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SURVEY OF INCOME AND PROGRAM PARTICIPATION (SIPP)
2008 PANEL
WAVE 13 TOPICAL MODULE MICRODATA FILE

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ABSTRACT

Survey of Income and Program Participation (SIPP) 2008 Panel Wave 13 Topical Module Microdata File, [machine-readable data file] / conducted by the U.S. Census Bureau. Washington: The Bureau [producer and distributor], 2015.

Type of File

Microdata; unit of observation is an individual.

Universe Description

The universe is the resident population of the United States, excluding persons living in institutions and military barracks.

Subject-Matter Description

The file contains data primarily from the topical module portion of the questionnaire. However, for purposes of matching persons to the core file, which was released separately, the beginning of the file contains identifying information as well as some basic demographics and social characteristics that are also contained in the core file. The identifying information includes sample unit, household address id, and entry address id. Demographic and social characteristics include age, sex, race (White alone; Black alone; Asian alone; Residual), ethnic origin, marital status, household relationship, and education. Data in this topical module file include professional certifications and educational certificates.

The sample in each wave consists of 4 rotation groups, each interviewed in a different month. For Wave 13, the interview months were from September 2012 to December 2012. For each group, the reference period for reporting labor force activity and income is the four calendar months preceding the interview month.

SIPP is a longitudinal survey where each sampled household and each descendent household is reinterviewed at 4-month intervals for each interview or "wave." This file contains the results of the thirteenth interview. Unique codes are included on each record to allow linking together the same persons from the preceding and subsequent waves.

Geographic Coverage

United States. No geography below the national level is shown on this file. State and metropolitan status are shown. Codes are included for 50 individual States and the District of Columbia, **although the sample was not designed to produce State estimates**.

Technical Description

File Structure: Rectangular. Each logical record for a sampled person includes information on the household and family of which the person was a part during each month of the reference period, as well as characteristics of the person. Beginning in 1990 the unit observation changed from one record for each person to **one record for each person for each month in sample.**

File Size: 76,034 logical records; 132 characters per record

File Sort Sequence of Sample Units: Sampling unit sequence number, by entry address ID, by person number within sampling unit and reference month.

Reference Materials

Survey of Income and Program Participation (SIPP) 2008 Panel, Wave 13 Topical Module Microdata File Technical Documentation. The documentation includes this abstract, the data dictionary, an index to the data dictionary, questionnaire facsimiles, and general information on SIPP.

Survey of Income and Program Participation Users' Guide. The Users' Guide contains a general overview of the file as well as chapters on survey design and content, structure and use of cross-sectional files, linking waves and reliability of the data. It is available at http://www.census.gov/programs-surveys/sipp/methodology/users-guide.html

Related Reports Online and in Print

Related reports include working papers, compilations of papers presented at annual meetings of the American Statistical Association, articles appearing in the *Journal of Economic and Social Measurement*, and reports in the P-70 series of the Current Population Reports. These reports are available online in PDF in the Publications Library at http://census.gov/library/publications.html

Related Machine-Readable Data Files

SIPP files from all Waves of the 1984 through 1993 Panels, 1996 Panel, 2001 Panel, 2004 Panel, and 2008 Panel are available from the Customer Services Center. Files (1990 forward) may be downloaded from the SIPP FTP website at http://thedataweb.rm.census.gov/ftp/sipp_ftp.html

File Availability

You can order the file on disc from the Customer Services Center at (301) 763-INFO (4636) or through our online sales catalog (click “Catalogs” on the Census Bureau’s home page). This file also may be downloaded from the SIPP FTP website at http://thedataweb.rm.census.gov/ftp/sipp_ftp.html

FILE INFORMATION

Matching Topical Module File with Core File

Since the core and topical module data are released as separate files, it may be necessary to match the two files. The two files contain the following information for linking purposes.

SSUID	Sample unit identifier
SPANEL	Panel year
SWAVE	Wave of data collection
SROTATON	Rotation of data collection
TFIPSST	FIPS State Code
EOUTCOME	Interview status code for this household
SHHADID	Household address ID differentiates hhlds in sample unit
SINTHHID	Household address ID of person in interview month
RFID	Family ID number for this month
RFID2	Family ID excluding related subfamily members
EPPIDX	Person index
EENTAID	Address ID of household where person entered sample
EPPPNUM	Person number
EPOPSTAT	Population status based on age in fourth reference month
EPPINTVW	Person's interview status
EPPMIS4	Person's fourth month interview status
ESEX	Sex of this person
ERACE	Race of this person
EORIGIN	Spanish, Hispanic or Latino
WPFINWGT	Person weight
ERRP	Household relationship
EMS	Marital status
EPNMOM	Person number of mother
EPNDAD	Person number of father
EPNGUARD	Person number of guardian
EPNSPOUS	Person number of spouse
RDESGPNT	Designated parent or guardian flag
TAGE	Age as of last birthday
EEDUCATE	Highest degree received or grade completed

Geographic Coverage

United States. State and metropolitan status are shown. Codes are included for 50 individual States and the District of Columbia, **although the sample was not designed to produce State estimates**. The file identifies the metropolitan status code for each household.

Identification Number System

The SIPP identification scheme is designed to uniquely identify individuals in each wave, provide a means of linking the same individuals over time, and group individuals into households and families over time.

