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Impact of Family Composition and
Benefits for Aged and Disabled**

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UC DATA, University of California, Berkeley**

December 2003



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Abstract

Estimates of the California food stamp participation rate by the United States Department of Agriculture Food and Nutrition Service (USDA/FNS) are significantly biased downwards because they do not appropriately consider two distinctive features of California: its large population of ineligible immigrants and the fact that Supplemental Security Income (SSI) recipients receive food stamp equivalents via California's food stamp cash-out. Whereas USDA/FNS calculates a food stamp participant access rate of 44% for 1999, we estimate a food stamp participation rate of 80% for the same calendar year. Our estimate of the rate for 1999 increases from 44% to 58% due to the exclusion of ineligible immigrants, and from 58% to 80% as a result of the food stamp cash-out for SSI recipients. For 2000 and 2001 we estimate the rates to be 80% and 78%, respectively. Our calculations indicate that using appropriate comparisons, California's participation rates for these years substantially exceed the corresponding national rates.

¹ Eva Y. Seto and Jon Stiles are research analysts at UC DATA, University of California, Berkeley. Henry E. Brady is a Professor of Political Science and Public Policy at the University of California, Berkeley. Points of view or opinions expressed in this document are those of the author(s) and do not necessarily represent the official position or policies of the Regents of the University of California.

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Executive Summary

California's Food Stamp Participation Rate, 1999 - 2001: Impact of Family Composition and Benefits for Aged and Disabled

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Estimates of the California food stamp participation rate by the United States Department of Agriculture Food and Nutrition Service (USDA/FNS) are significantly biased downwards because they do not appropriately consider two distinctive features of California: its large population of ineligible immigrants and the fact that Supplemental Security Income (SSI) recipients receive food stamp equivalents via California's food stamp cash-out.

Two previous estimates of California's participation rate in 1999, one from USDA/FNS directly and one from Mathematica Policy Research, Inc. commissioned by USDA/FNS, were 44% and 52% respectively. Those estimates adjust for California's food stamp cash-out by simply excluding the high participation SSI population from their calculations. Moreover, USDA/FNS includes ineligible non-citizens who cannot participate. Both these factors lead to an underestimate of food stamp participation. We estimate the food stamp participation rate for calendar year 1999 to be 80% by taking more careful account of the ineligible non-citizen population and including the SSI/SSP population into the rate calculation.

For 2000 and 2001 we estimate the rates to be 80% and 78%, respectively. Our calculations indicate that using appropriate comparisons, California's participation rates for these years substantially exceed corresponding national rates.

Food Stamp Participation Rates

<i>California</i>			
	1999	2000	2001
Our calculated rate	80 %	80 %	78 %
USDA/FNS rate	44 %	42 %	40 %
Mathematica rate	52 %	53 %	(not yet available)
Nation Excluding California			
Our calculated rate	60 %	65 %	63 %
United States			
Our calculated rate	63 %	67 %	65 %
USDA/FNS rate	56 %	55 %	54 %
Mathematica rate	58 %	59 %	(not yet available)

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Summary

California's Food Stamp Participation Rate, 1999 - 2001: Impact of Family Composition and Benefits for Aged and Disabled

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Estimates of the California food stamp participation rate by the United States Department of Agriculture Food and Nutrition Service (USDA/FNS) are significantly biased downwards because they do not appropriately consider two distinctive features of California: its large population of ineligible immigrants and the fact that Supplemental Security Income (SSI) recipients receive food stamp equivalents via California's food stamp cash-out. Whereas USDA/FNS calculates a food stamp participant access rate in California of 44% for 1999², we estimate a food stamp participation rate of 80% for the same calendar year. Our estimate of the rate for 1999 increases from 44% to 58% due to the exclusion of ineligible immigrants, and from 58% to 80% as a result of the food stamp cash-out for SSI recipients. For 2000 and 2001 we estimate the rates to be 80% and 78%, respectively. Our calculations indicate that using appropriate comparisons, California's participation rates for these years substantially exceed the corresponding national rates.

Calculating a Food Stamp Participation Rate

The food stamp participation rate (PR) measures how many of those eligible for food stamps actually receive food stamps.

$$PR = \# \text{ Receiving Food Stamps Assistance} / \# \text{ Eligible for Food Stamps Assistance}$$

While it is possible to determine exact counts of those receiving food stamp assistance, it is impossible to determine exactly how many people would be eligible for food stamp assistance. Exact eligibility is determined by a complex set of rules involving income, assets, and citizenship status among other things. In order to accurately calculate a food stamp participation rate, estimates of the eligible population must be made.

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² We use 1999 as a base year for comparing participation rates because this allows us to use the larger sample sizes from the 2000 census microdata to model eligibility for non-citizens. The income and program participation items in the 2000 census use the 1999 calendar year for the reference period.

USDA/FNS calculates a food stamp participation rate by first calculating how many people receive food stamps. Using administrative data they add the number of people participating in either the Food Stamp program or the Food Distribution Program on Indian Reservations (FDPIR).³ The number of people eligible for food stamps is estimated using Census figures of the number of people falling below the poverty threshold minus SSI recipients in poverty.

$$PR_{FNS}^4 = \frac{\# \text{ Receiving Food Stamps} + \# \text{ Receiving FDPIR}}{\# \text{ People in Poverty} - \# \text{ on SSI in Poverty}}$$

Based on this methodology, the **PR_{FNS} for California in 1999 is 44%**.

The USDA hired Mathematica Policy Research, Inc. to estimate a participation rate that takes into account other eligibility criteria, such as citizenship or documentation status. Mathematica's estimate of **PR_{MATH}⁵ for California in 1999 is 52%**.

Neither of these methodologies accurately account for two distinctive features of California which affect food stamp eligibility. The first feature is the large number of ineligible immigrants in the state. The second feature is that in California SSI recipients are not eligible for food stamps. Instead, SSI recipients "cash-out" food stamp benefits and receive additional amounts in their benefits to compensate for food stamps.

Unauthorized Immigrants in California

According to United States Immigration and Naturalization Service (INS) estimates, California is home to more than 2 million unauthorized immigrants. This number is close to one-third of the national population of unauthorized immigrants, and the largest number in any state in the country. Nationally, only 2.5% of the population is unauthorized, while 6.5% of California's population is unauthorized. This is the largest percentage of any state in the country.

To accurately estimate the number of people eligible for food stamps, one must consider the federal restrictions on food stamp eligibility that are based on citizenship or documentation status. Specifically, for non-citizens to be eligible for food stamps they must meet specific requirements. First, they must be a "qualified alien" -- either a Legal Permanent Resident (LPR) or an asylee or refugee. Second, they must meet one of the following criteria: (1) be an LPR with 40 quarters of work, (2) be elderly and lawfully residing in the U.S on August 22, 1996, (3) be a child lawfully residing in the U.S. on August 22, 1996, or (4) be blind or disabled. (These criteria reflect the regulations governing eligibility during 1999, 2000, and 2001. More restrictive criteria were in place

³ FDPIR participants cannot also participate in the Food Stamps program. Since the programs offer similar services and those on Indian Reservations can choose to participate in either program, FDPIR recipients are considered the same as Food Stamp program recipients.

⁴ FNS as a subscript indicates that this is the USDA/FNS calculation.

⁵ MATH as a subscript indicates that this is the Mathematica calculation.

directly prior to 1999, and criteria were made less restrictive effective in 2003). Clearly any estimate of eligibility that includes citizenship and documentation status must consider people's age and year of entry.

Based on estimates of the undocumented population and characteristics of the remaining non-citizens, we adjust the pool of persons in poverty to reflect limitations on eligibility. Our calculations suggest that only a small percentage -- about 5% -- of non-citizens entering the country since 1996 are potentially food stamp eligible. A larger fraction, about 30%, of entrants between 1990 and 1996 could participate in the program, and nearly 67% of non-citizens entering before 1990 could participate.

Using this additional information, we estimate the food stamp participation rate to be:

$$PR_{XNC}^6 = \frac{\# \text{ Receiving Food Stamps} + \# \text{ Receiving FDPIR}}{\# \text{ People in Poverty} - \# \text{ Non-citizen Ineligibles} - \# \text{ on SSI in Poverty}}$$

We estimate this as **PR_{XNC} for 1999 = 54%**.

We can further refine this by considering the additional effect of the presence of an unauthorized immigrant to his/her household. For the purposes of determining the food stamps eligibility of a household containing an unauthorized individual, a portion of the income of unauthorized persons is deemed to the remaining eligible members of the household. The inclusion of this income can make the household food stamp ineligible based on income requirements. Taking this into account we revise our estimate of the food stamp participation rate to be:

$$PR_{XNCH}^7 = \frac{\# \text{ Receiving Food Stamps} + \# \text{ Receiving FDPIR}}{\# \text{ People in Poverty} - \# \text{ Non-citizen Ineligibles} - \# \text{ Removed from Poverty} - \# \text{ on SSI in Poverty}}$$

We estimate this as **PR_{XNCH} for 1999 = 58%**.

SSI and Food Stamp Eligibility in California

In California Supplemental Security Income (SSI) recipients are categorically ineligible for food stamp benefits. Instead their food stamp benefits are "cashed-out" in the form of additional cash. This additional cash benefit can be found in the State Supplementary Payment (SSP).

California is the only state in the country that cashes-out food stamp benefits for SSI recipients. All other states offer food stamp benefits to eligible SSI recipients. California's state supplement to SSI is one of the most generous in the country.

In calculations of the food stamp participation rate for states other than California, those receiving food stamps include many SSI recipients in the numerator who are excluded in

⁶ XNC as a subscript indicates that this is our calculation excluding non-citizens ineligible.

⁷ XNCH as a subscript indicates that this is our calculation excluding ineligible non-citizen households.

California. SSI/SSP recipients in California, who receive a food stamp equivalent, should also be included in the numerator. Based on living arrangements and SSI grant amounts, we estimate that 80% of those receiving SSI/SSP would be food stamp eligible if food stamps weren't cashed-out in California. This more appropriate adjustment treats SSI/SSP recipients in the same fashion as FDPIR recipients and recipients who combine SSI and food stamps in other states.⁸

Estimates of the participation rate by USDA/FNS and Mathematica attempt to adjust for the food stamp cash-out in California by excluding SSI recipients from both the numerator and denominator. This is an inadequate adjustment for two reasons: first, SSI recipients are particularly likely to participate in the food stamp program nationally -- Mathematica's estimates of food stamp participation in households with SSI income are near 100% -- and so their exclusion only in California deflates estimates of participation in California. It also ignores the fact that California SSI recipients receive a benefit explicitly recognized as the equivalent to the food stamp benefit.

Including this adjustment factor we would get:

$$PR_{\text{SUMMARY}}^9 = \frac{\# \text{ Receiving Food Stamps} + \# \text{ Receiving FDPIR} + 80\% \text{ of } \# \text{ Receiving SSP}}{\# \text{ People in Poverty} - \# \text{ Non-citizen Ineligibles} - \# \text{ Removed from Poverty}}$$

This estimated **PR_{SUMMARY} for 1999 is 80 %**.

Food Stamp Participation Estimates for 2000 and 2001

Based on data for 1999, the simple food stamp participation rate (**PR_{FNS}**), differed substantially from more carefully considered estimates. To extend those estimates for later years¹⁰ we looked at changes in each of the components we use: counts of food stamp participants, poverty rates, estimates of the ineligible non-citizen population in poverty, the households of ineligible immigrants, and the population receiving SSI/SSP. The table below reflects the extension of the estimates discussed earlier to 2000 and 2001, considering these factors.

⁸ USDA/FNS inappropriately corrects for CA cash-out of food stamps by excluding from the denominator those who are in poverty and receive SSI (note the second term in the denominator of **PR_{FNS}**).

⁹ SUMMARY as a subscript indicates that this calculation includes all the discussed adjustments.

