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## Introduction

Since June 1961, the Federal Food Stamp Program has been in operation assisting low income families and individuals in the purchase of food. Households which qualify under the eligibility requirements established by the United States Department of Agriculture and apply for certification become eligible to purchase food stamps. Participants purchase food stamps at prices below the face value of the stamps then redeem the stamps for food at supermarkets or other stores which have been certified to handle transactions involving food stamps. The difference between the purchase price and face value of the stamps is termed bonus value. The purchase price of the food stamps is based on the household's net monthly income while the monthly coupon allotment (face value) is determined by the size of the household.

The food stamp program has grown from approximately 50,000 participants receiving \$381,000 in food stamp bonus value in June 1961 to nearly 13,600,000 participants receiving approximately \$271 million in bonus value in March 1974. Throughout this twelve year period of growth little information has been available concerning the characteristics of households participating in the food stamp program. To provide such data, the Bureau of the Census, under sponsorship of the Office of Economic Opportunity, conducted a household survey in June 1973. The questions concerning food stamps were designed mainly to collect information concerning household participation in the food stamp program during the month of May 1973 with additional questions on participation during the previous twelve month period.

This presentation which is largely based on information collected by this survey has two objectives. The first objective is to provide a brief analysis covering the quality of the food stamp information collected using the June 1973 Current Population Survey (CPS). The second objective is to develop a profile of food stamp households with respect to their economic and demographic characteristics including their annual income in relation to official Federal poverty levels.

### Quality of Food Stamp Survey Data

The survey data presented here pertaining to food stamp recipients were collected by supplementing the June 1973 Current Population Survey questionnaire with a group of questions covering household purchases of food stamps during the month of May 1973 and during the previous twelve month period, June 1, 1972 to May 31, 1973. The Current Population Survey is a monthly household survey of approximately 50,000 households designed primarily to provide national estimates of employment, unemployment, and other characteristics of the labor force. It has also been widely used to provide data covering income, migration, educational attainment, and many other demographic, economic, and social characteristics of the population. To evaluate the quality of the food stamp data collected using the June 1973 CPS, a comparison was made between the survey data and data published by the United States Department of Agriculture.

Comparison of published information from the Department of Agriculture and data from the June 1973 CPS indicate that, although the survey data apparently underestimate the number of persons in households purchasing food stamps in May 1973, the survey universe of food stamp households is representative of the USDA universe of food stamp households with respect to household size, bonus values, and participation in public assistance programs.

The number of persons in households reporting the purchase of food stamps in May 1973 on the CPS was 9,881,100. This figure compares to a USDA published figure of about 12,358,200. The CPS figure which is approximately 80 percent of the USDA estimate differs from the USDA figures for several reasons. As in all household surveys, the data are subject to sampling and nonsampling errors. Of the factors causing the discrepancy between the two estimates, nonsampling errors such as misreporting and nonreporting are probably the most important.

Two other factors which may also contribute to the 20 percent difference between these estimates are possible errors in the USDA administrative data and the occurrence of multiple USDA food stamp households within the CPS household structure. Because the USDA estimates are derived from information provided by local (in most cases counties) food stamp agencies, some of which undoubtedly do a better record keeping job than others, the USDA estimates are also subject to error and should not be used as a tool for evaluation without this fact in mind. Whether errors in the administrative data tend to lessen or widen the gap between these estimates has not been determined. Evidence from a record check study indicate that some of the CPS households contain two or more USDA food stamp units. This situation may occur, for example, in the case of a CPS household containing both a primary family and a subfamily consisting of the primary family head's son and the son's wife and child. Although this group represents one CPS household, it is conceivable that both the primary family and the subfamily could receive food stamps as separate units. The design of the questionnaire, however, allowed only one food stamp household for each CPS defined household. This fact caused a portion of the difference in the number of participating households (see table 1) but should have had little effect on the count of the number of persons in food stamp households, a figure which could be recorded correctly regardless of the number of food stamp households within the CPS household. Although these facts would suggest that the underestimate of the number of food stamp households would be greater than that for persons in the households, the underestimate for both figures was about the same, 20 percent.