The various components of the identification scheme are listed below:

SSUID	Sample Unit Identification Number
SINTHHID	Address ID
EENTAID	Entry Address ID
EPPPNUM	Person Number

The sample unit identification number was created by scrambling together the PSU, segment, and serial numbers used for Census Bureau administrative purposes. This identifier is constructed the same way on each wave regardless of moves, to enable matching from wave to wave.

The two-digit address ID code identifies each household associated with the same sample unit identification number. The first digit of the address ID code indicates the wave in which that address was first assigned for interview. The second digit sequentially numbers multiple households that have the same serial number. The address ID code is 11 for all sample addresses in Wave 1. As SIPP sample persons move to new addresses, new address ID codes are assigned. Any new address to which sample unit members moved during Wave 4 is numbered in the 40's.

The person ID is a five-digit number consisting of the two-digit entry address ID and a three-digit person number. Person numbers 101, 102, etc., are assigned in Wave 1; 201, 202, etc., are assigned to persons added to the roster in Wave 2, and so forth. This five-digit number is not changed or updated, regardless of moves.

The sampling unit serial number and address ID code uniquely identifies each household in any given wave. The sampling unit serial number can link all households in subsequent waves back to the original Wave 1 household.

Topcoding of Income Variables

To protect against the possibility that a user might recognize the identity of a SIPP respondent with very high income, income from every source is "topcoded" so that no individual income amounts above $150,000 are revealed. While the data dictionary indicates a topcode of 50,000 for monthly income, this topcode will rarely be used. In most cases the monthly income is shown as an individual dollar amount of $12,500, with $12,500 actually representing "$12,500 or more." (The $150,000 annual income topcode is $12,500 multiplied by 12 months). Individual monthly amounts above $12,500 may occasionally be shown if the respondent's income varied considerably from month to month, as long as the average does not exceed $12,500. For example, if a respondents' income from a single job were concentrated in only one of the four reference months, a figure as high as $50,000 could be shown. (Income from interest or property have lower topcodes).

Summary income figures on the person, family, and household records are simple sums of the components shown on the file after topcoding, and are not independently topcoded. Thus, a person with high income from several sources (jobs, businesses, property) could have aggregate monthly income well over the topcode for each source. Families and households with a number of high income members could theoretically have aggregate income shown well over $150,000, though well below the $1.5 million shown as the highest allowable value in the data dictionary.

The user is cautioned against trying to make much use of the occasional monthly figures above $12,500, except in calculating aggregates or observing patterns across the 4-month period for a single individual, family, or household. Those units with higher monthly amounts shown are a biased sample of high income units, more likely to include units with income from multiple sources than other units with equally high aggregate income which comes from a single source.

INDEX TO 2008 WAVE 13 TOPICAL MODULE FILE

Key to Concept Labels

AEC - Professional Certifications and Educational Certificates Variables
ED - Education Variables
FA - Family Variables
HH - Household Variables
PE - Person, Demographic, and Coverage Variables
SU - Sample Unit Variables
WW - Weighting Variables

	Description	Variable	Position
AEC:	Can cert be used to get a job	IJOBPCER	113 - 114
AEC:	Demo skills take test or exam to earn cert or license	IEXPCERT	119 - 120
AEC:	Ever earned this type of certificate	ICERT	123 - 124
AEC:	Have a professional or state or industry cert	IPROCERT	105 - 106
AEC:	How long to earn certificate	ITIMCERT	131 - 132
AEC:	Is certification or license required	IRJPCERT	115 - 116
AEC:	MOST RECENT completed certificate	IFLDCERT	125 - 126
AEC:	Mainly for work-related or personal interest	IWHYPCER	109 - 110
AEC:	Mainly self-study or classes or course	ISDYCERT	129 - 130
AEC:	Major subject or field of study	IFLDPCER	111 - 112
AEC:	Take course or training to earn cert or license	ITRNPCER	117 - 118
AEC:	Take test or class or earn CEUs	ICDPCERT	121 - 122
AEC:	Type of school or organization	ISCHCERT	127 - 128
AEC:	Universe indicator.	EAECUNV	103 - 104
AEC:	Who awarded this certification or license	IWHOPCER	107 - 108
ED:	Highest Degree received or grade completed	EEDUCATE	90 - 91
FA:	Family ID Number for this month	RFID	33 - 35
FA:	Family ID excluding related subfamily members	RFID2	36 - 38
HH:	FIPS State Code	TFIPSST	25 - 26
HH:	Interview Status code for this household	EOUTCOME	30 - 32
PE:	Address ID of hhld where person entered sample	EENTAID	42 - 44
PE:	Age as of last birthday	TAGE	69 - 70
PE:	Designated parent or guardian flag	RDESGPNT	88 - 89
PE:	Household relationship	ERRP	67 - 68
PE:	Marital status	EMS	71 - 71
PE:	Person index	EPPIDX	39 - 41
PE:	Person longitudinal key	LGTKEY	92 - 99
PE:	Person number	EPPPNUM	45 - 48
PE:	Person number of father	EPNDAD	80 - 83
PE:	Person number of guardian	EPNGUARD	84 - 87
PE:	Person number of mother	EPNMOM	76 - 79
PE:	Person number of spouse	EPNSPOUS	72 - 75
PE:	Person's 4th month interview status	EPPMIS4	52 - 52
PE:	Person's interview status	EPPINTVW	50 - 51

