



July 2014

# SCHOOL MEAL PROGRAMS

## Implications of Adjusting Income Eligibility Thresholds and Reimbursement Rates by Geographic Differences

# GAO Highlights

Highlights of [GAO-14-557](#), a report to congressional requesters

## Why GAO Did This Study

In fiscal year 2013, 30.7 million children participated in the National School Lunch Program and 13.2 million children participated in the School Breakfast Program, partly funded by \$14.6 billion from the USDA. The majority of these children came from low-income families and received school meals free or at a reduced-price. Income eligibility and school reimbursement rates for school meals are federally set and do not consider geographic differences in the cost of living (except for Alaska and Hawaii). GAO was asked to explore the potential to account for such differences through a variety of measures and cost data.

This report, therefore, looks at a variety of methods by which to identify geographic differences in living costs and the potential for using them to adjust (1) income eligibility thresholds, and (2) reimbursement rates for schools. It also examines the extent to which states and localities can make adjustments for geographic differences in costs by using existing program rules. GAO reviewed relevant laws, regulations, and literature; analyzed available data sources and methods; and interviewed knowledgeable experts.

## What GAO Recommends

GAO is not making any recommendations.

View [GAO-14-557](#). For more information, contact Kay Brown at (202) 512-7215 or [brownke@gao.gov](mailto:brownke@gao.gov).

July 2014

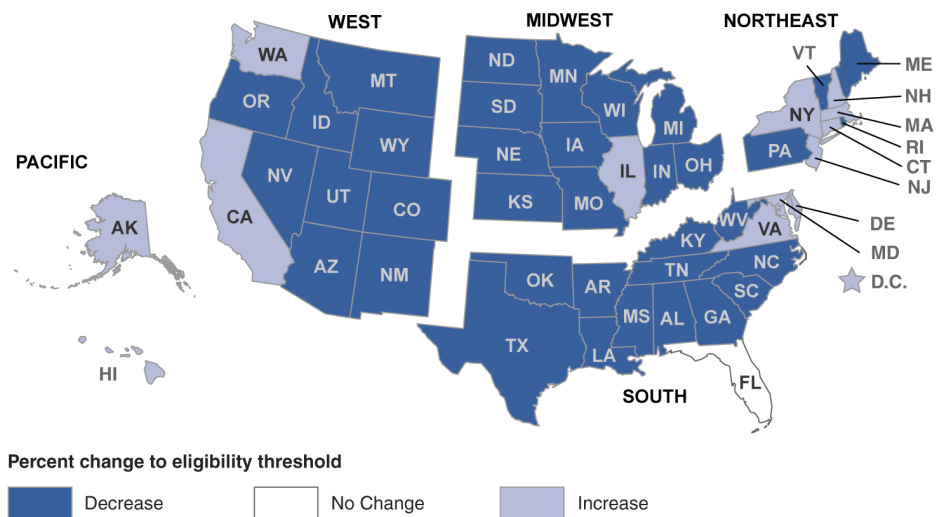
# SCHOOL MEAL PROGRAMS

## Implications of Adjusting Income Eligibility Thresholds and Reimbursement Rates by Geographic Differences

### What GAO Found

There are a number of measures by which income thresholds for the U.S. Department of Agriculture (USDA) school meal programs could be adjusted to account for geographic differences in the cost of living; doing so would likely lead to shifts in eligibility and program costs. For example, the Supplemental Poverty Measure or Regional Price Parities could be used to adjust for geographic price differences; each could result in fewer children qualifying for assistance in the South and Midwest and more children qualifying in the Northeast (see figure below). In general, the effects of any such cost-of-living adjustment are difficult to predict and would vary depending on their implementation, such as whether they were applied state-wide or at the sub-state level, or whether children were kept from losing eligibility. Overall program costs could increase if more children participated.

Example of Potential Effect of a Geographic Cost Adjustment on School Meal Eligibility Thresholds Using 2006-2010 Data



Source: GAO analysis of Regional Price Parities data; Map Resources (map). | GAO-14-557

Although the cost of delivering school meals varies by geographic region, the usefulness of available cost data is unclear for making such adjustments. Neither the Regional Price Parities for food services and goods or the U.S. Bureau of Labor Statistics' wage data account for some drivers of variation in costs, such as economies of scale. In addition, they may not reflect the characteristics of the food and labor components of individual school districts.

The national school lunch and breakfast program rules allow states to expand eligibility for free meals and increase reimbursements to schools using federal or state funds. Some schools have expanded eligibility by providing free meals to all students under federal program rules. At the same time, some states use state funds to provide additional per meal reimbursements to schools for meals served. However, no state has used these flexibilities to adjust for within state geographic differences.

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### Abbreviations

ACS	American Community Survey
BEA	Bureau of Economic Analysis
BLS	Bureau of Labor Statistics
CE	Consumer Expenditure Survey
CEP	Community Eligibility Provision
CPI	Consumer Price Index
ERS	Economic Research Service
FMR	Fair Market Rents
FNS	Food and Nutrition Service
HHS	Department of Health and Human Services
MSA	metropolitan statistical area
RPP	Regional Price Parities
SNAP	Supplemental Nutrition Assistance Program
SPM	Supplemental Poverty Measure
TANF	Temporary Assistance for Needy Families
USDA	U.S. Department of Agriculture

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July 8, 2014

### Congressional Requesters

During fiscal year 2013, about 30.7 million children participated in the National School Lunch Program and more than 13.2 million participated in the School Breakfast Program across every state, the District of Columbia, Guam, Puerto Rico, and the Virgin Islands, as well as children of the U.S. Department of Defense armed forces personnel attending schools overseas. Both of these programs are administered by the U.S. Department of Agriculture's (USDA) Food and Nutrition Service (FNS) through state agencies that oversee local entities that provide school meals. The federal government provides cash reimbursements for each meal that meets nutritional requirements that is served at schools that participate in the lunch and breakfast programs. In fiscal year 2013, USDA spent about \$14.6 billion on these programs. Students who participate in these programs may qualify for either paid, free, or reduced-price meals depending on their household income and household size. In the 2013-2014 school year, for example, a child who was part of a three-person household qualified for free meals if the child's annual household income did not exceed \$25,389. It does not generally matter whether this household resided in a high-cost metropolitan area or a lower-cost rural area because the income eligibility thresholds for free and reduced-price meals are uniform throughout the country—with the exception of Alaska and Hawaii, where they are higher. Similarly, except in Alaska and Hawaii, USDA's reimbursement rates for meals served are the same for all schools, regardless of where the schools are located. The standard USDA reimbursement rate for the 2013-2014 school year was \$2.93 for a school lunch served free to a qualifying child.

Because the cost of housing, transportation, food, and other necessities can vary by region or locality, concerns have been raised that some children who are in need of free or reduced-price school meals may not qualify for them because the current income eligibility measure does not recognize that households in high-cost areas may need higher incomes to meet their basic needs. Questions have also been raised regarding whether some school districts can afford the same quality of food as other school districts because USDA reimbursement rates do not adjust for geographic differences in food and labor costs. To better understand the issues related to making geographic adjustments for the school meal programs, you asked us to examine both eligibility determination and meal reimbursements.

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This report addresses the following questions:

1. What existing data and methods could be used to adjust USDA income eligibility thresholds for school meals so that they account for variations in the cost of living, and what are the implications of making such adjustments?
2. What existing data and methods could be used to adjust USDA reimbursement rates so that they account for variations in food, labor, and other costs, and what are the implications for making such adjustments?
3. To what extent can states and localities make adjustments to eligibility and reimbursement rates for school meals?

To answer these questions, we reviewed relevant federal laws and regulations, analyzed available data sources and methods, reviewed relevant literature, and interviewed knowledgeable agency officials and experts. Specifically, we interviewed USDA officials from FNS and the Economic Research Service (ERS) to learn more about the school meal programs, types of data available, and relevant studies. Further, we interviewed officials at the Bureau of Economic Analysis (BEA), the Bureau of Labor Statistics (BLS), and the Census Bureau regarding the availability and appropriateness of various types of data and methods for making geographic adjustments to school meals eligibility and reimbursement rates. We also spoke with officials at the Department of Health and Human Services (HHS) regarding a study they were mandated to conduct under the Patient Protection and Affordable Care Act which evaluated methods for and effects of making geographic cost-of-living adjustments to the health care subsidies under the act, as well as the Supplemental Nutrition Assistance Program (SNAP), Medicaid, and other programs.<sup>1</sup> We also spoke with School Nutrition Association representatives regarding state and local policy options for expanding eligibility and funding for school meals and the extent to which they see the need for such adjustments in their districts. Based on our review of the economic literature, we developed a list of key considerations to evaluate the usefulness and appropriateness of existing data sources to

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<sup>1</sup> The Urban Institute, *Geographic Variation in the Cost of Living: Implications for Poverty Guidelines and Program Eligibility*, a report prepared at the request of the Department of Health and Human Services, June 2013. This study was required by the Patient Protection and Affordable Care Act, Pub. L. No. 111-148, § 10105(f), 124 Stat. 119, 907 (2010).

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adjust for geographic differences in cost of living. Our analysis of existing methods was both informed by and consistent with the findings of the HHS report, which included the findings of an expert panel. The HHS report also included calculations on how geographic cost-of-living adjustments would affect poverty guidelines. We used these as part of our analysis regarding the implications of geographic adjustments. In addition, we explored how geographic cost-of-living adjustments to eligibility guidelines might interact with existing USDA policy options.

For school meal costs, we examined research regarding school meal costs, their components, and how costs vary geographically. We then evaluated available data sets on food costs and wages and other components of meal cost based on how appropriate they were for comparison to school food and wage costs. For the purposes of illustration, we calculated adjustments to reimbursements using two separate indexes, one of which was a composite index we constructed from existing data sources. Where we show potential adjustments to eligibility income thresholds and reimbursement rates, we do not include territories because the indexes we used do not currently cover them.

We evaluated the data and methodology used to create two indexes, the Regional Price Parities (RPP) and Supplementary Poverty Measure (SPM), and found them to be sufficiently reliable for the purpose of providing examples of how state level thresholds might change under one application of the RPPs and SPM to school meals. This report discusses several implications related to the appropriateness of applying these measures to geographic adjustment of school meals.

We conducted this performance audit from July 2013 to July 2014 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient and appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.]

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## Background

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### Structure of National School Lunch and Breakfast Programs

The National School Lunch Program was established in 1946 and the School Breakfast Program was established in 1975 to provide nutritionally balanced, low-cost or free lunches and breakfasts to children in participating schools. At the federal level, the programs are administered by USDA's FNS. At the state level, the National School Lunch Program and School Breakfast Program are typically administered by state educational agencies, which operate the programs through agreements with school food authorities, which are the governing bodies that have the legal authority to operate the school meal programs in one or more schools.<sup>2</sup> School food authorities provide the meals and claim reimbursements based on counts of meals served.<sup>3</sup> Local educational agencies are responsible for providing applications, certifying eligibility, and verifying eligibility of a sample of children certified as eligible for free or reduced-price meals.<sup>4</sup>

### Eligibility for Free and Reduced-Price Meals

In fiscal year 2013, approximately 70 percent of school lunches and 85 percent of school breakfasts served went to children who qualified for federally-subsidized free or reduced-price meals. School districts determine whether children are eligible to receive free or reduced-price school meals based on the HHS federal poverty guidelines, which set the maximum eligible income by household size.<sup>5</sup> The HHS poverty guidelines are a simplified version of the Census Bureau's federal poverty

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<sup>2</sup> Puerto Rico, the U.S. Virgin Islands, Guam, and U.S. Department of Defense overseas military bases also participate under the Richard B. Russell National School Lunch Act. Entities located in the Northern Mariana Islands and American Samoa receive a USDA Nutrition Assistance Program block grant. The block grants provide flexibility to meet nutritional needs within broad parameters.

<sup>3</sup> To be reimbursable, such meals must meet statutory meal pattern and nutritional requirements.

<sup>4</sup> For ease of reference, in this report, we use the term "school district" to refer to school food authorities and local educational agencies, recognizing that the activities described may be the responsibility of one or the other of those entities.

<sup>5</sup> We have raised questions about the eligibility determination process and have made recommendations on how the process can be improved. See GAO, *School-Meals Programs: USDA Has Enhanced Controls, but Additional Verification Could Help Ensure Legitimate Program Access*, [GAO-14-262](#) (Washington, D.C.: May 15, 2014).



