

Measuring County Food Stamp Performance

Using the Program Access Index to Analyze California's 58 Counties

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Introduction

As the federal administrator for the Food Stamp Program, the United States Department of Agriculture (USDA) is responsible for ensuring that the program realizes its mission. In order to fulfill this responsibility, USDA each year releases “participation rates” that measure food stamp participation in all 50 states. These participation rates are complex approximations of food stamp participation that factor in a number of variables, including household resources and immigration status, in estimating food stamp eligibility.

While these participation rates may well be the best estimates of performance, they do have their disadvantages. First, the participation rates, because of the complexity of their measures, are often released more than two years after the year in question. Second, USDA only calculates these participation rates at the state level, not for individual counties. Because the Food Stamp Program is administered by counties in California, there is a need for estimates of performance at a county level. Since the complex methodology described above cannot be readily applied at the county level, another USDA measure, the Program Access Index, can meet this need.

We urge readers to avoid comparing the PAI to the well-known participation rate. Many are aware that California’s state *participation rate* is just below 50%. As described below, the Program Access Index is a different measure and should not be compared to the rate. While the PAI has limited comparative use in relation other measures, it is perhaps the most useful tool available for comparing counties to each other.

Program Access Index

The Program Access Index (PAI) is one of the measures USDA Food and Nutrition Service (FNS) uses to assess states’ performance in the administration of the Food Stamp Program. The PAI is simply the ratio of the average number of individuals participating in the Food Stamp Program to the number of individuals income-eligible to participate in each state for a particular calendar year. Because income is the only eligibility measure considered in the index, the PAI can best be seen as a measure of the extent to which low-income people are participating in the Food Stamp Program.

While PAI is an incomplete measure, USDA uses PAI to evaluate and reward food stamp performance, notably the high performance bonuses established in the 2002 Farm Bill.

This report presents a PAI for all California counties. We had to make two modifications to the methodology employed by USDA. First, we had to adjust for limited income data for California's smaller counties. Secondly, we had to make adjustments to USDA's SSI exclusion step to yield a better county comparative measure.

Adjustments for Small Counties

Because of the limited income and poverty data available for smaller counties two different methodologies were used. In California's 40 largest counties we were able to follow the same methodology now employed by USDA, which uses income data from the American Community Survey (ACS). However, in the 18 smaller counties ACS data was not available necessitating an estimation of income data based on the Small Area Income and Poverty Estimates (SAIPE) program and data from the 2000 Census. First, we will present the PAI of the 40 largest counties using USDA's methodology, then we will show the PAI of all California counties using the income approximation described above and finally we will show the merged data from the two separate PAI calculations.

Adjustments for County SSI Populations

In California most SSI recipients are not eligible to receive food stamps. These individuals must be removed from the index. As you'll see in "Step 7" described in the methodology below, we took an approach that uses actual SSI participation data in the counties rather than apply a statewide measure to each county (as had been done previously). While this is certainly an improvement as it allows a more fair comparison between counties, there is a downside. Such an approach artificially raises the PAI. To address this issue, we also provided results using the prior approach. Provided in Appendix A are an alternate set of PAI calculations, which applies USDA's SSI calculation uniformly across all counties.

Further details on these adjustments are provided in the methodology.

Large Counties

These tables provide the PAI and rank for each of California's 40 largest counties, listed alphabetically, using USDA methodology. California has an overall PAI of 0.379 using statewide data and this methodology.

COUNTY	PAI	RANK
Alameda	0.409	19
Butte	0.492	9
Contra Costa	0.366	25
El Dorado	0.399	20
Fresno	0.646	2
Humboldt	0.467	12
Imperial	0.599	3
Kern	0.457	13
Kings	0.457	14
Lake	0.381	23
Los Angeles	0.379	24
Madera	0.382	22
Marin	0.204	37
Mendocino	0.485	10
Merced	0.535	6
Monterey	0.314	28
Napa	0.140	40
Nevada	0.297	30
Orange	0.240	35
Placer	0.306	29

COUNTY	PAI	RANK
Riverside	0.280	31
Sacramento	0.695	1
San Bernardino	0.444	15
San Diego	0.230	36
San Francisco	0.434	16
San Joaquin	0.559	4
San Luis Obispo	0.188	38
San Mateo	0.160	39
Santa Barbara	0.255	32
Santa Clara	0.382	21
Santa Cruz	0.330	26
Shasta	0.431	17
Solano	0.416	18
Sonoma	0.249	33
Stanislaus	0.480	11
Sutter	0.494	8
Tulare	0.558	5
Ventura	0.330	27
Yolo	0.243	34
Yuba	0.529	7