	Description	Variable	Position
PE:	Population status based on age in 4th reference month	EPOPSTAT	49 - 49
PE:	Sex of this person	ESEX	53 - 53
PE:	Spanish, Hispanic or Latino	EORIGIN	55 - 56
PE:	The race(s) the respondent is	ERACE	54 - 54
SU:	Hhld Address ID differentiates hhlds in sample unit	SHHADID	27 - 29
SU:	Hhld Address ID of person in interview month	SINTHHID	100 - 102
SU:	Rotation of data collection	SROTATON	24 - 24
SU:	Sample Code - Indicates Panel Year	SPANEL	18 - 21
SU:	Sample Unit Identifier	SSUID	6 - 17
SU:	Sequence Number of Sample Unit - Primary Sort Key	SSUSEQ	1 - 5
SU:	Wave of data collection	SWAVE	22 - 23
WW:	Person weight	WPFINWGT	57 - 66

ALPHABETICAL VARIABLE LISTING TO
2008 WAVE 13 TOPICAL MODULE FILE

Key to Concept Labels

AEC - Professional Certifications and Educational Certificates Variables
ED - Education Variables
FA - Family Variables
HH - Household Variables
PE - Person, Demographic, and Coverage Variables
SU - Sample Unit Variables
WW - Weighting Variables

Variable		Description	Position
EAECUNV	AEC:	Universe indicator.	103 - 104
EEDUCATE	ED:	Highest Degree received or grade completed	90 - 91
EENTAID	PE:	Address ID of hhld where person entered sample	42 - 44
EMS	PE:	Marital status	71 - 71
EORIGIN	PE:	Spanish, Hispanic or Latino	55 - 56
EOUTCOME	HH:	Interview Status code for this household	30 - 32
EPNDAD	PE:	Person number of father	80 - 83
EPNGUARD	PE:	Person number of guardian	84 - 87
EPNMOM	PE:	Person number of mother	76 - 79
EPNSPOUS	PE:	Person number of spouse	72 - 75
EPOPSTAT	PE:	Population status based on age in 4th reference month	49 - 49
EPPIDX	PE:	Person index	39 - 41
EPPINTVW	PE:	Person's interview status	50 - 51
EPPMIS4	PE:	Person's 4th month interview status	52 - 52
EPPPNUM	PE:	Person number	45 - 48
ERACE	PE:	The race(s) the respondent is	54 - 54
ERRP	PE:	Household relationship	67 - 68
ESEX	PE:	Sex of this person	53 - 53
ICDPCERT	AEC:	Take test or class or earn CEUs	121 - 122
ICERT	AEC:	Ever earned this type of certificate	123 - 124
IEXPCERT	AEC:	Demo skills take test or exam to earn cert or license	119 - 120
IFLDCERT	AEC:	MOST RECENT completed certificate	125 - 126
IFLDPCER	AEC:	Major subject or field of study	111 - 112
IJOBPCER	AEC:	Can cert be used to get a job	113 - 114
IPROCERT	AEC:	Have a professional or state or industry cert	105 - 106
IRJPCERT	AEC:	Is certification or license required	115 - 116
ISCHCERT	AEC:	Type of school or organization	127 - 128
ISDYCERT	AEC:	Mainly self-study or classes or course	129 - 130
ITIMCERT	AEC:	How long to earn certificate	131 - 132
ITRNPCER	AEC:	Take course or training to earn cert or license	117 - 118
IWHOPCER	AEC:	Who awarded this certification or license	107 - 108
IWHYPCER	AEC:	Mainly for work-related or personal interest	109 - 110
LGTKEY	PE:	Person longitudinal key	92 - 99

SIPP 2008 WAVE 13 TOPICAL MODULE MICRODATA FILES

Variable		Description	Position
RDESGPNT	PE:	Designated parent or guardian flag	88 - 89
RFID	FA:	Family ID Number for this month	33 - 35
RFID2	FA:	Family ID excluding related subfamily members	36 - 38
SHHADID	SU:	Hhld Address ID differentiates hhlds in sample unit	27 - 29
SINTHHID	SU:	Hhld Address ID of person in interview month	100 - 102
SPANEL	SU:	Sample Code - Indicates Panel Year	18 - 21
SROTATON	SU:	Rotation of data collection	24 - 24
SSUID	SU:	Sample Unit Identifier	6 - 17
SSUSEQ	SU:	Sequence Number of Sample Unit - Primary Sort Key	1 - 5
SWAVE	SU:	Wave of data collection	22 - 23
TAGE	PE:	Age as of last birthday	69 - 70
TFIPSST	HH:	FIPS State Code	25 - 26
WPFINWGT	WW:	Person weight	57 - 66

HOW TO USE THE DATA DICTIONARY

The Data Dictionary describes the file contents and provides locations for each variable (record layout of the public-use computer tape file.) The first line ("D" Line) of each data item description gives the variable name, size of the data field, and the begin position of that field. The components include a short mnemonic or field name for use with software packages; field size; starting position; and a description of field contents with possible values.