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thresholds.<sup>6</sup> Children are eligible for free meals if their household's income is less than or equal to 130 percent of the federal poverty guideline. A child may also qualify for free meals as categorically eligible if the child is homeless, a runaway, foster child, or a migrant as defined in law, or if a child is from a household that participates in certain other government assistance programs, such as the Supplemental Nutrition Assistance Program (SNAP) or Temporary Assistance for Needy Families (TANF). Children may be certified as categorically eligible if their application indicates they meet such conditions or have someone in the household that participates in one of these programs. Children may also be directly certified as categorically eligible without the need for an application, such as through administrative records matching with other government programs. Children are eligible for reduced-price meals if their household income is greater than 130 percent but less than or equal to 185 percent of the federal poverty guidelines. The HHS 2013 federal poverty guideline for a three-person household, for example, was \$19,530; so for the 2013-2014 school year, a child from a three-person household would qualify for free meals if the household income was at or below \$25,389. That same child would qualify for reduced price meals if the household income was between \$25,390 and \$36,131. Income eligibility limits for free and reduced meals are higher in Alaska and Hawaii because HHS's poverty guidelines, upon which USDA bases its income eligibility guidelines, are higher in those states.

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## Federal Reimbursements for School Meals

School districts receive cash reimbursements from USDA through the state agency with the amount of the per-meal reimbursement based on the type of meal served (lunch or breakfast) and the meal category (free, reduced-price, or paid).<sup>7</sup> (See table 1.) The reimbursement schedule is

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<sup>6</sup> The current Census Bureau poverty thresholds were developed in the 1960s and have been adjusted annually for inflation. The poverty thresholds have been subject to criticisms such as they do not reflect current family incomes or the current composition of family expenditures; they do not account for public assistance benefits; they do not account for tax liabilities and some other costs, such as health care; and they do not adjust for geographic cost variations. There have been recommendations to address concerns with the measure, although the official Census Bureau poverty thresholds remain unchanged, except for the annual inflation adjustment.

<sup>7</sup> Schools can charge children no more than \$0.40 for a reduced-price meal. Children who do not qualify for free or reduced-price meals are categorized as "paid," since they pay the regular price that the school charges for a meal, although schools receive a small subsidy even for paid meals.

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the same for all states, except Alaska and Hawaii, which receive higher reimbursement rates.<sup>8</sup>

**Table 1: USDA Per-Meal Reimbursement Rates for the National School Lunch Program and School Breakfast Program in the Contiguous States, School Year 2013-2014**

Meal category	Lunch	Breakfast
Free	\$2.93	\$1.58
Reduced price	\$2.53	\$1.28
Paid	\$0.28	\$0.28

Source: USDA | GAO-14-557.

Note: These rates are the “lower payment level” rates which apply for lunches where less than 60 percent of lunches served in the school lunch program during the second preceding year were served free or at a reduced price and for breakfasts for non-severe need students.

An additional per-lunch reimbursement rate of \$0.02 is required to be provided if 60 percent or more of a school’s lunches are free or reduced-price.<sup>9</sup> In addition, if the school district has been certified as complying with federal nutritional requirements, there is a \$0.06 reimbursement supplement per lunch served.<sup>10</sup> USDA provides additional per-breakfast reimbursements if a school is determined to be in severe need, which is defined as a school that served 40 percent of school lunches free or at a reduced price in the second preceding year. USDA also provides federal support for school meal programs through USDA food commodities. Such commodities provided the equivalent of an additional \$0.2325 per lunch served nationwide in school year 2013-2014. According to USDA, the federal subsidy for a free meal is intended to cover, across all school districts, the average school’s cost of producing a reimbursable meal—not to cover all costs for all school districts.

State agencies establish the per-meal rates of reimbursement for school districts in their states. According to USDA officials, all states currently

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<sup>8</sup> The same reimbursement rates that apply to the contiguous states also apply to the District of Columbia, Virgin Islands, Puerto Rico, and Guam. In school year 2013-2014, the standard reimbursement rate for a free lunch was \$2.93 for the contiguous states, \$3.42 in Hawaii, and \$4.74 in Alaska.

<sup>9</sup> 42 U.S.C. § 1753(b)(2).

<sup>10</sup> Pub. L. No. 111-296, § 201, 124 Stat. 3183, 3214 (codified at 42 U.S.C. § 1753(b)(3)(C)).

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use the same USDA reimbursement schedule to provide per-meal reimbursements to school districts.

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## Universal Free Meal Provisions

Some school districts have chosen to provide universal free meals under special provisions, designated as Provision 2, Provision 3, and Community Eligibility Provision (CEP).<sup>11</sup> Participating schools provide free meals to all children, regardless of their household income. Under these provisions, schools cover any meal costs not reimbursed by USDA in exchange for a reduced administrative burden on school districts for processing school meal applications and determining eligibility for free and reduced-price meals.

USDA reimbursement for schools participating under the special provisions is different than for schools under the standard program. Any school or school district can elect to participate in Provision 2 or 3. However, to elect CEP, schools or school districts must have at least 40 percent of students certified for free meals without the use of an application (for example, those directly certified through SNAP) in the prior school year. USDA calculates reimbursements for meals served differently under each policy, so in deciding whether to participate, schools must consider this, as well as the amount they would have to cover for meals not reimbursed by USDA.

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## Geographic Cost-of-Living Adjustments in Federal Programs and Available Data Sources

Income eligibility guidelines for most means-tested federal programs have historically not varied across the country based on differences in the cost of living. Some exceptions include

- federal housing assistance eligibility, which is based on median income for a given location;
- federal training program eligibility, which is based on variations in the cost of living across the country; and
- the federal Child Care and Development Fund, which allows states to provide child care subsidies to qualifying families with incomes below 85 percent of state median income.

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<sup>11</sup> The Community Eligibility Provision was previously named the Community Eligibility Option.

Despite the common use of standard federal poverty guidelines to determine eligibility, several data sources have been developed that show geographic variation in the cost of various good and services. (See table 2.)

**Table 2: Data Sources That Measure Geographic Variation in the Cost of Living**

<b>Data source</b>	<b>Produced by</b>
Cost of Living Index	Council for Community and Economic Research
CEO (Carrillo, Early and Olsen) Index	Academic researchers Carrillo, Early, and Olsen
Lower Living Standard Income Level	Employment and Training Administration, U.S. Department of Labor
Regional Price Parities	Bureau of Economic Analysis, U.S. Department of Commerce
Supplemental Poverty Measure	U.S. Census Bureau, U.S. Department of Commerce
Self-Sufficiency Standard	Center for Women’s Welfare, University of Washington
Geographic Practice Cost Index	Centers for Medicare and Medicaid Services, U.S. Department of Health and Human Services
EPI Family Budgets	Economic Policy Institute
Fair Market Rents (FMR)	U.S. Department of Housing and Urban Development
Housing and Transportation Affordability Index	Brookings Institution
Medicare Hospital Wage Index	Centers for Medicare and Medicaid Services, U.S. Department of Health and Human Services
Milliman Medical Index	Milliman Consulting
Occupational Pay Relatives	Bureau of Labor Statistics, U.S. Department of Labor

Source: GAO | GAO-14-557.

While some of these data sources measure prices of a particular basket of goods, services, and, in some cases, wages—some of which may vary by state, region, or locality—none includes quality of life measures for such things as pollution, crime rates, health system quality, traffic, and public amenities. According to the economic literature, conceptually, a cost-of-living index should include these quality of life measures. Therefore, the data sources listed in table 2 can be thought of as proxy measures for the cost of living.

USDA provides the same school meal reimbursement rates for all the contiguous states,<sup>12</sup> similar to other federal programs, such as SNAP,

<sup>12</sup> USDA has discretionary authority to adjust reimbursement rates for Alaska, Hawaii, Guam, American Samoa, Puerto Rico, the U.S. Virgin Islands, and the Commonwealth of the Northern Mariana Islands and has used this authority to adjust reimbursement rates for Alaska and Hawaii. 42 U.S.C. § 1760(f).

which provides the same benefit payment rates for participants in the contiguous states.<sup>13</sup> However, USDA has collected data on school foodservice costs and has reported that there are variations in these costs among schools and these costs vary across the country.<sup>14</sup> In addition, there are other data sources that show geographic variation in labor costs, a major component of school foodservice costs. See table 3 for a list of data sources that show geographic variation in costs of labor.

**Table 3: Data Sources That Measure Geographic Variation in Costs of Labor**

<b>Data source</b>	<b>Produced by</b>
County Business Patterns	Census Bureau
Occupational Employment Statistics Survey	Bureau of Labor Statistics (BLS)
National Compensation Survey	BLS
American Community Survey	Census Bureau
Current Population Survey	Census Bureau and BLS
Quarterly Census of Employment and Wages	BLS
Current Employment Statistics	BLS

Source: GAO | GAO-14-557.

While such sources show evidence of geographic differences in labor costs, it has not been established that these differences would apply to school foodservice operations. Food is also a major component of school foodservice costs, but regional variation in the cost of food faced by schools is not represented by any existing price data or index.

<sup>13</sup> Other federal programs, such as Medicare, have payment rates based on area differences. Medicare is the federal health insurance program for people who are 65 or older, certain younger people with disabilities, and people with End-Stage Renal Disease (permanent kidney failure requiring dialysis or a transplant, sometimes called ESRD).

<sup>14</sup> See, USDA, FNS, Office of Research, Nutrition and Analysis, *School Lunch and Breakfast Cost Study-II, Final Report* (April 2008) and USDA, Economic Research Service, *School Foodservice Costs: Location Matters* (May 2011).

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## Existing Data and Methods for Adjusting for Geographic Variations Could Lead to Shifts in Eligibility and Might Increase Program Costs

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### Existing Federal Data Sources Are Available to Adjust School Meal Eligibility Based on Geographic Differences, but They Have Weaknesses

We identified two indexes that satisfied key considerations during our process of reviewing data sources to identify those that could be used to adjust eligibility guidelines for federal school meal programs for geographic differences in the cost of living. In assessing the overall suitability of various measures for making cost-of-living adjustments to the school meal programs, we used the following key considerations to guide our analysis:<sup>15</sup>

**Goods covered:** Which goods are taken into account in constructing the cost-of-living index? Do the goods included contribute substantially to the cost of living?

**Geographic coverage:** What geographic areas are the underlying data drawn from? Does the index capture variation in costs of living at the regional, state, or sub-state level?

**Time frame:** Are the estimates regularly updated and if so, how often? Could the cost-of-living estimates be used to update annual eligibility thresholds and reimbursement levels?

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<sup>15</sup> Similar factors were also identified in the HHS study on cost of living adjustments. They are drawn from the economic literature on cost of living adjustment methods. The final two considerations, source and methodology, are consistent with OMB's *Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by Federal Agencies*, [http://www.whitehouse.gov/omb/fedreg\\_final\\_information\\_quality\\_guidelines](http://www.whitehouse.gov/omb/fedreg_final_information_quality_guidelines), as well as GAO's *Assessing the Reliability of Computer-Processed Data* (GAO-09-680G).

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**Income group sampled:** To what extent does the cost-of-living index reflect or include costs for the lower-income quintiles (i.e., the target population of free and reduced-price lunches)?

**Source:** Is the source of the cost-of-living index authoritative, appropriate, and reliable?

**Methodology:**

- Methodological transparency: Do we know and understand the process?
- Bias: Could weaknesses in the underlying data or in the methodology cause the cost of living to be systematically over- or underestimated in a given area or areas? What was done to reduce bias and improve accuracy in the estimates?
- Underlying data: Are the underlying data complete, accurate, and reliable?

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**Regional Price Parities (RPP)** are a type of price index that allows price levels of multiple goods and services to be compared from place to place. RPPs include prices from a wide range of consumer goods and services collected for use in the Consumer Price Index and supplemented with housing data from the American Community Survey. RPPs compare the price level of goods and services in one location to the average price level of goods and services in all locations. The United States national average is set at 100, and different locations are above 100 if price levels are higher than average in that area and below 100 if price levels are lower than average in that area.

Source: Bureau of Economic Analysis. | GAO-14-577

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We evaluated all of the potential cost-of-living measures against these key considerations. Specifically, we eliminated from consideration data sources that (1) do not cover goods that make a significant contribution to overall costs of living, (2) do not cover all states, (3) are not updated regularly, and (4) do not include low-income individuals in the sampling framework. Table 6 in appendix I summarizes our analysis. We reviewed documentation for each data source to determine whether it had methodological characteristics that would limit its use for the purpose of adjustments for school meal eligibility. We identified Regional Price Parities (RPP) and the Supplemental Poverty Measure (SPM) as the two data sources that could be used to adjust eligibility guidelines for school meals programs based on these considerations. Our analysis is consistent with the findings of an expert panel<sup>16</sup> cited in a report to Congress recently released by HHS.<sup>17</sup>

As a tool to adjust school meal eligibility, RPPs have strengths and limitations. RPPs cover a comprehensive market basket of goods, are based on reliable federal data sources, and are estimated using methods that are transparent and well documented.<sup>18</sup> Another advantage of the RPPs is that they are available for states, as well as metropolitan statistical areas (MSA), and non-metropolitan areas, which would allow for cost-of-living adjustments to be made at either the state or sub-state level.<sup>19</sup> However, some estimates may be less accurate because the

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<sup>16</sup> Members of the expert panel included: James Ziliak, University of Kentucky, Project Consultant, Poverty Institute; Steven Zuckerman, the Urban Institute, Project Consultant, Fellow in Health Policy; Bettina Aten, Bureau of Economic Analysis; John Greenlees, Bureau of Labor Statistics, Senior Statistician; Bruce Steinwald, Institute of Medicine, Consultant; and Trudi Renwick, Census Bureau.

