MANUFACTURERS ALLIANCE **Economic Report**

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ADJUSTING THE CONSUMER PRICE INDEX TO BETTER MEASURE COST OF LIVING:

Implications for Entitlements, Taxes, and Economic Growth

Final Report of Boskin Commission Recommends Adjusting CPI by 1.1 Percent; Adjustment Would Significantly Ease Task of Balancing Federal Budget

Introduction

Recently, the Boskin Commission made its final report on the accuracy of the Consumer Price Index (CPI) as a cost-of-living measure.[1] The Commission found that the CPI overestimates increases in the cost of living by approximately 1.1 percentage points per year.[2] The report was the subject of extensive coverage in the media and has generated continued commentary. The Commission's overall finding that the CPI overstates inflation comes as no surprise to most professionals who collect, analyze, and report economic data. For more than two decades, most economists and statisticians have agreed that the CPI overestimates increases in the cost of living; the only issues being the magnitude of the error and how to correct for the sources of bias.

Three major facts explain the amount of interest in the Boskin Commission's report. First, a number of federal spending and tax provisions are explicitly linked to changes in the CPI. As a result, any downward changes in the CPI would lower spending and raise taxes by hundreds of billions of dollars over a 10-year period. Second, agreement on a legislative adjustment to the CPI would considerably ease the job of balancing the federal budget, a task that both the Republican Congress and the Democratic Administration have listed as a major goal. Finally, historical overstatement of the CPI raises important questions about what has really happened to the economy over the last few decades.

The Manufacturers Alliance has already issued two reports on the accuracy of the Consumer Price Index as a measure of inflation.[3] This report first focuses on the specific findings of the Boskin Commission final report. Second, it explains how adopting the Commission's recommendations would affect the federal budget. Third, it speculates on the probability that these recommendations will be implemented during the coming year. Finally, the report examines what overestimation of the rate of inflation implies about economic growth during the last two decades.

CPI and the Federal Budget

Federal spending and tax laws contain numerous provisions that are linked to changes in the CPI.

[1] *Toward a More Accurate Measure of the Cost of Living: Final Report to the Senate Finance Committee From the Advisory Commission To Study the Consumer Price Index*, December 4, 1996. The final report is available from the Senate Finance Committee. The Senate Finance Committee created the Boskin Commission in early 1995 and tasked it with evaluating the magnitude and direction of any bias involved in using the CPI as a cost-of-living index. The Commission was chaired by Michael Boskin, Professor of Economics, Stanford University, and also included Ellen Dulberger, Director of Marketing Strategy, IBM Personal Computer Company, Robert Gordon, Chairman, Department of Economics, Northwestern University, Zvi Griliches, Professor of Economics, Harvard University, and Dale Jorgensen, Chairman, Department of Economics, Harvard University.

[2] The Commission actually found that the likely range of overestimation was between 0.8 and 1.6 percentage points. It focused on 1.1 as the most likely single-point estimate. The Commission characterized its findings as conservative, hinting that the true bias may be higher.

[3] *The Consumer Price Index Revisited*, ER-351, October 11, 1995; *The CPI: Does It Overstate Inflation?*, ER-332, March 24, 1995.

Among the most important examples are automatic increases in Social Security and Medicare benefits and the break points used for calculating marginal income tax rates. The rationale for these provisions differs slightly. The generally accepted purpose of cost-of-living adjustments (COLAs) is to ensure that inflation does not lower the standard of living of recipients. The Congress, having decided on an appropriate level of assistance, does not want to raise this level, but it also does not want the standard of living of the recipients eroded by inflation. Indexing of certain tax provisions was begun in the early 1980s to prevent individuals from moving into higher income tax brackets because of inflation.

Although these provisions mattered more in the 1970s and early 1980s when the CPI often rose at double-digit rates, any overestimation can still have important consequences over several years because of both the large number of federal provisions tied to the CPI and the effect of compounding even small changes over time.

