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**ANALYSIS OF HOUSEHOLD EXPENDITURES
IN RELATION TO THE FOOD STAMP
PROGRAM BENEFIT STRUCTURE**

FINAL REPORT

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EXECUTIVE SUMMARY

The fundamental objective of the Food Stamp Program (FSP) is to increase the capacity of low-income households to purchase food and obtain a nutritionally adequate diet. To accomplish this objective, the design of the program's benefit structure relies on several important assumptions about how low-income households spend their income. FNS sought information about the accuracy of these assumptions by funding a research project to analyze the actual expenditure behavior of low-income households based on data from the Consumer Expenditure Surveys (the CEX). This report presents the results of the investigation.

Two aspects of the FSP benefit structure incorporate important assumptions about the expenditure behavior of low-income households. First, participating households are assumed to devote 30 percent of their "disposable," or net, income to food purchases. If 30 percent of their net income falls below the amount deemed adequate to support their respective household's required food purchase (i.e., the Thrifty Food Plan amount), then households are awarded food stamp benefits that are sufficient to increase their purchasing power up to the Thrifty Food Plan (TFP) level for their household size.

Second, net income as defined by FSP rules is determined on the basis of the assumption that households spend a portion of their income on items over which they have little or no control (e.g., shelter and medical care) or which are disregarded by the FSP in order to provide incentives to engage in work (e.g., the 20 percent deduction from earned income and dependent-care expenses).

The original objective of this effort was to address two broad categories of questions about the relationship between the design of the benefit structure and the expenditure behavior of households:

1. How do low-income and higher-income households allocate their income among major expenditure categories? How do the spending patterns of FSP participants compare with those of low-income nonparticipants?
2. Do the assumptions about the expenditure behavior of households which are embodied in the food stamp benefit formula reflect the actual behavior of low-income households? In particular:
 - o Do low-income households and FSP participants spend 30 percent of their net income (excluding food stamps) on food?
 - o Does the earned income deduction of 20 percent accurately reflect the amount of earnings which FSP participants must devote to taxes and other work-related expenses?

- o What proportion of income do low-income and FSP households devote to medical, shelter, and dependent-care expenses?

We have examined the capacity of the CEX to address these policy questions and have developed information on the first issue--the overall patterns of expenditures by groups of interest to FNS policymakers. However, the second broad category of analytical questions could not be addressed because characteristics of the CEX limited our ability to investigate the relationship between income and expenditures. In particular, we found that "total expenditures" exceeded "income" in more households and by greater amounts than could be explained through substantive reasons. Based on this finding, as well as on published methodological work on the Current Population Survey (CPS), which gathers income-related data in a manner similar to the CEX, we concluded that income tended to be underreported, particularly for households that we identified as "low income" (see discussion in Chapter III of the main report). Thus, unfortunately, the questions pertaining to the FSP benefit structure cannot be addressed with data from the CEX.

DESCRIPTION OF THE CONSUMER EXPENDITURE SURVEY DATA

The analysis is based on the quarterly interview data from the 1982-83 Consumer Expenditure Surveys (CEX), which are conducted by the Bureau of Labor Statistics primarily to calculate cost-of-living indices for the United States. The survey consists of a Quarterly Interview Survey in which consumer units are interviewed five times at three-month intervals, and a Diary Survey (based on a separate sample) in which consumer units keep diaries of their expenses. The Diary Survey is designed to collect data on food and other frequently purchased items. The Quarterly Interview Survey is designed to collect data on major expense items, although it also obtains estimates of expenditures on food. Because the Quarterly Survey includes information on food expenditures, other expenditures, and income, it is the best available data source for addressing questions pertaining to the FSP benefit structure.

Although the Quarterly Survey is the best available data source for the analysis, it was not designed primarily for analyses of issues associated with the Food Stamp Program. The design of the CEX imposed important limitations that must be clearly understood in order to address the policy questions of interest to FNS.

- o Coverage of Deductible Items. Our general assessment is that coverage of expenditures on key items which are deductible under FSP rules is quite good, although we cannot isolate deductible dependent care from non-deductible expenses. Also, we cannot isolate some major elements of work expenses (such as transportation to work), and we must estimate the deductible portion of medical expenses.

- o Definition of Household. The CEX consumer unit corresponds quite closely, but not exactly, to the FSP definition of household. The most significant discrepancy is that elderly FSP households who reside within consumer units cannot be identified separately.
- o Definition of the Relevant Time Period. The CEX Quarterly Interview Survey collects expenditure data for four successive three-month periods, but income data cover only the annual period. Consequently, we must either aggregate expenditure information to a yearly basis and compare annual expenditures and income or, alternatively, use annual income (divided by 4) as a proxy for quarterly income. Because this average quarterly income may be a very poor estimate for actual quarterly income--especially for households which have enrolled in the FSP because of a recent decline in income--we base our primary analysis on annual income and expenditures. The primary disadvantages of this approach are the substantially smaller available sample and the weaker link to FSP eligibility rules which are based on a monthly time frame.
- o Identification of Eligible FSP Participant and Non-Participant Households. Because FSP eligibility is determined on a monthly basis, it is impossible to replicate the eligibility criteria using the CEX. We approximated the FSP definition of eligibility by requiring that (1) annual household income meet the FSP gross income criterion (130 percent of poverty or less) and (2) liquid assets measured at the beginning and end of the annual observation period fall below the FSP assets cutoff. This approximation classifies as "ineligible" some cases that may actually have been eligible temporarily for some part of the year, and it classifies as "eligible" some households whose non-liquid assets (e.g., vehicles) would have made them ineligible. Because our determination of eligibility is imprecise, sample households which passed the above tests are referred to as "low-income" households.
- o Sample Coverage. The 1982-83 CEX sampled only urban households. Thus, the results of this study are not generalizable to the overall U.S. population.

In terms of addressing the policy questions on the FSP benefit structure, the CEX suffers from more significant limitations: (1) income appears to be underreported, particularly for low-income households, and (2) FSP participants may systematically underreport their food expenditures. The apparent problem with the income data was identified on the basis of initial comparisons of total expenditures with gross income.

The annual expenditures of approximately 70 percent of the households that we identified as "low income" exceeded their annual incomes. Furthermore, the margin of excess was not small; half of all low-income households spent about 25 percent more than their income, and about one-third spent 50 percent more than their income. The fact that assets were drawn down or other substantive reasons explained only a small percentage of the cases in which expenditures exceeded income.

The potential problem with the food expenditure data is due to the sequence and wording of the questions about food expenditures in the CEX questionnaire. Questions were worded in a manner whereby it was unclear whether or not the respondent was supposed to include purchases with food stamp coupons in the estimate. To the extent that FSP participants excluded the food purchased specifically with coupons, this question wording would lead to an understatement of the expenditures made on food by FSP participants. These two limitations of the CEX made it impossible to draw meaningful conclusions about the relationship of the FSP net income to expenditures on food, shelter, and other deductible items.

The annual analysis sample obtained from the 1982-83 CEX contained a total of 4,419 households, of whom 3,668 were considered "higher income" because the annual gross income or assets exceeded our criteria, 453 were low-income FSP nonparticipants, and 298 were low-income FSP participants.

PATTERNS OF EXPENDITURES ON BROAD CATEGORIES OF ITEMS

Table 1 presents summary data on overall expenditures by households and the share of expenditures devoted to "necessities" (food, shelter, and clothing) and to food. The following are the major findings:

- o Annual expenditures vary considerably across income groups and groups defined in terms of FSP participation.
 - The average annual expenditures of higher-income households are more than double those of low-income households (\$23,000 vs. \$10,400).
 - Low-income nonparticipant households spend nearly 50 percent more than food stamp households (\$12,000 vs. \$8,000), even though their incomes, inclusive of food stamps, are quite similar.
 - The relative differences among the subgroups are accentuated when we examine per-capita total expenditures, particularly the difference between low-income FSP participants and nonparticipants.
- o The differences among the groups in terms of spending on necessities is somewhat smaller in relative terms than are the differences in total spending.

TABLE 1

SUMMARY DATA ON ANNUAL EXPENDITURES BY URBAN HOUSEHOLDS:
ANNUAL SAMPLE

	All Households			Low-Income Households			
	Total	Higher Income	Low-Income	Non-Participant	Food Stamp Participant	Full-Year FSP Participant	Part-Year FSP Participant
Average Annual Expenditures							
Total amount	\$20,978	\$23,180	\$10,442	\$11,996	\$8,010	\$6,587	\$9,858
Per capita amount	\$ 9,137	\$10,120	\$ 4,435	\$ 5,538	\$2,708	\$2,352	\$3,171
Average Annual Expenditures on Food, Shelter, and Clothing							
Total amount	\$10,016	\$10,817	\$ 6,182	\$ 6,703	\$5,285	\$4,810	\$6,087
Per capita amount	\$ 4,392	\$ 4,741	\$ 2,725	\$ 3,253	\$1,896	\$1,816	\$2,001
Share of total spending	52.3%	49.4%	66.3%	62.2%	72.6%	77.4%	66.6%
Average Annual Expenditures on Food							
Total amount	\$ 3,205	\$ 3,406	\$ 2,248	\$ 2,330	\$2,119	\$1,980	\$2,298
Per capita amount	\$ 1,357	\$ 1,443	\$ 945	\$ 1,096	\$ 708	\$ 669	\$ 759
Share of total spending	17.8%	16.3%	24.9%	22.5%	28.7%	31.0%	25.8%
Average Annual Income (including food stamp allotment)	\$26,623	\$28,404	\$ 6,541	\$ 6,458	\$6,670	\$6,015	\$7,520
Average Household Size	2.73	2.69	2.89	2.52	3.47	3.34	3.64
Sample Size							
Weighted (1,000)	71,247	58,926	12,321	7,517	4,804	2,714	2,090
Unweighted	4,419	3,668	751	453	298	162	136

SOURCE: Weighted tabulations from the annual analysis file from the 1982-83 Consumer Expenditure Survey.

- Spending on necessities by higher-income households is 75 percent higher on average than the spending of low-income households.
- Spending on necessities by low-income nonparticipants is about 25 percent higher than the spending of participants.
- o The share of total expenditures devoted to "necessities" varies substantially among the income and participant groups.
 - Higher-income households devote approximately half of their total spending to food, shelter, and clothing, while low-income households devote two-thirds of their spending to these same items.
 - FSP participants spend nearly three-fourths of their budget on necessities, while low-income nonparticipants spend just under two-thirds.
- o Similar differences are apparent for expenditures on food.
 - Higher-income households spend about 16 percent of their budget on food; low-income households spend about one-fourth.
 - FSP participants spend nearly 30 percent of their budget on food, and low-income nonparticipants spend about 23 percent.

BUDGET SHARES DEVOTED TO ITEMS IN THE FOOD STAMP BENEFIT FORMULA

Although it proved impossible to develop a reliable estimate of FSP net income, it is useful to examine the share of the budget which the various subgroups devoted to key items that are covered in the FSP benefit formula. Table 2 summarizes the main findings on average budget shares devoted to food at home, as well as to shelter and medical expenses.

- o Food Expenditures. Low-income households and particularly FSP households devote relatively small shares of their budgets to food for consumption away from home. Over 40 percent of low-income households spend more than 25 percent of their budget on food, compared with just 10 percent of higher-income households. Over half of FSP participants devote at least 25 percent of their budget to food.

TABLE 2

SUMMARY OF DATA ON ANNUAL BUDGET SHARES FOR FOOD, DEDUCTIBLE
SHELTER, AND MEDICAL EXPENSES FOR URBAN HOUSEHOLDS:
ANNUAL SAMPLE
(percent)

	All Households			Low-Income Households			
	Total	Higher Income	Low- Income	Non- Participant	Food Stamp Participant	Full-Year Participant	Part-Year Participant
FOOD							
Average Budget Shares for Food							
Food, total	17.8	16.3	24.9	22.5	28.7	31.0	25.8
Food at home	13.7	12.0	22.2	19.2	27.0	29.4	24.0
Food away	4.0	4.3	2.7	3.3	1.7	1.6	1.8
Percent with Budget Shares for Food Exceeding 25 Percent	15.9	10.0	43.9	35.9	56.5	64.6	46.0
SHELTER							
Average Budget Shares for Deductible Shelter Expenses	22.7	21.0	30.8	28.9	33.7	36.3	30.3
Percent with Budget Shares for Deductible Shelter Expenses Exceeding 50 Percent	3.7	1.7	12.9	8.1	20.3	28.1	10.0
Average Budget Shares for Medical Care							
Medical care total	5.0	4.8	5.8	7.4	3.3	2.2	4.8
Households with elderly or disabled member	8.7	8.5	9.1	10.0	6.7	4.3	9.9
Other households	3.0	3.1	2.6	3.6	1.5	1.0	2.2
Sample Size							
Weighted (1,000)	71,247	58,926	12,321	7,517	4,804	2,714	2,090
Unweighted	4,419	3,668	751	453	298	162	136

SOURCE: Weighted tabulations from the annual analysis file from the 1982-83 Consumer Expenditure Survey.

- o Deductible Shelter Costs. The average shares devoted to these items are 20 percent for higher-income households and 30 percent for low-income households, and one-third for FSP households. However, about 20 percent of FSP participants devote more than half of their budget to deductible shelter items.

- o Medical Expenses. Average budget shares are highest for the low-income nonparticipant group and, across all income groups, for households with an elderly or disabled member. Overall, households with an elderly or disabled member spend about 9 percent of their budget, compared with 3 percent in other households. Low-income nonparticipants devote the highest budget share (7 percent) to deductible medical expenses, and low-income participants devote the lowest share (3 percent). Indeed, 27 percent of these low-income nonparticipants spend at least 10 percent of their budget on deductible medical expenses. The difference between FSP participants and the low-income nonparticipants is that the participants are more likely to be receiving medical assistance.

deducted from gross household income to determine the net income amount. Specifically, the following deductions from gross income are currently used to calculate FSP net income:

- o The standard deduction, which is \$99 per month in fiscal year 1987 (the standard deduction is adjusted annually based on the Consumer Price Index minus both food and homeownership costs¹)
- o An earned income deduction of 20 percent, designed to compensate for work expenses and provide an incentive to work
- o Dependent-care expenses if incurred during work, training, or job-search activities, not to exceed \$160 per month
- o The medical expenses of elderly or disabled household members in excess of \$35 per month
- o Shelter expenses in excess of 50 percent of available income after all other deductions have been subtracted, not to exceed \$149 per month for households without an elderly or disabled member.

The original objective of this effort was to address two broad questions about the relationship between the design of the benefit structure and the expenditure behavior of households:

1. How do low-income and higher-income households allocate their income among major expenditure categories? How do the spending patterns of FSP participants compare with those of low-income nonparticipants?
2. Do the assumptions about the expenditure behavior of households which are embodied in the food stamp benefit formula reflect the actual behavior of low-income households? In particular:

¹Changes in food prices are excluded from this index because benefits are indexed annually to reflect these changes. Changes in the costs of homeownership are excluded because most food stamp households rent, rather than own, housing, and because the program offers a separate shelter deduction.

- o Do low-income households and FSP participants spend 30 percent of their non-food stamp net income (excluding food stamps) on food?
- o Does the earned income deduction of 20 percent accurately reflect the amount of earnings which FSP participants must devote to taxes and other work-related expenses?
- o What proportion of income do low-income and FSP households devote to medical, shelter, and dependent-care expenses?

We have examined in detail the capacity of the CEX to address these policy questions and have developed information on the overall patterns of expenditures by groups of interest to FNS policymakers. This information is reported in Chapters II and III.

However, the second set of analytic issues could not be addressed because certain characteristics of the CEX limited our ability to investigate the relationship between income and expenditures. In particular, we found that "total expenditures" exceeded "income" in more households and by greater amounts than could be explained through substantive reasons. Based on this fact, as well as on published methodological work on the Current Population Survey (CPS), which gathers income-related data in a manner similar to the CEX (see the discussion in Section 2 of Chapter III), we concluded that income tended to be underreported, particularly for households that we identified as "low income." Thus, unfortunately, we believe that the questions of most interest to FNS cannot be addressed based on the CEX.

The report is organized into two chapters and a series of supporting appendices. Chapter II describes the CEX data set, discusses the key measurement issues associated with using the CEX to address the FSP

policy questions described earlier, discusses and documents the critical limitations associated with income and food expenditures, and briefly describes the characteristics of the sample included in our analysis. Chapter III then describes the expenditure patterns of low-income households (including both FSP participants and nonparticipants) in terms of broadly defined expenditure categories, and compares them with the expenditure patterns of higher-income households. In addition, the chapter discusses the shares of total expenditures that are devoted to items (food, shelter, and medical expenses) that are incorporated in the FSP benefit formula. While budget shares do not correspond to the FSP concept of net income, they do provide useful insights into the relative shares of the overall resources that are devoted by households to key items.

Three appendices provide additional details on the analyses that were attempted. Appendix A documents decisions about constructing the analysis file and defining the expenditure variables. Appendix B presents data on the characteristics of the sample and compares the characteristics of the CEX analysis sample that we developed with the characteristics of a CPS sample and a national sample of food stamp participants based on FSP quality control data. Finally, Appendix C reports on the direct comparison of FSP net income expenditures on food for home consumption, shelter costs, medical expenses, and work expenses.

II. THE DATA, DEFINITION OF THE ANALYSIS FILE, AND CHARACTERISTICS OF THE SAMPLE

Addressing the research questions outlined in Chapter I requires three general types of data. The first type encompasses information on household expenditures. These expenditure data should include (1) expenditures on major, quite broadly defined categories and (2) data on more narrowly defined items that represent deductions from gross income for the purposes of determining food stamp net income. The second key type of data encompasses information on household income, since virtually all of the research questions pertain to the relationship between expenditures and income. Since the relationship between expenditures and income may differ by income source, it is also important to be able to distinguish among earned income, transfer income, and unearned income from other sources. The third type of data which is needed to address most of the major research questions encompasses information on specific subgroups of the population. The most important of these subgroups are FSP eligibles and FSP participants. The other subgroups of interest include households with an elderly or disabled member, AFDC households, and households at various income levels.

The Consumer Expenditure Quarterly Interview Survey (CEX) is believed to be the best available data source for the purposes of the analysis. It provides the detailed information on expenditures, income, and household characteristics that is needed to address the research questions pertinent to this task. In addition, it is up-to-date, covering household income and expenditures reported in 1982 and 1983. Thus, the CEX provides a contemporary picture of household expenditure patterns and enables us to

relate these patterns to the current design and parameters of the food stamp program.¹

In this chapter we describe the CEX, its sample design, and the data it provides. We also describe the major weaknesses in the data and how they affect our analysis. In Sections B and C, we discuss the analysis files that we created from the CEX and the definitions of the population subgroups (e.g., FSP-eligible households) used in this study. Finally, we examine the characteristics of the analysis file samples and compare them with the characteristics of the general population and of food stamp households.

A. THE CONSUMER EXPENDITURE QUARTERLY INTERVIEW SURVEY

Consumer Expenditure Surveys have been conducted by the Bureau of Labor Statistics (BLS) about every ten years since 1888-91 in order to provide the government with expenditure data to calculate cost-of-living indexes, such as the Consumer Price Index. The current CEX, which began in 1980, is different from previous surveys in that it is being conducted on a continuous basis. This analysis is based on information on consumer expenditures covering 1982 and 1983.

The 1982-83 surveys consist of two separate components: (1) a Quarterly Interview panel survey, in which each consumer unit in the sample is interviewed five times, once every three months, over a twelve-month period; and (2) a Diary, or record-keeping, Survey, in which consumer units

¹The CEX has the added advantage of being an ongoing survey. Thus, it offers the opportunity to examine changes in expenditure patterns over time and can be used in future research efforts to update the results of this analysis.

are asked to complete a diary of expenses for two consecutive one-week periods. Each component has its own questionnaire, and the samples are independent.

The Quarterly Interview component of the CEX is the data source used in this analysis. It is designed to collect data on major expense items, household characteristics, and income. The expenditures covered in this survey are those which respondents can be expected to recall fairly accurately for a period of three months or longer. These include relatively large expenditures, such as those for property, automobiles, and major appliances, and those which occur on a regular basis, such as rent, insurance premiums, and apparel. BLS estimates that the Interview Survey collects detailed data on 60 to 70 percent of total household expenditures. These data are supplemented with global estimates--that is, rough estimates of average expenditures during the three-month period--of food and other frequently purchased items. These global estimates account for an additional 20 to 25 percent of total expenditures. In addition to the expenditure information, the Interview Survey provides data on household demographic and socioeconomic characteristics, employment status, income, taxes, occupational expenses, and assets.¹

¹The Diary Survey is designed to obtain detailed data on frequently purchased and small items that are less likely to be recalled accurately by respondents over the three-month period used in the Interview Survey. These items include food and beverages (purchased for use both at home and in eating places), tobacco, housekeeping supplies, nonprescription drugs, and personal-care products and services. However, because the Diary Survey does not collect information on other expenditure items, it is not appropriate for use in this study.

1. Survey Design

The 1982-83 Interview Survey consists of a rotating panel sample design. Under this design, interviews with each sample unit are conducted quarterly over a twelve-month period. After the fifth interview, the consumer unit is dropped from the survey and is replaced by another household. In any given quarter, about 20 percent of the sample is dropped--having completed their fifth interviews--and a new rotation group is added.¹

The first interview for a household obtains information on demographic and family characteristics and on the inventory of major durable goods in the consumer unit. Expenditure information is also collected on a one-month recall basis and is used with the inventory information for bounding purposes--that is, to classify the consumer unit for the analysis and to prevent the duplicate reporting of expenses in the subsequent interviews. The expenditure and inventory data collected in this initial interview are not included in the Interview Survey public-use file.²

The public-use file consists of information provided in the second through fifth interviews, combined with the demographic information

¹The sample is based on addresses, so that each sample address is contacted up to five times. A household which moves away from its sample address before the fifth interview is dropped from the survey. It is replaced by the household that moved into the sample address for the remaining interviews if the new household passes an eligibility screen and is found qualified. Roughly 75 percent of the sample units complete all five interviews.

²The 1972-73 CEX released a separate data file which included information from the bounding interviews on each sample unit's inventory of consumer durables. (See van der Gaag et al., 1981, for a discussion on this data source.) BLS has no plans to release a similar data file for the 1982-83 Interview Survey; however, it does expect to release companion files beginning with the 1984 CEX.

obtained in the bounding (first) interview.¹ Table II.1 summarizes the coverage and timing of the data that are available on the public-use file. The second through fifth interviews use a uniform quarterly questionnaire to collect expenditure information from each consumer unit. Expenditures are defined as the net out-of-pocket expenditures of the household during the three months preceding the interview date. The major groupings of expenditures include food (both at home and away from home), housing, clothing, transportation, and other goods and services. All of these groupings, except food, can be broken down into finer categories.

In addition to expenditure information, the second and fifth interviews obtain detailed data on employment and income during the twelve months preceding the interview. These data include wages, salary, taxes, and other information on the employment of each household member, as well as nonwage sources of income (unemployment compensation, transfer income, alimony, child support, etc.) for the household as a whole. Only the fifth interview includes data on the household's assets and liabilities. In each of the four quarterly interviews, respondents are asked whether they have received food stamps in the preceding three months and the value of the food stamps.

Approximately 4,800 consumer units are interviewed in each quarter. (This figure does not include households that are receiving their initial, or bounding, interview). These 4,800 units are divided fairly equally among four rotation groups, so that in any given quarter only about 1,200

¹Household characteristics are updated at each interview.

