CENTER for RETIREMENT RESEARCH at BOSTON COLLEGE

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WHAT IS THE RIGHT PRICE INDEX FOR THE SOCIAL SECURITY COLA?

By Alicia H. Munnell and Patrick Hubbard*

Introduction

The U.S. Social Security Administration recently announced a 2022 cost-of-living adjustment (COLA) of 5.9 percent – the largest since the early 1980s. But critics continue to argue that the Consumer Price Index (CPI-W) currently used for adjusting Social Security benefits does not reflect the spending of older Americans on health care and therefore understates inflation. They urge the adoption of a special price index intended to reflect the spending patterns of Social Security beneficiaries – the experimental CPI-E.

While historically the CPI-E, which covers those ages 62 and over, has risen faster than the CPI-W, the old relationship between the two indexes appears to have changed. In fact, if the 2022 COLA had been based on the CPI-E, it would have been 4.8 percent rather than the actual 5.9 percent. This *brief* explores the changing relationship between the CPI-W and the CPI-E.[1]

The discussion proceeds as follows. The first section describes the calculation of the CPI-W, used for Social Security. The second describes the CPI-E and its limitations. The third reports the relationship between the CPI-W and the CPI-E since 1983 and shows how it has changed in recent years. The fourth section identifies the factors that have narrowed the difference between the two measures. The final section concludes that a major reason for the disappearing differential has been the slowdown in the growth of medical care costs over the past two decades.

Social Security COLA

Social Security benefits are subject each year to a COLA, which is based on the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W).[2] Since the COLA first affects benefits paid after January 1, Social Security needs to have figures available before the end of the year, and thus uses inflation numbers from the third quarter of the preceding two years to calculate the adjustment. For example, the adjustment for January 1, 2022 is based on the increase in the CPI from the third quarter of 2020 to the third quarter of 2021. Inflation grew substantially throughout 2021, resulting in the third quarter average being 5.9 percent higher than its level in 2020. Given this year-to-year increase in overall prices, the COLA for 2022 is the largest since the early 1980s (see Figure 1 on the next page).

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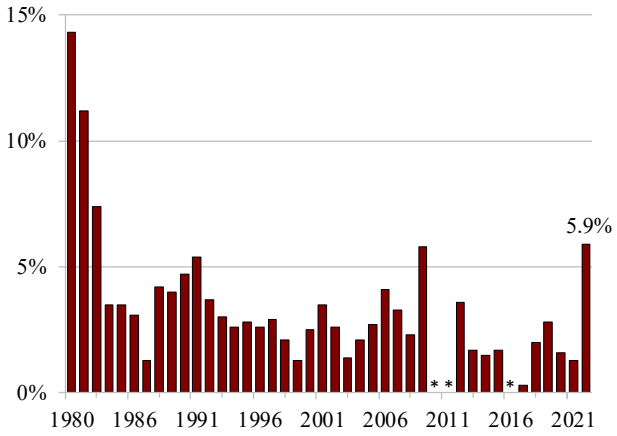
Figure 1. Social Security Cost-of-Living Adjustment, 1980-2021



Notes: Asterisks for 2010, 2011, and 2016 indicate no COLA. The 2009 COLA was 5.8 percent, just slightly lower than the 2022 COLA.
Source: U.S. Social Security Administration (2021).

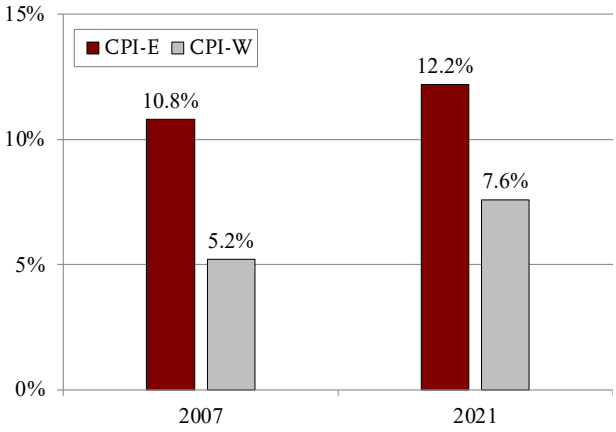
What Is the CPI-E?

