Moment of Truth
PROJECT

Measuring Up:
The Case for the Chained CPI

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About the Moment of Truth Project

In its final report, "The Moment of Truth," the President's bipartisan National Commission on Fiscal Responsibility and Reform ("Fiscal Commission") declared that the era of deficit denial is over. The debt crisis in Europe, the sobering election results, and the work of the Fiscal Commission have transformed the debate from a question of if we will reduce long-term deficits, to a matter of when and how we will do so. Fiscal responsibility will be the dominant national issue of the next two years, and we have the rare opportunity to enact a broad bipartisan plan to reduce the deficit and bring the debt under control. We must not let that opportunity pass.

The Moment of Truth project will spearhead a sustained, coordinated effort to capitalize and expand on the momentum generated by the Fiscal Commission. Though the Fiscal Commission did not have all the answers, it showed that broad bipartisan support for an ambitious deficit reduction plan is possible – as demonstrated by the bipartisan 11 out of 18 supermajority vote in favor of the plan, which included five Democrats, five Republicans, and one Independent.

The Moment of Truth project will build on this effort, working with Congress, the Administration, and the public at large. The project will be co-chaired by Erskine Bowles and Senator Alan Simpson and staffed by several senior members of the Fiscal Commission staff. It will focus primarily on public education, Congressional outreach, and technical and policy analysis.

To contact the Moment of Truth project, or for media and other inquiries, please email Lawrence Kluttz at kluttz@crfb.org.

The Moment of Truth (MOT) project is a non-profit, non-partisan effort that seeks to foster honest discussion about the nation's fiscal challenges, the difficult choices that must be made to solve them, and the potential for bipartisan compromise that can move the debate forward and set our country on a sustainable path.

Measuring Up:
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Introduction

With so much of government set to autopilot, the measurement we use for inflation plays a very important role in public policy. Currently, the federal government generally relies on the consumer price index (CPI) to index provisions of the budget and tax code to account for cost-of-living changes. However, this measure actually overstates inflation and, as a result, drives up the deficit unnecessarily.

Maintaining purchasing power in spending programs and indexing various parts of the tax code is an important policy goal. However, policymakers should ensure that the most accurate measure of inflation is being used.

To correct the problem of over-indexation, many have proposed switching to the chained CPI to provide a more accurate measure of inflation for indexed provisions in the federal budget. This switch was recommended by the National Commission on Fiscal Responsibility and Reform ("Fiscal Commission") and the Bipartisan Policy Center's Debt Reduction Task Force ("Domenici-Rivlin"). It was also a key component in negotiations on the debt ceiling last summer and the Super Committee last fall, and has a number of strong advocates from the left, right, and center (see http://crfb.org/blogs/bipartisan-support-chained-cpi). An overwhelming majority of economists from both parties agree that the chained CPI is a far more accurate measure of inflation than the CPI measurements currently in use.

In addition to improving technical accuracy, switching to chained CPI would have the secondary benefit of reducing the deficit – by about $390 billion over the next decade alone if implemented for 2014.

Addressing our fiscal challenges will require many tough choices and policy changes – but switching to the chained CPI represents neither. Such a change offers policymakers the rare opportunity to achieve significant savings spread across the entire budget by making a technical improvement to existing policies. As such, across-the-board adoption of the chained CPI should be at the top of the list for any deficit reduction plan or down payment.

Background

Currently, the federal government relies on two cost-of-living measures for most inflation-indexed spending programs and provisions of the tax code: the CPI-U (Consumer Price Index for All Urban Consumers) and the CPI-W (Consumer Price Index for Urban Wage Earners and Clerical Workers).

The CPI-W is used to calculate COLAs for Social Security and other federal retirement programs, while the CPI-U is used to index various provisions of the tax code, as well as poverty thresholds. The CPI-U is considered to be the more accurate of the two, since it covers 87 percent of the population, compared to the 32 percent covered by the CPI-W.