TABLE II.1
TIMING AND COVERAGE OF KEY AREAS IN THE CONSUMER
EXPENDITURE QUARTERLY INTERVIEW SURVEY

Item	Interview in Which Data Are Obtained				
	1	2	3	4	5
Major Nonfood Expenditures		Q	Q	Q	Q
Food Expenditures					
Global Estimates ^a		Q	Q	Q	Q
Food Stamp Deductions/Gross Income					
Gross income		Y			Y
Medical expenses		Q	Q	Q	Q
Dependent care		Q	Q	Q	Q
Shelter costs		Q	Q	Q	Q
Taxes/work expenses		Y			Y
Food Stamp Receipt and Amount		Q	Q	Q	Q
Detailed Income by Source		Y			Y
Liquid Assets					p ^b
Household Size/Composition	P	P	P	P	P
Characteristics	p ^c				

P indicates that the data pertain to the interview date.

Q indicates that the data pertain to the previous three months.

Y indicates that the data pertain to the previous twelve months.

^a"Global estimates" are based on respondents' estimates of average expenditures for the period, rather than on the detailed data recorded for other expenditures in the Interview Survey.

^bRetrospective information on assets held as of one year prior to the interview date are also collected.

^cUpdated at each interview.

households are in the same rotation cycle and are receiving the same interview.¹

2. Data Limitations

Although the CEX² is the best available data source for this analysis, the data were not collected with the goals of this investigation in mind. As a result, there are certain aspects of the CEX that are less than ideally suited to this research. Table II.2 summarizes our assessment of the CEX in terms of its coverage and timing of the key items that are required for our analysis of household expenditure patterns.³ In this section, we outline the important weaknesses in the CEX that have a direct impact on our analysis and which may limit the scope of our research and the generalizability of our findings. These include (1) the coverage of the CEX sample, (2) the timing of the expenditure and income data, (3) the measurement of expenditures, (4) the coverage of key FSP expenditure and income categories, (5) the measurement of food expenditures, and (6) the determination of FSP eligibility. Each of these issues is covered in the following subsections.

Sample Coverage. For two reasons, the sample contained in the CEX is less than ideal for the purposes of our study. First, nonurban

¹In contrast, the 1972-73 Interview Survey, which was not ongoing and did not use a rotating sample scheme, had a sample of 10,000 households that were interviewed quarterly over a two-year period.

²In the remainder of this report, CEX refers specifically to the Quarterly Interview Survey unless noted otherwise.

³A detailed assessment is contained in the analysis plan for this task (see Boldin et al., 1986).

TABLE 11.2
SUMMARY OF KEY DATA ITEMS IN THE 1982-83 CONSUMER
EXPENDITURE INTERVIEW SURVEY

Key Data Items	Coverage	Timing	Comments
Sample	Fair (urban consumer units only)	--	Unit of observation differs from Food Stamp Unit.
Expenditures			
Major Nonfood Categories	Good	Previous Quarter	Durable goods purchases make it difficult to compare expenditures directly with income.
FSP Deductible Items	Good	Previous Quarter	
Food	Fair	Previous Quarter, Global estimates	Inclusion of food stamp purchases in food expenditure amount is ambiguous.
Income			
Total	Good	Annual, year prior and current year	Monthly income, needed to replicate FSP eligibility criteria, is not available.
By Source	Good	Annual, year prior and current year	
Subgroups of Interest			
FSP-Eligible	Fair (must approximate with annual income, limited assets)	Annual, year prior and current year	Must determine eligibility on an annual as opposed to monthly basis.
FSP-Participant	Fair	Previous Quarter (not by month)	Cannot identify within-quarter interruptions in food stamp receipt.
Household with Elderly	Good	Current	
AFDC Household	Fair (asks about public assistance receipt)	Annual, year prior and current year (not by month)	Cannot identify intrayear interruptions in program participation.

households are not represented in the 1982-83 survey. Therefore, our results are not generalizable to the U.S. population to the extent that expenditure patterns between urban and nonurban households differ and to the extent that the Food Stamp Program has a different impact on the expenditures of these two groups. This differential impact may be due simply to differences in the characteristics (e.g., household size, income) of the urban and nonurban food stamp recipient population. The conclusions of this analysis should be interpreted with this limitation in mind.

The second and less serious limitation is due to differences between the unit of observation in the CEX and the food stamp unit. In the CEX, all data refer to the consumer unit. A consumer unit comprises either of the following: (1) all members of a particular household who are related by blood, marriage, adoption, or other legal arrangements; (2) a person living alone or sharing a household with others, residing as a roomer in a private home or lodging house, or residing in permanent living quarters in a hotel or motel, and who is financially independent;¹ or (3) two or more persons living together who pool their income to make joint expenditure decisions. In contrast, Food Stamp Program rules specify that the food stamp unit is to consist of all persons living together who customarily buy their food and prepare meals as a unit.² The rules also state

¹Financial independence is determined by the three major expense categories: housing, food, and other living expenses. To be considered financially independent, the respondent must provide him or herself with at least two of the three major expense categories.

²The Stuart B. McKinney Homeless Act of 1987 broadened the definition of the assistance unit. The earlier FSP definition of the assistance unit is used because the CEX data on which the analysis is based pertain to 1982-83.

that related persons who live together must be in the same food stamp unit regardless of whether they buy and prepare food together, unless the individuals are elderly or disabled.

A comparison of the FSP rules with the CEX consumer unit definition suggests that an important discrepancy between food stamp units and consumer units may stem from the FSP provision that permits related elderly or disabled members who purchase food and prepare meals separately from the rest of the household to form their own food stamp units. In these households, the food stamp unit may be a subunit of the consumer unit, since, by definition, all related individuals in a household are in the same consumer unit.

The degree to which this difference between consumer and food stamp units affects our analysis depends upon the prevalence of these elderly or disabled person food stamp subunits in the general food stamp population. Evidence from Landa (1987) suggests that about 16 percent of households which report receiving food stamps are either partially covered (not all household members are food stamp recipients) or contain more than one food stamp unit.¹ Of these households, about a third, or roughly 5-1/2 percent, of all food stamp households contain an elderly or disabled individual. Landa's results suggest that some small but significant number of food stamp households contain elderly or disabled members who are either not receiving food stamps or are treated as food stamp units separately from the rest of the household. In the CEX, these households are counted as one

¹Landa (1987) uses Wave 4 of the 1984 Survey of Income and Program Participation (SIPP) panel to conduct her analysis.

consumer unit and are treated as single, fully covered food stamp units in our analysis.

Timing of the Expenditure and Income Data. It is important that the expenditure data and the income data cover identical time periods. Since food stamp eligibility is determined on a monthly basis, the ideal data set for our purposes would include information on monthly income. The CEX, however, provides quarterly expenditure data and annual income data. Thus, we must either aggregate the expenditure data to an annual time period and compare annual expenditures with annual income or, alternatively, use annual income (divided by 4) as an estimate of quarterly income.

Each of these approaches has significant shortcomings. There are two main disadvantages to using annual expenditures and income. First, it departs further from the FSP accounting period than do the quarterly data. Since we are most interested in "average" relationships between expenditures and income, the longer time period poses less of a problem and may even be more appropriate than a shorter accounting period. A monthly or quarterly accounting period would almost certainly display greater variation than annual figures, simply because of the timing of household expenditures and income receipt. A second disadvantage is that using the annual data reduces the sample sizes substantially. Indeed, a quarterly file from the 1982-83 CEX contains nearly twice as many households as the annual file.

The use of quarterly data, however, entails a different set of problems. The most serious of these is that annual income is almost certainly a poor measure of quarterly income, particularly for many food stamp and other low-income households. Indeed, many households become food

stamp recipients precisely because they have recently suffered a decline in income (through loss of a job, a change in living arrangements, etc.). For such households, average annual income is a poor proxy for quarterly income and could provide a seriously misleading picture of the relationship between expenditures and income. To be sure, using the annual figures provides only a picture of the relationship between expenditures and income "averaged" over both good times and bad times for those households which have suffered a reduction in income. Thus, the data for households that participate in the Food Stamp Program only for part of the year must be interpreted cautiously. However, such averaging seems preferable to running the risk of overstating the income of some FSP households and thereby providing a misleading picture of the relationship between their expenditures and their income. For this reason, our primary analysis in this report has been based on estimates of annual expenditures and annual income.

Measurement of Expenditures. Another aspect of the expenditure data that limits our ability to directly compare expenditures and income is the manner in which the detailed expenditure information is recorded. Expenditures are recorded as the net price of products purchased in the quarter regardless of whether the purchases are financed through loans or other sources rather than by current income. For example, the full net price of an automobile (price minus trade-in allowance) is recorded as an expenditure in the quarter in which it is purchased. Under this method of tabulating expenditures, those households that borrow money to finance a current-period purchase will have overstated expenditures out of income in

the current period. The problem is obviously more severe for large durable-goods purchases (e.g., vehicles and major household appliances).

The problems created by durable-goods purchases and how these purchases pertain to current income are more fundamental than the measurement issue noted above, because households receive a flow of services over time from durable goods. Therefore, past durable-goods purchases that generate current-period service flows (a household's stock of durable goods) may affect the amount or type of current-period expenditures. This in turn will affect the observed relationship between current expenditures and current income. Unfortunately, information on a household's stock of durable goods is not available in the 1982-83 CEX. When interpreting the results of this study, the reader should be aware that some of the observed differences in expenditures and expenditure-income relationships between household groups (e.g., food stamp participants and low-income nonparticipants) may stem from differences in durable-goods stocks between those groups.

Coverage of Key FSP Expenditure and Income Categories. Another important set of measurement issues pertains to the specific items included in the CEX expenditure and income categories and the relationship of these categories to the definitions used by the Food Stamp Program. Food Stamp Program rules define very specifically the gross countable income and categories of expenditures that are to be included in each deduction in the computation of net income. Our ability to replicate the FSP definitions of gross income and deductions is somewhat limited.

Table II.3 shows the components of gross countable income under FSP rules and indicates the coverage of these items on the CEX. In terms of earned income, wages, salaries, and earnings from self-employment are covered in the CEX, although some parts of what the FSP considers "earned self-employment" income may be counted as property income in the CEX. This is true for income from rental property, for which we cannot determine whether the owner actively managed the property. It is also not possible to distinguish assistance payments that require work or training allowances from other assistance payments. While this does not affect our estimate of gross income, it could introduce some inaccuracies into the estimates of earnings. However, these are relatively rare types of earned income, and we expect the inaccuracies to be relatively small.

The CEX appears to provide good coverage for the major categories of unearned income, such as assistance payments, retirement benefits, dividends, interest, and rents. However, strike benefits and educational benefits in excess of tuition costs are not identified in the CEX. Finally, FSP rules allow a variety of types of income to be excluded from countable gross income. The only types that are likely to be counted in the CEX income measures and that should be excluded are irregularly received income not exceeding \$30 per quarter and the earnings of minor students. Again, these types of income tend to be relatively rare among FSP recipients, which suggests that the inaccuracies introduced by our inability to distinguish among them will be minor.

Table II.4 lists the elements of each FSP income deduction and indicates the coverage of the items on the CEX. The CEX provides good coverage of shelter, medical, and dependent care expenses. However, we

TABLE 11.3

COVERAGE OF THE COMPONENTS OF THE FOOD STAMP PROGRAM DEFINITION
OF INCOME IN THE CONSUMER EXPENDITURE SURVEY

Elements of Countable FSP Gross Income	Coverage in the Consumer Expenditure Survey
----------------------------------------	---------------------------------------------

EARNED INCOME

Wages and salaries

Covered in CEX

Contributions from employers

Not covered in CEX

Gross income from self-employment, including:

- o gain from sale of capital goods
- o income from rental property if household manages property 20 or more hours/week
- o payment from roomer or boarder

Covered in CEX

Cannot determine source of rental income; counted as unearned income.

Training allowances from vocational training programs such as WIC, WIN, or CETA (now JTPA).

Included in the CEX measure of welfare income; cannot be broken out separately.

TABLE 11.3 (continued)

Elements of Countable FSP Gross Income	Coverage in the Consumer Expenditure Survey
INCOME EXCLUSIONS	
Nonmonetary benefits	Not covered.
Irregularly received income not in excess of \$30/quarter.	Not identified separately in CEX.
Educational loans, etc., used for tuition and mandatory fees.	Not identified separately in CEX.
All loans with deferred payment.	Not identified.
Reimbursements for past or future expenses.	Not identified.
Monies received and used for care of nonhousehold member.	Not identified except that CEX includes medical expenses net of insurance reimbursements.
Earned income of children less than 18 years old who are students at least half-time when school is in session.	Covered in CEX, but cannot determine enrollment status of those with earnings; included in our measure of earnings
Money received in a nonrecurring lump-sum payment such as income tax refunds, retroactive lump sum of social security, SSI, etc., lump-sum insurance settlements, or refunds on security deposits.	Not covered.
Cost of producing self-employed income.	CEX includes net income from self-employment.

TABLE 11.4

THE COVERAGE OF FOOD STAMP PROGRAM INCOME DEDUCTIONS
IN THE CONSUMER EXPENDITURE SURVEY

Food Stamp Program Income Deduction	Coverage in the Consumer Expenditure Survey
<p>Standard Deduction</p> <ul style="list-style-type: none"> o \$85 per household, per month, in 48 states and DC (different deduction for Alaska, Hawaii, Guam, Puerto Rico, and the Virgin Islands) 	<p>1982-83 survey covers urban civilian non-institutionalized population of the U.S.; states and territories cannot be identified.</p>
<p>Earned Income Deduction</p> <ul style="list-style-type: none"> o 18 percent of gross earned income o Raised to 20 percent as of 5/1/86 	<p>CEX contains data on most elements of mandatory deductions from pay (federal tax, state and local tax, social security withholding; variable for miscellaneous occupational expenses includes union dues, uniforms, tools, etc.; costs of transportation to work and meals at work cannot be identified).</p>
<p>Medical Deduction</p> <ul style="list-style-type: none"> o Limited to elderly/disabled members of food stamp households o Allowable expenses in excess of \$35 per month 	<p>CEX identifies the number of elderly/disabled household members, but does not identify the expenditures for these individuals separately.</p>
<p>Allowable Medical Costs include</p> <ul style="list-style-type: none"> o Medical and dental care o Hospitalization or outpatient treatment, nursing care, nursing home care (including payments for any individual who was a household member immediately prior to entering home) o Prescription drugs, costs of medical supplies, sick room equipment (including rental costs) o Health insurance premiums (certain policies, lump sum payments in case of death, etc., are <u>not</u> deductible) o Medicare premiums o Dentures, hearing aids, prosthetics o Seeing eye dog; procurement and maintenance o Eyeglasses o Reasonable cost of transportation and lodging to obtain medical treatment o Maintaining an attendant, home health aide, or housekeeper because of age or illness--if the cost qualifies under both the medical and dependent care deduction--treated as medical cost 	<p>CEX covers most allowable medical costs, except that "costs of transportation and lodging to obtain medical treatment" cannot be identified.</p>
<p>Shelter Expenses--Deductible Items Are Limited to</p> <ul style="list-style-type: none"> o Rent o Mortgage o Loan payments and interest (mobile home) 	<p>Covered on the CEX. Covered on the CEX. Covered on the CEX.</p>

TABLE 11.4 (continued)

Food Stamp Program Income Deduction	Coverage in the Consumer Expenditure Survey
<ul style="list-style-type: none"> o Property taxes o State and local assessments o Insurance (not including insurance on furniture or personal belongings) 	<ul style="list-style-type: none"> Covered. Not covered. Covered.
<ul style="list-style-type: none"> o Utilities <ul style="list-style-type: none"> -- Heating and cooking fuel -- Electricity and cooling -- Water and sewage -- Garbage fees -- Basic service for one telephone (including tax) -- Initial installation fees 	<ul style="list-style-type: none"> Covered. Covered. Covered. Covered. CEX data includes total cost of phone; for analysis, phone cost was capped at \$10 per month. Not covered.
<ul style="list-style-type: none"> o Shelter costs when temporarily <u>not</u> occupied because of employment, training, illness, natural disaster (must intend to return home, and home must not be rented and costs not claimed by current occupants for FSP) 	<ul style="list-style-type: none"> Not covered.
<ul style="list-style-type: none"> o Charges for repairs resulting from natural disaster (fire or flood), not including any costs which will be reimbursed. 	<ul style="list-style-type: none"> Not covered.
<p>Dependent Care Expenses</p>	
<ul style="list-style-type: none"> o Costs for care of child or other dependent when necessary for a household member to: <ul style="list-style-type: none"> -- Accept or continue employment -- Seek employment in compliance with job search criteria -- Attend training or pursue education which is preparatory to employment o Shelter and dependent care costs for nonelderly households capped at \$115/month in 12/1980. Raised to \$125/month in 10/1983. o Separate cap on dependent care costs of \$160/month set in 5/1986. (No indexing or geographical adjustment.) 	<ul style="list-style-type: none"> Item coverage on the CEX is good; cannot distinguish dependent care expense for employment and training from dependent care expenses for other purposes.

cannot always determine the portion of these expenses that are FSP INSERT deductible. For instance, only medical expenses incurred by elderly or disabled household members are currently deductible from gross income. The CEX identifies the number of elderly or disabled household members, but does not separately identify the medical expenditures incurred by these individuals. A similar problem arises with dependent care expenses and telephone costs. For telephone costs, only the basic monthly service fee is a deductible shelter expense, but the CEX does not separately identify this amount.

While the CEX provides good coverage of medical, dependent care, and shelter expenses, its coverage of work expenses is less than complete. Information on work expenses is used to evaluate the earned income deduction, which was set at 18 percent in 1982-83 and raised to 20 percent in 1986. The CEX provides information on taxes and miscellaneous occupational expenses such as union dues, but it does not include separate information on the cost of transportation to and from work or the cost of meals at work. Therefore, our measure of work expenses is likely to understate the actual work expenses incurred by households with earnings.

Measurement of Food Expenditures. Another set of measurement issues pertains to the data on food expenditures and food stamp receipt. The CEX Quarterly Interview Survey is designed to obtain data on large and/or regularly recurring items. The Diary Survey, which is administered to a separate sample, is designed to obtain detailed and accurate data on expenditures on small items and items that may be purchased at frequent intervals or irregularly. Because of this design, the Interview Survey contains only a few summary questions about food purchases for home

consumption. Basically, respondents are asked to estimate how often they have shopped at grocery stores during the previous three months and the "usual amount of your purchase." Another question asks how much of this amount is devoted to food and nonalcoholic beverages. A similar series of questions elicits information about purchases from sources other than grocery stores. After questions about purchases of alcoholic beverages for home consumption and purchases of dinners, snacks, and meals for consumption outside the home, respondents are asked whether any members of the consumer unit have received federal food stamps and the amount of food that could be purchased with those food stamps. It is unclear to us whether responses to the initial questions about purchases for home consumption would include the value of food purchased with food stamps. We believe that most people would include everything they bought no matter how it was paid for. However, many respondents may not have done so.

Two issues arise. First, does the global question about "usual amounts" lead to a higher or lower estimate of total food expenditures than the more detailed records kept in the Diary Survey? If the estimates differ, which of the two is likely to be the more accurate? Second, did food stamp recipients include the amount of their purchases with food stamps in their estimates of food expenditures?

With regard to the first issue, one presumes that the Diary Survey is conducted because it is considered to yield more reliable estimates of total food expenditures than the more global questions in the Interview Survey. However, one would expect a relatively stable relationship between estimates of average expenditures from the two sources. Unfortunately, that relationship has not been very stable in recent years. The Interview

Survey estimates of food expenditures were 19 percent higher than the Diary Survey estimates in 1980 and 14 percent higher in 1981. However, in 1982, the Interview was only 1 percent higher, and in 1983 less than 4 percent higher.¹ As a result of this unstable relationship, it is difficult to gauge the accuracy of the Interview Survey's food expenditure data relative to those in the Diary Survey.

With regard to the second issue, MPR's experience in the survey for the SSI/Elderly Cashout Demonstration leads us to be skeptical that the question was interpreted consistently by all respondents. MPR used a sequence of questions on food expenditures that was patterned after the 1972-73 CEX (which was nearly identical to the questions in the 1982-83 CEX). Early tabulations of the data led analysts to suspect that some food stamp recipients had omitted the amounts purchased with food stamps from their estimates of food expenditures. MPR added a probe to the interview which asked respondents directly whether their initial estimate included the amount purchased with food stamps.² Approximately 25 percent of the sample in the nondemonstration (i.e., noncashout) sites said in response to the probe that their initial estimate had not included their purchases with food stamps. Because of this experience, we are concerned that some food stamp recipients who responded to the 1982-83 CEX may not have included the amounts purchased with their food coupons. Thus, even apart from the

¹See U.S. Department of Labor, Bulletin 2246 (1986), Text table 8, page 10, for a comparison of the food expenditures reported in the two surveys.

²Call backs were made to all sample members to re-ask the questions about food expenditures using the more structured questioning which included the probe.

general problem of underreporting described above, the food purchases of food stamp recipients are likely to be understated relative to the food purchases of nonparticipants. Both problems suggest that we must exercise great caution in the analysis, particularly in the analysis of the food expenditures of food stamp recipients.

Despite our reservations about the quality of the reported data on food expenditures in the CEX Interview Survey, it is still the best source of data, because one of the primary objectives of the analysis is to assess the relationship of nonfood expenditures and FSP rules, rather than just food expenditures.

Determination of FSP Eligibility. A primary objective of this task is to investigate the expenditure patterns of FSP participants and compare them with eligible nonparticipants. At each of the four quarterly interviews, the CEX asks whether the household has received food stamps in the three months prior to the interview and, if it has, the amount of the food stamps. This definition of participation presents two problems for the analysis. First, since substantial turnover occurs in the FSP (see Carr et al., 1984), many of the households which report receiving food stamps during a three-month period will not receive benefits for all three months. Although the expenditures in the Interview Survey refer to the previous three months and thus correspond to the period during which food stamp receipt is measured, some expenditures may occur in months in which quarterly food stamp recipients were not receiving benefits. If participation in the FSP affects household expenditures, then a definition of participation based on the quarterly receipt of benefits may lead to under-

estimates of the effect, because some of the expenditures made by these "participants" were made when they were not receiving benefits.

Using an annual analysis file will help mitigate this problem because it provides four observations on each household's quarterly food stamp receipt. Although this information will not enable us to identify within-quarter interruptions in food stamp receipt, we will be able to distinguish between those households that report receiving food stamps in all four quarters (and are likely to have been on the program for the entire year) and those that report receipt in only one to three of the quarters.

Another problem is whether and how we can define an eligible non-participant group that will serve as an appropriate comparison to the FSP participant group. The FSP imposes two major eligibility screens: (1) income limits determined by gross and net monthly income calculations and (2) assets limitations. As discussed earlier, the Interview Survey cannot identify FSP-defined gross monthly income precisely, because income is reported on an annual basis. Estimates of gross monthly income that are based on annual data may lead to misclassifications of eligibility status among the sample households due to intra-year variation in household income. The same holds true for the net monthly income calculation, which is based on estimated gross income.

The second eligibility screen requires that the assets of households not exceed \$1,500 (or \$3,000 for households of two or more persons with an elderly member).¹ All liquid assets, including cash on hand, money

¹These assets limits refer to rules in effect in 1982-83, the time period covered by the CEX. The limits were revised by the Food Security Act of 1985.

in checking and savings accounts, savings certificates, and stocks and bonds, are counted towards this limit. The assets limit also includes (1) part of the value of motor vehicles owned by the household and (2) the value of any real property which is not the primary residence. The CEX Interview Survey provides information on the value of liquid assets held at the time of the fifth interview and on how this value changed over the previous year. However, neither the value of motor vehicles nor the value of property is covered.

