

# Experimental Consumer Price Index for Americans 62 Years of Age and Older, 1998-2009

## Introduction

The Consumer Price Index (CPI) measures the average change over time in the prices paid by urban consumers for a representative market basket of consumer goods and services. The CPI for All Urban Consumers (CPI-U) represents the spending habits of about 87 percent of the population of the United States. The CPI for Urban Wage Earners and Clerical Workers (CPI-W), a subset of the CPI-U population, represents about 32 percent of the U.S. population.<sup>1</sup>

The Bureau of Labor Statistics (BLS) also calculates an experimental price index for Americans 62 years of age or older (often called the CPI-E). This article reviews price changes seen in the experimental CPI-E from December 1997 through December 2009 and reiterates the methods, sources of data, and limitations of the experimental index described in earlier articles<sup>2</sup>. Over the 12-year period from December 1997 through December 2009, the experimental CPI-E rose 36.1 percent. This compares to increases of 33.9 and 33.8 percent for the CPI-U and CPI-W, respectively.

## Methodology, sources of data, and limitations

Although this study indicates a slightly higher overall inflation rate for older Americans compared to the official CPI population groups, any conclusions drawn from it should be used with caution because of the various limitations, summarized below, inherent in the methodology.

*Expenditure weights.* For purposes of index estimation, the CPI is divided into strata cross-classified by 38 areas and 211 item categories. For each CPI population group, these area/item strata are weighted according to their importance in the spending patterns of the respective population. The definition of the population of older Americans used for the experimental price index was all urban noninstitutionalized consumer units that met one of the following three conditions:

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<sup>1</sup> The Chained CPI for All Urban Consumers (C-CPI-U), which BLS began publishing in August 2002 with data back to January 2000, also represents the urban population. The prices used in the C-CPI-U are the same as those used to produce the CPI-U and CPI-W, but the C-CPI-U uses a different formula and different weights to combine basic indexes.

<sup>2</sup> For example, the April 2008 *Monthly Labor Review* article by Kenneth J. Stewart, “The experimental consumer price index for elderly Americans (CPI-E), 1982-2007” provided estimates of the series for all items and major CPI expenditure components from December 1982 through December 2007.

- 1) Unattached individuals who were at least 62 years of age;
- 2) Members of families whose reference person (as defined in the Consumer Expenditure Survey) or spouse was at least 62 years of age; or
- 3) Members of groups of unrelated individuals living together who pool their resources to meet their living expenses, whose reference person was at least 62 years of age.

In the 2007-2008 Consumer Expenditure Survey, which is used as the source of expenditure weights in the CPI for 2010-2011, 18 percent of the urban consumer units met the above definition for older Americans. Because the number of consumer units used for determining weights in the experimental index was relatively small, expenditure weights used in the construction of the experimental price index have a higher sampling error than those used for the larger populations.

For each population group, the base expenditure weight of any component represents the actual expenditure on that component in the base period. The "relative importance" of any component is its base expenditure weight updated for changes in relative prices expressed as a percent of the total updated expenditures for the population. The relative importance data for each of the three population groups for December 2009 are shown in Table 1.

*Areas and outlets priced.* The CPI-E is a weighted average of price changes for the same set of strata and collected from the same sample of urban areas used in calculating the CPI-U and CPI-W. Because the strata are defined by metropolitan area as well as item category, this means that the CPI-E reflects the general geographic distribution of the urban population.

Retail outlets are selected for pricing in the CPI based on data reported in a separate survey representing all urban households. The experimental index also uses the same retail outlet sample. The outlets thus selected may not be representative of the places of purchase (for example, the types of store or their locational distribution within metropolitan areas) of the elderly population.

*Items priced.* One major limitation of the experimental index is that the item samples priced within selected outlets are determined with probabilities proportionate to total urban (and not elderly) expenditures. As a result, the specific items selected for pricing in each outlet may not be representative of the experimental index population.

*Prices collected.* A final source of uncertainty about the appropriateness of using the CPI-U prices for the index of the older population concerns the availability of discount prices for older Americans. For example, senior-citizen discount rates are used in the CPI in proportion to their use by the urban population as a whole. To the extent that senior-

citizen discounts take the form of a fixed percentage discount from the regular price, this may not be a problem. If, however, the discount is not expressed as a percentage of the price, or if that percentage is periodically adjusted, the scarcity of senior-citizen discount prices in the current CPI could lead to error in the experimental index.

Because of the above limitations, any conclusions drawn from these analyses should be treated as tentative.

### **Relative behavior of price indexes**

Table 2 shows the behavior of the CPI-E, CPI-U, and CPI-W for selected expenditure categories for the period December 1997 through December 2009. Over this 12-year period, the reweighted experimental price index for older Americans (CPI-E) rose 36.1 percent. This compares with increases of 33.9 percent for the CPI-U and 33.8 percent for the CPI-W.

