Public and Private Food Assistance Choices of Food Needy Families

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Abstract

A bivariate probit model was used to determine public and private food assistance participation among the population below 125 percent poverty level, using the Current Population Survey data. Food stamp use and food pantry use were complements. Household income, food insecurity status, household structure, and rural residence affected participation decisions.

Keywords: bivariate probit model, food stamp, food pantry, food insecurity

Introduction

Low-income, food-needy families in the United States can choose from an array of strategies to help them cope with their food needs. Government programs, such as the Food Stamp Program, represent the more formal and bureaucratic end of the food assistance spectrum. Alternatively, food-needy families may rely on highly informal, family-based coping strategies, such as buying a few low-cost staples and stretching their use or relying on friends or relatives for meals. The use of food pantries and other organized forms of private food assistance could be considered a middle-ground coping strategy in terms of its formality.

While many studies have examined causes of food insecurity and reasons for Food Stamp Program participation (e.g. Gleason, Schochet and Moffitt; Rosso and Folwer; Wilde et al.) , and others have focused on food pantry or soup kitchen use (e.g. Daponte et al., Duffy et al.), few studies have examined the interrelationship of private and public food assistance programs. It is not yet fully understood, for example, whether food stamp users -- if all other factors, such as family food insecurity level, are equal -- are less likely, more likely, or equally likely to use food pantries than those in similar circumstances who do not participate in the Food Stamp Program.

The general objective of this research is to assess the factors affecting the use of private and public food assistance by low-income families. Understanding the link between food pantry use and Food Stamp Program participation is especially important given that food pantry use appears to be increasing at a rapid rate in some areas (U.S. Conference of Mayors, 1998, 1999, 2000) while Food Stamp Program participation among the eligible population is declining at a surprisingly high rate (Wilde et al.).

Background

The U.S. Food Stamp Program began as a pilot program in the early 1960s and was expanded nationwide in the 1970s. Since then, it has been the nation's largest formal anti-hunger program. Benefits, either in the form of coupons or electronic transfers, allow low-income households to purchase food for home consumption. The average monthly participation level in fiscal year (FY) 2001 was 17.3 million individuals (FRAC).The current level of food stamp participation is low, relative to historical standards. From 1994 to 1999, a period spanning the "welfare reform" changes of 1996, participation in the program dropped by about one third, from 27.5 to 18.2 million recipients (Wilde et al.).

Formal private food assistance via an extensive food bank network is a more recent development than food stamps. Before the early 1980s, private food aid in this country was largely limited to soup kitchens in high-poverty urban areas. In the 1980s, however, in the face of a changing federal policy direction coupled with a deep recession, private emergency food systems expanded to include more rural areas and to offer a wider variety of food assistance. Food pantries, which provide (largely unprepared) food for home consumption, became widespread, reaching into suburban and rural areas. Pantries are direct-contact organizations

that normally provide food provided by a central food bank network, such as America's Second Harvest network, the nation's largest.

Private food assistance via food pantries and food banks was originally promoted as a response to a short-term crisis (Curtis and McClellan,), but food drives and other forms of private food aid by local community groups have become a lasting and common feature across the U.S. (Clancy, Bowering, and Poppendieck). In the late 1990s, despite the strong economy and drop in food stamp participation, findings from surveys in over 30 major cities suggest that requests for emergency food assistance by families with children rose sharply (U.S. Conference of Mayors, 1998, 1999, and 2000). The link between welfare reform, the decrease in food stamp participation, and these reported increases in food pantry use is not well understood; however, in some cases directors of the pantries do cite welfare reform as a contributing factor (Eisinger).

The interaction among coping strategies is an important policy concern, given the recent fall-off in Food Stamp Program participation by the eligible population. Plausible explanations for this drop in program use include increased administrative barriers associated with welfare reform (Wilde et al.) and lack of knowledge that food stamp benefits can be continued (Zedlewski and Brauner), and increased availability of private food assistance.

Data and Methods

Data

The study used Current Population Survey (CPS) data from March and April, 1999. March and data were contain information related to government program use, and the April data provides the food security supplement. CPS data are collected monthly on about 50,000 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.

