The Effect of SNAP Benefits for Food Insecurity

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1. Introduction

This research investigates whether an additional Supplemental Nutrition Assistance Program (SNAP, formerly known as the Food Stamp program) dollar per person, reduces food insecurity. SNAP provides benefits to qualifying households to be used for purchasing food. Some have suggested that SNAP benefits may be less effective in some areas because of geographic differences in food prices (Leibtag, 2007; Nord and Hopwood, 2007). We include food prices in our analysis to control for these differences. We find that holding food prices constant, an additional SNAP dollar reduces the probability of food insecurity by nearly 1 percent. Furthermore, we find that food prices do not in and of themselves contribute to higher food insecurity. Instead, higher food prices decrease the purchasing power of SNAP benefits, reducing food security.

Food insecure households are more likely to be SNAP participants. Previous research has investigated SNAP's ability to improve food security. Jensen (2002) notes that there is likely a positive correlation between a household's SNAP-participation decision and their food-insecurity status. Using full-information maximum likelihood, she jointly estimates limited-dependent variable equations and finds that expected SNAP benefits reduce the probability of food insecurity. Jensen must estimate "expected SNAP benefits" because her data source, the CPS-FSS, did not capture actual SNAP benefits in the 2000 survey.[1] Gunderson and Oliveira (2001) estimate two equations for SNAP participation and food security using simultaneous probit, but are unable to identify a statistically significant link between the two. Wilde and Nord (2002) exploit the longitudinal nature of the CPS-FSS to control for unobserved household heterogeneity. But, again they are unable to identify a statistically significant causal relationship between SNAP and food insecurity.

[1] Jensen did not include food prices in her analysis.

Some recent research uses instrumental variables to identify SNAP participation effects. Food insecurity status and food stamp participation are separate limited dependent-variable equations. Heterogeneity in participation rules across states exogenously shifts the participation equation allowing the identification of the participation effect in the food insecurity equation (Yen, et al. 2008; Ratcliffe and McKernan, 2010). Another approach uses state-level errors in payments as instruments for benefits (Myzkerezi and Mills, 2010). These studies find a negative relationship between SNAP participation and food insecurity.

This research follows a similar approach, but differs in two ways. First, we use a natural experiment to identify a causal link between SNAP benefits and food insecurity. Recent legislation increased the maximum amount of SNAP benefits and we use this exogenous increase to identify the causal effect of increased SNAP benefits for food insecurity. While recent research finds support for the notion that SNAP participation reduces food insecurity, all prior research has not always found a negative link. This research will contribute to the body of knowledge concerning the efficacy of the program. Second, this research differs in that we identify the marginal effect of an additional SNAP dollar on the probability that a household is food insecure.

2. SNAP and the American Recovery and Reinvestment Act (ARRA)

Food stamp eligibility is determined by a household's income and resources, while the per-person benefit is determined by household income and deductions for certain expenses. Eligibility guidelines require gross monthly income to be equal or less than 130 percent of the poverty level, and net income after allowable expense deductions must be at or below the poverty line. Resource guidelines require households to have assets equal to $2,000 or less, while households with elderly or disabled members may have assets equal to $3,250.[2] And, some persons are typically ineligible for food stamps regardless of income and resources, including undocumented immigrants, persons on

[2] These are 2012 limits, which are adjusted for inflation. Limits in 2008 and 2009 would have been lower.

strike, and some legal immigrants in the US for less than five years. In addition, childless unemployed adults are typically limited to three months of benefits.

Maximum household benefits increase at a decreasing rate with household-size. Households with zero net-income receive the maximum benefit, while benefits are reduced from the maximum by 30 cents for each dollar of net-income. Gross income is reduced by deductions for living expenses, including a standard deduction, and deductions for medical, dependent care, child support, and shelter expenses to arrive at net income.