Because annual income and not monthly income data are available and because only limited assets information is provided, our measures of eligibility are necessarily imprecise. The rules we use to classify individual sample households will inevitably misclassify some noneligible persons as eligible and vice versa. We discuss these rules in Section C of this chapter.

B. THE ANNUAL ANALYSIS FILE

The primary analysis file used in this report is an annual file which links the quarterly expenditure data across each household's four interviews so as to create measures of annual expenditures which cover the same time period as the income-related data. Household characteristics are measured as of the end of the one-year period (i.e., the date of the fifth

interview).¹ In this section, we briefly describe the annual file and discuss its major advantages and weaknesses. A description of the sample selection process and content of the annual and quarterly files is contained in Appendix A.

The annual file consists of data on all households which completed four interviews (interviews two through five) during the course of the nine quarters contained in the 1982-83 CEX. With the information from four interviews, annual expenditure variables are constructed. This provides a direct match between the income and expenditure data and enables us to obtain estimates of the relationship between income and expenditures which are not contaminated by the effect of intra-year income variation. The annual file provides other advantages, which are discussed briefly below.

The Interview Survey determines food stamp participation by documenting the receipt of food stamps by the household sometime during the three months prior to the interview. As discussed earlier in this chapter, this definition of participation is imprecise because substantial turnover in the FSP suggests that many households which report receiving food stamps during a three-month period will not have been in the program the entire three months. Thus, some of the households we designate as "participants"

¹A second quarterly file is also created which contains a single quarterly observation on the expenditures of each household for a three-month period using the household's fifth interview and income data pertaining to the twelve-month period prior to the interview. The quarterly file's main advantage is its larger sample size. However, the timing mismatch between the expenditure and income data on the file may distort estimates of the relationship between income and expenditures due to within-year variation in income. As a result, the quarterly file is used only as a check on the annual file results in this report. Results from the quarterly file are presented only when they provide additional insights.

will be only part-quarter participants, whose expenditure patterns may differ from those of the full-quarter food stamp recipients. The quarterly analysis file does not provide a way to deal with this problem. However, the annual file provides four observations on the quarterly food stamp receipt status of each household. Although this information does not enable us to identify within-quarter interruptions in food stamp receipt, we are able to distinguish between those households which report receiving food stamps in all four quarters and those which report receipt in only one to three of the quarters. Thus, we can compare the expenditure patterns of individuals who were probably receiving food stamps for the entire observation period with the expenditure patterns of individuals who were receiving food stamps at some time during the observation period, but not for the entire period.

Annual expenditure information also enhances our ability to analyze expenditures on FSP deductibles, particularly medical expenditures. Expenditures reported in the Interview Survey represent quarterly net expenses, so that the quarterly medical-expenditure data measure the FSP-deductible expense imprecisely to the extent that outlays and reimbursements are made in different quarters. The annual file reduces this problem because mismatches of outlays and reimbursements on an annual basis will occur less often.

Although the annual analysis file provides a better measure of the relationship between income and expenditures than does the quarterly file, it does contain several weaknesses which should be mentioned. First, only 75 percent of the households complete all five interviews, primarily because addresses and not households are sampled. Households that change

addresses are not followed and are automatically dropped from the survey. A sample that consists only of households that complete all five interviews will clearly underrepresent "movers," posing a problem if the expenditure patterns of "movers" differ from the expenditure patterns of "stayers." Second, the annual file results may be more sensitive to the impact on expenditures of changes in household composition that occur during the year. Because we are measuring household composition at a point in time (i.e., at the fifth interview), we are ignoring the influence that changes in composition during the year may have on household expenditures. Finally, the annual analysis file has a relatively small sample size. Less than 5,000 households are on the file, compared with over 10,000 on the quarterly file. Of these 5,000, only about 400 are FSP participants. This small sample size limits our ability to perform separate analyses for different subgroups of the population, such as elderly and AFDC households. In general, these subgroup analyses are not undertaken in this study.

C. DEFINITION OF THE ELIGIBLE AND PARTICIPANT POPULATION

The purpose of this analysis is to examine the expenditure patterns of low-income households and determine whether the Food Stamp Program has an influence on these patterns. To do so, we must define, as accurately as possible, a food stamp recipient household group and a comparable group of eligible nonparticipants.

Food stamp participation is determined by self-reported food stamp receipt in the previous quarter. With these data, we define three food stamp household groups on the annual file: (1) all food stamp households;

(2) full-year participant households; and (3) part-year participant households.

The total food stamp household group consists of all sample members who report receiving food stamps in at least one of the four quarters. This group is then divided into two subgroups. Full-year participants are those food stamp households who report receipt in all four quarters. Part-year participants receive food stamps in one, two, or three of the four quarters. Although we cannot identify within-quarter interruptions in food stamp receipt with the CEX data, this two-way breakdown of food stamp households allows us to compare the expenditure patterns of participants who were probably receiving food stamps over the entire year with those who were not.

In choosing criteria to identify the FSP eligible subsample, we would like to come as close as possible to identifying those households which are in fact FSP eligibles. As was discussed in Section B of this chapter, however, determining program eligibility with the annual file is necessarily imprecise because (1) data on income and deductible expenses are provided at the annual level, so that FSP-defined gross and net monthly income cannot be accurately determined, and because (2) only a limited set of liquid assets information needed to impose the assets screen is provided. As a result of these data inadequacies, we decided to determine eligibility by applying a gross annual income cutoff set at 130 percent of poverty and an assets screen based on the limited assets data. A net income screen is not utilized. Because our determination of eligibility is imprecise, we refer to the households which passed the gross income and assets tests as low-income households in this report.

On the annual file, 751 households passed the gross income screen and assets test and are defined as low-income households. About 40 percent of these households (298 households) reported food stamp receipt in at least one of the four quarters, and 162 households were full-year participants.

Sixty-three, or about 17 percent, of the households who reported food stamp receipt in the annual file failed the income or assets screens. The determination of these food stamp households as "seemingly ineligible" was due at least in part to the inherent imprecision of our eligibility determination process. However, in order to maintain consistency between the low-income participant and nonparticipant groups, these seemingly ineligible households are excluded from the low-income participant group in this analysis. We discuss the problems with our definition of the low-income sample in Appendix A. Table A.3 in that appendix presents a breakdown of households who passed the income and assets tests in both the annual and quarterly files.

D. CHARACTERISTICS OF THE ANNUAL ANALYSIS FILE SAMPLE

In this section, we summarize our examination of the characteristics of the annual analysis file sample. A detailed analysis of these characteristics, including tables, is contained in Appendix B.

The examination has two basic objectives. First, it will be important to compare the characteristics of the various subgroups whose expenditures are analyzed in Chapters III and IV. Because household characteristics are likely to condition expenditures to a large extent, it is important to examine household characteristics with some care in order to interpret appropriately the expenditure data presented in Chapters III

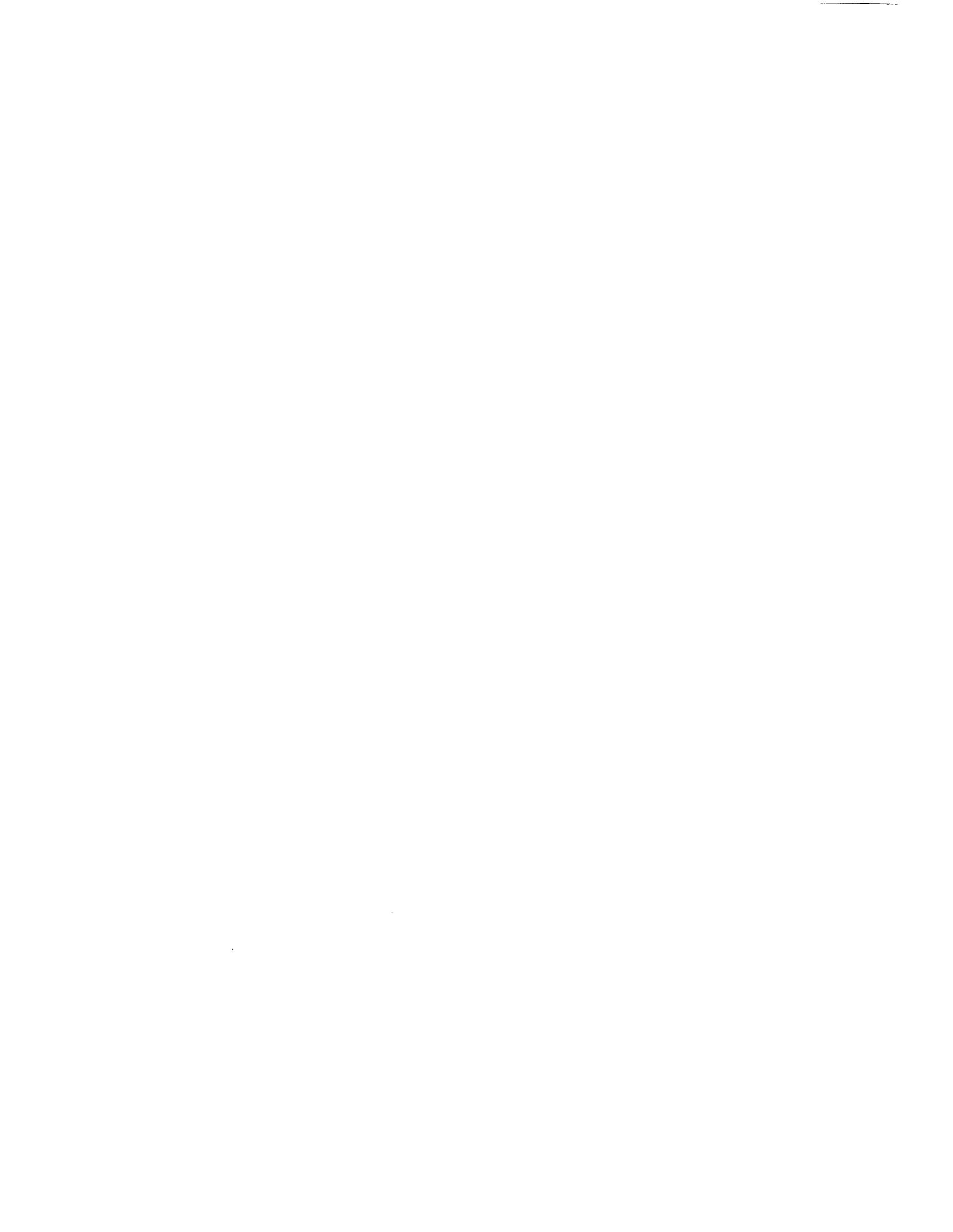
and IV. Second, it is important to assess, if only informally, the representativeness of our analysis sample.

The necessity of examining the representativeness of the annual analysis sample is especially pressing for two reasons. First, the 1982-83 CEX includes only urban households, and these households may differ in important ways from those which represent the entire U.S. population. Second, the sample loss caused by the requirement that a household must have reported a full four quarters of expenditure data in order to be retained in the annual sample may affect the representativeness of the sample. In particular, more transient households may tend to be underrepresented in the analysis sample, and it is important to determine whether this leads to the over- or underrepresentation of households with particular characteristics. To investigate these issues, we compare the characteristics of our CEX analysis sample with the characteristics of the general population and of food stamp households, as measured through the Current Population Survey (CPS).

In addition, our definitions of food stamp participation and the food stamp household are subject to some important limitations that were described in the previous section. Furthermore, our sample of food stamp participants is relatively small. To provide some evidence on the extent to which our sample differs from the national caseload, we compare selected characteristics of the food stamp participants in our sample with characteristics of the national food stamp caseload, as measured through the national quality control sample data.

The following are the major findings of the examination of the characteristics of the annual file sample:

1. Low-income households are larger, are more likely to have low educational levels and to show greater dependence on transfer income, and are more likely to be headed by a single female than are other households. Within the low-income group, participants tend to be more disadvantaged than nonparticipants, and, within the participant group, full-year participants tend to be more disadvantaged than part-time participants.
2. Low-income elderly households appear to be less likely to participate in the Food Stamp Program than low-income nonelderly households.
3. Differences in housing tenure between the various household groups are striking. Only 45 percent of low-income households own their home, compared with three-fourths of higher-income households. Within the low-income group, only one-fourth of participants own their own home, although 60 percent of nonparticipants are homeowners. This result has important implications for interpreting differences in shelter costs between the household groups.
4. Although the CEX sample represents only about 80 percent of all U.S. households (because of attrition), the characteristics are very similar to the characteristics of all U.S. households as measured on the CPS.
5. The CEX sample of food stamp participants is similar to the CPS sample of food stamp participants in terms of most key characteristics, except that the average household size on the CEX is substantially higher (3.5 versus 2.9 persons). National FNS QC data also indicate that the average FSP household has 2.9 persons. We believe this reflects the fact that the CEX represents only urban households rather than reflecting differences in the definition of household.
6. Both CEX and CPS data show that a relatively high percentage of FSP participant households--45 percent--had earned income, compared with about 20 percent according to FNS administrative data. Of course, the CEX and CPS potentially cover periods where the household was not receiving food stamps. Indeed, we find that about one-third of the full-year participants in the CEX annual sample report earnings.



III. ANALYSIS OF TOTAL HOUSEHOLD EXPENDITURES

This chapter provides a broad-brush look at the expenditures of food stamp households and how these expenditures compare with other household groups--especially low-income nonparticipants. It serves as an initial and important step towards understanding how low-income households allocate their income and how the Food Stamp Program might affect this allocation.

The chapter is organized as follows. The first section provides a brief description of the expenditure categories used in the analysis. Section B presents a general examination of expenditures, providing a comparison of expenditure levels and per capita expenditures across all household groups as defined in Chapter II. Section C examines budget shares to investigate how low-income households allocate their expenditures across the various expenditure categories. Budget shares are used rather than income shares because a majority of low-income households report expenditures which exceed their incomes, making it difficult and potentially misleading to compare expenditures with income across household groups. This is especially true in light of the fact that the degree to which expenditures exceed income is larger for low-income nonparticipants when compared with food stamp households. In the final section of this chapter, we examine the relationship between total expenditures and income, and attempt to explain why low-income households in our sample report expenditures in excess of income.

A. EXPENDITURE CATEGORIES

The annual analysis file contains 75 expenditure variables created from expenditure information in the CEX (see Appendix A). To conduct the expenditure analysis, we aggregated these 75 variables to form 10 major expenditure categories. These 10 categories are food, housing, apparel, house furnishings, transportation, medical care, personal care, recreation, education, and other expenses. Subgroups within some of the categories are formed (e.g., transportation is broken down into vehicle purchases, other vehicle expenses, and public transportation) to allow a more detailed

TABLE III.1
MAJOR EXPENDITURE CATEGORIES AND THEIR COMPOSITION

Category	Composition
Food	Food at home and away from home (global estimates), excluding alcoholic beverages.
Housing	
Deductible shelter payments	Deductible mortgage payments, property taxes, insurance, assessments and rent.
Deductible fuel and utilities	Deductible natural gas, electricity, heating oil and other fuels, telephone, ^d water and other public services.
Non-deductible payments and utilities	Non-deductible utility costs and mortgage payments.
Dependent care	Babysitting, daycare, and care for the elderly.
Shelter, durables	Capital improvements to home, painting, repairs, etc.
Household operations	Rental and repair of tools and appliances, household services, and moving expenses.
Apparel	Clothing and clothing services, watches, and jewelry.
House Furnishings	Household textiles, furniture, floor coverings, appliances, housewares, and miscellaneous household equipment.
Transportation	
Vehicle purchases	New and used cars and trucks and recreational vehicles (net outlays).
Other vehicle expenses	Finance charges and payments on principal, gasoline and motor oil, maintenance and repairs, insurance, licenses, rental, and airline and boat fares.
Public transportation	Bus, taxi, mass transit fares, and other public transportation

TABLE III.1 (continued)

Category	Composition
Medical Care	Health insurance, medical services, prescription drugs, and medical supplies.
Personal Care	Personal care services (including haircuts), personal care appliances, rental and repair of personal care appliances, and other expenses.
Recreation	
Reading	Reading materials, including books, magazines, and newspapers.
Entertainment	Fees and admissions, televisions, radios, sound equipment, and other equipment and services.
Education	Tuition, books and supplies, and other college and secondary school expenses (daycare excluded).
Other Expenses	
Cash contributions	Contributions to charity, educational institutions, political and other organizations, and gifts to persons not in the consumer unit.
Retirement funds	Payments to social security, private pensions, and other retirement plans.
Occupational expenses	Union dues, tools, uniforms, association dues, licenses, and permits.
Other	Funeral expenses, life insurance, miscellaneous finance charges, and alcohol and tobacco.

^aOnly the basic monthly rate for one telephone is FSP-deductible. As a result, a maximum of \$120 (\$10 per month) is placed on the reported telephone fees that are included in a household's deductible fuel and utilities expenditure category. Any remaining telephone expenses are included in the non-deductible payments and utilities category.

TABLE 111.2

AVERAGE ANNUAL EXPENDITURE LEVELS FOR URBAN HOUSEHOLDS
 BY MAJOR EXPENDITURE CATEGORY: ANNUAL SAMPLE
 (dollars)

	All Households			Low-Income Households			
	Total	Higher Income	Low- Income	Non- Participant	Food Stamp Participant	Full-Year Participant	Part-Year Participant
Expenditure Categories							
Total Expenditures	\$20,978	\$23,180	\$10,442	\$11,996	\$8,010	\$6,587	\$9,858
Food	3,205	3,406	2,248	2,330	2,119	1,980	2,298
Housing	5,768	6,257	3,425	3,834	2,705	2,432	3,245
Apparel	1,043	1,154	509	539	461	398	544
House furnishing	742	839	279	317	219	208	234
Transportation	4,534	5,087	1,889	2,362	1,150	687	1,752
Medical care	887	961	536	732	229	123	366
Personal care	184	202	98	114	71	55	92
Recreation	962	1,089	357	420	258	219	310
Education	238	264	117	168	37	30	47
Other expenses	3,413	3,921	985	1,180	679	456	969
Average Annual Income:							
Including Food Stamp Allotment	\$26,623	\$28,404	\$6,541	\$6,458	\$6,670	\$6,015	\$7,520
Excluding Food Stamps	24,553	28,396	6,171	6,458	5,722	4,750	6,984
Average Household Size	2.73	2.69	2.89	2.52	3.47	3.34	3.64
Sample Size							
Weighted (1000)	71,247	58,926	12,321	7,517	4,804	2,714	2,090
Unweighted	4,419	3,668	751	453	298	162	136

SOURCE: Weighted tabulations from the annual analysis file from the 1982-83 Consumer Expenditure Survey.

non-essential items than on necessities such as food, housing, and clothing. For example, the higher-income households spend over three and a half times more on transportation than low-income households but only one and a half times more on food. On average, higher-income households spend less than twice the amount that low-income households spend on necessities but nearly triple the amount they spend on other items.

Important differences in expenditures are also present within the low-income household group. Nonparticipant households spend nearly 50 percent more than food stamp households, even though their incomes, inclusive of food stamps for the FSP participant households, are somewhat smaller. Most of this additional spending goes towards the purchase of non-essential items, since purchases of food, housing, and clothing by nonparticipants exceed participants' spending on these necessities only by 25 percent. In fact, food expenditures are roughly the same across the two groups.¹

A comparison of full-year with part-year participants reveals that the expenditures of full-year participant households are by far the lowest of any of the low-income household groups. Part-year participant expenditures fall roughly in the middle between nonparticipant and full-year participant spending, with total expenditures that are 50 percent more than those of full-year participants and 20 percent less than those of nonparticipants.

¹As discussed in Chapter II, the food expenditures of participant households may be understated because it is not clear whether respondents included the value of food purchased with food stamps in their answers to CEX interview questions on food purchases.

Although the total expenditures of part-year participants are 50 percent higher than those of full-year participants, expenditures on food, clothing, and shelter are only 25 percent greater. Total spending on other items, however, is more than twice as large. Thus, part-year participant households, like nonparticipants, allocate more of their expenditures to non-essential items than do households that are full-year food stamp recipients.

Finally, Table III.2 reveals that, on average, low-income households report expenditures which exceed their incomes. The excess is greatest for nonparticipant households whose average expenditures exceed average income by 85 percent. For participant households, average expenditures are only 20 percent higher than income inclusive of food stamp benefits (10 percent higher for full-year participants and 30 percent higher for part-year participants). The difference in the income-expenditure relationship between participant and nonparticipant households signals that more fundamental differences between these households may be present.

2. Per Capita Expenditures

The size and age composition of low-income food stamp households differ from those of other household groups (see Appendix B). In turn, these differences may contribute to differences in expenditure levels between these groups. To control for the impact of household size differences on expenditures, we calculate per capita expenditures. These figures are displayed in Table III.3 for the major expenditure categories. One should be aware that, although per capita figures adjust for household size differences, differences in the age composition of household members which

TABLE III.3

AVERAGE PER CAPITA ANNUAL EXPENDITURES FOR URBAN HOUSEHOLDS
BY MAJOR EXPENDITURE CATEGORY: ANNUAL SAMPLE
(dollars)

	All Households			Low-Income Households			
	Total	Higher Income	Low- Income	Non- Participant	Food Stamp Participant	Full-Year Participant	Part-Year Participant
Expenditure Categories							
Total Expenditures	\$9,137	\$10,120	\$4,435	\$5,538	\$2,708	\$2,352	\$3,171
Food	1,357	1,443	945	1,096	708	669	759
Housing	2,595	2,805	1,592	1,933	1,057	1,032	1,089
Apparel	440	493	188	224	131	115	153
House furnishings	314	358	104	131	62	56	68
Transportation	1,901	2,155	684	925	305	178	470
Medical care	424	455	277	385	108	57	175
Personal care	81	89	42	53	24	20	31
Recreation	414	472	137	176	77	69	88
Education	85	91	54	82	8	5	13
Other expenses	1,526	1,758	413	532	227	151	326
Average Household Size	2.73	2.69	2.89	2.52	3.47	3.34	3.64
Sample Size							
Weighted (1000)	71,247	58,926	12,321	7,517	4,804	2,714	2,090
Unweighted Sample Size	4,419	3,668	751	453	298	162	136

SOURCE: Weighted tabulations from the annual analysis file from the 1982-83 Consumer Expenditure Survey.

may affect expenditures--such as the presence of children--are not accounted for.¹

Since the average household size of food stamp households in our sample is larger than that for other households, the per capita figures accentuate the differences between food stamp and non-food stamp household expenditures. For example, low-income nonparticipant households spend 50 percent more than food stamp households, but over twice as much per capita. Total expenditures on food for the two groups are nearly the same, but per capita expenditures by nonparticipants exceed those of participants by over 50 percent. Total expenditures on food, clothing, and shelter, which are 24 percent higher for nonparticipants, are over 70 percent higher per capita when compared with food stamp households.

Expenditure differences between full-year and part-year participants are somewhat smaller when measured on a per capita basis, since the average household size of part-year participants in our sample is somewhat higher. For instance, part-year participant households spend roughly \$200, or 10 percent, more per year per capita on food, shelter, and clothing than do full-year households. The difference is \$1,250, or 25 percent, when measured in overall expenditure levels.

