December 2007 Microdata File: Technical Documentation

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June 20, 2008

Overview

This document provides technical information on the Current Population Survey Food Security Supplement (CPS-FSS) conducted by the U.S. Census Bureau for the U.S. Department of Agriculture in December 2007. The CPS-FSS data are available from the U.S. Census Bureau in two formats: ASCII format on CD-ROM, and ASCII format via the DataFerrett system (with optional SAS code to create a SAS datafile from the ASCII data accessed via DataFerrett). The Food Security Briefing Room on the Economic Research Service Web site (URL address at the end of this document) provides additional documentation, a copy of the questionnaire, and information on the concepts and history of the food security measurement project

Technical Description: CPS Food Security Supplement December 2007 Public-Use Microdata File

The CD-ROM data file is in ASCII format and consists of 151,431 logical records. Each record represents one person in a surveyed household or one address that was selected for the core labor force survey but that either was vacant, was not a residence, could not be contacted, or refused to participate. Noninterview households (17,759) are included in the CD-ROM file with their noninterview status indicated. Interviewed households (53,960) include 133,672 person records. Of the interviewed households, 45,587 households completed the Food Security Supplement as well as the labor force survey and included 113,216 person records.

The DataFerrett system files do not include noninterview households (but do include interviewed households with Supplement data missing). Data files downloaded from FERRETT, therefore, consist of 133,672 records comprising 53,960 households.

A subset of variables on each record contains data about the household of which the person is a part. These variables have the same value for all persons in the same household.

Contents of the Data File

The file includes data in four general categories:

(1) Monthly labor force survey data and recodes, collected by the Census Bureau for the Bureau of Labor Statistics. Included are geographic, demographic, income, and employment data that may be of interest to those analyzing the Food Security Supplement data. These variables are described briefly in the data dictionary on the CD-ROM or DataFerrett. More detailed information on concepts and definitions underlying these data is available in the technical documentation for the CPS monthly labor force data, available from the Bureau of Labor Statistics.

(2) Food Security Supplement data, collected by the Census Bureau for the United States

Department of Agriculture. These data consist of answers by household respondents to questions about household food expenditures, use of food assistance programs, and experiences and behaviors related to food security. All of the Food Security Supplement data are household-level data.

(3) Food security status and scale variables calculated from the Food Security Supplement data by the Economic Research Service of the U. S. Department of Agriculture. These household-level variables (HRFS12CX-HRFS30DE) are described in detail later in this document. ***NOTE: in 2007, the food security status and scale variables are missing in month-in-sample (HRMIS) 3 and 8 because test questions in these rotations did not function as expected. Food security weights are provided to weight the remaining month-in-sample groups up to represent the population. Information on weights is provided later in this document.***

(4) Weighting variables calculated by the Census Bureau as the number of persons or households represented by each person or household in the sample. Separate weights are calculated for the Food Security Supplement, the core CPS, and, in 2007, for the six month-in-sample groups with standard food security measures. Selection of appropriate weights for statistical estimation is described later in this document.

Contents of the Food Security Supplement Questionnaire

A copy of the Food Security Supplement questionnaire is available on the ERS Web site (address at end of this document) and on the public-use data file CD-ROM available from the Census Bureau. Variable names in the data dictionary generally consist of the prefix HE (household variable, edited) followed by the question number from the questionnaire. The major sections are as follows:

(1) Food Spending (HES1A-HES8)

(2) Minimum Food Spending Needed (HES8B-HES8D)

(3) Food Assistance Program Participation (HES9-HESP9)

(4) Food Sufficiency and Food Security (HESS1-HESSHM5). This section includes the 18 food security questions that are used to calculate the 12-month Food Security Scales as well as follow-up questions that are used to calculate the 30-day food security scales.

(5) Ways of Avoiding or Ameliorating Food Deprivation – Coping Strategies (HESC1-HESCM4).

Changes from Previous Years' Food Security Supplements

The December 2007 food security supplement questionnaire remained unchanged from the December 2006 survey except as follows:

- The food security questions were reordered in the questionnaire so that all household- and adult-referenced questions are administered first, followed by the child-referenced items. The question numbers and variable names were retained from previous years to facilitate programming. Changes were made in internal screener specifications to accommodate the new order of questions, but these are transparent to data users and resulted in only negligible changes in item responses.

- Alternative versions of SS4 (“We couldn’t afford to eat balanced meals”) and SS6 (“We couldn’t feed the children a balanced meal because we couldn’t afford that”) were tested in a split-ballot. Month-

in-sample (HRMIS) 1, 2, 5, and 6 used the standard question. HRMIS 4 and 7 used SS4A, “We couldn’t afford to eat nutritious meals,” and SS6A with similar wording regarding children’s meals. HRMIS 3 and 8 used SS4B, “We couldn’t afford to eat the quality and variety of foods that we should,” and SS6B with similar wording regarding children’s meals.