While there are no official estimates of the effect of a downward adjustment of the CPI by 1.1 percentage points by year on the federal budget, the Congressional Budget Office (CBO) has estimated the effect of a 1.0 percentage point reduction. According to the CBO, a 1.0 percentage point reduction would increase taxes by $71.9 billion and reduce spending by $110.6 billion over six years. Most of the spending reductions would be made in Social Security. In addition, these deficit reductions would produce another $19.3 billion in reduced interest payments. Total deficit reduction would be $201.9 billion over the six years. In 2002 alone, the deficit would be approximately $55 billion lower, achieving about one-third of the total deficit reduction needed to balance the budget. Over a longer period, the savings would be even greater. By 2008 the proposed change in the CPI would allow the government to borrow roughly $1 ***trillion*** less than it would have to otherwise.[4]

Table 1

Budget Savings From a 1.0 Percentage Point Change in the CPI

($ Billions)

Provision	1-Year Savings	6-Year Savings
Revenues	3.2	71.9
Outlays		
Social Security	2.7	76.5
Supplemental Social Security	0.2	6.7
Civil Service Retirement	0.3	8.5
Military Retirement	0.2	6.3
Veterans Compensation & Pensions	0.1	3.5
Earned Income Tax Credit	0.0	9.5
Other	0.0	0.4
Food Stamp Offset	0.0	-1.2
Total Outlays	3.6	110.6
Debt Service	0.2	19.3
Total Change in Deficit	7.0	201.9

Source: CBO estimates of May 1996

Many private contracts are also indexed to changes in the CPI. This is less true than it was in the past, since many collective bargaining agreements now contain fewer COLAs. Still, many employment contracts, rent provisions, and private pension contributions are tied in some way to adjustments in the CPI. It is important to note that ***legislative action to adjust for any overestimation in the CPI would not affect these provisions. Only changes adopted by the Bureau of Labor Statistics (BLS) to eliminate the bias in estimating the CPI would affect private contracts.*** A legislative change would, however, affect tax provisions governing the maximum contributions employers can contribute to private pension plans.

Findings of the Boskin Commission

In a dynamic economy prices are always moving, both up and down. Private individuals, firms, and government officials must constantly separate changes in relative prices, which signal increased availability or scarcity of individual products, from changes that affect all prices equally. If all prices and wages rose together by an equal amount, no one would be better or worse off. But amid the constant price changes that occur in a dynamic market it is often difficult to separate those that reflect a general price increase from those that signal changes in the real value of a specific good. If the price of steel rises by 2 percent tomorrow, how much of this increase should manufacturers pay attention to when deciding about the mix of materials in their products? The answer is not always apparent.

Theoretically, a uniform increase in the general level of all prices would lead to an equal rise in the overall level of wages and incomes if all prices and incomes were perfectly fluid. In many cases, however, incomes cannot respond quickly to inflation and it takes time to modify statutes which determine benefits and taxes. In the case of incomes, inflation will reduce the standard of living of people on fixed incomes below what it would be without inflation. Many governments have attempted to insulate part of the population from the effects of

[4] Boskin Commission Report, p. 5.

inflation by indexing provisions of the law to increases in the cost of living. The purpose of indexing is to keep living standards at a constant level and leave individuals no better or worse off than they were before inflation. Although very few private pension plans adjust benefits for inflation, most government retirement payments do.

Although it does not explicitly try to measure changes in the cost of living, the Consumer Price Index is widely used as a proxy for inflation. But if the CPI consistently overstates changes in the cost of living in a uniform way, the central purpose of indexing is jeopardized and the beneficiaries of indexing may be receiving more than lawmakers intended.

The Boskin Commission found that the CPI consistently overestimates changes in the cost of living. Although there is a large measure of uncertainty about the exact amount of overestimation, the Commission settled on a range of 0.8 to 1.6 percentage points a year. It listed the most likely single point estimate as being 1.1 percentage points.[5]

As in its interim report, the Commission listed five major sources of bias. In the final report, it attached estimates to only four of these, as two were combined. There is wide agreement that all of these sources lead the CPI to overestimate increases in the cost of living. Disagreement tends to center around the magnitude of the bias, the extent to which alternative measures would correct the problem, and possible sources of underestimation that could reverse some or all of the problem.

Substitution bias (also called higher level substitution bias).—The main problem with the Consumer Price Index is that it does not try to measure changes in the cost of living. Rather, it measures changes in the prices of a fixed basket of goods representing the purchases of a typical individual. This leads directly to the possibility of substitution bias. Price increases in some goods should cause consumers to buy less of those goods and more of other goods. But this does not mean that they are necessarily worse off than before. For example, assume that an individual has an equal preference for eating beef and chicken. Increases in the price of beef should lead him to purchase more chicken. But if he enjoys chicken as much as he enjoys beef, his standard of living has not changed. The CPI, however, would reflect the increase in the price of beef, leading to the inference that the cost of living has risen.