¹Households with different characteristics, such as age composition, clearly have different needs which are reflected in their expenditure patterns. For instance, a couple with a teenager has a greater need for food than does a single parent with two infants. Per capita calculations, however, do not capture these need differences. Therefore, differences in age composition between households which may affect expenditures are not captured in Table III.3.

C. HOW LOW-INCOME HOUSEHOLDS ALLOCATE THEIR EXPENDITURES

While actual and per capita expenditures are revealing, the objective of this analysis is to gain information on how low-income households allocate their income across the major expenditure categories. For example, what portion of their income goes towards the purchase of food and housing, and how do these portions compare with those of other households? With this information we can evaluate the potential impact of the FSP on household expenditure patterns.

Unfortunately, the data reveal that a majority of low-income households report expenditures which exceed reported income. In addition, the amount by which expenditures exceed income varies within the low-income population and is larger for nonparticipant than participant households. These factors make an analysis of how households allocate their income not only difficult, but potentially misleading. For example, how do we interpret income shares--the percentage of income spent on the various expenditure categories--when the sum of the shares adds up to more than 100 percent? Likewise, how do we compare income shares across household groups when the sum of the shares within those groups is different?

As an alternative to income shares we rely on budget shares to analyze how households allocate their expenditures. A budget share is the portion of total expenditures spent on a particular expenditure category. Budget shares can readily be compared across household groups, since average budget shares within a group always sum to 100 percent.

1. Average Budget Shares

Table III.4 provides average budget shares on the set of major expenditure categories for the seven household groups. On average house-

TABLE III.4

AVERAGE ANNUAL BUDGET SHARES (EXPENDITURES AS A PERCENT OF TOTAL EXPENDITURES)
FOR URBAN HOUSEHOLDS BY MAJOR EXPENDITURE CATEGORY: ANNUAL SAMPLE
(percent)

	All Households			Low-Income Households			
	Total	Higher Income	Low-Income	Non-Participant	Food Stamp Participant	Full-Year Participant	Part-Year Participant
Total Expenditures	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Food	17.8	16.3	24.9	22.5	28.7	31.0	25.8
Housing	29.8	28.3	36.9	35.8	38.5	40.7	35.7
Apparel	4.7	4.8	4.5	3.9	5.4	5.7	5.1
Subtotal	52.3	49.4	66.3	62.2	72.6	77.4	66.6
House furnishings	3.2	3.4	2.1	1.9	2.4	2.6	2.1
Transportation	18.6	19.8	12.6	14.2	10.0	7.5	13.2
Medical care	5.0	4.8	5.8	7.4	3.3	2.2	4.8
Personal care	1.0	1.0	0.9	1.0	0.8	0.8	0.9
Recreation	4.3	4.5	2.8	2.8	2.8	2.9	2.7
Education	0.9	0.9	0.7	1.0	0.3	0.3	0.4
Other expenses	14.9	16.2	8.8	9.5	7.7	6.5	9.3
Sample Size							
Weighted (1000)	71,247	58,926	12,321	7,517	4,804	2,714	2,090
Unweighted Sample Size	4,419	3,668	751	453	298	162	136

SOURCE: Weighted tabulations from the annual analysis file from the 1982-83 Consumer Expenditure Survey.

holds allocate roughly half of their expenditures to food, housing, and apparel. However, this percentage is much larger for the low-income groups, who allocate nearly two-thirds of their expenditures to these three categories. Within the low-income population there are important differences in the budget shares for food, housing, and clothing. Nonparticipant households allocate only 62 percent of their expenditures to these three necessities, whereas the budget share for these expenditures among food stamp households is nearly 73 percent. Within the low-income food stamp population, full-year participant households budget over 77 percent of their expenditures to these three categories, while part-year participants behave more like nonparticipants and spend only two-thirds of their expenditures on food, clothing, and shelter.

Because low-income households allocate a larger share of their budgets to necessities such as food, clothing, and shelter than do higher-income households, by definition they allocate less to other expenditure items. Two categories in which low-income households have substantially lower budget shares than higher-income households are transportation and other expenses. Higher-income households allocate nearly one-fifth of their expenditures to transportation, compared with less than 13 percent for low-income households. Budget shares for transportation are even lower for food stamp participants (10 percent) and are only 7.5 percent for full-year participant households.

The differences in budget shares are just as dramatic for other expenses, which include primarily retirement funds, insurance, and occupational expenses. The average budget share for these expenses for higher-income households is over 16 percent, compared with under 9 percent

for low-income households. Food stamp households allocate under 8 percent of their budget to these expenditures, and full-year participants only 6.5 percent.

2. The Distribution of Budget Shares for Food and Deductible Expenses

In order to provide a more detailed examination of the budget shares of low-income households, this subsection analyzes the distribution of budget shares for food and FSP-deductible expenses, including shelter costs and medical care expenses.¹

Food Expenditures. Table III.5 contains the distribution of budget shares for food for the various household groups. Differences in the distribution of budget shares for food between the household groups reflect differences in the average budget shares shown in Table III.4. For instance, only 10 percent of the higher-income households have budget shares for food which exceed 25 percent, compared with 36 percent of the low-income nonparticipant households, 46 percent of the part-year participants, and 57 percent of the full-year participant households. Given these figures, it is not surprising to find that a substantial number of food stamp households have high food expenditures relative to other expenses. Over a quarter of the low-income food stamp households have budget shares for food which exceed 35 percent. About a third of full-year participants have such high relative food expenditures, compared with only

¹We also intended to analyze dependent care expenses. However, only 10 to 20 percent of the households in the various household groups reported having these expenses. We felt that an examination of the distribution of dependent care expenses with so few positive cases might be misleading. For example, only 17 full-year food stamp participant households reported positive dependent care costs.

TABLE III.5
 AVERAGE AND DISTRIBUTION OF ANNUAL BUDGET SHARES FOR FOOD
 FOR URBAN HOUSEHOLDS: ANNUAL SAMPLE

	All Households			Low-Income Households			
	Total	Higher Income	Low-Income	Non-Participant	Food Stamp Participant	Full-Year Participant	Part-Year Participant
Average Budget Shares for Food							
Food, total	17.8	16.3	24.9	22.5	28.7	31.0	25.8
Food at Home	13.7	12.0	22.2	19.2	27.0	29.4	24.0
Food Away	4.0	4.3	2.7	3.3	1.7	1.6	1.8
Distribution of Budget Shares for Food							
0 - 10%	15.4	17.7	4.3	6.6	0.9	0.0	2.0
11 - 25	68.7	72.2	51.8	57.6	42.6	35.4	52.0
26 - 35	11.9	8.6	27.7	25.4	31.3	31.6	31.0
36 - 50	3.3	1.3	12.8	8.1	20.2	25.7	13.0
over 50	0.7	0.1	3.4	2.4	5.0	7.3	2.0
Median	16.3	15.3	23.7	21.0	27.0	28.4	24.1
Sample Size							
Weighted (1000)	71,247	58,926	12,321	7,517	4,804	2,714	2,090
Unweighted	4,419	3,668	751	453	298	162	136

SOURCE: Weighted tabulations from the annual analysis file from the 1982-83 Consumer Expenditure Survey.

11 percent of the low-income nonparticipant group. These results should be evaluated in light of the fact that food expenditures for food stamp households may indeed be understated if some of these households did not include the value of their food stamps in their reported food expenditure amounts (see Chapter II for a discussion of this problem).

Deductible Shelter Costs. Table III.6 contains the average budget shares and the distribution of budget shares for FSP-deductible shelter costs.¹ Comparing the average budget shares for these costs with those for all housing costs, as listed in Table III.4, indicates that over three-quarters of the housing costs are FSP-deductible shelter expenses. Roughly two-thirds of the deductible expenses are budgeted to rent and mortgage payments, with the remaining third used to cover fuel and utility costs. Fuel and utility costs comprise a slightly larger share of shelter expenses for the low-income groups.

Comparing the distribution of budget shares for deductible shelter costs across the household groups reveals that 71 percent of the higher-income households budget less than 25 percent of their expenditures to shelter, while only 45 percent of low-income nonparticipant households, 43 percent of part-year participants, and 33 percent of full-year participants have such a low percentage of their expenditures budgeted to shelter costs. At the other end of the distribution, we find that a substantial number of low-income food stamp participant households, especially full-year participants, have extremely high budget shares for shelter costs.

¹Deductible shelter costs include deductible shelter payments (e.g., rent and mortgage payments) and deductible fuel and utility expenses, as described in Table III.1.

TABLE III.6

AVERAGE AND DISTRIBUTION OF ANNUAL BUDGET SHARES
FOR DEDUCTIBLE SHELTER EXPENSES FOR URBAN HOUSEHOLDS: ANNUAL SAMPLE

	All Households			Low-Income Households			
	Total	Higher Income	Low- Income	Non- Participant	Food Stamp Participant	Full-Year Participant	Part-Year Participant
Average Budget Shares for Deductible Shelter Expenses							
Deductible Shelter, total	22.7	21.0	30.8	28.9	33.7	36.3	30.3
Rent & Mortgage Payments	15.8	14.0	18.9	17.3	21.4	23.2	19.2
Fuels and Utilities	7.8	7.0	11.8	11.5	12.3	13.1	11.1
Distribution of Budget Shares for Deductible Shelter Expenses							
0 - 10%	11.8	13.2	5.0	6.5	2.7	2.9	2.4
11 - 25	54.2	57.8	37.1	38.3	35.3	30.8	41.2
26 - 35	20.0	19.2	24.0	26.4	20.2	20.0	20.5
36 - 50	10.3	8.0	21.1	20.8	21.6	18.3	25.9
over 50	3.7	1.7	12.9	8.1	20.3	28.1	10.0
Median	20.2	19.3	28.0	26.5	30.2	32.2	28.6
Sample Size							
Weighted (1000)	71,247	58,926	12,321	7,517	4,804	2,714	2,090
Unweighted	4,419	3,668	751	453	298	162	136

SOURCE: Weighted tabulations from the annual analysis file from the 1982-83 Consumer Expenditure Survey.

Over 28 percent of the full-year participant households allocate more than half of their expenditures to deductible shelter costs, compared with only 10 percent of the part-year participants, 8 percent of the low-income nonparticipants, and less than 2 percent of the higher-income households.

Medical Care. Table III.7 contains information on the average budget shares and the distribution of budget share for medical care. The average budget shares are presented separately for households containing an elderly or disabled member, who qualify for the medical care deduction under the current food stamp regulations, and for nonelderly/disabled households who cannot deduct medical care costs. Two conclusions can be drawn from the average budget share figures in Table III.7 regarding medical care expenditures: (1) low-income nonparticipant households allocate substantially more of their expenditures to medical care than do participant households, and (2) elderly/disabled households allocate substantially more to medical care than do households without elderly or disabled members. Comparing part-year and full-year participant households reveals that budget shares on medical care for part-year participants are roughly midway between those of the higher nonparticipant shares and the lower full-year participant shares.

An examination of the distribution of budget shares in Table III.7 shows that for most households medical care expenses consume only a small portion of the household budget. More than half of all households in each household group allocate less than 5 percent of their budgets to medical care. The table also shows that a substantial number of food stamp participants (26 percent) incur no medical costs over a year. The

TABLE III.7

AVERAGE AND DISTRIBUTION OF ANNUAL BUDGET SHARES FOR
MEDICAL CARE FOR URBAN HOUSEHOLDS: ANNUAL SAMPLE

	All Households			Low-Income Households			
	Total	Higher Income	Low- Income	Non- Participant	Food Stamp Participant	Full-Year Participant	Part-Year Participant
Average Budget Shares for Medical Care							
Medical Care, total	5.0	4.8	5.8	7.4	3.3	2.2	4.8
o Households with Elderly or Disabled Member	8.7	8.5	9.1	10.0	6.7	4.3	9.9
o Other Households	3.0	3.1	2.6	3.6	1.5	1.0	2.2
Distribution of Budget Shares for Medical Care							
0%	5.4	3.6	13.7	5.9	25.9	34.4	14.9
1 - 2.5	38.8	40.5	30.5	24.2	40.3	39.9	40.8
2.6 - 5	22.9	23.7	19.2	22.0	14.8	11.1	19.5
6 - 10	18.9	19.2	17.2	20.9	11.5	11.1	12.0
11 - 20	9.9	9.1	13.6	19.6	4.4	2.7	6.5
over 20	4.1	3.8	5.8	7.5	3.1	0.8	6.2
Median	2.9	2.9	3.2	4.8	3.8	0.6	2.0
Sample Size							
Weighted (1000)	71,247	58,926	12,321	7,517	4,804	2,714	2,090
Unweighted	4,419	3,668	751	453	298	162	136

SOURCE: Weighted tabulations from the annual analysis file from the 1982-83 Consumer Expenditure Survey.

percentage with no medical costs is even higher for full-year participant households (34 percent).

Although medical care costs tend to be small for most households, a significant number of households in all household groups have medical care costs which consume a large portion of their budget. About 14 percent of all households have budget shares for medical care which exceed 10 percent. The percent of households with such high medical costs is larger for low-income households (19 percent) than for higher-income households (13 percent). However, this difference is due solely to the medical expenditures incurred by low-income nonparticipants, since few participant households allocate more than 10 percent of their expenditures to medical care. Over 27 percent of the low-income nonparticipant households have a medical care budget share which exceeds 10 percent, compared with only 13 percent of part-year participants and less than 4 percent of full-year participant households.

Differences in the characteristics of low-income participant and nonparticipant households may explain their differences in budget shares for medical care. Elderly households are more likely to incur medical costs, and over half of the nonparticipant households (56 percent) contain an elderly member, compared with only 26 percent of the participant households (see Table B.1 in Appendix B). In addition, food stamp participants are much more likely to be receiving public assistance (45 percent vs. 2 percent of the nonparticipants) and, in turn, are more likely to be covered by Medicaid.

D. INVESTIGATION OF THE EXPENDITURE-INCOME RELATIONSHIP

In this section we investigate the observed relationship between total expenditures and income and attempt to explain why a majority of low-income households in our sample report expenditures which exceed their incomes.¹ In particular, we are concerned with determining why nonparticipant household spending exceeds income to a greater degree than the spending of participant households.

Table III.8 presents the distribution of total expenditures as a percentage of income (including food stamps). About 36 percent of all households report expenditures which exceed their income, with the median household spending 87 percent of its income. Among the higher-income households, only 29 percent report expenditures greater than income and the median household spends only 82 percent of its income. The relationship is quite different for low-income households in which the median household spends 123 percent of its income and nearly 70 percent of the households report total expenditures greater than income.

Within the low-income subgroup, the median values of the variable are 137 percent for nonparticipant households, 120 percent for part-year participant households, and 105 percent for full-year participants. Roughly 75 percent of nonparticipant households report expenditures that

¹In our discussion of budget shares in the previous section, we focused on the mean as the measure of central tendency. Since there are relatively few or extremely large outliers (the budget share, by definition, ranges from 0 to 1), the mean and median budget shares were generally quite similar. However, the mean appears to be a less meaningful measure of central tendency for the ratio of expenditures to income, because the mean is sensitive to the presence of a relatively few cases with high expenditures and low income (i.e., a very high-expenditure/income ratio). Consequently, the discussion of the expenditure/income relationship focuses on the median as a measure of central tendency.

TABLE 111.8

DISTRIBUTION OF TOTAL EXPENDITURES AS A PERCENT
OF INCOME (INCLUDING FOOD STAMPS) FOR URBAN HOUSEHOLDS: ANNUAL SAMPLE
(percent)

Total Expenditures as a Percent of Income (incl. Food Stamps)	All Households			Low-Income Households			
	Total	Higher Income	Low- Income	Non- Participant	Food Stamp Participant	Full-Year Participant	Part-Year Participant
0 - 100%	63.5	70.5	30.6	25.4	37.4	44.5	28.2
100 - 125	16.2	15.1	21.5	17.6	27.6	27.9	27.3
125 - 150	7.9	7.0	12.6	13.4	11.3	11.1	11.5
150 - 200	6.2	4.6	13.8	15.6	11.1	6.7	16.8
Greater than 200	6.2	2.9	22.0	28.0	12.6	9.8	16.2
Cases with zero Income (incl. food stamps)	0.1	0.1	0.4	0.6	0.0	0.0	0.0
First Quartile Value ^a	68.2	65.7	94.8	99.4	88.8	85.8	95.8
Median	86.6	81.8	123.1	137.3	109.9	105.1	119.8
Third Quartile Value	116.4	106.3	185.3	222.9	145.5	132.7	172.5
Sample Size							
Weighted (1000)	71,247	58,926	12,321	7,517	4,804	2,714	2,090
Unweighted	4,419	3,668	751	453	298	162	136

Source: Weighted tabulations from the annual analysis file from the 1982-83 Consumer Expenditure Survey.

^aFor purposes of computing the quartile values, cases with zero income were counted as very large positive observations.

exceed their income, compared with 72 percent of the part-year participants and 55 percent of the full-year participants. These results are consistent with those in Table III.2, which indicated that nonparticipant households reported expenditures which exceeded income to a greater degree than did the expenditures of food stamp participants--especially when compared with full-year participant households.

At least three reasons might explain why a household's expenditures exceed its income: (1) income is underreported and/or expenditures are overreported; (2) the household is using other sources, including financial and non-financial assets and loans, to finance current-period expenditures; and (3) the way expenditures are recorded in the CEX may overstate current-period outlays--for example, the full price of a new car purchase is recorded as an expense, regardless of how the purchase was financed. Of the above reasons, the first one, income underreporting and/or expenditure overreporting, is potentially the most important. The second and third reasons may explain why a few households have expenditures which exceed income, but are unlikely to explain the systematic reporting of expenditures which exceed income in the low-income sample.

Income Underreporting. Respondents to the CEX are asked a series of detailed questions about whether they received income from various sources, and, if so, the amount of income from each source. We have not identified any methodological work that has directly examined the accuracy of income reporting in the CEX. However, the CEX income questions are quite similar in both structure and content to analogous questions on the CPS, and published information pertaining to the CPS, is available. Since the income questions on the two interviews are similar, the published information on the CPS probably provides some useful insights.

Information on estimates of money income from the CPS indicates that, overall, the CPS underestimates money income relative to an independent estimate by about 10 percent.¹ The divergence of individual components of income from the corresponding independent estimate is considerable. Wages and salaries from the independent source match the CPS estimates closely. However, estimates of unearned income differ by a

~~large percentage. For example, CPS estimates of AFDC were only 76 percent~~

of the independent estimate; CPS estimates of Social Security were 92 percent; and estimates of SSI were 82 percent.

To the extent that the type of underreporting of income found in the CPS carries over to the CEX, the above data have two important implications for our analysis. First, the incomes of low-income households are likely to be understated relative to higher-income households because low-income households generally receive a larger share of their total incomes from such sources as transfer income for which underreporting is most severe. Second, assuming that low-income households save little if

why the excess is greater among nonparticipant households. This is especially true given that participant households in our sample receive a higher percentage of their income from sources that tend to be underreported (e.g., transfer income). One possible explanation is that nonparticipant households are more likely to be recently and/or temporarily poor--that is, they have experienced a recent drop in their incomes due, for instance, to unemployment. As a result, they have not adjusted their spending downward to reflect their current income, either because they expect their income to increase shortly or because they are committed to certain expenditures which they cannot reduce in the short-term (e.g., mortgage or rent payments). In either case, these households are more likely than the long-term poor to spend more than their current income through borrowing, the spending down of financial assets, or the sale of non-financial assets.

Because the CEX does not contain historical income data, it does not permit us to determine whether nonparticipant households are more likely than participant households to have recently experienced a decline in their income. However, the CEX does provide information on liquid assets and debts at the beginning and end of the year to which the annual income and expenditure information refer. With this information we can investigate the relationship between the ratio of expenditures to income and changes in household assets or debt. That is, were there a significant number of low-income households who reported expenditures that exceeded income and who experienced a significant decline in assets or an increase in household debt over the year? If this relationship appears stronger for nonparticipant households, it could explain in part the greater degree to

which expenditures exceeded income for these households and would be consistent with the hypothesis that these households have experienced a recent decline in income, since they are spending down assets and borrowing money to finance current expenditures.

Only about 25 percent of FSP participants reported assets, and only 5 percent reported assets that exceeded \$500. Just less than 40 percent of low-income FSP nonparticipants reported assets, and 15 percent reported assets that exceeded \$500. (The incidence of missing information on assets was much higher among nonparticipants--29 percent versus 6 percent among participants.)

Our investigation of changes in household debt and liquid assets revealed that the low-income nonparticipant households were more likely than participant households, especially full-year participants, to experience a substantial increase in debt or decrease in assets over the previous year. About 12.5 percent of nonparticipant households reported an increase in debt of \$500 or more, compared with 9 percent of participants and only 8 percent of full-year participants. For assets, the difference was even larger. Seven percent of the nonparticipant households who reported their asset amounts experienced a decline in asset balances of \$500 or more.¹ Less than 1 percent of food stamp participants and no full-year participants reported such changes.

Given that nonparticipant households were more likely to experience an increase in debt or a decrease in liquid assets, we wanted to determine

¹Recall from Chapter II that about 16 percent of the nonparticipants and 6 percent of participants failed to report their asset balances in the CEX.

whether these changes were related to their expenditures as a percent of current income. To do so, we examined the percentage of households with high expenditures relative to income who experienced a substantial change in assets or debt. Of those nonparticipant households with expenditures that exceeded income by 150 percent or more, nearly one-fifth (19 percent) reported an increase in debt of more than \$500, and 12 percent had a decline in assets of over \$500. Conversely, of the food stamp households whose expenditures exceeded income by 150 percent or more, only 10 percent had a comparable increase in debt, and 2 percent a decline in assets. These results suggest that greater borrowing and spending down of assets by nonparticipant households may explain in part why these households report expenditures which exceed their income to a greater degree than low-income food stamp households who borrow less and have lower levels of financial assets available to supplement current expenditures.

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APPENDIX A
ANALYSIS FILE CONSTRUCTION
AND METHODOLOGY

In this appendix, we describe the sample selection for the annual and quarterly analysis files, the content of these files (including the list of expenditure variables, and the methodology used to determine the low-income subsamples).

A. SAMPLE SELECTION

Table A.1 illustrates the rotation group structure of the 1982-83 CEX Quarterly Interview Survey and the selection process used to develop the quarterly and annual analysis files. The quarterly analysis file contains information on consumer units who completed their fifth interview in one of the nine quarters on the CEX Interview Survey. These nine interviews are circled in Table A.1. About 10,300 households are contained in the quarterly file. Of these, approximately 6.2 percent, or 642 households, reported receiving food stamps in the three months preceding their fifth interview.

The sample selection process for the annual file is more complicated because that file is restricted to households which completed four interviews during the course of the 1982-83 CEX. One of two reasons explain why a household would be excluded from the annual analysis file: (1) all of its four interviews are not contained in the 1982-83 CEX or (2) it failed to complete four interviews and was dropped from the sample.