For a long time, critics have contended that the CPI-W understates inflation for the elderly because it does not reflect their spending patterns. Indeed, older people do spend a greater share of their budgets on medical care than their younger counterparts. The earliest year for which CPI-E weights are available is 2007, and they show that the elderly spent more than twice as much of their budget on medical care than the population as a whole (see Figure 2). And today, medical expenditures continue to be significantly higher among older people.

In 1987, Congress directed the U.S. Bureau of Labor Statistics to calculate a separate price index for people ages 62 and older. This index, called the CPI-E, has been extended back to December 1982 and uses reweighted calculations of the regular CPI to better mirror expenditures and prices for the elderly.[3]

Because the CPI-E is not constructed from scratch but rather is derived from an index for the broader population, it has a number of limitations.[4] First, expenditure patterns are based on relatively few households, so the weights are subject to much greater sampling error than those in the broad index. Second, prices may not be representative of the locations and types of stores frequented by the older population. Third, the sample of consumer items may not be the same as those bought by the elderly. Fourth, the availability of senior-citizen discounts is likely understated. So, the experimental index is far from perfect. Thus, if the decision were made to employ an index for the elderly, it would probably make sense to construct a new index with a larger sample of older households that uses the prices for products they buy at places they shop. But the debate continues to be focused on adopting the experimental CPI-E.

Figure 2. Expenditure Weights for Medical Care, CPI-E and CPI-W, 2007 and 2021

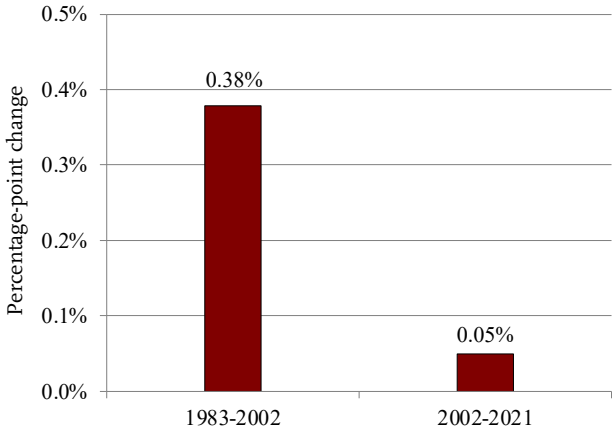


Source: U.S. Bureau of Labor Statistics (2021a).

How Do the CPI-W and CPI-E Compare: 1983-2021?

From the third quarter of 1983 to the third quarter of 2021, the average annual increase in the CPI-E was 2.8 percent, compared to 2.6 percent for the CPI-W. Interestingly, though, the difference in the rate of increases in the two indexes has not remained constant over time, and has narrowed in recent years (see Figure 3 on the next page). For the first 20 years of the CPI-E, it rose almost 0.4 percentage points per year faster than the CPI-W, but in the last 20 years the gap between these measures declined to 0.05 percentage points.

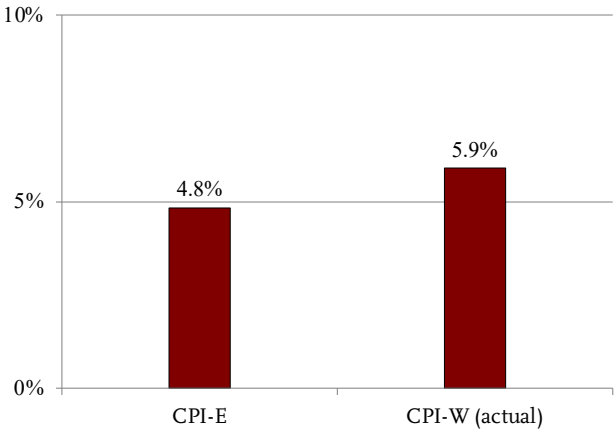
Figure 3. Average Differential between CPI-E and CPI-W Inflation Rates, 1983-2002 and 2002-2021



Sources: Authors' calculations using U.S. Bureau of Labor Statistics (2021b, 2021c).

As noted in the introduction, a particularly newsworthy development is that if the Social Security COLA for 2022 had been based on the experimental CPI-E, the adjustment would have been 4.8 percent compared to the actual COLA of 5.9 percent (see Figure 4).

