Food Stamp Participation Rates in California From 1996 Through 1999

Understanding California's Drop in Food Stamp Participation Using An Analysis of Food Stamp Participation Rates

CALIFORNIA
FOOD POLICY
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California Food Policy Advocates

California Food Policy Advocates is a public policy and advocacy organization whose mission is to improve the health and well-being of low-income Californians by increasing their access to nutritious and affordable food.

CFPA is California's only statewide advocacy organization with a focus on food and nutrition for low-income people. The organization's work emphasizes the critical importance of preserving, improving, and expanding participation in the federal food programs, the state's strongest tool in overcoming hunger and malnutrition. CFPA works with community-based organizations to identify critical food access problems and mobilize effective solutions to them.

CFPA uses research and analysis, advocacy, and community education and mobilization to ensure that every Californian has access to the nutrition required to grow, to learn, and to lead a productive life.

Acknowledgements

Between 1996 and 1999 food stamp rolls dropped dramatically in California. According to information provided by the U.S. Department of Agriculture there were 2,976,035 people participating in the program in November of 1996. By November of 2000 there were just 1,705,207 participants. This represents a stunning 43% decline, second highest in the country. Some observers have suggested that this drop can be attributed to strong economic conditions that have increased the earnings of low-income Californians so that many are no longer eligible for food stamps. To challenge this assumption, food stamp participation rates in California were developed using Current Population Survey (CPS) data and California Department of Social Services Food Stamp Participation data for 1996-1999.

Food stamp eligibility is based on a variety of factors, not all of which are contained in the CPS data set. Therefore, it was necessary to use a means of approximating food stamp eligibility criteria from variables that do exist in the CPS. This analysis adapted methodologies used by the U.S. Department of Agriculture, as well as those previously utilized by California Food Policy Advocates (*See Methodology Section*). The food stamp participation rate equals the number of participants divided by the number of people eligible.

Two clear conclusions can be derived from the analysis:

First, a statistically significant drop occurred in the food stamp participation rate in California from 1996 to 1999. In 1996, 59% of people eligible for food stamps received them. In 1999, just 45% of eligible people did. This chart depicts the decline:

Food Stamp Participation Rates 1996-1999

and 95% Confidence Interval
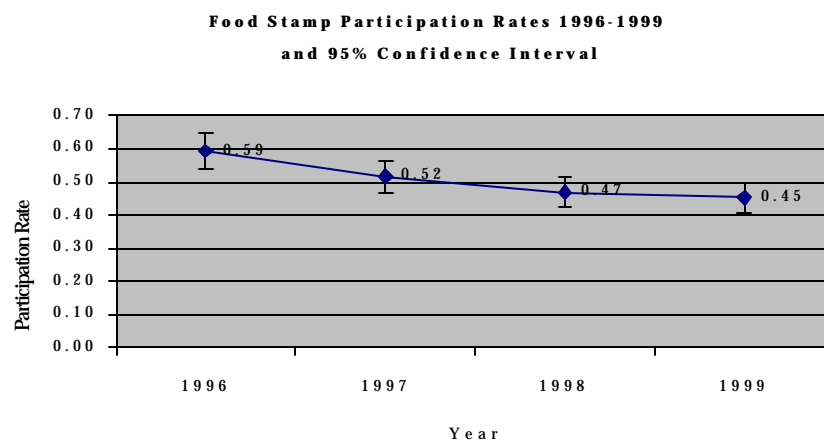
Second, the absolute number of people eligible for food stamps over the last several years has in fact decreased. However, **the number of participants in food stamps is dropping faster** than the decrease in the number of eligible people. This suggests that the fact that fewer people are

eligible is not the sole cause for the drop. The chart below indicates the decline in the number of both eligible and participating populations.