Screening of the Food Security Supplement

The Food Security Supplement includes several screens to reduce respondent burden and to avoid asking questions that may seem inappropriate to respondents given other information they have provided in the survey. The screener variables use information from the monthly labor force core data as well as from the Food Security Supplement. Households with incomes above 185 percent of the poverty threshold (HRPOOR=2, approximated from HUFAMINC and HRNUMHOU) that responded “no” to HES9 were not asked the questions on participation in food assistance programs. Households with income above 185 percent of poverty that registered no indication of food stress on HES9 or HESS1 were not asked the rest of the questions in the “Food Sufficiency and Food Security” section or those in the “Ways of Avoiding or Ameliorating Food Deprivation” section. Households that were screened out at the initial screen are assumed to be highly food secure (raw score imputed as zero). However, if they were screened out at the initial screen without having given a valid response to either screening question, then the food security scale and status variables are coded as “No Response” (-9).

There were also two “internal” screeners in the adult section and one in the child section in the main food security section (the questions that are used to calculate the Household Food Security Scale). These series of questions are divided into blocks. Households that registered no indication of food stress in the preceding block are skipped over the remaining blocks and responses to questions in the skipped blocks are assumed to be negative. However, if they were screened out without having given a valid response to any of the questions in the scale, then the food security scale and status variables are coded as “No Response” (-9).

The screening rules that determine whether a household was asked the questions in the food security scale varied somewhat during the first four years of fielding the Food Security Supplement (1995-98). These different screening procedures affected the estimated prevalence of food security differently in each year. From 1998-2007, screening procedures have remained unchanged and prevalence rates are directly comparable. The variable HRFS12CX indicates screening status under the “common screen” that allows comparisons of food security prevalence rates across all years since data were first collected in 1995. To compare 2007 prevalence rates to those for 1995, 1996, or 1997, users will need to edit the food security status variable of interest to “high food security” (raw score=0) for households that would have been screened out under the common screen (HRFS12CX=1). Comparison can then be made to variables in the common screen series (HRFS12C1, -C2, -C3, and -C4) in any earlier year’s data.

Screeners also were applied based on whether the household included any children, so that households without children were not asked questions that refer specifically to children. For this purpose, persons 17 or younger are classified as children except those who are household reference persons or spouses of household reference persons (PERRP=1, 2, or 3). Children’s Food Security Scale variables are coded as “Not in Universe” (-1) if there were no children in the household.

Food Security Status and Scale Variables

The main purpose of the Food Security Supplement is to provide information about the food security of the nation’s households. Six series of variables are provided for this purpose. The first three series indicate the food security of households, children in households, and adults in households during the 12 months prior to the survey. The remaining three series indicated the food security of households, children in households, and

adults in households during the 30 days prior to the survey. Each series includes one (or two in some series) categorical food security status variables, a raw score variable, and a scale score variable.

The food security status variables are as follows:

Household Food Security Scale, 12-Month Reference Period

- HRFS12M1 is a categorical variable that classifies households in three categories: food secure, low food security, and very low food security. Users may combine the latter two categories as food insecure.

- HRFS12MD is the same as HRFS12M1 except that the food-secure category is subdivided to differentiate households that reported no food-insecure conditions (high food security) from those that reported one or two food-insecure conditions (marginal food security).

- HRFS12M3 is the raw score—a count of the number of questions in the 12-month Household Food Security Scale that were affirmed by the household respondent.

- HRFS12M4 is the scale score, a continuous score based on fitting the data to a single-parameter Rasch model using item calibrations calculated from the 1998 data. Computed values range from about 1 to 14. Scale scores for households that affirmed no items cannot be calculated within the Rasch model. These households are food secure, but the degree of their food security is not known and may vary widely from household to household. They are assigned scale scores of -6 to remind users that they require special handling in analyses that assume linearity of the scale scores.

Children's Food Security Scale, 12-Month Reference Period.A set of food security variables indicating the food security of children in the household is calculated from responses to the 8 questions in the scale that ask specifically about food conditions among the children.

- HRFS12MC is a categorical variable that classifies households in three categories based on the food security of children in the household: food secure, low food security, and very low food security. Note that the coding of this variable differs from that of HRFS12M5 in 2004 and earlier years. HRFS12MC differentiates households with low food security among children (raw score 2, 3, and 4) from households in which children were food secure (raw score 0 and 1). The category very low food security among children in the 2005 and later years (HRFS12MC=3) is exactly equivalent to the category food insecure with hunger among children (HRFS12M5=2) in 2004 and earlier years.

- HRFS12M6 is the raw score on the 12-month child-referenced items.

- HRFS12M7 is the Rasch-model-based scale score on the Children's Food Security Scale.