The American Recovery and Reinvestment Act of 2009 (ARRA) affected federal food assistance in three primary areas. The ARRA expanded SNAP eligibility to jobless households with no children and increased maximum food benefits by 13.6 percent. The ARRA also provided additional funds to states for program administration. The ARRA allotted $500 million to the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) with $400 million devoted to an anticipated increase in demand for services. The ARRA provided $150 million for local agencies to support food banks, soup kitchens, and food pantries. The Act also provided funds to the National School Lunch Program (NSLP) and food distribution programs on Indian Reservations. But the funds, $100 million to the NSLP and $5 million to Indian Reservations, were designated for purchase of equipment and facility upgrades and are unlikely to have an impact of food security.

Beginning in April 2009, the ARRA temporarily increased the maximum SNAP benefit by 13.6 percent. Originally, the benefit increase was set to expire when the regular rate of benefit inflation overtook it, but legislation in 2010 instead terminates the increase in November 2013. The Act also eliminated the three month limit on benefits for childless unemployed adults.

The ARRA may affect food insecurity through two avenues. SNAP participation is likely to increase because of expanded eligibility standards. But, SNAP participation might also increase because of expanded food benefits. Prior to the Act some households may have chosen not to

participate, even though they were eligible, because the benefit from participating did not exceed the perceived, perhaps psychic cost, of participating in SNAP. After the Act, the enhanced benefits likely changed the cost-benefit calculation for some households leading them to participate (Nord and Prell, 2011).

3. Conceptual Model

Households receive utility from food (F) and other goods (OG). Households may receive some of their food through SNAP benefits. Let S denote food items bought with SNAP benefits and let f denote food items bought with cash, and so F=f+S. Households may receive disutility from the stigma of using SNAP benefits denoted D(S). Conditioning on SNAP eligibility it seems reasonable that households do not save, and the household problem is:

$$Max\ U(F, OG) - D(S)\ s.t.\ I = p_{OG}OG + p_f(F - S) \tag{1}$$

The household's optimization problem results in their demand for SNAP foods, $S = S(p_f, p_g, I) \geq 0$, food, $f = f(p_f, p_{OG}, I)$, and other goods, $OG = OG(p_f, p_{OG}, I)$.

Each household has some minimal level of food required to meet their needs, F_{min}. If $F = S(p_f, p_{OG}, I) + f(p_f, p_{OG}, I) \geq F_{min}$ then the household is food secure. If $F = S(p_f, p_g, I) + f(p_f, p_{OG}, I) < F_{min}$ then the household is food insecure.

Given an appropriate functional form for household utility, e.g., as in a Linear Expenditure System, it is possible to rewrite demand functions as expenditures that are linear functions of prices and income. In this paper we are interested in the interaction of SNAP benefits and food insecurity and so focus on estimating SNAP demand, and assuming expenditures are linear in prices and income write it as

$$p_f S = \alpha_o + \beta_{f1}p_f + \beta_{OG}p_{OG} + \beta_I I + \boldsymbol{x_1\beta_1} + \varepsilon, \tag{2}$$

where $p_f S$ is the per capita amount of SNAP benefits received by a household, $\boldsymbol{x_1}$ is a vector of demand shift variables, and the β_i are parameters to estimate. We are also interested in the effect of SNAP benefits for food security. Write an equation for food security as

$$FI = \alpha + \boldsymbol{x_2}\boldsymbol{\beta_2} + \beta_S p_f S + \beta_{f2} p_f + e, \tag{3}$$

where FI is a dichotomous indicator variable that takes a value of 1 if a household is food insecure, and 0 otherwise, $\boldsymbol{x_2}$ is a vector of exogenous variables affecting food security, and the β_i are parameters to estimate.

Equations (2) and (3) form the basis for estimation. In principle, equation (3) could be estimated in isolation, but previous studies have established that food insecure households are more likely to be SNAP recipients and so $E[e|p_f S] \neq 0$. The strategy is to treat equations (2) and (3) as a system and because equation (3) has a dichotomous dependent variable we use an Instrumental Variable Probit estimator.