An evaluation of the CPS estimate of the total number of households purchasing food stamps in the twelve month period, June 1, 1972 to May 31, 1973 was also made. The June CPS data show a total of about 3,938,000 different households participating during this period. Of this total, 829,000 households reported purchasing food stamps during the specified twelve month period but not in May 1973. A method offered by USDA for determining the number of different households participating in the food stamp program in a given twelve month period was 1.5 times the number participating in any single month. If this figure is used and May 1973 is taken as the base month then an estimate of the total number of households derived from administrative data is 1.5 x 3,941,000 or 5,912,000. The survey underestimate of the number of households participating between June 1, 1972 and May 31, 1973 using this method is about 33 percent.

Estimates derived from the CPS for both bonus value per participant and participation rates in public assistance programs by food stamp households are also very similar to USDA published figures. The aggregate bonus value for May 1973, defined as the difference between the purchase price and coupon allotment, was estimated from the CPS to be \$141.7 million. This figure is about 80 percent of the USDA estimate of \$178.5 million. The average bonus value per participant calculated from CPS data, however, was \$14.27, about 99 percent of the corresponding figure of \$14.45 published by the USDA for May 1973. USDA estimates also show that in May 1973, 61 percent of all persons receiving food stamps were in households which received food stamps as a direct result of their participating in the public assistance program in May. Data compiled from the CPS indicate that in May 1973 about 58 percent of all persons in food stamp households were in households headed by a person reporting the receipt of public assistance in May.

Evaluation of the CPS food stamp data with respect to many important demographic characteristics of the household such as income, age, race, and sex of head, and labor force status of head, etc., could not be made because little or no information is available from administrative sources. An evaluation of the survey data with respect to reliable demographic information from administrative sources could show that the difference is not proportionally distributed between demographic subgroups and that the survey households are not representative of the USDA food stamp households with respect to certain demographic characteristics. If differential underreporting could be determined using reliable administrative figures as a control, adjustments could be made to improve the usefulness of the data by simultaneously correcting for the underreporting of food stamp purchases and the differences in demographic composition.

# Characteristics of Food Stamp Households

Shown in tables 2 and 3 are data for families reporting the purchase of food stamps in May 1973 by selected characteristics. Data in table 2 show the proportion of the selected universe reporting the purchase of food stamps in May while the data in table 3 show the distribution of food stamp households for each selected universe. These data have not been adjusted for the 20 percent difference between USDA figure and the survey figure of the number of households purchasing food stamps in May 1973.

Since the data which will be presented in the following sections are based on a sample, they are subject to sampling variability as well as errors of response and nonreporting. None of the statements in this report have been tested for statistical significance, therefore, an attempt has been made to limit comparisons to situations where obvious significant differences exist.

Overall approximately 4.2 percent of all families and 5.7 percent of all households headed by a primary individual reported purchases of food stamps in May 1973. Almost one of every five families headed by a woman purchased food stamps in May while only 2.2 percent of all families headed by men purchased food stamps.

Participation rates for Negro<sup>2/</sup> families were higher than rates for white families for each characteristic shown; the high participation rate for Negro families reflecting the lower income and greater proportion of families headed by women for this group. Participation rates for families were higher in the South than in any other region, a result apparently of the lower incomes in this region.

Participation rates by income class decline, as would be expected, as income increases. The participation rates for Negro families appear to be higher than for white families at each income level. This higher participation rate for Negro families may result from the fact that a larger proportion of Negro families with low incomes receive public assistance than white families and therefore a larger proportion of Negro families are categorically eligible to participate in the food stamp program.

Negro families which comprise about 11 percent of all families and 32 percent of all families with incomes below poverty level in 1972 made up about 42 percent of the families purchasing food stamps in May 1973. Approximately 70 percent of all Negro families purchasing food stamps were headed by a woman. This contrasts with the corresponding figure of 43 percent for white families.