The next few lines contain descriptive text and any applicable notes. Categorical value codes and labels are given where needed. Comment notes marked by an (*) are provided throughout for the rest of the dictionary components. Comments should be removed from the machine-readable version of the data dictionary before using it to help access the data file.

The first line of each data item description begins with the character "D" (left-justified, two characters). The "D" flag indicates lines in the data dictionary containing the name, size and begin position of each data item. The second line of each data item description begins with the character "T" (left-justified, two characters). The "T" flag indicates lines in the data dictionary containing the category code and short description of the variable. The line beginning with the character "U" describes the universe for that item. Lines containing categorical value codes and labels follow next and begin with the character "V". The special character (.) denotes the start of the value labels. Two examples of data item descriptions follow:

```
D IPROCERT    2    105
T AEC: Have a professional or state or industry
  cert
     PROCERT Now I'd like to ask you about
     professional certification and licensure.
     Did ... have a professional certification
     or state or industry license? **NOTE: This
     variable has not been edited**  Universe =
     All persons age 16+ (TAGE ge
     16)
V         -2 .Refused
V         -1 .Don't know
V          0 .Not answered
V          1 .Yes
V          2 .No

D ICERT       2    123
T AEC: Ever earned this type of certificate CERT
     Some people decide to enroll at a college,
     university, community college, or trade
     school to earn a certificate rather than a
     degree. Has ... ever earned this type of
     certificate? **NOTE: This variable has not
     been edited**   Universe = All persons age
     16+ (TAGE ge 16)
V         -2 .Refused
V         -1 .Don't know
V          0 .Not answered
V          1 .Yes
V          2 .No
```