In order to identify β_S in equation (3), there must be at least one exogenous variable in $\boldsymbol{x_1}$ that is not included in $\boldsymbol{x_2}$. In other words, there must be a variable that affects food insecurity only through its effect on SNAP benefits. By carefully choosing the sample and time period examined, the ARRA provides a natural experiment that affected food-stamp benefits but that otherwise could not have affected household food-security. Since the Act increased SNAP benefits, a dummy variable taking a value of one during the time period corresponding to the Act's implementation and zero otherwise, will shift the SNAP benefits equation (2). And, by restricting our attention to households whose food security could only be affected by the ARRA induced increase in SNAP benefits, we are able to identify β_S for those households.

The effect of food prices can directly impact food security, through β_{f2}, but also indirectly through their effect on SNAP benefits, β_S. So, $\frac{\partial FI}{\partial p_f} = \beta_S{*}\beta_{f1} + \beta_{f2}$. We suspect higher food prices to

cause higher food insecurity and for the direct effect $\beta_{f2}$to be positive. We expect SNAP benefits to decrease food insecurity and for β_S to be negative. We also expect $\beta_{f1}$to be negative.

4. Data

The Current Population Survey – Food Security Supplement (CPS-FSS) supplies data for household characteristics including household food-security. Data for food prices comes from two separate sources. A first food-price source is compiled by members of the Council for Community and Economic Research (CCER) that are used to create the CCER Cost of Living Index. The second food price source comes from the Quarterly-Food-at-Home Database compiled by the Economic Research Service of USDA.

4.1 **Current Population Survey – Food Security Supplement (CPS-FSS)**

We use observations from the CPS-FSS from 2008 and 2009. The benefit of using this survey is that it includes household information, including whether the household received SNAP benefits and whether the household is food secure. Importantly the survey also includes geographic indicators that can be used to match household data with price data.

In general, households in the CPS are interviewed each month for four consecutive months, then ignored for eight months, then interviewed for the same four months the following year. The FSS of the CPS is conducted in December of each year. Each household is identified by a unique number so there is a subset of CPS households that are interviewed in December 2008 that are again interviewed in December 2009. We use the unique household indicator to identify these households and include only them in the analysis. The ARRA took effect in April of 2009, so its effect for SNAP benefits will be fully implemented by December of that year.

4.2 CCER Food Prices

The Council for Community and Economic Research, CCER (formerly known as the American Chamber of Commerce Research Association, ACCRA), produces a "Cost of Living Index to provide

a useful and reasonably accurate measure to compare cost of living differences among urban areas." The approach used in the Cost of Living Index is to divide consumer expenditures into categories, and then select individual items that represent those categories. The items used in the Cost of Living Index thus are surrogates for entire categories of consumer spending. The Cost of Living Index consists of six major categories: grocery items, housing, utilities, transportation, health care, and miscellaneous goods and services. Prices for each of the surrogates are collected by volunteers that the organization deems reliable. Prices recorded are meant to represent prices paid by a "mid-management" household. We are able to match CPS-FSS households in 135 urban areas with CCER price data.

4.3 Quarterly Food at Home Database

The Quarterly Food-at-Home Database (QFAHPD) is constructed by the Economic Research Service (ERS) of USDA using Nielsen Homescan data. The Homescan data are from a household panel's purchases of grocery items from a variety of store types. Purchases are of both UPC coded items and random weight products. Households register to become panel members and those chosen receive a hand-held scanner to record their purchases. Households receive a set amount of points for recording their purchases that can be redeemed for merchandise. ERS estimates household-level quarterly prices for 54 food groups that correspond with the 2005 Dietary Guidelines for Americans. Price estimates are available for 26 metropolitan areas. Prices are in dollars per 100 grams of food as purchased by consumers, and take into account premiums for processing and convenience.