Figure 4. Hypothetical COLA for 2022 Using CPI-E and Actual COLA Using CPI-W



Sources: U.S. Social Security Administration (2021) and U.S. Bureau of Labor Statistics (2021b).

Why Has the Gap Between the Indexes Narrowed?

The behavior of a price index depends on the change in the prices of the underlying items and the weights given to those items in constructing the index. The basic argument for the CPI-E has always been that older households spend more of their budgets on medical care and that these prices rise faster than the cost of other items. Both parts of that statement are correct.

People ages 62 and older currently spend 12.2 percent of their budget on medical care compared to 7.6 percent for the population as a whole (see Table 1). They also spend more on housing. On the other hand, they spend relatively less on food and beverages and on transportation.[5]

Table 1. Expenditure Weights for CPI-E and CPI-W, 2021

Spending category	CPI-E	CPI-W	Difference
Housing	46.6%	40.9%	5.7%
Food and beverages	13.5	16.7	-3.1
Transportation	13.0	16.9	-3.9
Medical care	12.2	7.6	4.6
Other goods and services	6.6	7.7	-1.1
Recreation	5.4	5.2	0.2
Apparel	1.9	3.0	-1.1
Tuition, other school fees, and childcare	0.8	2.1	-1.3
Total expenditures	100%	100%	0.0%

Source: U.S. Bureau of Labor Statistics (2021a).

The effect of these categories on the two inflation indexes depends not only on their relative weights, but also on the pattern of price changes relative to the average. During 1983-2002, relative to overall prices, medical care rose 2.6 percent faster and transportation rose 0.8 percent slower (due mainly to the rising

cost of gasoline) (see Table 2), both of which contributed to the faster relative growth of the CPI-E during this period. Over 2002-2021, the cost of all four spending categories rose faster than average, but the real action was in medical care and transportation. The relative cost of medical care fell from 2.6 percent more than the CPI-W average to 1.3 percent more, while the cost of transportation swung in the other direction – from 0.8 percent less than average to 0.2 percent more.

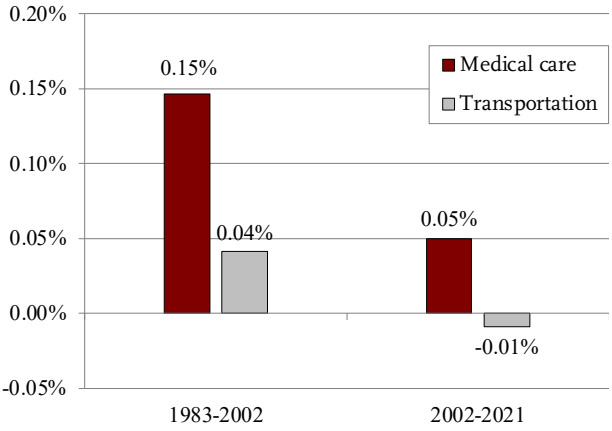
Table 2. Difference from Average Annual Rise in CPI-W by Category, 1983-2002 and 2002-2021

Spending category	Deviation from avg. increase in CPI-W	
	1983-2002 (CPI-W = 3.0%)	2002-2021 (CPI-W = 2.2%)
Housing	0.0	+0.2
Food and beverages	0.0	+0.2
Transportation	-0.8	+0.2
Medical care	+2.6	+1.3

Sources: Authors' calculations using U.S. Bureau of Labor Statistics (2021a and 2021b).

These changes in relative price increases explain why the difference between the CPI-W and the CPI-E declined from 0.38 percentage points over 1983-2002 to 0.5 percentage points over 2002-2021. Given that older Americans spend so much of their budget on medical care relative to the population as a whole, the slowdown in cost growth substantially reduced the inflation they faced over the two periods (see Figure 5). Second, the significant swing in the "transportation" category also helped the relative position of older people, since they spend less on transportation and therefore were less affected by the increase in transportation costs. Other components moved up and down as well, but "medical care" and "transportation" are the main story. (For a complete accounting, see the Appendix.)

