

Consumer Price Index Research Series Using Current Methods Questions and Answers

1) *What is this new index called?*

Title: The Consumer Price Index Research Series Using Current Methods, 1978-1998.
Short title: CPI-U-RS

2) *What is the CPI-U-RS and what does it attempt to do?*

The CPI-U-RS attempts to estimate what the measured rate of inflation in the CPI for all urban consumers (CPI-U) would have been over the 1978-98 period had the methods now used been in effect since 1978.

The CPI-U-RS provides an annual inflation series that adjusts only for specified changes in Bureau of Labor Statistics (BLS) methodology. It does not incorporate all possible research results on past inflation. For example, no attempt has been made to reflect any new information on trends in the safety or comfort of air travel, for which there is no corresponding methodological change in the CPI-U.

3) *Of what value is the CPI-U-RS? Why did the BLS produce it?*

Over the years the BLS has introduced a number of improvements in the methods it uses to compile the CPI. Some of these improvements have had pronounced effects on the growth rate of the index, while others have had lesser effects. A wide range of index users, including economic analysts, legislators, federal policy officials, and members of the media, have expressed an interest in knowing how these improvements might, on balance, have changed the performance of the index in earlier periods. The CPI-U-RS attempts to address this important interest.

The CPI-U-RS is, in some ways, an extension of the CPI-U-X1, an experimental CPI series developed in the past by the BLS to show what the rate of inflation in the CPI-U might have been, had the current rental-equivalence method of measuring homeownership cost been used prior to its 1983 introduction.

4) *What does the CPI-U-RS show?*

Over the 21-year period of the study (December 1977 – December 1998), the CPI-U-RS increased 141.2 percent, compared to 163.9 percent for the CPI-U over the same time period. This represents an average annual increase of 4.28 percent for the CPI-U-RS, compared with 4.73 percent for the CPI-U, for an average annualized difference between the two measures of 0.45 percent. It should be noted that the widest differences between the two series occur prior to 1983, when the current treatment of homeowner cost measurement was introduced into the CPI-U.

5) *Does the CPI-U-RS account exactly for the effects of the improvements BLS has made to the CPI over the years?*

No, the CPI-U-RS is an approximation. For some improvements—the use of the rental equivalence measure for homeowner costs, for example—estimates of the effects are reasonably precise. For other improvements—the use of hedonic quality adjustments in the apparel component, for example—no such claims of precision can be made.

Also, it is important to note that the component indexes were adjusted directly; individual prices were not used to recompute those indexes. For example, adjustments were made to the historical values of the CPI-U televisions index to reflect the estimated impact on that index of hedonic regression-based quality adjustment, had that method been employed prior to its implementation in January 1999. No attempt was made, however, to recompute the televisions index by applying hedonic regression analysis to the individual television prices collected for the CPI during the 1978-1998 period.

6) *What are the specific limitations of the CPI-U-RS?*

Most estimates are based on BLS research covering a short period of time and extrapolated to a longer period. Therefore, there must be considerable uncertainty surrounding the magnitude of adjustments made.

In addition, there have been several improvements made to the CPI not incorporated into the CPI-U-RS, either because they do not represent changes in methodology (e.g., periodic expenditure weight updates), because they had negligible impacts on the CPI's growth rate (e.g., changes in imputation methods), or because it was impossible to systematically estimate the hypothetical impacts of the new methods in past years (e.g., changes to the treatment of hospital prices).

Nonetheless, the CPI-U-RS can serve as a valuable proxy for researchers needing a historical estimate of inflation using current (1999) methods. The direct adjustment of individual CPI index series (such as motor fuel or prescription drugs) makes this the most detailed and systematic estimate available of a consistent CPI series.

7) *Specifically, what index series are available for the CPI-U-RS?*

The indexes for All items and the CPI major groups are available upon request, as are the indexes for Food, Energy and All items less food and energy.

8) *Is the CPI-U-RS subject to revision, and how frequently will it be updated?*

Yes, the CPI-U-RS is subject to revision as new methods are implemented in the CPI or as new information becomes available on the impact of past methodological improvements. These data will be updated annually in the *CPI Detailed Report*.

9) *How can the CPI-U-RS results be reconciled with the estimated methodological impacts shown in the 1999 Economic Report of the President (ERP)?*

The February 1999 *ERP* (p. 94) estimates that the future rate of growth in the CPI will be 0.68 percent per year slower because of changes that have or will be made to the CPI during the years 1995-2000. This table might lead some to infer that, had current CPI methods been in effect prior to 1995, inflation as measured by the CPI-U would have been

approximately 0.68 percent per year lower—and consequently that the CPI-U-RS would be approximately 0.68 percentage point below the CPI-U. By contrast, Table 2 and Figure 2 of the BLS paper show that the differences between the CPI-U and CPI-U-RS are usually only 0.3 or 0.4 percentage point during the several years prior to 1995. This apparent anomaly is explained by a variety of factors that cause the total adjustments used for the CPI-U-RS to be somewhat smaller than those used in the *ERP*.

First, and most importantly, the CPI-U-RS does not adjust for some methodological changes for which estimates are given in the *ERP*. For example, the *ERP* estimates that the 1998 market basket update will reduce the annual CPI-U growth rate by 0.17 percentage point, but the CPI-U-RS does not adjust for that update because it did not constitute a methodological change (see the answer to question 10 below). Other examples are the 1997 change in hospital services pricing (the impact of which the BLS could not systematically evaluate historically), and the 2000 change in sample rotation procedures (a change that would be impossible to simulate historically).

Second, the goals of these two estimates are different. The numbers in the *ERP* are estimates of the effect of changes to the CPI on *future* rates of inflation; the CPI-U-RS shows the *historical* effect. For example, the use of hedonic quality adjustments for personal computers will almost surely have a larger effect in the future than in the past, as the importance of personal computers continues to grow.

Third, the CPI-U-RS estimates for personal computers and generic drugs are smaller than those presented in the *ERP*. This reflects more recent calculations that were done for this paper and were first available subsequent to the release of the *ERP*.

Finally, the CPI-U-RS incorporates estimates of the effects of certain improvements that are not included by the *ERP*. The net impact of these improvements was to slightly reduce the difference between the CPI-U and CPI-U-RS in the years immediately prior to 1995.

10) *Why are the weight updates not incorporated in the CPI-U-RS?*

The weight updates of 1987 and 1998 were not methodological changes; periodic updates have long been a feature of the CPI. Moreover, it is not clear that weighting individual CPI series using the current 1993-95 base period would yield an “improved” aggregate measure for the year 1980, for example. Therefore, the CPI-U-RS is not adjusted for the 1987 and 1998 updates.

In December 1998, after the research for this paper was well underway, the BLS announced that beginning in 2002 expenditure weight updates would occur every two years rather than approximately once every decade. No attempt has been made in this paper, however, to incorporate the estimated historical impact of biennial updates between 1978 and 1987 and between 1987 and 1998.

11) *What methodological changes are reflected in the CPI-U-RS?*
These are shown in Table 1 of the paper.