The Bureau of Labor Statistics (BLS) formulates these price indices by creating a representative "market basket" of goods based on the covered population's consumer spending patterns; in the case of the traditional CPIs, this data is available with a two-year time lag. Then, using this market basket, BLS tracks price changes for the included items over time. BLS follows the prices of goods in the market basket, and measures inflation based on the overall change in the price of the basket.

In 1996, the Advisory Committee to Study the Consumer Price Index (the Boskin Commission) found that both CPI-U and CPI-W overstated inflation in a number of ways, which they estimated to total about 1.1 percentage points per year. The Bureau of Labor Statistics responded by making a number of changes to the way they measured CPI-U and CPI-W, which corrected much of the biases in the two indices.

However, a portion of the bias – upper level substitution bias for changes between categories – cannot be addressed through the existing CPI-U and CPI-W for technical reasons. Instead, BLS created a new measure of inflation – the chained CPI (also known as the superlative CPI or the C-CPI-U) – in 2002 to account for consumer substitution between categories. This measure has been refined and improved since it was initially published. Unlike the methodological changes in the calculation of CPI-U and CPI-W that are automatically reflected in the published measures used for indexing programs under current law, using the more accurate chained CPI for indexation instead of the CPI-U or CPI-W requires a statutory change in law.

Box 1
Major Provisions in the Federal Budget Indexed to CPI

Federal programs indexed to CPI:
- Social Security COLAs
- Civilian Pension COLAs
- Military Pension COLAs
- Veterans' Benefits
- SSI Benefits
- Maximum Award for Pell Grants
- Eligibility for Various Programs
- IPAB Savings Targets (Medicare)
- Affordable Care Act Subsidy Thresholds

Parameters of the tax code indexed to CPI:
- Tax Bracket Thresholds
- Personal Exemption Size
- Standard Deduction Size
- AMT Exemptions Thresholds
- Limitations on Retirement Accounts
- Phase out Levels for Tax Credits
- Thresholds for PEP and Pease
- Estate and Gift Tax Exemptions
- Health Care Excise Tax

The Technical Case for Chained CPI

One of the reasons the Boskin Commission found that the CPIs overstated price changes was something called substitution bias.

Understanding substitution bias requires recognizing the way consumers respond to changes in prices. If one spends $100 per month on apples and the price of apples suddenly doubles, it is unlikely that their cost of living will go up by $100. Rather, an individual will substitute away from apples, buying less of them than they otherwise would and therefore buying more of something else instead.

Substitution bias occurs because the regular measure of CPI assumes consumers will buy the same basket of goods regardless of relative prices, not realizing that consumers can often soften the blow of increased relative prices by consuming more of a relatively cheaper good. Since the Boskin Commission, the BLS has made a number of improvements in the calculation of CPI-U and CPI-W to account for what is known as "lower level substitution bias," when individuals substitute within categories. In particular, BLS adopted a geometric mean in 1999 to account for consumer substitution within item categories as relative prices change. The geometric mean formula, though, does not account for consumer substitution taking place between categories – known as "upper level substitution."

For example, if consumers respond to the price increase for Granny Smith apples by buying more Red Delicious apples instead (lower level substitution bias – changes within categories), this is accounted for in the current CPI.

