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## ***ADJUSTING THE CONSUMER PRICE INDEX***

### INTRODUCTION

Inflation is almost certainly the most serious problem now confronting the economy. The most common measure of inflation is the Consumer Price Index (CPI). It is a measure, however, which seems seriously flawed and may be overstating the rise in the cost of living during periods of rising prices. The CPI measures the change in price of a uniform market basket of goods and services over time. Unfortunately, it is often confused with, and used as, a cost of living index which attempts to measure a constant standard of living.<sup>1</sup> Although the CPI is a good indicator of pure price changes, it is not appropriate for many of its applications today. Criticisms of the index include its treatment of homeownership; its use of outdated buying patterns; failure to account for substitution in the market basket when consumers are faced with higher prices; and its limited applicability to specific subgroups.

With more than one-half of federal expenditures adjusted for inflation either directly or indirectly by the CPI, and a soon to be indexed tax code, it becomes especially important to have as accurate a measure of inflation as possible. Each one percentage rise in the CPI now triggers an increase in federal spending of about \$2 billion.<sup>2</sup> Thus, if biases in the index exaggerate the

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<sup>1</sup> There are actually two CPIs frequently used. The CPI-W reflects the price changes of urban wage earners, who comprise about 40 percent of the population. The CPI-U is a somewhat broader index that covers all urban households, or about 80 percent of the population. According to the Council of Economic Advisers and the Office of Management and Budget, the two indexes have never diverged by more than 0.5 index points. In November 1980, the CPI-U was 256.2 and the CPI-W was 256.4.

<sup>2</sup> Congressional Budget Office, Indexing with the Consumer Price Index: Problems and Alternatives, June 1981, p. 2.

rate of inflation, beneficiaries of indexed programs will be overcompensated for increases in the cost of living. This places an unfair burden on taxpayers who finance these programs and adds to the difficulty of balancing the budget.

By one estimate, in fact, the federal budget would be \$11 billion smaller today had the CPI been revised in 1974. Thus, if fiscal responsibility is to be achieved, the issue of indexing by the CPI must be addressed.<sup>3</sup>

## USES AND IMPLICATIONS OF THE CPI

The CPI has three principal functions. It is used: 1) to analyze and develop economic policy; 2) to deflate other economic data and values; and 3) to serve as an escalator for wage payments, contracts, and government expenditures.

### The Formation of Economic Policy

As an index of price change, the CPI attempts to measure the degree to which government economic policy has been successful in maintaining price stability, while also serving as a guidepost for future policy initiatives. Moreover, as the most commonly used indicator of inflation, it helps form expectations about inflation, and hence plays an essential role in the long-term decision-making process of both businessmen and individuals. Any conceptual and statistical inaccuracies in the CPI may result in misleading economic signals that could prompt individuals in both the public and private sector to adopt inappropriate policies.

### A Deflator

A second important use of the CPI is to deflate other economic data. Economic series can be expressed in real dollars, i.e., in

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<sup>3</sup> Even in the absence of any inaccuracies in the CPI, the whole concept of automatic indexation should be re-evaluated, because in some cases it may result in gross inequities. The indexation of congressional pensions, for example, benefited former Speaker of the House John W. McCormack by raising his initial annual pension of \$50,000 (or 80 percent of his \$62,000 salary) to \$92,000 a year at the time of his death in 1980. In contrast, the current Speaker of the House, Thomas P. (Tip) O'Neill, Jr., receives only \$79,125 a year. In addition, a four-star general who retired ten years ago would now receive \$64,000 a year in retirement benefits, while an active four-star general would be paid only \$54,000 annually. Though dramatic, these cases illustrate the problems with automatic indexing which may very well create disincentives for experienced federal or military personnel to remain actively involved. The examples cited above are from: Clifford M. Hardin and Kenneth W. Chilton, Budget Control and Indexed Entitlements: Are They Compatible? (St. Louis, Missouri: Center for Study of American Business, 1981), pp. 13, 15-16.

dollars of constant purchasing power, by dividing the CPI into the current value of some other economic variable. This permits comparisons over time in real terms without the obfuscating effects of inflation. The CPI is currently employed to deflate such series as hourly and weekly earnings, retail sales, and some personal consumption expenditures used to calculate the gross national product. Because of its effect on these other indicators, accuracy of the CPI is necessary.