SURVEY OF INCOME AND PROGRAM PARTICIPATION,
2008 PANEL WAVE 13 TOPICAL MODULE FILE DATA DICTIONARY

```
DATA         SIZE  BEGIN

D SSUSEQ      5      1
T SU: Sequence Number of Sample Unit - Primary
  Sort Key

U All persons
V    1:65000 .Sequence Number

D SSUID      12      6
T SU: Sample Unit Identifier
     Sample Unit identifier This identifier is
     created by scrambling together the PSU,
     Segment, Serial, Serial Suffix of the
     original sample address.  It may be used
     in matching sample units from different
     waves.
U All persons
V 000000000000:999999999999 .Scrambled Id

D SPANEL      4     18
T SU: Sample Code - Indicates Panel Year

U All persons
V       2008 .Panel Year

D SWAVE       2     22
T SU: Wave of data collection
     There were 16 waves of data collection in
     the 2008 Panel  Universe =
     All persons
V       1:16 .Wave of data collection

D SROTATON    1     24
T SU: Rotation of data collection
     Rotation within wave.  Each wave of data
     is collected over a four calendar month
     period.  The rotation field indicates
     which month within the wave a particular
     interview was conducted.
U All persons
V        1:4 .Rotation of data collection

D TFIPSST     2     25
T HH: FIPS State Code
     FIPS State Code Federal Information
     Processing Standards state (and state
     equivalent) code for the 50 states, and
     DC.
U All persons
V         01 .Alabama
V         02 .Alaska
V         04 .Arizona
```

```
V         05 .Arkansas
V         06 .California
V         08 .Colorado
V         09 .Connecticut
V         10 .Delaware
V         11 .DC
V         12 .Florida
V         13 .Georgia
V         15 .Hawaii
V         16 .Idaho
V         17 .Illinois
V         18 .Indiana
V         19 .Iowa
V         20 .Kansas
V         21 .Kentucky
V         22 .Louisiana
V         23 .Maine
V         24 .Maryland
V         25 .Massachusetts
V         26 .Michigan
V         27 .Minnesota
V         28 .Mississippi
V         29 .Missouri
V         30 .Montana
V         31 .Nebraska
V         32 .Nevada
V         33 .New Hampshire
V         34 .New Jersey
V         35 .New Mexico
V         36 .New York
V         37 .North Carolina
V         38 .North Dakota
V         39 .Ohio
V         40 .Oklahoma
V         41 .Oregon
V         42 .Pennsylvania
V         44 .Rhode Island
V         45 .South Carolina
V         46 .South Dakota
V         47 .Tennessee
V         48 .Texas
V         49 .Utah
V         50 .Vermont
V         51 .Virginia
V         53 .Washington
V         54 .West Virginia
V         55 .Wisconsin
V         56 .Wyoming

D SHHADID     3     27
T SU: Hhld Address ID differentiates hhlds in
  sample unit
     Household Address ID.  This field
     differentiates households within the
     sample PSU, segment, serial, serial
     suffix; that is, households spawned from
     an original sample household.  Universe =
```

```
                  All persons
V    011:169 .Household Address ID

D EOUTCOME    3     30
T HH: Interview Status code for this household

U All persons in households
V        201 .Completed interview
V        203 .Compl. partial- missing data; no
V            .TYPE-Z
V        207 .Complete partial - TYPE-Z; no
V            .futher followup
V        213 .TYPE-A, language problem
V        216 .TYPE-A, no one home (noh)
V        217 .TYPE-A, temporarily absent (ta)
V        218 .TYPE-A, hh refused
V        219 .TYPE-A, other occupied (specify)
V        234 .TYPE-B, entire hh institut. or
V            .temp. ineligible
V        248 .TYPE-C, other (specify)
V        249 .TYPE-C, sample adjustment
V        250 .TYPE-C, hh deceased
V        251 .TYPE-C, moved out of country
V        252 .TYPE-C, living in armed forces
V            .barracks
V        253 .TYPE-C, on active duty in Armed
V            .Forces
V        254 .TYPE-C, no one over age 15 years
V            .in household
V        255 .TYPE-C, no Wave 1 persons
V            .remaining in household
V        260 .TYPE-D, moved address unknown
V            .-SPAWN
V        261 .TYPE-D, moved within U.S. but
V            .outside SIPP -SPAWN
V        262 .TYPE-C, merged with another SIPP
V            .household
V        270 .TYPE-C, mover, no longer located
V            .in FR's area -PARENT
V        271 .TYPE-C, mover, new address
V            .located in same FR's area
V            .-PARENT
V        280 .TYPE-D, mover, no longer located
V            .in FR's assignment area
V            .-SPAWN

D RFID        3     33
T FA: Family ID Number for this month
     Family ID number may be used to identify
     all persons in the same family in a given
     month.  This ID is used for primary
     families, unrelated subfamilies, and
     primary and secondary individuals.
     Persons in related subfamilies have the
     primary family ID in this field.
U All persons
V      1:120 .Family ID number
```

```
D RFID2       3     36
T FA: Family ID excluding related subfamily
  members
     Family ID number excluding members of
     related subfamilies. This ID is used for
     all persons except related subfamily
     members.
U All persons except those in related subfamilies
   (excludes persons with ESFTYPE = 2)
V         -1 .Not in Universe
V      1:120 .Family ID number

D EPPIDX      3     39
T PE: Person index
     Person index.  This field differentiates
        persons within the sample unit. Person
         index is unique within the sample unit
     and      wave.
U All persons
V      1:999 .Person index

D EENTAID     3     42
T PE: Address ID of hhld where person entered
  sample
     Address ID of the household that this
     person belonged to at the time this person
     first became part of the sample.  Universe
     = All persons
V    011:169 .Entry Address ID

D EPPPNUM     4     45
T PE: Person number
     Person number.  This field differentiates
     persons within the sample unit. Person
     number is unique within the sample unit.
     Universe = All persons
V  0101:1699 .Person Number

D EPOPSTAT    1     49
T PE: Population status based on age in 4th
  reference month
     Population status.  This field identifies
     whether or not a person was eligible to be
     asked a full set of questions, based on
     his/her age in the fourth month of the
     reference period.
U All persons
V          1 .Adult (15 years of age or older)
V          2 .Child (Under 15 years of age)

D EPPINTVW    2     50
T PE: Person's interview status

U All persons
V          1 .Interview (self)
V          2 .Interview (proxy)
```

```
V          3 .Noninterview - Type Z
V          4 .Noninterview - pseudo Type Z.
V            .Left sample during the
V            .reference period
V          5 .Children under 15 during
V            .reference period

D EPPMIS4     1     52
T PE: Person's 4th month interview status
     Person's interview status for month 4
U All persons
V          1 .Interview
