

End of purchase requirement fails to change food stamp participation

Recipients no longer must buy stamps, but this has had little effect on characteristics of participants; highest participation is among single mothers, blacks, and no wage earners, according to the Consumer Expenditure Survey

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The Food Stamp Program was established in 1964 to “. . . raise levels of nutrition among low-income households . . . ”¹ The program has grown since its inception so that in 1985, the program cost almost \$20 billion and benefited an average 19 million people per month. How best to distribute benefits to program participants has been debated. Should participants be required to purchase food stamps? Should participants be given the value of the stamps in cash, rather than coupons? At the start of the program, participants were required to purchase the stamps. The amount by which the value of the stamps exceeded the purchase price was the actual benefit level, called the bonus. The 1977 Food Stamp Act began a new era in food stamp benefit distribution by eliminating the purchase requirement. This change took effect in 1979. A great deal of research has been done examining the characteristics of program participants, and the determinants of participation. However, little research has been done using data collected since the elimination of the purchase requirement.² The purchase requirement was believed to discourage participation by adding to the application burden which is the cost in terms of time and effort needed by the applicant to take part in the

program.³ It is reasonable to expect that this discouraged participation unevenly across the demographic spectrum of food stamp eligibles.⁴

This article compares the characteristics of participants in the program to those eligible but not participating, and examines the demographic factors related to participation using data collected after the elimination of the purchase requirement. The results of this study will indicate if any substantial changes in the characteristics of participants and the factors related to participation have occurred since the program's structure was altered.

Data

Data used for this study are from the 1984–85 Bureau of Labor Statistics' Consumer Expenditure Interview Survey. The unit of measure for the survey is called a consumer unit. Consumer units are determined by three characteristics: (1) all members of the household are related by blood, marriage, adoption, or other legal arrangements; (2) two or more persons living together who pool their income to make joint expenditure decisions; or (3) a person who lives alone or shares a household with others or who lives as a roomer in a private home or lodging house or in permanent living quarters in a hotel or motel, but is financially independent. To be considered financially independent, at least

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two of three spending categories, food, housing, and other living expenses, have to be provided by the respondent.

The survey uses a rotating sample design with respondents interviewed once during each of five consecutive quarters.⁵ Expenditure data are collected during each interview and income and financial asset data are collected during the second and fifth interviews. For the purposes of determining food stamp eligibility, only the fifth interview requests sufficient financial asset information. Accordingly, this study uses only fifth interview results. Because of the sampling technique and the subsequent weighting scheme used, employing only fifth interview results still represents a national sample. This original sample consisted of 10,300 respondents. After data screening and elimination of food stamp ineligible respondents, 1,810 respondents remained. The procedures used to simulate eligibility are described in the following section. Data screening consisted primarily of eliminating incomplete income reporters.⁶

Determination of eligibility

The criteria used to determine eligibility for food stamps are lengthy. Title 7 of the *Code of Federal Regulations* details the eligibility criteria, which consist of 136 pages of fine print. Previous researchers using the Diary component of the Consumer Expenditure Surveys have determined eligibility by statistical rules of thumb.⁷ In contrast, the Interview Survey provides the information necessary to apply most of the eligibility criteria directly. The exceptions to this arise through the inability to identify striking workers, disabled consumer unit members, and compliance with the work registration requirements.

Students, categorically ineligible, were eliminated from the sample, as were recipients of Supplemental Security Income from the "cash out" States, California and Wisconsin.⁸ Income deductions are allowed for excess child care, shelter, and medical expenses, and for earned income under the Food Stamp Program. The allowable deduction depends upon whether there are household members age 60 or older, or disabled members. Food stamp eligibility criteria are based on monthly reporting. The Interview Survey, however, asks respondents how much was spent for different items over the 3-month period. Thus, to compute the child care, shelter, and medical deductions, the reported quarterly expenditures were used and the limits on deductions allowed were multiplied by three. Similarly, a quarterly average of the reported annual income was used. For the assets test, the account balances as of the last day of the last month covered by the interview period were employed.