Measures of ease of access to food stamps and food pantries were derived from different sources. To characterize the ease of applying for food stamps, we used the number of pages in the food stamp application in the study year, which varied from state to state, as a symbol of "red tape" (O'Brien et al.). This data was provided by America's Second Harvest. America's Second Harvest also provided, upon request, a data set with the amount of food they provided for pantry distribution, in each state during the year 1999. Ease of access to a pantry was expressed in terms of pounds of pantry food per head for population in the state below 125 percent poverty level. While America's Second Harvest is not the only private food assistance program available, it is the largest provider and has an excellent record system. The amount of private food assistance will thus be underestimated in this study, but more comprehensive data is not available.

For this study, which examines household characteristics, only one observation from each household (the "household reference person") was retained from the CPS data files. 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. We looked only at households that did not change size over the time period.

The food insecurity level in the CPS data is based on 12 months recall on 18 different questions concerning behaviors and experiences related to household food security. The questions covered a range of experiences, 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.). Based on responses to survey items, households were characterized as food secure, food insecure without hunger, food insecure with moderate hunger, and food insecure with severe hunger. In addition to this, a food security Rasch scale was derived by using the survey results and is provided in the April CPS supplement.

Only households with less than 125 percent poverty level were kept in the sample, as these households would normally be eligible for food assistance programs. Households that were part of an experimental survey design in the April 1999 supplement (about $1/8^{th}$ of the sample), and thus not comparable to other households, were eliminated, as were those lacking valid answers to questions about food stamp and food pantry use. Because the welfare reform legislation of 1996 severely limited the access of recent immigrants to federal program, we retained only those households headed either by a US citizen or by an individual who immigrated before 1996. Screening for all these variables resulted in a final dataset of 3010. Details of data merging and screening process are available upon request.

Model

Review of previous models on the factors affecting food insecurity and choice of food assistance suggests that different demographic and state characteristics are responsible for the food insecurity status and food assistance choice of household.

Blank and Ruggles used monthly longitudinal data from the Survey of Income and Program Participation (SIPP) to examine participation in AFDC and food stamp, limiting their sample to single mothers. They found that participation in either program is most likely to occur for women with low current and future earnings opportunities, and is affected by location and policy parameters. They also found that a substantial number of women exit the program before

their apparent eligibility ends, perhaps because of unreported changes in income. Lubitz and Carr examined "trigger events" leading to Food Stamp Program entry. A large drop in household income was the event most likely to trigger program participation. Changes in household composition could trigger entry if those changes were associated with large changes in income, as would be the case in a divorce, where a wage-earner left the household. Hence, the literature provides strong evidence of the types of demographic variables (e.g. education, family structure, household location) that should be included in multivariate analyses of food assistance.

The final model to explain the alternative food assistance choice of food needy households in used in this study is a jointly determined bivariate probit model for food stamp (FDSTAMP) and food pantry (FDPANTRY) choices. Both FDSTAMP and FDPANTRY are binary choice dependent variables where "1" represents the population that received the particular food benefits and "0" otherwise.

The model takes the form of

$$Z_{i1} = \beta_1 + \beta_2 AGE + \beta_3 EDU\_D1 + \beta_4 EDU\_D2 + \beta_5 EDU\_D3 + \beta_6 EDU\_D4 + \beta_7 EDU\_D5 + \beta_8 SEX + \beta_9 HHSIZE + \beta_{10} BOTH\_KID + \beta_{11} ONE\_NKD + \beta_{12} ONE\_KID + \beta_{13} INCOME + \beta_{14} CASHWLFR + \beta_{15} NCASHWLFR + \beta_{16} OWNHOME + \beta_{17} RACE + \beta_{18} ORIGIN + \beta_{19} MSATYPE + \beta_{20} RASCHD + \beta_{21} RINDEX + \beta_{22} PAGE\_L + \varepsilon_{i1}$$

$Y_{i1} = 1$ if $Z_{i1} > 0$, $Y_{i1} = 0$ otherwise

$$Z_{i2} = \beta_1 + \beta_2 AGE + \beta_3 EDU\_D1 + \beta_4 EDU\_D2 + \beta_5 EDU\_D3 + \beta_6 EDU\_D4 + \beta_7 EDU\_D5 + \beta_8 SEX + \beta_9 HHSIZE + \beta_{10} BOTH\_KID + \beta_{11} ONE\_NKD + \beta_{12} ONE\_KID + \beta_{13} INCOME + \beta_{14} CASHWLFR + \beta_{15} NCASHWLFR + \beta_{16} OWNHOME + \beta_{17} RACE + \beta_{18} ORIGIN + \beta_{19} MSATYPE + \beta_{20} RASCHD + \beta_{21} RINDEX + \beta_{22} FOOD125P + \varepsilon_{i2}$$

