

Do Personal Attitudes about Welfare Influence Food Stamp Participation?

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Abstract

This paper attempts to determine whether negative personal attitudes toward welfare may prevent eligible persons from applying for food stamps. Using the dataset from the 2002 National Survey of American families (NSAF) survey, a logistic regression model was run. The findings of this study indicate that negative attitudes towards welfare may prevent people from applying for food stamps. Food insecurity on the other hand, increases the likelihood of applying for food stamps. Demographic variables such as employment, education and marital status also influence the probability of applying for food stamps.

Key Words: Food Stamp Program, welfare stigma

JEL Codes: Q18, I38

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In 2014, 14 percent of U.S. households were food insecure during at least some part of the year, with more than a third of these (5.6 percent of the U.S. population) reporting very low food security (Coleman-Jensen et al., 2015). The link between food insecurity and a host of undesirable health outcomes has been well established. Among adult women, food insecurity is associated with depression and anxiety (Bronte-Tinkew et al., 2007; Whitaker et al., 2006), dyslipidemia (Tayie and Zizza, 2009) and the metabolic syndrome (Parker et al., 2010). Problems in children may include greater likelihood of anemia, asthma and behavioral problems (Kirkpatrick et al., 2010; Eicher-Miller et al., 2009; Alaimo et al., 2001; Melchior et al., 2012). Food insecurity has also been associated with poorer management of chronic diseases, such as diabetes (Nelson et al., 2001).

Concern about the short-term and long-term consequences of food insecurity has resulted in the creation of an array of government programs designed to mitigate this problem. The largest of these is the Supplemental Nutrition Assistance Program (SNAP, formerly the Food Stamp Program), which served over 46 million people in nearly 23 million households at a cost of approximately \$74 billion in 2014. Research has shown the effectiveness of SNAP in reducing food insecurity and its related health problems (Executive Office of the President, 2015). Because of the program's efficacy in alleviating the myriad problems associated with food insecurity, under-enrollment in the program by eligible households is an area of concern.

A number of empirical studies have investigated the causes of under-enrollment in welfare programs in general and in food stamps in particular. Lack of knowledge about potential benefits, transaction costs in terms of time spent applying or transportation to the welfare office, and stigma have all been cited as reasons for under-enrollment (Andrade, 2002; Barlett et al.,

2004; Gundersen et al., 2011). To give a different twist to the numerous studies that have been undertaken to study food stamp participation and welfare, the purpose of this research is to assess whether negative attitudes towards welfare deter food stamp participation among potentially eligible beneficiaries. Assessing the extent to which such negative attitudes deter enrollment in food stamps/SNAP is important because of the known negative effects of food insecurity on health and well-being.

This study uses the 2002 round of the National Survey of American Families (NSAF). Unlike most data sets that include information on food stamp use, this data set includes responses that provide information on participants' attitudes toward welfare programs. In our study, negative attitudes of participants towards welfare are captured in a "stigma index." Findings from this study should add to the body of knowledge concerning why some eligible participants do not apply for food stamps/SNAP.

Background on Food Stamps/SNAP

The modern Food Stamp Program began as a pilot program in the early 1960s, with a permanent program authorized in 1964, although establishment nationwide took an additional decade. The original program required participants to purchase stamps, with the cost of the bundle of stamps dependent on household income. The purchase requirement was eliminated by the Food Stamp Act of 1977. Initially, food stamps were literally stamps; that is, paper coupons that could be used to purchase food for home preparation. The current form of delivery, electronic benefits transfer (EBT) on a card, was fully implemented nationwide by 2004. (Most states had fully implemented EBT by 2002.) Food Stamp/SNAP benefits can only be used to purchase food that is to be prepared and consumed at home.

Although the Personal Responsibility and Work Opportunities Reconciliation Act of 1996 (e.g. “welfare reform”) did not impose the strict time limits on all food stamp receipt that were imposed on cash welfare benefits, the act had provisions that significantly affected the program, particularly for households with no minor children at home. Under this law, unemployed adults with no minor children faced a time limit of three out of 36 months, although this provision was later modified to allow waivers in case of high overall unemployment rates. Under this same law, most legal immigrants were removed from eligibility. Further, the maximum allowed benefit was reduced and other changes making it more difficult to qualify (or easier to be disqualified once qualified) were implemented.