The final database contained 516 eligible program participants, and 1,294 eligible nonparticipants. Weighted to a national sample, they represent roughly 4.4 million

eligible consumer unit participants out of 15.9 million eligibles, indicating a participation rate of 28 percent.⁹ This participation rate falls in the range of those found in previous studies. John Czajka estimated a rate between 28 percent and 33 percent; Christine Ranney and John Kushman, on the other hand, reported that since the elimination of the purchase requirement, the participation rate has risen by 14 percent.¹⁰ The comparability of the participation rate found in this study with those found in past studies is limited by the different data sources and methods used to simulate eligibility.

Characteristics of participants

Participation in the Food Stamp Program is not the only difference between the eligible consumer unit participants and eligible nonparticipants. An examination of the demographic characteristics of these two groups reveals many other significant differences.¹¹ The average consumer unit size is significantly greater for participants, 3.1, compared to nonparticipants, 2.6. The larger consumer units are, on average, composed of more children, and fewer members age 60 and older. Participant means are 1.4 children, and .3 members 60 or older, as opposed to nonparticipant means of .8 and .5, respectively.

There are also significant racial and educational attainment differences between participants and nonparticipants. Blacks account for a greater proportion of participants than nonparticipants, 36 percent as opposed to 18 percent. A striking difference in the levels of education is that 11 percent of participants have some college training, whereas the proportion is 31 percent for nonparticipants.

Eligible nonparticipant consumer units show not only a higher degree of investment in education, but a higher level of physical assets as well. The proportion of homeowners is 45 percent for nonparticipants and 23 percent for participants, while the average number of vehicles owned is 1.2 for nonparticipants and .6 for participants. The mean income of nonparticipants is significantly higher, before and after taxes, than the mean income of participants, excluding the food stamp bonus. However, after including the bonus there is no significant difference between the two groups. It would seem that, although current incomes do not differ after accounting for participation, nonparticipants are in a better position to withstand a temporary financial setback, such as the loss of a job.

The relationship of these characteristics to participation is reflected in the participation rates in table 1. The consumer units with the highest rate of participation are those with single female parents, 69 percent, while the lowest rates are those with four or more earners, 7 percent, and more highly educated persons, 12 percent. The impact of racial differences on the probability of

participation is reflected in the 44-percent rate among blacks and the 22-percent rate among whites. Participation rates decrease in higher age groups, from 40 percent for those 25 to 34 to 20 percent for those 75 and older.

How do differences between participants and eligible nonparticipants compare to those found in studies using data collected prior to the elimination of the purchase requirement? Donald West employed 1972-73 Diary Survey data for his analysis which shows the same overall differences between participants and nonparticipants as those found in this study;¹² participant consumer units

have larger families, fewer homeowners, a greater percentage headed by blacks and women, and a lower level of educational attainment than nonparticipant units. Significance tests by West also resulted in the similar finding that income differences are not significant after accounting for food stamp benefits. While some differences exist between the results of this study and those of West's, the direction and relative magnitudes of the differences between participants and nonparticipants are similar. Another benchmark for comparison, which reported similar results, is a study by Czajka which employed data from the Income Survey Development Program, the predecessor to the Survey of Income and Program Participation.

In the past, several propositions have been put forth to explain the differences in participation among socioeconomic groups. Included in this list has been the purchase requirement. Other factors often cited have been welfare stigma, the burden of the application process, and ignorance about the program and potential eligibility. Eliminating the purchase requirement helps reduce the burden of the application process. Besides ignorance of the program, these possible explanations are a listing of the cost considerations in a cost-benefit type approach that a household might consider in deciding whether to participate.

Focusing on ignorance about the program as an explanation for nonparticipation, it seems reasonable that more highly educated eligibles would be more aware of the program and their possible eligibility. Following this line of reasoning, the expectation is that participation rates would be higher among more highly educated eligibles. However, the estimates of program participation rates by educational attainment in table 1 show just the opposite. The notion of welfare stigma being associated with participation helps to explain this result.