$Y_{i2} = 1$ if $Z_{i2} > 0$, $Y_{i2} = 0$ otherwise

$[\varepsilon_{i1}, \varepsilon_{i2}] \sim$ bivariate normal (BVN) [0, 0, 1, 1, ρ]

Z is the predicted "odds" of using food stamp or food pantry, the independent variables represent characteristics that might distinguish the users and non-users of food stamp or food pantry depending on the model.

The personal characteristics are modeled by age, education level, and sex of the reference person. AGE is the continuous variable where as education is a six category variable. Those six categories are education below grade 7 (omitted category), between 7-12th grade (EDU_D1), high school graduate or GED (EDU_D2), vocational college or some college (EDU_D3), undergraduate level (EDU_D4) and graduate level (EDU_D5). Each variable is modeled by binary categories, where the variable takes the value of "1" if the record falls in 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 data collection.

Family characteristics are modeled by household size and structure of the household. Household size (HHSIZE) is a continuous variable showing number of persons living in the household. Household structure is modeled by four categories: married, spouse living together without children (omitted category); married spouse living together with children (BOTH_KID): single without children (ONE_NKD): and single with children (ONE_KID). Each categorical variable takes the value of "1" if the record falls under that category and "0" otherwise.

The economic condition of the household is characterized by level of income, receiving cash or non-cash public welfare, and whether the household owns a home or not. Income (INCOME) is measured as a continuous variable, taking the mid-value of the total household income category variable given in the CPS data. Receiving cash public welfare (CASHWLFR)

is a binary variable where "1" represents if the household received 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 (NCASHWLFR) is binary variable where "1" represents if the household received 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. Home ownership (OWNHOME) is also a binary choice where "1" represents the household owns a home and "0" otherwise.

Other variables included in the regression models are race and nativity of the household. Race (RACE) is a binary variable where "1" is white and "0" otherwise. Origin (ORIGIN) is also binary variable where "1" is Hispanic and "0" otherwise.

Geographic characteristics are also included in the model. 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. Number of pages in food stamp questionnaire (PAGE_L) and per capita availability of pantry food for people less than 125 percent poverty level (FOOD125P) are two continuous variables to represent state characteristics of public and private food programs.

Food security status of the household is modeled by two variables RASCHD and RINDEX. RASCHD is a binary variable where "1" indicate the household has been coded as completely food secure in the CPS April supplement, and "0" otherwise. For those who are not completely food secure, the CPS April supplement contains a Rasch score (RINDEX), with increasing score associated with greater food insecurity.

Results

A description of the study population is given in Table 1. This information was obtained by multiplying the number of cases by the household food security weight provided in the CPS April supplement. Most observations come from metropolitan areas (73 percent), with a non-Hispanic (82 percent), white (70 percent) female (65 percent) listed as the household reference person. (In households with both a male and female head, the choice of one or the other as reference person is arbitrary.) Only a one third of households (33 percent) owned a home. About one half of the observations (51 percent) were single member households, followed by a single adult with children (26 percent) and then married couples with children (15 percent). The average household size of the sample population was 2.55 individuals per households. The average annual household income was $9,614.

Table 1 also shows that majority of reference persons had a high school education or less. A little over 10 percent did not complete grade seven, another 29 percent never completed high school and 51 percent graduated from high school. Less than 10 percent pursued post-secondary education. The age distribution of the reference person was more or less uniform. Here, it is presented in 15-year intervals.

About 46 percent of this low-income population was coded as absolutely food secure without any indication that they worried about food insecurity. Another 19 percent was in a "marginal food security" class. These individuals reported 1 or 2 positive responses to the questions about food insecurity. Twenty-three percent were food insecure without hunger, and around 11 percent were food insecure with some degree of hunger, either moderate (9 percent) or severe (2 percent).

Two independent logit models were estimated, one for food stamp and one for food pantry participation. In this formulation, the model for each food program participation choice (e.g. food pantry and food stamps) included participation in other program as independent variable, for example, food stamp model included the food pantry participation variable among the independent variables. Results are found in table 2.