Table A.1 shows that only those households in one of the six complete rotation groups on the 1982-83 CEX (rotation groups A - F) are eligible for inclusion in the annual file. Those CEX households who were not in one of these rotation groups could not be included in the annual file because only a subset of their four interviews are contained in the 1982-83 Interview Survey. The exclusion of these households presents no

TABLE A.1

STRUCTURE OF 1982-83 CEX QUARTERLY INTERVIEW SURVEY AND
SAMPLE SELECTION PROCESS FOR ANALYSIS FILES

		Year and Quarter							
1982		1983				1984			
First	Second	Third	Fourth	First	Second	Third	Fourth	First	
	Rotation Group A				Rotation Group E				
	2	3	4	5	2	3	4	5	2
3	4	5		Rotation Group D					
			2	3	4	5	2	3	
4	5		Rotation Group C						
		2	3	4	5	2	3	4	
5		Rotation Group B				Rotation Group F			
	2	3	4	5	2	3	4	5	

Notes:

1. The table illustrates interview numbers of the interviews contained in the 1982-83 CEX. Each of the nine quarters contains one each of interviews 2 to 5.
2. Circled interview 5's are those fifth interviews extracted for inclusion in the quarterly analysis file.
3. The boxed sets of interviews represent the six complete rotation groups that are represented in the annual analysis file. To be included in that file a consumer unit from a particular rotation group had to complete all four interviews.

sample selection problems for our analysis, since there are no systematic reasons associated with household characteristics that determine their exclusion from the annual file.

Exclusion because of failure to complete four interviews (when the opportunity exists), however, may not be random and may influence our results. BLS reports that the primary reason that households fail to complete four interviews is that they moved from their first interview address. Because the CEX samples addresses and not households, movers are dropped from the survey and are underrepresented in the annual file sample. To determine the amount of attrition from the sample from requiring that four interviews be completed, we compared the number of households in the six complete rotation groups which completed their second interview with the number who completed their second through fifth interviews and are included in the annual file. About 73.5 percent (4,958 out of 6,749) of the households completed all four interviews. The completion rate was slightly higher for those households which reported food stamp receipt in their second interview. Among these food stamp households, 386 out of 503, or nearly 77 percent, are on the annual file.

B. CONTENT OF ANALYSIS FILES

The analysis files consist of (1) income, assets, and household characteristic data drawn directly from the CEX; (2) household characteristic variables created from information provided on the CEX, such as elderly and disabled member variables; and (3) categorical expenditure variables, which are created by grouping together related expenditures which are reported in the survey. In this section, we describe how key characteristic

variables were created and the content of the expenditure variables contained on the analysis files.

1. Household Characteristics

The majority of household characteristic variables on the analysis files were drawn directly from the family-level data contained in the CEX. However, a number of summary variables were created from CEX member-level data (i.e., separate data on the characteristics of each consumer unit member). The summary variables include information on the age distribution of household members, participation in school lunch programs, participation in SSI and Social Security, college enrollment, and armed forces status.

Two sets of these variables are of particular importance in this study--age distribution and participation in SSI and Social Security. These variables are used to determine the presence of elderly and disabled members in the household. Because FSP regulations for eligibility determination and allowable deductions from gross income are somewhat different for households with elderly or disabled members, it is important that we properly identify these households in our sample.

The Food Stamp Program defines an elderly person as someone who is 60 years of age or older. We determine the presence of an elderly person with constructed variables on the number of males and females in the consumer unit who are age 60 or older at the fifth interview. This is an end-of-year measure of elderly in the annual file.

The analysis files contain two variables which we use to determine the presence of nonelderly, disabled persons in the household: (1) the number of household members younger than age 60 who receive SSI and (2) the

number of household members younger than age 60 who receive Social Security and report not working due to illness or disability. Information on other categories of disability status, such as veterans' benefits from a service-connected disability, are not available in the CEX. However, the two variables described above identify what are by far the two most important categories of disability status as defined under FSP regulations.

2. Expenditure Variables

The CEX contains expenditure information on approximately 500 separate types of household expenditures. Each expenditure is identified by a unique universal classification code (UCC). These expenditures were categorized to create 75 expenditure variables which are contained in the analysis files. Table A.2 lists these categorical variables by variable name, a description of the expenditures included in each category, and the UCCs used to create each variable. Table A.3 shows how the categorical variables were aggregated to form the "major expenditure" categories described in the text.

C. DETERMINATION OF THE LOW-INCOME SUBSAMPLE

As described in Section C in Chapter II, we applied both an annual gross income screen set at 130 percent of poverty and a liquid assets test to determine the low-income subsample in our analysis. In this appendix, we describe these tests in more detail and discuss how they might lead to an imprecise measure of the food stamp eligible population.

Using an annual gross income screen does not allow us to distinguish between households that are eligible the entire year and households that are only part-year eligibles. Evidence of turnover in the

TABLE A.2
EXPENDITURE VARIABLES CONTAINED IN ANALYSIS FILES

Variable Name	Description	Universal Classification Codes (UCC)
TDEBT1ST*	Total amount owed by consumer unit at first interview	006001
TDEBT5TH*	Total amount owed at fifth interview	006002
FOODHOME	Food purchased for home use	790220-790230
FOODAWAY	Food away from home	190901-190904, 790410, 790430
OWNDMORT	Owned dwelling: FSP-deductible mortgage interest payments	210901, 220311
OWNDMRT2**	Owned dwelling: FSP-deductible reduction in mortgage principal	830201
OWNDPROP	Owned dwelling: FSP-deductible property taxes	220211
OWNDINSR	Owned dwelling: FSP-deductible insurance	220111
OWNDASMT	Owned dwelling: FSP-deductible special assessments	840101
RENTDEX	Rented dwelling: FSP-deductible rent	210110
SHLTDURX	Shelter: Durable expenses (e.g., construction)	23011-230116, 230119-230123, 230141-240323, 320611-320633, 790600, 790690, 990901-990950
SHLTCAPL	Shelter: Capital improvements	220512, 220513, 220611, 220615
SHLTOPRP	Shelter: Expenses on other properties	790610-790640
SHLTINSR	Shelter: Non-deductible insurance payments	220112-220122, 350110

TABLE A.2 (continued)
Page 2

Variable Name	Description	Universal Classification Codes (UCC)
SHLTPROP	Shelter: Non-deductible property taxes	220212
SHLTMORT	Shelter: Non-deductible mortgage interest payments, ground rent	210902, 220312, 220321, 220322
SHLTMRT2**	Shelter: Reduction in non-deductible mortgage principals	790920, 830202
SHLTSPMP**	Shelter: Non-deductible special mortgage payments	790910, 830101, 830102
SHLTASMT	Shelter: Non-deductible special assessments	840102
SHLTOTHR	Shelter: Other non-deductible expenses	210210, 210310, 220901, 220902, 340911, 340912
FUELOIL	Utilities: Fuel oil, deductible	250111, 250112
BTLDGAS	Utilities: Bottled gas, deductible	250211, 250212
COAL	Utilities: Coal, deductible	250221, 250222
WOOD	Utilities: Wood & other fuels, deductible	250901, 250902
ELECTRIC	Utilities: Electricity, deductible	260111, 260112
NATURGAS	Utilities: Natural gas, deductible	260211, 260212
TELEPHON	Utilities: Telephone service	27000
UTILOTHR	Utilities: Other deductible utilities	270211, 270212, 270411, 270412, 270901, 270902
UTILNDED	Utilities: Non-deductible utilities	250113, 250114, 250213, 250214, 250223, 250224, 250903, 250904, 260113, 260114, 260213, 260214, 270213, 270214, 270413, 270414, 270903, 270904
BABYSITT	Dependent care: Babysitting, deductible	340210
CAREELD	Dependent care: Care for elderly; deductible	340906
DAYCARE	Dependent care: Day care expenses; deductible	670310
HHOPSERV	Household Operations: Services	330511, 340310-340420

TABLE A.2 (continued)
Page 3

Variable Name	Description	Universal Classification Codes (UCC)
		340520, 340530, 340903
HHOPMOVE	Household Operations: Moving expenses	340510
HHOPRENT	Household Operations: Rentals	340907, 340908, 990900, 340901, 340904
HHOPREPR	Household Operations: Repairs	340620, 340630
HHFRFURN	Household Furnishings: Furniture	290110-290440, 320901
HHFRAPPL	Household Furnishings: Appliances	230117, 230118, 300111-300412
HHFPCOMP	Household Furnishings: Computers, etc.	690110-690230
HHFRCAPL	Household Furnishings: Capital improvements	220511, 220612, 220613, 220614
HHFROTHR	Household Furnishings: Other household furnishings	230131, 230132, 280110-280900, 320110-320522, 320902-320904, 430130, 690241-690245
APRLDEX	Apparel: Uniforms	360901, 380902
APRLCLTH	Apparel: Clothing	360110-360512, 360902-380901, 380903-420120
APRLWTCH	Apparel: Watches and jewelry	430110, 430120
APRLSERV	Apparel: Services	440110-440900
TRANVEHQ	Transportation: New and used non-recreational vehicle purchases	450110, 450210, 450220, 460110, 460901-460903
TRANREPR	Transportation: Repairs	490110-490311, 490313-490900
TRANFNC	Transportation: Finance charges	510110-510902, 850300
TRANREDC**	Transportation: Reduction of principal on vehicular loans	850100
TRANFARE	Transportation: Airline and ship fares	530110, 530901
TRANRECV	Transportation: Recreational vehicle purchases	600110-600122, 600131-600132

TABLE A.2 (continued)
Page 4

Variable Name	Description	Universal Classification Codes (UCC)
TRANRNTL	Transportation: Vehicle rentals	520511-520522, 520902-520907, 620902, 620906, 620907
TRANPUBL	Transportation: Public transportation	530210-530510, 530902
TRANOTHR	Transportation: Other expenses	470111-480211, 490312, 500110, 520110-520410, 520530-520901
MEDCDEDX	Medical Care: Deductible expenses	540000-580902
READING	Recreation: Reading materials	590110-590230, 660310
ENTRTVS	Entertainment: TV's, other durable goods	310110-310210, 310230-310330
ENTROTHR	Entertainment: Other expenses	270310, 310341-310343, 340610, 340902, 340905, 600210-620420, 620903-620905, 620908, 620912, 310220
PERSCARE	Personal Care Expenses	640130-650900
CLLGBOOK	Education: College books	660110
CLLGTUIT	Education: College tuition	670110
OTHRTUIT	Education: Other tuition, excluding day care	670210, 670901
EDUCOTHR	Education: Other expenses	660210, 660900, 670902
MISCFNRL	Miscellaneous: Funeral expenses	680140, 680901
MISCLIFE	Miscellaneous: Life insurance	700110
MISCOINS	Miscellaneous: Other non-health insurance	002120
MISCFINC	Miscellaneous: Finance charges, non-vehicle	710110
MISCALCO	Miscellaneous: Alcoholic beverages	200900, 790310, 790320, 790420
MISCTOBA	Miscellaneous: Tobacco and supplies	630110, 630210
MISCOTHR	Miscellaneous: Other expenses (e.g., legal fees)	680110, 680210, 680220, 680902

TABLE A.2 (continued)
Page 5

Variable Name	Description	Universal Classification Codes (UCC)
MISCCASH***	Miscellaneous: Cash contributions	800801, 800810-800860
MISCGOVR	Miscellaneous: Government retirement	800910
MISCRRR	Miscellaneous: Railroad retirement	800920
MISCPEN	Miscellaneous: Private pension	800931
MISCSERP	Miscellaneous: Self-employment retirement plan	800932
MISCSSEC	Miscellaneous: Social Security payments	800940
MISCOCCX***	Miscellaneous: Deductible occupational expenses	900001
INKNDPMT*	In-kind payments: Food, rent	800700, 800710
AMTBORR*	Amount borrowed	850200
TRIAVEHQ*	Trade-in allowance: Vehicles	450116, 450216, 450226, 460116, 460907, 460908
TRIARECV*	Trade-in allowance: Recreational vehicles	600127, 600128, 600137, 600138
REIMVEHQ*	Reimbursements: Vehicles	860100, 860200, 860500
REIMRECV*	Reimbursements: Recreational Vehicles	860300, 860400, 860600, 860700

NOTE: Each Universal Classification Code refers to a separate expense reported on the 1982-83 CEX Quarterly Interview Survey.

*Variable is not an expense

**Variable is coded as negative and is multiplied by -1 to get an expense

***Expense is collected only at the fifth interview and refers to expenses incurred during the previous year.

TABLE A.3
COMPONENTS OF MAJOR EXPENDITURE CATEGORIES

Category	Variable List		
Food	FOODHOME	FOODAWAY	
Housing			
Deductible Shelter Payments	OWNDMORT OWNDASMT	OWNDPROP OWNDMRT2 ^a	OWNDINSR RENTDEX
Deductible Fuel and Utilities	FUELOIL WOOD TELEPHON ^b	BTLDGAS ELECTRIC UTILOTHR	COAL NATURGAS
Non-deductible Payments and Utilities	SHLTINSR SHLTOTHR SHLTMRT2 ^a TELEPHON ^b	SHLTPROP SHLTASMT SHLTSPMP ^a	SHLMORT SHLTOPRP UTILNDED
Dependent Care	BABYSITT	CAREELD	DAYCARE
Shelter, durables	SHLTDURX	SHLTCAPL	
Household Operations	HHOPSERV HHOPREPR	HHOPMOVE	HHOPRENT
Apparel	APRLDEX APRLSERV	APRLCLTH	APRLWTCH
House Furnishings	HHFRFURN HHFRCAPL	HHFRAPPL HHFROTHR	HHFRCOMP
Transportation			
Vehicle Purchases	TRANVEHQ	TRANRECV	
Other Vehicle Expenses	TRANREPR TRANRNTL	TRANFINC TRANREDC ^a	TRANFARE TRANOTHR
Public Transportation	TRANPUBL		
Medical Care	MEDCDEX		
Personal Care	PERS CARE		

TABLE A.4 (cont'd)

Category	Variable List		
Recreation			
Reading	READING		
Entertainment	ENTRTVS	ENTROTHR	
Education	CLLGBOOK	CLLGTUIT	OTHRUIT
	EDUCOTHR		
Other Expenses			
Cash Contributions	MISCCASH		
Retirement Funds	MISCGOVR	MISCRRR	MISCPPEN
	MISC SERP	MISC SSEC	
Occupational Expenses	MISCOCCX		
Other	MISCFNRL	MISCLIFE	MISCOINS
	MISCFINC	MISALCO	MISCTOBA
	MISCOTHR		

^aThese variables are counted as reductions in debt (increases in assets) by BLS and are entered as negative amounts on the public-use files. To obtain the expenditure they are multiplied by -1.

^bOnly the basic monthly rate for one telephone is FSP-deductible. As a result, a maximum of \$120 (\$10 per month) is placed on the reported telephone fees that are included in a household's deductible fuel and utilities expenditure category. Any remaining telephone expenses are included in the non-deductible payments and utilities category.

Food Stamp Program indicates that the number of part-year eligible households is not inconsequential (see Carr et al., 1984). Even if the screen we use to determine eligibility correctly classifies all households who were eligible the entire year, some part-year eligibles will be classified as eligible and others as ineligible. Picking an appropriate gross annual income cutoff is therefore somewhat arbitrary. At a minimum, we want to properly classify all households which were eligible or ineligible the entire year.

The gross monthly income cutoff for FSP eligibility is 130 percent of poverty. We considered relaxing this criterion somewhat so that part-year eligibles would more likely be counted as eligible households. However, we found that raising this percentage to 150 percent of poverty greatly increased the number of eligible nonparticipants relative to the eligible participant group. This had the effect of increasing the relative incomes of the nonparticipant group, which were already higher on average than participant incomes under the 130 percent cutoff. For this reason, we decided that a gross annual income cutoff set at 130 percent of poverty was the most appropriate for determining eligibility. Table A.3 lists the number of households passing the gross income screen by food stamp participant status.

The second screen we applied to determine eligibility is based on liquid assets data collected in the household's fifth interview. These data include information on balances held in checking accounts, savings accounts, and U.S. Savings Bonds and the estimated market value of stocks, bonds, and mutual funds held on the last day of the month preceding the fifth interview. Information on the amount held in these accounts as of a

year prior to the month preceding the fifth interview is also provided.¹
As discussed earlier, information on the value of countable non-liquid assets held by the household, such as vehicles, is not provided in the CEX.

The asset screen used to determine eligibility is based on the screen in effect in 1982 and 1983 when the survey was conducted. This screen required that the assets of households not exceed \$1,500. The screen was set to \$3,000 for elderly households with two or more members.² We apply the screen in a like manner to determine eligibility in our sample. Because we are determining eligibility on an annual basis, we require that, to be ineligible because of assets, the household had to (1) report its asset amounts at both the beginning and end of the year and (2) have both of these amounts exceed the appropriate limit. If the household failed to report its assets or if only one of the two assets values exceeded the screen, then the household did not fail the assets test (i.e., is not considered ineligible due to assets for this analysis). The purpose here is to error on the safe side and not misclassify eligible households because of a stringently applied assets screen. The figures in Table A.4 illustrate the impact that the assets screen has on eligibility status in our sample.³

¹ The information on the previous year's balances are provided by answers to questions which ask the respondent to report differences in the amounts held in the asset accounts as of the last day of the previous month compared with the amounts held a year ago last month.

² The asset screen was modified in the Food Security Act of 1985 so that elderly individuals living alone would be allowed to have countable resources up to \$3,000, and nonelderly households would be allowed assets up to \$2,000.

³ In the quarterly file, the asset screen was applied only to assets held as of the last day of the month preceding the fifth interview.

TABLE A. 4

SAMPLE SELECTION AND SAMPLE SIZES BY HOUSEHOLD GROUP

QUARTERLY AND ANNUAL ANALYSIS FILES

	Quarterly Analysis file						Annual Analysis File									
	All		Non-FSP		FSP		All		Non-FSP		FSP		Full-year		Part-year	
	Households		Participants		Participants		Households		Participants		Participants		Participants		Participants	
	Number	Pct	Number	Pct	Number	Pct	Number	Pct	Number	Pct	Number	Pct	Number	Pct	Number	Pct
Total Number of Households	10,303	100.0%	9,661	100.0%	642	100.0%	4,958	100.0%	4,572	100.0%	386	100.0%	184	100.0%	202	100.0%
o with Complete income reported	8,885	86.2	8,292	85.9	593	92.4	4,419	89.1	4,058	88.8	361	93.5	173	94.0	188	93.1
o and who passed gross annual income screen	2,093	20.3	1,572	16.3	521	81.2	867	17.5	567	12.4	300	77.7	163	88.6	137	67.8
o and who-passed assets test (FSP- eligible households)	1,787	17.3	1,268	13.1	519	80.8	751	15.2	453	9.9	298	77.2	162	88.0	136	67.3

Note: Figures in table represent unweighted counts and percentages.

There are two further points that should be made regarding the figures in Table A.4. First, somewhat more than 10 percent of the households in both analysis files have incomplete reported incomes.¹ As a result, these households are excluded from the analysis. One concern is that these excluded households have different characteristics and expenditures than complete income reporters. Results from the 1982-83 Interview Survey (see U.S. Department of Labor, 1986, Table 1) indicate that this is not the case. The characteristics and expenditures of the CEX sample appear to be nearly identical regardless of whether or not incomplete income reporters are included in the calculations.

The second point is that nearly 17 percent of food stamp households with complete incomes are determined to be FSP-ineligible. The majority of these households are "ineligible" because they fail the gross annual income screen. Some of these households may be misclassified as ineligible due to income misreporting, but others may be ineligible because eligibility is being determined at the annual level, while food stamp participation is based on quarterly receipt. If households are not receiving food stamps

for the entire year, then they may fail the annual income test even though they were eligible during the period in which they were on the program.

paring differences between full-year and part-year participants in the percent who fail the gross income screen. About 94 percent of full-year participants (163 out of 173) pass the gross annual income test; however, less than 73 percent (137 out of 188) of part-year participants do. Therefore, most of the recipients who are classified as ineligible are those who did not receive food stamps for the entire period over which their income was measured.

In this report, the low-income food stamp participant population is defined as those households who received food stamps and who passed the gross income and assets screens. Some food stamp households were identified as ineligible, and these were excluded from the analysis in order to ensure comparability with the low-income-nonparticipant households which were also subjected to these tests. This is unavoidable given that income and eligibility are measured on an annual and not a monthly basis. The noneligible food stamp group consists primarily of part-year recipients who may be less poor and only in temporary need of assistance.

APPENDIX B

EXAMINATION OF THE CHARACTERISTICS OF
THE ANNUAL ANALYSIS FILE SAMPLE

Section D in Chapter II contains a summary of our examination of the characteristics of the CEX annual file sample. This appendix contains a detailed analysis of these characteristics. The appendix is organized into three sections. In Section A, we compare the characteristics of several subgroups in the Consumer Expenditure Survey annual analysis sample. In Section B we compare the characteristics of our CEX sample with the characteristics of the U.S. population, as measured through the March 1984 Current Population Survey. In Section C, the characteristics of FSP participants in the CEX sample are compared with the characteristics of the national FSP caseload in February 1983, as measured through the national quality control data.

A. CHARACTERISTICS OF SUBGROUPS IN THE CEX SAMPLE

The analyses in Chapters III and IV are organized around comparisons among several groups. First, we compare the expenditures of low-income households that meet the eligibility criteria for the Food Stamp Program, based on their annual income and liquid assets, with the expenditures of households that fail to meet these criteria. Second, within the low-income subgroup, we compare the expenditures of households that participated in the Food Stamp Program with the expenditures of households that did not participate in the FSP. Third, we compare the expenditure behavior of households that reported receiving food stamps during all 4 quarters in which they were in the sample (full-year participants) with the expenditures of households that reported receiving food stamps in only 1, 2, or 3 quarters (part-year participants). To provide perspective for the later analyses, we compare the characteristics of these same subgroups in this section.

Tables B.1 to B.3 show selected characteristics for the following groups: all households, higher-income households, all low-income households, low-income food stamp households, and low-income nonparticipants in the Food Stamp Program. Table B.1 shows data for selected household characteristics, including size, composition, region of the country, population size of the urban area, and housing tenure. In terms of household size, low-income households are slightly larger on average than higher-income households--2.8 persons versus 2.7 persons. Within the low-income group, moreover, the FSP households appear to be substantially larger on average than the nonparticipants (3.5 persons, compared with 2.5 among the nonparticipants).

There are also substantial differences in the age composition of the households in each subgroup. Higher proportions of low-income households have small children (26.5 percent versus 15.7 percent), and higher proportions have elderly members (44.1 percent versus 30.5 percent). With respect to the low-income subgroup, a higher proportion of FSP participants have children--both young children (42.8 percent versus 16.1) and school-age children (52.4 percent versus 23.7 percent)--than do nonparticipants. Furthermore, FSP households are more likely to have young adults (65 percent versus 35 percent). Both participants and nonparticipants have very similar proportions of household members in the 35 to 59-year-old age bracket. However, a much lower percentage of participants have elderly household members (25.6 percent versus 55.9 percent of the nonparticipants), probably reflecting the lower-than-average rates of participation in the FSP among the elderly population.