The South which has the largest population of the four regions in the U.S. also accounts for the largest group of food stamp families, 38.4 percent, a rate which slightly exceeds its proportion of the total number of families in March 1973 (31.8 percent).

The distribution of food stamp families by residence

areas shown in table 3 varies somewhat with respect to the distribution of all families within these areas. While both 67 percent of all families and families purchasing food stamps reside in metropolitan areas, 30 percent of all families and 48 percent of all food stamp families live in the central city. Farm families which comprise about five percent of all families constitute only 2.5 percent of the total number of food stamp families.

Participation rates for primary individuals which make up approximately 30 percent of all food stamp households were highest for Negro females age 65 or older (25.5 percent) and lowest for white males less than 25 years old (1.4 percent). As was the case with families, Negro primary individuals had higher participation rates than white primary individuals. Of all primary individuals purchasing food stamps in May 1973, 74 percent were women; 41 percent were women age 65 and over.

Available information which have not been included in any of the tables indicate that of the households reporting the purchase of food stamps in May 1973, more than 60 percent reported purchasing food stamps in each of the previous twelve months. Over 80 percent reported purchasing food stamps for six or more months during this period. The mean number of months purchased for this group was approximately 9.3.

For the household which reported purchasing food stamps during the twelve month period June 1, 1972 to May 31, 1973 but not in May 1973 (a total of 828,000 households), the average number of purchase months was 3.8. Sixty percent of these households purchased food stamps for three months or less months with almost 30 percent reporting a purchase in only one month in the past twelve.

## Food Stamps and the Low Income Population

One obvious topic of interest concerning the food stamp population is the status of this population with respect to official Federal poverty standards and, conversely, the status of the poverty population with respect to participation in the food stamp program. To provide information on these subjects, a match of two Census Bureau data files, the March 1973 CPS file containing detailed income data and poverty status for calendar year 1972 and the June 1973 CPS file containing food stamp information was made. As a result of the CPS sampling design, households are interviewed for four consecutive months, released from the sample for eight months, and returned to the sample for a final four month period. One fourth of the households in the March 1973 CPS sample, therefore, were also in the June 1973 CPS sample and a match of these data files thus provided information from both data files for the households common to these monthly surveys

The total number of households available for matching (based on the March 1973 CPS data file) was 11,186 (actual number of sample households). Of these, 8,596, or 77 percent, were termed fullymatched Only these fully-matched households were used for analytical purposes since households of other matched status had undergone some compositional change between March and June, a fact which would complicate the analysis. Households which moved between March and June were by definition excluded from the analysis since no data from the June CPS was available.

After matching of the data files further screening of the matched records was required before the analysis could begin. Since the food stamp information on the June 1973 CPS was collected for households and poverty status is developed on a basis of families and unrelated individuals, all secondary families and secondary unrelated individuals were eliminated from the matched data file. An assumption was made, therefore, that the unit receiving food stamps within the CPS household was always the primary family or the primary unrelated individual<sup>2</sup>.

Tabulations made from the matched data file indicate that approximately half (52.8 percent) of the families and two-thirds (68.7 percent) of the unrelated individuals purchasing food stamps had annual incomes below the poverty level in 1972. These figures vary somewhat by race and sex of head, with food stamp families headed by a white male having a 42.4 percent poverty rate and food stamp families headed by a Negro female having a poverty rate of 60.2 percent.

The fact that only about 50 percent of all families purchasing food stamps during the specified twelve month period had incomes below the poverty level in 1972 is not surprising for several reasons. First, eligibility for food stamps is based on a net monthly income figure while the poverty status is based on an annual income concept. As a result, a household may be eligible for food stamps for several months because of some short term decrease in income but on an annual basis have income above the poverty level. Secondly, USDA maximum monthly income amounts, which help determine a household's eligibility to participate in the food stamp program are higher than one twelth of the poverty level which is an annual gross income amount. Thirdly, since monthly income used to determine eligibility is a net figure derived after deductions are made for payroll taxes, shelter costs, medical expenses, etc., the annual gross income of a participating household may be considerably higher than the poverty level.