### An Escalator

Lastly, a major use of the CPI today is as an escalator to protect incomes against a decline in purchasing power due to inflation. In fact, the CPI was created during World War I to help adjust the wage payments of workers in shipbuilding when the cost of living had increased "generally." The Bureau of Labor Statistics gathered survey information on workers' family expenditures for about 145 commodities and services in thirty-two cities. The index has since been expanded and refined to a point where it includes approximately 400 commodities and services in eighty-five areas. The CPI now is frequently used in collective bargaining agreements as an index for automatic cost-of-living adjustments (known as COLAs). The first such COLA clause was negotiated in 1948 between the United Auto Workers and the General Motors Corporation. When rapid inflation began eroding the buying power of workers in the mid-1960s, these clauses became more and more popular. As of January 1980, escalator clauses covered approximately 58 percent of all workers in major bargaining units.<sup>4</sup> Indexation is also widely used to adjust the wage payments of government workers at all levels.

An increasing proportion of federal expenditures in recent years has become explicitly indexed by the CPI to protect recipients from inflation. Indexing federal programs is not something new. Military retirement benefits were adjusted as long ago as 1870 to keep pace with the growth of active-duty pay through a process known as "recomputation." It was not until 1962, however, that guidelines actually were prescribed for adjusting federal programs for inflation. In that year, legislation was enacted to index civil service retirement benefits to the CPI; this was extended to military retirement benefits the following year. In the 1970s, federal programs were indexed on a large scale. Social Security, the largest of the entitlement programs, adopted indexing in 1972 (to take effect in 1975) to adjust benefits for increases in the price level. Railroad Retirement, Supplemental Security Income, and Veterans Pensions soon followed Social Security's lead. The growth of the relative importance of federally-indexed programs is illustrated by Table 1. From

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<sup>4</sup> Phillip Cagan and Geoffrey H. Moore, The Consumer Price Index: Issues and Alternatives (Washington, D.C.: American Enterprise Institute, 1981), p. 12.

1962 through 1974, indexed programs never exceeded 6 percent of total outlays. Beginning in 1975, however, indexation assumed a growing role, with such programs comprising a third of federal outlays. When other "uncontrollables" are included, more than half of the federal budget in effect is on "automatic pilot."<sup>5</sup> This simply adds to the uncontrollability of the budget.

TABLE 1

Outlays for Major Programs Currently Indexed  
(Billions of Dollars)

<u>Fiscal Year</u>	<u>Total Indexed Programs</u>	<u>Indexed Programs as % of Total Outlays</u>
1962	\$ 2.0	1.9
1963	2.2	2.0
1964	2.5	2.1
1965	2.9	2.4
1966	3.3	2.4
1967	3.9	2.5
1968	4.8	2.7
1969	4.2	2.3
1970	5.5	2.8
1971	9.1	4.3
1972	11.3	4.9
1973	13.5	5.5
1974	16.1	6.0
1975	91.6	28.1
1976	105.1	28.7
1977	119.5	29.7
1978	130.5	29.0
1979	150.9	30.5

NOTE: The table covers the following programs: Civilian Retirement and Disability, Military Retirement, Disabled Coal Miners, Food and Nutrition Assistance, Social Security, Railroad Retirement, Supplemental Security Income, and Veterans Pensions. Outlays for these programs are not included prior to their official indexation.

SOURCE: Council of Economic Advisers and Office of Management and Budget, Report on Indexing Federal Programs, January 1981, p. 13.