¹⁰ Estimates of the denominator components (persons in poverty, number of non-citizens by period of entry, poverty status of non-citizens and SSI recipients) for 2000 and 2001 are based on data drawn from the March Supplement to the Current Population Survey for 2001 and 2002. The samples for these surveys are much smaller than the 2000 Census, and the confidence interval around these estimates is larger.

Table 1: Food Stamp Participation Rates for California

California			
	1999	2000	2001
PR _{FNS}	44 %	42 %	40 %
PR _{MATH}	52 %	53 %	(not yet available)
PR _{XNC}	54 %	50 %	48 %
PR _{XNCH}	58 %	57 %	53 %
PR _{XNCH_SSI} ¹¹	58 %	57 %	53 %
PR _{SUMMARY}	80 %	80 %	78 %

In California, counts of food stamp recipients fell fairly steeply from 1999 to 2001: the decline between 1999 and 2000 was about 10%, followed by an additional decline of slightly under 5% between 2000 and 2001. SSI/SSP reciprocity rose slightly during the same period, although the 40,000 person increase in SSI/SSP between 1999 and 2001 is much smaller than the 285,000 person decline in the average number of monthly food stamp participants. The net effect of the declines in these administrative counts which comprise the numerator is to drive down participation rates for each of the estimates.

The denominator also fell during the period, acting to moderate the declines in the numerator and leading to an overall participation rate that fell only slightly. Most significant to the denominator was the slight fall in the poverty rate during this period. While there were increases in the number of ineligible non-citizens, fewer of them were in poverty and the net impact of changes among the non-citizen population in the denominator was small. Generally, the denominator decreased over time due to a falling poverty rate. This decrease in the denominator was not large enough to counteract the accompanying decrease in the numerator and the participation rate fell a small amount during this period.

Comparing California to the Rest of the Nation

The adjustments we have made to California's food stamp participation rate are large in size due to California's disproportionate share of ineligible non-citizens and direct provision of food stamp benefits via the SSI state supplement. Making similar adjustments to the remainder of the nation also affect calculations of the participation rate, but to a lesser degree.

Table 2 below provides estimates of adjusted participation rates for the nation excluding California.¹² As well as the four rates discussed earlier, we calculate an additional participation rate PR_{XNCH_SSI}.¹³ USDA/FNS excludes the SSI population from their

¹¹ XNCH_SSI as a subscript indicates that our calculation excluding SSI recipients, explained later.

¹² We take all other states excluding California together as a whole. While it would be possible to treat each state individually, we have not done so. Preliminary state level participation rates estimated for 1999 correlate highly (0.87) with rates calculated by Mathematica.

¹³
$$PR_{XNCH_SSI} = \frac{\# \text{ Receiving Food Stamps} + \# \text{ Receiving FDPIR} - \# \text{ Receiving SSI and FS}}{\# \text{ People in Poverty} - \# \text{ Non-citizen Ineligibles} - \# \text{ Removed from Poverty} - \# \text{ on SSI in Poverty}}$$

estimates of participation in California.¹⁴ We apply the same approach to other states in order to provide comparable measures of the food stamp participation rate among the non-SSI population. In other states, PR_{XNCH_SSI} is equal to PR_{XNCH} among the non-SSI population. In California, PR_{XNCH_SSI} is equivalent to PR_{XNCH} . While this measure is useful as an illustration of the differences in food stamp participation rate between non-SSI recipients, the rate $PR_{SUMMARY}$ is our preferred measure of the overall food stamp participation. This rate is calculated for a consistent population across states: it includes the high participation SSI recipients and it excludes ineligible non-citizens. It also recognizes the food-stamp benefit incorporated in the SSP payment in California.

Table 2: Food Stamp Participation Rates for the Nation Excluding California

Nation Excluding California			
	1999	2000	2001
PR_{FNS}	58 %	58 %	56 %
PR_{XNC}	60 %	61 %	59 %
PR_{XNCH}	60 %	65 %	63 %
PR_{XNCH_SSI}	55 %	59 %	57 %
$PR_{SUMMARY}$	60 %	65 %	63 %

Table 3 illustrates how our adjustments for SSI recipients and ineligible non-citizens clearly affect California more than the rest of the nation. Without any adjustments, California's participation rate is only 71-76% of the remainder of the country. After our adjustments, California's food stamp participation rate is either similar to (using PR_{XNCH_SSI} which excludes SSI recipients) or exceeds (using the most appropriate measure $PR_{SUMMARY}$) all other states taken together.

Table 3: Ratio of Food Stamp Participation Rates: California Relative to Remainder of Nation

Ratio of California to Remainder of Nation			
	1999	2000	2001
PR_{FNS}	.76	.73	.71
PR_{XNC}	.91	.83	.82
PR_{XNCH}	.96	.87	.84
PR_{XNCH_SSI}	1.06	.96	.93
$PR_{SUMMARY}$	1.32	1.24	1.24

California's rates for the three years 1999 through 2001 exceed national food stamp participation rates by thirteen or more percentage points each year.

¹⁴ Since SSI recipients are barred from receiving food stamps in California and therefore are not counted in the numerator, USDA-FNS excludes SSI recipients in poverty from the denominator as well.

Table 4: National Food Stamp Participation Rates

United States			
	1999	2000	2001
PR_{FNS}	56 %	55 %	54 %
PR_{MATH}	58 %	59 %	(not yet available)
PR_{XNC}	59 %	59 %	58 %
PR_{XNCH}	60 %	63 %	62 %
PR_{XNCH_SSI}	55 %	58 %	56 %
PR_{SUMMARY}	63 %	67 %	65 %

Conclusion

The effect of inappropriately accounting for the high percentage of ineligible non-citizens and the cash-out of food stamp benefits for SSI recipients in California leads to estimates of food stamp participation that are too low. We find that, after making reasonable assumptions, calculations of the food stamp participant access rate by USDA/FNS are only half as large as they should be. A much more appropriate estimate for the food stamp participation rate in California for 1999, 2000, and 2001 would be 80%, 80%, and 78%, respectively. Inclusion of adjustments for ineligible non-citizens also raises participation rates for the remainder of the country, but to a lesser extent. Overall, these adjustments raise California's rate from well below the national average to about 25% above the remainder of the country.

1 Introduction

1.1 The Importance of the Food Stamp Program

The Food Stamp Program is the nation's primary nutrition assistance program and serves over 19 million persons nationally. Annual expenditures in the Food Stamp Program top 18 billion dollars. It is a federal program run by the Food and Nutrition Service (FNS) of the United States Department of Agriculture (USDA), although states bear primary responsibility for administration and eligibility screening.

The Food Stamp program gained additional importance with the passage of the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA). Inherent in that legislation was a change in focus for public assistance in the nation. The government would no longer be focused on simply providing cash assistance but would also encourage reliance on resources obtained through the labor market. With this increased emphasis upon work and time limits, the Food Stamps program would serve as an important safety net for those transitioning between welfare and work.

1.2 Trends in Food Stamp Use

According to administrative records from USDA/FNS, the national food stamp caseload fell substantially from 1996 to 2000. In 1996 the caseload was almost 24 million persons and by 2000 it had fallen to 17 million persons, or by 30%. In California the decline was steeper, falling from 3.1 million persons in 1996 to 1.8 million persons in 2000, or by 42%.

Since 2000 the nation as a whole has been experiencing increased food stamp caseloads, from 17 million to 19 million in 2002, an increase of 12%. However, California caseloads fell between 2000 and 2001 (1.8 million to 1.67 million) and then rose slightly between 2001 and 2002 to 1.71 million. Overall California still experienced a 6% decline in the caseload between 2000 and 2002, one of only 6 states with declines during this period.

1.3 Difference between Need, Eligibility and Approval

This report discusses participation in the food stamp program in terms of access to the program by those who are ELIGIBLE for the program. Many other studies chronicling the use of food stamps discuss how well the program serves those who are in need, or in hunger. By discussing only the use of the program by those who are eligible for it, we bypass the public policy debate over whether the food stamp eligibility rules appropriately target those groups in need of nutrition assistance.

Our report focuses on current eligibility rules as they stand. The restrictions on eligibility are taken as fixed. This includes restrictions on income, assets, and citizenship status among other things. Eligibility criteria are complex, and we do not attempt to assess all criteria.

Our report also does not consider whether eligible populations apply for and are approved for benefits. Those who are eligible for food stamps according to eligibility criteria may choose not to apply for benefits. Without applying for benefits they cannot receive food stamps. Individuals are considered to be eligible for food stamps if they meet financial and citizenship criteria, regardless of whether they would apply for food stamp assistance or not.

1.4 Focus on the Federal Food Stamp Program

This report discusses participation and eligibility in the federal Food Stamp program only. We do not discuss participation in state funded food stamp programs. Until earlier this year when federal eligibility was restored to some groups, the California Food Assistance Program (CFAP) provided assistance to over 30 thousand households in California. CFAP was created in 1997 to provide food stamp benefits to many non-citizens who lost federal food stamp eligibility with the passage of 1996 welfare reform.

1.5. Roadmap to the Report

This report continues by detailing the data and methods we use to better estimate a food stamp participation rate. We provide the context for our calculations -- the rules governing eligibility, the data sources we use, and the formulation of the participation rate -- in Sections 2 through 5. Section 2 details the federal Food Stamp program eligibility rules. Section 3 describes how the distinctiveness of California makes calculating participation rates more challenging. Section 4 defines a food stamp participation rate. The data we use for our calculation are described in Section 5.

In Section 6, we describe in more detail the components we draw on in calculating rates and the assumptions which drive those calculations. In that section we also provide a more appropriate estimate of the food stamp participation rate and contrast that with other estimates. Section 7 describes how these estimated food stamp participation rates changed between 1999 and 2001. Comparisons between California and the rest of the country are presented in Section 8. Section 9 summarizes our conclusions, and Appendix A summarizes the assumptions made in the various calculations presented in this report. Appendices B and C discuss the robustness of our estimates under varying assumptions and selected aspects of Mathematica's approach to modeling participation rates.

2 Food Stamp Eligibility Rules

Federal Food Stamp eligibility is determined through a complex set of criteria based on income, resources, work and citizenship status. These criteria are applied to the entire food stamp household and to the individual members of it. A food stamp household is comprised of the members of a household who share a dwelling, food purchase, and food preparation. The income and resources of these members are considered jointly, although additional eligibility criteria apply to specific members. In some cases, resources and income of household members are not included (for example, resources of Supplemental Security Income (SSI) and Temporary Assistance for Needy Families (TANF) recipients are not counted for the purposes of determining eligibility). In other cases, even though an individual may not be an eligible member of the food stamp household, his or her income and resources are still applied (e.g. through sponsor deeming or the prorating of ineligible non-citizens' income). Income above limits set by the USDA Food & Nutrition Service reduces the food stamp benefit amount. The following sections outline major elements of the eligibility determination process but are not meant to be exhaustive.

2.1 Income Limits

Generally, households must meet two income tests.¹ First, gross income (income pre-tax) must be at or below 130% of the federal poverty line. The federal poverty line is adjusted annually for inflation and depends on household size and composition. Finally, net income, after deductions, must be at or below 100% of the federal poverty line. Deductions are comprised of several components. Each household is allowed a 20% deduction from earned income. Each household is also allowed a standard deduction, typically \$134 per month.² A dependent care deduction is allowed for work, training or education. This deduction is up to \$200 per month for each child under age 2 and \$175 for each other dependent. A deduction for medical expenses in excess of \$35 per month is allowed for elderly or disabled members, as long as these expenses are not paid for by insurance or someone else. An excess shelter deduction of up to \$367 per month is allowed for housing and basic utility costs that exceed more than half of a household's income.

2.2 Resource Limits

Generally, households are limited to \$2000 in countable resources. If the household contains an elderly or disabled member, the limit is increased to \$3000. Resources of SSI recipients are not counted. Only resources other than a home or a lot are considered. Usually this means liquid assets such as cash, bank accounts, and stocks and bonds, as

¹ Households where all members receive TANF or SSI -- the "pure" public assistance households- do not need to meet income tests.