Adult Food Security Scale, 12-Month Reference Period. A set of food security status variables indicating the level of food security among adults in the household is calculated from responses to the 10 questions in the scale that ask specifically about food conditions among adults in the household, and of the household in general. This variable provides a more nearly comparable measure of food security between households with and without children, or among households with children in different age ranges than does the Household Food Security Scale (the HRFS12M1—M4 series).

- HRFS12M8 is a categorical variable based on the scale score (HRFS12ME) that classifies households in four categories of food security among adults: High, marginal, low, and very low. Users may combine the first two categories as indicating food security among adults and the latter two as indicating food

insecurity among adults.

- HRFS12M9 is the raw score on the 12-month adult- and household-referenced items.
- HRFS12ME is the Rasch-model-based scale score on the Adult Food Security Scale.

Household Food Security Scale, 30-Day Reference Period. HRFS30D1, -D2, -D3 and -D4 correspond to HRFS12M1, -MD, -M3, and -M4, except that they are based on food security conditions during the 30-day period prior to the food security survey rather than the 12-month period. *Note: these variables are not comparable with the 30-day food security variables in 2004 and earlier years' data (HRFS30M1, M2, and M3). The earlier years' measures were based on only a subset of the items in the scale in 2005 and later years.*

Children's Food Security Scale, 30-Day Reference Period. HRFS30D5, -D6, and -D7 correspond to HRFS12MC, -M6, and -M7, except that they are based on food security conditions among children during the 30-day period prior to the food security survey rather than the 12-month period.

Adult Food Security Scale, 30-Day Reference Period. HRFS30D8, -D9, and -DE correspond to HRFS12M8, -M9, and -ME, except that they are based on food security conditions among adults during the 30-day period prior to the food security survey rather than the 12-month period.

Constructing Household Characteristics from Person Records

To compute some household characteristics such as household size, presence of children, or presence of elderly members, it is necessary to identify the records of all persons in the same household. Households are uniquely and completely identified by three variables in combination: State of residence (GESTCEN), and two household identifiers (HRHHID and HRHHID2). Characteristics of the household reference person can be assigned from the person record with PERRP 1 or 2, which will always be the record with the lowest-numbered PERRP in the household. To match to other months' CPS files, add the HRMIS variable to the household identification, adjusting one of the files for the difference in survey month.

Weights—Estimating Population Distributions of Person and Household Characteristics

The CPS is a complex probability sample, and interviewed households as well as persons in those households are assigned weights so that the full interviewed sample represents the total national non-institutionalized civilian population. Initial weights are assigned based on probability of selection into the sample, and weights are then adjusted iteratively to match population controls for selected demographic characteristics at State and national levels. There are three sets of household and person weights in this data file: (1) labor force survey weights, (2) Food Security Supplement weights, and (3) food security prevalence weights.

The labor force survey weights, HWHHWGT for households and PWSSWGT for persons, are positive for persons in all interviewed households (except that person weights for persons in the armed forces are zero or missing). These weights would be appropriate for analyzing whether households or persons who completed the Supplement differed from those who declined to complete the Supplement.

About 15 percent of eligible households completed the core labor force survey but declined to complete the Food Security Supplement. The Supplement weights, HHSUPWGT for households and PWSUPWGT for persons, are adjusted for Supplement nonresponse so that the Supplement respondents represent the national civilian non-institutionalized population. These weights are appropriate for estimating household distributions

of variables in the Food Security Supplement, except food security status.

Measures of food security for households in month-in-sample (HRMIS) 3 and 8 are not directly comparable with those in the rest of the sample or in other years because the test questions with “quality and variety of foods” wording did not function as near equivalents of the “balanced meals” and “nutritious meals” wording. Food security prevalence weights, HHFSWGT for households and PWFSWGT for persons, are adjusted so that the remaining six month-in-sample groups approximately represent the national civilian non-institutionalized population. The adjustments were calculated to maintain the number of households with children and without children and the number of adults in households with and without children, and the number of children. Estimates of some other subpopulation sizes based on the food security prevalence weights may differ slightly from those estimated from the full sample.

Household weights are attached to all person records in the household. To estimate household frequency distributions, the sample must be limited to one record for each household. This is usually accomplished by limiting the sample to records of household reference persons (PERRP=1 or 2). Noninterview or nonsupplement households must be excluded from these analyses based on HRINTSTA or HRSUPINT.

All weight variables have four implied decimal places in the CD-ROM (the decimal point is not included). Divide the weight variables by 10,000 for analysis in units or by 10,000,000 for analysis in thousands of persons or thousands of households. The format of weight variables downloaded from DataFerrett are somewhat unpredictable. Sometimes they are in units; sometimes they have four implied decimal places. These should be checked prior to use.