<sup>17</sup> This report, required by the Patient Protection and Affordable Care Act, evaluated methods to make geographic cost-of-living adjustments to several federal programs (not including the National School Lunch Program). The report, *Geographic Variation in the Cost of Living: Implications for the Poverty Guidelines and Program Eligibility*, prepared for HHS by the Urban Institute, concludes that, of the available methods, only RPPs and the SPM “[...] meet the criteria of being publicly available, produced by the federal government on a regular basis, and not restricted to one segment of the income distribution. The RPPs are comprehensive—reflecting all family spending. The SPM geographic adjustment reflects a narrower concept—geographic variation in median rents—but is simpler to explain.”

<sup>18</sup> RPP estimates were designated as official statistics on April 24, 2014.

<sup>19</sup> For areas within a state outside of an officially designated MSA, a separate, non-metropolitan RPP is calculated.



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Bureau of Economic Analysis (BEA) calculates RPPs using a complex statistical aggregation procedure that uses some estimated (i.e., imputed) values and some survey values for county level prices; in particular, housing data are available at the county level, but county-level prices for most goods and services have to be imputed from Consumer Price Index (CPI) data. As a result, the RPPs may show differences in cost of living between two areas when in fact the costs of living are similar.<sup>20</sup> This could be important if RPPs are used to adjust eligibility thresholds from state to state, which would also affect the flow of federal funding to cover reimbursement to schools for meals consumed by eligible students.

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<sup>20</sup> For instance, if a state has an RPP of 101, and another state has an RPP of 99, BEA cannot state that these numbers are significantly statistically different. More detailed underlying data would remove the need for imputation, improve the precision of RPP estimates, and allow BEA to publish confidence intervals for their estimates.

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The **Supplemental Poverty Measure (SPM)** is designed to take into account many of the government programs that assist low-income families and individuals and are not included in the current official poverty measure. While the official poverty measure includes only pretax money income, the supplemental measure adds the value of in-kind benefits, such as the Supplemental Nutrition Assistance Program, school lunches, housing assistance and refundable tax credits. Additionally, the supplemental poverty measure deducts necessary expenses for critical goods and services from income. Expenses that are deducted include taxes, child care and commuting expenses, out-of-pocket medical expenses, and child support paid to another household. The SPM makes use of multiple data sources, including the Current Population Survey, Consumer Expenditure Survey, and the American Community Survey.

Source: Census Bureau. | GAO-14-577

The SPM,<sup>21</sup> a joint product of the Census Bureau and BLS, presents a different set of strengths and limitations. The SPM poverty thresholds represent a minimum dollar amount necessary for a household to purchase basic food, clothing, shelter, and utilities and an additional small amount for other needs. At present, the only portion of the SPM that varies by location is the housing component, which comes from American Community Survey (ACS) data.<sup>22</sup> SPM thresholds are available at the MSA level; the recent HHS report also includes state-level adjustments produced by the Urban Institute using Census Bureau methodology and data. While housing costs represent a substantial portion of household budgets, reliance on housing as the only source of geographic variation introduces a potential source of bias because it may not account for other significant living costs that vary geographically.<sup>23</sup> For instance, in rural areas, the cost of housing may be low and the cost of living as measured by the SPM may appear low as a result, even though transportation costs, which are not reflected in the SPM adjustment, may be even higher than in urban or suburban areas.

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<sup>21</sup> Whereas RPPs are an inter-area price index, the SPM is a poverty threshold, a portion of which is adjusted for geographic cost differences.

<sup>22</sup> The SPM is a joint project of the Census Bureau and BLS. BLS produces the SPM thresholds using Consumer Expenditure Survey data; Census Bureau produces the SPM threshold estimates with the geographic housing adjustment. For the purposes of this report, we will focus on the geographic adjustment to the SPM thresholds, which are available from Census Bureau at the MSA level, and from the HHS report at the state level.

<sup>23</sup> The Census Bureau and BEA are currently evaluating how the SPM thresholds would change if the RPP index was applied to the SPM, either using the overall RPP index or for item-specific RPP indexes.

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## Effects from Any Adjustments to Income Eligibility Are Hard to Predict, but They Could Increase Overall Costs and Have Negative Implications for Some Participants

### Changes in Eligibility, Participation, and Costs

Adjusting eligibility thresholds based on geographic differences could result in increased or decreased eligibility, participation, and costs, depending on the cost of living in a given area and how adjustments are applied. For example, figure 1 shows how the income eligibility threshold for free and reduced-price meals could change using the state-level SPM adjustments. Figure 2 shows the change using state-level RPPs. The RPP map assumes that in states where the cost of living is the same as the national average, the eligibility threshold would remain unchanged; the SPM map shows adjustments wherever median rents differ from the national average. States with a relatively high cost of living, according to the indexes, such as states in the Northeast and West would see their eligibility thresholds increase, resulting in children at higher incomes qualifying for free or reduced-price meals. At the same time, in states where the cost of living is lower than average, according to the indexes, such as the South and Midwest, eligibility thresholds would be lower and fewer children would qualify for the program.<sup>24</sup>

If adjustments were made at the sub-state level, in general, more children would become eligible in metropolitan and other densely populated areas, as these areas tend to have a higher cost of living. Meanwhile, fewer children would be eligible in areas with a lower cost of living, such as non-metropolitan areas and small cities. In some cases, the cost-of-living differences within states are greater than the cost-of-living differences

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<sup>24</sup> The changes depicted in these maps are not the result of detailed simulations taking into account various implementation scenarios; rather they are a simple application of geographic cost-of-living adjustments to school meal eligibility thresholds. The affect on the total number of students would depend heavily on which method is selected and how it was implemented.

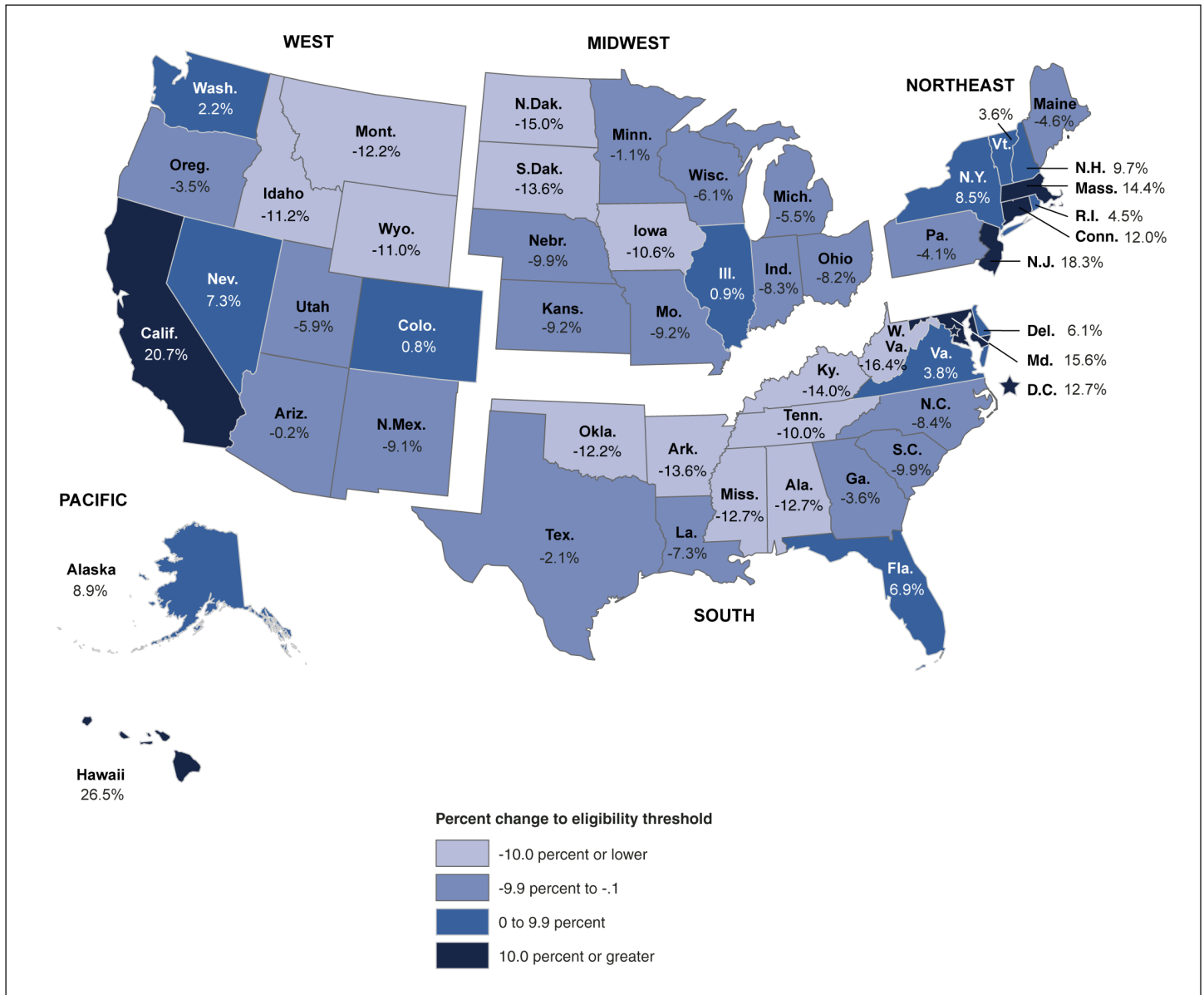
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between states. For example, RPP data indicate that the difference in price levels between metropolitan and non-metropolitan areas in New York is greater than the overall difference between New York and Connecticut.<sup>25</sup>

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<sup>25</sup> The overall state RPPs, 2006-2010, for New York State is 114.1 and Connecticut is 110.5 (relative to an overall U.S. average of 100). These numbers indicate that both New York and Connecticut have higher than average prices and that New York is slightly more expensive. However, the RPP for metropolitan areas in New York State is 116.4 and the RPP for non-metropolitan areas in New York State is 95.6.

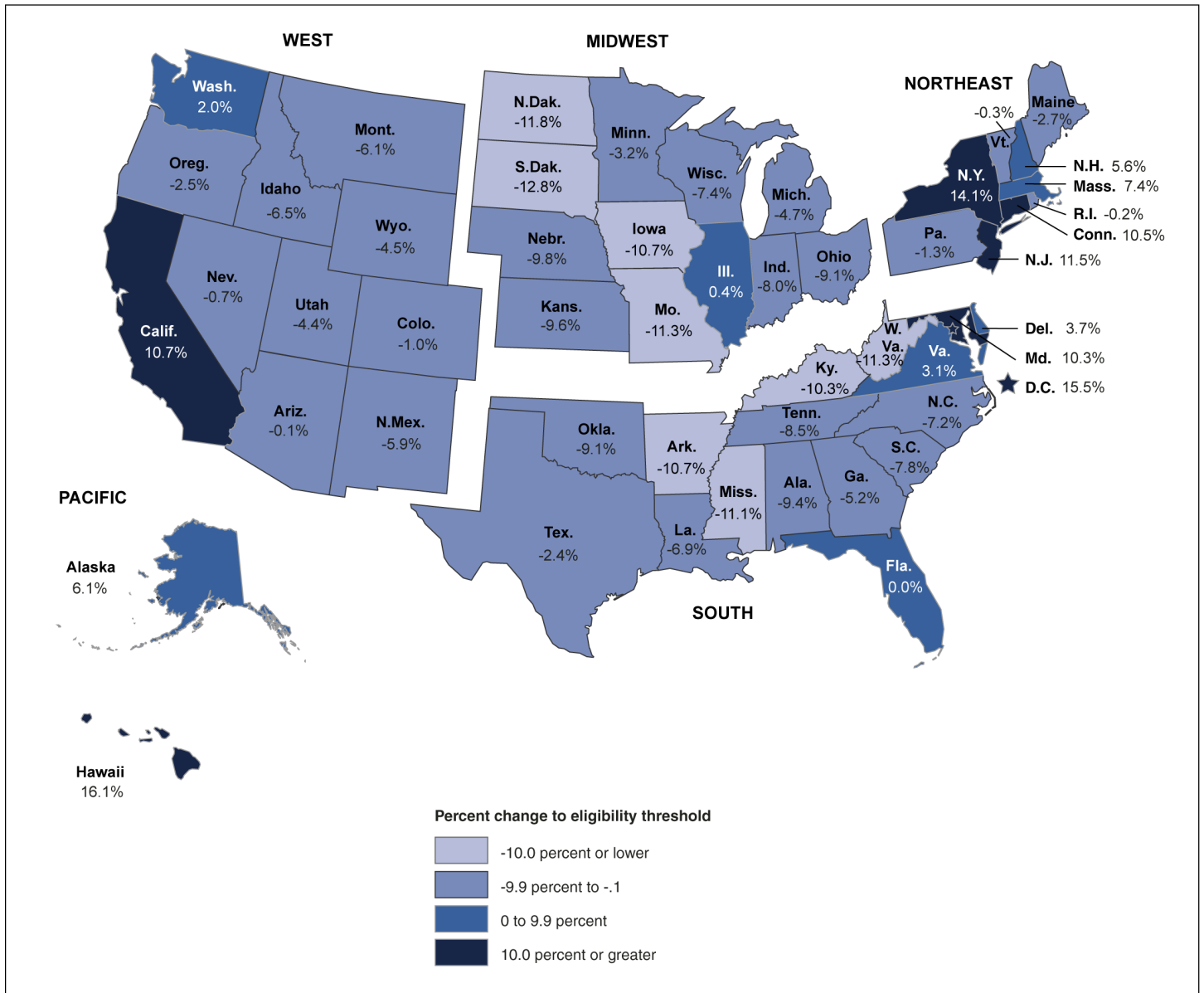
**Figure 1: Example of Percent Change in Eligibility Threshold for Free and Reduced-Price Meals Resulting from State-Level Supplemental Poverty Measure Adjustment, 2006-2010**



Source: GAO, based on Urban Institute analysis of Census data; Map Resources (map). | GAO-14-557

Notes: Percent changes for Alaska and Hawaii are relative to the national average and do not consider current Alaska and Hawaii eligibility thresholds. SPM adjustments are based on median gross rent (rent and utilities) for two-bedroom rental units with complete kitchen and bathroom facilities.