One original justification for indexation was that it would remove much of the uncertainty for those dependent on federal

<sup>5</sup> Examples of uncontrollable items are interest on the national debt, obligations entered into in the past but payable in the future, and open-ended entitlement programs.

programs by replacing what had been a sporadic practice of ad hoc increases. Indexing, it was argued, would assure benefit levels sufficient to maintain a constant standard of living, while sparing Congress the burden of making repeated, time consuming adjustments. In fact, proponents of indexing maintained that it would be an effective way of "de-politicizing" the issue of benefit increases. Political pressures had often led Congress to approve increases even greater than those that would have been provided by indexation. Between 1940 and 1974, when Social Security benefits were still adjusted on an irregular basis, the growth in benefits actually outpaced the CPI by 40 percent.<sup>6</sup> Thus, indexing was also seen as a means of constraining costs in politically sensitive areas.

Indexing is being extended to a new area by the Economic Recovery Tax Act of 1981. By it the tax system is indexed, as of 1985, by automatically adjusting individual tax brackets, the personal exemption, and the zero bracket rate to reflect inflation. The objective is to prevent further real tax increases that have been resulting from inflation-induced bracket creep.

This new legislation makes it especially important to have as accurate a measure of inflation as possible. If the CPI does have an upward bias, the beneficiaries of federally-indexed programs are overcompensated for increases in the cost-of-living and taxpayers will receive real tax cuts once the tax code is explicitly indexed. By raising expenditures and lowering revenues, automatic indexation raises serious questions concerning sound fiscal policy management. Indeed, the very indexing which is supposed to measure inflation may actually contribute to it. For example, a larger deficit may exacerbate inflationary pressures if increased government borrowing crowds out more productive investment in the private sector. Inflation would also be fueled if the Fed is forced to monetize all or part of the additional deficit. Similarly, cost of living adjustments in the private sector based on the CPI may artificially inflate labor costs and lead to a poor allocation of resources, thereby reducing the output of goods and services relative to the money supply. These actions drive up the CPI and contribute still further to the inflationary spiral.

## LIMITATIONS OF THE CPI IN ITS PRINCIPAL USES

### A Fixed Market Basket

The CPI measures price changes by comparing current prices to base period prices, using base period consumption patterns for weighting purposes. In other words, given a fixed market basket

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<sup>6</sup> Council of Economic Advisers and Office of Management and Budget, Report on Indexing Federal Programs, January 1981, p. 6.

of goods and services, it measures the relative costs of buying the same bundle of goods and services in subsequent time periods. The market basket currently used is based on a 1972-73 survey. As a fixed-weight index, the CPI tends to exaggerate the true cost of living because it fails to account for substitution as consumer preferences change. As prices of various products change at different rates, consumers generally shift purchases from products that have become relatively more expensive to those that have become relatively cheaper. Thus, during inflationary periods, the CPI usually overstates the rate of inflation by placing inordinate weight on items that have risen most rapidly in price. For example, in response to the escalating world oil prices, the proportion of gasoline in total personal consumption fell from 3.5 percent in 1972 to 2.8 percent in 1980.<sup>7</sup> Despite the decline in gasoline consumption, the CPI continues to use the out-dated base period weight, which clearly biases the index upwards.

Moreover, because the CPI does not take into account substitution, it is an inadequate measure of the cost needed to maintain a constant standard of living. A true cost-of-living index would attempt to compare the cost to the consumer of reaching a certain level of "satisfaction" or "utility," though such qualities admittedly would be hard to measure. By adjusting to relative price changes, consumers can attain a given level of utility at less cost than they could if they were to buy the original market basket. Consider the following example:

[I]magine a consumer who initially spends \$2 on 1 pound of beef and 1 pound of pork, both of which cost \$1 dollar [sic] per pound. If the price of pork then doubles but the price of beef remains the same the original basket of purchases would cost \$3.00 rather than \$2.00. A fixed-weight index like the CPI would register a 50% increase in the "cost of living." However, when this person consumes one pound of beef and one pound of pork, additional amounts of pork and beef are worth about the same to him. (We know this because in the original period he paid the same amount for the two meats.) Thus, although the consumer could spend his \$3.00 on the original market basket, he could make himself even better off by purchasing, for example,  $\frac{1}{4}$  pound less of pork and  $\frac{1}{2}$  pound more beef. That would mean that \$3.00 is a higher expenditure than would be necessary to achieve his original level of satisfaction.<sup>8</sup>

The Bureau of Labor Statistics revises the CPI every 10 to 12 years. During periods of relative price stability, this is

<sup>7</sup> Congressional Budget Office, op. cit., p. 46.

<sup>8</sup> Council of Economic Advisers and Office of Management and Budget, op. cit., pp. 28-29.

adequate, but when prices begin escalating rapidly, the index can easily become unrepresentative of actual consumption patterns.

The CPI could be made more precise by updating the consumption patterns more frequently, thereby acquiring some of the characteristics of a chain-index. A chain-index measures pure price changes between adjacent periods using the earlier period's consumption pattern for weighting purposes. Even though this would complicate comparisons of price changes between non-adjacent time periods, it would make the CPI a more representative cost of living index because it would consider changes in consumption patterns resulting from changes in tastes, relative prices, or the introduction of new products. Yearly updates might prove to be a valuable improvement in the usefulness of the index.

### The Homeownership Component

Perhaps the most serious shortcoming of the CPI is its treatment of homeownership costs. The homeownership component accounts for nearly one-quarter of the index and is widely believed to overstate significantly the importance of housing in the CPI. As a rough approximation of the magnitude of this overweighting, the CPI accords housing nearly five times as much importance as it does the residential rental component, even though only twice as many dwellings are owner-occupied. Even in the national income and product accounts, which measure the cost of current production for consumption, homeownership is weighted only two-and-a-half times as heavily as rental units, also well below the factor of five in the CPI. The large weight attributed to housing often exaggerates the actual increase in the cost of living.

Five separate elements are considered in measuring the cost of housing: the home purchase price, contracted mortgage interest cost, property taxes, property insurance, and maintenance costs. The latter three do not pose problems because they represent expenses that are incurred on a regular basis. Distortions arise, however, from the use of current purchase and current financing costs.

Durable goods such as housing, cars, and appliances are purchased in one period but generally provide services over a number of periods. Treating the purchase of a house as simply another commodity gives it a much greater weight than is appropriate. A true cost-of-living index should indicate the cost of consumption in each time period, i.e., the price one would pay to "consume" the shelter offered by that home. The price of a house, however, can also be viewed as an investment, one that could yield a homeowner a capital gain in later years when the house is resold. Economist Robert Gordon points out:

Far from being a source of higher prices, squeezed budgets, and falling living standards, most Americans have found home ownership to be a source of wealth creation and one of the few spots in the family budget

that is largely insulated from inflation....Increases in home purchase prices for existing home owners are a source of higher wealth, and "leverage" (the small initial share of their down-payment equity) makes the value of their equity increase by a multiple of the percentage annual increase in house prices. Because income is properly defined as consumption plus the change in one's wealth, higher home prices by this definition also raise individual incomes.<sup>9</sup>

In other words, the price paid for a house represents both a consumption and an investment function, yet only the first belongs in the CPI. Changes in the investment value of a house should be excluded from the index as changes in the prices of stocks and bonds already are. A properly constructed index thus would contain only the cost of "shelter services" provided by the house.