Decline In The Number of Eligibles and Participants From
1996-1999
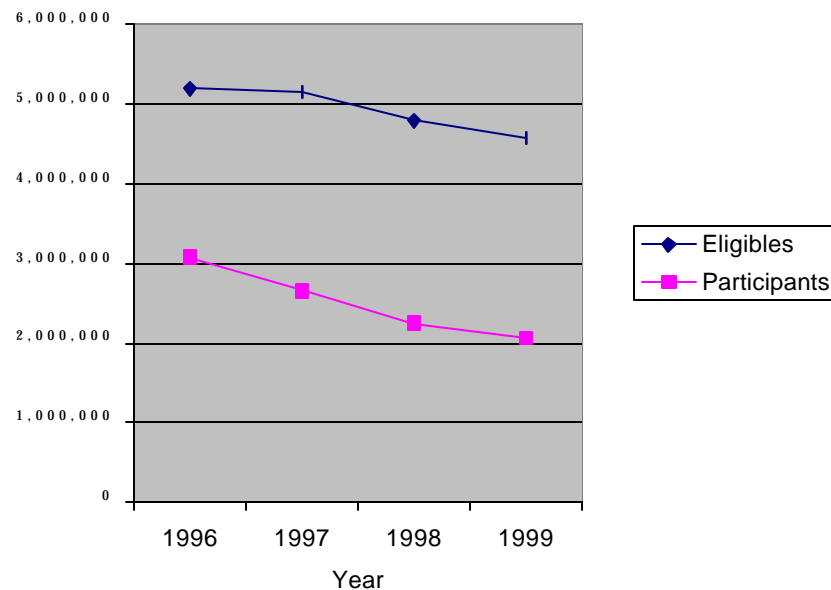
These two findings clearly indicate that a decrease in the number of people eligible for food stamps is an insufficient explanation for the drop in food stamp participation. The study demonstrates that eligible people are not being reached as successfully as they were just several years ago.

California Food Policy Advocates (CFPA) makes two primary recommendations as a result of these findings. First, CFPA recommends that the State of California invest in outreach activities to increase the participation of eligible Californians. California does not currently participate in a federal matching program for food stamp outreach.

The second recommendation is to further examine the role the economy has played in the drop in participation. Has a good economy meant that more eligible people for food stamps are working? Are working families more or less likely than other families to participate in the Food Stamp Program? CFPA examines these questions in a companion report, *A Comparison of Food Stamp Participation Rates in Working and Non-Working Households of California*.
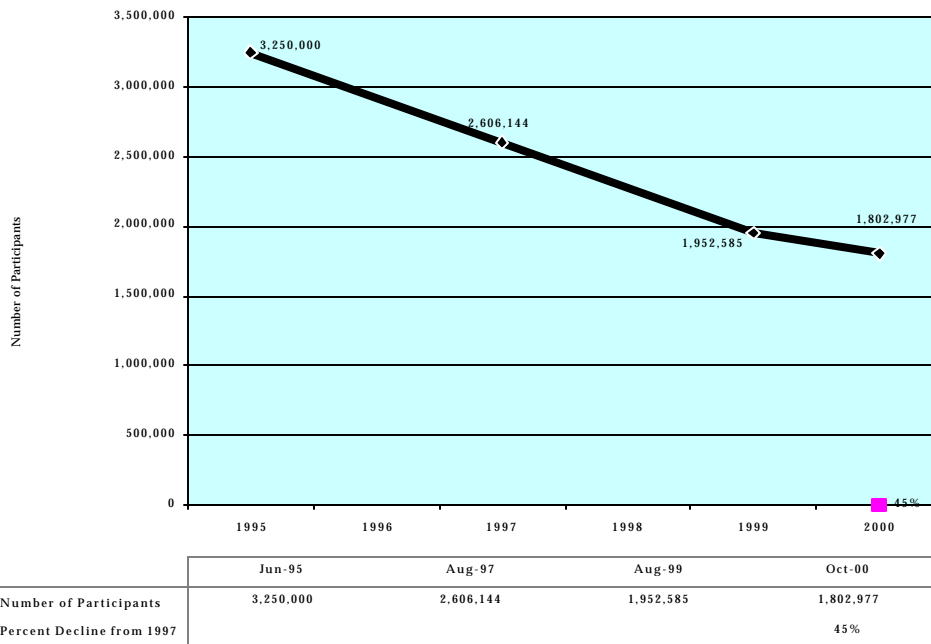
The goal of the federal Food Stamp Program is to alleviate hunger and malnutrition by enabling low-income households to obtain necessary food. Benefits are provided to low-income households on a sliding scale, based on family size and income. The average monthly benefit level is about $70 per individual.