**Figure 2: Example of Percent Change in Eligibility Threshold for Free and Reduced-Price Meals Resulting from State-Level Regional Price Parities Adjustment, 2006-2010**



Source: GAO analysis of Regional Price Parities data; Map Resources (map). | GAO-14-557

Note: Percent changes for Alaska and Hawaii are relative to the national average and do not consider current Alaska and Hawaii eligibility thresholds.

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Alternatively, adjustments could be implemented under a “hold-harmless” scenario that only allows for increased eligibility in areas with a high cost of living, but no decreases in areas with lower costs. For example, under a hold harmless scenario using state-level adjustments, any state in figure 1 or 2 with a negative change in eligibility would instead have zero change. This would cause the total number of eligible children to increase, and likely lead to increased participation and costs.

If cost-of-living adjustments were made based on geographic differences, which method is used would have an important effect on the total number of children eligible for free and reduced-price meals. According to the HHS study regarding geographic cost-of-living adjustments, using either the state- or MSA-level SPM would lead to a slight increase in the national level average poverty guidelines, while using the state- or MSA-level RPP would likely yield a slight decrease in the national level average poverty guidelines. The study also presents results from a simulation of geographic cost-of-living adjustments to SNAP eligibility.<sup>26</sup> Although SNAP and the school meal programs have different eligibility requirements, they use the same poverty guidelines in determining eligibility. Given this, the SNAP simulation may indicate how school meals eligibility could be generally affected by geographic adjustments. The study shows that total persons eligible for SNAP declined using both RPPs and SPM, more so when adjustments were done at the level of metropolitan area, rather than at the state level. The study indicates that the range of changes at the state level would be quite large, leading to a potentially significant change in the geographic distribution of benefits. For example, the MSA SPM would reduce eligibility by 19.5 percent in West Virginia and increase eligibility in California by 16 percent. The state SPM also produces a wide range of SNAP eligibility effects and would reduce eligibility by 17.5 percent in West Virginia and increase eligibility by 17.9 percent in California. Additionally for a few states in the SNAP simulation, RPPs and SPM produce quite different results—one method would produce increased eligibility while the other method would result in decreased eligibility.

Other details of the implementation could also affect who is eligible, the number eligible, and the total cost of adjusting the eligibility guidelines.

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<sup>26</sup> The simulation was done using the Urban Institute’s Trim3 microsimulation model, which reflects program rules, eligibility and means testing requirements, and likelihood of participation.

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For example, one consideration is whether to make adjustments at the state or sub-state level. There are states that include both areas that are below the U.S. average cost of living as well as areas that are above the average cost of living. A Census Bureau official pointed out to us that using a state-level adjustment would result in high cost-of-living areas (e.g., New York City) getting too little of an increase relative to the measure for their specific area and lower cost-of-living areas getting too much of an increase (e.g., Buffalo) relative to their area's actual cost of living. Furthermore, USDA officials said that it may be administratively complex to make geographic adjustments. For example, it may be challenging to implement geographic differences by MSA because school districts may not align with MSA boundaries and may instead cross the boundaries of areas with different costs of living. Additionally, it may be administratively complex to calculate and implement multiple thresholds—if different adjustments were made for each MSA, hundreds of eligibility threshold tables would have to be computed and published. Further implementation concerns that we identified that could affect the outcome include whether adjustments would be implemented in such a way as to decrease eligibility among some students (as opposed to a hold-harmless implementation) and how these adjustments would interact with existing policies affecting school meal eligibility.<sup>27</sup>

## Implications for Food Security

A geographic adjustment that allows for reductions and increases in the income eligibility guidelines could decrease food security for some children currently participating in the program and could increase food security for some children not currently benefitting from free school meals.<sup>28</sup> Children in lower cost-of-living areas from households who previously qualified for free or reduced-price meals may no longer qualify under lower income eligibility thresholds. This could affect both household food security and individual children's food security, a measure of access

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<sup>27</sup> Changes in school meal eligibility could also affect additional federal and state benefits to schools and children that use eligibility for free and reduced-price meals to determine other benefits. For example, the distribution of U.S. Department of Education, Title I of the Elementary and Secondary Education Act funds to schools can be based, in part, on the number of children eligible for free and reduced-price meals.

<sup>28</sup> However, children who no longer qualify for free or reduced-price school meals and who cannot pay for school meals may be provided meals or partial meals at some schools, but USDA does not reimburse schools for such meals. This is characterized as unpaid meal charges. The Healthy, Hunger-Free Kids Act of 2010 requires USDA to conduct a study of the policies and practices of schools and districts for serving meals to students who are unable to pay. Pub. L. No. 111-296, § 143, 124 Stat. 3183, 3213.



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## Challenges to Predicting the Outcome

to adequate food for an active and healthy life. Food insecurity, which most often takes the form of poor diet quality and food access, is higher than average in southern states—an area that is typically lower cost according to RPP and SPM rankings and would likely be adjusted downward in terms of eligibility. Moreover, according to USDA, food insecurity in 2012 was higher in households with children (20 percent) than the U.S. average (15 percent).<sup>29</sup> At the same time, USDA data also show that there are households above 185 percent of poverty that experience food insecurity and that food insecurity is higher than average in large cities, which tend to be higher cost according to the RPP. For children living in such higher cost areas, a cost-of-living adjustment may benefit those not currently eligible for free or reduced-price meals. Moreover, participation in school meals, particularly school breakfasts, has been shown to improve children's food security.

It is difficult to calculate how participation and costs would change because data are not available to determine how many students would qualify under adjusted guidelines and how many of those who qualify would actually participate. Determining the relationship between income and participation in school meals would require the collection of detailed household and individual-level data regarding income, benefits, and meal participation. At present, USDA requires school food authorities and states to provide aggregate data.<sup>30</sup> The underlying assumptions of such an analysis could also have a substantial effect on the results. The data source (e.g., RPP vs. SPM) would be important in determining potential outcomes of geographic adjustments, as would how that data source is used. The factors that could affect the outcome of geographic adjustments are summarized in table 4. Given that there are a number of

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<sup>29</sup> Alisha Coleman-Jensen, et al., *Household Food Security In the United States In 2012*, USDA-Economic Research Service, Report Number 155, September 2013.

<sup>30</sup> In order to determine how much actual participation in school meals, and therefore actual costs, would change, it is necessary to know how a change in eligibility translates into a change in participation. Not all eligible children participate and this may vary by income level; for instance, it might be that the poorer the household, the more likely the child is to participate in school lunch. If higher-income children participate at lower rates than children from the poorest households, increasing the eligibility threshold may not increase participation proportionally. There is some empirical evidence that shows that participation varies by income level. See, Mathematica Policy Research Inc., *Factors Associated With School Meal Participation and the Relationship Between Different Participation Measures*, a report conducted for USDA's Economic Research Service, June 2009 and USDA, Food and Nutrition Service, *School Nutrition Dietary Assessment Study-III: Volume II: Student Participation and Dietary Intakes*, November 2007.

possible implementation scenarios, we concluded that conducting a comprehensive simulation would be data and time intensive.

**Table 4: Factors That Could Affect the Outcome of Geographic Adjustments**

Factor affecting outcome	Description	Potential effect
Which method used	Regional Price Parities and the Supplemental Poverty Measure could lead to different cost-of-living adjustments being made in some areas.	Total eligibility may increase or decrease; effect may be completely different in some states depending on method.
Hold harmless implementation	Allows for eligibility to increase in areas with higher cost of living, but not decrease in lower cost-of-living areas.	Potential increase in total eligibility, participation, and costs.
Implementation that causes some children to become ineligible	Allows for eligibility to increase in higher cost-of-living areas and decrease in lower cost-of-living areas.	Could negatively affect food security for those in lower cost of living areas.
Likelihood of newly eligible students to participate unknown	How students at different levels along the income spectrum participate in school lunch is not entirely clear.	Changes in participation unknown.
Interaction with existing policy		Could mitigate decreased eligibility in some areas or amplify decreases to eligibility in others.

Source: GAO | GAO-14-557.

Other sources of data that could shed light on potential participation and cost implications of geographic adjustments to school meals have limitations. For instance, in a study conducted by the National Research Council on the feasibility of determining school meal eligibility on a community basis using the ACS household data, the National Research Council determined that ACS data lead to systematic underestimation of eligibility, sometimes by as much as 20 percent in high-poverty districts.<sup>31</sup> The study shows that the data in the ACS would be insufficient for

<sup>31</sup> The National Research Council researchers noted that ACS data do not cover all migrant children nor do they account for the presence of charter or private schools that affect the composition of public school student bodies.

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Interaction with Current Policies

determining school meal eligibility.<sup>32</sup> These same limitations would likely apply if ACS data were used in a simulation of adjusting school meal eligibility for geographic cost-of-living differences. Lack of individual-level data presents a significant limitation for any detailed assessment of the effect of geographic adjustment on school meals.

Determining the effect of geographic adjustment on school meal eligibility and participation is further complicated by the existence of a number of federal, state, and local policies that could either dampen or amplify the effects of any changes. For instance, children from households receiving SNAP or TANF benefits; or who are foster children, migrants, or runaways; or who receive food from the Food Distribution Program on Indian Reservations are considered to be categorically eligible for free school meals. In the 2012-2013 school year 14.7 million children were identified as categorically eligible for free or reduced-price meals. Depending on how geographic adjustments to school meal eligibility were set up, access to free meals for those children who are categorically eligible might not be affected at all. This would tend to dampen the effect of adjustments to eligibility thresholds based on geographic cost of living differences.

USDA's Provision 2, Provision 3, and the Community Eligibility Provision (CEP), under which schools that meet certain conditions provide all children a free meal, would also affect and be affected by the outcome of geographic adjustments. Because schools are most likely to find it in their interest to participate in Provision 2 and Provision 3 if they serve high-poverty populations and typically serve a large portion of meals free of charge, a change to eligibility guidelines could affect the decision of schools to participate. In some cases, if the percentage of children in a school that are eligible for free or reduced-price meals increases, a school might choose to participate as a Provision 2 or 3 school. Conversely, if the income eligibility amounts were lowered and some children no longer qualified based on household income, this would decrease the percentage of children in a school eligible for free or reduced-price meals and it could cause a school to reconsider its participation as a Provision 2 or 3 school. Meanwhile, participation in CEP depends on the number of children in the schools that are directly certified, meaning that they are both categorically eligible and certified without the need to fill out a separate school meal application. In the

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<sup>32</sup> The ACS does not ask any questions about school meal participation.

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absence of a geographic adjustment to the eligibility criteria for programs affecting categorical eligibility, a school participating in the CEP would be unaffected by a geographic cost-of-living adjustment to school meal eligibility criteria. USDA reported that in the 2011-2012 school year 7,176 schools participated as Provision 2 or Provision 3. Also, according to USDA officials 3,999 schools participated in CEP in the 2013-2014 school year.<sup>33</sup> This number is likely to grow in the near term through expanded use of direct certification and availability of the CEP.<sup>34</sup>

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## The Cost of Delivering School Meals Varies by Geographic Region, but the Usefulness of Existing Data to Adjust Reimbursements for These Differences Is Unclear

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### School Foodservice Costs Can Vary Depending on School Size, School District Decisions, and Location

USDA studies have shown that there are multiple cost drivers that affect schools' foodservice costs differently. FNS reported in its school lunch and breakfast cost study that the mean labor cost per breakfast reflected lower breakfast labor costs per meal in school districts serving larger numbers of reimbursable breakfasts. According to the study, "As the number of breakfasts served increases, labor cost per breakfast

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<sup>33</sup> The CEP count may include some schools who previously participated as Provision 2 or 3.