Since its full establishment in the 1970s, the Food Stamp Program/SNAP has been an entitlement program, meaning that all who meet the eligibility requirements can receive benefits. Benefit levels are set based on the USDA’s Thrifty Food Plan, the estimated cost of a nutritious low-cost diet when all food is assumed to be prepared and consumed at home. Although the Thrifty Food Plan estimates are tailored to families of different ages and sex, food stamps/SNAP benefits are calculated based on a reference family consisting of one adult male, one adult female, one child 6 to 8 years old, and one child 9 to 11 years old and then adjusted for family size. The maximum monthly allotment, for a household with no countable income, is then adjusted downward for income as the family is expected to contribute 30 percent of its net income toward food purchases.

Eligibility requirements have varied over the program’s history. However, a cut-off level of 130 percent of gross income has been in effect for many years. In addition, applicants face eligibility requirements in terms of net income (gross income minus certain allowed deductions)

and assets. Some of the eligibility requirements are set by the states, within limits, while others, such as the gross income limit, are in effect nationwide.

Take-up rates for the program among eligible households have varied considerably over the program's history. From 1994 to 2001, the period marked by welfare reform, the percentage of eligible households receiving food stamps fell from 75 percent to 54 percent (Ganong and Liebman, 2013). By 2013, however, participation rates have risen markedly to 90 percent of eligible households (Eslami, 2015). The large increase in take-up since its low in 2001 has been explained by an increase in outreach efforts, policy changes, and the drawn-out nationwide recession with an uneven recovery (Ganong and Liebman, 2013).

Stigma and the Take-Up of Welfare Programs

There have been two main approaches to the study of the reasons for non-participation in welfare programs among the eligible population, one being from a sociological and psychological point of view (see for example, Kerr, 1983) and the other based on economic models. The economics literature typically uses a utility framework including costs and benefits as a basis for elucidating the reasons for participating or not participating in welfare programs. Under this type of model, non-participation in a welfare program can be explained in terms of the costs associated with claiming the benefits, including both transaction costs (time and money spent on transportation to the welfare office, time spent filling out forms and so on) and the psychological cost of shame and stigma.

Research studies on welfare participation support the view that there is a psychological cost or stigma which deters eligible participants from applying for or benefitting from social welfare programs. Rogers-Dillon (1995), for example, argued that food stamps label the user as a welfare recipient and constitute what Goffman (1986) terms as "stigma symbols." The latter

describes stigma as "an attitude that is deeply discrediting." The theoretical framework of Rogers-Dillon's work suggests that the perception that welfare recipients are "cheating tax-paying citizens" is at least in part a result of the history and design of the American welfare system.

Weisbrod (1970) distinguished between marginal and total stigma. The author explained that people will decide to receive benefits if the marginal stigma is smaller than the expected value of benefits; hence participation will likely be greater for those who have previously claimed benefits. By contrast, stigma will be greater for those who have not previously claimed benefits or seen themselves as poor.

Moffitt (1983) developed a conceptual model of stigma of two types, "flat" and "variable" where the "flat" stigmatization would result in the same cost regardless of the size of the benefit, and the "variable" would be dependent on the benefit size. Applying his model to cash welfare programs, he found evidence that stigma arose from participation at any level, not from the size of the benefit.

Andrade (2002) reviewed the literature on the economics of welfare participation and welfare stigma. Interestingly, he stated that (at that time) "theoretical models of welfare take-up and welfare stigma are almost non-existent." The reason the author provided for the non-existence of theoretical model was that direct quantification of stigma is difficult and also that this subject lies between economic theory and the other social sciences (such as psychology and sociology) rendering economists (of the time) less interested in the issue.

Much of the underlying reason for limited studies may have to do with defining stigma and finding a way to measure it. Earlier contributions by Cowell (1986) on the economic theory of welfare stigma describe two equilibria that may be reached when stigma and take-up rates are

considered: one where take-up declines to zero and another where it increases to 100 percent. These two states are stable. However intermediate states are unstable implying that any change in take-up rate will either increase or decrease stigma, leading to changes in the same direction.

Under-enrollment in the Food Stamp Program (FSP) in particular has been analyzed in a number of studies. Ranney and Kushman (1987), building on the framework provided by Moffitt (1983), developed a model for FSP participation that included the possibility of welfare stigma. They found that food stamps increase food expenditures more than an equivalent amount of cash. Further, results of their FSP participation model indicate stigma has significant effects.