V          2 .Non-interview

D ESEX        1     53
T PE: Sex of this person

U All persons
V          1 .Male
V          2 .Female

D ERACE       1     54
T PE: The race(s) the respondent is
     What race(s) does ... consider
     herself/himself to be? 1 White 2 Black or
     African American 3 American Indian or
     Alaska Native 4 Asian 5 Native Hawaiian or
     Other Pacific Islander
U All persons
V          1 .White alone
V          2 .Black alone
V          3 .Asian alone
V          4 .Residual

D EORIGIN     2     55
T PE: Spanish, Hispanic or Latino
     Is ... Spanish, Hispanic or Latino?
U All persons
V          1 .Yes
V          2 .No

D WPFINWGT   10     57
T WW: Person weight
     Final person weight Four implied decimal
     places.
U All persons
V 0.0000:99999.9999 .Final person weight

D ERRP        2     67
T PE: Household relationship

U All persons
V          1 .Reference person with related
V            .persons in household
V          2 .Reference Person without related
V            .persons in household
V          3 .Spouse of reference person
```

```
V          4 .Child of reference person
V          5 .Grandchild of reference person
V          6 .Parent of reference person
V          7 .Brother/sister of reference person
V          8 .Other relative of reference person
V          9 .Foster child of reference person
V         10 .Unmarried partner of reference
V            .person
V         11 .Housemate/roommate
V         12 .Roomer/boarder
V         13 .Other non-relative of reference
V            .person

D TAGE        2     69
T PE: Age as of last birthday
     Edited and imputed age as of last
     birthday. Topcoding combines persons into
     last two single year of age groups. User
     should combine last two age groups for
     microdata analysis.
U All persons
V       0 .Less than 1 full year old V
        1:88 .Number of years old

D EMS         1     71
T PE: Marital status

U All adults (EPOPSTAT = 1)
V          1 .Married, spouse present
V          2 .Married, spouse absent
V          3 .Widowed
V          4 .Divorced
V          5 .Separated
V          6 .Never Married

D EPNSPOUS    4     72
T PE: Person number of spouse
      Universe = All persons V 0101:1699
.Person Number
V       9999 .Spouse not in household or person
V            .not married

D EPNMOM      4     76
T PE: Person number of mother
      Universe = All persons V 0101:1699
.Person Number
V       9999 .No mother in household

D EPNDAD      4     80
T PE: Person number of father
      Universe = All persons V 0101:1699
.Person Number
V       9999 .No father in household

D EPNGUARD    4     84
T PE: Person number of guardian
      Universe = All persons, 19
```

```
     years and under  TAGE
V         -1 .Not in Universe
V  0101:1699 .Person Number
V       9999 .Guardian not in household

D RDESGPNT    2     88
T PE: Designated parent or guardian flag
     Is ... the designated parent or guardian
     of children under age 18 who live in this
     household?
U All persons 15+ at the end of the reference
  period.  EPOPSTAT = 1
V         -1 .Not in Universe
V          1 .Yes
V          2 .No

D EEDUCATE    2     90
T ED: Highest Degree received or grade completed
     What is the highest level of school ...
     has completed or the highest degree ...
     has received?
U All persons age 15 and over
V -1 .Not in Universe
V         31 .Less Than 1st Grade
V         32 .1st, 2nd, 3rd or 4th grade
V         33 .5th Or 6th Grade
V         34 .7th Or 8th Grade
V         35 .9th Grade
V         36 .10th Grade
V         37 .11th Grade
V         38 .12th grade, no diploma
V         39 .High School Graduate - (diploma
V            .or GED or equivalent)
V         40 .Some college, but no degree
V         41 .Diploma or certificate from a
V            .vocational, technical,
V            .trade or business school
V            .beyond high
V         43 .Associate (2-yr) college degree
V            .(include
V            .academic/occupational
V            .degree)
V         44 .Bachelor's degree (for example:
V            .BA, AB, BS)
V         45 .Master's degree (For example: MA,
V            .MS, MEng, MEd, MSW, MBA)
V         46 .Professional School degree (for
V            .example: MD(doctor),DDS(dentist),JD(la-
V            .wyer)
V         47 .Doctorate degree (for example:
V            .Ph.D., Ed.D)

D LGTKEY      8     92
T PE: Person longitudinal key
     NOTE: This variable is not used on the
     Preliminary Wave 1 file. The longitudinal
     key is in sort by scrambled id (SSUID).
```

```
     The first five digits of the key contain a
     longitudinal sequence number which is
     unique for the sample unit across all
     waves.  The last three digits contain a
     person's index which identifies a person
     within a sample unit and is unique for a
     person across all waves.  This key can be
     used to merge people longitudinally.
U All persons
V 1001:70000001 .Longitudinal Key

D SINTHHID    3    100
T SU: Hhld Address ID of person in interview
  month
     Address ID of this person at time of
     interview (fifth month).  Universe =
             All persons
V          0 .Not In Universe
V    011:169 .Household Address ID

D EAECUNV     2    103
T AEC: Universe indicator.
     Universe indicator.  Universe =
        All persons age 16+ (TAGE ge 16)
V         -1 .Not in Universe
V          1 .In universe

D IPROCERT    2    105
T AEC: Have a professional or state or industry
  cert
     PROCERT Now I'd like to ask you about
     professional certification and licensure.
     Did ... have a professional certification
     or state or industry license? **NOTE: This
     variable has not been edited**  Universe =
     All persons age 16+ (TAGE ge
     16)
V         -2 .Refused
V         -1 .Don't know
V          0 .Not answered
V          1 .Yes
V          2 .No

D IWHOPCER    2    107
T AEC: Who awarded this certification or license
     WHOPCERT The next set of questions refers
     to ...'s MOST RECENT certification or
     license. Who awarded this certification or
     license? **NOTE: This variable has not
     been edited**  Universe = All persons age 16+
     (TAGE ge 16)   and IPROCERT=1
V         -2 .Refused
V         -1 .Don't know
V          0 .Not answered
V          1 .Federal government
V          2 .State government
```

```
V          3 .Local government
V          4 .Industry
V          5 .Business, company, or non-profit
V            .organization
V          6 .Professional Association
V          7 .Other

D IWHYPCER    2    109
T AEC: Mainly for work-related or personal
  interest
     WHYPCERT Did ... get this certification or
     license mainly for work-related reasons or
     mainly for personal interest? **NOTE: This
     variable has not been edited**  Universe =
     All persons age 16+ (TAGE ge 16)and
     IPROCERT=1 V-2 .Refused