Fig. 1: $1,000 Indexed to CPI-U and Chained CPI-U
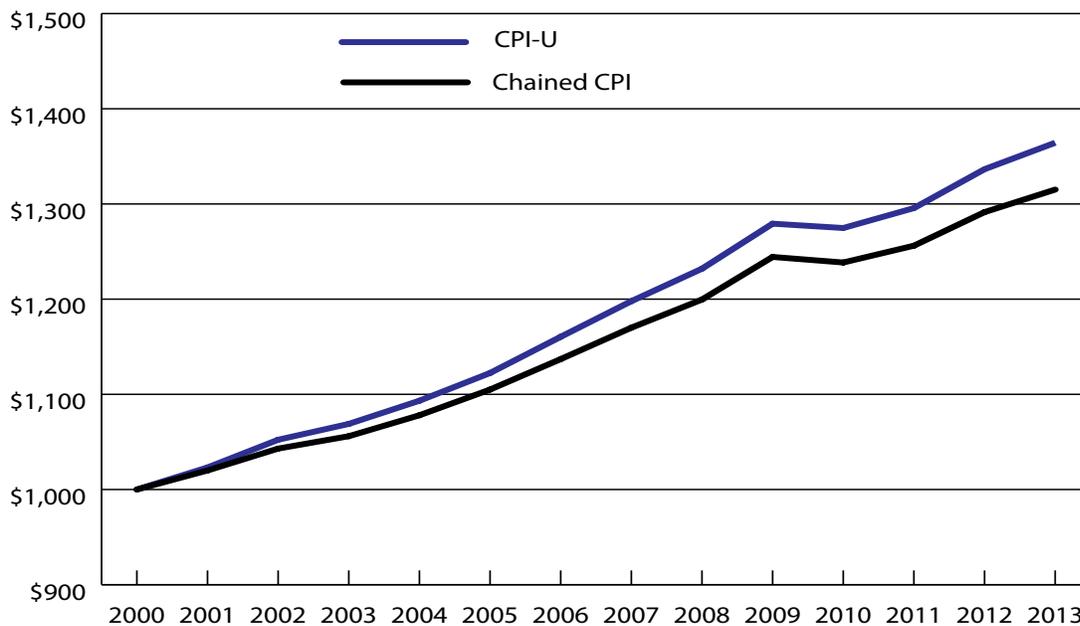
Source: Bureau of Labor Statistics and author calculations.

Box 2
How To Implement Indexation Based on Chained CPI

One shortcoming of the chained CPI is that it requires data which isn't fully available for 2 years, and so the BLS publishes the chained CPI in initial and interim forms before publishing in final form with a time lag. Historically, this initial estimate has been an average of 0.35 percentage points below the final chained CPI, causing some to argue that the chained CPI is actually a less, rather than more, accurate measure of inflation.

Though it is true the chained CPI process is imperfect, this criticism is not a valid one. As BLS has grown more experienced with calculating the chained CPI, the errors associated with its initial estimate have and will continue to decrease. More importantly, the Congressional Budget Office and others have identified ways to ensure

COLAs remain accurate over time, by calculating COLAs using a combination of the current initial chained CPI and a correction for past errors. In this way, any errors from using chained CPI would be small, and would disappear by the time the final index was released. This differs from the problems associated with the overstatement of the current CPI, which compound rather than correct over time.

CBO has explained how indexation using the Chained CPI could be implemented in a 2010 technical paper titled "Technical Appendix: Indexing with the Chained CPI-U for Tax Provisions and Federal Programs."[1]

[1] CBO, "Technical Appendix: Indexing with the Chained CPI-U for Tax Provisions and Federal Programs," http://www.cbo.gov/ftpdocs/112xx/doc11256/WebAppendix.pdf

But if consumers respond to the price of Granny Smith apples increasing by buying less apples altogether and purchasing more oranges instead (upper level substitution bias – changes between categories), this is not accounted for.

Upper level substitution bias is an artifact of the BLS's reliance on a fixed "market basket" of goods, which is based on old purchasing habits. This could be fixed by instead using a market basket based on the very newest purchasing habits, except that this would actually cause the opposite problem where substitution biases cause the CPI to understate inflation.

Moving to the chained CPI would address this bias by using a superlative index that updates expenditure weights and formulas in order to address consumer response to substitution between categories.

As the Congressional Budget Office (CBO) explains, the chained CPI "attempts to fully account for the effects of economic substitution on changes in the cost of living… [It] provides an unbiased estimate of changes in the cost of living from one month to the next by using market baskets from both months, thus 'chaining' the two months together."[2]

Since 2000, the chained CPI has, on average, been 0.25 to 0.3 percentage points lower per year than the standard CPI measures. Though this difference is small on average, it compounds over time; depending on which index you use, prices have either increased by 34 percent (CPI-U and CPI-W) or 29 percent (chained CPI) between 2000 and 2011 (see Figure 1). Over a longer time frame, this difference would become even more pronounced.