² The amount of the standard deduction depends on what area the household lives in. \$134 per month is the standard deduction for a household of 4 or fewer members living in the 48 contiguous states and the District of Columbia. The standard deduction is higher for Alaska, Hawaii and Guam and lower for the Virgin Islands. The standard deduction is higher for a household of 5 members, and higher still for a household of 6 or more members.

well as the value of vehicles over a certain threshold. The excess value of a vehicle over \$4650 is counted against a household's resource limit.

2.3 Sponsor Deeming

Persons who immigrate to the United States as family members must have a sponsor. This sponsor is required to sign a legally binding affidavit of support. An affidavit of support promises to provide enough financial support to keep the immigrant at or above 125% of poverty. According to Food Stamp regulations, the income and resources of an immigrant's sponsor must be counted as belonging to the immigrant. This is required even if the income and resources are not actually accessible to the immigrant. This sponsor deeming remains in effect until either the immigrant becomes a citizen, the immigrant has 40 quarters of work, or the sponsor dies.

Some adjustments are made to a sponsor's income to determine how much can be deemed to the immigrant. First, twenty percent of income is excluded. Next, the food stamp gross income eligibility limit is subtracted. The amount of the food stamp gross income eligibility limit is determined by the sponsor's household size, presuming that the sponsor and the immigrant live in separate households.³ The remaining income is deemed to the immigrant.⁴ All but \$1500 of a sponsor's resources are deemed to the immigrant. Immigrants must then meet the food stamp income and resource tests after this deeming has occurred in order to be eligible for food stamp benefits.

2.4 Work Requirements

Generally work requirements apply for food stamp recipients, although exemptions are available in certain cases. Able bodied adults between 16 and 60 must register for work, participate in employment or training or work at a referred job in order to continue receiving food stamps. If there are no children in the household, adults older than 17 and younger than 50 cannot receive food stamps for more than 3 months in a 36-month period unless they are working or are exempt. Exemptions to these requirements are generally granted for those who are disabled, pregnant, caring for a young child, or sometimes for school attendance.

2.5 Citizenship Status

All citizens, either native-born or naturalized, of the United States meet the citizenship requirements for food stamps eligibility. Certain non-citizens also meet citizenship status requirements. These include American Indians born in Canada and living in the United States under section 289 of section 4(e) of the Indian Self-Determination and Education Assistance Act, as well as Hmong or Laotian Tribe members whose tribes rendered

³ If the sponsor and the immigrant live in the same household, the sponsor's income would already be considered in determining the immigrant's food stamp eligibility.

⁴ If the sponsor has sponsored multiple immigrants, the amount of deemed income is pro-rated among the sponsored immigrants.

assistance to US personnel by taking part in a military or rescue operation during the Vietnam era.

All other non-citizens must meet specific criteria in order to be eligible for food stamps.

Certain refugees and asylees are eligible during the first seven years they are admitted or granted status. These include (a) refugees admitted under section 207 of the Immigration and Nationality Act (INA), (b) asylees granted asylum under section 208 of the INA, (c) persons whose deportation is being withheld under section 241(b) (3) of the INA, (d) Cuban or Haitian entrant under section 501(e) of the Refugee Education Assistance Act of 1980, or (e) Amerasian immigrants admitted under section 584 of the Foreign Operations, Export Financing and Related Programs Appropriations Act of 1988.

All other non-citizens who entered the country after August 22, 1996 are ineligible for food stamps.

Among those entering the US prior to August 22, 1996, several other categories of legal immigrants are eligible for food stamps. A legal permanent resident who has 40 qualifying quarters of work under the Social Security system is eligible. An elderly individual (born on or before August 22, 1931) or a child under 18 years old that had been lawfully residing in the United States on August 22, 1996 is eligible. Blind or disabled individuals receiving benefits or assistance for their condition as defined under section 3(r) of the Food Stamp Act are eligible, as are individuals lawfully residing in a state and on active duty in the U.S. military or Coast Guard, or an honorably discharged veteran.

Undocumented immigrants, temporary visitors, or qualified aliens who have not been in status for 5 years are ineligible for food stamps.

These criteria reflect the regulations governing eligibility during 1999, 2000, and 2001. More restrictive criteria were in place directly prior to 1999, and criteria were made less restrictive effective in 2003.

3 California Distinctiveness

Two aspects of California's population and eligibility criteria feature prominently in the determination of participation rates. They are discussed in this section.

3.1 Non-Citizens

PRWORA established different tiers of coverage for immigrants based on their date of entry, basis of entry, and citizenship status, while maintaining the pre-existing eligibility rules which preclude participation by foreign-born non-immigrants (e.g. students or temporary workers) and undocumented aliens. The size of these populations in California will substantially impact the calculation of take-up rates. Although California is home to only 12% of the US population, more than 28% of all foreign-born counted in the 2000 Census were California residents, as were 29% of non-citizens. Many of these foreign-born are post-PRWORA entrants. Of immigrants identifying their entry date on or after 1997 in the 2000 and 2001 Census Supplementary Surveys, 20% were residents of California. Undocumented immigrants are even more over-represented in California -- the most recent Immigration and Naturalization Service (INS) estimates suggest that 32% of the undocumented population in January of 2000 resided in California, which also posted the greatest numerical gains among the undocumented population during the 1990's. These figures suggest the distinct position occupied by California with respect to the presence of immigrants barred from food stamp participation.

3.2 Cash-Out of Food Stamps for SSI Recipients

California is the only state in the US which cashes out the food stamp benefit for Supplemental Security Income (SSI) recipients rather than offer them food stamp benefits in its traditional form. Consequently, in California SSI recipients will not appear in administrative counts of food stamp participants.⁵

When SSI became a federal program in the 1970's it replaced several state programs. At the time, the Social Security Administration (SSA) allowed California and several other states to offer additional cash benefits to SSI recipients in lieu of food stamp eligibility. These additional cash benefits were provided for by State Supplementary Payments (SSP). In California, SSP payments are provided to the SSA. SSA provides a single benefit, combining SSP and SSI grants, to SSI recipients.

For a number of reasons, SSI recipients in other states are usually food stamp eligible. First, all households where all members are receiving SSI or TANF are food stamp eligible without having to meet food stamp income tests. SSI benefit amounts are usually low enough to meet income restrictions for other types of households, and SSI recipients

⁵ U.S. Code of Federal Regulations (CFR) Title 7 Section 273.20 states "No individual who receives supplemental security income (SSI) benefits and/or State supplementary payments as a resident of California is eligible to receive food stamp benefits. The Secretary of the Department of Health and Human Services has determined that the SSI payments in California have been specifically increased to include the value of the food stamp allotment."

are exempt from food stamp resource limits. In order to provide rates for California that are comparable to other states, adjustments must be made for these differences.

4 Defining a Food Stamp Participation Rate

The intent behind providing information about participation in the forms of rates is to standardize levels of participation between groups or geographies which differ in the size of their populations who are at risk. To know that California has 1.7 million food stamp recipients, while Nebraska has only 90,000 recipients, is informative about the size of the programs, but tells us little about whether an individual is more or less likely to receive food stamps if he or she lives in Nebraska or California. Typically, a rate is calculated by dividing the population with a characteristic by the population at risk for that characteristic. The simplicity in the way a rate is defined may hide a great deal of complexity in the way, in practice, it is actually calculated.

There are a number of ways in which food stamp participation rates can be calculated. Participation rates can be defined for persons, families or households. Furthermore, rates can be calculated as recipients per total population, recipients per poor population, or recipients per eligible population. Strengths and weaknesses of the three measures are discussed below.

Recipients per total population: A rate defined relative to the total population is both straightforward to calculate and highly reliable, since food stamp caseloads and total population estimates can be estimated very accurately. The principal weakness of this rate is that it can be a poor indicator of participation among those who either qualify for or can receive food stamps. A rate of this type will systematically understate participation in states with low rates of poverty or large numbers of otherwise ineligible persons.

Recipients per poor population: A rate defined relative to the poor population provides an imperfect balance between ease of calculation and reliability on one hand, and adjustments for systematic bias based on economic need on the other. Annual estimates of state-level poverty rates and population in poverty are commonly available, although they are more variable than total population estimates and are often averaged over two or three years to limit random variation. They also limit bias due to differences between states in the size of their economically needy populations, but are susceptible to biases resulting from differences in food stamp eligibility due to factors other than poverty.

Recipients per eligible population: A rate defined relative to the eligible population is the measure which is most preferable analytically, but it can be difficult to calculate and subject to a wide margin of error. Depending upon how closely the qualification process is modeled, many elements must be imputed from other sources, and estimates for many elements of the rate may be based on small and variable samples. This rate does, to the extent that it accurately represents the eligible population and receipt of benefits, provide the least biased participation rate between states.

Although there are pluses and minuses associated with each of these three possible measures, we focus on the last measure for this report, and seek to estimate it in the most accurate and appropriate manner possible⁶. The basic form of this rate is:

$$PR = \# \text{ Receiving Food Stamps Assistance} / \# \text{ Eligible for Food Stamps Assistance}$$

Eligibility criteria under PRWORA differ for citizens and non-citizens, and differ as well between refugees and other immigrants. For a state like California that has a large foreign-born population, correctly identifying the size of these groups is important. PRWORA established different tiers of coverage for immigrants based on their date of entry and immigration status, and the size of these populations will substantially impact the calculation of take-up rates.

Calculations of the eligible population in California are further complicated by having to account for the different treatment of SSI recipients in California as opposed to other states. California has chosen to pay supplemental payments to SSI recipients rather than offer them food stamp benefits directly.

The participation rate for the food stamp program consists of measuring those who receive food stamps or equivalents divided by those who are eligible for food stamps. We can decompose this rate for California into the following items:

- A = those receiving benefits from the Food Stamp Program (FSP)
- B = those receiving benefits from the Food Distribution Program on Indian Reservations (FDPIR)
- C = those who receive SSI, receive the food stamp "cash-out", and would be food stamp eligible in other states
- D = those who are financially eligible
- E = those low income persons whose immigration (citizenship/residency) status makes them ineligible

The Participation Rate then would be:

$$PR = (A+B+C)/(D-E)$$

In the remainder of this report, we will work out the implications of this formula, and provide estimates for each of its components.

⁶ Even after identifying the components of a suitable participation rate, it is possible to measure the rate differently. In this report we focus on participation among the eligible population but present many measures of this rate. One measure of the rate may be more appropriate for one purpose while another may better suit another purpose.

5 Data

5.1 Administrative and Survey Data

Data describing food stamp eligibility and reciprocity can be drawn from two types of sources. The first type of data, administrative data, is gathered or generated as a by-product of program administration. Administrative data have the advantage that the data are typically collected for the full universe of individuals participating, but are uninformative about the population which does not participate and are usually narrowly focused on items necessary for program administration. The second source of information is from surveys. Surveys can be carefully designed to obtain a broad range of information for a representative sample of a target population. As a result, they describe non-participating populations as well as participants, but, based as they are on respondents' self-report, they may be subject to misreporting. They are also limited by sample size and level of detail, and may not be able to accurately describe smaller populations or provide finely grained distinctions in the data.

Fine grain distinctions, however, may be needed to determine eligibility. In determining a household's eligibility for food stamps, for example, case workers and program eligibility workers draw upon an extensive array of detail about program applicants. Eligibility workers verify income, assets, the household composition in terms of the "cooking pot" definition employed for food stamp eligibility, the nativity and documentation status of affiliated household members, and income deemed from individuals outside the household. That information is subsequently transformed into eligibility counts and coupon amounts of benefits received. These administrative counts are the most complete and accurate measure of total program use. Because they are based only on successful applicants, however, they do not tell us about the non-participating population, or about take-up rates among those eligible to participate.