I use prices in the QFAHPD to construct an index of the cost of the thrifty-food-plan for a family of four, a male adult, a female adult, a child age 6 to 8 and a child age 9 to 11. I calculated the cost of the family thrift-food-plan for each household in the CPS-FSS that is located in a MSA that coincides with the market groups in the QFAHD. I then find the average annual cost of the family thrifty-food-plan, and then divide each household's food-plan cost by the annual average. A household

with the average thrifty-food-plan cost would have an index value of 1. Definitions of variables are given in Table 1.

4.4 Summary Statistics

Tables 2 and 3 include the summary statistics for two samples of the data. The first, in table 2, are for households in the CPS-FSS in 2008 and 2009 that I was able to match with the CCER grocery price index. There are 10,616 observations from 5,308 households in this sample. The second, in table 3, are for households in the CPS-FSS in 2008 and 2009 that I was able to match with a thrifty food plan index using prices from the QFAHD. There are 20,896 observations from 10,448 households in this sample.

5. Empirical Results

I present results for estimating instrumental variable probit models for equations 2 and 3 in tables 5 through 8. Results in table 5 are for the first-stage SNAP per capita equation (2) using three subsamples of households when CCER grocery index is available to control for food prices. Results in table 5 are for the first-stage SNAP per capita equation (2) using three subsamples of households when the thrifty-food-plan index is available to control for food prices. Results in tables 6 and 7 are for the second-stage probit model of food security, equation (3), when using the same samples as in table 4 (CCER grocery index) and table 5 (thrifty food plan index). The first sample in all tables includes all available households, while the second sub-sample includes households that are below 185 percent of the poverty level, while the third sub-sample includes households that are below 185 percent of the poverty level and that are not WIC participants and that did not visit a food pantry in the last 30 days.

Turning to the results in tables 5 and 6, it appears ARRA is a valid instrument in that there is a strong partial correlation between ARRA and per capita SNAP benefits. Of course, another condition for a valid instrument is that ARRA is uncorrelated with the error term in equation 3. Presumably, there are unobservable factors that affect food security, but that are not controlled in estimation. As

long as these unobservables are uncorrelated with the included observables and the ARRA instrument, then coefficients are consistent. But, ARRA is essentially a time dummy and if unobservable factors changed between 2008 and 2008, then ARRA would be correlated with equation 3's error term; the estimated coefficients would be inconsistent. This is not a testable hypothesis given that the model is just identified. But, even if the condition is violated and results are inconsistent, the effect would work against the effect of SNAP and thus any estimated effect would be understated. General economic conditions worsened between 2008 and 2009. Real GDP shrank about .10% between quarter 4 2008 and quarter 4 2009, which should have increased the likelihood that a household would be food insecure. Indeed, food insecurity increased from 14.6 percent of the population in 2008 to 14.7 percent in 2009 (Nord et. al, 2009, and Nord, Andrews and Carlson, 2009). So, the unobservables are likely to have adversely affected food security, thus working in the opposite direction of per capital SNAP, and so the coefficient on SNAP is a lower bound estimate. All other variable have intuitive signs or are not statistically significant in tables 5 and 6.

The key results are in tables 7 and 8 which are the marginal effects of an IV Probit, where SNAP benefit per Capita is instrumented with the ARRA variable. In all 6 columns the marginal effect of SNAP per capita is statistically significant and negative. In the first results column in table 7 the marginal effect of an additional SNAP dollar per household member is to reduce household food insecurity by 1 percent. The following two columns suggest a smaller effect of about .5 percent. In table 8 the results are quite similar. The marginal effect ranges from negative .3 percent to negative .6 percent.