[2] CBO, "Using a Different Measure of Inflation for Indexing Federal Programs and the Tax Code," http://www.cbo.gov/ftpdocs/112xx/doc11256/CPI_brief.pdf

Budgetary Impact of the Chained CPI

Because a number of government programs and provisions in the tax code are linked to the CPI-U or CPI-W, the reliance on an overstated measure of inflation results in higher spending and lower revenue collections than intended or warranted. Relative to current law, which essentially projects continued overpayments and under collection, switching over to the chained CPI would result in substantial deficit reduction.

Instituting the chained CPI for Social Security cost-of-living adjustments (COLAs) alone would save $127 billion through 2023 if implemented in 2014. Using it for COLAs in other federal retirement programs would save another $38 billion over the same period, and there would be an additional $51 billion in deficit reduction from other areas of the budget. On the tax side, meanwhile, moving to chained CPI would cause tax bracket thresholds and other parameters to grow more slowly and raise an extra $124 billion over the ten-year period relative to current law.

Added together and combined with the net interest savings, we estimate that relying on the more accurate measure of inflation beginning in 2014 would reduce deficits by about $390 billion over the next decade and $84 billion in 2023 alone. Actual savings could be larger, since these numbers use a more conservative differential (0.25%) than has been used previously (0.3%), and since our numbers assume the chained CPI is not applied to CPI "sub-indices."

Though this would reduce the deficit relative to current law, it should not be considered a change in tax or spending policy. The provisions affected by the move to chained CPI are designed to be indexed to changes in overall cost of living. Rather than serving to raise taxes and cut benefits, switching to the chained CPI would simply be fulfilling the mission of properly adjusting for cost of living. As Robert Greenstein of the Center for Budget and Policy Priorities has said, "this change should not be regarded as a benefit cut or a tax increase. It should be regarded more as a technical change to achieve Congress's stated goal of keeping pace with inflation in as accurate a way as possible."[3]

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[3] Robert Greenstein, "A Simple Proposal That Can Yield Substantial Savings Over Time," http://www.cbpp.org/cms/index.cfm?fa=view&id=1895

Fig. 2: Budgetary Savings for Chained CPI by Category (Billions)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2014-2023
Social Security	$2	$4	$6	$9	$11	$14	$17	$19	$22	$25	$127
Other COLAs	$1	$1	$2	$3	$3	$4	$5	$6	$7	$7	$38
Other Spending*	$0	$1	$2	$3	$4	$5	$7	$8	$10	$11	$51
Tax Code	$1	$3	$6	$8	$9	$13	$16	$19	$23	$26	$124
Subtotal	**$3**	**$9**	**$15**	**$22**	**$28**	**$36**	**$44**	**$52**	**$61**	**$69**	**$340**
Interest	$0	$0	$0	$1	$3	$4	$6	$9	$12	$15	$50
Total	**$3**	**$9**	**$16**	**$23**	**$31**	**$40**	**$50**	**$61**	**$72**	**$84**	**$390**

*Includes impact on Medicaid and health exchange subsidies.
Note: numbers may not add due to rounding.   Source: CBO and author calculations.

Some analysts have raised concerns that using the chained CPI for indexing Social Security benefits would have a greater impact on the oldest seniors and long-term disabled, since these groups will have been collecting COLAs for a substantial number of years.

It is reasonable to argue that the Social Security program should be doing more to help the very old and long-term disabled who are likely to have outlived their assets and may no longer be able to work. However, using an incorrect inflation index is neither a sensible nor well-targeted way to help these populations. Instead, policymakers should look at new policies intended to help that group. The Fiscal Commission proposed, as part of its Social Security reform plan, a "20-year bump up," which would offer a flat-dollar benefit enhancement beginning 20 years after eligibility. Other proposals have offered similar benefit increases for the very old, such as a 5 percent benefit increase at age 85.