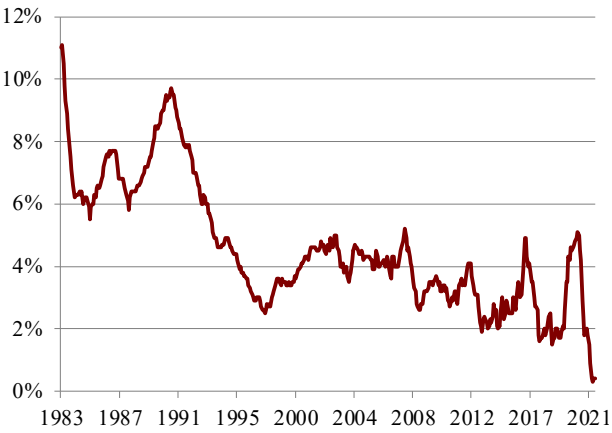
Figure 5. Impact of Medical Care and Transportation on Difference between CPI-E and CPI-W, 1983-2002 and 2002-2021



Note: Estimates use 2007 weights for the period ending in 2002, and 2021 weights for the period ending in 2021.
Sources: Authors' calculations using U.S. Bureau of Labor Statistics (2021a, 2021b, and 2021c).

And the extraordinarily low rate of medical care price growth in the last year – 0.4 percent – explains why the CPI-E fell below the CPI-W (see Figure 6).

Figure 6. Medical Care Inflation Growth, 1983-2021



Source: U.S. Bureau of Labor Statistics (2021d).

Conclusion

How best to keep Social Security benefits up to date with inflation has been a controversial issue. Critics have argued for decades that the CPI-W understates inflation for the elderly because it does not reflect how large a share of their budget goes for medical care, where prices have been rising rapidly. The CPI-E for a long while confirmed that the elderly saw more rapid rates of inflation.

That pattern changed after the turn of the century. One major explanation is that the rate of increase in the price of medical care slowed; the other is the changing pattern of transportation costs.

The extremely low rate of medical care inflation in the last year clearly reflected the low usage of doctor and hospital visits by the population as a whole during the pandemic and is unlikely to be repeated. But if the rate of medical care inflation continues to be held in check, as it has for the last two decades, then the argument for using the CPI-E weakens. Moreover, the CPI-E is not a real price index. It simply reweights the data collected for the population as a whole. Thus, if the decision were made to employ an index for the elderly, a new index would be needed with a larger sample of older households that relies on the prices for products they buy at places they shop.

Endnotes

1 The analysis follows the approach of Munnell and Chen (2015).

2 When the Social Security COLA was introduced in 1972, the only price index the U.S. Bureau of Labor Statistics (BLS) had was the CPI-W, which covers about 32 percent of the population. The BLS later introduced other measures of price inflation, but the CPI-W is still used today to adjust Social Security benefits. As new uses were developed for the CPI, the need for a broader and more representative index became apparent. In 1978, the BLS expanded the sample to all urban residents (not just wage earners) and created the CPI-U, which covers about 87 percent of the population, including most retirees. The CPI-U is used to index the brackets and other parameters of the personal income tax.

3 The CPI-E is not designed to precisely track the inflation experience of Social Security beneficiaries, because some individuals ages 62 and older are not receiving benefits and some beneficiaries (those receiving disability benefits) are under 62.

4 Stewart (2008) and U.S. Bureau of Labor Statistics (2021b).

5 The subcategory "tuition, other school fees, and childcare" was taken out of "education and communication." The remainder was combined with "other" to highlight the patterns discussed here.

6 For the period 1983-2002, the expenditure weights are from 2007; and for the period 2002-2021, the expenditure weights are for 2021. Ideally, one would want to have annual expenditure weights, but the data are only publicly available for years after 2007. As a result, the exercise for the period 1983-2002 explains only 0.16 percentage points of the 0.38 percentage point difference. For details on when new weights have been introduced into the CPI, see Table 2 on page 29 of U.S. Bureau of Labor Statistics (2015).

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APPENDIX

Appendix: Accounting for the Narrowing of the Differential Between CPI-W and CPI-E

Determining the reason for the changing pattern between the CPI-W and CPI-E involves calculating the difference in the weights for each category of expenditure between the two indexes and then multiplying those differences by the amount by which inflation in each category differs from the CPI-W average for each period. The Box describes the mechanics.

Table A2 shows the relative weights for the major expenditure categories in the CPI-E and CPI-W. The difference column shows the extent to which the elderly spend more on a particular category (medical care) or less (transportation) than the population as a whole.