Ranney and Kushman directly incorporated stigma effects in their model of the decision. In this framework, households are said to be concerned with prestige and privacy.¹³ Welfare stigma is the negative effect program participation has on household prestige and privacy. If households define prestige in relationship to a perceived peer group then the strength of this negative relationship might be greater for more highly educated eligibles, whose peer group is economically better off. This would depress their participation rate relative to less educated eligibles.

Observed differences in turnover in the Food Stamp Program among demographic groups are also useful in exploring explanations of differences in participation rates. Timothy Carr, Pat Doyle, and Irene Lubitz found that elderly and single parent households, and households receiving Aid to Families with Dependent Children are low turnover families.¹⁴ They tend to stay in the program for more months than other demographic groups. High

Table 1. Food stamp participation rates and numbers of eligibles by characteristics

Characteristic	Participation rate (percent)	Eligible consumer units (thousands)
All consumer units	28	15,855
Family size:		
One	18	5,635
Two	27	3,575
Three	40	2,099
Four	34	1,732
Five	28	1,406
Six or more	37	1,401
Number of earners:		
Zero	43	5,502
One	20	6,472
Two	19	2,821
Three	16	705
Four or more	7	355
Family type: ¹		
Married couple:		
Husband and wife	16	1,627
Own children, eldest under 17	27	2,469
Own children, eldest over 17	15	723
Other married couple families	23	874
Single parent:		
Single male parent	31	135
Single female parent	69	1,827
Single, no children	18	5,635
Other families	31	2,564
Age of reference person:		
Under 25	17	2,891
25-34	40	2,897
35-44	36	2,275
45-54	29	1,769
55-64	25	1,977
65-74	23	2,151
75 or older	20	1,896
Race of reference person:		
White	22	11,754
Black	44	3,666
Other	30	436
Education of reference person:		
Elementary (1-8)	36	4,284
High school dropout	35	3,658
High school graduate	28	3,487
Some college	12	2,944
College graduate or more	12	1,114
Never attended school	26	368
Region:		
Northeast	30	3,269
North Central	29	4,177
South	27	6,264
West	21	2,205

¹ Single parent consumer units have at least one child under 17 years old.

SOURCE: Consumer Expenditure Survey, 1984-85 interview survey collection period, complete income reporters.

turnover families are characterized as those with earners, more highly educated reference persons, and two parents.¹⁵ These families are more likely to perceive their situation as temporary. For example, the more highly educated eligibles may be between jobs. From a cost-benefit approach, the expected returns from a short period of participation may not outweigh the perceived cost in terms of stigma and the application burden.

If we consider the application burden as a cost discounted over the length of time in the program, consumer units in the program for shorter durations face a relatively higher cost. This is also true with respect to the updating procedures required to remain in the program if these procedures have a learning curve. These propositions are possible explanations of why lower participation rates occur among high turnover demographic groups. Additionally, they imply that the elimination of the purchase requirement, by reducing the steps in the application process, would be more likely to improve participation among these groups. However, as the results above show, an improvement in participation among these groups did not take place.

The same considerations used in exploring the differences in participation rates by characteristics can also be used to explain participation rates by sources of income. The following tabulation shows participation rates by sources of income. These income sources are not mutually exclusive.