<sup>34</sup> As required by law, states have been expanding direct certification with the goal of directly certifying 95 percent of SNAP categorically-eligible children in each state. 42 U.S.C. § 1758(b)(4)(F)(i)(III). Additionally, the CEP is continuing to be rolled out and must be available to every state by July 1, 2014. 42 U.S.C. § 1759a(a)(1)(F)(vii) – (x). According to USDA data, as many as 15 percent of school districts nationwide might be able to participate in CEP at a district level.

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decreases.” A prior FNS cost study report also stated that larger school districts may purchase greater volumes of food and get better food prices than smaller districts.<sup>35</sup> ERS reported that the use of foodservice management companies and school district size with associated economies of scale could influence meal costs, stating that, “Knowing the numbers of school districts that use foodservice management companies or the different mixes of larger and smaller school districts in different parts of the country could help explain per-meal cost differences across locations.”<sup>36</sup> In fact, ERS found that, the sizes of the school districts are associated with economies of scale, which leads to differences between urban school districts, which are the largest school districts, and rural school districts, which are the smallest. Thus, costs per meal are lower in the far larger school districts and higher in the smaller school districts. The ERS analysis also shows that the mix of breakfasts and lunches served contributed to differences in foodservice costs per meal across locations.

Because differences in actual school foodservice costs may be affected by school district decisions and practices as reported by USDA, such costs may not be appropriate for making adjustments to reimbursement rates. School district decisions—including how to staff their school meal programs, the quality of food purchased, where they purchase food, and the extent to which they purchase already prepared foods versus ingredients that then must be prepared by school foodservice staff, among others—can affect costs. As we have previously reported, data that can be influenced or controlled by program beneficiaries should not be used in funding formulas, because it can introduce disincentives into a program.<sup>37</sup> In this case, reimbursing schools based on actual costs might give schools an incentive to make higher-cost decisions since their costs would be covered by increased reimbursements. However, to the extent that school districts face different food prices and wage costs depending on their geographic location, data on how these costs vary by location could be used to adjust reimbursements for geographic differences.

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<sup>35</sup> See, USDA, FNS, Office of Analysis and Evaluation, *School Lunch and Breakfast Cost Study, Final Report* (October 1994).

<sup>36</sup> See, USDA, Economic Research Service, *School Foodservice Costs: Location Matters* (May 2011).

<sup>37</sup> See GAO, *Older Americans Act: Options to Better Target Need and Improve Equity*, [GAO-13-74](#) (Washington D.C.: Nov. 30, 2012).

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## Existing Data on Food, Labor, and Other Food-Establishment Prices May Not Reflect Costs Incurred by School Foodservice Programs

Only one federal, nationally-representative source—the RPP index for food goods—adjusts for geographic variation in the price of food, but it may not reflect school food items and the mix of items used.<sup>38</sup> The RPP index uses food items from the CPI “food at home” data series for food expenditures at grocery stores, which includes food items that would not typically be used for children’s school meals or may not meet the competitive food nutrition standards, such as carbonated drinks, baby food, candy, chewing gum, and coffee.<sup>39</sup> In addition, USDA requires schools to choose items from specific food categories that may not be included in the RPP index. The relative quantities of different food items included in the index may also differ from the mix of foods used by a school foodservice. USDA prescribes daily and/or weekly requirements for serving sizes and number of servings of fruits and vegetables (including vegetable subgroups), grains, milk, meat, and meat alternatives. USDA also prescribes calorie ranges and limits on saturated fats, sodium, and trans-fats. Further, RPPs use weights for food items based on U.S. Consumer Expenditure Survey data, which may not correspond to the food bought by schools to satisfy USDA’s requirements.

At the same time, because the ways in which schools are able to buy food differs from the ways households do, the prices schools and individual households pay are not comparable. First, because schools buy greater volumes than an average household, the prices they pay are likely lower. Second, schools may purchase food in a variety of ways, including (1) directly from manufacturers, (2) through brokers, (3) from distributors, or (4) through a foodservice management company that procures food for them. Some schools even participate in multi-school

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<sup>38</sup> USDA has established the Price Index for Foods Used in Schools and Institutions, which is used to annually adjust the national average value of donated food assistance given to states for each lunch served. The Price Index is computed using five major food components in the BLS Producer Price Index (cereal and bakery goods; meats, poultry and fish; dairy; processed fruits and vegetables; and fats and oils). However, the data from the Producer Price Index are only available at the national level.

<sup>39</sup> As of July 1, 2014, any food sold on a school campus during the school day, outside of the school meal programs, must meet the competitive food nutrition standards. *National School Lunch Program and School Breakfast Program: Nutrition Standards for All Foods Sold In School as Required by the Healthy, Hunger-Free Kids Act of 2010*, 78 Fed. Reg. 39,068 (June 28, 2013) (codified at 7 C.F.R. pts. 210 and 220). Under regulations in effect until June 30, 2014, foods of minimal nutritional value could not be sold in food service areas during breakfast or lunch periods.

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food buying cooperatives, which can also reduce food prices.<sup>40</sup> Further, states and schools use USDA entitlement dollars to purchase foods for which USDA has contracted with manufacturers through a competitive bidding process.<sup>41</sup> Such USDA foods account for 15 to 20 percent of food served in school meals. Schools may also use their USDA entitlement dollars and other funds to purchase fresh produce through a program with the Department of Defense. Despite differences in the composition of the index and the composition of school lunch purchasing patterns, if the prices of the foods in the index vary by geographic region in a way that is similar to variations in the prices of foods purchased by school meals, the index could be a reasonable proxy for school foodservice cost differences. However, given our review of the various factors that affect school meal costs and the differences in foodservice purchasing patterns, it is unclear how well the RPP would reflect school foodservice costs.

Similarly, available geographic foodservice wage data may not reflect costs for school foodservice labor. For example, BLS data from its Occupational Employment Statistics survey includes average hourly wage data for Food Preparation and Serving Related Occupations at state and sub-state geographic areas. These data represent a broad labor pool from which a school could draw for foodservice workers and therefore include some types of foodservice establishments that differ from schools. According to BLS, school foodservice workers may have more regular hours than workers at other foodservice establishments and work only during the school year, which is usually 9 to 10 months. Other foodservice establishment workers may have work shifts that include late evenings, weekends, and holidays. The BLS-defined labor pool also includes a much larger proportion of workers aged 16 to 19 years—persons who might not be available to work during school hours—compared with other occupations. There may also be differences in part-time and full-time employment opportunities for school foodservices and other foodservice establishments, which could affect wages. For example, BLS reports that about half of all foodservice workers were employed part-time and half

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<sup>40</sup> For various procurement methods, see National Food Service Management Institute, *Orientation to School Nutrition Management, Procurement and Inventory Management* (2013).

<sup>41</sup> Each state is assigned its entitlement amount annually, based on the total number of lunches served the previous year. This amount has a dollar value and functions as an account against which states can draw from a list of available offerings. Many states also allow local school districts to select among the available offerings.

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were employed full-time. On a national basis, BLS indicates that the hourly mean wage for foodservice workers at elementary and secondary schools is higher than for restaurants and other eating places, although it points out that the best job opportunities are at upscale restaurants.

In addition to the separate indexes for food and labor costs, geographic food establishment price data can be used to measure the price of a meal, but these data may not reflect meals provided in schools. The RPP food service data are derived from prices from cafeterias (including schools), restaurants, and vending. However, to the extent that institutions other than schools provide food items, portions, and levels of service that differ significantly from those in schools, the index may not accurately reflect school foodservice costs.<sup>42</sup> For example, unlike restaurants, participating schools must adhere to federal school meal nutritional standards and calorie limits and serve food items from specific food categories.<sup>43</sup> The RPP food service data may also be influenced by the mix of types of foodservice establishments in a geographic area (e.g., number of fast food versus full-service restaurants), whereas the school meal requirements for categories of foods and portions are the same throughout the country. Another difference between schools and some foodservice establishments may be how costs for rent, utilities, and custodial services are covered. USDA reported in its school lunch and breakfast cost study that most school districts incur some costs in support of their foodservice operations that are not charged to the foodservice budget.<sup>44</sup> Other foodservice establishments, such as restaurants, may have to cover the full cost of their foodservice.

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<sup>42</sup> Nonetheless, the national average USDA school reimbursement rates are adjusted annually for changes in the CPI, Food Away From Home series, from which the RPPs for food service are based. Although the CPI may provide a national measure of overall changes in meals prices among foodservice establishments, the CPI does not measure differences between cities.

<sup>43</sup> For more information on implementing nutrition standards, see GAO, *School Lunch: Implementing Nutrition Changes Was Challenging and Clarification of Oversight Requirements Is Needed*, [GAO-14-104](#) (Washington, D.C.: Jan. 28, 2014).

<sup>44</sup> USDA reported that in school year 2005-2006, these unreported costs accounted for an average of 19 percent of school districts' full cost of foodservice. USDA, *School Lunch and Breakfast Cost Study-II*.



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## Making Geographic Adjustments to Reimbursements Based on Existing Data Sources May Be Affected by Other Factors

The effect of adjusting reimbursements for geographic differences in prices and costs would differ depending on the index used. While we have determined that available data sources may not necessarily reflect particular aspects of school foodservice programs, we believe it is instructive to illustrate the potential effect of adjusting school meals for geographic price differences, using available data. We compared two different methodologies and computed the changes that would have occurred to the \$2.93 free lunch reimbursement rate in each state for the 2013-2014 school year. (See fig. 3.) Our analysis assumes that states with costs equal to the national average would see no change in their reimbursements, but those with above-average costs would experience an increase in reimbursements and those with below-average costs would experience a decrease. First, we used the RPP food service index, which shows the geographic variation in the price of meals, such as those served at restaurants. Applying the RPP food services index, the adjustments would range from a \$0.42 decrease in Kansas to a \$0.38 increase in Maryland. Second, we created a state-level composite index using RPP food goods data and BLS hourly wage data for Food Preparation and Serving Related Occupations.<sup>45</sup> The food and labor components were weighted based on the average percentage of food and labor costs of total foodservice costs that schools reported in USDA's school lunch and breakfast cost study, which uses data from a national sample of schools.<sup>46</sup> (See app. I for additional detail on our methodology.) Applying the composite food and wage index, states would see a change in reimbursements ranging from a \$0.22 decrease in South Dakota to a \$0.53 increase in the District of Columbia. Using either method, reimbursement rates would go down in most states, particularly in the South and Midwest, while reimbursement rates would go up for most states in the Northeast and for California.