The Food Stamp Program provides valuable benefits to many categorically eligible recipients, including seniors and the disabled but also working families. In fact, the Food Stamp Program helps to ensure that welfare reform succeeds and work is rewarded. Full-time minimum wage earning families only reach the poverty level with a combination of food stamps and the Earned Income Tax Credit. Despite these benefits, the Food Stamp Program is struggling.

Fewer Californians are participating in the Food Stamp Program. Participation in California has dropped from 2,976,035 in November of 1996 to just 1,705,207 participants in November 2000. This 43% drop in participation is the second highest in the country. Only Delaware had a higher drop of 46%.[1]

The Drop in Food Stamp Participation in Califonrnia Since 1995

	Jun-95	Aug-97	Aug-99	Oct-00
Number of Participants	3,250,000	2,606,144	1,952,585	1,802,977
Percent Decline from 1997				45%

Such a drop in participation might be cause for celebration if it meant that fewer Californians needed help putting food on the table.

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[1] Source: Preliminary Summary of Food Assistance Program Results for December 2000, FNS Data Base Monitoring Branch, 3/6/01 Summary of Food Assistance Program Results for December 2000. These figures may be found at: http://www.frac.org/html/news/fsp00decdata4.html

However, according to the U.S. Department of Agriculture, almost 4.4 million Californians are food insecure, meaning they either feel the physical pains of hunger or struggle to secure enough food for themselves or their families. Some of these 4.4 million are eligible for food stamps, but not receiving them.

The recent drop in food stamp participation, of course, would be cause for celebration if the decline reflected that families' incomes have risen higher than 130% of the poverty line level, the limit used to determine food stamp eligibility. This would mean that families were making more money and therefore have less need for food stamps. But is this the case in California? An analysis of food stamp participation rates is needed to answer this question.

Analyzing food stamp participation rates is not a new concept. For several years the U.S. Department of Agriculture has contracted with Mathmatica Policy Research to establish national and state-by-state food stamp participation data. Although this research is valuable, the last participation rate available for California is from 1998. California Food Policy Advocates seeks to build on the work of Mathmatica by establishing an acceptable methodology for establishing a state food stamp participation rate immediately after the release of annual Current Population Survey (CPS) data. The analysis contained in this report provides a participation rate for 1999 and also re-calculates participation rates for 1996-1998 using the same methodology.

CFPA's report, *Uncovering the Causes: Trends in Food Stamp Program in California* (2000) was the first effort in the state to understand the causes for the food stamp participation drop. This research sought to refute the claim that the drop was largely caused by the fact that certain individuals were cut off food stamp benefits through the passage of 1996 federal welfare reform legislation. Legal immigrants and Able-Bodied Adults Without Dependents (ABAWDS) were either denied food stamps or had their participation severely limited by welfare reform. The study found that even when these individuals were removed from calculations the food stamp participation rate in California still dropped. This finding suggested that other factors beyond the 1996 legislation are at work in California's participation drop.

The following analysis is the second part of a tripartite research project. *Uncovering the Causes* answered one question: Are limitations in eligibility driving the drop in participation? This report, *Food Stamp Participation Rates in California From 1996Through 1999,* answers another outstanding question: Are fewer people getting food stamps simply because fewer people are eligible? The third analysis in this series, *A Comparison of Food Stamp Participation Rates in Working and Non-Working Households of California,* examines whether the drop in participation is related to increased employment among eligible households. The impetus for the analysis is that many observers assert that the Food Stamp Program is in many ways incompatible with work - if more people are working then they may be less likely to participate because of barriers to program access. The third analysis will be released in April 2001.

As inquiries lead us closer to the true reasons for the drop in participation, there are a variety of steps that can be taken now to help stop the drop. California Food Policy Advocates has included several recommendations for increasing participation at the end of the report.