Table A2. Expenditure Weights for CPI-E and CPI-W, 2021

Spending category	CPI-E	CPI-W	Difference
Housing	46.6%	40.9%	5.7%
Food and beverages	13.5	16.7	-3.1
Transportation	13.0	16.9	-3.9
Medical care	12.2	7.6	4.6
Other goods and services	6.6	7.7	-1.1
Recreation	5.4	5.2	0.2
Apparel	1.9	3.0	-1.1
Tuition, other school fees, and childcare	0.8	2.1	-1.3
Total expenditures	100%	100%	0.0%

Source: U.S. Bureau of Labor Statistics (2021a).

Box. *The Mechanics*

A hypothetical example might help (see Table A1). Assume that people spend money on only three items – housing, medical care, and recreation – and that prices for these items rise over some period at an average annual rate of 3 percent, 5 percent, and 1 percent, respectively. Applying different CPI-E and CPI-W weights to the inflation rates for each category yields overall inflation rates of 3.1 percent and 2.4 percent respectively – a difference of 0.7 percentage points. To determine why the CPI-E is higher involves: 1) calculating the difference between the weights in the two indexes and between each category and CPI-W inflation; and 2) multiplying those numbers together. The results for this example show that 0.4 percentage points of the 0.7-percentage-point difference between the CPI-E and CPI-W comes from medical care and the bulk of the remainder from recreation.

Table A1. Illustrative Impact of Differences in Weights and Inflation

	Inflation	Index weights		Difference between		Impact
	(1)	CPI-E (2)	CPI-W (3)	CPI-E and CPI-W weights (4) = (2) – (3)	Category and overall CPI-W inflation (5) = (1) – 2.4%	(4) x (5)
Housing	3.0%	55%	50%	5%	0.6%	0.03%
Medical care	5.0	25	10	15	2.6	0.39
Recreation	1.0	20	40	-20	-1.4	0.28
Overall inflation		3.1	2.4			
Difference between CPI-E and CPI-W			0.7			0.70

Source: Authors' calculations.

The effect on the two indexes depends not only on the relative weights, but also on the pattern of price change over time – specifically, the difference between inflation for each expenditure category and the average for the CPI-W. Table A3 reports average inflation for each category and Table A4 reports the amount by which each category differed from the average.

Table A3. Annual Rate of Inflation by Category (CPI-W), 1983-2002 and 2002-2021

Spending category	1983-2002	2002-2021
Housing	3.01%	2.42%
Food and beverages	3.04	2.44
Transportation	2.23	2.45
Medical care	5.62	3.32
Other goods and services	4.18	1.12
Recreation	0.71	0.75
Apparel	0.94	0.02
Tuition, other school fees, and childcare	7.00	4.03
Total	3.01%	2.23%
CPI-E total	3.39	2.28
Difference	0.38	0.05

Sources: Authors' calculations using U.S. Bureau of Labor Statistics (2021b, 2021c).

Table A4. Difference from Annual Rate of Inflation by Category,1983-2002 and 2002-2021

Spending category	1983-2002	2002-2021
Housing	0.0%	0.2%
Food and beverages	0.0	0.2
Transportation	-0.8	0.2
Medical care	2.6	1.1
Other goods and services	1.2	-1.1
Recreation	-2.3	-1.5
Apparel	-2.1	-2.2
Tuition, other school fees, and childcare	4.0	1.8

Sources: Authors' calculations using U.S. Bureau of Labor Statistics (2021b, 2021c).

The final step in the analysis is to multiply the difference in the weights by the deviations from the average rate of price increase.[6] The results are shown in Table A5, where positive numbers indicate categories that caused the CPI-E to increase faster than the CPI-W.

Table A5. Impact of Deviations in Weights and Prices on the Difference between CPI-E and CPI-W, 1983-2002 and 2002-2021

Spending category	1983-2002	2002-2021
Housing	0.00%	0.01%
Food and beverages	0.00	-0.01
Transportation	0.04	-0.01
Medical care	0.15	0.05
Other goods and services	-0.02	0.01
Recreation	0.01	0.00
Apparel	0.03	0.02
Tuition, other school fees, and childcare	-0.06	-0.02
Total	0.16%	0.06%

Note: Numbers do not add to totals due to rounding.
Sources: Authors' calculations using U.S. Bureau of Labor Statistics (2021a, 2021b, 2021c).

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