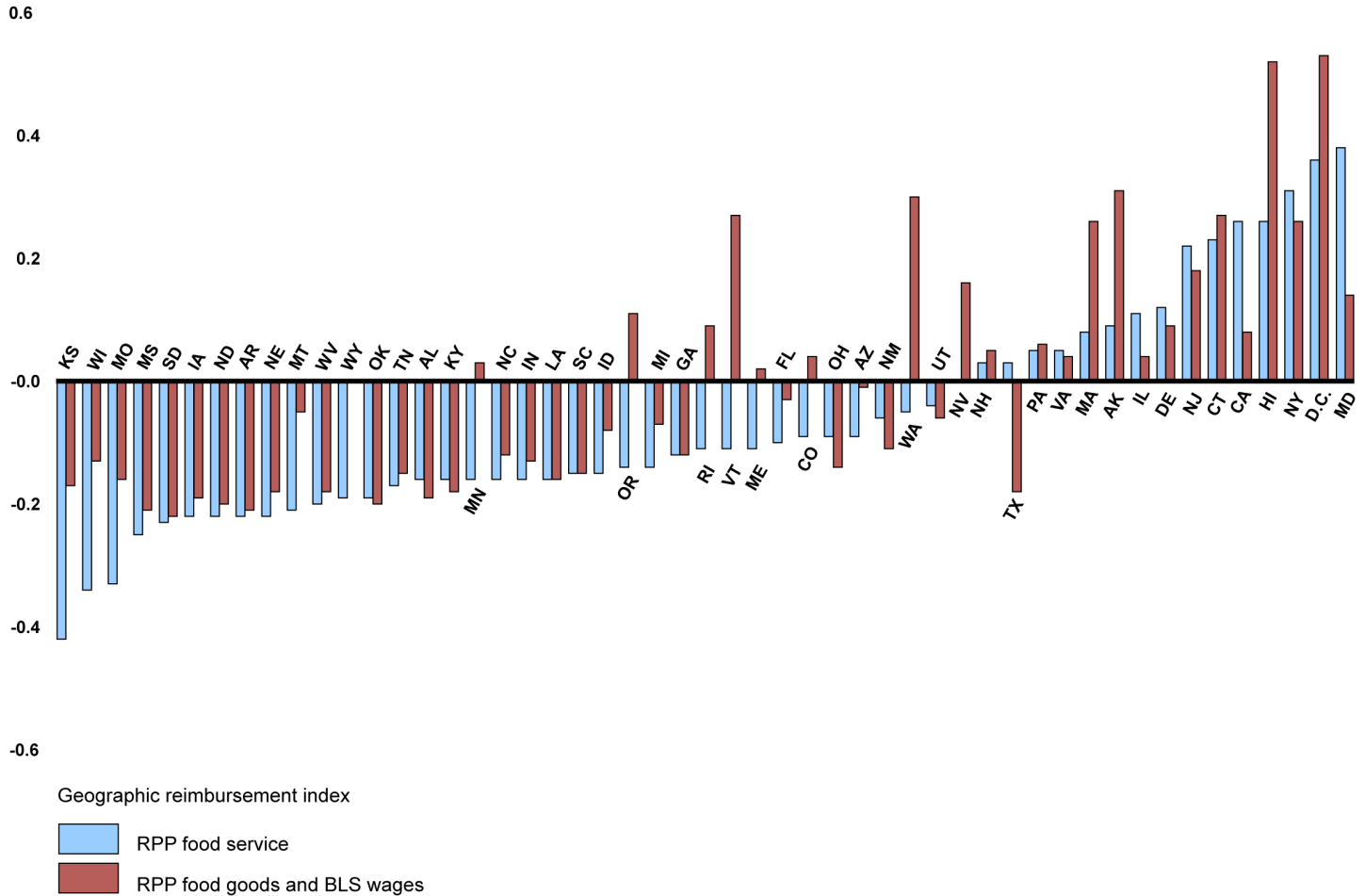
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<sup>45</sup> USDA used a similar methodology to establish the reimbursement adjustments for Alaska and Hawaii in 1979 and 1981, respectively. However, USDA used the Thrifty Food Plan for food values and the County Business Patterns data for labor costs. We did not use either the Thrifty Food Plan, since data are not available for all states, or the County Business Patterns data, since it does not provide an hourly wage for occupational categories.

<sup>46</sup> These proportions may differ among schools by geographic area, which are not reflected in our computations. An alternative to using a composite food and labor index would be to use just one component to make partial adjustments.

**Figure 3: Example of Changes to the 2013-2014 School Free Lunch \$2.93 Reimbursement Rate by State Using Two Methods (Sorted by the Regional Price Parities Food Service Index)**

Changes to school meal reimbursement (in dollars)



Source: GAO analysis of Bureau of Economic Analysis' Regional Price Parities (RPP) for food goods and services data for 2006 – 2010 and Bureau of Labor Statistics (BLS) wage data for Food Preparation and Serving Related Occupations as of May 2010. | GAO-14-557

Notes: Changes for Alaska and Hawaii are relative to the national average and do not consider current Alaska and Hawaii reimbursement rates. These changes in reimbursement rates are presented for illustrative purposes only and should not be considered the actual changes that would occur if reimbursement rates were adjusted for geographic differences.

For most states, the two indexes track in the same direction; that is, both indexes go up for a state or both indexes go down for a state. However, in eight states, one index showed an increase, while the other index showed a decrease in the reimbursement rate. For example, in Washington State, the composite food and wage index would increase the free lunch

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reimbursement rate by \$0.30, while the RPP food services index would reduce the reimbursement rate by \$0.05. Further analysis would be needed to determine why the two indexes provided different results for such states.

Although the indexes show increases and decreases in reimbursement rates compared to a national average, the effect on overall program costs would depend on how the adjustments were implemented. For example, even if reimbursements were adjusted up or down relative to a national average of \$2.93 for a free school lunch in our example, the overall reimbursement costs would depend on how many meals are served by each school in each local area and the change in reimbursement rates that apply to that local area. If, on the other hand, the adjustments were made under a hold-harmless scenario, where there would be no adjustments for local areas where costs were below the national average and only those local areas with higher than average costs would have their rates adjusted, the overall cost of the program would increase.

State-level adjustments may mask differences within states. BLS wage data are not available for all areas within states. However, where BLS wage data for the Food Preparation and Serving Related Occupations are available for some sub-state areas, the data show variation within states. For example, in California, the May 2010, hourly mean wage for the Food Preparation and Serving Related Occupations was \$9.69 in the Chico area, but was \$12.40 in the San Francisco-San Mateo- Redwood City Metropolitan Division. Similarly, in Illinois, the May 2010, BLS hourly mean wage for the Food Preparation and Serving Related Occupations in the Cape Girardeau-Jackson, MO-IL area was \$8.99 while the hourly mean wage in the Bloomington-Normal area was \$10.33. The RPP data on food expenditures for goods and services are not reported for sub-state areas. However, the overall RPP cost of living index that includes food, housing, and clothing, among other items, shows that there is variation in prices within states, which suggests that the RPP food expenditures within states could also vary. Further, both the USDA's ERS simulation of school per-meal costs and a BEA analysis of RPP food goods and services also show price differences among urban, suburban,

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and rural categories.<sup>47</sup> Without price data that cover all areas within states, the state-level average adjustments would be higher than prices faced in some parts of a state and lower than prices faced in other parts of a state.

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## Existing Federal and State Policies Offer Eligibility and Reimbursement Flexibility

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### Existing USDA Policies Can Be Used to Expand Access to Free School Meals for All Children

Schools participating as Provision 2, Provision 3, or under the Community Eligibility Provision (CEP) provide free school meals for all children, which can increase access for children who would not otherwise qualify for free meals based on their household income. These provisions are available for both breakfast and lunch. USDA has encouraged the use of such provisions to expand program participation as a way to eliminate the possible financial burden for children, so that any child can participate regardless of income.<sup>48</sup> According to USDA, many schools find that using Provision 2 or 3 at breakfast increases participation so drastically that they do not actually realize a loss from otherwise paying students. In addition, schools can save on administrative costs due to reduced application burdens, as well as simplified meal counting and claiming procedures. Because school districts are responsible for covering the cost of providing free meals to all students not covered by federal reimbursement, they must determine if it is in their financial interest to use

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<sup>47</sup> ERS simulated meal costs in the 2002-2003 school year and found that average per meal costs ranged from \$2.22 in the FNS Southwest Region to \$2.93 in the Mid Atlantic Region. The report made some effort to include a quality measure in its analysis, although the report states that its findings did not answer the question of whether USDA reimbursement is sufficient to produce a nutritious meal, and the report did not consider school district revenues in its analysis. U.S. Department of Agriculture, Economic Research Service, *School Foodservice Costs: Location Matters* ERR-117 (May 2011).

<sup>48</sup> For example, see USDA, *Strategies for Expanding School Breakfast Program Access* (undated), [http://www.fns.usda.gov/sites/default/files/toolkit\\_expandingaccess.pdf](http://www.fns.usda.gov/sites/default/files/toolkit_expandingaccess.pdf). Provisions 2 and 3 can be implemented for the School Breakfast programs only, whereas Community Eligibility requires the participating school to also include the National School Lunch Program.

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such provisions. USDA has found that schools most likely to find it in their financial interest to use Provision 2 or Provision 3 are those schools that serve high-poverty populations and typically serve a large proportion of their meals free of charge. The CEP is intended for schools in high-poverty areas and requires a minimum percentage of students certified for free meals in order for a school to participate. A recent evaluation of the implementation of the CEP in its first 2 years found that participating school districts had increased breakfast and lunch program participation and federal reimbursements, as well as administrative cost savings.<sup>49</sup> As the CEP becomes available in all states, additional school districts may participate.<sup>50</sup> USDA data show that 15 percent of school districts may be eligible for the CEP.<sup>51</sup>

Eligibility for free school meals may also be expanded through increased participation in other federal programs. Children who are from households receiving SNAP or TANF benefits, or who receive food from the Food Distribution Program on Indian Reservations are considered to be “categorically eligible” for free school meals.<sup>52</sup> To the extent that states have the flexibility to expand eligibility for these other programs, eligibility for school meals through categorical eligibility may increase.

State and school district efforts to directly certify children who are categorically eligible may also increase access/enrollment for free school meals. In an effort to ensure that these children have access to free school meals and to reduce the paperwork burden on eligible families, USDA requires states to set up systems that directly certify categorically-

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<sup>49</sup> Abt Associates, *Community Eligibility Provision, USDA Nutrition Assistance Program Report*, Food and Nutrition Service, Office of Policy Support, a report prepared for USDA, February 2014.

<sup>50</sup> The Healthy, Hunger-Free Kids Act of 2010 requires CEP to be available to schools in all states by July 1, 2014. Pub. L. No. 111-296, § 104, 124 Stat. 3183, 3193 (codified at 42 U.S.C. § 1759a(a)(1)(F)(x)).

<sup>51</sup> Individual schools may also be eligible for CEP.

<sup>52</sup> While the federal gross income-eligibility for SNAP aligns with that for free school meals, we previously found that 27 states had provisions that increased SNAP gross income eligibility limits between 160 and 200 percent of the federal poverty guidelines. As a result, some children from households receiving SNAP would qualify for free school meals even though their household income was greater than 130 percent poverty guidelines limit for free school meals. See GAO, *Supplemental Nutrition Assistance Program: Improved Oversight of State Eligibility Expansions Needed*, [GAO-12-670](#) (Washington, D.C.: July 26, 2012).

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eligible children by obtaining information from SNAP records. This system requires no action by a child's parents or guardians to have the school district recognize the child as eligible for free meals. According to USDA, many states and school districts directly certify eligible children through computer matching of SNAP, TANF, and the Food Distribution Program on Indian Reservations records against student enrollment lists. This reduces the practice of states sending letters to SNAP, TANF, and the Food Distribution Program on Indian Reservations households with school-age children, which the households then needed to forward to their children's schools. The Healthy, Hunger-Free Kids Act of 2010 mandated an expansion of direct certification with the goal of directly certifying 95 percent of all SNAP categorically-eligible children in each state.<sup>53</sup>

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### USDA Has Discretionary Authority to Adjust Reimbursement Rates for Geographic Differences in Alaska, Hawaii, and U.S. Territories

USDA has discretionary authority to adjust reimbursement rates for Alaska, Hawaii, Guam, American Samoa, Puerto Rico, the U.S. Virgin Islands, and the Commonwealth of the Northern Mariana Islands to reflect differences between the costs of providing meals in those locations and the costs of providing meals in all other states.<sup>54</sup> USDA used this authority to set higher reimbursement rates for Alaska in 1979 and Hawaii in 1981 and has adjusted these rates annually by the increase in the national average rates.<sup>55</sup> In 2007, Puerto Rico requested higher reimbursement rates; however, USDA declined the request because, although Puerto Rico had somewhat higher than average food and labor costs when compared to the continental states, its costs were within the range of those of the continental states.

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<sup>53</sup> Pub.L. No. 111-296, § 101(b), 124 Stat. 3183, 3186 (codified at 42 U.S.C. § 1758(b)(4)(F)(i)(III)).

<sup>54</sup> 42 U.S.C. § 1760(f).

<sup>55</sup> At those times, USDA found that costs in Alaska and Hawaii for providing breakfasts and lunches to be substantially higher than the national average. According to USDA at the time there was ample evidence the reimbursement presented financial hardships to schools in Alaska. The number of participating schools and meals served had declined in Alaska and schools had indicated that high costs and financial losses were a factor in their decision to leave the program and additional schools indicated that the same financial problems threatened their ability to continue to offer the program. National School Lunch, School Breakfast and Child Care Food Programs; Payment Rates for the State of Alaska for the Period July 1 – December 31, 1979, 44 Fed. Reg. 60,344 (Oct. 19, 1979). National School Lunch and School Breakfast Programs; Payment Rates for the State of Hawaii for the Period January 1- June 30, 1981, 46 Fed. Reg. 7414 (Jan. 23, 1981).

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## USDA Allows States to Vary Federal School Meal Reimbursement Rates

Although state agencies are paid based on a USDA schedule for meals served by school districts, state agencies are required to annually establish their own per-meal reimbursement rates for school districts in their states. According to USDA, all states currently use the same USDA reimbursement schedule to provide reimbursements to school districts. According to USDA regulations, rates of reimbursement established by state agencies may be assigned at levels based on financial need, except that rates are not to exceed the maximum rates set by USDA.<sup>56</sup> In its Federal Register notice setting school meal reimbursement rates, USDA says that, “These maximum rates are to ensure equitable disbursement of Federal funds to school food authorities.”<sup>57</sup> For the 2013-2014 school year, the maximum reimbursement rate for a free school lunch is \$3.10 in the contiguous states.<sup>58</sup> According to USDA officials, if a state provides federal reimbursement rates up to the maximum rate for some school districts, the state would have to offset this by decreasing rates for some other school districts so that the total federal funding in the state remains the same. Using this flexibility, states could adjust school meal reimbursements to help address cost variations in different parts of the states. According to USDA officials, no states have taken advantage of this ability to adjust federal reimbursement rates within their states.

