Regional Differences in Use of Food Stamps and Food Pantries by Low-Income Households

in the United States

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Abstract

The purpose of this paper is to examine the use of food stamps and private food assistance in different regions of the country during 1999, a year when food stamp use dropped to its lowest point in the recent past. Our results show that impoverished families in the South are less likely than those in other regions to obtain private food assistance, although they are more likely than those in the West or Midwest to use food stamps. Low-income families in the Northeast are also more likely than those in the West or Midwest to use food stamps.

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Throughout the latter part of the 1990s, participation in the Food Stamp Program among eligible

households declined markedly. Bartlett, Burstein, and Hamilton (2004) found that three-quarters

of eligible non-users cited factors associated with local food stamp office attitudes and policies

as influencing their decision not to participate. Private food assistance use is not as well

documented as use of government programs, but findings from surveys in over 30 major cities

suggest that requests for emergency food assistance by families with children rose through the

late 1990s (U.S. Conference of Mayors, 1998, 1999, and 2000). Given that the current political

climate, in the age of "Charitable Choice," appears to promote expanded use of private, rather

than public welfare and that private food aid does not operate under consistent rules across

different locales, a deeper understanding of regional patterns of food assistance use is important.

The objective of this paper is to test for regional differences in food stamp and private

food assistance use. We used data from the 1999 Current Population Survey (CPS) to estimate

logit models of participation in the two types of food assistance and included regional dummies

as well as variables reflecting individual and household characteristics.

Background

Food insecurity is widely defined as "limited or uncertain availability of nutritionally

adequate and safe foods or limited or uncertain ability to acquire acceptable foods in socially

acceptable ways" (Anderson, 1990). In the more extreme cases, food insecurity may be

accompanied by moderate or severe hunger.   The relationship between family food hardship and poor outcomes for children has been documented in several research studies (see for example Alaimo et al., 2001, or Hamelin, Habicht, and Beaudry, 1999).   Given the possible negative impacts on child development, documenting food insecurity and addressing it with suitable policies is important.

In the mid-1990s, the USDA and the National Center for Health Statistics developed a survey-based measure of household food security and hunger. The survey module, which is included in the Current Population Survey (CPS) conducted by the Census Bureau, contains 18 questions concerning household food security, ranging from worrying that food would run out to having household children unable to eat for a whole day because of lack of resources to get food (Bickel et al., 2000). Based on responses, households are characterized as food secure, food insecure without hunger, food insecure with moderate hunger, and food insecure with severe hunger. In addition to the four categories, survey responses are used to calculate a food security scale, based on the Rasch measurement model (Wright, 1983).

Table 1 provides information on food security levels by region of the United States from the 2002 CPS. The South has the highest level of overall food insecurity, 12.4 percent.   The most severe form of food insecurity, food insecurity with hunger, affected 3.6 percent of the population in the South. The West has the next highest rate of food insecurity, 12.1 percent, and the highest rate of food insecurity with hunger, 3.9 percent.   The Northeast had the lowest rate of food insecurity and the lowest rate of food insecurity with hunger.

Food Assistance Programs

Government food assistance programs, including the Food Stamp Program, the school lunch program and the Special Supplemental Nutrition Program for Women, Infants, and

Children (WIC), were created to address the problems of hunger and food insecurity among low income families in the United States. Of the three programs, the Food Stamp Program is the largest and most comprehensive.

The literature on food stamp use is vast, and many previous studies have addressed the factors affecting participation. A large drop in household income is the event that has been found most likely to trigger Food Stamp Program participation, often following a change in household composition, such as a divorce (Lubitz and Carr, 1985). Food stamp use, in general, is most likely to occur for women with low current and future earning opportunities, and is affected by location and policy parameters (Blank and Ruggles, 1996). Gleason, Schochet and Moffit (1998), reviewing food stamp participation research, report that among low-income households, food stamp participation rates are highest among nonwhite and non-elderly households, and for households with children.

The disutility of Food Stamp Program participation was discussed by Gundersen and Oliveira (2001). Building on work by Moffitt (1983) and by Ranney and Kushman (1987), Gundersen and Oliveira found stigma from using food stamps to be a possible factor discouraging participation in the program. On the other hand, Coe (1983), examining the reason for lower participation among the elderly, found that lack of information, rather than fear of stigma, appeared to be the greatest deterrent to participation.