The food stamp participation rate in California has been estimated in previous years using several different methodologies. The methodology used in this study is similar to the methodology outlined by Greg Paulos in *Uncovering the Causes: Trends in Food Stamp Program in California*. The major difference between the two studies being that this study attempts to estimate the participation rate for the entire population, whereas Paulos' study excluded non-citizens and able-bodied adults from the population.

The food stamp participation rate is defined as the total number of participants divided by the total number of eligibles. It is a convenient measure of the extent to which the Food Stamp Program is being utilized. This study estimates the average food stamp participation rate in California for the years 1996-1999 using data from the Current Population Survey (CPS).

Determining eligibility

The March supplement of the CPS provides data on demographic variables for the previous calendar year. Unfortunately, variables related to income are given only for the year and not month-by-month. Thus, the number of eligibles cannot be estimated for a particular month. The estimate for the number of eligibles that is produced is an estimate of the average monthly number of eligibles.

Individuals were considered eligible for food stamps if:

1) Their gross household income was less than 130% of the federal poverty level.
2) Their household assets were less than $2,000 (or $3,000 if the household included an over 60 or disabled person).
3) They were not Able Bodied Adults Without Dependents (ABAWDS).
4) They were not students.
5) They were not receiving Supplemental Security Income (SSI).

Income eligibility

The poverty threshold for each household was estimated using the poverty guidelines that are produced by the Department of Health and Human Services[2]. The guidelines were used rather than the threshold that is produced by the CPS. The guidelines provide a crude approximation of the poverty threshold. However, they provide a quick and easy way for food stamp offices to assess poverty and are thus used to determine food stamp eligibility.

Asset eligibility

The CPS contains variables about household income that is due to interest or dividends. It was assumed that dividends provided a 2% return and interest a 6.5% return. From this, the total amount in assets due to investments and bank accounts was imputed.

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[2] The poverty guidelines for 1999 and previous years may be found at http://www.ssc.wisc.edu/irp/

Households with disabled persons were identified using a variable for household disability payments.

ABAWDS

Individuals between the ages of 18 and 50 that lived in a household with no children under the age of 18 were classed as ABAWDS.

Weights

To compute the total number of eligibles in California, the weights for each sampled, eligible individual are summed. Weights are used in the CPS since some individuals have a greater likelihood of being sampled than others. Specifically, the weight for any individual is the inverse of his/her probability of being sampled. CPS produces a number of slightly different weights. The final weight was found to be most suitable for this study.

Number of Participants

The number of participants and the number of eligibles must be estimated equivalently. Since the estimate of the number of participants is an estimate of the average monthly number of eligibles, the number of participants must also be an estimate of the average monthly number of participants. The average monthly number of participants was calculated for each of the years 1996-1999 using monthly data provided by the California Department of Social Services[3]. The number of participants includes individuals who are receiving food stamps through the state, i.e. individuals on CFAP (California Food Assistance Program).

 The CPS data was not used to estimate food stamp participation for two reasons. First, the reported participation is an estimate of participation based on data from all participants. It will only differ from the true participation as a consequence of human error. The CPS data by contrast is based on a sample of the Californian population. In this case, participation in California can only be inferred using the percentage participation in the sample. Since the sample is relatively small, this inference is liable to inaccuracy. Second, the CPS estimate would be biased since people tend to under-report food stamp participation: When asked about participation, food stamp participants often deny participating.

Confidence intervals

The 95% confidence interval for the participation rate is given by:

$\hat{r} \pm 1.96 \times se(\hat{r})$

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[3] The data used may be found in appendix D. The CDSS figures for average monthly participation were not used because the number of eligibles was calculated in terms of calendar years and the CDSS year begins in July and ends the following June.

where $\hat{r}$ is the participation rate estimate and $se(\hat{r})$ is the standard error of the participation rate estimate. It may be shown that

$$se(\hat{r}) = \frac{p}{\hat{t}^2} \times se(\hat{t})$$

where p is the number of participants and $\hat{t}$ is the estimated number of eligibles. $se(\hat{t})$ was estimated using the generalized variance function provided by the CPS. In general, it has the form

$$se(\hat{t}) = \sqrt{a\hat{t}^2 + bt}$$

where a and b are constants whose values are computed by the CPS for classes of variables. CPS recommended that for eligibility (and participation) that the "below poverty" coefficients be used i.e. $a = 1.14$ and $b = 11,833.2$.