In addition to these two factors which demonstrate that a considerable number of families with annual incomes above the poverty level are eligible for food stamps, guidelines set up for the food stamp program provide that all persons receiving public assistance are also eligible to participate in the food stamp program. About one half of the families and one-third of the unrelated individuals receiving public assistance in 1972 had annual incomes above the poverty level, yet were categorically eligible to participate in the food stamp program while receiving public assistance income.

Estimates of participation in the food stamp program by families and unrelated individuals with incomes below the poverty level in 1972 are shown in table 4. Several adjustments were made to the survey data before the estimates of participation in food stamp program by the poverty population could be derived. First, adjustments were made to the survey data for the underestimate of the number of food stamp households by assuming the underestimate was distributed proportionally between demographic subgroups and between the poverty and nonpoverty population. This adjustment also assumed that the survey underestimated the number of households purchasing food stamps during the 12 month period June 1, 1972 to May 31, 1973 by 33 percent. Because the food stamp program was in operation in only about two-thirds of the counties in the U.S. in May 1973, a second adjustment was made which excluded from the analysis sample households located in sampling areas (primary sampling units) containing one or more counties which did not have the food stamp program in May 1973. This adjustment allowed the derivation of participation rates based only on households residing in areas administering the food stamp program.

The data shown in table 4 indicate that overall, 53.3 percent of all families and 30.8 percent of all unrelated individuals with incomes below the poverty level in 1972 purchased food stamps between June 1, 1972 and May 31, 1973. The participation rate in the food stamp program for female headed families with incomes below the poverty level in 1972 was 71.1 percent while the rate for families headed by an elderly male was 34.2 percent. About 75 percent of the families and 80 percent of the primary individuals below the poverty level who purchased food stamps, purchased food stamps in six or more months during this period.

Participation rates were significantly higher for both Negro families and primary individuals below the poverty level than for white families and individuals. This, again, may result, in part, from the fact that a larger proportion of low income Negro families receive public assistance than white families.

### Summary

The June 1973 CPS represents the first attempt by the Census Bureau at collecting detail information concerning household participation in the food stamp program on a national scale. The role of food stamps as well as other sources of what have been termed "nonmoney" or "noncash" income as an important source of income to both families and individuals has been increasing at a rapid rate. More efforts will be needed by the Bureau of the Census and others to expand our knowledge as to the effects of "noncash" income on the total welfare of the population.

Collection of food stamp data using the June 1973 CPS was an experience which resembles our previous survey experiences in collecting public transfer money income data such as public assistance. This experience has been that the number of recipients and the aggregate amount of benefits, in terms of dollars, have been substantially underestimated by the surveys but that the reporting recipients appear to closely represent the total universe in many important respects.

The data presented here pertaining to the relationship between the food stamp and official Federal poverty universes must be used only keeping in mind the assumptions which have been made. Since the data used to develop these estimates were not collected for the specific purpose of estimating the relationship between poverty and food stamps, some useful information pertinent to the analysis such as changes in household composition during the year, financial assets, and purchases of food stamps covering all of calendar year 1972 were not collected. The fact that the analysis required a match of the March 1973 CPS and June 1973 CPS files resulted in some problems. Households which moved during the period between March and June were necessarily excluded from the final sample used in the analysis. The sample size was reduced considerably and, therefore, sampling errors increased to levels which are much higher than those associated with the entire CPS sample. Even in the light of these problems, this study has produced some interesting findings which should serve to increase our knowledge about the food stamp program and to promote more detail and specialized studies in this area.

 I / The estimate of \$141.7 million bonus value from the CPS was derived assuming households reporting the purchase of food stamps in May but failing to report the necessary information to calculate bonus value received, on the average, the same bonus values as households reporting both purchase price and coupon allotment. Approximately 10 percent of the food stamp households did not provide all information required to calculate the bonus value.