Daponte, Sanders, and Taylor (1999) studied the reasons for household non-participation in food stamps. Their findings indicate that many low-income households who appear to be eligible for food stamps in fact would not be eligible upon further investigation. Like Coe (1983), they also found that knowledge of program availability was an important determinant of whether eligible households used the program. However, they found that knowledge was

endogenous: those who had the greatest anticipated benefits had the greatest incentive to learn about the program.

Throughout the latter part of the 1990s, participation in the Food Stamp Program declined markedly. Although part of the decrease in participation was attributable to the strong economy of this period, and another portion was attributed to rules changes under the 1996 Personal Responsibility and Work Opportunity Reconciliation Act (i.e. "welfare reform") of 1996, about half the decline in participation remains unexplained (Wilde et al., 2000).

At the same time that food stamp enrollment among the eligible population was falling, demand for private food assistance appeared to be growing. Findings from surveys in over 30 major cities suggest that requests for emergency food assistance by families with children rose through the late 1990s (U.S. Conference of Mayors, 1998, 1999, and 2000). Private food assistance can take the form of hot meals from a "soup kitchen," but the most common and widespread form of private food assistance comes from food pantries. Food pantries provide foodstuffs, often pre-packed in boxes, to clients to take away and prepare at home. They most often operate under the umbrella of an area food bank, from which they receive, at a nominal cost, the bulk of the food they donate to their clients. Food pantry services were almost unknown before 1980, but have increased markedly in recent years. The link between welfare reform and reported increases in food pantry use is not well understood; however, in some cases directors of the food pantries did cite welfare reform as a contributing factor (Eisinger, 1999).

While research on private food assistance use is not as extensive as research into the use of government food assistance programs, the literature in this area is growing. Several published studies provide insights into who is using private food assistance in the United States and why they need it. Taren et al. (1990), for example, interviewed low-income families in Hillsborough

County, Florida, to determine factors related to food consumption. Roughly half the sample families received food stamps and 12 percent used a food pantry. Results indicated that the end of the month was associated with the most food shortages.

Daponte et al. (1998) compared 400 food pantry users and low-income non-users in Allegheny County, Pennsylvania. Respondents were interviewed between April and July, 1993. All respondents were below 185 percent of the poverty level. Results showed that pantry clients are more likely to have difficulty feeding their families, run out of money for food, and serve less nutritious foods than non-clients. The median length of food pantry use was two years. Thus, food pantries in this area were clearly serving more chronic cases as opposed to the emergency cases they were created to serve. Most of the pantry clients in this study accessed the pantries by walking and only 26 percent of users owned a car.

Clancy, Bowering, and Poppendieck (1991) profiled the characteristics of food pantry clients in the New York City and Upstate New York areas. The food pantry clients in the Upstate New York sample were disproportionately white females with children. By contrast, the city sample had a larger percentage of older African-Americans, without children at home. The Upstate sample had more long-term clients (more than 3 years) than the city group, suggesting that rural people may have fewer options for improving their food security over the long run than do urban residents.

America's Second Harvest (1997), the nation's largest network of food banks, profiled the characteristics of their clients.   Of client households at the time of the study, 67 percent had an annual household income of less than $10,000. Many clients were unemployed or disabled. For only 28 percent of households was employment the main source of income. Thirty-seven percent of all clients were unemployed, 21 percent were working, 21 percent were disabled, and

12 percent were retired. Thirty three percent of all households served were single parent households. Forty percent of clients receive food stamps, but many reported that the stamps do not last the entire month. Thirty-nine percent of food stamp recipients reported having their benefits cut. Of those who do not have food stamps, nearly 40 percent had applied and were waiting for approval. Twenty seven percent of clients reported that adults in the households had skipped meals in the past month, because of lack of resources to obtain food. In 9 percent of the households, children had skipped meals. Many clients also lacked basic household amenities. Twenty four percent of clients reported having no stove, 43 percent no telephone, and 60 percent no car.

Both Bartfeld (2003) and Duffy et al. (2002) analyzed single mothers who used food pantries in the era of welfare reform. Duffy et al. (2002) found that stigma was not a concern among low-income food-needy single-parent respondents in East Alabama and that awareness of food pantry services was an important characteristic distinguishing food pantry users from other low-income, food-needy individuals in the study area. They also found that church attendance might have provided low-income families with a social network to make them aware of community food pantry resources (Duffy et al., 2002). Bartfeld (2003), surveying single-mother food pantry users in Wisconsin, found that most had low education levels, low household income, and often experienced an array of hardships. For many of these respondents, food pantry use was an on-going strategy to meet food needs.