For comparative purposes, the standard error for the % of eligibles in California in 1999 was calculated using the Jack-Knife method and the generalized variance function[4]. The comparison gave an insight into the accuracy of using the generalized variance function to compute standard errors.

Bias

A serious source of error in the estimates is bias. It is not known how biased the estimates generated by this methodology are, though it is likely that they are significantly biased. A list of the major sources of bias follows:

1) Non-citizens were all assumed to be documented and thus eligible for food stamps. The 1999 CPS estimate for the percentage of non-citizens among the Californian population was 16.1%. Since the non-citizen population of California is so large, the assumptions made regarding their eligibility will have substantial impact on the estimate. Laura Castner[5] (2000) also found it necessary to make this assumption.
2) The CPS defines a household differently from the Food Stamp Program. Some CPS households will contain multiple food stamp households.
3) Household assets were only roughly assessed. Important assets such as vehicles were not included.
4) ABAWDS were considered ineligible when in fact they are eligible for at least 3 months out of every 36.

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[4] Details on this method may be found in: Appendix A and Schirm, Allen L. and John V. Dicarlo. 1998. "Using Baysian Shrinkage Methods to Derive State Estimates of Poverty, Food Stamp Program Eligibility, and Food Stamp Program Participation." Food and Nutrition Service, U.S Department of Agriculture.
[5] Castner, Laura. 2000. "Trends in FSP Participation Rates: Focus on 1994 to 1998." Food and Nutrition Service, U.S Department of Agriculture

5) Using yearly income under-estimates the average monthly number of eligibles. SIPP data shows that the average of the 12 monthly poverty rates based on monthly income tends to be higher than the annual poverty rate based on annual income[6]

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[6] Castner, Laura (2001). Personal Communication.

Results

Between 1996 and 1999, a statistically significant drop occurred in the food stamp participation rate in California. In 1996, 59% of people eligible for food stamps received them. In 1999, just 47% of eligible people did. The chart below depicts this decline over this time period.

There was a statistically significant drop of 7% (p-value=0.04) in food stamp participation between 1996 and 1997. Between 1997 and 1999 there was also a statistically significant drop of 7% (p-value=0.05) in the food stamp participation rate, though obviously the rate of decline was slower during this 2-year period.

Tests of significance were done based on standard errors obtained using the Generalized Variance Function (GVF). A Jack-Knife standard error was also produced for the 1999 % eligible estimate and was found to be very similar to that of the GVF. The latter being 0.57% compared with 0.64% for the former. This suggests that the tests of significance and confidence intervals for participation rates are of reasonable accuracy.

Food Stamp Participation Rate and 95% Confidence Interval
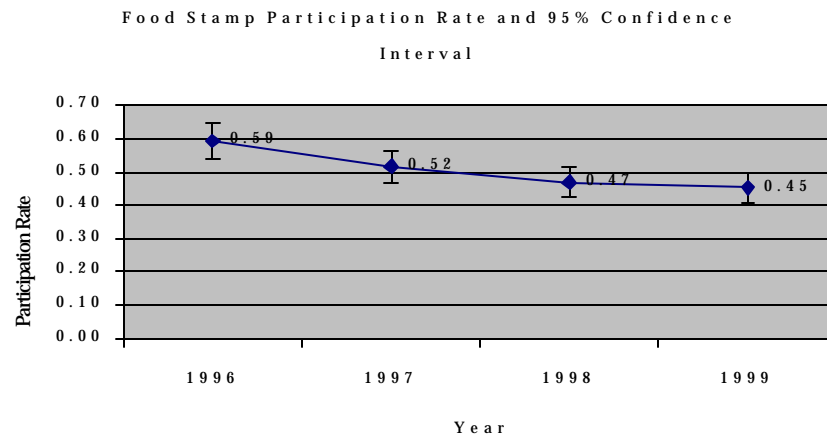
In addition, as the table below indicates, both the number of participants in the food stamp program and the number of eligibles declined during the period 1996-1999.