The large weight accorded to mortgage interest costs presents another difficulty. The weight is determined by including the total interest that borrowers contract to pay over the first half of the life of the mortgage (because mortgage contracts on average remain in effect for only half of the originally scheduled duration). Present expenditures on mortgage interest depend on both the purchase price of the home as well as the mortgage rate. By including the price of a home, this, again, ignores the distinction between the consumption and investment aspects of housing. In addition, the current treatment of mortgage payments disregards the fact that most homeowners are not affected by rising home prices and interest rates because their payments have been determined in the past when the size of this component was much smaller. One alternative to this approach is suggested by Cagan and Moore:

[T]he weight of the mortgage interest could be based on the interest actually paid in the survey period of all homeowners, in which case the weight would reflect the distribution of mortgages by maturity in the survey sample. The weight of the mortgage interest under this alternative would be lower than under the present method, because in recent decades mortgage rates and house prices have been rising, and on the average relatively more has been spent on new mortgages than on old ones.

In addition, the interest rate used in the index could be an average of rates currently in effect for all outstanding mortgages. These rates were largely determined at previous dates but are still being paid. This treatment would correspond to the way rents and some other contract prices are treated now. The mortgage

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<sup>9</sup> Robert J. Gordon, "The Consumer Price Index: Measuring Inflation and Causing It," The Public Interest 63 (Spring 1981), pp. 121-122.



component would then reflect a weighted average of actual interest payments being made on outstanding mortgages, rather than the current rate on new mortgages.<sup>10</sup>

This approach would not only improve the accuracy of the CPI, but would also largely reduce the inherent instability of the housing component. Table 2 compares annual changes in mortgage interest costs using the current rate and a fifteen-year moving average, along with the resulting impact on the CPI. As is evident from the table, fluctuations in mortgage interest costs as well as the CPI could have been markedly reduced had the fifteen-year moving average been employed during the eleven-year period from 1968 to 1979. Moreover, it would resolve any problems that might arise if variable rate mortgages become popular.

Although the change discussed above would be an improvement over the current treatment of the housing component, still more can be done. The Bureau of Labor Statistics has developed several experimental indexes that attempt to estimate the cost of "consuming" a home. The most commonly discussed alternative, the CPI X-1, does this by allowing market rental rates for homes act as a proxy for the value of shelter services they provide.

TABLE 2

Alternative Mortgage Interest Costs in the CPI, 1968-1979  
(percentage change per year)

December to December	Mortgage Interest Costs		Official version	Total CPI-U	
	Current rate	Fifteen-year average		Excluding mortgage interest	With fifteen- year average mortgage interest
1968	16.3	5.1	4.7	4.3	4.3
1969	19.2	8.9	6.1	5.7	5.8
1970	15.9	11.4	5.5	5.1	5.2
1971	-7.1	6.9	3.4	3.8	4.0
1972	2.1	4.8	3.4	3.4	3.4
1973	19.1	5.6	8.8	8.5	8.4
1974	21.5	10.2	12.2	11.8	11.8
1975	7.1	11.7	7.0	7.0	7.2
1976	-0.7	9.3	4.8	5.1	5.2
1977	10.8	7.8	6.8	6.6	6.6
1978	22.0	10.3	9.0	8.2	8.3
1979	34.7	15.7	13.3	11.6	11.7
Average, 1968-1979	12.9	8.9	9.0	6.7	6.8

SOURCE: Phillip Cagan and Geoffrey H. Moore, The Consumer Price Index: Issues and Alternatives (Washington, D.C.: American Enterprise Institute, 1981), p. 39.

<sup>10</sup> Cagan and Moore, op. cit., pp. 37-38.

### Quality Changes

One of the more cumbersome conceptual difficulties in calculating the CPI is estimating the dollar value of quality changes. For example, with each model change of an automobile a distinction must be made between the overall price increase and that arising from quality improvements. The Bureau of Labor Statistics attempts to separate the effects of a price rise from that of a quality change, but the degree to which it succeeds is questionable, given the difficulty of measuring the incremental value consumers place on quality improvements. For example, cleaner air and water and improved working conditions have been achieved on a large scale through government regulations. These benefits, however, are attained only by devoting greater resources to the production of goods, thereby driving up prices and, consequently, the CPI. But the CPI ignores these ancillary changes. Thus, it appears that the same standard of living has become more expensive while, in fact, part of the higher costs actually may be buying what many regard as an improved overall quality of life.