In 1999, Ponza et al. conducted a survey of both current recipients and eligible non-participants. Of the eligible non-participants, only 7 percent cited stigma as their most important concern. However, nearly half of these eligible non-participants did respond positively to at least one of the survey questions about perceptions of stigma from food stamps. Among current recipients, those dissatisfied with the program were likely to report both high participation costs and feelings of stigma associated with the program. In a similar survey conducted among eligible non-participants in 2000-2001, Bartlett et al. (2004) found that 69 percent of respondents reported that they would apply if they knew they were eligible, but 27 percent said they would never apply. Of those who said they would never apply, 44 percent cited stigma-based reasons and 61 percent cited the costs of application or participation (Bartlett et al, 2004).

Gundersen et al. (2011) in a review of the economics of food insecurity describe three main factors for not participating in the FSP: firstly, there may be stigma associated with receiving SNAP, ranging from a person's own distaste for receiving food stamps, to the possible negative reaction of case workers; second, transaction costs can diminish the attractiveness of

SNAP participation and thirdly, the benefit level can be quite small, for some families as low as \$17 a month.

Conceptual Framework

The economic approach to welfare participation compares the net utility of benefiting from food stamps/SNAP with the utility of not participating in the program. When the former is anticipated to be greater than the latter, the household will apply to participate in the program.

Using the framework of Blundell et al. (1988), a household will apply to participate in the program if

$$U_p [y + B(y,z^*), z] - C(y,z) > U_{np} (y,z) \quad (1)$$

Where y is the income of household, $B(y,z^*)$ is the benefit from the program, z^* is a vector of characteristics determining decision to participation, $C(y,z)$ is the disutility of applying to the program and U_p and U_{np} are respectively the utilities of participation and non-participation. The probability of participation ($P_i = P(U_p - C - U_{np}) > 0$) will be decreasing in y_i (for given levels of B_i and z_i) and increasing in B_i (for given levels of y_i and z_i).

This framework is similar to the one employed by Gundersen et al. (2009), who modeled the participation decision in terms of anticipated costs (stigma and transaction costs) and anticipated benefits (increased household ability to purchase food) of participation.

For our study, with its focus on stigma as a deterrent to applying for food stamps, the decision variable of interest is whether the respondent has ever applied for food stamps. Explanatory variables (that is the elements of z) include stigma, as well as other household characteristics.

Data

The 2002 round of the National Survey of American Families (NSAF) was used for this study, in which interviews were conducted with over 40,000 families, yielding information on over 100,000 people under the age of 65. The survey sample is representative of the US as a whole and therefore allows for national level analysis. Information on a broad array of government programs, fiscal capacity and demographic characteristics can be derived from the survey data. The data were collected by random digit dial telephone sample supplemented by an area probability sample of non-telephone households. Interviews were conducted with the most knowledgeable adult (MKA). In households with children, in addition to the MKA, one or two additional adults under the age of 65 who did not have any of their own children under the age of 18 living with them were sampled and interviewed. The dataset contains variables to account for the survey design variables: stratification, clustering, and weights. (See Abi-Habib et al., 2002, for additional information on survey methods.)

The respondents retained for this study were comprised solely of families with minor children. Families without children were not retained because of the time limits for eligibility placed on unemployed adults without children, making that population subgroup significantly less likely than those with children to apply for food stamps. Because of eligibility rules following the 1996 Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA), immigrant families were also excluded.

In this data set, income is coded as 50 percent of poverty, 100 percent of poverty, and 150 percent of poverty. We used in our analysis families at or below 150 percent of poverty. Because the gross income limit for food stamps is 130 percent of poverty, the data would likely contain some people who weren't eligible for the FSP at the time the interviews were conducted.

However, given that among low-income families income tends to fluctuate, and given that our dependent variable was having ever-applied for food stamps, the higher of the two possible choices seemed more reasonable for this study. There were 5,399 observations in the sub-sample of interest.

A dummy variable for food stamp application was created and represented whether the MKA had ever applied for food stamps. The data have complicated skip patterns, so several survey questions needed to be assessed to create this variable. (Details available on request.) We use application, not participation, as the dependent variable because stigma most directly affects the willingness to apply, while participation also depends on meeting eligibility requirements.