 $\frac{2}{N}$  Negro actually refers to Negro and other races throughout this paper.

 $\frac{3}{As}$  a result of residents moving from the sample address, noninterviews, and errors in recording identifying information, some households could not be matched.

4/A fully-matched code was assigned to a household only if records for each person 14 years and older within the household were present on both data files. Therefore, these households have undergone no compositional changes among their members 14 years old and over.

<sup>5/</sup>Since the number of secondary families is very small (about 100,000 of a total of 54.3 million total families in March 1973) and 75 percent of all unrelated individuals are primary individuals living alone, this assumption will be a correct one in almost all cases.

6/Families and unrelated individuals were classified as food stamp recipients if any person in the family or anyone in the household headed by the primary individual reported purchasing food stamps in any month between June 1, 1972 and May 31, 1973.

TABLE 1. A COMPARISON OF JUNE 1973 CPS SURVEY DATA AND U.S. DEPARTMENT OF AGRICULTURE DATA ON THE NUM-BER OF HOUSEHOLDS PURCHASING FOOD STAMPS IN MAY 1973

	Food	Stamp Hous	eholds by Size		Ratio of CPS Households to
Size of Household	Number (thous.) (1)	Percent1/ (2)	Number (thous.) (3)	Percent (4)	USDA households (1+3)
Total	3,110	100.0	3,941	100.0	•79
1 2 3 4 5 6 7	874 655 451 305 228 170 131 175	29.2 21.9 15.1 10.2 7.6 5.7 4.4 5.6	1,186 822 581 445 304 210 143 250	30.1 20.9 14.7 11.3 7.7 5.3 3.6 6.3	.74 .80 .78 .69 .75 .81 .92 .70
Size not available Mean size	121 3•19	3.9 <sup>2</sup> / (X)	(X) 3.13	(X) (X)	(X) 1.02

1/ Percents are calculated based on the total number of households reporting on the number of persons covered under the food stamp program.

2/ This figure represents the percent of all households reporting the purchase of food stamps in May which did not report the number of persons covered under the food stamp program.

X - Not applicable.

TABLE 2. PERCENT OF FAMILIES PURCHASING FOOD STAMPS DURING MAY 1973 BY SELECTED CHARACTERISTICS

	All families		White	Families	Negro and Other Races Families		
Selected Characteristics	Number (Thou- sands)	Percent Purchasing Food Stamps	Number (Thou- sands)	Percent Purchasing Food Stamps	Number (Thou- sands)	Percent Purchasing Food Stamps	
All families	54,309	4.2	48 <b>,</b> 154	2.8	6 <b>,</b> 155	15.5	
<u>Sex of Head</u> Male Female	47,794 6,515	2.2 19.0	43,531 4,623	1.8 12.2	4,262 1,892	6.6 35.5	
Age of Head   Less than 25   25 to 54   55 to 64   65 years or older	4,113 33,779 8,699 7,718	6.7 4.1 3.2 4.2	3,548 29,660 7,947 6,999	4.4 2.6 2.1 3.2	564 4,119 752 719	21.2 15.1 14.6 14.1	
Residence Farm Nonfarm, total In metropolitan areas In central city Outside central city Outside metropolitan areas.	2,538 51,771 36,531 16,427 20,104 15,240	2.2 4.3 4.2 6.6 2.2 4.6	2,399 45,755 31,733 12,751 18,982 14,022	1.6 2.8 2.6 3.6 1.8 3.4	139 6,016 4,798 3,676 1,122 1,218	14.1 15.5 15.0 17.0 8.3 17.8	
Region Northeast North Central. South. West	12,831 15,098 17,001 9,380	3.8 3.5 5.2 4.1	11,713 13,871 14,053 8,517	2.5 2.3 2.9 3.6	1,117 1,227 2,948 863	17.8 17.3 15.7 9.1	
<u>Income</u> <sup>1</sup> / Under \$2,000. \$2,000 - \$2,999. \$3,000 - \$3,999. \$4,000 - \$4,999. \$5,000 - \$5,999. \$6,000 or more. NA.	1,102 2,062 2,285 2,348 2,905 39,003 4,537	31.6 21.5 15.7 10.6 5.0 0.9 2.3	770 1,637 1,830 2,071 2,456 35,297 4,045	24.8 15.8 12.5 6.9 3.3 0.6 1.8	332 425 455 277 449 3,712 492	45.6 40.0 27.9 33.4 13.9 3.8 8.0	