6. Conclusion

SNAP benefits seem to have a statistically significant and negative impact on household food insecurity status. This is important because earlier studies have found mixed results in regard to household participation in SNAP and food insecurity. The results here provide more evidence for the

effectiveness of the program and also provide an estimate of the marginal effect of each additional SNAP dollar. Each additional SNAP dollar, per person, decreases the probability of food insecurity by about .3 to 1 percent. Given data are available on the increase in SNAP spending and in the number of SNAP recipients, it is possible to estimate the number of persons keep from food insecurity.

A weakness of the approach here is that the ARRA instrument is an annual dummy variable that may be correlated with unobservable factors that affect food security. While we have argued that unobservable factors are unlikely to have improved for poor households in the study, if the unobservables did improve then the ARRA dummy would capture their effect, as well as the effect of SNAP benefits increases. Future improvements to this research will include analyzing households that are likely to have experienced deteriorating unobservable factors, such as households that were above 185 of the poverty line in 2008, but below it in 2009.

Table 1. Variable Names

Variable Name	Definition
Food Insecure	A binary variable for whether the household was food insecure in the last 30 days.
Snap per Capita	Nominal food stamp dollars received in the most recent month, divided by the number of persons in the household .
House Income	A continuous measure of income. The mid-point of upper and lower values of the categorical income values in the CPS-FSS
Age	The age of the person answering the survey in the cps-fss
Age Squared	Age x age
Married	Binary variable for whether the household in a married couple (married=1).
Own Home	Whether the household owns their home (ownhome=1).
West	Binary regional variable. Northeast is the base.
Midwest	Binary regional variable. Northeast is the base .
South	Binary regional variable. Northeast is the base.
High School Grad	Binary variable for whether the person answering the survey graduated high-school. Not a high school graduate is the base.
College Grad	Binary variable for whether the person answering the survey graduated college. Not a high school graduate is the base.
Minority	Binary variable for whether the person answering the survey identified themselves as non-caucasian.
ARRA	Binary variable = 1 in 2009 .
Grocery Index	Continuous grocery price index from CCER.
Thrifty Food Plan Index	Continuous composite thrifty food plan cost index constructed using QFAHD.

Table 2. Summary Statistics when CCER Grocery Index is Available

Variable	Obs	Mean	Std. Dev.	Min	Max
Food Insecure	10,616	0.075	0.264	0	1
Household Income	10,616	6.729	6.091	0.25	25
Age	10,616	50.670	16.086	15	85
Age Squared	10,616	2826.196	1704.476	225	7225
Married	10,616	0.529	0.499	0	1
Own Home	10,616	0.761	0.426	0	1
HS Graduate	10,616	0.561	0.496	0	1
College Graduate	10,616	0.336	0.472	0	1
Minority	10,616	0.166	0.372	0	1
HH Head Unemployed	10,616	0.046	0.210	0	1
Childless	10,616	0.309	0.462	0	1
Grocery Index	10,616	1.005	0.121	0.794	1.576
Snap per Capita	10,616	5.203	23.394	0	200

Table 3. Summary Statistics when Thrifty Food Plan Index is Available

Variable	Obs	Mean	Std. Dev.	Min	Max
Food Insecure	20,896	0.070	0.255	0	1
Household Income	20,896	7.278	6.570	0.25	25
Age	20,896	50.906	15.898	15	85
Age Squared	20,896	2844.177	1691.926	225	7225
Married	20,896	0.536	0.499	0	1
Own Home	20,896	0.748	0.434	0	1
HS Graduate	20,896	0.540	0.498	0	1
College Graduate	20,896	0.356	0.479	0	1
Minority	20,896	0.163	0.369	0	1
HH Head Unemployed	20,896	0.046	0.210	0	1
Childless	20,896	0.308	0.462	0	1
Grocery Index	20,896	0.998	0.065	0.896	1.184
Snap per Capita	20,896	4.806	22.727	0	20

