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CRS Report for Congress

Adjusting Federal Benefits for Geographic Differences in the Cost of Living

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Summary

By indexing various benefits and transfer payments to the consumer price index (CPI), policymakers intended that the real value, or purchasing power, of those payments not be eroded by increases in the general level of prices. Although such indexing provisions may compensate for changing economic conditions over time, there is no allowance for substantial geographic differences in the cost of living. A separate CPI is published for each of a number of metropolitan areas, but those figures allow only a comparison of inflation *rates* experienced by residents of those areas. The CPI does not allow interarea cost of living comparisons. The federal government does not currently publish any statistics allowing comparison of differences in the overall cost of living in different areas of the country. The most widely used data to estimate geographic cost of living differences are the ACCRA indexes, published by the Council for Community and Economic Research. An examination of ACCRA data for the first quarter of 2007 reveals considerable variation in the cost of living across different areas of the country. The greatest portion of the variation from place to place in the cost of living was attributable to differences in the cost of housing. This report will not be updated.

By indexing various benefits and transfer payments to the consumer price index (CPI), policymakers intended that the real value, or purchasing power, of those payments not be eroded by increases in the general level of prices. Poverty thresholds are also updated annually based on changes in the CPI. But while such indexing provisions compensate for changing economic conditions over time, there is no allowance for substantial differences in the cost of living, at any given time, depending on geographic location. Simply put, some places are more expensive than others in which to live.

Some measure of the geographic variation in the cost of living might be useful for a number of reasons. It would make possible the adjustment of a variety of income support payments for local living costs. It would also make possible an adjustment to

existing measures of income to provide a clearer view of variations in living standards across the country.

The federal government produces several different measures of change in the cost of living. The CPI measures change in the prices paid for goods and services by households. There are a number of price indexes associated with the goods and services that make up gross domestic product (GDP), and the producer price index measures price change at the wholesale level and for raw materials. Although each of these indicators measures changes in prices over time, they are useless when it comes to measuring variations in the cost of living in different parts of the country at any one time.

A separate CPI is published for each of a number of metropolitan areas, but those figures only allow a comparison of inflation rates experienced by residents of those areas. For each of the individual city price indexes the value of the index is set equal to 100 for the years 1982 to 1984 (the *base* period). Thus, even if the cost of living in one city is substantially higher than it is in another, the index numbers for those two cities are equal in the base year. Subsequent index numbers can only indicate if there is any difference in the inflation rates experienced by residents of those cities. *The CPI does not allow interarea cost-of-living comparisons*.

The federal government makes annual adjustments to white-collar pay, and a locality-based comparability payment. Although the locality-based payment is sometimes referred to as a cost-of-living adjustment, it is not based on any measure of the cost of living. Rather, it is based on the Employment Cost Index (ECI), which is a measure of the rate of change in private sector wages and salaries.[1]

From a theoretical standpoint, goods that are sold nationwide and are easily transported might be expected to exhibit little geographic variation in price. The main reason for prices to vary for such goods would be transportation costs, and variations in the rents and salaries paid by the stores in which they are sold. Otherwise there would be a tendency for the prices of those goods to converge. If there were a premium for a given good in one area of the country, there would be an incentive to producers of that good to make more of it available in that area, either through increased production or a redistribution of current production. Any increase in the supply of that good in an area where there is a premium would tend to reduce that premium, and bring the good's price closer in line with its price elsewhere.

In contrast, geographic differences in the cost of land are likely to persist, since the supply of land in a given area is fixed. The local supply of land may vary somewhat, in a sense, due to changes in zoning for example, but ultimately land price increases cannot induce an increase in its supply. Differences in land values, and thus rents, might therefore be expected to account for a significant share of any geographic variation in the cost of living. Variation in rents may affect relative living costs directly through its effect on housing costs, or indirectly through its effect on the costs of doing business.

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[1] See CRS Report RL33732, *Federal White-Collar Pay: FY2008 Salary Adjustments*, by Barbara L. Schwemle.

Measuring Geographic Differences in the Cost of Living

The federal government does not currently publish any statistics allowing comparison of differences in the overall cost of living in different areas of the country.[2] But there are some regularly available data from a private source which can be useful in getting an idea how much the cost of living varies across the country.

Perhaps the most widely used data are the ACCRA indexes (formerly the American Chamber of Commerce Researchers Association). These are published by the Council for Community and Economic Research (C2ER). The data in the ACCRA cost-of-living index were originally collected by participating chambers of commerce, but may be collected by any organization. The data are put in the form of a set of index numbers that compare the cost of living in more than 300 urban areas across the country.[3]

The ACCRA data are intended to measure the relative cost, in different areas of the country, of the standard of living "appropriate for professional and managerial households in the top income quintile."[4] The actual market basket is smaller than the one for which BLS collects price data to calculate the CPI, and many of the items priced tend to be name brands sold at large chain stores. For the goods and services priced in the ACCRA index considerable effort is expended to maintain consistency in the market basket. Considerable detail, for example, goes into the selection of the house to be priced in each area.[5]

The Missouri Economic Research and Information Center (MERIC) has taken the ACCRA index numbers for the first quarter of 2007, and averaged the data for all of the cities represented in each state. An examination of those data reveals considerable variation in the cost of living across the states.[6] According to the MERIC indexes, Hawaii was the most expensive state at 165.3% of the national average, and Oklahoma was the least expensive state at 89.4% of the national average. **Table 1** presents the aggregate MERIC cost-of-living indexes as well as the ranking for each state. For each state, the index is relative to the national average, which equals 100.

