

An Update on the Experimental Consumer Price Index (CPI-E) for Older Americans

Introduction. The Consumer Price Index (CPI), reported monthly by the Bureau of Labor Statistics (BLS), measures the average change in prices over time for a fixed “basket” of goods and services. The BLS calculates the CPI for two population groups: “All Urban” consumers (CPI-U), and “Urban Wage Earners and Clerical Workers” (CPI-W). The latter is a subset of the CPI-U population: urban households that derive more than half of their income from clerical or hourly wage occupations. The CPI-W households represent 32 percent of the total U.S. population. The CPI-W is used primarily for calculating cost-of-living adjustments (COLAs) for unionized workers and recipients of federal entitlements such as Social Security. In addition to these two CPIs, the 1987 amendments to the Older Americans Act of 1965 directed BLS to develop an experimental index (CPI-E) for Americans 62 years of age and older.

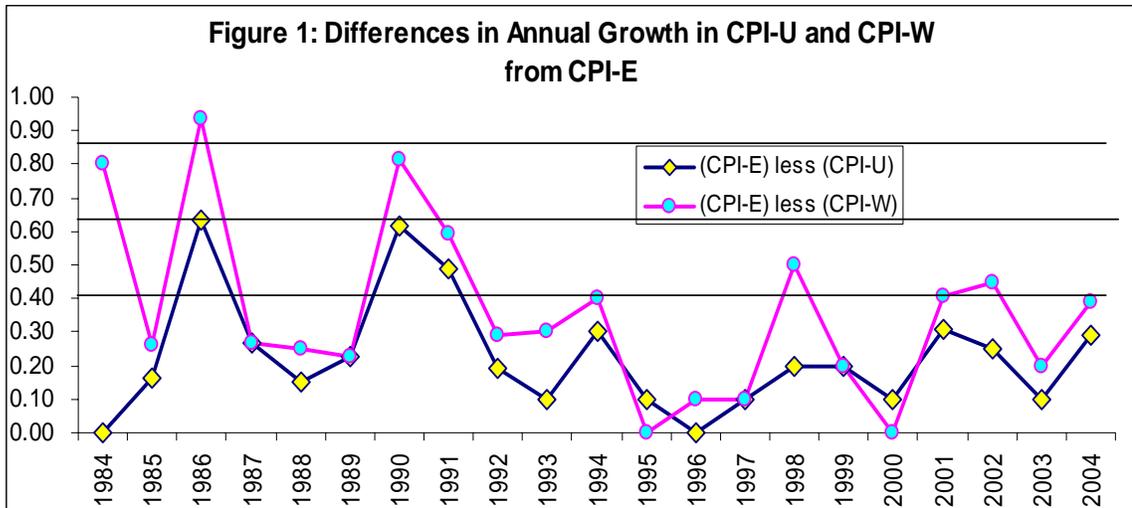
How different is the CPI-E?

Table 1 shows three price indexes (1982 = 100), their 12-month percent change, and differences between the CPI-E and the other two price indexes from 1983 to 2004. Except in 1984 and 1996, the CPI-E’s annual growth has always been greater than that of the CPI-U (col. 5 and 6). The difference in annual growth rates in column 8 was highest (0.63 percentage points) in 1986, declined to zero in 1996, and then increased. The difference in annual growth rates between the CPI-E and the CPI-W was even more dramatic and mostly larger (col. 9) than that between the CPI-E and the CPI-U—the difference (CPI-E - CPI-W) was highest (0.93) in 1986, declined to zero in 1995 and 2000, and then increased again (Figure 1).

**Table 1: Experimental Consumer Price Index for Older Americans (CPI-E), CPI-U, and CPI-W:
All Items, 1983-2005**

Year (1)	CPI-E (2)	CPI-U (3)	CPI-W (4)	12-month Percent Change			CPI-E /less CPI-U (8)	CPI-E /less CPI-W (9)
				CPI-E (5)	CPI-U (6)	CPI-W (7)		
1983	102.1	99.6	99.8		3.20	3.00		
1984	106.5	103.9	103.3	4.30	4.30	3.50	0.00	0.80
1985	110.5	107.6	106.9	3.76	3.60	3.50	0.16	0.26
1986	113.3	109.6	108.6	2.53	1.90	1.60	0.63	0.93
1987	117.7	113.6	112.5	3.87	3.60	3.60	0.27	0.27
1988	122.7	118.3	117.0	4.25	4.10	4.00	0.15	0.25
1989	128.9	124.0	122.6	5.03	4.80	4.80	0.23	0.23
1990	136.6	130.7	129.0	6.01	5.40	5.20	0.61	0.81
1991	143.0	136.2	134.3	4.69	4.20	4.10	0.49	0.59
1992	147.6	140.3	138.2	3.19	3.00	2.90	0.19	0.29
1993	152.2	144.5	142.1	3.10	3.00	2.80	0.10	0.30
1994	156.6	148.2	145.6	2.90	2.60	2.50	0.30	0.40
1995	161.2	152.4	149.8	2.90	2.80	2.90	0.10	0.00
1996	166.1	156.9	154.1	3.00	3.00	2.90	0.00	0.10
1997	170.1	160.5	157.6	2.40	2.30	2.30	0.10	0.10
1998	173.2	163.0	159.7	1.80	1.60	1.30	0.20	0.50
1999	177.3	166.6	163.2	2.40	2.20	2.20	0.20	0.20
2000	183.5	172.2	168.9	3.50	3.40	3.50	0.10	0.00
2001	189.2	177.1	173.5	3.11	2.80	2.70	0.31	0.41
2002	192.7	179.9	175.9	1.85	1.60	1.40	0.25	0.45
2003	197.4	184.0	179.8	2.40	2.30	2.20	0.10	0.20
2004	203.3	188.9	184.5	2.99	2.70	2.60	0.29	0.39
2005	n.a.	198.8*	195.0*					

