exemptions, and the standard deduction. Over time, the cumulative budget effects of a significant reduction in CPI increases would amount to hundreds of billions of dollars in spending restraint, higher tax revenues from primarily middle class taxpayers, and lower deficits, relative to baseline projections. For example, according to the commission's report, over a ten year period (1997-2006), well over $600 billion would be shaved from deficits by reducing CPI increases by 1.1 percentage points annually.

The commission's report suggests implementing legislation to adjust the CPI in order to realize the associated savings and revenues increases. The available analysis indicates that tax increases would comprise about 40 percent of the direct budget effects, while entitlement savings would comprise about 60 percent of these direct effects. For example, for every $100 billion of legislated budget changes, roughly $40 billion would be tax increases, and about $60 billion would be entitlement savings. Further outlay reductions would result from debt service savings. Policy makers will have to evaluate whether this ratio of tax increases to entitlement savings is optimal. This paper will take no position on this policy question, but only is intended to provide some background on some of the key issues.

The CPI and Measurement Issues

Although there is some agreement among economists that the CPI probably overstates inflation to some degree, there is great disagreement over the extent of this overstatement. Attempts to produce precise estimates of this overstatement involve resolution of many thorny issues inherent in any price index of this type. The difficulties are large enough that the Boskin commission's interim report estimated an upward statistical bias of 0.7-2.0 percentage points, a very large range in which the upper bound is nearly three times as large as the lower bound.

Most of the problems related to the CPI were identified by the Stigler committee several decades ago, and by the Bureau of Labor Statistics (BLS) since. The Stigler committee, headed by George Stigler (later named a Nobel Laureate), reported its findings in hearings held by the Joint Economic Committee (JEC) in 1961. Though BLS has addressed some of these issues, others remain.

The Stigler committee identified several sources of problems common to price indexes including "frequency of revision of the Weight Bases" -- referring to updating the market basket of goods and services -- quality changes, treatment of new products, treatment of consumer durables, and other issues. BLS has examined these and other issues over the years, and the Boskin commission also addressed them.

The technical issues related to the CPI are extremely complicated. The CPI is produced by classifying 207 strata of consumption items in 44 geographical areas, resulting in 9,108 components in the CPI. Aside from the sheer size of the CPI, the methodology also can be a source of problems. The CPI is an index composed of a fixed weight market basket of goods and services. Thus the substitution of lower priced goods for higher priced goods produces a *substitution effect*. When the price of one product rises, consumers tend to substitute like products to avoid the price increases. Even when sharply higher prices force substitution to avoid price increases, the CPI methodology assumes that consumer spending on each item is an unchanged proportion of the index over time, and thus price increases tend to be overstated. Likewise, when the price of one good drops, more of it may be purchased, but this increase is not reflected in changing weights in the CPI. Every ten years or so the CPI is reweighted with a more current reflection of relative consumption patterns. The problematic effects of substitution effects in a fixed weight index have been well recognized for many years.

Another issue results from the fact that the same product can be purchased from discount outlets. The proliferation of retail outlets such as the "Price Club" over the last ten years means that a larger proportion of some products are purchased on a discount basis, though often associated with a loss of service. This is called the *outlet substitution effect.*

One of the most difficult issues, the extent to which *quality* improvements account for price increases, appears impossible to resolve with precision. Exactly how much more productive is an item of computer software or hardware now relative to price changes occurring over several years? What is the increased value supplied by medical technology such as the latest MRIs and noninvasive surgical procedures relative to their prices and those of more primitive technology and procedures? Another problem area regards the introduction of entirely new products. How should a product's output and price be evaluated that may not have even existed several years before? Various statistical techniques can be used to try to resolve such questions, but precise answers often cannot be obtained.

Conclusion

The Boskin commission has produced a serious report that merits serious examination. Careful consideration of CPI revision is needed because if it is excessive, it would have an important impact on social security and other retirement programs. It could also result in sizable tax increases on middle class taxpayers. Because the implications of the report are so significant, the report should be closely examined by other experts in the field. If a consensus develops that the CPI is not useful as an inflation adjustment index, perhaps some other index should be considered, as recommended by the Boskin commission. Some of the ideas contained in the recommendations of the Boskin commission have been under consideration or development by BLS for some time.

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