Table 5. First-Stage Snap Per Capita Dependent Variable, CCER Sample

	Sample 1	Sample 2	Sample 3
Household Income	-0.357***	-2.895***	-2.214***
	(0.03)	(0.37)	(0.32)
Age	0.253*	0.431	0.560*
	(0.115)	(0.228)	(0.227)
Age Squared	-0.003**	-0.006**	-0.006**
	-0.001	-0.002	-0.002
Married	-7.952***	-13.087***	-10.287***
	(0.990)	(1.744)	(1.694)
Own Home	-8.521***	-9.094***	-8.004***
	(0.883)	(1.459)	(1.449)
HS Graduate	-4.564***	-2.09	-1.591
	(1.241)	(1.689)	(1.672)
College Graduate	-6.140***	-7.327***	-5.976**
	(1.214)	(2.118)	(2.038)
Minority	5.497***	9.901***	8.584***
	(1.06)	(2.02)	(2.02)
HH Head Unemployed	10.783***	11.433***	9.487**
	(2.035)	(2.947)	(3.300)
No Children	-8.424***	-11.424***	-8.291***
	(1.161)	(2.241)	(2.216)
Grocery Index	-11.125***	-16.790*	-15.876**
	(2.038)	(6.659)	(5.998)
ARRA	1.229***	3.081***	3.045***
	(0.300)	(0.802)	(0.845)
West		-0.973	0.546
		(3.143)	(2.814)
Midwest		3.051	2.366
		(2.985)	(2.570)
South		-0.286	0.142
		(2.889)	(2.466)
HH Size		1.468**	0.934
		(0.484)	(0.490)
Constant	30.703***	40.669***	29.709**
	(4.137)	(10.097)	(9.609)
athrho			
Constant	1.319***	0.979**	1.041**
	(0.358)	(0.356)	(0.380)
lnsigma			
Constant	3.088***	3.508***	3.445***
	(0.03)	(0.03)	(0.04)
Log-likl	-5.01E+04	-2.08E+04	-1.83E+04
N	10616	3908	3500

* p<0.05, ** p<0.01, *** p<0.001

Robust Standard Errors in ()

Table 6. First-Stage Snap Per Capita Dependent Variable, QFAHD Sample

	Sample 1	Sample 2	Sample 3
Household Income	-0.285***	-2.389***	-1.915***
	-0.022	-0.251	-0.189
Age	0.251**	0.427*	0.638***
	(0.083)	(0.169)	(0.164)
Age Squared	-0.003***	-0.005***	-0.007***
	-0.001	-0.002	-0.001
Married	-7.972***	-13.023***	-10.341***
	(0.677)	(1.252)	(1.230)
Own Home	-8.498***	-10.400***	-9.569***
	(0.609)	(1.049)	(1.032)
West	-3.089***	-9.676***	-8.095***
	(0.540)	(1.527)	(1.472)
Midwest	-1.726*	-5.544**	-4.670**
	(0.685)	(1.895)	(1.722)
South	-1.841***	-7.110***	-5.668***
	(0.55)	(1.58)	(1.47)
HS Graduate	-6.483***	-4.606***	-3.749**
	(0.968)	(1.305)	(1.269)
College Graduate	-7.656***	-8.846***	-7.341***
	(0.956)	(1.591)	(1.506)
Minority	3.313***	6.654***	5.750***
	(0.687)	(1.421)	(1.405)
HH Head Unemployed	8.442***	9.282***	6.684**
	(1.359)	(2.067)	(2.154)
HH Size	0.794***	1.000**	0.721*
	(0.158)	(0.356)	(0.357)
No Children	-6.489***	-11.229***	-8.601***
	(0.864)	(1.657)	(1.626)
Thrifty Food Plan	-16.188***	-32.555***	-21.849**
	(3.37)	(9.37)	(8.48)
ARRA	1.270***	3.407***	3.400***
	(0.208)	(0.578)	(0.609)
Constant	34.919***	64.916***	41.152***
	(4.310)	(10.876)	(10.011)
athrho			
Constant	0.919**	0.587*	0.731**
	(0.310)	(0.273)	(0.280)
lnsigma			
Constant	3.063***	3.517***	3.446***
	(0.023)	(0.022)	(0.027)
Log-likl	-9.79E+04	-3.93E+04	-3.44E+04
N	20896	7374	6605