### The Treatment of Taxes and Government Services

There are also questions about whether the CPI properly treats taxes and government services. Excise taxes are included as part of the price of goods and services and are therefore incorporated in the CPI, whereas individual income taxes are excluded despite the fact that both are levied to finance government activities. The unequal treatment of taxes can lead to incongruities. An increase in excise taxes that is offset by an equal reduction in income taxes would inflate the CPI even if real disposable income remains the same.<sup>11</sup> If, for example, the government wished to pursue a policy of increased energy conservation, it may decide to raise the sales tax on gasoline to discourage its consumption and return the revenues to the public through reduced income taxes. This would accomplish its goal of conservation by altering relative prices (making gasoline relatively more expensive) without changing real incomes. Yet the CPI would be blind to this trade-off and would register an increase in the cost-of-living. In turn, this would trigger increased outlays of federal expenditures on the many indexed programs.

In addition, the government uses its power of taxation to supply goods and services. These goods and services clearly provide benefits that affect the standard of living and, consequently, should be included in a comprehensive cost-of-living index. By raising the CPI, an increase in excise taxes may give the indication that more money is needed to preserve a given standard of living. This may not be true, as it would depend on the value individuals place on the resulting change in the distribution of resources between the public and private sectors.

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<sup>11</sup> This would probably alter the distribution of income.

### Equity Considerations

Automatic indexation has been opposed for reasons of equity as well as efficiency. When there is a general decline in real, national incomes, full indexation allows those members of society whose incomes are adjusted for inflation to preserve a constant standard of living at the expense of those whose wages are not escalated. These disparities may arise for a variety of reasons, e.g., when there is a rise in the price of imported goods relative to domestically produced goods or when domestic labor productivity declines. Moreover, complete protection may conflict with public policy objectives, e.g., conserving gasoline to reduce dependence on foreign oil sources. These concerns have led to proposals to exclude imports from the CPI or to limit benefit increases to the CPI or a wage index (whatever figure is lower). The final determination, of course, is contingent upon the desirability of any resulting transfers between those financing and those receiving adjustments for inflation.

### Specialized Indexes

A common criticism of the CPI is of its limited applicability to particular subgroups, such as the elderly and the poor. This alleged inadequacy has prompted calls for special indexes that would more accurately reflect the cost of living of certain demographic groups and/or those benefiting from indexed programs.

Since vast resources are now devoted to support the elderly, it is essential to determine the applicability of the CPI as an escalator for this group. The large weight accorded housing in the CPI tends to exaggerate the cost of living for older people because only a very small proportion of them are in the market seeking housing. Alvin Rabushka and Bruce Jacobs of the Hoover Institution calculate that 70 percent of the elderly live in their own homes and over 80 percent of these make no mortgage payments whatsoever.<sup>12</sup> Older people, on the other hand, consume a relatively greater proportion of medical services than others, the cost of which has in recent times been rising faster than the rate of inflation. On the surface, this factor would appear to lead to an underestimation of the rise of the cost of living for the elderly. But because of increased publicly financed medical coverage available to this group through programs such as Medicaid and Medicare, the medical component has generally been overstated.<sup>13</sup> In any case, it is clear that the consumption patterns for the elderly are not the same as for other age groups.

Similarly, the CPI may inaccurately gauge the buying patterns of the poor. This imprecision arises by including the expendi-

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<sup>12</sup> Alvin Rabushka and Bruce Jacobs, "Aging and Public Policy: Rethinking Issues and Programs," Hoover Institution Reprint Series, No. 33, p. 1.