Data

We used data from the Current Population Survey (CPS) of 1999 to examine regional patterns of food assistance use. The March CPS data contain information related to government

program use, and the April data include the food security supplement, which measures levels of household food insecurity and asks about the use of private food assistance.

CPS data are collected monthly on about 55,000 housing units with observations on each individual in the household. A sample household is interviewed for four consecutive months, and then, after an 8-month rest period, for the same four months a year later. Thus, about 75 percent of the sample is common from month to month. There were 134,951 and 132,324 CPS observations on individuals in March and April, 1999, respectively. Full documentation on the design and methodology of the survey can be found in Technical Paper 63 from the U.S. Department of Labor (2000). Data for the two months were merged using an identification number created by concatenating state code, household ID (a non-unique identifier), and number of people in households. To ensure matching across months, we looked only at households that did not change size over the time period. We retained a single observation per household (the "household reference person") from the CPS data files for demographic information. Households that were part of an experimental survey design in the April, 1999, supplement (about 1/8th of the sample) and thus not comparable to other households were eliminated, as were those lacking valid answers to questions about food assistance program use. Screening for all these variables resulted in a final data set of 3,059. Details of data merging and screening process are available on request.

Regional Patterns of Food Assistance Use

Table 2 provides information on use of food stamps and food pantries by households in 1999, based on CPS data. For those at or below 125 percent of poverty, food stamp take-up is highest in the Northeast (43 percent) and lowest in the Midwest (32 percent). Food pantry use is considerably lower than food stamp use in all regions. It is highest in the West (14 percent) and

lowest in the South (9 percent). Results for those at or below 185 percent of poverty show similar patterns, but with lower take-up levels all around. Those above 130 percent of poverty would generally not be eligible for food stamps and may not be eligible for private food assistance use, depending on state rules.

To discover whether households in similar circumstances are more or less likely to use a food assistance program if they live in a particular region, regression models are needed. Review of previous models on the factors affecting food assistance use suggests that different economic and demographic characteristics of the household should be included as explanatory variables. In addition, based on previous research, we hypothesize that the decision to participate in a food assistance program is affected by the perceived disutility, in the forms of stigma and inconvenience, of obtaining aid. Individuals who already receive other forms of cash or non-cash welfare benefits would presumably be less concerned about the stigma of pantry or food stamp use than those who do not currently receive any other forms of assistance. Hence, we hypothesize that use of cash welfare or other forms of non-cash welfare would make individuals more likely to use private food assistance.

The relationship of private food assistance use to food stamp use is not well understood. However, individuals who use one form of food assistance may be more likely than others to use another form, either because of issues related to stigma or because these individuals are "plugged in" to the food assistance network. Previous research has shown that knowledge of program availability is a factor explaining lack of use of food assistance programs (see for example Duffy et al., 2002).

For food pantry use, we estimated logit models of the form:

$Z_i = \beta_0 + \beta_1 AGE + \beta_2 EDUD1 + \beta_3 EDUD2 + \beta_4 HHSIZE + \beta_5 BOTHCH +$

$$\beta_6 ONENCH + \beta_7 ONECH + \beta_8 RACE + \beta_9 HISP + \beta_{10} SEX + \beta_{11} MSATYPE + \beta_{12} CASHWLF$$

$$+ \beta_{13} NCASHWLF + \beta_{14} OWNHOME + \beta_{15} INCOME + \beta_{16} RASCHD + \beta_{17} RINDEX +$$

$$\beta_{18} FSTAMP + \beta_{19} NEAST + \beta_{20} MWEST + \beta_{21} SOUTH + \varepsilon_i$$

Z is the "log odds" of using private food assistance and the independent variables represent characteristics that might affect use. The personal characteristics include age, education level and sex of the reference person. AGE is a continuous variable while education is represented as a three-category variable. Those three categories are education at less than the high school level (EDUD1), education at the high school level or GED (omitted category) and education beyond a high school degree or GED (EDUD2). Each variable is modeled by binary categories, where the variable takes the value of "1" if the record falls on that category and "0" otherwise. Sex (SEX) is a binary variable with "1" representing female response person and "0" otherwise. Sex of the reference person in a two-head household is somewhat arbitrary in the CPS data. However, we included the variable, as omitting a relevant variable is a more serious problem than including an unneeded one.