* p<0.05, ** p<0.01, *** p<0.001

Robust Standard Errors in ()

Table 7. Second-Stage Food Security IV Probit Marginal Effects, CCER Sample

	Sample 1	Sample 2	Sample 3
Snap per Capita	-0.010***	-0.006***	-0.006***
	(0.003)	(0.002)	(0.002)
Household Income	-0.022***	-0.041***	-0.034***
	(0.002)	(0.005)	(0.005)
Age	0.013***	0.019***	0.019***
	(0.002)	(0.003)	(0.003)
Age Squared	-0.000***	-0.000***	-0.000***
	0.000	0.000	0.000
Married	-0.097***	-0.094***	-0.089***
	(0.025)	(0.030)	(0.028)
Own Home	-0.099***	-0.070***	-0.056**
	(0.025)	(0.021)	(0.024)
HS Graduate	-0.066***	-0.031	-0.040*
	(0.018)	(0.017)	(0.018)
College Graduate	-0.114***	-0.103***	-0.095***
	(0.019)	(0.024)	(0.025)
Minority	0.061***	0.065**	0.058*
	(0.020)	(0.027)	(0.028)
HH Head Unemployed	0.160***	0.125***	0.117***
	(0.032)	(0.027)	(0.032)
No Children	-0.118***	-0.076**	-0.046
	(0.025)	(0.031)	(0.030)
Grocery Index	-0.024	0.013	0.031
	(0.055)	(0.090)	(0.092)
West		0.086	0.099
		(0.050)	(0.050)
Midwest		0.118*	0.126*
		(0.047)	(0.048)
South		0.103*	0.120*
		(0.048)	(0.049)
HH Size		0.025***	0.024***
		(0.005)	(0.006)

* p<0.05, ** p<0.01, *** p<0.001

Robust Standard Errors in ()

Table 8. Second-Stage Food Security IV Probit Marginal Effects, QFAHD Sample

	Sample 1	Sample 2	Sample 3
Snap per Capita	-0.006***	-0.003*	-0.004**
	(0.003)	(0.002)	(0.002)
Household Income	-0.019***	-0.031***	-0.029***
	(0.002)	(0.006)	(0.004)
Age	0.012***	0.019***	0.019***
	(0.001)	(0.002)	(0.002)
Age Squared	-0.000***	-0.000***	-0.000***
	0.000	0.000	0.000
Married	-0.077***	-0.071***	-0.070***
	(0.025)	(0.027)	(0.024)
Own Home	-0.068***	-0.050**	-0.046**
	(0.026)	(0.022)	(0.022)
West	-0.007	-0.008	-0.014
	(0.012)	(0.025)	(0.023)
Midwest	-0.003	0.006	0.011
	(0.011)	(0.023)	(0.023)
South	-0.003	0.01	0.017
	(0.010)	(0.022)	(0.021)
HS Graduate	-0.056***	-0.032*	-0.036**
	(0.021)	(0.015)	(0.015)
College Graduate	-0.094***	-0.089***	-0.090***
	(0.025)	(0.023)	(0.022)
Minority	0.031***	0.035*	0.031*
	(0.012)	(0.017)	(0.018)
HH Head Unemployed	0.107***	0.093***	0.091***
	(0.028)	(0.021)	(0.021)
HH Size	0.021***	0.018***	0.018***
	(0.003)	(0.004)	(0.004)
No Children	-0.046***	-0.050*	-0.037
	(0.021)	(0.026)	(0.024)
Thrifty Food Plan Index	-0.067	-0.015	0.012
	(0.073)	(0.123)	(0.115)

* p<0.05, ** p<0.01, *** p<0.001

Robust Standard Errors in ()

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