Survey data provides much more coverage on populations who could potentially participate. Large-scale surveys which gather information on nationally representative populations that cast light on the eligible population include the March Current Population Survey (CPS), the Survey of Income and Program Participation (SIPP), and the Decennial Census of Population and Housing. All of these sources have limitations: the SIPP is not designed to be representative at the state level, the CPS and Decennial Census lack detailed questions about assets and other factors key to financial eligibility, and all three surveys lack the requisite detail needed to identify non-citizens who are barred from participation. The following section briefly describes the data we drew upon for our analyses.

5.2 Datasets Used for these Analyses

A brief description of the administrative and survey sources we have drawn on is provided below.

5.2.A. Food Stamp Program Participation Data

We received from USDA monthly counts of the number of persons participating in the federal food stamp program. These counts were provided by USDA/FNS staff and list monthly food stamp participation for California and every other state. These data are administrative counts. Reports are generated for each federal fiscal year and provide monthly counts of food stamp participants. In order to obtain data for Calendar Years 1999-2001 we've combined several USDA federal fiscal year reports.

5.2.B. Food Distribution Program on Indian Reservations Participation Data

We also received from USDA monthly counts of the number of persons participating in the Food Distribution Program on Indian Reservations. Some people who live on Indian reservations may choose to participate in this program rather than the standard food stamp program. This FDPIR program provides food assistance in a manner very similar to the federal Food Stamp program. Counts of persons participating in the FDPIR program are in administrative reports that are produced for each federal fiscal year and provide monthly counts. Reports from several USDA federal fiscal years were combined to provide data for Calendar years.

5.2.C. Federal Administrative counts of SSI participation

State and national level administrative counts of SSI participation were obtained from the Social Security Bulletin Annual Statistical Supplement from the Social Security Administration. Table 7.B.1 of the Annual Statistical Supplement each year lists the number of persons receiving federally administered payments in December of that year. For California, whose SSP payments are also federally administered, these counts reflect those who are receiving either SSI or SSP or both.⁷ For other states who either don't have SSP or administer SSP themselves, the counts represent only SSI payments. These counts are used in combination with California state data to help estimate the size of the population receiving the food stamp cash-out. For the purposes of this report, we use participation numbers as of December of each year to represent calendar year participation.

5.2.D. State Administrative counts of SSI/SSP participation

The California Department of Social Services produces a monthly report SSP 107 that describes the SSI/SSP caseload of California. From these reports we are able to distinguish between recipients who receive SSI and SSP together and those who receive only SSP. More importantly to this study, the report also breaks down the living situation of SSI/SSP recipients. This allows us to better estimate who in the SSI/SSP caseload might also be food stamp eligible if they were not receiving SSI in California. For

⁷ It is possible to receive SSP and not SSI in California. This would happen when the participant had enough earnings and/or unearned income such that their SSI benefit amount was zero, but they had not yet earned and/or received enough to eliminate their SSP payment amount. Everyone who received a non-zero SSI payment in California received a SSP benefit.

example, it is generally true that those who receive SSI/SSP and live in some form of group facility will not be food stamp eligible.

5.2.E. Food Stamp Program Quality Control (FSP QC) Database

The U.S. Department of Agriculture's Food and Nutrition Service administers the Food Stamp Program (FSP). USDA/FNS uses data from their Quality Control (QC) database to evaluate the effect of changes in the economic, demographic and legislative environment on the food stamp program. The source of the QC database is the data collected by state FSP agencies during their monthly case reviews. This administrative data is collected for approximately 47,000 food stamp units and is designed to be nationally representative of food stamp recipients in each federal fiscal year. The FSP QC database includes variables regarding food stamp issuance as well as several demographic variables - including detailed citizenship and immigration status variables applicable to food stamp eligibility.

5.2.F. 1% Public Use Microdata Samples (PUMS) from the 2000 Decennial Census.

The PUMS provides information at the individual level for a 1% sample of respondents to the 2000 Census. The data items are those drawn from the long form of the census, and include age, sex, race, place of birth, citizenship, year of entry in single years (for foreign-born residents), income and SSI receipt (for persons age 15 and older), household composition, employment, poverty status, and other selected characteristics. The sample size is large, with data on 2.8 million individuals nationwide, and 340,000 California residents. Information about household composition and demographic characteristics reflect individuals' statuses in 2000. Income characteristics and program participation measures pertain to 1999.

5.2.G. Annual Demographic File (ADF) of the Current Population Survey.

The Current Population Survey (CPS) is a monthly survey of about 50,000 households conducted by the Bureau of the Census for the Bureau of Labor Statistics. The CPS is the source of official estimates of employment and unemployment, earnings, and hours worked. The annual demographic survey, the March supplement to the CPS, provides further detail about households in the U.S. by asking additional income and demographic questions. In addition to standard demographic information, the March supplement identifies place of birth, citizenship status, and period of entry in three year increments, and asks about the amounts and sources for all income in the household. These data are the source of official estimates of poverty in the United States. The sample for the March supplement is larger than for the basic monthly survey, about 65,000 households, because the basic monthly sample for March is supplemented with a Hispanic oversample drawn from the basic monthly sample from the previous November. The March supplement was also enhanced, beginning in 2002, to provide better state-level estimates for the allocation of funds associated with the State Children's Health Insurance Program. The SCHIP sample expansion adds oversamples of non-Hispanic non-white households and non-Hispanic white households containing children 18 year of age and younger.

Household composition and demographic characteristics reflect status at time of interview, while income and program participation reflect data for the previous calendar year. We use data from the 2001 and 2002 ADF to estimate food stamp eligible populations.

5.2.H. Census 2000 Supplementary Survey and 2001 Supplementary Survey.

Microdata files from the Census 2000 Supplementary Survey and 2001 Supplementary Survey provide detailed responses from individual questionnaires. The size of the samples in California for the 2000 and 2001 Supplementary Surveys, respectively, are 38,143, and 111,290. Information concerning the foreign born include country of birth, year of entry, and citizenship status, as well as reported SSI receipt (for persons age 15+), poverty status and demographic characteristics. Household composition and demographic characteristics reflect status at time of interview, while the reference period for income and program participation is the previous calendar year.

6 Method of Calculating the Food Stamp Participation Rate

This chapter discusses the elements and methods we used in calculating Food Stamp participation rates for California and the remainder of the nation for the calendar year 1999. We begin with calculations for 1999, because the sample sizes from the Census 2000 Public Use Microdata Samples (PUMS) are much larger than are available from the Current Population Survey (CPS), and allow us to estimate the eligible population with more precision. We conclude this chapter with a comparison of this participation rate for California for 1999 with the rate used by FNS to allocate state performance bonuses. Comparisons for 2000 and 2001, and between California and the rest of the nation, are provided in a later chapter.

6.1 Counts of Food Stamp Participants

Food Stamp participation in California averaged slightly less than 2 million recipients per month in 1999. This is about 11 percent of the nation overall. Food stamp participation in California was highest in January, around 2 million recipients, and fell through the year to nearly 1.9 million in December. Overall food stamp participation patterns in California were very similar to the nation overall. In the United States overall, food stamp participation was highest in January, around 18.5 million and fell during the year to slightly over 17 million in December.

Table 6.1: Food Stamp Participants in CA and US, 1999

1999	California	Percentage of US	US
January	2,062,758	11.16%	18,483,171
February	2,029,832	11.11%	18,277,915
March	2,051,856	11.18%	18,354,551
April	2,043,566	11.29%	18,100,864
May	2,013,442	11.22%	17,947,007
June	2,013,442	11.29%	17,835,831
July	1,974,212	11.14%	17,723,939
August	1,952,585	11.03%	17,695,611
September	1,924,820	10.86%	17,725,280
October	1,922,749	10.97%	17,530,630
November	1,895,136	10.81%	17,538,150
December	1,882,556	10.93%	17,217,554
Average	1,980,580	11.08%	17,869,209

6.2 Food Distribution Program on Indian Reservations Participation Data

California has a smaller share of the nation's FDPIR participants than food stamp participants. In 1999 California averaged about 8,000 FDPIR participants, or about 6%

of the country's 130,000 participants. FDPIR participation is fairly consistent over the year, varying less than 1% throughout the year.

Table 6.2: FDPIR Participants in CA and US, 1999

1999	California	Percentage of US	US
January	8,120	6.16%	131,779
February	7,926	6.31%	125,559
March	8,221	6.09%	135,063
April	8,083	6.21%	130,081
May	7,833	6.15%	127,302
June	7,687	5.84%	131,667
July	8,112	6.10%	132,882
August	7,977	5.98%	133,350
September	7,801	6.15%	126,920
October	7,777	6.13%	126,946
November	7,705	6.06%	127,175
December	8,008	6.30%	127,173
Average	7,938	6.12%	129,658

6.3 Financial Eligibility

Two broadly different approaches to estimating the financially eligible (on the basis of income and assets) population are generally taken. The first approach attempts to identify a proxy population which both heavily overlaps the 'true' eligible population and is reliably identifiable with a reasonable degree of precision. This is the approach taken by USDA/FNS in their determination of Participant Access Rates used for performance bonuses. This first method may be biased if the proxy population systematically differs from the 'true' population for some groups or areas. We discuss the USDA/FNS calculations, and the extent to which they are biased, in Section 6.7.

A second approach attempts to model, as closely as possible, every element of the determination process through which individuals qualify for participation. In its ideal form, this approach requires very large, accurate, and detailed samples with data that mirror the features examined in the screening process. Such data sources mirroring the food stamp eligible population do not exist. Alternatively, one can still model the determination process using a mix of survey sources, which entails the imputation of unknown data and extensive statistical modeling. The latter is the approach taken by Mathematica in their analyses of trends in food stamp participation rates. We discuss the methodology used by Mathematica in Appendix C.

We use the first approach in estimating the financially eligible population,⁸ but adjust the rate to account for distinctive features of the program and population in California. The population in poverty is a natural population to use to proxy the eligible population: poverty thresholds are directly used in the determination process, both for gross and net income screens, and serve as a population for which official estimates are routinely generated and broadly distributed. The poverty threshold is a money income threshold that varies by family size and composition. If a family's total income is less than that family's threshold based on family composition, then that family, and every individual in it, is considered poor. Poverty thresholds do not vary geographically, and are adjusted annually for inflation. We use the population with gross incomes under 100% of the poverty threshold as our proxy for the "financially eligible" population.⁹

6.4 Immigration Status

In addition to criteria based on income and resources, eligibility for the federal food stamp program is strongly shaped by immigrant status. Undocumented or temporary migrants have always been barred from participation, and PRWORA deeply curtailed the use of federal means-tested programs for a large fraction of the remaining foreign-born. This has a big impact on states with large immigrant populations.

In California, the basis for immigrants' program ineligibility includes (1) undocumented status, (2) presence in the state on the basis of a temporary visa which precluded participation before and after PRWORA, and (3) more recent limits drawn around non-citizen status and date of entry.¹⁰ Ballpark estimates of these three populations are suggested by figures published by the INS and the Bureau of the Census:¹¹

- Undocumented Status - The INS placed the undocumented population in California at 2.2 million in January of 2000;

⁸ It would be possible, in future research, to replicate the modeling of the determination process used by Mathematica and modify that approach to more accurately adjust for the presence of ineligible immigrants, income and assets of ineligible persons, and the cash out of SSP recipients in California. We do not do so in this report.

⁹ Using this poverty threshold as a proxy for financial eligibility is exactly what USDA/FNS did in their calculations, although this is neither the gross nor net income test that is used in eligibility screening.

¹⁰ The undocumented include both those who entered without authorization and those who entered legally but have overstayed their visas. Immigrants barred on the basis of the recency of their entry include all legally present non-citizens not legally present who entered after August 22, 1996, (excepting the blind and disabled, asylees, and refugees) as well as legal permanent residents present prior to August 22, 1996 who are not children, elderly, disabled, refugees/asylees, or credited with 40 quarters of Social Security earnings. Effective April 1, 2003, LPRs who have who have been qualified aliens for 5 years will become eligible, regardless of date of entry; in October, 2003, qualified alien children will become eligible regardless of entry date.