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[2] There has been some work done by BLS towards the development of an interarea cost-of-living index using data collected for the CPI. See Bettina H. Aten, "Interarea Price Levels: An Experimental Methodology," *Monthly Labor Review*, September 2006, pp. 47-61.

[3] Only cities with populations larger than 50,000 are eligible to participate in the ACCRA index program. Rather than surveying what households purchase in each area, the ACCRA index tracks the prices of goods that are representative of larger categories. Those prices are then aggregated using weights based on the Survey of Consumer Expenditures, published by BLS. The effects of taxes are not included.

[4] From the C2ER website [http://www.c2er.org].

[5] The house selected is supposed to be one convenient to schools and shopping, with three bedrooms and roughly 2,400 square feet of living space and utilities typical of similar houses in the area. In contrast to the CPI, the cost of housing is based on the cost of home purchase and thus is affected by the level of interest rates.

[6] New Hampshire is not represented in the first quarter 2007 survey.

Table 1. Relative Cost of Living by State, First Quarter of 2007

State	Rank[a]	Cost of Living Index	State	Rank[a]	Cost of Living Index
Alabama	11	91.9	Missouri	7	90.8
Alaska	46	129.0	Montana	29	101.5
Arizona	34	104.7	Nebraska	5	90.5
Arkansas	4	90.1	Nevada	37	107.7
California	49	138.9	New Jersey	47	130.0
Colorado	30	101.6	New Mexico	27	100.0
Connecticut	42	123.1	New York	44	125.4
Delaware	36	105.3	North Carolina	17	94.3
District of Columbia	48	136.9	North Dakota	15	93.7
Florida	35	105.3	Ohio	16	94.0
Georgia	9	91.6	Oklahoma	1	89.4
Hawaii	50	165.3	Oregon	39	111.7
Idaho	21	95.4	Pennsylvania	31	101.8
Illinois	23	97.2	Rhode Island	43	124.1
Indiana	12	92.9	South Carolina	13	93.2
Iowa	14	93.3	South Dakota	6	90.7
Kansas	8	91.1	Tennessee	3	89.6
Kentucky	20	95.2	Texas	2	89.6
Louisiana	19	94.7	Utah	24	98.6
Maine	38	109.3	Vermont	41	117.4
Maryland	45	126.4	Virginia	32	103.9
Massachusetts	40	116.3	Washington	33	104.6
Michigan	26	99.3	West Virginia	22	96.5
Minnesota	25	99.1	Wisconsin	18	94.4
Mississippi	10	91.9	Wyoming	28	101.4

Source: Missouri Economic Research and Information Center.

Note: New Hampshire is not represented in this survey.

a. 1st is the least expensive, 50th is the most expensive.

Analysis of the various component indexes allows for some interesting observations. As was expected, the greatest portion of the variation from place to place in the cost of living was attributable to differences in the cost of housing.[7] The variance in the housing component of the cost-of-living index was more than five times that of the overall index. In contrast, health care costs had only about one-third of the variation of the overall cost of living.

Policy Considerations

Data showing geographic differences in the cost of living are limited. If policymakers want to make adjustments to income support payments, or the official poverty thresholds, there is currently no official measure on which to base them. Those data that are available are from private sources, and there is no way to ensure their consistency or continued availability. Even the ACCRA indexes may not be ideal for adjusting income support payments, because they are limited to urban areas and only track the cost of living for fairly well-to-do households. Moreover, participation in the survey is entirely voluntary, and there is no guarantee that an area that is currently part of the survey will continue to be.

The areas for which data are collected for the ACCRA indexes were not selected to be representative of the overall distribution of the population. If the purpose of an official interarea cost-of-living measure were to adjust benefits for those who are relatively less well off, it would be important for it to reflect the areas in which that population tended to live. Whether there is as much geographic variation in the cost of living of that population as there is in the ACCRA data is an open question.

The ACCRA indexes also show that the variation in cost depends on what goods and services are under consideration. There appears to be much less variation in medical care costs than there is in housing costs, for example. If that is true, there might be a less compelling case for geographic adjustments to medical care subsidies than for housing subsidies.

It may be that a measure could be constructed making use of data already collected for the calculation of the CPI. But like the ACCRA index, CPI data are only collected in urban areas. Although there is considerable variance in the cost of living across urban areas, there may also be substantial differences between urban and rural areas, and among rural areas.

There may be considerable practical obstacles to any effort to adjust benefits automatically to compensate for variations in the cost of living. An important question is how would the different areas be defined? It is conceivable that such small areas would be needed to account for all the significant differences in living costs, that the data collection required would be immense.

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[7] Variance is a statistic which measures how much a set of numbers deviates from its mean. It is not expressed in any particular unit. The variance of a set of numbers is calculated by summing the squares of the differences between each observation and the mean of the entire set of numbers.

One way of reducing the cost of constructing an interarea cost-of-living index might be to limit the range of items that are included. The income level that defines the poverty population was based entirely on food prices. An interarea measure that focused on just the price of food and housing, for example, would be much less complicated than one that reflected all the items that currently make up the marketbasket for the CPI.

A possible alternative to the use of a measure that tracked price differences in different areas might be a measure based on income differences. The most important reason for geographic differences in the cost of living is variation in the cost of housing. Housing costs are considerably influenced by income and so a measure based on income might be a reasonable substitute for one based on prices.[8]

[8] The Census Bureau publishes estimates of median household income by state, see the U.S. Census Bureau's website at [http://www.census.gov/hhes/www/income/statemedfaminc.html]. The Bureau of Economic Analysis publishes regular estimates of personal income by metropolitan area, state, and county, see the Bureau of Economic Analysis's website at [http://www.bea.gov/regional/index.htm].