The relative importance data for the CPI-E and the CPI-U and CPI-W populations show that older Americans devote a substantially larger share of their total budgets to medical care (see Table 1). In addition, for each population group, medical care prices rose more rapidly than the overall (all items) index during each of the eight years studied. For this reason, the medical care component accounts for a significant portion of the difference between the higher rate of increase measured for the CPI-E relative to the two official population groups during the 1998-2009 period.

Price change for each major expenditure group varied by population because the distribution of expenditures on the products and services within the major groups varied among the three index populations. For example, within the housing major group, the weight for owner-occupied shelter is higher for the elderly than the CPI-U and CPI-W populations, as a higher proportion of elderly own homes than the other population groups. The weight for rent, on the other hand, is smaller for the CPI-E population.

### **The CPI and its relationship to Social Security benefits**

Adjustments to Social Security benefits are currently based on the percent change in the CPI-W, measured from the average of the third quarter of one year to the third quarter of the succeeding year.

While the population covered for this study includes persons 62 years of age and older, it is important to note that it differs in many ways from the population receiving Social Security benefits.

First, many Social Security beneficiaries are younger than 62 years of age, and receive benefits because they are surviving spouses and/or minor children of covered workers or because of disability. The spending patterns of this younger group are excluded in the weights for the experimental index for older Americans. Second, a substantial number of persons 62 years of age and older do not receive Social Security benefits, especially those 62-64 years of age. Although these older consumers are included in the population covered by the experimental reweighted index, they would be excluded from an index specifically defined to reflect the experience of Social Security pensioners.

In short, an index designed specifically to measure price change for Social Security beneficiaries (i.e., one that excludes older people not receiving benefits, but includes younger persons receiving survival and disability benefits) might well show price movements that differ from those of the experimental index.

## **Conclusions**

This report summarizes the change in the prices of three population groups: the CPI-U, the CPI-W, and the CPI-E, the experimental population of Americans older than 62 years of age, for the period December 1997 through December 2009. During this time period, the CPI-E increased at a slightly higher rate than either of the two official populations.

The CPI-E, reweighted to incorporate the spending patterns of older consumers, behaved more like the CPI-U than the CPI-W. This was expected, because the CPI-U includes the expenditures of all urban consumers, including those 62 years of age and over. The CPI-W, however, is limited to the spending patterns of wage-earner and clerical families and, therefore, specifically excludes the experience of families whose primary source of income is from retirement pensions.

In addition, the medical care component of the CPI has a substantially larger relative weight in the experimental population compared to the CPI-U or CPI-W. As a result, the medical care component tends to have a larger effect on the elderly population than it does on the other two indexes. Other differences also play an important role, however, such as the greater weight of homeownership in the CPI-E.

Finally, the experimental price index has limitations as an estimate of the inflation rate experienced by older Americans. Because of the various limitations inherent in the methodology, any conclusions drawn from these data should be made with caution.

**Table 1. CPI relative importance for selected expenditure groups, December 2009  
(based on 2007-2008 Consumer Expenditure Survey weights).**

Expenditure group	Population	CPI-U	CPI-W	CPI-E
All items		100.00	100.00	100.00
Food and beverages		14.80	16.43	12.35
Food at home		7.80	8.90	7.16
Food away from home		5.94	6.43	4.37
Alcoholic beverages		1.06	1.09	0.82
Housing		41.96	39.75	47.08
Shelter		32.29	30.17	36.55
Rent		5.97	8.48	3.77
Owners' equivalent rent		25.21	20.96	31.52
Apparel		3.70	3.79	2.65
Transportation		16.69	18.65	14.22
Medical care		6.51	5.26	11.07
Medical care commodities		1.61	1.30	2.95
Medical care services		4.90	3.96	8.12
Recreation		6.44	6.03	5.53
Education and communication		6.43	6.18	3.91
College tuition		1.49	0.96	0.55
Other goods and services		3.48	3.92	3.19
Tobacco and smoking prod.		0.87	1.40	0.59

**Table 2. Percentage changes in the CPI-U, CPI-W, and CPI-E by major expenditure group, December 1997 - December 2009**

Expenditure Groups	CPI-U	CPI-W	CPI-E
All items	33.9	33.8	36.1
Food and beverages	37.1	37.0	36.3
Food at home	34.0	34.0	34.5
Food away from home	41.4	41.5	40.1
Alcoholic beverages	35.4	36.8	32.6
Housing	36.7	37.4	37.3
Shelter	39.2	39.8	38.0
Rent of primary residence	47.2	46.6	46.2
Owners' equivalent rent	39.0	38.2	39.2
Apparel	-9.3	-8.7	-9.3
Transportation	31.5	31.2	32.4
Medical care	60.1	60.8	60.0
Medical care commodities	42.2	40.0	45.7
Medical care services	66.0	67.1	65.9
Recreation	13.2	9.9	21.1
Education and communication	28.9	24.2	11.2
College tuition and fees	107.8	109.5	111.2
Other goods and services	64.0	78.0	57.5
Tobacco and smoking products	212.0	214.5	209.2