Obtaining an accurate measure of consumer welfare is impossible, since it is a subjective feeling. Alternative indexes can be constructed which under certain assumptions correct for much of this bias contained in the CPI. The Commission estimated that adopting these measures would reduce the rate of increase in the CPI by approximately 0.15 percentage points per year.

Formula Bias (also called lower level substitution bias).—Today's economy offers consumers choices between millions of goods and services at millions of prices. Of course, the BLS cannot measure all of these goods and prices. It must collect a sample of data and then aggregate the data into an overall index. The Boskin Commission concluded that the way in which the BLS does this introduces a separate source of upward formula bias into the CPI. One example is the use of arithmetic means rather than geometric means. Say the price of apples rises from $1 to $2. The price has risen 100 percent. Now assume that the price returns to its original level. Ideally the index should reflect the fact that prices have remained constant from period 1 to period 3. But prices only fall by 50 percent during the second period. Taking the arithmetic mean of the two price changes leads to the conclusion that prices have risen by 50 percent over the time period when in fact the price has returned to its original level. Using a geometric mean[6] would reflect the fact that there has been no change. This particular source of bias is likely to be more important in a low inflation, competitive environment where price decreases are increasingly common.

Recent changes in the way BLS calculates the index have reduced this bias by about 0.24 percentage points. The final Boskin report estimates the remaining bias at 0.25 percentage points.

New product bias.—The CPI only measures the prices of goods in a historical market basket. Price changes involving goods outside the basket do not affect its estimate of inflation. Current statistics are based on an average basket of goods purchased in 1982-1984. The BLS updates this basket only once every 10 years. The 1998 CPI estimates will begin using an updated basket based on consumer purchases between 1993-1995. Yet the economy is always adding new products to the market and removing old ones from it. And consumers change their shopping patterns much more often than once every decade. As a result, the CPI's market basket does not always reflect actual purchases such as the

[5] This is slightly lower than the figure listed in the Commission's interim report. In September 1995 the Commission made a preliminary estimate that the overall bias was 1.5 percentage points. Since then the BLS has made changes in the estimation methodology that eliminate an estimated bias of 0.24 percentage points. The estimates of specific components of bias also differ from those contained in the interim report. The Commission does not state what factors caused it to change its final estimate.

[6] The geometric mean is the square root of the product of the two price ratios and produces the number that, when multiplied by the original price, produces the new price, in this case 1, ($\sqrt{(2/1) \bullet (1/2)} = 1$).

growing market for home computers. At a time when many leading companies press to earn a large percentage of their income from products introduced in the last five years, this lag in integrating new products into the CPI makes the market basket less and less relevant over time.

This lag is important because in the typical product cycle the price of a good decreases dramatically and its market share increases rapidly shortly after it is first introduced. These rapid price declines, such as happened with computers and cellular phones, will not be reflected in the CPI since the new product is not yet represented in the market basket of items being priced. In the final Boskin report this source of bias was combined with quality bias discussed below and estimated at 0.6 percentage points.

Quality bias.—Both new and old products often show rapid quality improvement. The fact that this year's model costs more than last year's may not be due solely to inflation. Part or all of the price increase may reflect an increase in the quality of the product. The price of a top-end home computer has remained relatively constant over the past five years. But the capability that comes with the computer has increased dramatically in terms of speed, memory, software, and add-ons included in the purchase. Thus, the real cost of computing power has declined rapidly. An index that does not reflect these quality changes would overestimate the cost of purchasing this power. Although the BLS tries to adjust for both new goods and increases in quality, in its interim report the Commission estimated that the combined effect of these sources of error on the CPI is 0.6 percentage points.

New outlet bias.—Over the past decade, price competition has become more intense. Many higher priced retail outlets have lost market share and even gone out of business. At the same time, outlet stores such as Wal-Mart, Office Depot, and Best Buy, which are characterized by high volumes and low prices, have gained market share. The BLS assumes that the lower prices these stores offer are fully explained by lower quality and reduced service and convenience. But their growing market share may indicate that they are offering real price reductions. If so, this reduction in the cost of living as consumers use outlet stores to find bargains is not reflected in the CPI. In its final report, the Commission estimated that this omission biased the CPI upward by 0.1 percentage points.