Household structures take one of four categories: married, spouse living together without children (omitted category), married spouse living together with children (BOTHCH), single without children (ONENCH), and single with children (ONECH). Each categorical variable takes the value of "1" if the record falls under that category and "0" otherwise. Household size (HHSIZE) is a continuous variable for the number of persons living in the household.

The economic condition of the household is characterized by level of income and whether the household owns a home or not. Income (INCOME) is measured as a continuous variable, taking the mid-value of the category variable for total household income provided by the CPS data. Receiving cash public welfare (CASHWLF) is a binary variable where "1"

represents a household receiving any positive amount of benefits under categories "Disability Benefits" or "Supplementary Social Security Benefits" or "Public Welfare" and "0" otherwise. Similarly, the non-cash public welfare (NCASHWLF) is a binary variable where "1" represents the household receiving any non-cash benefits in the form of "Public Housing" or "Low or Subsidized Rent" or "Medicaid Benefits" or "Free or Reduced Lunch or Breakfast for Children at School" or "Free or Reduced Lunch for Elderly" or "WIC Benefits" and "0" otherwise. Food stamp use (FSTAMP) is also a binary variable, with 1 representing receipt of food stamps, 0 no food stamps. Home ownership (OWNHOME) is again a binary variable where "1" represents the household owning a home, "0" otherwise. Other demographic variables included in the study are race and ethnicity of the household. Race (RACE) is a binary variable where "1" is white and "0" otherwise. HISP is also a binary variable where "1" indicates Hispanic origin and "0" otherwise.

MSATYPE is a binary variable to show the location of household where "1" represents that the household lies within a metropolitan area and "0" otherwise. Region is represented by the four Census categories, with the West the arbitrarily omitted category. Food security status of the household is modeled by two variables RASCHD and RINDEX. The CPS April supplement contains a Rasch score with increasing score associated with greater food insecurity, truncated at the food security end (Bickel et al., 2000). To deal with the effects of data truncation, RASCHD is introduced as a binary variable where "1" indicates the household has been coded as completely food secure, and "0" otherwise. RINDEX assigns a zero value for food secure households and retains the original score for those who are not completely food secure.

Because eligibility for private food assistance varies by state and even by agency, we examined food pantry use first among those at or below 125 percent of poverty and then among those at or below 185 percent of poverty.

For food stamp use, we estimated a similar model. In this case, food pantry use was included as a dependent variable. Because eligibility for food stamps is limited to those at or below 130 percent of poverty, we estimated food stamp use only for those at or below 125 percent of poverty. We reduced the poverty level for the data set slightly below the target level of 130 percent because of the likelihood that people between 125 percent and 130 percent of poverty would either not meet other eligibility requirements or would find the small benefits available at this income level insufficient to justify participation in the program.

Limitations

Untangling causality in models that predict the probability of using food assistance programs is fraught with difficulty. Household income from earnings and participation in other welfare programs (e.g. TANF, WIC, housing assistance) may be jointly decided along with the use of food pantries or food stamps. Further, while participation in other welfare programs would appear to indicate that the respondent may be less concerned about stigma than low-income respondents who do not enroll in other programs, lack of information or the disutility associated with the perceived transaction costs of enrolling may be the primary separator between eligible non-users and users of these programs.

Another concern is that the food security level of a household may be affected by participation in food assistance programs, leading to simultaneous equation bias. However, recent work by Gundersen and Oliveira (2001) indicates that while food insecurity affects the probability of participation in the food stamp program, participation in the program has no

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impact on household food security status. This finding is similar to that of Butler and Raymond (1996), who found that, when models were properly specified, the use of food stamps did not improve nutrition in households with elderly heads. In theory, the possible endogeneity of food security could be handled through the use of instruments. To provide consistent estimates, the instruments must be highly correlated with food security status, but not with program participation decision. Research studies, however, have shown that the same household characteristics linked to program participation are also linked to food security (see, for example, Frongillo et al., 1996). Thus, because accounting for possible endogeneity of food security status would likely result in bias from weak instruments (Staiger and Stock, 1997), and based on previous studies that show only a one-way causality, we treat food security status of the household as an exogenous variable. Further research on the impact of food assistance on food security levels is certainly well warranted, but is beyond the scope of this study.

Another limitation of this study is that the data may be subject to measurement error if respondents under or over-report their use of programs. Further, the data on relevant variables was collected over a two-month period. Conditions in the household may have changed in that month, leading to another source of possible measurement error.