Household size, being single with children, receiving cash and non-cash public welfare and female sex of the reference person positively affected the probability of food stamp participation. Income level, home ownership, metropolitan status, and higher food security status negatively affected the probability of food stamp participation. Additionally, the length of the food stamp application (which varies from state to state) negatively affected food stamp use. Food pantry use was positively affected by receipt of cash and non-cash public welfare and also by the index of food insecurity. Being single with children, non-white and living in a metropolitan area had a negative effect on food pantry participation. In each model, participation in the alternative food assistance programs was significant and positive at much less than the one percent, providing evidence that these programs are not substitutes for each other, but rather are likely to be used in conjunction by food insecure households.

Given the significant effects, and the likelihood of non-independence in decision-making, a bivariate probit was estimated (Table 3). There was significant correlation between the two models, (rho = 0.2653; $p<.0000$). This also showed that food stamps and food pantries are not independent, but are complementary choices for food needy households.

The results in the bivariate probit model are similar to those in the individual logit models. The signs and coefficients of the food pantry model suggest that low annual household income, large family size, higher food insecurity, female reference persons, being single with

children, not owning a home, receiving cash and non-cash public welfare, non-Hispanic origin, living in non-metropolitan areas and a shorter food stamp questionnaire increased the probability of food stamp participation. Age and education level of the reference persons were not significant. On the other hand, age, sex, family structure, home ownership and income level were not significant for the food pantry model. Receiving cash and non-cash public welfare, non-Hispanic, non-metropolitan area status and increasing food insecurity positively affected the food pantry participation. Only the high school diploma category of education level was found significant.

Discussion

The general household characteristics that were found to influence food pantry and food stamp use were similar to the characteristics reported by other researchers, with poorer, more food insecure households more likely to see such assistance. Additionally, we found that non-metropolitan low-income households were more likely than urban households to use food assistance program. Further work on this problem, and refinements to these models, will involve assessing the independence of income and food stamp choice, as well as examining food insecurity variable relative to the food assistance choices. These variables may be jointly determined. Additionally, simulations will be performed to assess the likelihood of program use by households in different circumstances.

The most important findings of this study are: 1) that the likelihood of using one form of food assistance (food pantry or food stamps) is increased by use of the other form, and 2) that page length of the food stamp form appears to be a significant deterrent to food stamp use among low-income households .

Although some may view private food assistance as a plausible substitute for the government food stamp programs, our results indicate that food stamps and food pantries are actually complementary to each other. The severity of food insecurity appears to push families to look for more than one possible sources of food assistance. Further, food pantry users may come into contact with staff members, volunteers, or other pantry clients who provide information about government programs, making it more likely these individuals would enroll in the Food Stamp Program. Conversely, food stamp clients may be told about available pantry programs by their caseworkers.

An important finding, from a policy perspective, was that the length of the food stamp application had a negative effect on food stamp participation, giving some credence to the hypotheses that "red tape" keeps food needy families from using this program. A uniform simplified questionnaire would be a policy remedy to this problem.

References

Bickel, G. M. Nord, C. Price, W. Hamilton, and J. Cook.. "Guide to Measuring Household Food Security, Revised 2000." Alexandria, VA: Office of Analysis, Nutrition, and Evaluation, Food and Nutrition Service, USDA, 2000.

Blank, R. and P. Ruggles. "When Do Women Use Aid to Families with Dependent Children and Food Stamps?" Journal of Human Resources. 31, 1 (1996): 57-89.

Clancy, K., J. Bowering, and J. Poppendiek. "Characteristics of a Random Sample of Emergency Food Program Users in New York: I. Food Pantries." American Journal of Public Health. 81, 7 (July, 1991): 911-914.

Curtis, K. and S. McClellan. "Falling through the Safety Net: Poverty, Food Assistance and Shopping Constraints in an American City." Urban Anthropology. 24, 1-2 (1995): 93-135.

Daponte, B., G. Lewis, S. Sanders, L. Taylor. "Food Pantry Use among Low-Income Households in Allegheny County, Pennsylvania." Journal of Nutrition Education. 30, 1 (1998): 50-57.