To correct these sources of bias, the Commission made several recommendations to the BLS, many of them quite technical. If the BLS adopted all of these changes, the Commission estimated that these would correct much, but not all, of the bias. The remaining bias is more difficult to eliminate since it is caused by inherent flaws in estimating the cost of living. The Commission therefore recommended that:

> Congress and the Administration . . . decide whether they wish to continue the widespread substantial over indexing of various federal spending programs and features of the tax code. If the purpose of indexing is accurately and fully to insulate the groups receiving transfer payments and paying taxes, no more and no less, they should pass legislation adjusting indexing provisions accordingly.[7]

Three Ways in Which the Boskin Report Could Be Acted Upon

There are three ways in which the report of the Boskin Commission could lead to action. The first depends on actions of the BLS. BLS officials greeted the report with a lukewarm reception. The Commissioner of the BLS, Katharine Abraham, had previously testified that the likely bias was only 0.5 percentage points, and the BLS has since acted to eliminate roughly half of this estimated bias. After the Boskin report was issued, Commissioner Abraham stated that no significant remedies could take place before 1999. Meanwhile, the BLS continues to study changes in the CPI and already plans to introduce new methods over the next several years which it estimates will lower the bias by roughly 0.6 percentage points. Some of these changes will be introduced on an experimental basis only. It is doubtful that the BLS will adopt all of the changes recommended in the Commission report.

A second possibility is that the Congress or the President could mandate the BLS to adopt the recommended changes. This would set a dangerous precedent. Government agencies, including the BLS, collect a wide variety of economic statistics. Both the private and public sectors rely on these statistics as indicators of what is happening to the economy. While the statistics are never perfect, it is important that users have confidence that political pressure has not affected the accuracy, type, or timing of the statistics released. While both branches of government should support the BLS in its effort to develop more reliable statistics, neither should threaten the political independence that statistical agencies have traditionally enjoyed.

Only changes adopted by the BLS in estimating the ***official*** CPI, whether voluntarily or by order of Congress or the Administration, would affect private contracts indexed to it. Although these contracts

[7] Boskin Commission Report, p. vi.

are less pervasive than they once were, they are still frequently used. The Bureau of National Affairs (BNA) reports that BLS data show that COLA provisions affect only 22 percent of all workers covered by major union contracts, down from 40 percent in the late 1980s and a BNA survey showed that 77 percent of respondent employers believed that adjustments to the CPI would have no impact on bargaining.[8]

The last and most probable response to the Boskin Commission recommendations is for the Congress and the Administration to agree on legislative language that would change the standard index used in benefit calculations and tax provisions from the CPI to the CPI minus a specific number of percentage points. The legislation would have to identify all of the instances where the CPI was used as an index and would almost certainly have to treat equally each provision. There would be little justification for adjusting the index of benefit programs but not of tax provisions. Language that reduced the CPI by 0.5 percentage points was part of the alternative budget offered by conservative Democrats in fall 1995 and could be included in any budget compromise between the Administration and the Congress.

Although adjusting the CPI is warranted on its merits, the large budgetary impact makes it logical that the adjustment would be part of a final agreement to balance the federal budget. Republicans, having initiated the report, have expressed their support of the general idea but have made it clear that they will not act without Democratic support. This marks the second time (the release of the interim report and the 1995 budget negotiations being the first) in which the index adjustment has been laid at the Administration's door with an offer of support if it is picked up. The first time, many observers predicted that there would be a final budget deal between the two parties and that a CPI adjustment would be part of it. The Administration, however, decided not to engage the Republicans in serious budget negotiations. At the time, certain congressional Democrats, including Minority Leader Richard Gephardt (MO) indicated that they would actively oppose any attempt to change the CPI legislatively.

Whether the Administration will make a more concerted effort this time may depend largely on the importance the public attaches to balancing the budget. If balancing the budget no longer draws the amount of public support it once did, the Administration is unlikely to propose the politically difficult spending reductions needed to achieve this goal. A number of politically powerful groups traditionally affiliated with the Democratic Party, including the American Association of Retired Persons and the AFL-CIO, have already criticized the findings of the Boskin Commission. There is little reason for the White House to risk upsetting these groups unless it views deficit reduction as a high priority. And it is unlikely to have this view if it thinks that the issue has largely passed from the public's attention.

Impact of CPI on Economic Data

Two additional points of more general concern need to be made. Although the Boskin Commission did very little original research to reach its findings, its conclusions largely reflect the body of research that has been done on this subject, much of it by the BLS itself. This fact is reflected in some of the criticisms the Commission's report has received. Rather than attack it on its findings, those who are heavily critical of the report often argue not that the CPI does not overstate the cost of living, but that reductions in the CPI would be politically harmful for other reasons.