Results

Results of the modes for private food assistance use are reported in Table 3. Food stamp use, use of cash welfare, and use of non-cash welfare are all positively related to the likelihood of using private food assistance. The results show that the likelihood of a single parent living with children obtaining private food assistance is significantly lower than that of a two-adult family without children. For families at very low incomes (below 125 percent of poverty), the two-adult families with children were not significantly different from childless two-adult families in terms of likelihood of obtaining private food assistance. When the sample is

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expanded to include those at slightly higher income levels (up to 185 percent of poverty), this result changes so that all families with children are less likely than childless families with two adults to obtain private food aid. Single adults without children were not significantly different from two-adult childless families in terms of private food assistance use. Lower use of private food assistance programs by adults with children may indicate that the search time or other transactional costs of using these programs may be more difficult for the caretakers of children. Alternatively, families with children may be more likely to obtain more formal assistance, through food stamps, school lunch or other government feeding programs that are more easily available to those with children.

Race is not a significant factor in private food assistance use; however, Hispanics are significantly less likely than non-Hispanics in similar circumstances to use food pantries. For those at or below 125 percent of poverty, living in a metro area corresponds to lower likelihood of food pantry use; however, this variable is not significant when the sample is expanded to include those at or below 185 percent of poverty. Both the dummy variable indicating absolute food security and the Rasch index measuring the scope of food insecurity where it existed were significant in both equations, indicating a dummy variable alone may not fully control for the relationship between food insecurity and the decision to use food assistance. This result held in both the smaller sample (at or below 125 percent of poverty) and the larger sample (at or below 185 percent of poverty). The South was the only region to have a significant parameter estimate. Compared to the omitted category (the West), and controlling for other factors, low-income residents in the South are significantly less likely to use private food assistance. The other regions were not significantly different from the West in terms of private food assistance use. This result is somewhat surprising given the strong relationship between private food assistance

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and religious organizations (Cashwell et al., 2004; Molnar et al., 2001) and the South's reputation as the "Bible Belt."

Results of the logit model for food stamp use are presented in table 4. In this case, food stamp use (a binary variable) was regressed against the same demographic and regional variables as used in the food pantry equation with food pantry use (FDPANTRY) included as an explanatory variable. In contrast to the private food assistance results, residents of the South were found to be significantly more likely, when other factors are controlled, than those in the omitted category (West) to use food stamps. Residents of the Northeast are also more likely than those in the West to use food stamps, while those in the Midwest are not statistically different from those in the West in use of food stamps. Also, in contrast to the private food assistance case, single parents with children are more likely than those in other family structures to use food stamps.

CONCLUSIONS

We find that, when household characteristics are held constant, families in the South are less likely than families in other regions of the country to use private food assistance. At the same time, they are more likely than families in the West or Midwest to use food stamps, indicating that the reduced likelihood of using private food assistance is probably not associated with a generally greater reluctance to accept aid in any form. The reason for lower food pantry use in the South is an area for future research. One possible cause may be that the South has higher levels of poverty than many other regions and large tracts of highly rural areas, which could lead to resource strain for private food assistance programs. Delivering assistance in more affluent, more urbanized areas may be less difficult as the perspective donor base for foodstuffs and cash to run these programs is larger and recipient groups are not as widely scattered. Hence,

in these more affluent, more urban areas, access to private food assistance programs may be higher among the intended recipient group. An analysis looking at the location of private food assistance agencies with respect to the demographics of the surrounding area could provide some evidence to either support or refute this theory.

Regional differences in food stamp use among families in different regions of the country are also worth investigating. The two regions where food stamp use was significantly higher than in other areas were the South and the Northeast. The two regions are diverse, the North more urbanized and affluent, and the South having higher poverty rates and more extensive rural areas. The two regions also differ culturally and politically.

Because this study is limited to one year, 1999, it is unknown whether these regional patterns are persistent. Further work, both for recent years and for years before the 1996 welfare reform was enacted, would be a useful continuation of this study.

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Table 1. Food Insecurity by Region, 2002

| Category | Food Secure % | Food Insecure | | |
		Total Insecure %	Without hunger %	With hunger %
Region:				
Northeast	90.8	9.2	6.3	3.0
Midwest	90.4	9.6	6.4	3.3
South	87.6	12.4	8.8	3.6
West	87.9	12.1	8.1	3.9

Source: Calculated by ERS using data from the December 2002 Current Population Survey Food Security Supplement. (Numbers may not add up because of rounding.)