TABLE B.1

CHARACTERISTICS OF URBAN HOUSEHOLDS IN THE CONSUMER EXPENDITURE SURVEY ANNUAL SAMPLE,
BY FOOD STAMP ELIGIBILITY AND PARTICIPATION STATUS
(percent of households)

Household Characteristics	Higher Income Households ^a	Low Income Households			All Households
		FSP Participants	FSP Nonparticipants	All Low-Income	
Household Size					
1 Person	22.6%	22.6%	38.4%	32.2%	24.3%
2 Person	31.7	16.8	27.3	23.2	30.2
3 Persons	16.7	16.5	11.8	13.7	16.2
4 or More Persons	29.0	44.1	22.5	30.9	29.3
Average	2.7	3.5	2.5	2.9	2.7
Percent of Households with Members					
Under 6 Years	15.7%	42.8%	16.1%	26.5%	17.6%
6-17 Years	28.6	52.4	23.7	34.9	29.7
18-34 Years	48.2	64.7	34.9	46.5	47.9
35-59 Years	52.5	39.7	37.9	38.6	50.1
60 Years and Over	30.5	25.6	55.9	44.1	32.9
Type of Household					
Child Under 18 Present					
Two parents	32.3%	21.6%	19.5%	20.3%	30.2%
Single parent	5.6	46.5	11.2	25.0	9.0
Elderly Member Present	30.5	25.6	55.9	44.1	32.9
Single Person					
Elderly	9.2	14.0	28.7	23.0	11.6
Nonelderly	13.4	8.6	9.7	9.3	12.7
Disabled Member Present	1.5	9.8	3.2	5.8	2.3
Region					
Northeast	21.9%	26.6%	23.0%	24.4%	22.3%
Midwest	27.3	26.0	22.2	23.7	26.7
South	31.9	34.3	39.1	37.2	32.9
West	18.8	13.1	15.7	14.7	18.1
Population of Urban Area					
1,250,000 and Over	45.9%	42.1%	45.0%	43.8%	45.6%
385,000 to 1,250,000	26.8	21.9	27.6	25.4	26.5
75,000 to 385,000	24.7	34.1	25.7	28.9	25.4
Less Than 75,000	2.7	2.0	1.8	1.8	2.5
Housing Tenure					
Own Home	73.5%	24.3%	58.5%	45.2%	68.6%
Rent	25.9	73.6	39.6	52.8	30.6
Occupy Without Rent	0.6	2.0	1.9	2.0	0.9
Student Housing	0.0	0.0	0.0	0.0	0.0
Sample Size					
Unweighted	3,668	298	453	751	4,419
Weighted (1000)	58,926	4,804	7,517	12,321	71,247

SOURCE: Weighted tabulations are from the annual analysis file constructed from the 1982-83 CEX Quarterly Interview Survey.

^aIncludes all households who failed the annual gross income or assets tests for FSP eligibility. Sixty-three (63) of these households received food stamps.

TABLE B.2

CHARACTERISTICS OF HEADS OF URBAN HOUSEHOLDS IN THE CONSUMER EXPENDITURE SURVEY ANNUAL SAMPLE,
BY ELIGIBILITY AND FOOD STAMP PARTICIPANT STATUS
(percent with characteristics)

Household Characteristics	Higher Income Households ^a	Low Income Households			All Households
		FSP Participants	FSP Nonparticipants	All Low-Income	
Age					
Under 25 Years	3.5%	7.6%	6.7%	7.1%	4.1%
25-34 Years	22.9	34.4	11.0	20.1	22.4
35-59 Years	45.8	35.4	28.4	31.1	43.2
60 Years and Over	27.9	22.6	53.9	41.7	30.3
Average	48.2	44.3	57.5	52.4	49.0
Education					
8th Grade or Less	9.1%	28.9%	30.7%	30.0%	12.7%
Some High School	11.8	31.3	19.6	24.2	13.9
High School Graduate	32.0	26.2	25.9	26.0	31.0
Some College	22.3	11.0	14.9	13.3	20.7
College Graduate	24.9	2.7	8.9	6.4	21.7
Race					
Black	8.0%	42.1%	16.7%	26.6%	11.2%
White	90.6	54.9	82.2	71.6	87.3
Other	1.4	3.0	1.1	1.9	1.5
Sex					
Female	27.0%	70.2%	50.0%	57.9%	32.4%
Male	73.0	29.8	50.0	42.1	67.6
Sex and Marital Status					
Female, Spouse Not Present	20.8%	65.3%	45.2%	53.0%	26.3%
Male, Spouse Not Present	12.8	7.9	13.6	11.4	12.5
Spouse Present	66.5	26.8	41.2	35.6	61.1
Employment, Previous 12 Months					
Full-Time	69.9%	24.6%	30.1%	28.0%	62.6%
Part-Time	7.0	9.4	14.7	12.7	8.0
Did Not Work	23.2	66.0	55.2	59.4	29.4
Reason Person Did Not Work (of those not working)					
Retired	74.3%	17.4%	60.7%	41.9%	63.0%
In School	1.0	5.6	2.0	3.6	1.9
Ill	10.9	27.4	19.6	23.0	15.1
Could Not Find Work	1.4	11.0	3.7	6.9	3.3
Other	12.5	38.6	14.1	24.7	16.8
Sample Size					
Unweighted	3,668	298	453	751	4,419
Weighted (1000)	58,926	4,804	7,517	12,321	71,247

SOURCE: Weighted tabulations from the annual analysis file constructed from the 1982-83 CEX Quarterly Interview Survey.

^aIncludes all households who failed the annual gross income or assets tests for FSP eligibility. Sixty-three (63) of these households received food stamps.

TABLE B.3

INCOME AND ASSETS OF URBAN HOUSEHOLDS IN THE CONSUMER EXPENDITURE SURVEY ANNUAL SAMPLE,
BY FOOD STAMP ELIGIBILITY AND PARTICIPANT STATUS
(percent of households)

Household Characteristics	Higher Income Households ^a	Low Income Households			All Households
		FSP Participants	FSP Nonparticipants	All Low-Income	
Gross Annual Income					
\$0	0.1%	0.0%	0.6%	0.4%	0.2%
\$1-\$1,000	0.1	4.6	3.4	3.9	0.7
\$1,001-\$2,500	0.2	11.5	5.6	7.9	1.6
\$2,501-\$5,000	0.7	39.6	27.6	32.3	6.2
\$5,001-\$10,000	9.3	31.7	50.2	43.0	15.1
\$10,001-\$20,000	28.8	11.9	12.0	12.0	25.9
\$20,000+	60.8	0.6	0.5	0.6	50.4
Average	\$28,396.4	\$5,722.1	\$6,458.0	\$6,171.1	\$24,552.9
Per Capita Gross Annual Income					
\$0	0.1%	0.0%	0.6%	0.4%	0.2%
\$1-\$500	0.04	8.8	3.8	5.7	1.0
\$501-\$1,000	0.1	10.0	2.8	5.6	1.1
\$1,001-\$2,500	0.6	55.2	26.4	37.6	7.0
\$2,501-\$5,000	11.9	24.2	51.6	40.9	16.9
\$5,001-\$10,000	39.2	1.9	14.9	9.8	34.1
\$10,001-\$20,000	34.2	0.0	0.0	0.0	28.3
\$20,000+	13.9	0.0	0.0	0.0	11.5
Average	\$12,336.3	\$2,006.1	\$3,204.6	\$2,737.2	\$10,676.3
Gross Annual Income As a Percent of Poverty					
Less than 50%	0.4%	33.0%	12.0%	20.2%	3.8%
51-100	1.2	55.2	43.3	48.0	9.3
101-130	1.6	11.8	44.7	31.9	6.8
131-200	18.9	0.0	0.0	0.0	15.6
201-300	24.9	0.0	0.0	0.0	20.6
300+	53.1	0.0	0.0	0.0	43.9
Average	374.9%	63.4%	88.3%	78.6%	323.6%
Income by Source, Percent With					
Earnings	82.1%	44.0%	47.4%	46.1%	75.9%
Transfer Income (nonfood stamp)	36.8	81.9	62.1	69.8	42.5
Other Income	60.6	16.4	29.8	24.6	54.4
Average Distribution of Income by Source					
Earnings	\$23,478.8	\$2,441.4	\$2,968.5	\$2,763.0	\$19,896.4
Transfer Income (nonfood stamp)	\$2,185.4	\$3,094.3	\$3,009.7	\$3,042.7	\$2,333.6
Other Income	\$2,732.2	\$186.4	\$479.9	\$365.5	\$2,322.9
Annual Earnings					
\$0	17.9%	56.0%	52.6%	53.9%	24.1%
\$1-\$1,000	0.8	8.7	6.5	7.3	1.9
\$1,001-\$2,500	1.3	6.3	6.3	6.3	2.2
\$2,501-\$5,000	2.2	10.1	9.1	9.5	3.4
\$5,001-\$10,000	5.4	10.8	17.6	15.0	7.0
\$10,001-\$20,000	21.1	7.7	7.4	7.5	18.7
\$20,000+	51.4	0.5	0.5	0.5	42.6

TABLE B.3 (continued)

Household Characteristics	Higher Income Households ^a	Low Income Households			All Households
		FSP Participants	FSP Nonparticipants	All Low-Income	
Percent Participating In					
Food Stamps (full year)	0.2%	56.5%	0.0%	22.0%	4.0%
Food Stamps (part year)	1.3	43.5	0.0	17.0	4.0
Public Assistance or AFDC	0.9	45.1	1.7	18.6	4.0
SSI	0.8	20.5	6.9	12.2	2.8
Social Security or RRR	26.1	25.2	53.2	42.3	28.9
UI	8.6	13.8	6.7	9.5	8.7
WC or Veteran's Benefits	3.3	2.7	1.3	1.9	3.0
School Lunch	3.0	35.7	8.6	19.2	5.8
Annual Food Stamp Benefits					
\$0	98.5%	0.0%	100.0%	61.0%	92.0%
1-100	0.3	6.6	0.0	2.6	0.7
101-250	0.3	15.6	0.0	6.1	1.3
251-500	0.4	14.3	0.0	5.6	1.3
501-1,000	0.3	24.8	0.0	9.7	1.9
1,001-2,500	0.3	34.0	0.0	13.2	2.5
2,501+	0.0	4.8	0.0	1.9	0.3
Average	\$7.2	\$947.8	\$0.0	\$369.6	\$69.9
Value of Liquid Assets					
\$0	5.2%	69.6%	32.8%	47.1%	12.5%
\$1-\$500	13.1	19.7	22.6	21.5	14.5
\$501-\$1,000	7.0	2.7	8.8	6.4	6.9
\$1,001-\$1,500	4.2	0.7	3.4	2.3	3.8
\$1,501	8.3	1.1	2.9	2.2	7.3
\$3,001-\$5,000	7.4	0.3	0.04	0.1	6.1
\$5,001-\$10,000	9.4	0.0	0.3	0.2	7.8
\$10,001+	22.1	0.0	0.0	0.0	18.3
Missing	23.4	6.0	29.3	20.2	22.8
Average	\$13,419.8	\$94.9	332.84	\$223.6	\$11,060.0
Sample Size					
Unweighted	3,668	298	453	751	4,419
Weighted (1000)	58,926	4,804	7,517	12,321	71,247

SOURCE: Weighted tabulations from the annual analysis file constructed from the 1982-83 CEX Quarterly Interview Survey.

^aIncludes all households who failed the annual gross income or assets tests for FSP eligibility. Sixty-three (63) of these households received food stamps.

The data on type of household indicate that about 23 percent of the higher-income households are single-person households, compared with 32 percent of low-income households. Furthermore, most of the single-person higher-income households are not elderly persons, whereas over 70 percent of the low-income single-person households are elderly. Among the low-income households, there is also a substantial difference in the proportion of single-person households in the participant and nonparticipant groups, a difference due entirely to the tendency of elderly households to participate at a lower rate than is true of other households. Disabled household members are more likely to be present in low-income households than in other households (5.8 percent versus 1.5 percent). Moreover, a higher percentage of participant than nonparticipant low-income households include a member with a disability.

The geographic distribution of the various target groups varies somewhat. For example, the Northeast and South have somewhat higher proportions of low-income than of other households, while the opposite pattern holds for the Midwest and the West. Among the low-income group, the Northeast and Midwest have slightly higher percentages of participants than nonparticipants, suggesting higher participation rates in those regions than in the West and South. The distribution among urban areas of different sizes is very similar across all subgroups in the table. The one exception to this generalization is that higher proportions of FSP participants reside in urban areas of 75,000 to 385,000, and slightly lower proportions reside in all other size categories, than is the case with the other subgroups. There is no apparent substantive explanation for this difference, and it may well be due to chance.

Finally, differences in housing tenure are quite striking. Three-fourths of all higher-income households own their homes, compared with only 45 percent of low-income households. Furthermore, within the low-income group, only one-fourth of participants own their own home, although nearly 60 percent of the nonparticipant households are homeowners.

Table B.2 displays selected characteristics of the household head in the CEX households. Data on the age of household head are consistent with information in Table B.1 on household composition. Heads of low-income households tend to be slightly older than the heads of other households (52 versus 48 years), but among the low-income group the heads of nonparticipant households are much older than the heads of participant households (57 versus 44 years). Households headed by a black person are more likely to be low-income and have higher rates of participation than other low-income groups. Households headed by females with no spouse present comprise a higher percentage of the low-income population (53 percent versus 21 percent of the other households), and among the low-income group they comprise a higher proportion of participant than nonparticipant households: 65 percent of participant households are headed by single females, compared with 45 percent of nonparticipant households.

Finally, there are substantial differences in work status and reasons for not working. Only 41 percent of the heads of low-income households worked in a full- or part-time job in the previous year, compared with 77 percent of the heads of other households. Among the low-income households, 45 percent of the nonparticipant household heads worked, but only 34 percent of the heads of participant households were employed. For those heads who did not work in the previous year, a majority of

higher-income household heads reported that they were retired (74 percent). The percentage was much smaller (42 percent) for nonworking heads in low-income households. Again, there are substantial differences within the low-income population. Only 17 percent of the nonworking heads in participant households reported that they did not work because of retirement. By contrast, 61 percent of the nonworking, nonparticipant household heads said that they were retired. This difference in reported reasons for not working is due in part to age differences between participant and nonparticipant household heads: 54 percent of low-income nonparticipant heads are older than age 60, compared with just 23 percent of the heads of participant households.

Table B.3 provides data on the levels and sources of household income and the level of household assets. The top three sections of the table examine gross income. The data on total gross income indicate that the average annual income of higher-income households was about \$28,400, while the annual income of low-income households was about \$6,200, a greater than fourfold difference. Within the low-income group, FSP recipients have lower incomes than the nonparticipants--\$5,700 versus \$6,500, a difference of 14 percent. When income per capita is considered, the relative differences between low-income participants and nonparticipants is even larger. The per capita income of FSP households is about \$2,000, and the per capita income of non-FSP households is about \$3,200, a difference of more than 50 percent. Thus, it seems clear that the poorest segment of the low-income population is the most likely group to participate in the program.

With respect to the sources of income, the differences again conform to what one would expect. Relative to low-income households, higher proportions of the higher-income households have earnings (82 percent versus 46 percent) and other income (60 percent versus 25 percent), and lower proportions have transfer income (37 percent versus 70 percent). The same type of a pattern prevails in the relationship among sources of income for low-income participants and low-income nonparticipants. Higher percentages of nonparticipants have earnings (47 versus 44 percent) and other income (30 versus 16 percent), but smaller percentages have transfer income (62 versus 82 percent). The relative shares of the various sources of income in the total income of each group follow a similar pattern.

Patterns of participation in other types of income-support programs are again very different for the subgroups, and conform to our expectations. Very few of the higher-income households participate in any of these programs, except Social Security and Unemployment Insurance, the two programs listed which are not targeted specifically toward low-income households. Higher proportions of low-income households participate in all of the income-support programs. Among the low-income group, higher percentages of the food stamp participants participated in each income-support program except Social Security. This pattern is consistent with other information which suggests that households who participate in the Food Stamp Program are more likely to participate in other income-support programs than are non-food stamp participating households (see Long, 1987).

Tables B.4 to B.6 provide data on the characteristics of various subgroups of food stamp recipients, including low-income full-year participants, low-income part-year participants, and participants who

TABLE B.4

CHARACTERISTICS OF URBAN FOOD STAMP HOUSEHOLDS IN THE CONSUMER EXPENDITURE SURVEY ANNUAL SAMPLE,
BY FULL AND PART-YEAR PARTICIPATION AND ELIGIBILITY
(percent of households)

	Low Income Stamp Households			Noneligible Participant Households
	Full-year Participant	Part-year Participant	All Low-Income Participant	
Household Size				
1 Person	23.6%	21.2%	22.6%	4.1%
2 Person	20.6	12.0	16.8	20.1
3 Person	14.9	18.6	16.5	27.1
4 or More Persons	41.0	48.2	44.1	48.7
Average	3.3	3.6	3.5	3.7
Percent of Household with Member				
Under 6 Years	47.3%	37.0%	42.8%	51.2%
6-17 Years	49.4	56.3	52.4	46.3
18-34 Years	63.9	65.8	64.7	64.7
35-59 Years	42.4	36.3	39.7	63.4
60 Years and Over	23.7	28.0	25.6	19.1
Type of Household				
Child Under 18 Present				
Two parents	15.8%	29.1%	21.6%	48.0%
Single parents	49.8	42.2	46.5	19.1
Elderly Member Present	23.7	28.0	25.6	19.1
Single Person				
Elderly	14.2	13.7	14.0	2.5
Nonelderly	9.4	7.5	8.6	1.6
Disabled Member present	13.0	5.5	9.8	8.6
Region				
Northeast	26.7%	26.5%	26.6%	24.5%
Midwest	28.0	23.4	26.0	22.9
South	37.0	30.9	34.3	37.0
West	8.3	19.2	13.1	15.7
Population of Urban Area				
1,250,000 and Over	36.6%	49.2%	42.1%	51.3%
385,000 - 1,250,000	22.8	20.7	21.9	12.2
75,000 - 385,000	38.4	28.5	34.1	33.3
Less Than 75,000	2.3	1.6	2.0	3.2
Housing Tenure				
Own Home	18.4%	32.1%	24.3%	44.0%
Rent	78.0	67.9	73.6	53.2
Occupy Without Rent	3.6	0.0	2.0	2.8
Student Housing	0.0	0.0	0.0	0.0
Sample Size				
Unweighted	162	136	298	63
Weighted (1,000)	2,714	2,090	4,804	913

SOURCE: Weighted tabulations from the annual analysis file constructed from the 1982-83 CEX Quarterly Interview Survey.

TABLE B.5

CHARACTERISTICS OF THE HEAD OF URBAN FOOD STAMP HOUSEHOLDS IN THE CONSUMER EXPENDITURE SURVEY ANNUAL SAMPLE,
BY FULL YEAR AND PART-YEAR PARTICIPATION AND ELIGIBILITY
(percent with characteristics)

	Low Income Stamp Households			Noneeligible Participant Households
	Full-year Participant	Part-year Participant	All Low-Income Participant	
Age				
Under 25 Years	8.9%	5.9%	7.6%	8.7%
25-34 Years	31.7	37.8	34.4	28.3
35-59 Years	38.1	32.0	35.4	49.9
60 Years and Over	21.3	24.3	22.6	13.1
Average	43.9	44.8	44.3	41.7
Education				
8th Grade or Less	32.5%	24.3%	28.9%	16.6%
Some High School	33.0	29.1	31.3	14.1
High School Graduate	19.4	34.9	26.2	40.3
Some College	13.2	8.1	11.0	23.6
College Graduate	1.9	3.6	2.7	5.4
Race				
Black	45.1%	38.1%	42.1%	16.3%
White	52.7	57.9	54.9	83.2
Other	2.2	4.1	3.0	0.5
Sex				
Female	75.1%	63.9%	70.2%	25.6%
Male	24.9	36.1	29.8	74.4
Sex and Marital Status				
Female, Spouse Not Present	73.6%	54.6%	65.3%	22.6%
Male, Spouse Not Present	7.1	8.9	7.9	14.6
Spouse Present	19.3	36.6	26.8%	62.8
Employment, Previous 12 Months				
Full-Time	14.2%	38.3%	24.6%	71.4%
Part-Time	8.1	11.0	9.4	12.0
Did Not Work	77.7	50.8	66.0	16.6
Reason Person Did Not Work (percent of those not working)				
Retired	12.6%	26.8%	17.4%	31.9%
In School	8.1	0.7	5.6	0.0
Ill	30.3	21.7	27.4	38.4
Could Not Find Work	11.6	9.8	11.0	7.9
Other	37.4	41.1	38.6	21.9
Sample Size				
Unweighted	162	136	298	63
Weighted (1000)	2,714	2,090	4,804	913

SOURCE: Weighted tabulations from the annual analysis file constructed from the 1982-83 CEX Quarterly Interview Survey.

TABLE B.6

INCOME AND ASSETS OF URBAN FOOD STAMP HOUSEHOLDS IN THE CONSUMER EXPENDITURE SURVEY ANNUAL SAMPLE,
BY FULL-YEAR AND PART-YEAR PARTICIPATION AND ELIGIBILITY
(percent of households)

	Low Income Stamp Households			Noneligible Participant Households
	Full-year Participant	Part-year Participant	All Low-Income Participant	
Gross Annual Income				
\$0	0.0%	0.0%	0.0%	0.0%
\$1-\$1,000	4.8	4.4	4.6	0.0
\$1,001-\$2,500	15.4	6.5	11.5	0.0
\$2,501-\$5,000	47.3	29.5	39.6	0.7
\$5,001-\$10,000	25.9	39.3	31.7	10.1
\$10,001-\$20,000	6.4	19.1	11.9	44.2
\$20,000+	0.2	1.1	0.6	45.1
Average	\$4,750.3	\$6,983.7	\$5,722.1	\$18,727.5
Per Capita Gross Annual Income				
\$0	0.0%	0.0%	0.0%	0.0%
\$1-\$500	10.6	6.5	8.8	0.0
\$501-\$1,000	13.5	5.4	10.0	0.0
\$1,001-\$2,500	54.5	56.1	55.2	0.0
\$2,501-\$5,000	20.6	28.8	24.2	53.4
\$5,001-\$10,000	0.8	3.2	1.9	44.0
\$10,001-\$20,000	0.0	0.0	0.0	2.6
\$20,000+	0.0	0.0	0.0	0.0
Average	\$1,810.6	\$2,259.8	\$2,006.1	\$5,385.0
Gross Income as a Percent of Poverty				
Less Than 50%	41.8%	21.7%	33.0%	0.0%
51-100	53.6	57.4	55.2	0.7
101-130	4.7	21.0	11.8	1.4
131-200	0.0	0.0	0.0	61.2
201-300	0.0	0.0	0.0	29.0
300+	0.0	0.0	0.0	7.7
Average	55.1%	74.2%	63.4%	197.8%
Income By Source, Proportion With				
Earnings	32.2%	59.4%	44.0%	92.7%
Transfer Income (nonfood stamp)	86.6	75.9	81.9	72.2
Other Income	13.9	19.5	16.4	35.1
Average Distribution of Income by Source				
Earnings	\$1,257.4	\$3,978.4	\$2,441.4	\$14,831.8
Transfer Income (nonfood stamp)	\$3,346.4	\$2,767.1	\$3,094.3	\$3,289.9
Other Income	\$146.5	\$238.2	\$186.4	\$605.8
Annual Earnings				
\$0	67.8%	40.7%	56.0%	7.3%
\$1-\$1,000	7.9	9.6	8.7	0.0
\$1,001-\$2,000	7.9	4.1	6.3	0.0
\$2,501-\$5,000	7.7	13.2	10.1	0.0
\$5,001-\$10,000	5.7	17.3	10.8	24.6
\$10,001-\$20,000	2.9	13.9	7.7	39.3
\$20,000+	0.0	1.1	0.5	28.8

TABLE B.6 (continued)

	Low Income Stamp Households			Noneligible Participant Households
	Full-year Participant	Part-year Participant	All Low-Income Participant	
Percent Participating In				
Food Stamps (full year)	100.0%	0.0%	56.5%	15.6%
Food Stamps (part year)	0.0	100.0	43.5	84.4
Public Assistance or AFDC	55.5	31.6	45.1	19.2
SSI	23.4	16.8	20.5	8.4
Social Security or RRR	22.6	28.6	25.2	19.5
UI	8.1	21.2	13.8	44.1
WC or Veteran's Benefits	0.7	5.2	2.7	5.2
School Lunch	40.9	28.9	35.7	24.3
Annual Food Stamp Allotment				
\$0	0.0%	0.0%	0.0%	0.0%
\$1-\$100	0.0	15.2	6.6	22.1
\$101-\$250	13.6	18.2	15.6	19.9
\$251-\$500	7.3	23.3	14.3	24.1
\$501-\$1,000	20.8	29.9	24.8	18.0
\$1,001-\$2,500	51.1	11.8	34.0	15.8
\$2,501+	7.2	1.7	4.8	0.0
Average	1,264.8	536.3	947.8	465.4
Value of Liquid Assets				
\$0	78.0%	58.6%	69.6%	17.0%
\$1-\$500	12.9	28.5	19.7	37.6
\$501-\$1,000	1.9	3.7	2.7	17.1
\$1,001-\$1,500	0.8	0.5	0.7	2.1
\$1,501-\$3,000	0.0	2.5	1.1	1.0
\$3,001-\$5,000	0.5	0.0	0.3	2.1
\$5,001-\$10,000	0.0	0.0	0.0	6.2
\$10,001+	0.0	0.0	0.0	2.3
Missing	5.9	6.2	6.0	14.7
Average	73.9	122.3	94.9	1,702.0
Sample Size				
Unweighted	162	136	298	63
Weighted (1000)	2,713	2,090	4,804	914

SOURCE: Weighted tabulations from the annual analysis file constructed from the 1982-83 CEX Quarterly Interview Survey.

failed the eligibility screens. In general, the data suggest that the full-year participants are more disadvantaged than the part-year participants, and the "noneligible" participants are less disadvantaged than the low-income participants. The average number of household members in the full-year participant households is 3.3, compared with 3.6 for the part-year participants. In addition, the full-year participants tend to have more small children but fewer school-age children, as well as more adults in the 35- to 59-year age range but fewer elderly. Likewise, the full-year participants have more disabled and fewer home owners.