V         -1 .Don't know
V          0 .Not answered
V          1 .Mainly work-related
V          2 .Mainly personal interest

D IFLDPCER    2    111
T AEC: Major subject or field of study
     FLDPCERT What is the major subject or
     field of study for this certification or
     license? **NOTE: This variable has not
     been edited**  Universe = All persons
     age 16+ (TAGE ge 16)and IPROCERT=1
V         -2 .Refused
V         -1 .Don't know
V          0 .Not answered
V          1 .Architecture and engineering
V          2 .Computer networking and
V            .administration
V          3 .Computer applications and design
V          4 .Business/finance management
V          5 .Administrative support
V          6 .Nursing/nurse assisting
V          7 .Other medical/health care
V          8 .Cosmetology
V          9 .Culinary arts
V         10 .Protective services
V         11 .Legal and social services
V         12 .Education
V         13 .Construction and manufacturing
V            .trades
V         14 .Transportation and material moving
V         15 .Public utilities
V         16 .Other

D IJOBPCER    2    113
T AEC: Can cert be used to get a job
     JOBPCERT Can this certification or license
     be used if ... wanted to get a job with
     any employer in that field?
```

```
     (CERTIFICATIONS AND LICENSES THAT ARE
     RECOGNIZED STATE-WIDE SHOULD BE RECORDED
     AS "YES".) **NOTE: This variable has not
     been edited**  Universe = All persons
     age 16+ (TAGE ge 16)and IPROCERT=1
V         -2 .Refused
V         -1 .Don't know
V          0 .Not answered
V          1 .Yes
V          2 .No

D IRJPCERT    2    115
T AEC: Is certification or license required
     REQJOBPCERT Is this certification or
     license required for ...'s current or most
     recent job? **NOTE: This variable has not
     been edited**  Universe = All persons age
     16+ (TAGE ge 16)  and IPROCERT=1
V         -2 .Refused
V         -1 .Don't know
V          0 .Not answered
V          1 .Yes
V          2 .No
V          3 .Not applicable(never worked)

D ITRNPCER    2    117
T AEC: Take course or training to earn cert or
  license
     TRNPCERT Did ... take courses or training
     to earn the certification or license?
     **NOTE: This variable has not been
     edited**  Universe = All persons age
     16+ (TAGE ge 16)and IPROCERT=1
V         -2 .Refused
V         -1 .Don't know
V          0 .Not answered
V          1 .Yes
V          2 .No

D IEXPCERT    2    119
T AEC: Demo skills take test or exam to earn
  cert or license
     EXAMPCERT Did ... have to demonstrate
     skills while on the job or pass a test or
     exam to earn the certification or license?
     **NOTE: This variable has not been
     edited**  Universe = All persons age
     16+ (TAGE ge 16)and IPROCERT=1
V         -2 .Refused
V         -1 .Don't know
V          0 .Not answered
V          1 .Yes
V          2 .No
```

```
D ICDPCERT    2    121
T AEC: Take test or class or earn CEUs
     CEDPCERT Did ... have to take periodic
     tests or continuing education classes or
     earn CEUs to maintain the certification or
     license? **NOTE: This variable has not
     been edited**  Universe = All persons age
     16+ (TAGE ge 16)  and IPROCERT=1
V         -2 .Refused
V         -1 .Don't know
V          0 .Not answered
V          1 .Yes
V          2 .No

D ICERT       2    123
T AEC: Ever earned this type of certificate
     CERT Some people decide to enroll at a
     college, university, community college, or
     trade school to earn a certificate rather
     than a degree.  Has ... ever earned this
     type of certificate? **NOTE: This variable
     has not been edited**  Universe =
          All persons age 16+ (TAGE ge 16)
V         -2 .Refused
V         -1 .Don't know
V          0 .Not answered
V          1 .Yes
V          2 .No

D IFLDCERT    2    125
T AEC: MOST RECENT completed certificate
     FLDCERT The next set of questions refers
     to ...'s MOST RECENT completed
     certificate. What is the major subject or
     field of study for this certificate?
     **NOTE: This variable has not been
     edited**  Universe = All persons age 16+
     (TAGE ge 16)and ICERT=1
V         -2 .Refused
V         -1 .Don't know
V          0 .Not answered
V          1 .Architecture and engineering
V          2 .Communications
V            .technologies/technologists
V          3 .Computer and information sciences
V          4 .Engineering and related
V            .technologies
V          5 .Business management
V          6 .Business support
V          7 .Marketing
V          8 .Health professions, except nursing
V          9 .Nursing
V         10 .Health technologists and
V            .technicians
V         11 .Health aides
```

```
V         12 .Cosmetology
V         13 .Culinary arts
V         14 .Personal services(other than
V            .cosmetology and culinary
V            .arts)
V         15 .Protective services
V         16 .Public and social services(other
V            .than protective services)
V         17 .Education
V         18 .Construction trades
V         19 .Manufacturing
V         20 .Mechanic and repair technologies
V         21 .Transportation and material moving
V         22 .OTHER

D ISCHCERT    2    127
T AEC: Type of school or organization
     SCHLCERT What type of school or
     organization provided the certificate
     program? **NOTE: This variable has not
     been edited**  Universe = All persons
     age 16+ (TAGE ge 16)    and ICERT=1
V         -2 .Refused
V         -1 .Don't know
V          0 .Not answered
V          1 .A community college
V          2 .A university or college other
V            .than a community college
V          3 .A trade, vocational, technical,
V            .or business school
V          4 .Business or company
V          5 .Professional organization
V          6 .Trade union
V          7 .Non-profit organization
V          8 .Federal, state, or local
V            .government
V          9 .Military
V         10 .Someplace else

D ISDYCERT    2    129
T AEC: Mainly self-study or classes or course
     STUDYCERT Was the training for this
     certificate mainly self-study or mainly
     classes or courses with an instructor?
     **NOTE: This variable has not been
     edited**  Universe = All persons age 16+
     (TAGE ge 16)and ICERT=1
V         -2 .Refused
V         -1 .Don't know
V          0 .Not answered
V          1 .Mainly self-study
V          2 .Mainly Instructor

D ITIMCERT    2    131
T AEC: How long to earn certificate
     TIMECERT How long did it take to earn this
```

```
     certificate? **NOTE: This variable has not
     been edited**  Universe = All persons age
     16+ (TAGE ge 16)  and ICERT=1
V         -2 .Refused
V         -1 .Don't know
V          0 .Not answered
V          1 .Less than one week
V          2 .One week to one month
V          3 .More than one month
```