Table 2. Food Assistance Participation Across Regions by Poverty Level

Participation	Northeast	Midwest	South	West	Total
At or Below 125% Poverty Level					
Food Stamp	43.1%	31.9%	33.1%	33.0%	34.5%
Food Pantry	11.8%	13.4%	8.7%	14.0%	11.2%
At or Below 185% Poverty Level					
Food Stamp	24.2%	16.5%	19.6%	18.4%	19.5%
Food Pantry	8.1%	7.4%	5.8%	10.2%	7.4%

Data Source: CPS, 1999

Table 3. Logit Model of Food Pantry Participation, by Poverty Level

Variables	125% Poverty Level			185% Poverty Level		
	Coeff	t-ratio	Marginal Effects	Coeff	t-ratio	Marginal Effects
Constant	-2.516	-5.187***	-0.147	-2.803	-7.623***	-0.088
FDSTAMP	0.758	5.086***	0.044	0.920	7.265***	0.029
AGE	-0.003	-0.712	0.000	-0.001	-0.328	0.000
HHSIZE	0.002	0.035	0.000	-0.038	-0.747	-0.001
EDUD1	-0.152	-1.036	-0.009	-0.110	-0.904	-0.003
EDUD2	0.261	1.163	0.015	-0.158	-0.863	-0.005
BOTHCH	-0.382	-1.001	-0.022	-0.445	-1.661*	-0.014
ONENCH	-0.164	-0.548	-0.010	-0.283	-1.397	-0.009
ONECH	-0.624	-1.767*	-0.036	-0.650	-2.556**	-0.020
RACE	0.028	0.187	0.002	-0.037	-0.294	-0.001
HISP	-0.520	-2.420**	-0.030	-0.296	-1.740*	-0.009
SEX	-0.042	-0.265	-0.002	0.022	0.179	0.001
MSATYPE	-0.268	-1.836*	-0.016	-0.151	-1.255	-0.005
CASHWLF	0.309	2.163**	0.018	0.290	2.350**	0.009
NCASHWLF	0.616	3.458***	0.036	0.782	5.448***	0.025
OWNHOME	-0.148	-0.857	-0.009	-0.190	-1.406	-0.006
INCOME	-0.012	-0.882	-0.001	-0.006	-0.657	0.000
RASCHD	-0.661	-2.763***	-0.038	-0.703	-3.657***	-0.022
RINDEX	0.246	8.653***	0.014	0.273	11.638***	0.009
NEAST	-0.100	-0.514	-0.006	-0.241	-1.553	-0.008
MWEST	-0.061	-0.313	-0.004	-0.227	-1.463	-0.007
SOUTH	-0.435	-2.468**	-0.025	-0.591	-4.140***	-0.019
Log likelihood function	-846.062			-1323.139		
Restricted log likelihood	-1069.386			-1770.609		
Chi-squared	446.648			894.936		
N	3059			6762		

***p<0.01; **p<0.05; *p<0.1
Data Source: CPS, 1999

Table 4. Logit Model of Food Stamp Participation, 125% Poverty Level, 1999

Variables	125% Poverty Level		
	Coeff	t-ratio	Marginal Effects
ONE	-2.117	-5.677***	-0.426
FDPANTRY	0.772	5.131***	0.155
AGE	0.002	0.697	0.000
HHSIZE	0.218	4.215***	0.044
EDUD1	0.215	1.964**	0.043
EDUD2	-0.027	-0.151	-0.006
BOTHCH	0.407	1.438	0.082
ONENCH	-0.142	-0.639	-0.029
ONECH	0.775	2.943***	0.156
RACE	0.155	1.328	0.031
HISP	-0.244	-1.611	-0.049
SEX	0.224	1.919*	0.045
MSATYPE	-0.220	-1.994**	-0.044
CASHWLF	1.738	16.788***	0.350
NCASHWLF	0.713	5.754***	0.144
OWNHOME	-0.269	-2.172**	-0.054
INCOME	-0.072	-7.081***	-0.014
RASCHD	-0.540	-3.447***	-0.109
RINDEX	0.042	1.593	0.009
NEAST	0.351	2.297**	0.071
MWEST	-0.051	-0.329	-0.010
SOUTH	0.305	2.294**	0.061
Log likelihood function		-1371.804	
Restricted log likelihood		-1953.502	
Chi-squared		1163.396	
N		3059	

***p<0.01; **p<0.05; *p<0.1
Data Source: CPS, 1999