With respect to differences between the low-income and the non-eligible participants, the noneligible participant households tend to be larger (3.7 persons per household versus 3.5), more noneligible households have persons in the 35- to 59-year age group (63 versus 40 percent), fewer have elderly members (19 versus 25.5 percent), and more are homeowners (44 versus 24 percent).

The characteristics of the reference person in the various groups of food stamp recipient households are shown in Table B.5. Full- and part-year participants are similar in terms of the average age of the reference person. However, more of the full-year participants are high school dropouts (65 versus 43 percent), more are black (45 versus 38 percent), more are female with no spouse present (74 percent versus 65 percent), and fewer have a spouse present (19 versus 37 percent). With respect to the differences between the low-income and noneligible food stamp recipients, the noneligible tend to be younger (an average age of 41.6 versus 44.3), better educated (fewer are high school dropouts, and more have at least

some college), and more likely to have a spouse present (63 percent versus 27 percent).

Finally, Table B.6 provides data on the level and sources of household income for the food stamp participant groups. The income levels of full-year participants are substantially lower than those of the part-year participants. The average ratio of gross income to the poverty level is 55 percent for the full-year participants, compared with 75 percent for the part-year participants. Furthermore, fewer full-year participants have earnings, more receive benefits from at least one transfer program, and a higher percentage receive benefits from each of the transfer programs except Social Security and unemployment insurance. Finally, full-year participants possess fewer liquid assets. The same patterns of differences exist when low-income and noneligible food stamp recipients are compared, except that the income and asset differentials are greater, in both relative and absolute terms.

B. COMPARISON OF SELECTED CHARACTERISTICS ON THE CURRENT POPULATION SURVEY

Because of how the annual analysis file sample was selected from the larger 1982-83 CEX sample, we are concerned about the representativeness of the overall sample. In particular, approximately 65 percent of the CEX sample was not usable, either because income data were incomplete or because the household did not complete four quarterly interviews. Furthermore, the primary reason that households did not complete four interviews was that they had moved. In addition, the total number of food stamp recipients in the analysis sample is so small that a serious risk exists that chance might produce a sample that is not representative of the population. Finally, and perhaps most importantly, the sample represents

only urban households, since rural households are excluded from the 1982-83 CEX. In order to help assess whether these factors limit the analysis, we compare the characteristics of our analysis sample with the characteristics of all U.S. households and with the characteristics of all households receiving food stamps during the year, as measured in the Current Population Survey (CPS).

Table B.7 shows the estimated number of households, selected household characteristics, and selected income measures for the CEX annual sample, the 1982 CPS, and the 1983 CPS. The top section of the table shows the estimated number of households in the United States, according to each source. As the data indicate, the CEX represents a smaller number of households than does the CPS, largely because of the sample loss described above. The geographic distribution of households, the percentage of householders (i.e., household heads) who are black, the size distribution of households, the percentage of households receiving food stamps, and the measures of income are all very similar in the CEX and in the two CPS samples. The percentage of householders who are younger than 35 years of age, the percentage who dropped out of high school, and the percentage with earnings are all slightly lower in the CEX sample than in the CPS sample, but all the differences are very small--in the range of 2 or 3 percentage points. The percentage of home owners is slightly higher in the CEX. None of these differences is large enough to suggest that the overall CEX sample is unrepresentative of the U.S. population.

Table B.8 shows similar data for households that reported receiving food stamps. Larger differences between the CEX and CPS are apparent in Table B.8. The CEX sample shows a higher proportion of the food stamp

TABLE B.7

COMPARISON OF SELECTED CHARACTERISTICS OF HOUSEHOLDS IN THE CONSUMER EXPENDITURE SURVEY
ANNUAL SAMPLE AND CURRENT POPULATION SURVEY: ALL HOUSEHOLDS

Household Characteristics/ Income	Consumer Expenditure Survey Annual Sample 1982-1983	Current Population Survey 1982	Current Population Survey 1983
ESTIMATED TOTAL HOUSEHOLDS	71,247,422	83,918,000	85,407,000
<u>Household Characteristics</u>			
<u>Distribution by Region of the U.S.</u>			
Northeast	22.3%	21.4%	21.3%
Midwest	26.7	25.4	25.1
South	32.9	33.5	33.7
West	18.1	19.7	19.8
Percent of Householders Who Are Black	11.2	10.6	10.0
Percent of Households Under 35	26.5	29.6	29.6
Average Age of Households (years)	49.0	n.a.	n.a.
<u>Size of Household</u>			
1 person	24.3	22.9	23.4
2 person	30.2	31.5	31.5
3 person	16.2	17.6	17.7
4 or more persons	29.3	27.9	27.4
Mean	2.7	2.7	2.7
Percent of Householders Who Did Not Complete High School	26.6	29.2	27.9
Percent of Households Owner Occupied	68.6	64.9	64.6
<u>Income</u>			
Percent of Households with Earnings	75.9	78.3	77.3
Average Amount of Earnings	\$19,896	\$19,217	\$20,134
Average Total Income	\$24,553	\$24,309	\$25,401
Percent of Households Receiving Food Stamps	8.0	8.6	8.5

NOTE: Current Population Survey data are collected in March of the year following the reference year. Income, earnings, and food stamp receipt pertain to the calendar year 1982 or 1983. Household characteristics are measured as of the interview month. The CPS results refer to all households, but the CEX sample represents only urban households.

a

Definitions of households differ in the Consumer Expenditure Survey and Current Population Survey. In the Consumer

TABLE B.8

COMPARISON OF SELECTED HOUSEHOLD CHARACTERISTICS IN THE CONSUMER EXPENDITURE SURVEY
 SAMPLE AND CURRENT POPULATION SURVEY: FOOD STAMP RECIPIENTS

Household Characteristics/ Income	Consumer Expenditure Survey Annual Sample 1982-1983	Current Population Survey 1982	Current Population Survey 1983
Household Characteristics^a			
Distribution by Region of the U.S.			
Northeast	26.3	19.2	21.1
Midwest	25.5	25.0	25.9
South	34.8	40.5	38.0
West	13.5	15.3	15.0
Percent of Householders Who Are Black	37.9	32.7	33.8
Percent of Households Under 35	41.1	41.7	41.3
Average Age of Households (years)	43.8	43.0	43.6
Size of Household			
1 person	19.6	19.1	20.1
2 person	17.4	20.0	21.0
3 person	18.2	20.8	20.0
4 or more persons	44.8	40.2	38.9
Mean	3.5	3.0	2.9
Percent of Householders With Children Less Than 5	44.1	39.5	39.6
Percent of Households Owner Occupied	27.5	31.5	30.5
Income			
Percent of Households with Earnings	51.7	44.8	42.5
Average Amount of Earnings	\$4,421	n.a.	n.a.
Average Total Income	\$7,800	\$7,608	\$7,661
Average Amount of FSP Benefits	\$871	\$994	\$1,042

NOTE: The CPS results refer to all food stamp recipients, but the CEX sample represents only urban food stamp households.

^a

Data from the 1982 CPS are from Current Population Reports, Series P-60, No. 143, Table 5.

^b

Data from the 1983 CPS are from Current Population Reports, Series P-60, No. 148, Table 5.

recipient households in the Northeast and lower proportions in the South than does the CPS. Larger percentages of households are headed by a black, have young children, and have earnings, while a smaller percentage own their own homes. The annual income of the CEX sample is slightly higher and their food stamp benefits are somewhat lower than the corresponding amounts in the CPS sample. These differences may be the result of the small CEX sample and/or the fact that the CEX represents only the urban food stamp population, as well as attrition from the CEX sample due to the failure of some households to complete all four quarterly interviews.

C. COMPARISON OF THE CEX AND NATIONAL QC DATA

A second source of information about the characteristics and income of food stamp recipients is the data assembled for the study of caseload characteristics from the ongoing food stamp quality control (QC) system. We have used the QC data for the month of February 1983 for the comparison, since it is roughly the mid-point of the period covered by the CEX data. The CEX annual file sample cases include all low-income FSP participants. In addition, the full-year participants are shown separately.

It is important to note that the CEX food stamp subgroup differs from the subgroup used in the previous section for comparison with the CPS. In the previous section, the most appropriate comparison was with all food stamp recipients, since this was the group identified in the CPS. In the present comparison, however, it seems more appropriate, though by no means ideal, to include only the low-income participants who passed the eligibility screens, because all the QC sample had low incomes (apart from errors) and were receiving benefits at the time their income and characteristics were measured. Even so, the income for the part-year

participants in the low-income group may cause the income of the FSP participant group to be overstated. Therefore, we have also shown the full-year participants separately, although this group suffers from the problem that it represents only the relatively long-term segment of the caseload.

Table B.9 shows the data for selected characteristics and income variables. The CEX samples are quite similar to the QC sample in terms of the percent of households with a disabled member, the percent with school-age children, the percent receiving public assistance, and the percent receiving SSI. However, the average household size, the percent with elderly household members, and the average gross income are all larger in the CEX than in the QC data. Furthermore, the average food stamp benefit of the CEX sample is considerably lower. The differences are smaller, though still substantial, for the full-year participants.

TABLE B.9

COMPARISON OF HOUSEHOLD CHARACTERISTICS AND INCOME OF
FOOD STAMP RECIPIENTS IN THE CONSUMER EXPENDITURE
SURVEY AND NATIONAL QC DATA

Household Characteristics/ Income	1982-83 Consumer Expenditure Survey, Annual Sample		National Quality Control Data, Caseload Character- istics, February 1983
	All Low-Income Participants	Low-Income Participants	
Household Characteristics			
Average Household Size	3.5	3.3	2.9
Percent with Elderly Member	25.6	23.7	18.1
Percent with Disabled Member	9.8	13.0	7.7
Percent with School Age Children	52.4	49.4	51.6
Income Sources and Level			
Average Gross Income	\$477	\$396	\$376
Average Net Monthly Income			\$208
Percent with Gross Income			5.4
Percent with Zero Net Income	8.7	11.0	18.4
Percent Receiving Earned Income	44.0	32.2	22.1
Percent Receiving AFDC/GA	45.1	55.5	50.0
Percent Receiving SSI	20.5	23.4	18.0
Average Food Stamp Benefit Amount	\$79	\$105	\$127
Sample Size			
Unweighted	298	162	6,817
Weighted (1,000)	4,804	2,714	8,052

NOTE: The 1982-83 CEX sampled only urban households, but the National QC data represent both urban and rural food stamp recipients.

APPENDIX C

EXPENDITURES OF LOW-INCOME HOUSEHOLDS AND
THE COMPONENTS OF FSP NET INCOME

The Food Stamp Program is designed to improve the dietary quality of low-income households by augmenting the resources available to them for purchasing food. The Food Stamp Program and its benefit structure incorporate a number of features that are designed to ensure that individuals in similar circumstances are treated the same way, while at the same time recognizing that a variety of factors may limit a household's ability to use its income to secure an adequate diet. For example, the food stamp benefit formula assumes that low-income households can (or should) spend 30 percent of their available income on food. The food stamp benefit is the difference between the cost of the Thrifty Food Plan¹ and 30 percent of net income. In turn, net income is a measure of the resources available to the household for the purchase of food.

In setting the formula for net income, policymakers have assumed that some of the household's gross income is not available for the purchase of food. Two types of allowances are made in computing "disposable," or net, income. One type of allowance is designed to encourage work effort. For this purpose, a certain percentage of earned income is assumed to cover the expenses of holding a job, and therefore is not available for the purchase of food. Expenses incurred in holding a job include such items as mandatory deductions from earnings (income taxes, Social Security, mandatory union dues, etc.), the cost of travel to and from work, the cost of uniforms or special clothing, the cost of meals away from home, and the

¹The Thrifty Food Plan is a research-based set of economical and nutritious diets developed by the Department of Agriculture which attempts to reflect the food choices of households with limited food budgets. The Food Stamp Program assumes that the cost of the Thrifty Food Plan reflects the minimum that must be spent by a household of a given size to receive an adequate diet.

like.¹ During 1982-83 (the period covered by the data used in this analysis), the work expense deduction was 18 percent of earned income.²

A second feature of the FSP formula designed explicitly to encourage work effort is the dependent care deduction. Costs of dependent care incurred while working, looking for work, or training in preparation for work are all deducted from gross income in computing net income, up to certain limits, described below.

The second type of deduction incorporated into the FSP benefit formula is designed to take into account both ordinary and extraordinary expenditures on necessary items other than food. In particular, a standard deduction, which was set at \$85 in 1982-83 and is \$99 in 1987, is automatically deducted from the gross income of every household. Furthermore, the medical expenses of elderly or disabled household members in excess of \$35 are deducted from gross income in calculating the amount available for the purchase of food. Finally, a deduction is made when allowable shelter costs exceed 50 percent of gross income after the standard deduction, work expense deduction, and medical deduction have been subtracted. The shelter deduction plus the dependent care deduction for nonelderly households is subject to a cap, which was \$115 in 1982-83.³

¹ The Report of the House of Representatives Committee on Agriculture on the Food Stamp Act of 1977 (Report No. 95-464) indicates (on page 61) that the work expense deduction is intended to cover all mandatory deductions from a worker's gross earnings plus "incidental expenses to employment and/or training such as transportation, meals away from home, special clothing, and other incidentals necessary for such employment or training."

² As of early 1986 the percentage was increased to 20 percent.

³ Beginning in 1986, separate caps for dependent care and shelter expenses replaced the combined shelter/dependent care cap.

In this appendix, we examine the relationship between the assumptions about the expenditures of low-income households which are incorporated into the FSP benefit formula and the actual consumption behavior of a sample of low-income households. Our basic objective is to examine the behavior of low-income households in light of the Food Stamp Program benefit structure. Specific research questions are:

- o Do the assumptions about the expenditure behavior of households which are embodied in the food stamp benefit formula reflect the actual behavior of low-income households? In particular:
 - Do low-income households and FSP participants spend 30 percent of their non-food stamp net income on food?
 - Does the earned income deduction of 20 percent accurately reflect the amount of earnings which FSP participants must devote to taxes and other work-related expenses?
- o What proportion of income do low-income and FSP households devote to medical, shelter, and dependent-care expenses?
- o What are the characteristics and circumstances of the households which spend more or less on these various items than the percentages incorporated into the food stamp benefit formula?

The overriding policy question is whether the net income concept used in the Food Stamp Program is an adequate measure of the resources available to low-income households for the purchase of food. However, two important limitations with the CEX data restrict our ability to address this question adequately. First, as discussed in Chapter II, we are concerned that some food stamp recipients in our sample may not have included the value of food purchased with their food coupons in their reported food purchase amount. Thus, the food purchases of recipients may

be understated, making it difficult to evaluate whether or not they spend 30 percent of their non-food stamp net income on food. Second, as detailed in Chapter III, a majority of low-income households report expenditures which exceed their reported incomes. If this mismatch of income and expenditures is due primarily to income underreporting, as we suspect, then FSP net income calculations will understate actual net income on average, and calculations of expenditures as a percent of net income will be overstated. In our opinion, these two data problems severely restrict our ability to address the specific research questions listed above. For this reason, the tabulations presented in this appendix should be interpreted with caution, and no firm conclusions should or can be drawn.

The basic method used in the analysis is to compute the amount of the expenditure on each deductible category as a percent of the relevant income concept. Thus, in the analysis of food expenditures, we examine food expenditures from the household's own resources as a percentage of net income. In addition, we examine total food expenditures (including food stamps) as a percent of the TFP amount for the household. The analysis of the shelter deduction examines the household's deductible shelter costs as a percent of the household's gross income after the standard deduction, work expense deduction, and medical deduction have been subtracted. Finally, we examine measured work expenses as a percent of earned income. In each case, we first present the medians and distributions of the relevant percentage measures, and then examine a scatterplot of the expenditure category against the income measure.

A. ANALYSIS OF THE RELATIONSHIP BETWEEN FOOD EXPENDITURES AND FSP NET INCOME

In order to examine the relationship between food expenditures from the household's own resources and the FSP-defined net income, we computed the ratio of these two quantities for households that did not participate in the Food Stamp Program and examined the distribution of the ratio. Ideally, we would like to examine the same relationship for food stamp participants as well. However, two difficulties limit the usefulness of this measure for FSP participants. First, we believe that some respondents to the CEX question on food expenditures probably failed to include amounts purchased with food stamps in their investments. Thus, the total food expenditures of FSP participants are understated relative to those of non-participants. Second, even apart from measurement-error problems, it is impossible to distinguish what the household would have bought from its own resources in the absence of the Food Stamp Program from what it actually did buy with both stamps and its own resources. Thus, if we were to compute food-at-home expenditures from own resources by subtracting the food stamp allotment from total food expenditures and then compare this computation with FSP net income, we would underestimate the share of own

resources used to purchase food.¹ Table C.1 shows the median and distribution of this variable for each income and participation group. Among higher-income households, the median value of expenditures from the household's own resources as a percentage of its net food stamp income is 8.6 percent. Nearly 95 percent of these households spend less than 25 percent.

Among low-income non-FSP participants, the median is 38.5 percent. Only about one-quarter of all households spend less than 25

¹ Suppose there is a household with net income = \$200, and 30 percent of net income would be spent on food in the absence of the FSP:

$$\text{Net Income} = \$200$$

$$\text{Food-At-Home Expenditures} = (.3)(200) = \$60$$

Thus, the behavior of this household conforms to the FSP assumptions. Suppose further that the TFP amount for this household is \$100, so that the FSP bonus would be \$100 - \$60 = \$40. Take two extremes: (1) the MPC out of bonus = 1, and (2) the MPC out of bonus = 0.

$$(1) \quad \text{MPC} = 1 \qquad \qquad \qquad \text{T}$$

$$\text{Food Expenditures} = 60 + 40 = \$100$$

$$\frac{\text{Food Expenditures} - \text{FSP Bonus}}{\text{Net Income}} = \frac{100 - 40}{200} = .3$$

$$(2) \quad \text{MPC} = 0 \qquad \qquad \qquad \text{T}$$

$$\text{Food Expenditures} = \$60$$

$$\frac{\text{Food Expenditures} - \text{FSP Bonus}}{\text{Net Income}} = \frac{60 - 40}{200} = .1$$

As is clear, only in the extreme case of an MPC = 1 will we determine that the food expenditure behavior of this household conforms to the program's assumptions. More fundamentally, the procedure used always leads to an underestimate of the percentage of net income allocated to food expenditures by FSP households, and the magnitude of the underestimate is larger as the deviation of the MPC from one becomes greater.

TABLE C.1

DISTRIBUTION OF FOOD EXPENDITURES (EXCLUDING FOOD STAMPS)
AS A PERCENT OF FOOD STAMP NET INCOME
FOR URBAN HOUSEHOLDS: QUARTERLY SAMPLE
(percent)

Food Expenditures as Percent of Net Income	All Households			Low-Income Households	
	Total	Higher Income	Low-Income	FSP Participants	FSP Nonparticipants
Cases with Net Income Zero					
Own expenditures less than the food stamp benefit	0.2	n.a.	1.1	3.6	n.a.
Own expenditures greater or equal to the food stamp benefit	3.6	0.1	14.0	10.2	15.6
Cases with net Income Positive					
Own expenditures as percent of net income					
< 0%	0.9	0.2	3.9	13.3	0.0
0 - 10	48.6	58.8	10.8	16.3	8.6
10 - 25	31.6	33.6	25.3	25.1	25.4
25 - 35	5.5	3.8	12.0	8.8	13.3
35 - 50	3.7	1.9	10.6	7.7	11.9
50 - 100	3.5	1.1	12.7	8.1	14.7
100 - 500	1.8	0.4	7.1	5.8	7.7
> 500	0.6	0.1	2.4	1.3	2.9
Median ^a	10.0	8.4	30.5	19.1	36.6
Sample Size					
Weighted (1000)	141,131	112,215	28,916	8,526	20,390
Unweighted	8,885	7,098	1,787	519	1,268

SOURCE: Weighted tabulations from the quarterly analysis file from the 1982-83 Consumer Expenditure Survey.

^aFor purposes of computing the median, cases with zero net income were counted either as very large positive or very large negative observations.

percent. Thus, these data appear to suggest that low-income households tend to spend more than 30 percent of their net food stamp incomes on food at home. Recall, however, that the overall relationship between spending and income seems to suggest that income is underreported. Moreover, the average budget share devoted to food-at-home expenditures is about 20 percent (see Table III.5).

Although the table provides a succinct summary of the data, it is also useful to examine the relationship of own food expenditures and net income in more detail. For this purpose, we plotted the value of expenditures on food from the household's own resources against 30 percent of net income. Households on or near the diagonal line are those whose expenditures were approximately 30 percent of their net income. Households below the line spent less than 30 percent of their net income on food, and those above the line spent more than 30 percent on food. Figure C.1 displays the data for low-income non-food stamp households.