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## Other State Policies Can Affect Access to Free School Meals and Reimbursement Rates

Some states and localities have expanded access to free school meals. For example, as we reported in July 2009, some school districts had elected to implement programs that eliminated reduced-price meals.<sup>59</sup> In these programs, students qualifying for reduced-price meals were given free meals and state or local governments paid the reduced-price fee (not more than 40 cents for each lunch and 30 cents for each breakfast).

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<sup>56</sup> 7 C.F.R. § 210.7(b).

<sup>57</sup> National School Lunch, Special Milk, and School Breakfast Programs, National Average Payments/Maximum Reimbursement Rates, 78 Fed. Reg. 45178 (July 26, 2013).

<sup>58</sup> For the 2013-2014 school year, the maximum rate plus the 6 cent certification supplement is \$3.16 for a free lunch. This rate is \$0.15 - \$0.23 higher than the free lunch reimbursement rates of \$3.01 for schools that serve 60 percent or more free or reduced-price lunches and receive the 6 cent supplement and the reimbursement rate of \$2.93 for schools that serve less than 60 percent free and reduced-price lunches and do not receive the 6 cent supplement.

<sup>59</sup> See GAO, *School Meal Programs: Experiences of the States and Districts That Eliminated Reduced-price Fees*, [GAO-09-584](#) (Washington, D.C.: July 17, 2009).

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Schools reported increased participation and decreased administrative costs with such programs.

Some states provide additional school meal reimbursement using state funds. For example, California provided \$0.22 for every free or reduced-price meal in the 2013-2014 school year. New York provides additional reimbursement of \$0.06 for each free or paid lunch and \$0.20 for each reduced-price lunch. Neither New York nor California vary the additional state reimbursements for geographic cost differences within their states.

Sources of state funds to support school district meal programs include required state matching funds and other state funds. States are required to provide matching funds to their school meal programs of 30 percent of the funds received by each state under Section 4 of the Richard B. Russell National School Lunch Act during the school year beginning July 1, 1980.<sup>60</sup> For the 2011-2012 school year, the required match from all states totaled \$206 million. However, states reported spending \$548 million to support school meal programs in that year.<sup>61</sup> An example of such expenditures is funds appropriated by a state and used for reimbursing schools on a per-meal basis for meals served.<sup>62</sup> Changes to other government programs, such as SNAP, may also affect eligibility for school meals, since children from SNAP households are automatically eligible for free school meals. For example, if states expand eligibility for SNAP, such as by increasing qualifying income levels, children from households that qualify under the expanded SNAP eligibility would be eligible for free school meals.

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## Concluding Observations

Making geographic adjustments to school meal eligibility thresholds and reimbursement rates is complex and outcomes are difficult to predict. Decisions regarding (1) whether indexes are appropriate to use in making the adjustments; (2) whether adjustments are made at the level of the school district, the state, or other geographic region; and (3) how often adjustments are reassessed to account for changes in the cost of living,

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<sup>60</sup> 42 U.S.C. § 1756(a). If the per capita income of any state is less than the per capita income of the United States, the matching requirements may be decreased. Section 4 of the Richard B. Russell National School Lunch Act is codified at 42 U.S.C. § 1753.

<sup>61</sup> States report on Form FNS-13, Annual Report of State Revenue Matching.

<sup>62</sup> States are not allowed to count revenues used for state salaries or other state level administrative costs.



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food prices, and wages that may affect geographic areas differently could all significantly affect the outcome. While adjusting eligibility could help increase access to free and reduced-price meals in areas where housing and other costs are significantly higher than average, to the extent that cost-of-living differences do not align with measures of need, such as food insecurity, adjusting income eligibility may not achieve greater equity. In addition, if adjustments are made in a way that reallocates limited resources among geographic areas rather than adding to the cost of the program, such changes would likely lead to some children living in lower-cost areas no longer receiving free or reduced-price meals. Likewise, making adjustments to meal reimbursement rates using available data and methods for food price and wage differences may not account for other considerations, such as size of schools, that affect school costs. Other considerations include how to adjust eligibility and reimbursements in geographic areas for which there are limited data on cost of living, food costs, and wages, including some less populated rural areas, as well as U.S. territories and outlying areas.

States are allowed to adjust reimbursements to different areas within the state, which could be used to adjust for differences in foodservice prices. Given that no state presently takes advantage of this and given that there is more room for states to increase their participation in existing federal options designed to expand access to school meals, it seems there are a number of opportunities for states to address both eligibility and reimbursement issues at a state level.

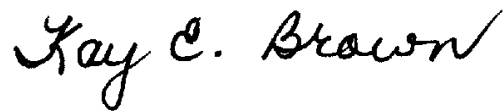
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## Agency Comments

We provided a draft of this report to the Department of Commerce, the Department of Health and Human Services, the Department of Labor, and USDA for review and comment. The agencies did not provide formal comments; however, the Department of Labor and USDA provided technical comments, which we incorporated as appropriate. As part of its technical comments, the Department of Labor expressed concern that our use of the term “cost of living” is not consistent with the very specific meaning of the term as used in economic literature. As we acknowledge in the report, the indexes we discuss do not account for differences in quality of life, and therefore cannot be considered true measures of cost of living. As a result, we consider these indexes—geographic indexes that account for differences in prices of what consumers buy for the same or similar goods and services across areas—to be proxies for the cost of living.

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As agreed with your offices, unless you publicly announce its contents earlier, we plan no further distribution of this report until 30 days from its issue date. At that time we will send copies of this report to relevant congressional committees and other interested parties. In addition, this report will be available at no charge on GAO's website at <http://www.gao.gov>. If you or your staff have any questions concerning this report, please contact me at (202) 512-7215 or [brownke@gao.gov](mailto:brownke@gao.gov). Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made key contributions to this report are listed in appendix II.



Kay E. Brown  
Director, Education, Workforce, and Income Security Issues

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*List of Requesters*

The Honorable Sam Farr  
Ranking Member, Subcommittee on Agriculture, Rural Development Food  
and Drug Administration, and Related Agencies  
Committee on Appropriations  
House of Representatives

The Honorable Xavier Becerra  
House of Representatives

The Honorable Julia Brownley  
House of Representatives

The Honorable Lois Capps  
House of Representatives

The Honorable Tony Cardenas  
House of Representatives

The Honorable Anna G. Eshoo  
House of Representatives

The Honorable Michael M. Honda  
House of Representatives

The Honorable Jared William Huffman  
House of Representatives

The Honorable Zoe Lofgren  
House of Representatives

The Honorable Grace Flores Napolitano  
House of Representatives

The Honorable Lucille Roybal-Allard  
House of Representatives

The Honorable Linda T. Sanchez  
House of Representatives

The Honorable Adam Schiff  
House of Representatives

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The Honorable Jackie Speier  
House of Representatives

The Honorable Mark Takano  
House of Representatives

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# Appendix I: Scope and Methodology

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## Cost of Living Data Sources and Methods

We reviewed government studies and selected academic literature relating to geographic cost-of-living adjustments and interviewed experts from federal agencies, academia, and other organizations. Such studies include a prior GAO report that lists 12 types of methods or data sources that may be used to make cost-of-living adjustments to the federal poverty line.<sup>1</sup> We also reviewed the National Research Council Panel on Poverty and Family Assistance recommendations regarding the measurement of poverty, including making geographic cost-of-living adjustments.<sup>2</sup> In addition, we reviewed the Boskin Commission findings and recommendations relevant to improving cost-of-living indexes.<sup>3</sup> Further, we reviewed peer reviewed journal articles regarding the development and improvement of new methodologies to measure costs of living and geographic differences in those costs.

As part of the Patient Protection and Affordable Care Act, the Department of Health and Human Services (HHS) was required to conduct a study to examine the feasibility and implication of adjusting the application of the federal poverty thresholds for different geographic areas so as to reflect the variations in the cost of living among different areas within the United States. HHS contracted with the Urban Institute to do the study and as part of the study the Urban Institute published a literature review on geographic variation in the cost of living.<sup>4</sup> The Urban Institute identified 12 available approaches for capturing geographic differentials in cost of living and focused its review on the quality of each approach and how it might be used to adjust poverty guidelines for program eligibility. Based on our interviews with the agencies' officials and document reviews we also identified the Lower Living Standard Income Level as another method that is currently used to adjust for geographic cost-of-living differences in a federally-funded program.

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<sup>1</sup> See GAO, *Poverty Measurement: Adjusting for Geographic Cost-of-Living Difference*, [GAO/GGD-95-64](#) (Washington, D.C.: Mar. 9, 1995).

<sup>2</sup> The National Research Council Panel recommended that poverty thresholds be indexed to reflect variation in housing costs across the country, as a "first and partial step" to addressing geographic cost of living differences. See *Measuring Poverty: A New Approach*, C. Citro and R. Michaels (Eds.) (National Academies Press, 1995).

<sup>3</sup> Michael J. Boskin, et al., "The CPI commission: Findings and recommendations," *The American Economic Review*, 87.2 (1997): 78-83.

<sup>4</sup> The Urban Institute, *Geographic Variation in the Cost of Living: Implications for Poverty Guidelines and Program Eligibility Appendix A-C* (May 2013) and *Geographic Variation in the Cost of Living: Literature Review* (submitted to HHS on May 22, 2012).

We evaluated each of the available cost-of-living data sources along six considerations, summarized in the table below to determine which data sources and methods we would further discuss in this report. These considerations emerged from our literature review and are consistent with the findings of an expert panel convened by the Urban Institute in the course of its study for HHS. The considerations are summarized in table 5.

**Table 5: Critical Considerations for Evaluation of Cost of Living Data Sources and Methods**

Consideration	Description
Geographic coverage	Are cost of living measures provided for the whole country? How detailed is the geographic coverage?
Goods included	Are goods relevant to household costs of living included?
Income group sampled	Does the cost-of-living measure reflect or take into account costs for lower income Americans?
Time frames	What time frame do the data cover? How frequently is the measure updated?
Source	Is the source of the data authoritative?
Methodology	Is the methodology transparent? How are potential sources of bias addressed? Are the underlying data reliable?

Source: GAO | GAO-14-557.

In applying these factors, we eliminated from consideration methods that do not (1) cover goods that make a significant contribution to overall costs of living; (2) cover all states and do not include both urban and rural data; (3) are not updated regularly; and (4) do not include lower income individuals in the sampling framework. Our analysis is summarized in tables 6 and 7.

**Table 6: Cost of Living Methods Summarized Along Five of Six Critical Considerations**

Method name	Source	Goods covered	Geographic coverage	Time frame	Income group sampled	Included for further review?	Reason
Cost-of-Living Index <sup>a</sup>	Council for Community and Economic Research; used by researchers and businesses	Broad range	Urban only	Quarterly	Top Income Quintile	No	Only urban, upper income coverage
CEO (Carrillo, Early and Olsen) Index <sup>b</sup>	Academic researchers Carrillo, Early and Olsen	Broad range	Urban plus imputed rural	One time	Top Income Quintile	No	Upper income only; not updated

**Appendix I: Scope and Methodology**

<b>Method name</b>	<b>Source</b>	<b>Goods covered</b>	<b>Geographic coverage</b>	<b>Time frame</b>	<b>Income group sampled</b>	<b>Included for further review?</b>	<b>Reason</b>
Lower Living Standard Income Level <sup>c</sup>	Employment and Training Administration	Broad range	Metro and non-metro	Not updated; adjusted for inflation annually	All (uses 2/3 of median for 4 person family)	No	Outdated; primary series discontinued
Regional Price Parities (RPP) <sup>d</sup>	Bureau of Economic Analysis	Broad range	Metro and non-metro regions in all states	Annual	All (weighted average across all groups)	Yes	Basic standards for considerations met
Supplemental Poverty Measure (SPM) <sup>e</sup>	Census Bureau	Housing	Metropolitan Statistical Area (MSA), states	Annual based on 5 year American Community Survey (ACS)	All (overall median) used)	Yes	Basic standards for considerations met
Self-Sufficiency Standard <sup>f</sup>	Center for Women's Welfare, University of Washington	Broad range	County level for majority of states	Varies	Varies; generally all	Yes	Basic standards for considerations met
Geographic Practice Cost Index <sup>g</sup>	Centers for Medicare and Medicaid Services	Medical practice costs	County data aggregated to 89 areas	Every 3 years	Samples (work, practice, and malpractice costs)	No	Only covers medical practice costs
Economic Policy Institute Family Budgets <sup>h</sup>	Economic Policy Institute	Rent, food, transportation, childcare, taxes, healthcare, other	521 MSAs, 45 MSAs that cross states; one rural area in each state (except RI,NJ)	Some, but not all, data annually updated	Bottom 40% from CE surveys, sampled costs for some goods	Yes	Basic standards for considerations met
Fair Market Rents <sup>i</sup>	Housing and Urban Development	Housing	Metro and non-metro counties	Annual	40th Percentile of gross rents	Yes	Basic standards for considerations met
H+T Affordability Index <sup>j</sup>	Brookings Institution	Housing and transportation	Urban areas only	Varies	"Typical" households	No	Urban only, not updated regularly
Medicare Hospital Wage Index <sup>k</sup>	Centers for Medicare and Medicaid Services	Hospital wages	County, aggregated to 444 areas	Annual	Hospitals	No	Covers medical/hospitals only
Milliman Medical Index <sup>l</sup>	Milliman Consulting	Medical costs	14 cities	Annual	"Typical" employer	No	Covers medical costs only
Occupational Pay Relatives <sup>m</sup>	Bureau of Labor Statistics	Wages	77 Metro areas	Discontinued	Subset of employers	No	Discontinued

Source: GAO | GAO-14-557.