<i>Income source</i>	<i>Participation rate (percent)</i>	<i>Eligible consumer units (thousands)</i>	<i>Percent of eligibles reporting income source</i>
Public assistance (including job training grants)	87	2,403	15.2
Unemployment	33	1,177	7.4
Worker's compensation and veterans' benefits	26	544	3.4
Supplemental security	64	1,707	10.8
Social Security or railroad retirement	23	5,268	33.2
Wages or salaries	20	8,529	53.8
Interest on savings account(s) or bonds	10	1,623	10.2

The highest level of participation is among consumer units receiving public assistance, 87 percent. There are several reasons to expect this. It may partly reflect a reduced application burden. In some States it is possible to apply for the Food Stamp Program on the same application used for public assistance.¹⁶ Another possibility is that the welfare stigma from participation in different programs is related and decreases at the margin. If an individual participates in a public assistance program, he or she may feel less stigma from using food stamps than someone who participates only in the Food Stamp Program. Lastly, this high participation rate may reflect a deeper level of need.¹⁷ The most

frequently reported income source is wages and salaries, 53.8 percent. While this is the most commonly reported form of income among eligibles, the participation rate is only 20 percent. For these eligibles, the peer group is other working households. For them, the stigma deterrent to participation may be greater, and their perceived need less.

Determinants of participation

By using a regression model which isolates the impact of each demographic characteristic on participation, a clearer picture of the relative importance of these characteristics in determining participation can be obtained. A probit model was estimated to accomplish this task.¹⁸

The probit results show that as income increases the probability of participation decreases.¹⁹ There are two ways to view this result. First, those who decide to participate do so because they are needier than those who do not participate. Second, the amount of the food stamp bonus will tend to be less for those with higher income, so after weighing the benefits against the costs, the benefits are too small to bring about participation for the higher income eligibles.

Other results from the probit model estimation are in line with the differences in characteristics already reported. The probability of participation is higher for consumer units with children or with a black reference person. The probability of participation is lower when the consumer unit has a reference person with some college education and owns its residence. Neither region of residence nor urban residence is significantly related to participation.

Another factor important in the probability of participation model is the consumer unit's income sources. Recipients of unemployment benefits and pensions are more likely to participate. Participation in other welfare programs is also strongly related to participation in the Food Stamp Program. In part, this probably reflects the reduced burden of applying for more than one program. However, as Czajka points out, it is not possible to determine if participation in other welfare programs induces participation in the Food Stamp Program or if participation in the Food Stamp Program induces participation in other programs.

To clarify the implications of these results, a representative consumer unit was selected and the probability of its participation calculated, using the probit coefficients.²⁰ This representative consumer unit is a husband and wife with one child under 6 years of age. The reference person is employed with a wage income of \$1,500 per quarter, the mean quarterly income for the entire sample of eligible consumer units. In addition, the reference person is white, a high school graduate, and the consumer unit rents its dwelling. The probability of this consumer unit participating in the program is 16 percent. If one characteristic

of the representative consumer unit is changed, holding all other characteristics constant, the probability of participation changes as well. For example, the probability of participating increases to 18 percent if another child under 6 years of age is included in the consumer unit. If the dwelling place is owned and not rented, the probability falls to 7 percent.

If the reference person is black the probability of participation is 24 percent. Should he or she have a college degree, the probability is 8 percent. The probability decreases even further to 4 percent if the reference person is age 60 or older and the child is older than 17. The probability of participation of a single parent consumer unit with two children under 6 is 29 percent.

The strength of the relationship between income source and participation is clearly evident. If the representative consumer unit remained the same in every way except that income came from unemployment benefits rather

than wages, the probability of participation would be 45 percent. If the income source is public assistance, the probability rises to 83 percent.

Conclusion

The elimination of the purchase requirement was intended to improve the level of participation in the Food Stamp Program. While the comparability of the overall participation rate found in this study with those found in past studies is limited, it appears that if an increase in the overall participation rate has taken place, it is not large. Furthermore, reasonable expectations that more highly educated eligibles and two-parent households would be encouraged to participate by the elimination of the purchase requirement are not supported by these findings. The pattern of uneven levels of participation across demographic groups has remained in this post-purchase requirement period. □

—FOOTNOTES—

¹See *The Food Stamp Act of 1964*, Public Law 88-525, 88th Cong., 1964 (H.R. 10222).

²See Christine Ranney and John Kushman, "Cash Equivalence, Welfare Stigma, and Food Stamps," *Southern Economic Journal*, April 1987, pp. 1011-27.