The most pressing of these arguments is that, adjustments for inflation aside, some recipients need more assistance from the government, not less. An across-the-board adjustment in the CPI would affect all recipients of government programs, including those with very low incomes. The Boskin Commission did not address this issue. The Congress having set the minimum standard of living that it wanted to provide to beneficiaries, the Commission attempted to advise it on how to protect these beneficiaries from general increases in the cost of living. It did not ask whether Congress had set the minimum standard of living high enough. The real argument of many critics is that this standard is too low and should be raised, regardless of the level of inflation. This is a political question. A possible compromise would be to exempt those at the lower end of the income ladder from any adjustment.

A second argument is that, if the CPI adjustment has been overstated in the past, then the economy has been doing much better than previously believed. In this case the average real income of workers has been rising faster than previously thought. As a result, it is argued that redistribution of income to older Americans through Social Security, Medicare, and other retirement programs will no longer be such a serious social problem. This latter argument is deeply flawed. Redistribution cannot be justified only by the relative wealth of the workers being taxed. It must look primarily at the needs of the nonworking recipients and the extent to which they should be subsidized by the working population. Since the vast majority of retired

[8] BNA, *Daily Report for Executives, Special Supplement,* December 5, 1996, p. S-8.

individuals already get back far more in government benefits than they paid for in payroll taxes, and since younger generations will almost certainly pay higher taxes and receive fewer benefits over their lifetimes, there is a strong justification for greater income testing of benefits for the nonworking population.

This latter argument does raise one interesting point. The overstatement of inflation is just one example of the consequences of poor economic data. Economic statistics will never be perfect. Lately, however, experts have voiced increased concern about the quality of data on the U.S. economy. Two of the recommendations made by the Boskin Commission attempted to address this more general issue. The Commission recommended legislation that would make it easier for the government's major data agencies in the Departments of Commerce and Labor to share information to improve the accuracy and timeliness of economic statistics. It also recommended the expenditure of additional resources to increase the government's ability to collect data. Although it was widely criticized, the Republican Congress' plan to eliminate the Department of Commerce would have partly addressed this problem by merging the nation's major data collection agencies into one office similar to Statistics Canada.[9]

The consequences of overstatement can be glimpsed by an examination of the broader implication of the Boskin Commission findings. Even in a zero-inflation environment, some prices will rise to reflect greater scarcity and increased quality. Because prices are the main vehicle for communicating economic information, a failure to separate real from nominal price increases can drastically skew our view of economic performance, especially over long periods of time. Two of today's most pressing macroeconomic issues are the decline in productivity increases and the consequent stagnation of wages. But if the CPI has consistently been overstated by the magnitude in the Boskin report, then the economy has been doing better than previously believed. Specifically, instead of rising by only 6.5 percent since 1979, the real median income may have risen by over 29 percent.[10] The anxiety that many people feel about the difficulty of maintaining a decent standard of living may be due more to increases in the number and quality of goods that they regard as necessary rather than in a failure of incomes to keep up with the cost of affording a constant standard of living.

Conclusion

It is generally acknowledged that the CPI overstates the effect of inflation and the Manufacturers Alliance believes the recommendations of the Boskin Commission should be acted upon. The Alliance urges the Administration and the Congress to agree on legislation that changes the formula for all cost-of-living adjustments to the CPI minus 1.1 percentage points. The most logical vehicle to do this would be a comprehensive budget agreement that balances the federal budget by 2002. Both the Administration and congressional leaders have promised to work toward this goal and the Alliance has long advocated that this be achieved. But even if the two branches of government cannot agree on the other spending cuts needed to balance the budget, an adjustment to the COLAs should be passed this year on its own merits.

The precise size of the adjustment would have to be revised whenever the BLS changed its methodology to eliminate sources of bias. The Boskin Commission has suggested that the Congress establish a permanent rotating independent commission of experts to review the progress in estimating the cost of living every three years or so and advise it on the appropriate interpretation of the then-current statistics. This commission could also estimate the effect of any changes to the CPI methodology. The Congress could then use this estimate to change the size of the legislative adjustment to the CPI.

If the Congress is concerned that such an adjustment to the CPI would unfairly punish people with low incomes, it may want to raise the level of benefits they receive. As stated above, this issue, while important, is not a reason for continuing to rely on statistics that are known to be biased.

[9] The Manufacturers Alliance analyzed the proposal to restructure the Department of Commerce and the need to improve the collection of statistics in *Reengineering the Department of Commerce*, PR-137, September 20, 1995.

[10] Robert J. Samuelson, "Starbucks and the CPI," *The Washington Post*, December 11, 1996, p. A25.

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