Food insecurity is an important driver in the decision to apply for food stamps (Nord and Golla, 2009). At the same time, the FSP is in itself designed to reduce food insecurity. Thus, the relationship between food insecurity and food stamps is complicated by selection bias. As such, studies that have attempted to derive the impact of the FSP on reducing food insecurity have faced the difficulty of accounting for self-selection (Gundersen et al., 2011). Our paper does not attempt to correct for possible simultaneity bias; however, further work will explore this problem.

In the United States, since the mid-1990s, food insecurity is typically measured by the USDA's "food security module," a set of questions concerning behaviors and experiences regarding various types of food hardship. For the adult measure of food insecurity, there are 10 questions (see Coleman-Jensen et al., 2015). The NSAF survey does not contain the full 10-question food security module, nor does it have variables for levels of food insecurity. Instead the survey contains only 3 of the 10 questions in the USDA module. Personal correspondence with Mark Nord (2006) provided a method of using the available question to determine whether

or not the social family was food secure. Four categories of food insecurity can be determined: fully food secure, marginally food secure, low food security and very low food security. (Details of the coding available on request.)

Table 1 summarizes the frequency of respondents in each of these categories. The table shows that 67 percent who never applied for FSP were fully food secure and 23 percent had low to very low food security levels. Among respondents who applied for food stamps, 49 percent reported being fully food secure (including marginally food secure).

Stigma Index

The NSAF survey contained the following questions that pertain to welfare, answers to which were used to develop a stigma index:

Here are some opinions that people have expressed about welfare and about working. For each of the following statements, please tell me whether you strongly agree, agree, disagree or strongly disagree.

- a. Welfare makes people work less than they would if there wasn't a welfare system.*
- b. Welfare helps people get on their feet when facing difficult situations such as unemployment, a divorce, or a death in the family.*
- c. Welfare encourages young women to have babies before marriage.*

The stigma index in this study refers to the negative attitudes of respondents towards welfare. A score of 1 to 4 is given corresponding to the responses of "strongly agree," "agree," "disagree" and "strongly disagree" respectively for questions a and c. For the second question, to which agreement indicates a positive attitude toward welfare, the scoring is reversed. Table 2 provides summary statistics for these responses. A total score of less than or equal to 6 was used to represent respondents with strong negative attitudes toward welfare. The stigma index was then

used to create a binary variable, with a value of 1 for those with a score of 6 or higher, and 0 otherwise.

Regression

Logistic regression was used to determine the explanatory variables which maximize the likelihood of applying for food stamps. Logistic regression employs binomial probability theory whether an event/person belongs to one group rather than the other:

$$\frac{p_i}{1-p_i} = \exp\{x_i'\beta\} \quad (2)$$

where x_i is a vector of covariates and β is a vector of regression coefficients.

Demographic variables found in the literature relevant to food stamp participation are marital status, employment, race and education (Rank and Hirschl, 2005; Mykerezzi and Mills, 2010; Grieger and Danziger, 2011). Therefore these variables are incorporated in the model.

The logit model estimated is of the form:

$$\text{Fdstp}_i = \beta_0 + \beta_1 \text{SI} + \beta_2 \text{FI} + \beta_3 \text{EDU} + \beta_4 \text{EMP} + \beta_5 \text{MARSTAT} + \beta_6 \text{RACE} + \varepsilon \quad (3)$$

Fdstp_i is the ‘log odds’ of applying for food stamps and the independent variables represent household characteristics. SI is the binary variable which takes the value 1 for a high stigma index, 0 otherwise; FI is a 0-1 variable that takes the value 1 for low food security and very low food security and zero for food secure and marginally food secure; EDU is a binary variable, where 1 indicates higher than a vocational certificate, and 0 otherwise; EMP is a binary variable where 1 indicates the respondent is employed, 0 otherwise; marital status is a binary variable where 1 indicates a married respondent, 0 otherwise, and RACE takes the value 1 for black, non-Hispanic respondents and 0 otherwise. Table 3 provides summary statistics for the variables used for the regression.

Results

A comparison of the mean value of the stigma index reveals that among those who had applied for food stamps, the 'stigma index' had an average value of 7.87 compared to 7.35 for those who had not. Lower values correspond to more negative attitudes toward welfare. The difference was small, but statistically significant.