Top 10 Large counties:

COUNTY	PAI	RANK
Sacramento	0.695	1
Fresno	0.646	2
Imperial	0.599	3
San Joaquin	0.559	4
Tulare	0.558	5
Merced	0.535	6
Yuba	0.529	7
Sutter	0.494	8
Butte	0.492	9
Mendocino	0.485	10

Lowest large county performers:

COUNTY	PAI	RANK
Napa	0.140	40
San Mateo	0.160	39
San Luis	0.188	38
Marin	0.204	37
San Diego	0.230	36
Orange	0.240	35
Yolo	0.243	34
Sonoma	0.249	33
Santa Barbara	0.255	32
Riverside	0.280	31

All Counties:

This table provides PAI of all counties using an adapted USDA methodology to estimate income. Counties are listed alphabetically. Using statewide data and this methodology, California has a PAI of 0.388.

COUNTY	PAI	RANK
Alameda	0.422	28
Alpine	0.351	37
Amador	0.301	45
Butte	0.439	22
Calaveras	0.312	42
Colusa	0.368	35
Contra Costa	0.367	36
Del Norte	0.723	1
El Dorado	0.281	47
Fresno	0.650	3
Glenn	0.428	26
Humboldt	0.568	7
Imperial	0.536	11
Inyo	0.401	30
Kern	0.462	19
Kings	0.473	18
Lake	0.399	32
Lassen	0.459	20
Los Angeles	0.372	34
Madera	0.514	13
Marin	0.264	51
Mariposa	0.332	39
Mendocino	0.519	12
Merced	0.622	5
Modoc	0.414	29
Mono	0.151	58
Monterey	0.260	52
Napa	0.250	54
Nevada	0.274	49

COUNTY	PAI	RANK
Orange	0.265	50
Placer	0.311	43
Plumas	0.258	53
Riverside	0.328	41
Sacramento	0.642	4
San Benito	0.435	24
San Bernardino	0.427	27
San Diego	0.245	55
San Francisco	0.435	23
San Joaquin	0.578	6
San Luis Obispo	0.187	56
San Mateo	0.165	57
Santa Barbara	0.328	40
Santa Clara	0.430	25
Santa Cruz	0.336	38
Shasta	0.564	8
Sierra	0.401	31
Siskiyou	0.492	16
Solano	0.495	15
Sonoma	0.281	48
Stanislaus	0.504	14
Sutter	0.540	10
Tehama	0.454	21
Trinity	0.479	17
Tulare	0.544	9
Tuolumne	0.398	33
Ventura	0.297	46
Yolo	0.306	44
Yuba	0.703	2

All counties with merged PAI:

This table shows all counties using the most accurate PAI available. For the largest 40 counties this is the PAI using USDA methodology. For the smallest 18 counties this is the PAI using an adapted USDA methodology to estimate income.

COUNTY	PAI	RANK
Alameda	0.409	27
Alpine*	0.351	38
Amador*	0.301	45
Butte	0.492	11
Calaveras*	0.312	43
Colusa*	0.368	36
Contra Costa	0.366	37
Del Norte*	0.723	1
El Dorado	0.399	30
Fresno	0.646	3
Glenn*	0.428	24
Humboldt	0.467	15
Imperial	0.599	4
Inyo*	0.401	28
Kern	0.457	17
Kings	0.457	18
Lake	0.381	34
Lassen*	0.459	16
Los Angeles	0.379	35
Madera	0.382	33
Marin	0.204	54
Mariposa*	0.332	39
Mendocino	0.485	12
Merced	0.535	7
Modoc*	0.414	26
Mono*	0.151	57
Monterey	0.314	42
Napa	0.140	58
Nevada	0.297	46

COUNTY	PAI	RANK
Orange	0.240	52
Placer	0.306	44
Plumas*	0.258	48
Riverside	0.280	47
Sacramento	0.695	2
San Benito*	0.435	21
San Bernardino	0.444	20
San Diego	0.230	53
San Francisco	0.434	22
San Joaquin	0.559	5
San Luis Obispo	0.188	55
San Mateo	0.160	56
Santa Barbara	0.255	49
Santa Clara	0.382	32
Santa Cruz	0.330	40
Shasta	0.431	23
Sierra*	0.401	29
Siskiyou*	0.492	10
Solano	0.416	25
Sonoma	0.249	50
Stanislaus	0.480	13
Sutter	0.494	9
Tehama*	0.454	19
Trinity*	0.479	14
Tulare	0.558	6
Tuolumne*	0.398	31
Ventura	0.330	41
Yolo	0.243	51
Yuba	0.529	8

* Indicates smaller county with PAI calculated using a modified USDA methodology to estimate income.