In addition to this $390 billion in deficit reduction, there are numerous budgetary merits to using the chained CPI. First, it would contribute to reducing the long-term funding shortfall in Social Security. Switching to the chained CPI for COLAs would close about one-fifth of Social Security's 75-year shortfall. This would be a significant down payment on bringing that program into long-term balance.

Another merit of switching to the chained CPI is that the savings are credible but back-loaded. The budgetary savings from a 0.25 percent change in indexing is very tiny at first – in fact, switching to chained CPI only saves about $3 billion in the first year and $9 billion in the second. Over time, though, these savings compound, leading to increasing amounts of annual deficit reduction. Assuming implementation in 2014, the policy would save nearly $70 billion (over $80 billion including interest) in 2023 and more in subsequent years. The gradual ramping up of savings fits in well with the idea that deficit reduction should be enacted immediately but phased in gradually so as not to undermine the economic recovery and to give taxpayers and beneficiaries time to adjust to the small changes.

One final merit of using the chained CPI is its political appeal. Although switching to the chained CPI is a technical change that should not be viewed as a spending cut or tax increase, it is worth noting that the effects of switching to chained CPI would be quite balanced, with a portion of savings coming from Social Security, other spending programs, and the tax code.

Using a better measure of inflation would also give us a more accurate understanding of changes in real variables in the economy. As the Boskin Commission report stated, "Even if no federal program on either the outlay or revenue side of the budget were indexed, it would still be desirable to improve the quality of measures of the cost of living from the standpoint of providing citizens a better and more accurate estimate of what was actually going on in the economy."[4] But the magnitude of our fiscal challenges and the substantial fiscal impact of achieving this correction make this change particularly timely.

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[4] The Advisory Commission To Study The Consumer Price Index, "Toward A More Accurate Measure Of The Cost Of Living," http://www.ssa.gov/history/reports/boskinrpt.html

Distributional Impact of the Chained CPI

One commonly-voiced claim made about switching to the chained CPI is the notion that it is "regressive" both on the tax and on the spending side, meaning that it affects lower and middle-income households to a larger degree than higher-income households. This claim is a false one and is based on a misunderstanding of how the chained CPI works and a misreading of existing non-partisan analysis of the change. With regards to both Social Security and the tax code, switching to chained CPI would be roughly distributionally neutral – meaning that individuals of different income levels are affected similarly.

On Social Security, the effects of chained CPI would be more or less uniform across individuals. Because the cost-of-living-adjustment offers the same percent increase for all beneficiaries, the effect of switching to a more accurate but modest measure of inflation would be also roughly the same for everyone. Of course, in reality there would be some differences due to a number of factors, including how long individuals receive benefits from the program. As it turns out, however, these deviations skew slightly progressive rather than regressive. According to the Social Security Administration, switching to the chained CPI would reduce average benefits in 2050 by about three percent relative to the current CPI for those in the bottom three quintiles, and four percent for those in the top two quintiles.

**Fig. 3: Average Percent Reduction in Social Security Benefits (2050)**
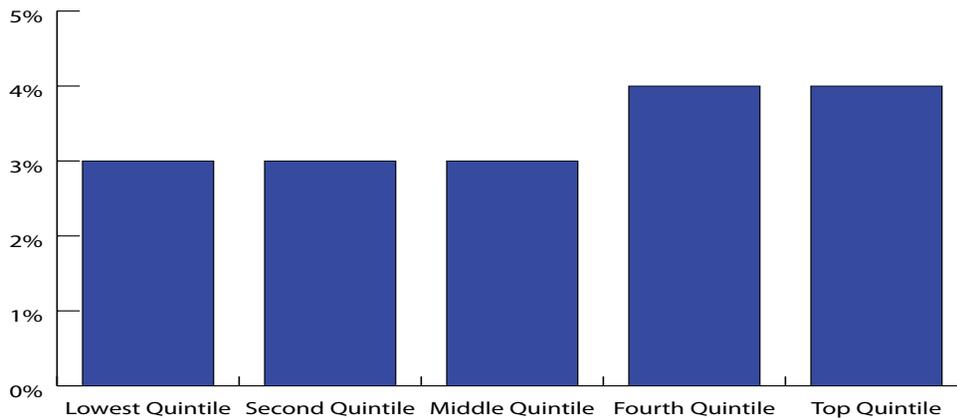
Source: Social Security Administration, Office of Policy.