The results of the regression are reported in table 4. After controlling for other factors, high stigma was found to be a significant deterrent to food stamp application (odds ratio for "high stigma" = 0.526). Thus, even after controlling for other factors, respondents who have a strong negative attitude towards welfare are less likely to apply for food stamps. From the odds ratio, the marginal probability associated with high stigma is 0.345. Similarly, those individuals who are employed are less likely to apply for food stamp. The results of the regression shows that people who are married are less likely to apply for food stamps. Food insecurity was found to be a significant driver in the applicant ever having applied for food stamps.

Limitations of this study include the possibility of simultaneous equation bias from including food insecurity as an explanatory variable. Further, results are limited by potentially incorrect responses to the survey questions regarding application for food stamps. Previous research has found that incorrect responses to questions about food stamp receipt are non-trivial and are asymmetric so that false negatives are more common than false positives (Bollinger and David, 2005). To complicate this problem, those with high stigma indices may be more likely than those with low indices to deny applying for food stamps even if they had done so. To counteract this problem would require use of administrative data that includes attitude questions. Another limitation of this study is that food insecurity and attitudes toward welfare were

measured over the previous 12 months, while the question about application for food stamps spanned the person's entire (adult) life.

Concluding remarks

The current high rates of take-up for food stamps/SNAP have been attributed at least in part to public outreach efforts (Ganong and Liebman, 2013). However, at the same time, media portrayals of poverty and welfare have become increasingly negative, which could result in increases in feelings of stigma associated with program use. Rose and Baumgartner (2013) analyzed media "framing" of poverty over the period 1960 to 2008 and found that "generous" (e.g. more positive) frames heavily dominated media coverage during the era of the "War on Poverty," but that "stingy" frames became more prevalent during the 1970s and subsequent years. In their research, the two "stingy" frames involved "cheating," a frame which was found most commonly in the 1970s and early 1980s, and "laziness," which has grown dramatically in prevalence from that same time period on.

Results of our study provide evidence that individuals' negative attitudes toward welfare decrease the likelihood of applying for food stamps/SNAP. Among families with children, those with high stigmatization were found to be about half as likely to report ever having applied for food stamps as those with less negative views. These findings are important because research has shown that food stamp/SNAP benefits reduce household food insecurity and the negative health outcomes associated with it.

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Table 1. Food Security Status of Respondents

	Fully food secure	Marginally food secure	Low food security	Very low food security
Never applied for FSP (%)	67.28	9.29	17.16	6.27
Applied for FSP (%)	36.93	12.27	30.46	20.34

Responses adjusted by survey weights.

Table 2. Summary of Responses to Questions about Welfare

	Strongly agree	Agree	Disagree	Strongly disagree
a. Welfare makes people work less than they would if there wasn't a welfare system.	20.42%	43.15%	28.67%	7.77%
b. Welfare helps people get on their feet when facing difficult situations such as unemployment, a divorce, or a death in the family.	23.61%	60.39%	12.59%	3.42%
c. Welfare encourages young women to have babies before marriage.	9.45%	23.00%	50.11%	17.44%

Responses adjusted by survey weights.

Table 3. Summary Statistics

Variable	Respondents who have never applied for FSP (N=1597)		Respondents who have applied for FSP (N=3672)	
	Mean	Std Error of Mean	Mean	Std Error of Mean
Stigma Index	0.319	0.019	0.193	0.013
Food Insecurity	0.234	0.016	0.508	0.013
Education	0.435	0.018	0.295	0.011
Employment	0.551	0.019	0.480	0.013
Marital Status	0.537	0.020	0.287	0.013
Black non-Hispanic	0.190	0.016	0.356	0.015

Analysis performed in SAS PROC SURVEYMEANS, adjusting for sample design and survey weights

Table 4. Factors affecting probability of Applying for Food Stamps among NSAF 2002 Survey participants

Variable	Parameter	Std Error	Odds Ratio	95% Wald Confidence Limits	
Intercept	1.1870***	0.110			
Stigma	-0.643***	0.124	0.526	0.411	0.673
Food Insecurity	1.143***	0.118	3.137	2.476	3.976
Education	-0.549***	0.097	0.578	0.476	0.701
Employment	-0.307**	0.101	0.736	0.601	0.900
Marital Status	-0.848***	0.110	0.428	0.344	0.533
Black Non-Hispanic	0.582***	0.119	1.790	1.411	2.271

Logistic regression results from SAS PROC SURVEYLOGISTIC, corrected for sample design and sampling weights. *** Significant at the 0.01 level, ** Significant at the 0.05 level, * Significant at the 0.10 level. Significance based on Wald Chi-Square.