<sup>13</sup> The CPI does not take into consideration an offset for medical expenses covered by insurance, but this is an average for everyone in the sample.

tures of high-income families with low-income families. Higher income groups receive greater weight because they spend more, including goods beyond the affordability of low-income households. As a result, this acts to overweigh luxury goods and underweigh necessities, and is therefore a poor tool in determining eligibility and benefit levels for the various income security programs.

A word of caution regarding the construction of specialized indexes is that there is no guarantee that these indexes will give results any different from a general index or that they will reduce the costs of indexing. In fact, a more representative index may actually be more costly if it turns out that the CPI had understated the rate of price increase for certain groups. Nevertheless, the tremendous importance of indexing based on the CPI requires a closer evaluation of specialized indexes.

## ALTERNATIVES TO THE CPI

### CPI X-1

A "rental equivalence" (CPI X-1) index now being developed by the Bureau of Labor Statistics attempts to circumvent some of the more serious problems connected with the housing component. This approach tries to distinguish between the consumption and investment aspects of housing by using market rents as a proxy for the shelter services of a similar owner-occupied home. In essence, it seeks to capture the cost a household incurs by "consuming" the housing services itself rather than renting to someone else. To be accurate, of course, this index must take into account differences in location, size, and quality. The CPI X-1's treatment of homeownership is the single most palliative change that could be desired because it reduces the excessive weight now accorded housing. This indeed, however, would still retain the remaining shortcomings of the CPI.

### PCE "Chain Index"

Many economists suggest replacing the CPI with the Personal Consumption Expenditure (PCE) "chain index" of the National Income and Product Accounts. This index would be preferable to the CPI for several reasons: 1) its coverage is somewhat broader for it includes all goods and services currently produced for consumption, approximately two-thirds of GNP; 2) it employs the rental equivalency approach used in computing the CPI X-1; and 3) it uses current consumption patterns rather than those determined in 1972-73. The principal drawback to the PCE chain index is its omission of used items, such as cars and appliances, that also comprise a part of a consumer's living cost.

According to estimates for the Congressional Budget Office (CBO), federal expenditures in 1981 would be lower by \$11 billion

had the PCE chain index replaced the CPI in 1974.<sup>14</sup> Changing a new index at this time, however, may not result in immediately reduced outlays. This paradox stems from the effect of interest rates on the CPI. Just as the index overstates inflation when interest rates are rising, it understates when they are declining. As a consequence, some economists argue, it may be useful to delay switching to an alternative index to allow the government to recoup past losses from overindexation. This objection could be overcome by instituting a one-time adjustment in benefit increases to make them more accurately reflect what benefits would have been had a more precise measure been used all along. CBO's calculations reveal that such a change would reduce 1981 increases from about 11.2 percent to about 3 percent.<sup>15</sup> Once this is accomplished, a more accurate index, such as the CPI X-1 or the PCE chain index, could be permanently installed.

#### Using the Lower of a Wage or Price Index

The index could also be changed, some maintain, to assure that everyone bears some of the burden of an economic slowdown or surging inflation. One way of doing this would be to limit cost of living adjustments to the lower of the CPI or a wage index. This could preclude recipients of indexed programs from gaining relative to active workers during periods when real wages are falling. Wages ordinarily rise by the rate of increase in prices plus a premium for productivity advances, though this was not the case on two occasions in the past decade (1974-75 and 1980). In these years, those receiving indexed benefits actually did better than active workers, whose wages or salaries were not automatically adjusted for inflation. Over time, however, a change in this method would reduce the real level of benefits, unless a "catch up" period were allowed for recipients to regain their original benefits in real terms. This could be achieved by delaying the switch back to a price index from a wage index until benefits attained their previous level in real dollars.

This proposal would reduce outlays for indexed programs only if wages continue to lag behind prices. Moreover, it would do nothing to correct any of the other deficiencies in the CPI.

#### Capping the CPI

Some experts suggest retaining the CPI as the official barometer of inflation but imposing a discretionary cap on benefit increases. This would treat indexed programs just like current federal pay adjustments. The advantage of this approach over automatic indexing is that it adds flexibility and permits the consideration of changing economic conditions. Unfortunately,

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<sup>14</sup> Congressional Budget Office, op. cit., p. 75.