Top 15 counties with merged PAI:

COUNTY	PAI	RANK
Del Norte*	0.723	1
Sacramento	0.695	2
Fresno	0.646	3
Imperial	0.599	4
San Joaquin	0.559	5
Tulare	0.558	6
Merced	0.535	7
Yuba	0.529	8
Sutter	0.494	9
Siskiyou*	0.492	10
Butte	0.492	11
Mendocino	0.485	12
Stanislaus	0.480	13
Trinity*	0.479	14
Humboldt	0.467	15

Lowest performers with merged PAI:

COUNTY	PAI	RANK
Napa	0.140	58
Mono*	0.151	57
San Mateo	0.160	56
San Luis Obispo	0.188	55
Marin	0.204	54
San Diego	0.230	53
Orange	0.240	52
Yolo	0.243	51
Sonoma	0.249	50
Santa Barbara	0.255	49
Plumas*	0.258	48
Riverside	0.280	47
Nevada	0.297	46
Amador*	0.301	45
Placer	0.306	44

* Indicates smaller county with PAI calculated using a modified USDA methodology to estimate income.

Methodology:

The following describes the USDA methodology used to calculate PAI for California's largest 40 counties.

Step 1: Determine number of food stamp participants (CY 2006), by summing the monthly counts from January to December 2006 ¹
Step 2: Determine the monthly average of Food Distribution Program on Indian Reservations (FDPIR) participants (CY2006), monthly averages of FDPIR participants were obtained from the USDA Western Region for each of the seven food distribution programs across the state. These numbers were then broken down by county based on estimates by the individual food program directors. Although this method is not exact, FDPIR participation is so low compared to the number of people below 125 percent of poverty that any slight errors in the directors' estimation should be negligible in the determination of PAI. To give a sense of the relative sizes of the populations in question, in 2006 there were 6,210 FDPIR participants and 6,412,322 people below 125 percent of poverty in California.
Step 3: Determine number of disaster assistance participants (CY 2006)
Step 4: Calculate adjusted number of annual participants (CY 2006), subtracting step 3 from step 1
Step 5: Calculate adjusted average monthly participants (CY 2006), dividing step 4 by 12
Step 6: Determine number of individuals with income below 125 percent of poverty, use estimates from 2006 American Community Survey (ACS) ² . Individuals below 125 percent of poverty is used as a proxy for food stamp eligibility because, although food stamp eligibility extends to those below 130 percent of poverty no annual data is available on those below 130 percent of poverty specifically.
Step 7: Determine number of SSI recipients (CY 2006) ³ . In California most SSI recipients are not eligible to receive food stamps. Therefore an adjustment must be made to remove any SSI recipients from the group of individuals below 125 percent of poverty because they should not be considered as part of the eligible population. The difficulty is that there is no county by county data that specifies how many SSI recipients fall below 125 percent of poverty. USDA methodology calculates an adjustment using ACS data. In 2006 this adjustment was 288,303 individuals out of the 1,224,901 receiving SSI in California. This implies that 23.537% of SSI recipients are below 125 percent of poverty. We believe that USDA underestimates the number

¹ California food stamp participation data is available at: <http://www.cdss.ca.gov/research/P352.htm>

² 2006 American Community Survey (ACS) data available at: <http://www.census.gov/acs/www/>

³ California SSI data available at : http://www.ssa.gov/policy/docs/statcomps/ssi_sc/index.html

of SSI recipients below 125 percent of poverty based on prior analyses of the California SSI population by Mathematica and others.⁴ Additionally, due to differences in demographics, the proportion of low income SSI recipients may not be the same in all counties. Therefore, we chose to instead subtract all SSI recipients from the group of individuals below 125 percent of poverty. This results in an underestimation of the eligible population and therefore artificially raises the PAI. Provided in Appendix A are an alternate set of PAI calculations done using the USDA's calculation that 23.537% of California SSI recipients are below the poverty line applied uniformly across all counties.

Step 8: Calculate adjusted number of people below 125 percent of poverty, subtract step 2 and step 7 from step 6

Step 9: Calculate the Program Access Index for 2006, by dividing step 5 by step 8

Step 10: Rank order counties by PAI

The following describes the methodology used to calculate the PAI of all counties, however in the tables showing merged data this methodology was only used for the smallest 18 counties.