¹¹ See, for example, the INS report *"Estimates of the Unauthorized Immigrant Population Residing in the United States: 1990 to 2000," United States Immigration and Naturalization Service, January 2003* and the Census Bureau Working Paper *"Evaluating Components of International Migration: The Residual Foreign Born," 2002.*

- Temporary Visas - In FY 2000, 200,000 visas for students and temporary worker/trainee were issued to aliens indicating California as their state of destination, and;
- Non-citizen Status and Entry after 1996 - 1.3 million non-citizens counted in California during the decennial census had entered since 1996, and only 15% of the remaining 4 million non-citizens who entered in 1995 or earlier are eligible as a child or elderly person.

These populations overlap one another, and none of them precisely identifies the groups that we intend to remove from our denominator. This section will discuss briefly the nature of the overlaps, the extent to which they map onto the ineligible population, and a reasonable range of estimates for the size of the rule-based ineligible population in California who are currently included in participation rate denominators.

6.4.A. The ineligible immigrant population

Estimates of the unauthorized population are, because of their sensitive nature, most often based on a residual approach.¹² In a residual approach, the size of one component of a population for which no direct measure exists is estimated by subtracting all the more directly known remaining components of the population to generate a remainder. Uncertainty in any of the components considered will introduce uncertainty in the residual, and these techniques often generate a fairly wide band of possible values depending on assumptions about under-coverage, emigration, mortality, or period of reported entry. In addition to the uncertainties inherent in the technique, many estimates differ because they are attempting to define slightly different populations - undocumented persons rather than non-permanent residents, or individuals who were counted in the Census (the enumerated population) rather than total counts in the population.¹³ For our purposes, we are seeking to distinguish legal permanent residents and refugee/asylees, who may be eligible for food stamps, from unauthorized immigrants and temporary migrants (e.g. students or temporary workers/trainees), who are not. Because we use data from the decennial census to estimate the food stamp population, we are considering the enumerated population, rather than the total population.

For these calculations, we will focus on two recent estimates from authoritative governmental units: the Census Bureau (CB) and the Immigration and Naturalization Service. The INS estimate of the total unauthorized population of the US on January 1, 2000 was 7 million. The June 2002 estimate by the Census Bureau of the unauthorized and quasi-legal population enumerated in the 2000 Census on April 1 was 8.7 million, about 25% higher. A part of this difference is simply that the INS and CB estimates are of slightly different populations. Adjusting the INS estimate to reflect the enumerated rather than total population and subtracting the quasi-legal population from the Census Bureau

¹² One notable exception to this is the direct estimate of the unauthorized Mexican population in Los Angeles used by Marcelli and Heer (1997) based on self-reported documentation status of 558 responses of Mexican immigrants sampled from tracts with a 25% or higher Mexican-born population in 1990.

¹³ The enumerated population will differ from the total population because some groups are "under-counted" - they are not included in population counts provided by the census.

estimates, yields, respectively, estimates of 6.3 million and 7.0 million unauthorized immigrants.¹⁴ Including estimates of legal temporary migrants provided by these agencies produces a range between 7.65 million and 8.35 million unauthorized or temporary migrants in the beginning months of 2000.¹⁵

Apportioning the undocumented population in proportion to the INS estimates and the temporary migrant population in accordance with California's share of student and temporary worker/trainee visas (17%), would suggest an excluded range between 2.2 million and 2.4 million in California, or between 6.5% and 7.2% of the population. These two groups were ineligible both pre- and post PRWORA.

In addition, PRWORA established additional limits to food stamp eligibility among non-citizens, based on their date of entry, age, disability status, and refugee/asylee status. Estimates of the population which became ineligible as a result of PRWORA¹⁶ require more detail in terms of the characteristics of the non-citizen population by period of entry. The following section discusses our estimates of the eligible population by period of entry. We think these estimates provide the most reasonable counts of eligible non-citizens.

6.4.B. PRWORA ineligible non-citizens

In order to determine how many immigrants in California might be eligible for food stamps, we divide the immigrants into three groups by year of entry: those who arrived in 1996 or later, those who arrived between 1990 and 1995, and those who entered before 1990. We divide immigrants into these three groups because these groups will differ in terms of work experience, documentation status, and eligibility requirements based directly on period of entry. Each of the three groups is discussed in turn, focusing on the factors which most influence their eligibility.

Among non-citizens who entered the US after August 22, 1996 and were still present at the time of the 2000 census, only refugees/asylees and those with 40 quarters of work would be considered federally eligible for food stamps. Since few immigrants entering after that date will have the requisite work record, only a small fraction¹⁷ of the 1.3 million non-citizens identifying their entry date as 1996 or later are eligible for federal food stamps.

¹⁴ The INS count was deflated by the 10% undercount rate they base their estimates on, and the Census Bureau count was deflated by 1.7 million to account for refugees and asylees, deportees, and pre-1990 residual immigrants adjusting to LPR during the 1990s'. (See pp.18-19 of Costanzo et al. 2002).

¹⁵ These adjustments use INS estimates of 1.5 million non-immigrants, adjusted downward by their 10% estimate of the undercount. The Census Bureau's estimate of 782,000 Legal Temporary Migrants enumerated in the 2000 census (Population Division Working Paper # 60, January, 2002) probably reflects an underestimate of the temporary migrant population on the part of the Census Bureau.

¹⁶ Although PRWORA barred the federal provision of benefits to many non-citizens, many states-- including California-- provide 'state-only' benefits to non-citizens who became ineligible. We do not treat such non-citizens as food stamp eligible.

¹⁷ If 20% of the 300,000 refugee arrivals 1996-1999 were to California, that would suggest that less than 5% of the 1.3 million non-citizens entering in that period were food stamp eligible (20% of 300,000 is less than 5% of 1.3 million, 60,000 < 65,000).

Turning next to the 2.5 million non-citizens who entered prior to 1990, we subtract an estimated 573,000¹⁸ unauthorized immigrants for a net pool of 1.94 million potentially eligible non-citizens. Non-citizens who entered during this period may be eligible as refugees/asylees, as children or elderly persons, or on the basis of their work history. Tabulations from the 2000 Census indicate that 15-20% of this pool are too old to qualify as a child, but too young to have accumulated 40 quarters of employment. If we eliminate this group from the eligible population, assume that all remaining adults have accumulated 40 quarters of employment,¹⁹ up to 1.6 million non-citizens who entered before 1990 may be food stamp eligible.

For the 1.5 million remaining non-citizens who entered between 1990 and 1996, about 80% are between 18 and 64: too old to be eligible as a child and too young to be eligible as elderly. Because of the recency of their entry, these working age adults are also unlikely to have accumulated 40 quarters of earnings, leaving about 330,000 child or elderly non-citizens. Because most of the 800,000 undocumented entrants from this period overlap with the excluded working age non-citizens, only 5% of such unauthorized entrants (40,000) are subtracted from the remaining pool of eligibles, leaving 290,000 persons. Between 100,000 and 200,000 refugees and asylees are assumed to be eligible regardless of age, yielding a total eligible population who entered in this period (and remained non-citizens) of 400,000 to 500,000.

Summing across the three entry groups yields a total of 3.2 million immigrants -- about 60% of all non-citizens, or 9.5% of all Californians -- who are ineligible for food stamps due to immigration status. If this population perfectly mirrored the rest of California in terms of income and household structure, ignoring their ineligible status would cause us to misestimate participation by 10%. Because this population does not mirror the rest of the state, but is over-represented among the economically disadvantaged, the impact of their ineligibility is amplified.

To gauge the overlap between the poor and non-citizen-ineligible, we calculate the likelihood that individuals most similar to the ineligible non-citizens in the 2000 Census Microdata sample are in poverty. Since 60% of non-citizens are ineligible, our initial calculations simply apply the poverty rate for non-citizens as a whole. That poverty rate is 24.5%. We refine those estimates by distinguishing among non-citizens by period of entry, and applying the poverty rate found among each of those period of entry groups to the ineligible populations identified above. Our estimate of the poverty rate among the non-citizen-ineligible, based on this approach, is 28%. This poverty rate is higher than among non-citizens as a whole, reflecting a relatively higher concentration among more recent entrants and the young. It is slightly lower than the poverty rate among Mexico-

¹⁸ This represents the number of unauthorized immigrants estimated to be present in 1990, adjusted for the percent emigrating, dying, or adjusting to permanent resident, and adjusted downward for undercount.

¹⁹ Assuming that all of the documented non-citizens who could have accumulated 40 quarters actually did accumulate that work history probably overstates the food stamp eligibility of this group, and thus understates food stamp participation. We discuss some alternates to this assumption in the discussion of robustness in Appendix B, but use the 100% rate in the absence of definitive estimates of work histories.

born non-citizens, who make up the majority of undocumented immigrants in California. Applying the 28% poverty rate to the population of 3.2 million non-citizens who are barred from participation yields an estimated 900,000 persons in poverty who are ineligible because of their citizenship/entry status. This represents about 19% of the entire California population who are in poverty.

These poor non-citizens are *directly* ineligible, because of program rules, to receive food stamp benefits. However, there is an additional segment of the population who, because they live in a household with an ineligible non-citizen, become ineligible as well. These potentially eligible members in households containing ineligible non-citizens are not directly barred from participation, but become ineligible because of the way that poverty thresholds are calculated for households containing ineligible persons. In these households, the income of ineligible persons is included as part of the household's income, but ineligible members are excluded from the count of household members for food stamp purposes. Since poverty status is based on the ratio of total household income to number of household members, many households will appear to be above poverty thresholds in eligibility calculations because fewer members are counted.

We estimated the number of otherwise eligible persons in poverty who are pushed above the poverty threshold by other household members' ineligible status. To do this, we first calculated the ratio of every household's income to the poverty threshold. Non-citizens were assigned an eligibility status based on their period of entry.²⁰ We then recalculated this ratio for the household, excluding the ineligible member(s) while including their income. We also explored alternative definitions of the household, using categories which were more closely aligned with the 'cooking pot' definitions used for food stamps. Considering these variations, our estimates of otherwise eligible members living in households pushed from below to above the poverty threshold range from 7% to 12% of otherwise eligible persons in poverty.

6.5 Food Stamp Eligibility for SSI/SSP Recipients

In December of 1999, the number of persons receiving SSI/SSP in California was approximately 1.1 million. This represents approximately 16% of the 6.6 million national SSI payment recipients.

The California Department of Social Services issues a monthly report, SSP 107, which summarizes SSI/SSP reciprocity. It breaks down the SSI/SSP caseload by various factors, including aid type (Aged, Blind, or Disabled) and living situation. Using data from the SSP 107 reports we determined what percentage of the SSI/SSP caseload could potentially be food stamp eligible in the absence of California's cash-out of food stamps benefits for SSI recipients. To do this, we subtracted the portions of the total SSI/SSP caseload that would not be food stamp eligible. From the total SSI/SSP caseload we first

²⁰ Eligibility status was assigned to non-citizens based on their period of entry (and in some variations, age) such that any given non-citizen entering in a period had a likelihood of being identified as eligible equal to that of all other non-citizens who entered in the period. The base likelihood in each period was derived from the estimates discussed in earlier sections.

removed those who were SSP only recipients.²¹ Next we removed those who lived in Non-Medical group facilities, and then those who live in Title XIX facilities. The living situations of these SSI recipients generally imply ineligibility for food stamps. Eliminating these groups from the SSI/SSP caseload left approximately 80% of the SSI/SSP caseload as potentially food stamp eligible for all of the months of our study. We elaborate in Appendix B on the impact of other estimates of food stamp eligibility among SSI/SSP recipients.

6.6 Result - Participation Rate

If you combine all the elements we described earlier, you can refine the definition of the participation rate to:

$$PR_{\text{SUMMARY}}^{22} = \frac{\# \text{ Receiving Food Stamps} + \# \text{ Receiving FDPIR} + 80\% \text{ of } \# \text{ Receiving SSI}}{\# \text{ People in Poverty} - \# \text{ Non-citizen Ineligibles} - \# \text{ Removed from Poverty}}$$

The numerator consists of three segments of the population. The "# Receiving Food Stamps" is the number of food stamp participants. The "# Receiving FDPIR" is the number of participants in the Food Distribution Program on Indian Reservations. "80% of # Receiving SSI" represents those in California who receive SSI/SSP and a food stamp cash-out and who would receive traditional food stamps if they lived in a state other than California.