Eligibility and Participation by Year

Year	California Population Size	Number of Eligibles	Number of Participants	% of Population Eligible	Participation rate
1999	33,708,538	4,579,129	2,070,786	13.6	0.45
1998	33,236,803	4,793,312	2,251,483	14.4	0.47
1997	32,715,617	5,151,477	2,665,098	15.7	0.52
1996	32,125,416	5,194,680	3,084,246	16.2	0.59

Further analysis shows that the rate of decline was substantially greater for the number of participants than the number of people eligible. During the four-year period the average yearly decline in the number of eligibles was 153,888 persons while the average yearly decline in the number of participants was 253,365. The following chart demonstrates that while the number of people eligible for food stamps over the last several years has in fact decreased, the number of people participating has decreased at a faster rate.

Decline In The Number of Eligibles and Paticipants From
1996-1999
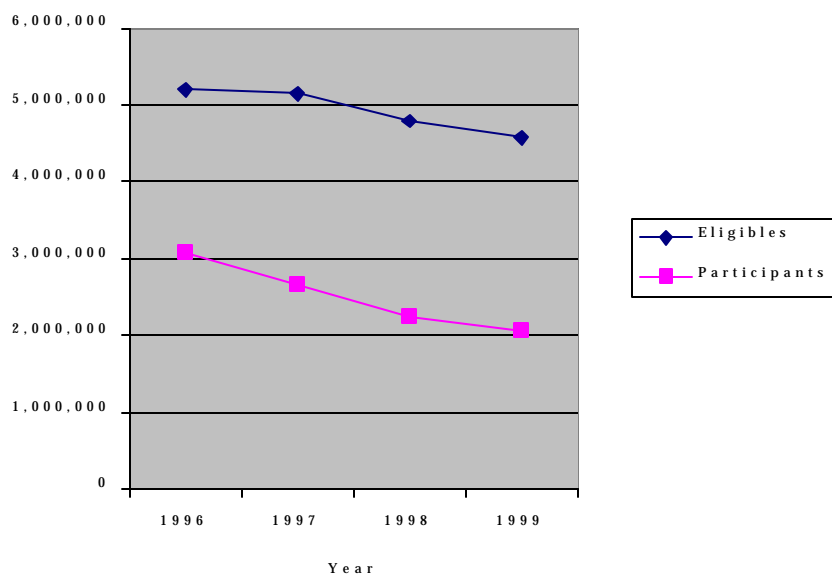
Recommendations

The results from this analysis suggest that something more should be done to increase California's participation rate. But what? Outreach seems to be a justifiable response to the state's poor participation in the Food Stamp Program.

According to a recent U.S. Department of Agriculture study, over 71% of the people eligible for food stamps but not receiving them did not know about the Food Stamp Program or assumed they were ineligible. Working families are especially confused about food stamp eligibility. Many wrongly assume that food stamps are only for people on welfare and not working. Outreach to inform families about the benefits and the basic eligibility rules for the Food Stamp Program would be beneficial.

U.S.D.A. has matching-funds program for food stamp outreach. The federal government matches a state investment in outreach, dollar-for-dollar; California has not accessed this federal matching money. Other states are already accessing the federal matching outreach money with success – every state that has used this money has shown an increase in participation in its targeted populations. California Food Policy Advocates has requested that the state legislature and governor invest $2 million in food stamp outreach to be matched by $2 million in federal resources.

One target for outreach should be working families. A common misconception about the Food Stamp Program is that it is only for people who are on welfare, not for people who are working at low-wages. Another issue for working families is program access - do people who work have the time to access the program when applications are generally taken during normal work hours? To target outreach and to improve access, CFPA believes additional analysis into the participation and non-participation of working families versus non-working families is necessary.