(Data from the June 1973 CPS. Numbers as of June 1973)

1/ The money income levels shown here may be somewhat understated. These data which are from the June 1973 CPS control card are based on the respondent's estimate of total family money income for the preceding 12 month period coded in broad, fixed income intervals.

TABLE 3.	FAMILIES	PURCHASING	FOOD	STAMPS	DURING	MAY	1973	ΒY	SELECTED	CHARACTERISTICS
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Selected Characteristics	All Families	White Families	Negro and Other Races Families
Total purchasing food stamps	2,281	1,327	954
Sex of Head			
Total	100.0	100.0	<b>100.</b> 0
Male	45.8	57.5	29.6
Female	54.2	42.5	70.4
Age of Head			
Total	100.0	100.0	100.0
Less than 25	12.2	11.9	12.6
25 to 54	61.4	58.5	65.3
55 to 64	12.2	12.7	11.5
65 years or older	14.2	16.9	10.6
Residence			
Total	100.0	100.0	100.0
Farm	2.5	2.8	2.0
Nonfarm. total	97.5	97.2	98.0
In metropolitan areas	67.0	61.2	75.2
In central city	47.6	34.7	65.4
Outside central city	19.4	26.5	9.8
Outside metropolitan areas	33.0	38.9	22.8
Region			
Total	100.0	100.0	100.0
Northeast	21.6	22.1	20.9
North Central	23.1	23.8	22.3
South	38.4	31.2	48.6
West	16.8	23.0	8.3
Income <sup>1</sup> /			
Total	100.0	100.0	100.0
Under \$2,000	21.7	19.7	24.6
\$2,000 - \$2,999	23.7	22.8	24.9
\$3,000 - \$3,999	17.6	19.1	15.5
\$4,000 - \$4,999	11.8	11.4	12.3
\$5,000 - \$5,999	6.3	6.2	6.4
\$6,000 or more	14.3	15.4	12.9
NA	4.6	5•4	3.5

Dete	from	the	June	1973	CPS.	Numbers	88	of	June	1973)	)
	T LOW	une	June	<b>TZ</b> ( )		number.a	a.a	U1	June	<b>T</b> 2())	

1/ The money income levels shown here may be somewhat understated. These data which are from the June 1973 CPS control card are based on the respondent's estimate of total family money income for the preceding 12 month period coded in broad, fixed income intervals.

TABLE 4. PERCENT OF FAMILIES AND PRIMARY INDIVIDUALS WITH INCOMES BELOW THE POVERTY LEVEL IN 1972 AND PURCHASING FOOD STAMPS DURING THE PERIOD JUNE 1, 1972 TO MAY 31, 1973

Age and Sex of Head	Percent Below the Poverty Level in 1972 Purchasing Food Stamps					
	All Races	White	Negro and Other Races			
FAMILIES						
Total	53.3	49.2	61.1			
Male head, total.	40.3	38.8	45•6			
Under 65 years.	42.2	41.2	45•2			
65 years or older.	34.2	31.6	(B)			
Female head, total	71•1	71.8	70.5			
Under 65 years	74•4	78.0	69.6			
65 years or older	(B)	(B)	(B)			
PRIMARY INDIVIDUALS	30 <b>.8</b>	26.2	59•2			
Total	38.5	36.5	(B)			
Male, total	38.6	(B)	(B)			
Under 65 years	(B)	(B)	(B)			
Female, total	28.7	24.0	(B)			
Under 65 years	38.0	32.1	(B)			
65 years or older	23.6	20.1	((B)			

Base less than 50,000