On the revenue side, the average effects are similar – though there would likely be more deviation within each income group. According to an analysis by the Tax Policy Center (TPC) after the enactment of the January 2013 American Taxpayer Relief Act, each quintile would see about a 0.13 percent reduction in their after-tax income in 2020, relative to current law. Because so many provisions in the tax code are indexed to inflation – including the standard deduction, personal exemptions, income levels where new tax brackets begin, the AMT threshold, income thresholds for limits on various tax expenditures, etc – most taxpayers would be affected by the change. The exception is the very lowest earners who currently face no tax burden; nearly everyone making below $10,000 per year and more than half making between $10,000 and $20,000 would see no change in their tax burden.

Overall, nearly 50 percent of the additional revenues generated by the chained CPI would come from the top quintile, although the very wealthiest households would face only modest changes relative to their incomes because a declining share of their income would be affected by the inflation-indexed portions of the tax code.[5]

Fig. 4: Percent Change in After-Tax Income (2020)
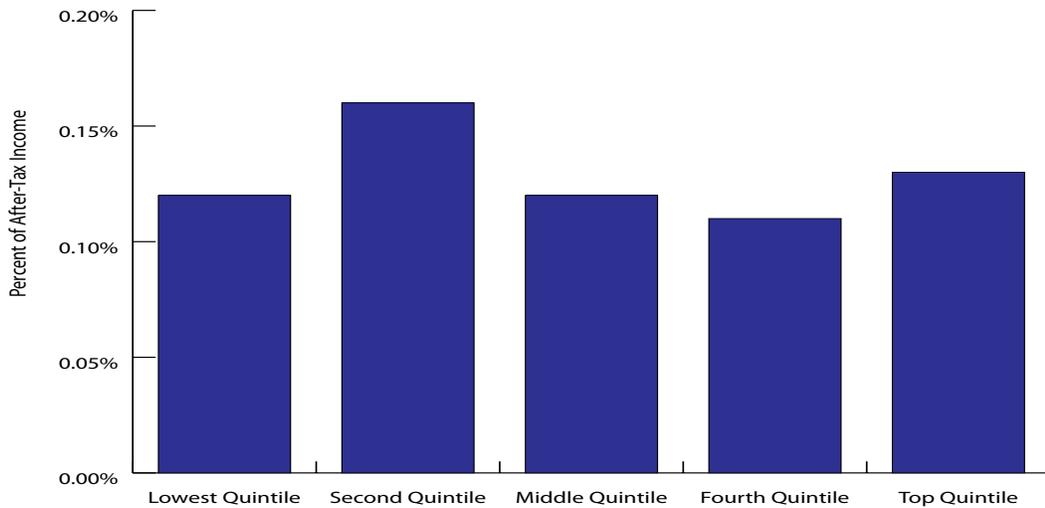
Source: Tax Policy Center.

While switching to the chained CPI would be distributionally neutral, this distribution may not be desirable in the context of aiming to protect the most vulnerable from any adverse effects of deficit reduction. When thinking about distribution, however, it is important to keep in mind the total effect of the package rather than the effect of a single policy. As an example, if Social Security reform were to rely on chained CPI but also raise the taxable maximum and flatten the benefit formula, as the Fiscal Commission plan would do, the net outcome would be highly progressive. Moreover, to the extent there are specific undesirable effects of chained CPI on certain vulnerable populations, they should be addressed through small policy changes targeted to those populations. For example, the Fiscal Commission recommended instituting a flat dollar benefit bump-up for very old Social Security recipients (as well as a minimum benefit for lower income beneficiaries). Other policies such as enhancing SSI benefits or increasing the refundability of certain credits on the tax side could be included in a package to offset the impact of the

change on lower income individuals.