* Sept. 2005



Source: Experimental Consumer Price Index, Consumers, Aged 62 and Older, unpublished data, U.S. City Average, All Items (December 1982 = 100). U.S. Department of Labor, Bureau of Labor Statistics, Washington, DC. www.bls.gov

The three indexes are not directly comparable because the CPI-E uses a market basket that may not reflect the actual purchases made by persons age 62 and older.¹ The CPI-E refers to urban consumer units in which (a) unattached individuals (not in a family) are at least 62 years of age; or (b) the reference person of the family or the spouse is at least 62 years of age; or (c) the reference person of the group of unrelated individuals living together, who pool their resources for living expenses, is at least 62 years of age. The population age 62 and older represents only 19 percent of the total sample in the Consumer Expenditure Survey from which expenditure weights are calculated for the CPI-E. The higher rate of price increase in the CPI-E shows that consumers aged 62 and older allocate a larger portion of their total expenditures to items whose costs have grown more rapidly than other items of expenditures. For example, the elderly allot a larger proportion of their expenses (also known as *expenditure weights*) to medical care than the two population groups represented in the CPI-U and the CPI-W.²

¹ Amble, Nathan, and Kenneth J. Stewart, "Experimental Price Index for Elderly Consumers," *Monthly Labor Review*, May 1994.

² For discussion on weights, see Verma, Satyendra, "A Note on Using an Experimental CPI-E for Older Americans," *Data Digest* Number 52, December 2000, AARP Public Policy Institute.

The *expenditure weight* of any category in the CPI-U and the CPI-W is measured by the actual expenditure on that item in the base period. It represents the relative importance of that item in total expenditures. The relative importance or expenditure weight of medical care is much higher for older Americans in the CPI-E than for all Americans in the CPI-U. It was twice as high in 1995. Since the CPI-E sample is much smaller than the CPI-U sample, the sampling error of expenditure weights for the CPI-E is higher than for the other two indexes. While the relative expenditure weights differed in each of the three indexes, especially for medical care, shelter, and transportation, CPI-E prices of items within each goods and services category are still based on the purchases of the *entire* CPI-U population. For example, prices of medical services within the medical care category, or beverages in the food category, are selected from the purchases of the entire population. Thus, medical prices may not be representative of specific services, such as nursing care and long-term care, purchased by the CPI-E population (Amble and Stewart).

These prices also do not account for the discount prices available to older Americans, such as senior-citizen discounts, or the prices at discount outlets where older Americans might shop. This causes a *price-selection* bias

Table 2. CPI-E, CPI-U and CPI-W for Major Expenditure Groups (December 1982=100)											
Month/year	All items	Food and beverages	Housing	Apparel	Trans- poration	Medical care	Medical care - commodities	Medical care - services	Recreation*	Educ. & comm.*	Other goods/ services
CPI-E (December 1982 =100)											
2000	183.5	174.1	178.4	129.4	161.0	278.6			105.6	99.5	251.0
2001	189.2	179.4	185.4	127.1	161.8	292.2			107.6	101.2	261.1
2002	192.7	182.5	189.5	124.6	160.0	306.3			109.6	102.3	270.0
2003	197.4	186.3	194.4	121.0	165.2	318.9			111.5	101.7	275.9
2004	203.3	192.6	200.2	120.3	171.7	333.0			113.4	100.7	282.5
CPI-W (1982-84 =100)											
2000	168.9	167.7	165.4	128.3	152.8	259.9		265.9	102.4	102.7	276.5
2001	173.5	173.0	172.1	126.1	153.6	271.8		278.5	103.6	105.3	289.5
2002	175.9	176.1	175.7	123.1	151.8	284.6		292.5	104.6	107.6	302.0
2003	179.8	179.9	180.4	120.0	156.3	296.3		305.9	105.5	109.0	307.0
2004	184.5	186.2	185.0	120.0	161.5	309.5		321.5	106.3	110.0	312.6
CPI-U (1982-84 =100)											
2000	172.2	168.4	169.6	129.6	153.3	260.8		266.0	103.3	102.5	271.1
2001	177.1	173.6	176.4	127.3	154.3	272.8		278.8	104.9	105.2	282.6
2002	179.9	176.8	180.3	124.0	152.9	285.6		292.9	106.2	107.9	293.2
2003	184.0	180.5	184.8	120.9	157.6	297.1		306.0	107.5	109.8	298.7
2004	188.9	186.6	189.5	120.4	163.1	310.1		321.3	108.6	111.6	304.7
C-CPI-U (Chained Base: 1999=100)											
2000	102.0	101.4	102.7	100.2	103.0	102.5	101.4	102.8	100.9	98.5	102.7
2001	104.3	104.1	106.5	98.0	103.5	107.1	105.6	107.5	101.9	97.5	106.5
2002	105.6	105.8	108.7	94.8	102.6	112.0	109.4	112.9	102.7	98.4	110.1
2003	107.8	107.7	111.4	91.7	105.3	116.4	111.9	117.9	103.4	99.3	111.9
2004	110.2(U)	111.0(U)	114.2(U)	90.9(U)	108.2(U)	121.4(U)	114.5(U)	123.8(U)	103.7(U)	100.0(U)	113.8(U)