<sup>a</sup>This index was formerly known as the ACCRA Cost of Living Index and is now known simply as the Cost of Living Index (COLI) produced by the Council for Community and Economic Research (C2ER), <http://www.coli.org/AboutIndex.asp>.

<sup>b</sup>Paul Carrillo, et al., A Panel of Price Indices for Housing Services, Other Goods, and All Goods for All Areas in the United States 1982-2010 (2012).

<sup>c</sup>Workforce Investment Act of 1998 (WIA); Lower Living Standard Income Level (LLSIL), 79 Fed. Reg. 17,184 (March 27, 2014).

<sup>d</sup>Bettina Aten, Eric Figueroa, and Troy Martin, Notes on Estimating the Multi-Year Regional Price Parities by 16 Expenditure Categories: 2005-2009, [http://www.bea.gov/papers/pdf/notes\\_on\\_estimating\\_the\\_multi\\_year\\_rpps\\_and\\_appendix\\_tables.pdf](http://www.bea.gov/papers/pdf/notes_on_estimating_the_multi_year_rpps_and_appendix_tables.pdf).

<sup>e</sup>Kathleen Short and Thesia Garner, The Supplemental Poverty Measure: A Joint Project between the Census Bureau and the Bureau of Labor Statistics, presented to the Federal Economic Statistics Advisory Committee (FESAC), June 8, 2012, [http://stats.bls.gov/pir/spm/spm\\_pap\\_joint12.pdf](http://stats.bls.gov/pir/spm/spm_pap_joint12.pdf).

<sup>f</sup><http://www.selfsufficiencystandard.org/>.

<sup>g</sup>A brief overview and Geographic Practice Cost Index data, <http://www.cms.gov/apps/physician-fee-schedule/documentation.aspx>.

<sup>h</sup>Elise Gould, Nicholas Finio, Natalie Sabadish, and Hilary Wething, Economic Policy Institute 2013 Family Budget Calculator: Technical Documentation, EPI Working Paper #297, July 3, 2013, <http://www.epi.org/publication/wp297-2013-family-budget-calculator-technical-documentation/>.

<sup>i</sup>U.S. Department of Housing and Urban Development, Office of Policy Development & Research, Fair Market Rents For The Section 8 Housing Assistance Payments Program, July 2007 (rev.), <http://www.huduser.org/portal/datasets/fmr.html>.

<sup>j</sup><http://htaindex.cnt.org/about.php>.

<sup>k</sup><http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/wageindex.html>.

<sup>l</sup>Christopher S. Girod, Lorraine W. Mayne, and Scott A. Weltz, Susan K. Hart, 2014 Milliman Medical Index, Milliman Research Report, May 20, 2014, <http://www.milliman.com/mmi/>. <http://www.bls.gov/news.release/ncspay.toc.htm>.

<sup>m</sup><http://www.bls.gov/news.release/ncspay.toc.htm>

Next we conducted a review of the source data and estimation methodology underlying the remaining methods. To do this, we reviewed the documentation produced along with the cost-of-living methods and, where questions remained, interviewed individuals involved in creating the estimates. We focused on the source of the data and methodology used to produce the estimate. Table 7 summarizes this analysis.



**Table 7: Summary of Methodology Evaluation for Selected Methods**

Method name		Methodology		
	Description	Economic model/statistical technique	Potential sources of bias/uncertainty	Underlying data quality
Regional Price Parities (RPP)	Inter-area price index that compares prices for a market basket based on BLS Consumer Expenditure Survey (CE) data.	Adjusts Consumer Price Index (CPI) prices with CE weights; uses hedonic methods to control for quality differences (such as packaging, size and outlet for goods; rooms, fixtures, etc. for housing); multilateral aggregation of estimated prices for defined areas. <sup>a</sup>	Analysis of standard errors, namely the difficulty of calculating standard errors for imputed values; cannot construct confidence intervals; increasing sample size for some areas would decrease uncertainty. <sup>b</sup>	Uses CPI prices; adjusts using weights from CE; American Community Survey (ACS) rent data.
Supplemental Poverty Measure (SPM)	Experimental poverty measure that includes food, shelter, clothing, and utilities with deductions for out of pocket medical expenses and taxes.	Thresholds calculated as a function of the sum of expenditures with adjustments for a family of four. Housing component adjusted with ACS median rents. Sets the threshold based on a level of spending that two-thirds of American families are able to achieve or exceed.	Does not adjust for geographic differences in items other than housing; no adjustment for quality differences in goods. Lacking documentation regarding standard errors.	Uses CE expenditure data on food, shelter, clothing, and utilities. Housing costs separated by housing tenure; but uses consumption for all other goods. Uses ACS 5-year average median rent for 2-bedroom apartment to adjust housing component of bundle. <sup>c</sup>
Self-Sufficiency Standard	Defines adequate budget categories for a number of family types and provides average cost for budget items in different areas.	Lacks an underlying statistical or economic model to justify budget weights/amounts. No tests of statistical significance in comparing cost differences. <sup>d</sup>	Data sampling is non-random; no analysis of sampling error or uncertainty. <sup>e</sup>	Data sources vary from place to place; lack of comparable data across locations; small samples.
Economic Policy Institute Family Budgets	Defines adequate budget categories for a number of family types and provides average cost for budget items in different areas. Some costs extrapolated from older data.	Lacks an underlying statistical or economic model to justify budget weights/amounts. No tests of statistical significance in comparing cost differences.	No analysis of sampling error or uncertainty. <sup>f</sup>	Uses Fair Market Rents (FMR) data, which are problematic. Not all data is updated regularly. Some data provided by advocacy organizations.

Method name		Methodology		
	Description	Economic model/statistical technique	Potential sources of bias/uncertainty	Underlying data quality
Fair Market Rents	Administratively determined as the 40th percentile of median rent.	No economic or statistical model to justify use as a cost-of-living index or determination of 40th percentile as relevant statistic.	Random digit dialing has low response rates; responders may differ systematically from non-responders. This may contribute to bias and non-random variation in the final determination.	Data quality and reliability problems. The Department of Housing and Urban Development recommends against using FMRs to adjust for cost-of-living differences. FMR only sample recent movers, and local boards can appeal their FMR determination, all of which lead to the data not being recommended for any purpose beyond the Section 8 program.

Source: GAO | GAO-14-557.

<sup>a</sup>Bettina Aten, et al., Notes on Estimating the Multi-Year Regional Price Parities by 16 Expenditure Categories: 2005-2009, April 2011, BEA Working Paper WP2011-03.

<sup>b</sup>Bettina Aten, et al., Standard Errors in the U.S. Regional Price Parities, BEA Working Paper WP2013-5 (May 10, 2013).

<sup>c</sup>Kathleen Short and Thesia Garner, The SPM: A Joint Project Between the Census Bureau and Bureau of Labor Statistics, (June 8, 2012).

<sup>d</sup>Based on documentation from the Center for Women’s Welfare and interview with developer of standard.

<sup>e</sup>Based on interview with developer of standard.

<sup>f</sup>Elise Gould, Nicholas Finio, Natalie Sabadish, and Hilary Wething, Economic Policy Institute 2013 Family Budget Calculator: Technical Documentation, EPI Working Paper #297, July 3, 2013, <http://www.epi.org/publication/wp297-2013-family-budget-calculator-technical-documentation/>.

We determined that the Regional Price Parities (RPP) and Supplemental Poverty Measure (SPM) best satisfied these considerations and we chose to further discuss in this report how these methods could be used to adjust for variations in the cost of living for U.S. Department of Agriculture (USDA) school meal income eligibility and the implications of doing so. Table 8 provides an example of what the data look like for one state: Illinois. The metropolitan statistical area-level adjustment factors show a range of costs of living around the state (see table 8).

**Table 8: Regional Price Parities (RPP) and Supplemental Poverty Measure (SPM) Data for Illinois**

Metropolitan area	RPP	SPM <sup>a</sup>
Illinois—State metropolitan areas	102.9	86.7
Illinois—State non-metropolitan areas	83.8	84.8
Bloomington-Normal, IL	94.6	93.3
Champaign-Urbana, IL	94.5	93.9
Chicago-Joliet-Naperville, IL-IN-WI	106.0	105.9
Danville, IL	81.0	—
Decatur, IL	91.1	87.7
Davenport-Moline-Rock Island, IA-IL	92.0	89.4
Kankakee-Bradley, IL	99.3	95.3
Peoria, IL	92.8	91.0
Rockford, IL	92.7	92.7
Springfield, IL	93.4	90.7

Sources: Bureau of Economic Analysis data (2006-2010) and Census Bureau data (2005-2009) | GAO-14-557.

<sup>a</sup>Metropolitan statistical area adjustment factor for Illinois ranges from .848 to 1.06; numbers were multiplied by 100 for easier comparison to the RPP.

We interviewed agency officials about the reliability of these data for the purposes of our analysis. We evaluated the data and methodology used to create the RPPs and SPM and found them to be sufficiently reliable for our purposes. This report presents several implications that relate to the appropriateness of applying these measures to geographic adjustment of school meals.

It is important to note that many of the potential data sources we examined were not necessarily intended to be used for the purpose of making geographic cost of living adjustments. Our decision to narrow our focus to RPPs and the SPM should be seen neither as an endorsement or recommendation of these methods, nor as a criticism of the other methods.

**Composite Reimbursement Adjustment Index**

To illustrate the potential effects of adjusting school meal reimbursement for geographic price differences we used two indexes, the RPP food service index and a composite index using labor and food price data. We assembled a food and wage composite index using 2006-2010 RPP data for food goods and 2010 Bureau of Labor Statistics (BLS) hourly wage data for Food Preparation and Serving Related Occupations. Both the RPP data and the BLS data were available at the state and national level.

We used the RPP food goods index for the food component. We then computed a BLS index by dividing each state BLS average wage by the national BLS average wage. We then weighted each index by the proportion of food and labor costs to total food and labor costs, as reported by USDA in its school lunch and breakfast cost study.<sup>5</sup> According to the USDA study, food and labor costs accounted for 90.1 percent of school meal costs of which 45.6 percent was for food and 44.5 percent was for labor.

The food and wage composite index was calculated for each state as follows

$$\left[ \left( \frac{\text{state RPP food goods index}}{100} \right) \times \left( \frac{\text{proportion of average school food costs}}{\text{total proportion of average labor and food costs}} \right) + \left( \frac{\text{state BLS wage}}{\text{national BLS wage}} \right) \times \left( \frac{\text{proportion of labor costs}}{\text{total proportion of labor and food costs}} \right) \right]$$

For example, to determine the composite index for the state of Alabama:

$$\left[ \left( \frac{96.1}{100} \right) \times \left( \frac{45.6}{90.1} \right) + \left( \frac{\$9.16}{\$10.21} \right) \times \left( \frac{44.5}{90.1} \right) \right] = .93$$

To show the change to the free school lunch reimbursement rate, 1.0 was subtracted from the composite index and then multiplied by the 90.1 percent proportion of the \$2.93 free lunch reimbursement rate, as follows

$$\left[ (\text{composite index} - 1) \times (.901 \times \text{lunch reimbursement rate}) \right]$$

To illustrate the change to the free lunch reimbursement rate for Alabama:

$$\left[ (.93 - 1) \times (.901 \times \$2.93) \right] = - \$0.186$$

This illustration shows that in the 2013-2014 school year Alabama schools would have received 18.6 cents less in reimbursement for a lunch served to a child eligible for a free lunch.

<sup>5</sup> USDA, FNS, Office of Research, Nutrition and Analysis, *School Lunch and Breakfast Cost Study-II, Final Report* (2008).

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# Appendix II: GAO Contact and Staff Acknowledgments

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## GAO Contact

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## Staff Acknowledgments

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