Duffy, P., J. Molnar, L Claxton, G. Hallmark, C. Bailey, and S. Miklouchich. Private Food Assistance in East Alabama: Issues of Access and Need. Starkville, MS: Southern Rural Development Center, Project Report, December, 1999. http://ext.msstate.edu/srdc/activities/duffy_finalreport.htm

Eisinger, P. " Food Pantries and Welfare Reform: Estimating the Effect." Focus. 20, 3 (1999): 23-28.

FRAC (Food Research and Action Center). "Food Stamp Program: Basic Facts and Data" http://www.frac.org/html/federal_food_programs/programs/fsp.html. 2003.

Gleason, P., P. Schochet, and R. Moffitt. "The Dynamics of Food Stamp Program Participation in the Early 1990s." Alexandria, VA: USDA, Food and Nutrition Service, April, 1998.

Lubitz, I. and T. Carr. "Turnover in the Food Stamp Program in 1979: The Role of Trigger Events." Washington, D.C: Mathematica Policy Research, Inc., February, 1985.

O'Brien, D., K. Pendergast, E. Thompson, M. Fruchter, and H.T. Aldeen. "The Red Tape Divide." Chicago, IL: America's Second Harvest (www.secondharvest.org), 2001.

Olson, C. "Factors Contributing to Household Food Insecurity in a Rural Upstate New York County." Family Economics and Nutrition Review. 10, 2 (1997): 2-17.

Rosso, R. and L. Fowler. "Characteristics of Food Stamp Households: Fiscal Year 1999." Alexandria, VA: USDA, Food and Nutrition Service, Office of Analysis, Nutrition and valuation, FSP-00-CHAR, 2000.

U.S. Conference of Mayors. A Status Report on Hunger and Homelessness in American Cities 1998, 1999, 2000. Washington, D.C.: U.S. Conference of Mayors. Web published at: www.usmayors.org

Wilde, P., P. Cook, C. Gundersen, M. Nord, and L. Tiehen. "The Decline in Food Stamp Program Participation in the 1990's." Washington, DC: USDA, ERS, Food Assistance and Nutrition Research Report Number 7, June, 2000.

Zedlewski , S. R., and S. Brauner. "Are the Steep Declines in Food Stamp Participation Linked to Falling Welfare Caseloads?" Number B-3 in Series, "New Federalism: National Survey of America's Families" Washington, D.C.: The Urban Institute, November, 1999. Published on-line at www.urban.org.

Table 1. Weighted distribution of households

Distribution	weighted number of cases	Percentage
a. Households receiving food stamp benefits		
Received	2813267	34.79
Not received	5274153	65.21
b. Households receiving food pantry benefits		
Received	852411	10.54
Not received	7235009	89.46
c. Sex distribution of the reference person		
Female	5299082	65.52
Male	2788338	34.48
d. Racial distribution of the reference person		
White	5686292	70.31
Non-white	2401128	29.69
e. Nativity of households		
Hispanic	1426075	17.63
Non-hispanic	6661345	82.37
f. Location distribution of households		
Metropolitan	5925790	73.27
Non-metropolitan	2161630	26.73
g. Households receiving cash public benefits		
Received	2428276	30.03
Not received	5659144	69.97
h. Households receiving non-cash public benefits		
Received	4332934	53.58
Not received	3754486	46.42

Table 1. Weighted distribution of households, continued

Distribution	weighted number of cases	Percentage
i. Households owning a home		
Own home	2674007	33.06
Not owned	5413413	66.94
j. Distribution of household structure		
Married, no children	598882	7.41
Married, some children	1249198	15.45
Single, no children	4103894	50.74
Single, some children	2135446	26.4
k. Distribution of educational level of reference person		
Less than 7th grade	854138	10.56
7th - 12th grade	2371768	29.33
HS Diploma, GED	4119791	50.94
Vocational degree	308150	3.81
Undergradute degree	347699	4.3
Graduate degree	85875	1.06
l. Distribution of food security status of households		
Absolutely secure	3784116	46.79
Marginally secure	1517390	18.76
Insecure w/o Hunger	1856208	22.95
Insecure w/ evel 1 hunger	761589	9.42
Insecure w/level 2 hunger	168117	2.08
m. Distribution of age of reference person		
15 – 30 years	2006834	24.81
31 – 45 years	2186110	27.03
46 – 60 years	1412526	17.47
61 – 75 years	1432164	17.71
75 and over	1049787	12.98