The denominator consists of those in poverty whose citizenship and residency status allowed them and their households to remain food stamp eligible. Starting from "# People in Poverty" we remove two ineligible groups. The first group is those persons whose immigration status makes them food stamp ineligible ("# Non-citizen Ineligibles"). The second group excluded is those persons whose households are removed from poverty because of the income and food stamp household size effect of non-citizen ineligible members in the household ("# Removed from Poverty"). Remember that the inclusion of income from citizenship based ineligible members often pushes the entire household out of poverty.

²¹ We've removed SSP only recipients from our calculations. While SSP recipients do receive the food stamp benefit in their SSP payment, they are not SSI recipients receiving food stamp benefits. Since we are adjusting only for the SSI cash-out, we are concerned ONLY with SSI recipients who receive food stamp benefits. To the extent that SSP only recipients also receive the food stamp benefit, they might also be considered food stamp recipients. This is discussed further in Appendix B.

²² The subscript SUMMARY indicates that this calculation includes all the discussed adjustments.

Table 6.3: Food Stamp Participation Rates for California

	<i>1999</i>
PR_{SUMMARY}	80 %
PR_{XNCH}	58 %
PR_{XNC}	54 %
PR_{FNS}	44 %
PR_{MATH}	52 %

Our calculated participation rate $PR_{SUMMARY}$ is 80%. This takes into account all the factors mentioned above. Below we describe two alternative specifications, but none of them accurately model both food stamp participation and the eligible pool. The first alternative (PR_{XNCH}) relaxes the assumption we make about SSI recipients, and the second alternative (PR_{XNC}) goes further in also relaxing the assumptions we make about non-citizen households and their eligibility.

The first alternative measure adjusts for non-citizen eligibility but, like other measures discussed in Section 6.7, excludes SSI recipients from the numerator and denominator. As we will discuss later in Section 6.7 removing SSI recipients entirely from the calculations of a participation rate has some serious deficiencies. The estimate PR_{XNCH} ²³ is:

$$PR_{XNCH} = \frac{\# \text{ Receiving Food Stamps} + \# \text{ Receiving FDPIR}}{\# \text{ People in Poverty} - \# \text{ Non-citizen Ineligibles} - \# \text{ Removed from Poverty} - \# \text{ on SSI in Poverty}}$$

This estimate takes into account the effect of ineligible members of the household on the household's food stamp eligibility. The additional income of the citizenship-based-ineligible household member pushes the household out of poverty, due to the increased ratio of income to food stamp household size. We estimate PR_{XNCH} to be 58% for 1999.

The second alternative calculation would be to only consider the effect of the citizenship based ineligible person without any consideration of how this changes the household's eligibility. This measure is:

$$PR_{XNC}^{24} = \frac{\# \text{ Receiving Food Stamps} + \# \text{ Receiving FDPIR}}{\# \text{ People in Poverty} - \# \text{ Non-citizen Ineligibles} - \# \text{ on SSI in Poverty}}$$

For 1999, we estimate PR_{XNC} to be 54%. This measure also eliminates SSI recipients from the calculation. Doing so, in combination with ignoring the income effect on the food stamp household, generates an estimate that only partially takes into account the

²³ The subscript XNCH indicates that this is our calculation excluding ineligible non-citizen households.

²⁴ The subscript XNC indicates that this is our calculation excluding non-citizen ineligible.

complexities of food stamp eligibility for non-citizens and SSI recipients, but does not go far enough.

While we believe that PR_{SUMMARY} is the most accurate estimate, we present the other alternatives to critics who are less comfortable with our assumptions. In Appendix B we discuss the robustness of our findings and how alternative assumptions yield slightly different results.

6.7 Weaknesses of the USDA/FNS Participation Rate Calculation

USDA's Food and Nutrition Service issued a memorandum on December 3, 2002 that reported on state by state "participant access rates". These participant access rates are meant to measure the level of food stamp participation relative to the number of people in poverty. For our purposes, this "participant access rate" is basically akin to participation rates that we discuss in this report, and we will refer to it as a participation rate. This calculated rate shares a number of aspects in common with our approach, but also differs in significant respects. The calculation of that rate is discussed below, contrasted with our approach at several points.

The participant access rate (PAR) calculation can be broken down into two components, the numerator which represents the adjusted monthly participation, and the denominator which represents an adjusted poverty level. The adjusted monthly participation in the food stamp program was obtained by calculating a total participation level, which combined administrative counts of the food stamp program and the FDPIR. To get this figure for 2001, FNS combined a 12-month calendar year average of administrative counts of food stamp participation for January through December 2001 with a similar average for FDPIR.

In our calculation, we utilize a similar approach to the numerator, relying on administrative counts of participation. Unlike our estimates, the USDA/FNS calculations ignore a population receiving a benefit explicitly identified as a food stamp equivalent--the population cashed out of food stamps via a payment through SSI/SSP. This population in California is sizeable, and inclusion of these beneficiaries substantially affects estimated rates of participation.

The adjusted poverty level used for the denominator was the 2001 estimate of State poverty published by the Census Bureau, derived using the March 2002 Current Population Survey. For California, USDA/FNS adjusted the poverty level to reflect the SSI/SSP food stamp cash-out. This adjustment reduced the count of people in poverty in 2001 by 4.6%, the percentage of poor people in California who receive SSI.

Exclusion of the SSI/SSP population in California from the numerator and denominator is an inadequate and inappropriate way to adjust for the food stamp cash-out for a number of reasons. First, SSI recipients have much higher rates of participation than typical in the Food Stamp program. One estimate, from Mathematica, is that while participation among eligible persons in general averaged only 59% between 1998 and 2000,

participation rates for those in households with elderly SSI income averaged 93%, and rates for those in households with non-elderly SSI income averaged 103%.²⁵ Excluding those on SSI from the eligible pool virtually guarantees substantially lower estimates of participation.

More importantly, all SSI recipients in California receive benefits in their SSP payment which are explicitly food-stamp equivalents. FNS calculations (and those done by Mathematica) exclude a large high-participation population in California which is included in all other states. The most appropriate adjustment is to include the population in the both the numerator and denominator of the rate estimate as we have done with PR_{SUMMARY}. Chapter 8 also discusses the impact on other states' estimated participation rates if their SSI populations were excluded in the manner done for California.

Equally important, the poverty population used as the base denominator includes a large segment of the population specifically barred from participation: ineligible non-citizens. Our denominator adjusts for the presence of ineligible non-citizens in a more appropriate manner. A substantial fraction -- 28%-- of the poor population of California is non-citizen. Many of these non-citizens are, in the post-PRWORA era, ineligible for food stamps.

Mathematica also estimates a participation rate using an approach which attempts to estimate the eligible population by more closely modeling the determination process. That methodology, discussed in more detail in Appendix C, also inappropriately excludes California's SSI population and may understate non-citizen ineligibility in California.

²⁵ See Karen Cunyngnam, "Trends in Food Stamp Program Participation Rates: 1994 to 2000" June, 2002. page 12. Because the rates are simple ratios of actual participants from administrative sources to estimated eligible populations from survey data, the estimated participation rate exceeds 100% in some instances.

7 California's Food Stamp Participation Rate Over Time

Between 1999 and 2001, California saw its food stamp caseload fall from nearly 2 million recipients to not quite 1.7 million, a decrease of 16 percent. During the same period, the SSI caseload rose by 3%, from 1.07 million recipients to 1.11 million recipients, and the FDPIR program saw a slight decline in participation.

In this period, the number of Californians in poverty declined from 4.7 million in 1999 to 4.3 million persons in 2001. The bottom panel of Table 7.1 shows two additional, and successively better, estimates of the changes in the food stamp eligible population. The size of the population in poverty, after subtracting the non-citizen ineligible population, drops from 3.8 to 3.6 million persons between 1999 and 2001. Excluding, as well, the population in poverty who are ineligible because of the presence of directly ineligible persons in the household, we estimate a decline in the food stamp eligible population from 3.6 to 3.4 million persons between 1999 and 2001.

Table 7.1: Components in Estimating FS Participation Rate

		1999	2000	2001
Numerator	Food Stamp Recipients	1,980,580	1,782,806	1,663,457
	FDPIR Recipients	7,938	7,613	7,819
	SSI Recipients	1,066,486	1,087,614	1,106,294
Denominator	Persons in Poverty	4,677,000	4,441,000	4,321,000
	FS Eligible Pool (individual ineligible)	3,818,866	3,725,962	3,586,726
	FS Eligible Pool (incl. household effect)	3,573,952	3,314,494	3,278,445

The net effect of these changes in the individual components of our estimate is that the food stamp participation rate is steady at 80% for 1999 and 2000 and falls slightly to 78% in 2001. We present alternative participation rates over time for comparison. For example, PR_{FNS}^{26} is our calculated participation rate using the USDA/FNS methodology discussed in Section 6.7. PR_{MATH}^{27} is the reported participation rate calculated by Mathematica.

Table 7.2: Participation Rates 1999-2001

	1999	2000	2001
PR_{FNS}	44 %	42 %	40 %
PR_{MATH}	52 %	53 %	N/A
PR_{XNC}	54 %	50 %	48 %
PR_{XNCH}	58 %	57 %	53 %
$PR_{SUMMARY}$	80 %	80 %	78 %

²⁶ The subscript FNS indicates that this is the USDA/FNS calculation.

²⁷ The subscript MATH indicates that this is the Mathematica calculation.

8 Comparing California to the Rest of the Nation

The adjustments we have made to California's food stamp participation rate are large as a result of California's disproportionate share of ineligible non-citizens and direct provision of food stamp benefits via the SSI state supplement. Making similar adjustments to the remainder of the nation also affect calculations of the participation rate, but to a much lesser degree.

Table 8.1 below provides estimates of adjusted participation rates for the nation excluding California.²⁸ In addition to the four rates discussed earlier, we calculate an additional participation rate PR_{XNCH_SSI} .

$$PR_{XNCH_SSI} = \frac{\# \text{ Receiving Food Stamps} + \# \text{ Receiving FDPIR} - \# \text{ Receiving SSI and FS}}{\# \text{ People in Poverty} - \# \text{ Non-citizen Ineligibles} - \# \text{ Removed from Poverty} - \# \text{ on SSI in Poverty}}$$

USDA/FNS excludes the SSI population from their estimates of participation in California.²⁹ PR_{XNCH_SSI} is equivalent to PR_{FNS} for California with an additional adjustment for ineligible non-citizens. That is, it adjusts for ineligible non-citizens, but not for the SSI cash-out. We apply the same approach to other states in order to provide comparable measures of the food stamp participation rate among the non-SSI population.³⁰ While this measure is useful as an illustration of the impact of choosing this specification of the food stamp participation rate, the rate $PR_{SUMMARY}$ is still preferable as a measure of the overall food stamp participation rate.

Table 8.1: Food Stamp Participation Rates for the Nation Excluding California

Nation Excluding California			
	1999	2000	2001
PR_{FNS}	58 %	58 %	56 %
PR_{XNC}	60 %	61 %	59 %
PR_{XNCH}	60 %	65 %	63 %
PR_{XNCH_SSI}	55 %	59 %	57 %
$PR_{SUMMARY}$	60 %	65 %	63 %

²⁸ We take all other states excluding California together as a whole. Total national participation rates, including California and all other states, are presented in Table 8.3. While it would be possible to treat each state individually, we have not done so. Preliminary state level participation rates estimated for 1999 correlate highly (0.87) with rates calculated by Mathematica.

²⁹ Since SSI recipients are barred from receiving food stamps in California and therefore are not counted in the numerator, USDA-FNS excludes SSI recipients in poverty from the denominator as well.