Chained CPI is a more accurate measure of inflation and there is no reason to maintain an average $320 tax windfall for those in the top quintile as a result of using an inaccurate measure of inflation in the tax code just to prevent a $20 tax increase for those in the bottom quintile. Likewise, there is little reason to provide higher than warranted increases in benefits for all Social Security beneficiaries just to protect lower-income beneficiaries when those concerns could be addressed by much more targeted policies and at lower overall costs.

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[5] Some analyses appear to show a regressive impact of switching to the chained CPI. However, those studies often measure progressivity as the percent change in taxes paid instead of the percent change in after-tax income – the much more widely used measure. In addition, some studies measure the chained CPI off of a much more unrealistic and older version of a current law baseline, which in turn would have shielded many middle and upper-income earners from being affected as a result of the AMT, even though that is no longer the case in light of the American Taxpayer Relief Act.

Conclusion

The purpose of indexing government benefits and provisions in the tax code to prices is to ensure that they are adjusted to reflect changes in cost of living. However, current law relies on measures of inflation that fail to fulfill this purpose accurately. The Bureau of Labor Statistics has said that the chained CPI provides a closer approximation to a cost of living measure than other CPI measures, a judgment shared by economists and statisticians across political and ideological spectra. Adopting the chained CPI for indexation therefore represents a more accurate and effective approach to achieving the desired policy goal of accurately preserving the real value of certain spending programs and tax provisions.

The magnitude of our fiscal challenges will require serious tax and spending changes that go well beyond technical issues. The Fiscal Commission offered recommendations for trillions of dollars in savings in order to gradually reduce the debt as a share of the economy - recommendations which should be enacted as soon as possible. But if policymakers cannot even agree to a technical improvement to rely on a more accurate measure of inflation, the prospects for making the hard choices seem grim.

Box 4
Why Not Switch to the CPI-E?

The CPI-E, or CPI-experimental, is a price index that attempts to measure cost-of-living changes for Americans 62 and older. Some have argued that rather than switching Social Security COLAs to the chained CPI, which is on average 0.3 percent lower than CPI, we should switch to the CPI-E, which is 0.2 percentage points higher than CPI. Advocates claim that the CPI-E comes closer to reflecting the cost of living of the elderly, and therefore is a better index for Social Security.

Unfortunately, the CPI-E as an index has a number of flaws. For one, it covers a very small sample size and is in reality just a subset of the CPI-U rather than its own index; these features raise serious questions about the CPI-E's accuracy. In addition, the CPI-E does not appropriately measure certain prices faced predominantly by seniors – including those related to outlet and mail-order shopping – or take into account "senior discounts." And finally, there is substantial controversy about whether the CPI appropriately measures health care cost inflation – a problem which is particularly pronounced in the CPI-E. As CBO explains, it is unclear "whether the cost of living actually grows at a faster rate for the elderly than for younger people…Some research suggests that BLS underestimates the rate of improvement in the quality of health care and that such improvement may be reducing the true price of health care by more than 1 percent a year.

If that is the case, then all versions of the CPI overstate growth in the cost of living, with the overstatement especially large for the CPI-E."[6]

On top of this, the CPI-E still suffers from the same upper-level substitution bias as the regular CPI, suggesting that even if policy makers were to make the judgment that Social Security should be indexed to CPI-E, they should index it to a chained CPI-E.

Even if the CPI-E could be improved (and chained) to address the problems above, switching to it would represent a policy choice rather than a technical correction. Social Security is designed to index benefits to overall inflation – and chained CPI offers the most correct measure of inflation. Using the CPI-E would represent a policy choice that benefits should be indexed to cost of living changes among seniors (even though one third of beneficiaries are not seniors), rather than general inflation. Such a change would represent an expansion of benefits, and should only be considered in the context of comprehensive reform which brings the system back into balance over the long term.

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[6] CBO, "Using a Different Measure of Inflation for Indexing Federal Programs and the Tax Code," http://www.cbo.gov/ftpdocs/112xx/doc11256/CPI_brief.pdf

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