Table 2. Result of Individual Logit Model for Food Stamp and Food Pantry

Variable	Food Stamp Model	Food Pantry Model
Constant	1.6008***	-3.3317***
	(.4071)	(.5680)
AGE	.0030	-.0015
	(.0035)	(.0049)
EDU_D1	.1158	-.0945
	(.2826)	(.2672)
EDU_D2	-.1509	.1612
	(.1861)	(.2658)
EDU_D3	.0290	.7333*
	(.2933)	(.3744)
EDU_D4	-.3372	-.1020
	(.3188)	(.4537)
EDU_D5	-.9568	1.0977
	(.6968)	(.7372)
INCOME	-.0737***	-.0005
	(.0102)	(.0145)
HHSIZE	.2251***	-.0085
	(.0521)	(.0644)
BOTH_KID	.3774	-.4012
	(.2861)	(.4000)
ONE_NKD	-.1558	-.2027
	(.2242)	(.3151)
ONE_KID	.7416***	-.6167*
	(.2657)	(.3696)
OWNHOME	-.2933**	-.2297
	(.1232)	(.1789)

Table 2. continued…

CASHWLFR	1.7300***	.3433**
	(.1038)	(.1461)
NCASHWLF	.6790***	.6766***
	(.1242)	(.1862)
RACE	.0939	.1331
	(.1153)	(.1543)
ORIGIN	-.2532	-.4768**
	(.1557)	(.2240)
MSATYPE	-.1854*	-.2647*
	(.1095)	(.1493)
RASCHD	-.5406***	-.7476***
	(.1575)	(.2541)
RINDEX	.4080	.2516***
	(.0268)	(.0292)
SEX	.2347**	.0545
	(.1177)	(.1650)
PAGE_L	-.0116*	n/a
	(.0062)	
FOOD125P	n/a	.0033
		(.0061)
FDSTAMP	n/a	.8321***
		(.1535)
FDPANTRY	.8302***	n/a
	(.1555)	
Log-likelihood ratio	-1354.619	-792.7795

*** Significant at 1% level of significance;

** Significant at 5% level of significance; and

* Significant at 10% level of significance

Figure in the parenthesis indicates Standard Error.

Table 3. Result of Bivariate Probit Model

Variable	Food Stamp Model	Food Pantry Model
Constant	-.9245	-1.8298
	(.2409)***	(0.3006)***
AGE	.0015	0.0000
	(.0021)	(0.0029)
EDU_D1	.0591	-0.0212
	(.1027)	(0.1398)
EDU_D2	-.0895	0.0797
	(.1055)	(0.1438)
EDU_D3	.0667	0.3960
	(.1686)	(0.2134)*
EDU_D4	-.2180	-0.0601
	(.1987)	(0.2321)
EDU_D5	-.5095	0.4932
	(.4013)	(0.4301)
INCOME	-.0423	-0.0044
	(.0059)***	(0.0083)
HHSIZE	.1295	0.0163
	(.0309)***	(0.0382)
BOTH_KID	.1905	-0.2149
	(.1637)	(0.2298)
ONE_NKD	-.1005	-0.1299
	(.1253)	(0.1615)
ONE_KID	.4038	-0.2924
	(.1500)***	(0.2035)
OWNHOME	-.1750	-0.1454
	(.0698)**	(0.0982)

Table 3. Continued…..

CASHWLFR	1.0427	0.3276
	(.0608)***	(0.0760)***
NCASHWLF	.4282	0.4209
	(.0749)***	(0.0984)***
RACE	.0600	0.0680
	(.0655)	(0.0831)
ORIGIN	-.1575	-0.2565
	(.0913)*	(0.1126)**
MSATYPE	-.1152	-0.1356
	(.0646)*	(0.0798)*
RASCHD	-.3116	-0.3242
	.0917***	(0.1201)***
RINDEX	.0409	0.1447
	(.0149)***	(0.0161)***
SEX	.1368	0.0406
	(.0669)**	(0.0880)
PAGE_L	-.0071	n/a
	(.0035)**	
FOOD125P	n/a	0.0015
		(0.0035)
Rho	0.2653	
	(0.0449)***	
N = 3010, Log likelihood ratio = -2158.346		

*** Significant at 1% level of significance;

** Significant at 5% level of significance; and

* Significant at 10% level of significance

Figure in the parenthesis indicates Standard Error.