* Base Year: 1997 =100; U: An estimate

in the CPI-E, which is already based on a much smaller sample than the other two indexes. It is for all these reasons that CPI-E is classified as an *experimental* index.

Table 2 compares price indexes of major categories of the CPI-E with the CPI-U, the CPI-W, and a new index called the superlative index (C-CPI-U), also known as Tornqvist's chained consumer price index.³ The CPI-U divides the medical price index into medical care-commodities and medical care-services, but they are both lower than the combined price index of medical care in the CPI-E. For example, as shown in Table 2, the CPI-E for medical care was 333 in 2004, compared to 310 for medical care-commodities and 321 for medical care-services in the CPI-U – a difference of 23 and 12 percentage points, respectively. This difference is mainly due to the expenditure weights in the respective indexes. The CPI-E price increases are lower than the CPI-U price increases for education and communication, and other goods and services, but significantly higher for food and beverage, housing, transportation, and recreation.

Table 3 summarizes the annual growth in prices by major categories. From 2000 to 2004, the CPI-E rose 1.6 percentage points more than the CPI-W and 1.1 percentage points more than the CPI-U for all items. The C-CPI-U measure of inflation is lower than those of other indexes. This is mainly due to significant reduction of the substitution bias in the C-CPI-U compared with other indexes, and to other methodological changes such as (a) allowing the market basket to change in every period, instead of keeping it fixed as in the other indexes and (b) changing the fixed base-year formula (in the CPI-U and the CPI-W) to a “chained” base-year formula.

Conclusion. One of the limitations of the CPI-E is that it is based on a much smaller sample than the CPI-U or the CPI-W. A larger sample and more research are needed to collect

³ For details see, Verma, Satyendra, and Laurel Beedon, “The CPI Options: What They Are and What They Mean for Social Security,” *Issue Brief* Number 76, April 2005, AARP Public Policy Institute.

Table 3: Percent Increase in Prices of Major Expenditure Categories in CPI-E, CPI-U, CPI-W and C-CPI-U: From 2000 to 2004

Categories	CPI-E	CPI-U	CPI-W	C-CPI-U
All items	10.8	9.7	9.2	8.0
Food and beverages	10.6	10.8	11.0	9.5
Housing	12.2	11.7	11.9	11.2
Apparel	-7.0	-7.1	-6.5	-9.3
Transportation	6.6	6.4	5.7	5.0
Medical care	19.5	18.9	19.1	18.4
Medical commodities	n.a.	n.a.	n.a.	12.9
Medical care services	n.a.	20.8	20.9	20.4
Recreation	7.4	5.1	3.8	2.8
Education and communication	1.2	8.9	7.1	1.5
Other goods/ services	12.5	12.4	13.1	10.8

separate data on prices older Americans pay at various points of purchase. Also, in the context of rising medical care and prescription drug prices, more frequent revisions are needed in expenditure weights to measure the CPI-E more accurately.

The Social Security inflation adjustments are currently based on the CPI-W. If Social Security benefits were to be indexed by the CPI-E instead of the CPI-W, the COLA adjustments would be higher, but the CPI-E would not represent all Social Security recipients for two reasons. First, the expenditure patterns of older Americans are better represented by the CPI-U than the CPI-W because the CPI-U includes all consumers, including those age 62 and older, while the CPI-W includes only families that are wage earners and clerical workers, and excludes families whose primary sources of income are pensions and Social Security. Second, some recipients are younger than age 62, and some do not start receiving Social Security benefits until they retire at age 65 or later.⁴ Thus, even though the CPI-U does not fully represent the annual price change for older Americans, it is still the best current alternative among all available measures.

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⁴ See Amble and Stewart, 1994.