³⁰ SSI recipients are excluded from both the numerator and denominator; therefore PR_{XNCH_SSI} is in fact a food stamp participation rate among the non-SSI population. We removed from the numerator the percentage of food stamp recipients who are also SSI recipients. These percentages are estimated using the FSP QC Database. We remove from the denominator the percentage of people in poverty who are also SSI recipients. These percentages are estimated using the Census 2000 PUMS data and the CPS March files from 2001 and 2002.

Table 8.2 illustrates how our adjustments for SSI recipients and ineligible non-citizens clearly affect California more than the rest of the nation. Without any adjustments, California's participation rate is only 71-76% of the remainder of the country. After our adjustments California's food stamp participation rate is either similar to (using PR_{XNCH_SSI}) or exceeds (using the best available measure $PR_{SUMMARY}$) all other states taken together.

**Table 8.2: Ratio of Food Stamp Participation Rates:
California Relative to Remainder of Nation**

Ratio of California to Remainder of Nation			
	1999	2000	2001
PR_{FNS}	.76	.73	.71
PR_{XNC}	.91	.83	.82
PR_{XNCH}	.96	.87	.84
PR_{XNCH_SSI}	1.06	.96	.93
$PR_{SUMMARY}$	1.32	1.24	1.24

Although estimates for 2001 have not been released by Mathematica at the time of this report, their estimates consistently place California's participation rate below the national average. Their estimate of California's rate in both 1999 and 2000 place it at 90% of the national average. Although that rate more accurately describes California's rate relative to the nation than the direct USDA/FNS estimate, it still understates California's relative rate by a substantial amount.

Table 8.3: National Food Stamp Participation Rates

United States			
	1999	2000	2001
PR_{FNS}	56 %	55 %	54 %
PR_{MATH}	58 %	59 %	(not yet available)
PR_{XNC}	59 %	59 %	58 %
PR_{XNCH}	60 %	63 %	62 %
PR_{XNCH_SSI}	55 %	58 %	56 %
$PR_{SUMMARY}$	63 %	67 %	65 %

9 Conclusion

The effect of ignoring the high percentage of ineligible non-citizens and the cash-out of food stamp benefits for SSI recipients in California leads to estimates of food stamp participation that are much too low. We find that, after making reasonable assumptions, calculations of the food stamp participant access rate by USDA/FNS are only half as large as they should be. More appropriate estimates for the food stamp participation rate in California for 1999, 2000, and 2001 would be 80%, 80%, and 78%, respectively. Inclusion of adjustments for ineligible non-citizens also raises participation rates for the remainder of the country, but to a lesser extent. Overall, these adjustments raise California's rate from well below the national average to about 25% above the remainder of the country. Over the three years we examine, 1999 through 2001, we find California's rate to be on average 14 percentage points higher than the national average.

Appendix A: Summary of Participation Rate Calculations

This Appendix summarizes the various participation rate calculations presented in this report. Critical to the discussion of an appropriate measure of the food stamp participation rate is whether various components are included or excluded from either the numerator or the denominator of the food stamp participation rate calculation. The numerator represents those who are receiving food stamp benefits and the denominator represents those who are eligible. Table A.1 describes the inclusion or exclusion of various components in the food stamp participation rate calculations. A "yes" indicates that the component is included, while a "no" indicates that the component is excluded. A "partial" indicates that some aspects of the issue are addressed, but incompletely. A "no/yes" indicates that the component is excluded for California but included for other states. Only the $PR_{SUMMARY}$ measure includes all groups in the numerator who get food stamps or food stamp equivalents while limiting the denominator to those who are actually eligible to receive food stamps or food stamp equivalents.

Table A.1: Inclusion of Components in FS Participation Rate Calculation

<i>LOCATION:</i>	<i>Numerator</i>			<i>Denominator</i>		
<i>COMPONENT:</i>	<i>FS</i>	<i>FDPIR</i>	<i>SSI</i>	<i>Ineligible Non-citizen</i>	<i>Ineligible Non-citizen Household</i>	<i>SSI</i>
<i>RATE</i>						
PR_{FNS}	yes	yes	no/yes	yes	yes	no/yes
PR_{MATH}	yes	yes	no/yes	partial	partial	no/yes
PR_{XNC}	yes	yes	no/yes	no	yes	no/yes
PR_{XNCH}	yes	yes	no/yes	no	no	no/yes
PR_{XNCH_SSI}	yes	yes	no	no	no	no
$PR_{SUMMARY}$	yes	yes	yes	no	no	yes

The appropriate treatment of two groups is particularly crucial in California. The first group of interest is non-citizens who are ineligible for food stamps based on immigration status. This group should clearly be excluded from the denominator since they are ineligible. Ineligible non-citizens are those who are directly ineligible because they do not meet immigration status based food stamp eligibility criteria. The presence of an individual who is an ineligible non-citizen can spill over to affect the entire household because of income and resource deeming and cause the entire household to become ineligible. The column labeled "Ineligible Non-Citizen Household" describes whether the participation rate includes household members who become financially ineligible in this way. These issues are discussed more completely in Section 6.4.

The second group of interest is SSI recipients. In all other states besides California these recipients are eligible for food stamps and can receive food stamps in their usual form, as opposed to the cash-out in California. For the SSI columns the "no/yes" combination

represents the differential treatment of California and the remainder of the nation. The value to the left of the slash represents what is true for California, and the value to the right of the slash represents what is true for the remainder of the US. The exclusion of SSI recipients in the calculation is detrimental to an accurate calculation of the participation rate. This is discussed in Section 6.5.

The first rate listed is the rate calculated by the USDA/FNS. More detail about the calculation of this rate can be found in Section 6.7. The second rate is that calculated by Mathematica. That rate is discussed further in Appendix C.

The remaining four rates are calculations described in this report. Only the final rate, PR_{SUMMARY} , correctly accounts for all food stamp recipients in the numerator and removes ineligibles from the denominator. This rate is our preferred calculation and is the most appropriate measure for comparing California to the rest of nation.

Appendix B: Robustness Of Our Estimate Of The Food Stamp Participation Rate

Although the administrative counts of food stamp recipients are considered to be accurate and authoritative, estimates of the eligible population are inherently subject to assumptions made about how to appropriately model the eligibility process. No survey data source completely mirrors the process of defining a food stamp household, calculating the appropriate deductions, collecting medical expenses, separating the amounts of countable and uncountable assets, gathering income from all sources (including deemed income from outside the household), and establishing non-citizen based eligibility. Assumptions made about how to estimate that population may lead to over- or under-estimates of participation. In earlier sections, we used the population in poverty as our proxy for the food stamp eligible population, and made what we believe to be the most reasonable adjustments to that population to correct for ineligible non-citizens and cashed-out SSI/SSP recipients.

In this section, we discuss the impact alternate assumptions might have. For example, ineligible non-citizens might be more likely to be in poverty than eligible non-citizens, or a higher fraction of recent immigrants may be eligible than we calculated. There are four primary elements we will vary: first, the proportion of non-citizens, by period of entry, who are ineligible; second, the poverty status of the ineligible population; third, the extent to which the inclusion of income from persons excluded from the food stamp household push an eligible household into the ineligible category, and; finally, the proportion of SSI recipients eligible for and receiving food stamp equivalents via SSP.

Estimates of ineligible non-citizens.

Estimates of the eligibility of non-citizens were driven by 1) official estimates of the unauthorized population in California and the US; 2) counts of refugees/asylees admitted to California and the US, especially during the 1990's; 3) estimates, based on the 1% PUMS from the 2000 Census, of the age structure in non-citizens by period of entry, and; 4) assumptions about the U.S. work histories of immigrants. Based on these factors, we estimated what proportion of the 5.4 million non-citizen Californians in 2000 met eligibility criteria.

Of non-citizen entrants after August 22, 1996, only refugees and asylees are eligible for food stamps. Reports from the Office of Refugee Resettlement (ORR) suggest that, in California, this is a small fraction -- 2-3% -- of non-citizens identified in the 2000 Census. We used a more conservative figure - 5% - which increases estimates of the eligible population in poverty by less than a half percent.³¹ A much lower or higher figure is not reasonable.

Pre-1996 entrants may be eligible if they were 65 or older in August of 1996, are currently children, or are blind or disabled and receiving benefits for their condition. In addition, persons credited with 40 quarters of Social Security earnings are eligible for

³¹ Although Mathematica uses a much higher estimate -- 16% -- that figure does not agree with INS estimates or ORR figures. Mathematica's methodology is briefly discussed in Appendix C.

food stamps. We identified the fraction of pre-1996 entrants who were children or aged in the 2000 PUMS, and believe these to be accurate. We did not provide estimates of disabled entrants. Using a broad definition of disability -- one which uses difficulty in working and excluding those currently employed -- could increase the number of eligible non-citizens by up to 100,000, and increase the size of the eligible poverty population by slightly less than 1%.

We relied on estimates from the INS and the Census Bureau of the unauthorized population who were counted in the census. Estimates of this population are dependent on a variety of assumptions. If we assumed that actual counts were either 20% lower or 20% higher than those estimated by these authorities, gross counts of the unauthorized and temporary migrants could grow or shrink by 450,000. The presence of these non-citizens is skewed toward recent arrivals, most of whom are already considered ineligible because of post August 1996 entry or lack of qualifying quarters of work or age eligibility. The influence on counts of the eligible would be concentrated among pre-1990 entrants, who also are least likely to be in poverty. As a result, the estimated counts of eligible non-citizens might vary upward or downward by over 100,000, but would shift the size of the poor eligible population by less than 1%.

Overlap of non-citizen ineligibility and poverty

We estimated the proportion of the population in poverty who were ineligible for food stamps by assuming that ineligible non-citizens were similar to eligible non-citizens who entered during the same period. Since many of the ineligible non-citizens are undocumented, they could face greater disadvantage in the labor market, and be more inclined to be in poverty. The table below shows the poverty rates in 1999 for all non-citizens and Mexico-born non-citizens by period of entry. The number of ineligible non-citizens who entered in each period who would be below poverty if the poverty rate in each cell was applied is shown in the last row under each alternative.

Table B.1: Alternative Non-Citizen Poverty Rates

	Year of Entry			TOTAL
	pre 1990	1990 -1995	1996 or later	
ALTERNATIVE A: Applying ALL NON-CITIZENS' POVERTY RATES				
Ineligible Non-Citizens	900,000	1,100,000	1,200,000	3,200,000
Percentage of Non-citizens in Poverty	20%	25%	31%	
Ineligible Non-citizens in Poverty	180,000	275,000	372,000	827,000
ALTERNATIVE B: Applying MEXICO-BORN NON-CITIZENS POVERTY RATES				
Ineligible Non-Citizens	900,000	1,100,000	1,200,000	3,200,000
Percentage of Mexico-born Non-citizens in Poverty	24%	31%	37%	
Ineligible Non-citizens in Poverty	216,000	341,000	444,000	1,001,000

The lower estimate, applying the poverty status typical of non-citizens as a whole, was used in earlier sections. If, instead, we used the poverty rate for Mexico-born non-citizens, the number of ineligible non-citizens in poverty would be about 20% higher, and the proportion of the population in poverty who are ineligible would rise from 18% to 21%. The latter assumption is most plausible for the pre-1990 entrants, among whom documentation status plays a larger role in determining ineligibility. Among more recently entered non-citizens, age, work history and post-PRWORA entry are more commonly a basis for ineligibility, and adjusting rates based on the Mexico-born³² is more difficult to justify. There is no reason to assume, however, that poverty rates for the ineligible would ever tend to be lower than those of non-citizens in general. Therefore, a reasonable range lies between the figures used in our earlier analyses, and is bounded on the upper end by the poverty rate among the Mexico-born non-citizens. We used the more conservative figure for our primary estimates.