Step 1: Determine number of food stamp participants (CY 2006), by summing the monthly counts from January to December 2006

Step 2: Determine number of monthly average FDPIR participants (CY2006), FDPIR numbers were obtained as described above.

Step 3: Determine number of disaster assistance participants (CY 2006)

Step 4: Calculate adjusted number of annual participants (CY 2006), subtracting step 3 from step 1

Step 5: Calculate adjusted average monthly participants (CY 2006), dividing step 4 by 12

Step 6: Determine number of individuals with income below 125 percent of poverty, estimate using 2005 Small Area Income and Poverty Estimates (SAIPE) and 2000 census data. This methodology had to be used because the 2006 ACS does not provide data for California's 18 smallest counties. To estimate the number of people in those counties below 125 percent of poverty we used a combination of 2005 SAIPE (2005 is the most recent year available) and 2000 census data. The number of people in each county below 100 percent of poverty was given by the 2005 SAIPE. Then the ratio of people below 125 percent of poverty to those below 100 percent of poverty for each county was determined using 2000 census data (this was the last year for which data on 125 percent of poverty was available for these small counties). This ratio was then multiplied by the number of people below 100 percent of poverty from the 2005 SAIPE.

⁴ This report can be found at: <http://www.cfpa.net/CashoutinCA2003.pdf>

Although this method is not exact it gives us the best approximation of the number of people living below 125 percent of poverty in these smaller counties. For the larger counties, where we were able to use both methodologies, this proved to give a very close approximation and PAI numbers were for the most part very close.^{5,6}

Step 7: Determine number of SSI recipients (CY 2006)

Step 8: Calculate adjusted number of people below 125 percent of poverty, subtract step 2 and step 7 from step 6

Step 9: Calculate the Program Access Index for 2006, by dividing step 5 by step 8

Step 10: Rank order counties by PAI

⁵ 2005 Small Area income and Poverty Estimates (SAIPE) program data available at: <http://www.census.gov/hhes/www/saipe/tables.html>

⁶ 2000 Census data is available at: <http://factfinder.census.gov/home/saff/main.html?lang=en>

APPENDIX A: PAI with USDA SSI Adjustment

This table shows PAI of all counties using the 23.537% USDA SSI adjustment. It uses merged data from the two methodologies described in the report: the 40 biggest counties use the standard methodology and the 18 smallest counties use the methodology with the SAIPE income adjustment. Additionally, the calculations below subtract only 23.537% of SSI recipients from the group of income eligible individuals rather than the entire SSI population (See Step 7 in description of standard methodology.) Using this alternate SSI adjustment with statewide data California has an overall PAI of 0.321. The reasons for offering this approach are described in the methodology.

COUNTY	PAI	RANK
Alameda	0.332	30
Alpine*	0.323	33
Amador*	0.269	44
Butte	0.403	12
Calaveras*	0.272	43
Colusa*	0.325	32
Contra Costa	0.302	37
Del Norte*	0.562	1
El Dorado	0.331	31
Fresno	0.556	2
Glenn*	0.367	22
Humboldt	0.377	20
Imperial	0.469	5
Inyo*	0.347	28
Kern	0.399	14
Kings	0.407	9
Lake	0.315	35
Lassen*	0.390	17
Los Angeles	0.320	34
Madera	0.348	26
Marin	0.180	54
Mariposa*	0.282	41
Mendocino	0.406	10
Merced	0.467	6
Modoc*	0.351	24
Mono*	0.143	56
Monterey	0.279	42
Napa	0.128	58
Nevada	0.253	46

COUNTY	PAI	RANK
Orange	0.208	51
Placer	0.260	45
Plumas*	0.208	52
Riverside	0.247	47
Sacramento	0.548	3
San Benito*	0.398	15
San Bernardino	0.382	18
San Diego	0.196	53
San Francisco	0.291	39
San Joaquin	0.457	7
San Luis Obispo	0.170	55
San Mateo	0.135	57
Santa Barbara	0.231	48
Santa Clara	0.312	36
Santa Cruz	0.292	38
Shasta	0.350	25
Sierra*	0.348	27
Siskiyou*	0.393	16
Solano	0.352	23
Sonoma	0.218	50
Stanislaus	0.403	11
Sutter	0.402	13
Tehama*	0.375	21
Trinity*	0.377	19
Tulare	0.490	4
Tuolumne*	0.339	29
Ventura	0.288	40
Yolo	0.219	49
Yuba	0.443	8

* Indicates smaller county with PAI calculated using a modified USDA methodology to estimate income.