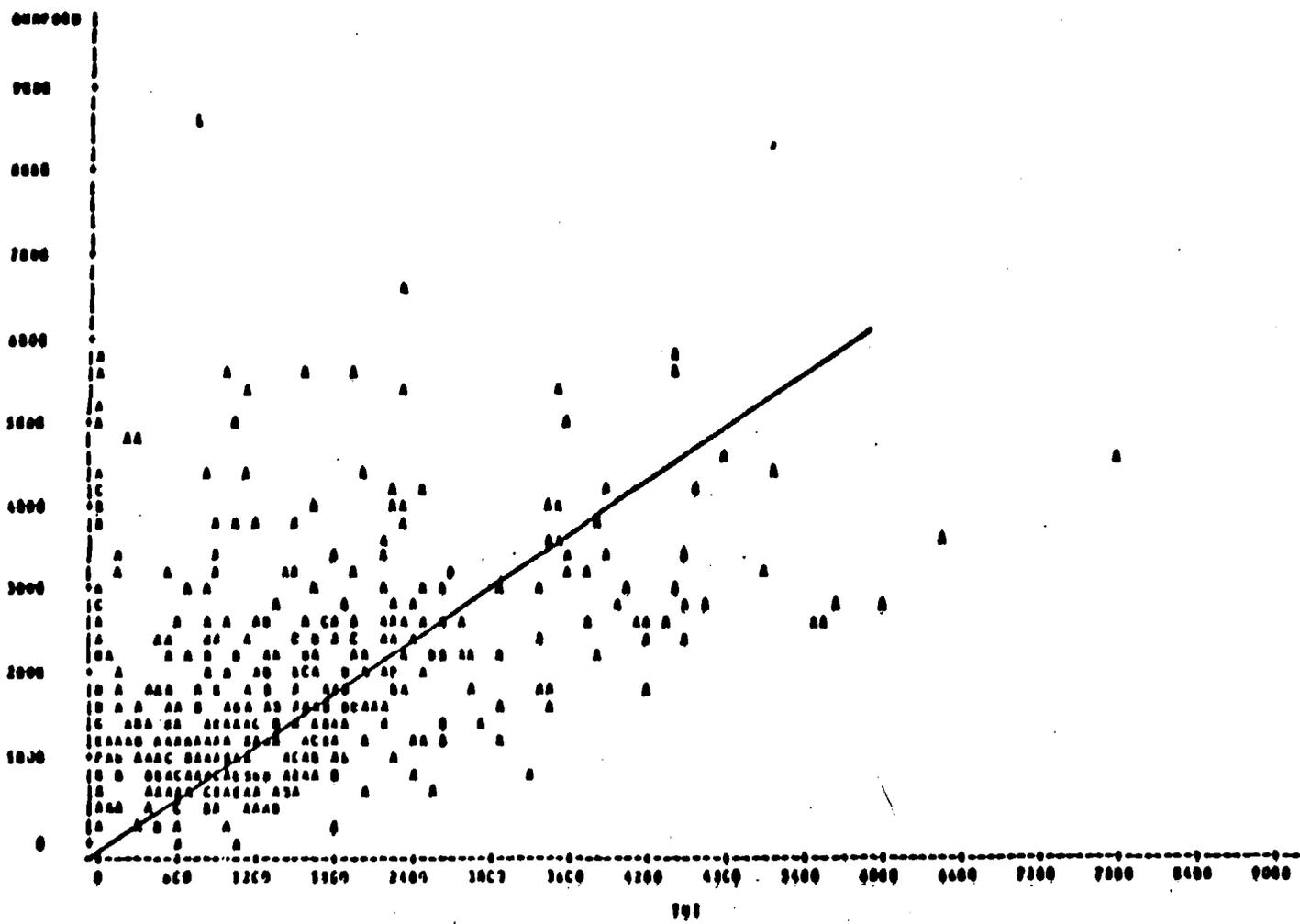
Figure C.1 reveals several interesting points. First, most of the cases spending far more than 30 percent of net income on food have very low net incomes, under \$3,000 per year. Second, most of the cases with higher net incomes (above \$10,000) tend to spend less than 30 percent on food. However, many of the cases that spend less than 30 percent on food have low net incomes, below \$5,000 per year.

B. ANALYSIS OF THE RELATIONSHIP BETWEEN DEDUCTIBLE SHELTER COSTS AND ADJUSTED GROSS INCOME

The food stamp benefit formula provides an additional deduction for households whose expenditures on deductible shelter items exceed 50 percent of their income after the standard deduction, the work expense deduction,

FIGURE C.1

"LOW-INCOME NONFOOD STAMP HOUSEHOLDS"



C.9

(30 percent of Net Income)

the dependent care deduction, and the medical deduction have been subtracted. In this section we examine the relationship between deductible shelter costs and 50 percent of this income amount, which for convenience we refer to as "adjusted gross income."

Table C.2 shows the distribution of deductible shelter costs as a percent of adjusted gross income for the set of household subgroups. The median values of the variable are 20 percent for the higher-income household group, 53 percent for low-income households which did not receive food stamps, and 61 percent for all low-income food stamp recipients. Within the low-income food stamp participant group, the median for full-year participants is much higher than the median for part-year participants (65 versus 52 percent). Indeed, the median and distribution of the shelter cost variable for part-year participants is more similar to that for the nonparticipants than to that for the full-year participants.

Again, it appears that low-income nonparticipants tend to spend about 50 percent of their "available income" on housing, as the food stamp benefit formula assumes. However, FSP participants tended to spend slightly more than 50 percent of their available income on deductible shelter expenses. As occurs with food expenditures, very substantial variation exists among households around these central tendencies. For example, approximately one-third of the households in each of the two low-income groups spent 40 percent or less on deductible shelter costs. Approximately one-third of nonparticipants, but 45 percent of all participants and over half of full-year participants, spent more than 60 percent of their adjusted gross income on shelter. The group which spent just about 50 percent (40 to 60 percent) comprised 30 percent of the food

TABLE C.2

DISTRIBUTION OF TOTAL EXPENDITURES ON FOOD AT HOME
AS A PERCENT OF THE THRIFTY FOOD PLAN AMOUNT
FOR URBAN HOUSEHOLDS: QUARTERLY SAMPLE
(percent)

Percent of Thrifty Food Plan	All Households			Low-Income Households	
	Total	Higher Income	Low-Income	FSP Participants	FSP Nonparticipants
70% or Less	27.1	23.4	41.8	40.3	42.4
70% to 130%	44.1	44.8	41.5	51.0	37.5
130% or More	28.8	31.9	16.8	8.7	20.2
Median	100.5	106.7	80.0	78.6	80.0
Sample Size					
Weighted (1,000)	141,131	112,215	28,916	8,526	20,390
Unweighted	8,885	17,098	1,787	519	1,268

SOURCE: Weighted tabulations from the quarterly analysis file from the 1982-83 Consumer Expenditure Survey.

stamp participant subgroup and 22 percent of the low-income nonparticipant subgroup.

Plots of deductible shelter costs against adjusted gross income (Figures C.2 and C.3) were also very similar for the low-income participants and nonparticipants. In both subgroups, those whose adjusted gross incomes were higher tended to spend less than 50 percent of their income on shelter. Those with lower adjusted gross incomes (i.e., below \$12,000) tended to cluster more tightly around 50 percent, except that there is a group with low income and very high shelter costs (i.e., adjusted gross income below \$8,000 and shelter costs above \$4,000).

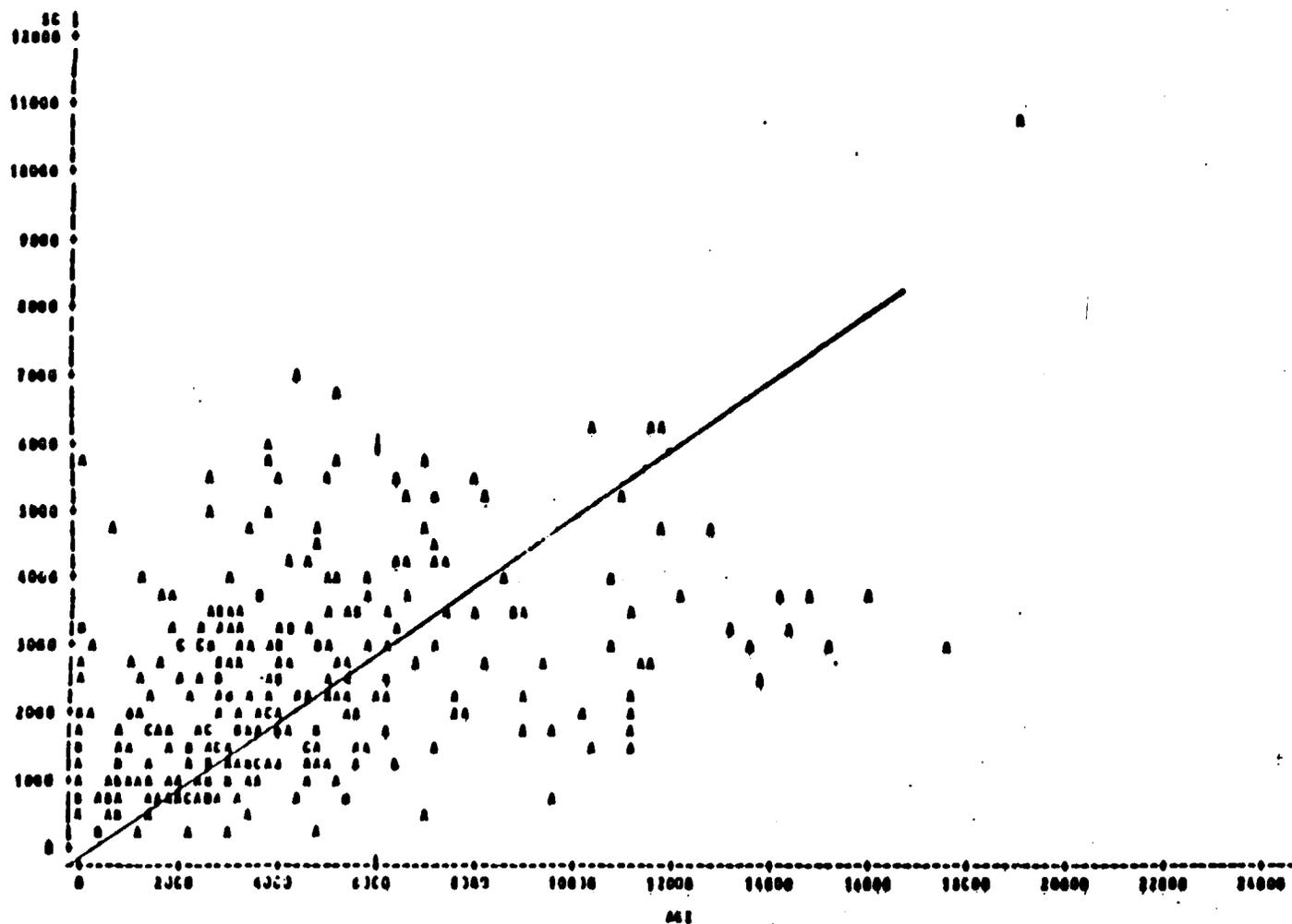
C. ANALYSIS OF WORK EXPENSES

Current rules allow 20 percent of earnings to be deducted (the deduction was set at 18 percent in 1982-83, the period covered by the CEX). The purpose of this deduction is both to encourage work and to recognize that the total amount earned is not available for the purchase of food. As described above, our measure of work expenses includes all taxes on earnings, as well as miscellaneous occupational expenses. However, it excludes two potentially large work-related expenditure items that Congress intended to cover in the work expense deduction--the cost of transportation to and from work, and the cost of food purchased in the work place. Thus, we expect that measured work expenses will substantially understate the actual work expenses of the sample households, which the deduction is intended to cover.

Table C.3 shows the data on the distribution of work expenses as a percent of earnings for the subgroups of interest. The top section of the

FIGURE C.2

PLOT OF SHELTER COST (SC) VERSUS ADJUSTED GROSS INCOME (AGI):
LOW-INCOME FOOD STAMP HOUSEHOLDS



C.13

FIGURE C.3

PLOT OF SHELTER COST (SC) VERSUS ADJUSTED GROSS INCOME (AGI):
LOW-INCOME NON-FOOD STAMP HOUSEHOLDS

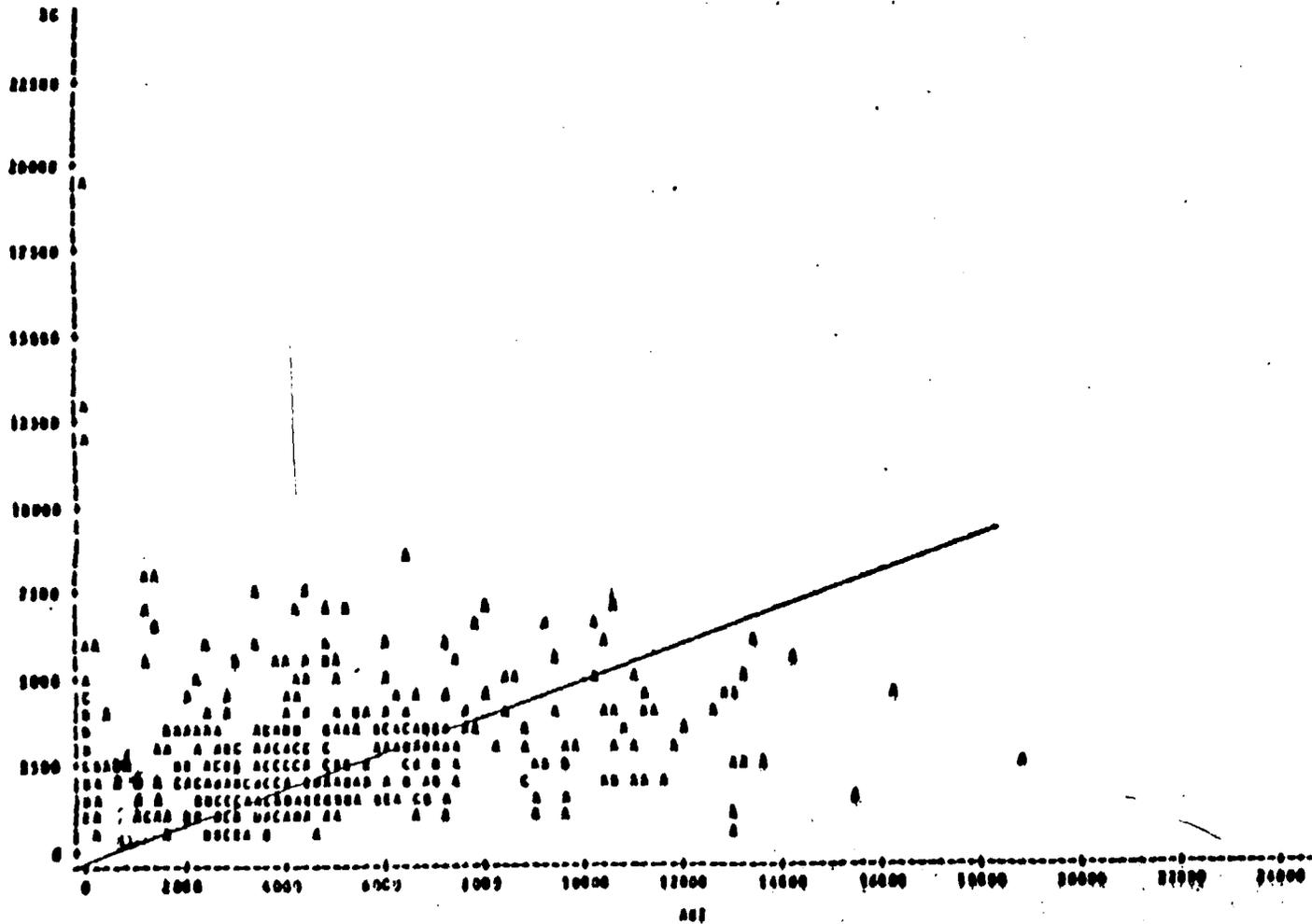


TABLE C.3

DISTRIBUTION OF DEDUCTIBLE SHELTER EXPENSES
AS A PERCENT OF ADJUSTED GROSS INCOME^a
FOR URBAN HOUSEHOLDS: QUARTERLY SAMPLE
(Percent)

Deductible Shelter Costs As A Percent of Adjusted Gross Income	All Households			Low-Income Households	
	Total	Higher Income	Low-Income	FSP Participants	FSP Nonparticipants
Zero Adjusted Gross Income	1.8	0.5	7.1	4.5	8.2
0-20%	41.2	48.9	12.1	7.1	14.2
20-40%	33.1	36.2	21.8	22.2	21.7
40-60%	11.2	9.5	18.0	18.0	18.0
60-80%	4.5	2.7	11.5	13.9	10.5
Greater Than 80%	8.2	2.6	29.5	34.4	27.4
Median	23.8	20.5	57.1	61.9	53.9
Sample Size					
Weighted (1000)	141,131	112,215	28,916	8,526	20,390
Unweighted	8,885	7,098	1,787	519	1,268

SOURCE: Weighted tabulations from the quarterly analysis file from the 1982-83 Consumer Expenditure Survey.

^aAdjusted gross income equals gross income minus the standard deduction, work expense deduction, dependent care deduction, and medical deduction.

table indicates that 82 percent of the higher-income households and 46 percent of low-income households have earned income. Only one-third of full-year participant households have earnings. Interestingly, 60 percent of part-year participants have earnings, a higher proportion than among the low-income nonparticipants. This high proportion with earnings suggests that the part-year participant group may consist of households that experienced a temporary decline in their income.

With respect to the distribution of work expenses among those who worked, it is interesting to note the differences between low-income and higher-income households, and the similarities between low-income nonparticipants and food stamp participants. The median value of work expenses as a percentage of earned income is 21 percent for the higher-income earners, but only 10 percent for the low-income earners. For the most part, this difference reflects the higher rates at which higher earnings are taxed. The median for low-income nonparticipants is just over 10 percent, while the median for low-income participants is just under 10 percent. However, within the participant group, full-year and part-year participants are quite different. The medians are 9.4 and 12.2 percent, respectively. Eighty-four percent of participants (93 percent of full-year participants and 78 percent of part-year participants) and 75 percent of nonparticipants spent 20 percent or less of their earnings on taxes and miscellaneous occupational expenses. Less than 8 percent of low-income nonparticipants and less than 6 percent of participants devoted more than 30 percent of their earnings to these work-expense items.

Although our measure of work expenses suggests that the FSP work expense deduction is adequate to cover taxes and miscellaneous work

expenses for most FSP participants who work, the measure omits some potentially large components of work expenses--most notably, transportation to and from work. For this reason and because a small minority of participants spend more than 20 percent, we must be cautious when drawing conclusions about the adequacy of the current earned income deduction. However, the data do indicate that over half of the food stamp households devoted less than 10 percent of their earnings to the work expense items covered in the CEX.

D. COMPARISON OF RESULTS WITH THE QUARTERLY ANALYSIS FILE

We examined the sensitivity of the results presented in the previous sections to the use of the annual analysis file. We computed, for the quarterly sample, each measure presented in the previous section for the annual sample, and we tabulated the distributions, means, and medians. Table C.4 compares the medians of each outcome measure that were obtained for each sample and target group. Additional details appear in Tables C.5 to C.7.

TABLE C.4

DISTRIBUTION OF WORK EXPENSES AS A PERCENT OF EARNINGS
FOR URBAN HOUSEHOLDS: QUARTERLY SAMPLE
(percent)

Work Expense	All Households			Low-Income Households	
	Total	Higher Income	Low-Income	FSP Participants	FSP Nonparticipants
Percent of Households with Earned Income	77.4	84.2	50.8	41.1	54.7
Work Expenses as a Per- cent of Earned Income					
0-10%	36.8	34.0	54.6	58.1	53.5
10-20%	16.6	15.6	23.4	27.3	22.2
20-30%	28.9	30.9	16.0	10.6	17.7
30-40%	13.6	15.3	3.0	2.4	3.2
40-50%	2.7	2.9	1.7	1.1	1.9
More than 50%	1.3	1.3	1.3	0.4	1.6
Median	18.5	20.1	9.3	8.6	9.4
Sample Size					
Weighted (1000)	141,131	112,215	28,916	8,526	20,390
Unweighted	8,885	7,098	1,787	519	1,268

SOURCE: Weighted tabulations from the quarterly analysis file from the 1982-83 Consumer Expenditure Survey.

TABLE C.5

DISTRIBUTION OF FOOD EXPENDITURES (EXCLUDING FOOD STAMPS)
AS A PERCENT OF FOOD STAMP NET INCOME
FOR URBAN HOUSEHOLDS: QUARTERLY SAMPLE
(percent)

Food Expenditures as Percent of Net Income	All Households		Low-Income Households
	Total	Higher Income	FSP Nonparticipants
Cases with Net Income Zero			
Own expenditures less than the food stamp benefit	0.2	n.a.	n.a.
Own expenditures greater than or equal to the food stamp benefit	3.6	0.1	15.6
Cases with net income Positive			
Own expenditures as percent of net income			
< 0%	0.9	0.2	0.0
0 - 10	48.6	58.8	8.6
11 - 25	31.6	33.6	25.4
26 - 35	5.5	3.8	13.3
36 - 50	3.7	1.9	11.9
51 - 100	3.5	1.1	14.7
101 - 500	1.8	0.4	7.7
> 500	0.6	0.1	2.9
Median ^a	10.0	8.4	36.6
Sample Size			
Weighted (1000)	141,131	112,215	20,390
Unweighted	8,885	7,098	1,268

SOURCE: Weighted tabulations from the Quarterly Analysis File from the 1982-83 Consumer Expenditure Survey.

^aFor purposes of computing the median, cases with zero net income were counted either as very large positive or very large negative observations.

TABLE C.6

DISTRIBUTION OF DEDUCTIBLE SHELTER EXPENSES
AS A PERCENT OF ADJUSTED GROSS INCOME^a
FOR URBAN HOUSEHOLDS: QUARTERLY SAMPLE
(percent)

Deductible Shelter Costs as a Percent of Adjusted Gross Income	All Households			Low-Income Households	
	Total	Higher-Income	Low-Income	FSP Participants	FSP Nonparticipants
Zero Adjusted Gross Income	1.8	0.5	7.1	4.5	8.2
0 - 20%	41.2	48.9	12.1	7.1	14.2
21 - 40%	33.1	36.2	21.8	22.2	21.7
41 - 60%	11.2	9.5	18.0	18.0	18.0
51 - 80%	4.5	2.7	11.5	13.9	10.5
Greater Than 80%	8.2	2.6	29.5	34.4	27.4
Median	23.8	20.5	57.1	61.9	53.9
Sample Size					
Weighted (1000)	141,131	112,215	28,916	8,526	20,390
Unweighted	8,885	7,098	1,787	519	1,268

SOURCE: Weighted tabulations from the Quarterly Analysis File from the 1982-83 Consumer Expenditure Survey.

^aAdjusted gross income equals gross income minus the standard deduction, work expense deduction, dependent care deduction, and medical deduction.

TABLE C.7

DISTRIBUTION OF WORK EXPENSES AS A PERCENT OF EARNINGS
FOR URBAN HOUSEHOLDS: QUARTERLY SAMPLE
(percent)

Work Expense	All Households			Low-Income Households	
	Total	Higher-Income	Low-Income	FSP Participants	FSP Nonparticipants
Percent of Households with Earned Income	77.4	84.2	50.8	41.1	54.7
Work Expenses as a Percent of Earned Income					
0 - 10%	36.8	34.0	54.6	58.1	53.5
11 - 20%	16.6	15.6	23.4	27.3	22.2
21 - 30%	28.9	30.9	16.0	10.6	17.7
31 - 40%	13.6	15.3	3.0	2.4	3.2
41 - 50%	2.7	2.9	1.7	1.1	1.9
More Than 50%	1.3	1.3	1.3	0.4	1.6
Median	18.5	20.1	9.3	8.6	9.4
Sample Size					
Weighted (1000)	141,131	112,215	28,916	8,526	20,390
Unweighted	8,885	7,098	1,787	519	1,268

SOURCE: Weighted tabulations from the Quarterly Analysis File from the 1982-83 Consumer Expenditure Survey.