³Additionally, if the purchase requirement exceeded the usual food expenditure by the household, participation was discouraged.

⁴This point is more fully discussed in this article while exploring how the application burden could lead to differences in participation rates among demographic groups.

⁵For complete definitions of the terms used in the survey, see *Consumer Expenditure Survey: Interview Survey, 1984*, Bulletin 2267 (Bureau of Labor Statistics, 1986).

⁶For a complete description of data limitations, screening, and eligibility simulation, see Gregory M. Brown, "Food Stamp Program Participation and Non-Food Expenditures," paper delivered at the meeting of the Eastern Economic Association, Boston, MA, March 10-12, 1988.

⁷See Chuang Huang, L. Stanley Fletcher, and Robert Raunika, "Modeling the Effects of the Food Stamp Program on Participating Households' Purchases: An Empirical Application," *Southern Journal of Agricultural Economics*, December 1981 pp. 21-28; and Donald A. West, *Effects of the Food Stamp Program on Food Expenditures: An Analysis of the BLS CES 1973-74 Diary Survey*, Research Bulletin XB0922 (Pullman, WA, Washington State University, 1984).

⁸No attempt was made to eliminate the demonstration Supplemental Security Income cash out areas.

⁹There are many reasons to suspect that this understates the participation rate. See Brown, "Food Stamp Program Participation and Non-Food Expenditures"; and Timothy Carr, Pat Doyle, and Irene Lubitz, *Turnover in the Food Stamp Program: A Preliminary Analysis* (Washington, DC, Mathematica Policy Research, 1984). The simulation also produced 66 seemingly ineligible participants. A likely explanation for their occurrence is that the use of quarterly averages of annual income doesn't adequately reflect the variations in income that lead these respondents to participation. Because the presence of these seemingly ineligible consumer units might distort the relationship between participation and income for participants, they were eliminated

from the sample. If they were included, the estimated number of eligible consumer units would be roughly 17 million, with 5.6 million participating, a participation rate of 33 percent. Whereas, if those consumer units with incomplete income information that were estimated to be eligible nonparticipants were eliminated, the participation rate would rise to 31 percent.

¹⁰See John L. Czajka, *Determinants of Participation in the Food Stamp Program in 1979: Spring 1979* (Washington, DC, Mathematica Policy Research, 1981); and Ranney and Kushman, "Cash Equivalence," p. 1012.

¹¹A *t*-test was used to test for the significance of differences in these characteristics. The *t*-statistic was based on the results obtained from estimating weighted regressions, and a significance level of alpha = .01.

¹²West, "Effects of the Food Stamp Program."

¹³An earlier work incorporating welfare stigma in a model of program participation is Robert Moffitt, "An Economic Model of Welfare Stigma," *American Economic Review*, December 1983, pp. 1023-35.

¹⁴See Carr, Doyle, and Lubitz, *Turnover in the Food Stamp Program*, p. 41. One reason why the elderly have a low turnover rate may relate to the reduced administrative burden they face. If all household members are 60 or older, and have no earned income, then they do not have to report monthly. See *Code of Federal Regulations* (Washington, DC, Superintendent of Documents, Government Printing Office, 1985), p. 499.

¹⁵The reference person is the first member mentioned by the respondent when asked to "Start with the name of the person or one of the persons who owns or rents the home." It is with respect to this person that the relationship of other consumer unit members is determined.

¹⁶See *Code of Federal Regulations*, p. 384.

¹⁷Czajka, *Determinants of Participation*.

¹⁸For a description of the probit model, see G.S. Maddala, *Limited-dependent and Qualitative Variables in Econometrics* (New York, Cambridge University Press, 1983).

¹⁹The probit model results can be obtained from the author.

²⁰The probability of participation equals $1 - F(-B'X_i)$, where F is the cumulative normal distribution, B' is the vector of probit coefficients, and X_i are the data describing the consumer unit.