 In *A Comparison of Food Stamp Participation Rates in Working and Non-Working California Households* CFPA seeks to answer these questions: Are more working families eligible for food stamps? Are they more or less likely to participate in the Food Stamp Program? This analysis will be released in April 2001.

Even before this additional analysis is released there are steps that the State and local food stamp offices can take to improve access for working families, such as opening food stamp offices in the evenings so that working families can apply after work. This practice and other practices to improve access can be found in Best Practices to Improve the Food Stamp Program in California. This document can be found at http://www.cfpa.net/foodstamps/BestPractices.pdf.

Appendix A: Jack-Knife Standard Errors

 The sample that forms the CPS data set can be split into 8 rotation groups. A rotation group consists of households that begin the CPS at the same time. Each of the 8 rotation groups isproduced using the same sampling methodology. As a consequence of this sample design it is possible to estimate the standard error of parameter estimates using the Jack-Knife procedure. The standard error of the % eligible in 1999 was computed as follows:

Y =Estimate of the % of the Californian population that is eligible combining data from all 8 rotation groups.

$Y_{(r)}$ =Estimate of the % of the Californian population that is eligible excluding the rth rotation group

$$SE(Y) = \sqrt{\frac{7}{8}\sum_{r=1}^{8}(Y_{(r)} - Y)^2}$$

The values of $Y_{(r)}$ are given below, Y =13.6.

Rotation Group	$Y_{(r)}$
1	13.8
2	13.4
3	13.7
4	13.7
5	13.5
6	13.9
7	13.5
8	13.2

Thus $SE(Y)$ using the Jack-Knife procedure was found to be 0.57%.

This value for $SE(Y)$ may be compared to the value obtained using the Generalized Variance Function. Using the Generalized Variance Function, $SE(Y)$ =0.64% and was computed as follows:

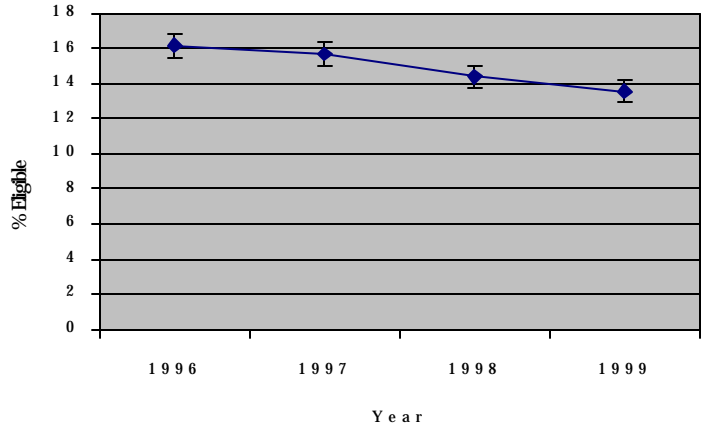$$SE(Y) = \sqrt{\frac{b}{X}Y(1-Y)}$$

X = population size (X =33,708,538)

b = "below poverty" constant used by the CPS (b =11833.2)

Appendix B:

Percentage of the Californian Population Eligible

for Food Stamps and 95% Confidence Intervals

Appendix C:

Estimates and 95% Confidence Intervals for the Food Stamp Participation Rate and % Eligibility in California by Year

Year	% of Population Eligible	95% Confidence Interval	Participation rate	95% Confidence Interval
1999	13.6	12.3-14.9	0.45	0.41-0.50
1998	14.4	13.1-15.7	0.47	0.42-0.52
1997	15.7	14.3-17.1	0.52	0.47-0.57
1996	16.2	14.8-17.6	0.59	0.54-0.65

Food Stamp Participation in California since 1996 (CFAP included)