Ineligibility among household members of non-citizens

The impact of restrictions targeted towards non-citizens extends to their households, as well. Although more than a quarter of Californians are foreign-born, forty-three percent of Californians live in a household which contains a foreign-born member. More than a third of the population in poverty is foreign-born, but 57% of the population in poverty shares a household with a foreign-born member. Non-citizens comprise 28% of the population in poverty, but nearly half (48%) of those in poverty live with a non-citizen. These citizen members in households containing non-citizens are not directly barred from participation, but income from ineligible non-citizens are counted in the household's income. Since the ineligible members are excluded from the counts of household members for food stamp purposes, many households have income above poverty in eligibility calculations because fewer members are counted.

³² We use poverty rates for the Mexico-born as an indicator of the impact of documentation status, since INS estimates suggest that the large majority of undocumented immigrants are from Mexico.

We estimated the number of otherwise eligible persons in poverty who are pushed above the poverty threshold by other household members' ineligible status. To do this, we first calculated the ratio of every household's income to the poverty threshold. Non-citizens were assigned an eligibility status based on their period of entry³³, and we then recalculated this ratio for the household, excluding the ineligible member(s) while including their income. We also explored alternative definitions of the household, using categories which were more closely aligned with the 'cooking pot' definitions use for food stamps. Our estimates of the percentage of 'otherwise eligible household members' who go from below poverty to above poverty using these alternatives range from 7% to 12%. This would suggest that between a third and a half of eligible persons in poverty who are living with ineligible non-citizens may fail to qualify due to revisions in their economic status.

Food Stamp Eligibility of SSI/SSP recipients

In 1999, the average monthly number of food stamp recipients averaged slightly fewer than 2 million, and an additional 1.1 million SSI recipients received food stamp equivalent benefits via the food stamp "cash-out" included in the SSP. Not all SSI/SSP recipients would, in the absence of the cash-out, be eligible for food stamps. We estimated that approximately 20% of the SSI/SSP caseload may not be eligible. Most are excluded because they are SSP only. Others were eliminated because they lived in Title XIX facilities or non-medical group facilities. We include only the approximately 80% of SSI/SSP recipients who both receive food stamp equivalent benefits and who could receive them in the absence of the cash-out in the calculation of the food stamp participation rate.

It is possible that some SSP-only recipients may have been excluded who would qualify for food stamps, or that a greater share of SSI/SSP recipients may not be eligible. Table B.2 indicates that the 80% estimate is obtained by entirely excluding SSP only recipients. If we chose instead to consider SSP only recipients as food stamp eligible we would increase the estimate to over 90%. Increasing the share of the SSI/SSP caseload who are eligible to 90% would increase the estimated participation rate by 3% (from 80% to 83%). Decreasing the eligible caseload to 70% of SSI/SSP enrollments would result in a 3% decrease (from 80% to 77%). It would require the strong and extremely unrealistic assumption that 55% of the SSI/SSP caseload was ineligible to push estimated participation rates below 70%.

³³ Eligibility status was randomly assigned to non-citizens based on their period of entry (and in some variations, age) such that any given non-citizen entering in a period had a likelihood of being identified as eligible equal to that of all other non-citizens who entered in the period. The base likelihood in each period was derived from the estimates discussed in earlier sections.

Table B.2: Estimating Food Stamp Eligibility Among SSI/SSP Recipients

Month	Total Caseload	Total SSP Only Caseload	Total Non medical Board	SSP and Non-medical Board	Total Title XIX Facility	% of Total Caseload	
						Non-Medical Board Title XIX Facility SSP Only	Non-Medical Board Title XIX Facility
1999							
January	1,038,915	168,676	65,198	17,313	15,728	78%	92%
February	1,039,490	168,537	65,090	17,282	15,428	78%	92%
March	1,043,134	168,693	65,113	17,249	15,550	78%	92%
April	1,043,069	168,716	64,950	17,188	15,486	78%	92%
May	1,045,626	169,166	64,867	17,195	15,550	78%	92%
June	1,048,780	169,201	64,766	17,112	15,550	78%	92%
July	1,049,238	168,874	64,699	17,108	15,339	78%	92%
August	1,054,573	169,483	64,714	17,048	15,423	78%	92%
September	1,054,396	169,470	64,552	17,053	15,360	78%	92%
October	1,055,694	169,903	64,619	17,097	15,303	78%	92%
November	1,059,955	170,780	64,667	17,101	15,490	78%	92%
December	1,057,862	168,122	64,584	17,051	15,337	78%	92%
2000							
January	1,061,416	170,666	64,394	17,100	15,221	78%	92%
February	1,065,531	170,897	64,372	17,035	15,744	78%	92%
March	1,064,808	170,552	64,037	17,012	15,620	78%	93%
April	1,068,060	171,610	63,980	16,992	15,635	78%	93%
May	1,071,721	171,801	64,096	17,001	15,842	78%	93%
June	1,071,229	171,665	63,992	17,004	15,849	78%	93%
July	1,073,596	172,405	64,059	17,033	15,680	78%	93%
August	1,077,948	172,635	63,999	16,974	16,035	78%	93%
September	1,075,260	171,708	63,629	16,914	15,898	78%	93%
October	1,079,066	172,528	63,828	16,946	15,959	78%	93%
November	1,079,596	172,864	63,804	16,924	15,807	78%	93%
December	1,078,979	170,449	63,783	16,903	15,796	78%	93%
2001							
January	1,083,190	172,166	63,515	16,874	15,952	78%	93%
February	1,084,276	172,115	63,434	16,782	16,088	78%	93%
March	1,085,003	171,738	63,413	16,803	16,044	78%	93%
April	1,089,253	172,385	63,446	16,783	16,299	78%	93%
May	1,089,307	171,884	63,194	16,729	16,395	78%	93%
June	1,089,697	171,881	63,043	16,680	16,455	78%	93%
July	1,094,877	170,715	63,262	16,520	16,857	79%	93%
August	1,092,877	170,783	62,736	16,443	16,523	79%	93%
September	1,094,549	171,880	62,729	16,647	16,336	79%	93%
October	1,098,105	171,557	62,742	16,590	16,518	79%	93%
November	1,098,110	171,785	62,578	16,618	16,215	79%	93%
December	1,098,336	172,755	62,572	16,660	16,253	79%	93%

Appendix C: Mathematica's Calculations of Eligibility

For their direct estimates, Mathematica attempts to model as closely as possible the food stamp eligibility determination process.³⁴ When elements necessary to model the process do not exist, they impute them based on data from the Survey of Income and Program Participation (SIPP), the Panel Study of Income Dynamics (PSID), and administrative sources. Below, we briefly describe the methodology they use to calculate food stamp eligible population, and contrast their treatment of ineligible non-citizens and California's food stamp cash-out of SSI recipients with our own. Like the USDA/FNS estimates discussed in Section 6.7, Mathematica excludes SSI recipients in California, and may incompletely adjust for non-citizens' ineligibility in California, leading to lower estimates of eligibility than we believe are appropriate.

Mathematica begins by constructing a household based on food stamp definitions, rather than the definition used by the census bureau in calculating poverty rates. Because the CPS does not ask questions necessary to define the food stamp household, they estimate the formation of food stamp households in some instances using data from the Food Stamp Program Quality Control (FSP QC) data (administrative data pertaining to households which receive food stamps). They exclude full time students, residents of group quarters, and households headed by members of the Armed Forces. They also, in California, exclude SSI recipients. Because there is under-reporting of SSI in the CPS, they use a simulation using CPS data to impute receipt of SSI.

This adjustment for the cash-out of SSI recipients decreases the pool of eligible persons, thus reducing the denominator of the participation rate. This, like the USDA/FNS approach discussed in Section 6.7, excludes a population receiving a benefit explicitly identified as a food stamp equivalent. This population in California is sizeable, and their exclusion substantially decreases estimated rates of participation compared to a measure which includes them as beneficiaries in the numerator and eligibles in the denominator.³⁵

In the next stage, Mathematica proceeds to identify non-citizen eligibles in the CPS. Because the CPS does not ask questions necessary to distinguish eligible and non-eligible non-citizens, they impute eligibility status. They indicate “[w]e assume 16 percent of non-citizens who entered after 1993 are refugees.

³⁴ Mathematica's estimates derive from a multi-stage process. The final estimates are empirical Bayes shrinkage estimates which incorporate the directly estimated rates described in this appendix with a state-level regression-based estimate estimated across all states. We focus on the direct estimate here, since the elements of the numerator and denominator affect the final estimate both directly and via their incorporation in the regression component. See Castner and Schirm (2003) for a description of the shrinkage estimation process, and Cunyningham (2003) for a description of the process of modeling eligibility. We thank Laura Castner for clarifications, extensions and corrections of the estimation process as documented in those sources.

³⁵ The SSI population has, in general, very high rates of food stamp reciprocity. Mathematica estimates that, in other states, the participation rate of households with SSI income to be 99.14%. Using their methodology, in California that reciprocity is not included, while in other states it is.

Their estimate that 16% of post-1993 entrants are eligible refugees is, we believe, high. If we apply that rate to counts from the 2000 Census, it would suggest the entry of 300,000 refugees to California in the period. The Office of Refugee Resettlement, in their 1999 report to Congress, suggests that fewer than 100,000 refugees and asylees arrived in California during the period. As well, some fraction of refugees entering during the period will have emigrated, died, or naturalized prior to 2000, and will not be countable as resident non-citizens.

Of the remaining resident alien population identified after subtracting post-1993 refugees, those entering before August 1996 who are disabled, currently under the age of 18, or who were aged 65 or older in August of 1996 are treated as eligible in Mathematica's calculations. In addition, legally resident aliens with 40 quarters or more of Social Security earnings are also eligible. Because work history and documentation status are unavailable on the CPS, work histories and legal presence are imputed based on the 1997 PSID³⁶. Of the individuals remaining after adjustments for post 1994 refugees and pre-PRWORA aged, child, and disabled non-citizens are made, an estimated 20% are estimated to be food stamp eligible based on earnings histories and reported documentation status. These non-citizens with a qualifying work history, and every non-citizen member of their household, are presumed to be food stamp eligible.

While this imputation of work history and documentation status is a reasonable approach to adjusting eligibility, it is worth noting that this adjustment applies irrespective of place of residence or period of entry. This imputation will be likely to overestimate eligibility in areas, like California, with high proportions of undocumented or recently arrived immigrants. Like Mathematica, we made adjustments for pre-PRWORA entrants who were aged or children. We also eliminated individuals we believed were too young or too recently arrived to have accumulated 40 quarters of social security earnings. The remainder we treated as eligible (either because they had 40 quarters of earnings or were family members of such a person).

Subsequently, Mathematica identifies ineligible able-bodied adults without children (ABAWD) based on imputations from the SIPP and state and federal administrative target data, and applies the asset tests to all remaining eligible food stamp units. Since questions on assets are not included in the CPS, asset status is imputed for all units which are not "pure" public assistance units (units in which every member receives cash aid). Finally, a distribution of monthly income is imputed for household members based on annual income, reported number of weeks worked, and patterns of income receipt in the SIPP. Income of the food stamp unit is summed for a month, and the result compared to the gross income screen.

Net income is then estimated for food stamp units based on the a regression model calculated from FSPQC data. Estimated net income is calculated based on amounts of earned income, unearned income, a flag indicating extremely low gross income for the

³⁶ The PSID added a sample of 441 immigrant families in 1997. The documentation status of the household head and his/her spouse were requested in the interview. Twenty-three of the 259 heads with valid responses to this item indicated they were present without papers.

unit and five geographic flags. The resulting model is applied to the CPS samples to identify households which pass the net income screen. Although incomes of individuals excluded from the unit are typically not included in the sum, a portion of the earned and unearned income of immigrants excluded on the basis of their non-citizen status is deemed to the food stamp unit.

Rather than attempt to model directly the income and asset portion of the eligibility determination process, we use a household's poverty status as a proxy for financial qualification. We modify that status as result of the non-citizen eligibility screening in order to account for the impact of the attribution of ineligible person's income to the household, even though they are excluded from household counts.

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