<sup>15</sup> Ibid., p. 76.

such a cap may be arbitrary and subject to shifts in political winds, while also failing to correct for the flaws in the CPI.

### Comparisons of Alternative Indexes

Table 3 illustrates the difference had the various indexes been used over the past decade. Both the CPI X-1 and PCE chain index would have been more stable than the CPI and would have grown at a less rapid rate.

TABLE 3

#### Comparison of Percent Changes in Alternative Indexes

<u>Year</u>	<u>CPI-U</u>	<u>CPI X-1</u>	<u>PCE Chain</u>	<u>Average Hourly Earnings</u>
1971	3.5	3.7	3.8	6.9
1972	3.4	3.3	3.7	7.7
1973	8.3	8.0	7.6	6.6
1974	12.2	11.1	11.0	8.3
1975	7.4	6.8	6.4	6.2
1976	5.1	5.2	4.9	7.7
1977	6.7	6.3	6.3	7.7
1978	9.0	7.8	8.0	8.0
1979	12.7	10.6	9.9	7.8
1980	12.5	10.9	10.4	8.8
1970-80 <sup>1</sup>	116.6	103.0	99.8	109.6

NOTE: Percent changes, annual rates, fourth quarter to fourth quarter.

<sup>1</sup> Percent change over ten-year period, 1970:4 to 1980:4.

SOURCE: Congressional Budget Office, Indexing with the Consumer Price Index: Problems and Alternatives, June 1981, pp. 56 and 58.

The index measuring average hourly earnings appears to indicate that the worker lost ground to inflation in the 1970s. This is somewhat misleading because the index excludes other forms of compensation such as fringe benefits and employer contributions to various social insurance and private benefit plans, which have increased substantially over the last ten years.

### CONCLUSION

In a recent article in the Wall Street Journal, Lindley Clark, Jr. asserted: "The Consumer Price Index is a dandy index of inflation when there isn't much inflation to measure."<sup>16</sup>

<sup>16</sup> Lindley H. Clark, Jr., "The CPI Does Fine -- If There's No Inflation," Wall Street Journal, April 14, 1981, p. 31.

Although this may be too harsh an assessment, it does indicate that the various shortcomings of the CPI may make it inappropriate for many of its present applications. Recognizing that there is no perfect measure, policymakers may have to settle for either a version of the CPI or some alternative index. The final new form, of course, would be set by the intended specific purpose of the index.

Probably the most feasible solution to this problem is simply to improve the present index. The advantages would be twofold. First, although the CPI X-1 and the PCE chain index are better indicators of changes in the cost of living, they are not nearly as well known as the CPI. Thus, retaining the CPI in a modified form may be desirable if problems associated with a switch to a lesser known alternative are to be avoided. Second, most of the distortion in the CPI can be eliminated by employing a rental equivalence measure of homeownership and by updating consumer buying patterns more often.

Many of the suggestions to improve the CPI outlined in this paper have been around for at least twenty years, when they were made by a committee headed by former University of Chicago economist George Stigler. Since then, despite the wealth of evidence in support of changing the CPI, the Bureau of Labor Statistics has done surprisingly little to upgrade the index. According to Robert Gordon:

...[I]t is striking that the BLS spent \$50 million during 1972-77 to revise the CPI without curing any of its major defects....

It seems clear in retrospect that the BLS spent its revision money on the wrong things, improving the number of outlets covered or the number of consumers surveyed rather than investing money in more rent data on single-family homes or on performance data for newly introduced models and products.<sup>17</sup>

With billions of dollars in cost of living adjustments hinging upon each percentage point change in the CPI, it is imperative that its flaws either be corrected or a new index adopted for adjustment purposes.

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<sup>17</sup> Gordon, op. cit., p. 134.