	1999	1998	1997	1996
Jan	2,146,451	2,354,570	2,913,501	3,129,907
Feb	2,130,880	2,336,227	2,920,362	3,152,472
Mar	2,168,404	2,334,721	2,891,224	3,195,064
Apr	2,146,874	2,325,254	2,852,747	3,180,722
May	2,121,479	2,291,582	2,787,912	3,153,880
Jun	2,073,450	2,251,987	2,724,571	3,128,369
Jly	2,070,224	2,213,860	2,677,774	3,073,894
Aug	2,040,231	2,177,810	2,606,030	3,073,948
Sep	2,009,144	2,184,055	2,411,387	3,006,890
Oct	2,002,677	2,214,360	2,439,063	3,002,639
Nov	1,971,128	2,182,425	2,395,925	2,975,088
Dec	1,968,484	2,150,950	2,360,681	2,938,077
Average	**2,070,786**	**2,251,483**	**2,665,098**	**3,084,246**

Appendix E: SPSS code used to estimate the number of eligibles.

*create household id.

```
COMPUTE hhid= hhseq.
```

*identify households without dependents.

```
IF (age< 18) lt18 = 1 .

SORT CASES BY
 hhid (A) .

SAVE OUTFILE='G:\users\christian\fs-paticip\particip.sav'
  /COMPRESSED.

AGGREGATE
 /OUTFILE=*
 /BREAK=hhid
 /lt18_1 = MEAN(lt18).
MATCH FILES /TABLE=*
 /FILE='G:\users\christian\fs-paticip\particip.sav'
 /BY hhid.

RECODE
 lt18_1 (SYSMIS=0) .
```

* create abawds indicator.

```
IF (age >= 18&age <= 50&lt18_1=0) abawd = 1 .

RECODE
 abawd (SYSMIS=0) .
```

*compute poverty threshold.

```
COMPUTE povcut=8240+((numper-1)*2820).
```

*compute incmel (income eligibility indicator).

```
COMPUTE pov = hhinc/povcut .


IF(pov<1.3)incmel=1.

RECODE
 incmel (SYSMIS=0) .
```

*create hiasset file (file with variable to indicate that household satisfies the high-asset criterion).

```
SORT CASES BY
 hhid (A) .

SAVE OUTFILE='G:\users\christian\fs-paticip\particip.sav'
  /COMPRESSED.

FILTER OFF.
```

```
USE ALL.
SELECT IF(age >= 60|hrcpds=1).

COMPUTE hiasset = 1 .

AGGREGATE
 /OUTFILE=*
 /BREAK=hhid
 /hiasse_1 = MEAN(hiasset).

SORT CASES BY
 hhid (A) .

SAVE OUTFILE='G:\users\christian\fs-paticip\hiasset.sav'
  /COMPRESSED.
```

*merge hiasset file with original file (merged by household id).

```
MATCH FILES /TABLE=*
 /FILE='G:\users\christian\fs-paticip\particip.sav'
 /BY hhid.

RECODE
 hiasse_1  (SYSMIS=0) .
```

*compute asset (estimated value of assets).

```
COMPUTE assetint = hincin/0.065 .
COMPUTE assetdiv = hincdi/0.02 .
COMPUTE asset = assetint+assetdiv .
```

*compute assel (indicator for being asset-eligible).

```
IF (asset < 2000
| (asset<3000&hiasse_1=1)) assetel = 1 .

RECODE
 assetel  (SYSMIS=0) .
```

*compute school .

```
RECODE
 nlfsch
 (1=1)  (ELSE=0)  INTO  school .
```

*compute ssi.

```
RECODE
 incs18
 (1=1)  (ELSE=0)  INTO  ssi .
```

*compute el (eligibility variable).

```
IF ((assetel=1 & abawd=0 & school=0 & incmel=1 & ssi=0) ) el = 1 .

RECODE
 el  (SYSMIS=0) .
```

*divide weight by 100 so that it is inverse of sampling prob, then weight.

COMPUTE wgtfnl = wgtfnl/100 .

WEIGHT
 BY wgtfnl.

*produce frequencies for el.

```
VARIABLE LABELS el "Food Stamp Eligible?".
VALUE LABELS el
 .000000000000000 "not eligible"
 1.00000000000000 "eligible"
.
FREQUENCIES
  VARIABLES=el  .
```

execute.