SOURCE AND ACCURACY STATEMENT FOR THE SURVEY OF INCOME AND PROGRAM PARTICIPATION 2008 WAVE 1 TO WAVE 16 PUBLIC USE FILES[2]

SOURCE OF DATA

Source of Data. The data were collected in the 2008 Panel of the Survey of Income and Program Participation (SIPP). The population represented in the 2008 SIPP (the population universe) is the civilian noninstitutionalized population living in the United States. The institutionalized population, which is excluded from the population universe, is composed primarily of the population in correctional institutions and nursing homes (91 percent of the 4.1 million institutionalized people in Census 2000).

The 2008 Panel of the SIPP sample is located in 351 Primary Sampling Units (PSUs), each consisting of a county or a group of contiguous counties. Of these 351 PSUs, 123 are self-representing (SR) and 228 are non-self-representing (NSR). SR PSUs have a probability of selection of one. NSR PSUs have a probability of selection of less than one. Within PSUs, housing units (HUs) were systematically selected from the master address file used for the 2000 decennial census. To account for HUs built within each of the sample areas after the 2000 census, a sample containing clusters of four HUs was drawn from permits issued for construction of residential HUs up until shortly before the beginning of the panel. In jurisdictions that don't issue building permits or have incomplete addresses, we systematically sampled expected clusters of four HUs which were then listed by field personnel.

Households were classified into two strata, such that one strata had a higher concentration of low-income households than the other. We oversampled the low-income stratum by 44 percent to increase the accuracy of estimates for statistics of low-income households and program participation. Analysts are strongly encouraged to use the SIPP weights when creating estimates since households are not selected with equal probability.

Sample households within a given panel are divided into four random subsamples of nearly equal size. These subsamples are called rotation groups and one rotation group is interviewed each month. Each household in the sample was scheduled to be interviewed at four-month intervals over a period of roughly five years beginning in September 2008. The reference period for the questions is the four-month period preceding the interview month. The most recent month is designated reference month 4, the earliest month is reference month 1. In general, one cycle of four interview months covering the entire sample, using the same questionnaire, is called a wave. For example, Wave 1 rotation group 1 of the 2008 Panel was interviewed in September 2008 and data for the reference months May 2008 through August 2008 were collected.

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[2] For questions or further assistance with the information provided in this document contact: Tracy Mattingly of the Demographic Statistical Methods Division at (301) 763-6445 or via the e-mail at Tracy.L.Mattingly@census.gov.

In Wave 1, the 2008 SIPP began with a sample of about 65,500 HUs. About 13,500 of these HUs were found to be vacant, demolished, converted to nonresidential use, or otherwise ineligible for the survey. Field Representatives (FRs) were able to obtain interviews for about 42,000 of the eligible HUs. FRs were unable to interview approximately 10,000 eligible HUs in the panel because the occupants: (1) refused to be interviewed; (2) could not be found at home; (3) were temporarily absent; or (4) were otherwise unavailable. Thus, occupants of about 81 percent of all eligible HUs participated in the first interview of the panel.

For subsequent interviews, only original sample people (those in Wave 1 sample households and interviewed in Wave 1) and people living with them are eligible to be interviewed. The SIPP sample includes original sample people if they move to a new address, unless the new address was more than 100 miles from a SIPP sample area. In this case, FRs attempt telephone interviews.

Since SIPP follows all original sample members, those members that form new households are also included in the SIPP sample. This expansion of original households can be estimated within the interviewed sample, but is impossible to determine within the non-interviewed sample. Therefore, a growth factor based on the growth in the known sample is used to estimate the unknown expansion of the non-interviewed households.

Growth factors account for the additional nonresponse stemming from the expansion of non-interviewed households. They are used to get a more accurate estimate of the weighted number of non-interviewed HUs at each wave, called sample loss. To calculate sample loss we use Formula (1):

$$Sample\ Loss = \frac{(A_1 \times GF) + A_C + D_C}{I_C + (A_1 \times GF) + A_C + D_C} \tag{1}$$

where A_1 is the weighted number of Type A non-interviewed households in Wave 1, A_C is the weighted number of Type A non-interviewed households in the Current Wave, D_C is the weighted number of Type D non-interviewed households in the current wave, I_C is the weighted number of interviewed households in the current wave, and GF is the growth factor associated with the current wave.

Table A. Sample Loss and Response Rate for SIPP 2008									
			Type As		Type Ds				
Wave	Eligible HUs	Interviewed HUs	Total	Weighted Rate	Total	Weighted Rate	Growth Factor	Weighted Sample Loss	Weighted Response Rates
1	52,031	42,032	9,999	19.4%				19.4%	80.6%
2	42,481	39,000	2,921	6.9%	560	1.3%	1.01	25.9%	91.8%
3	42,779	37,651	4,159	9.7%	969	2.3%	1.02	29.0%	88.1%
4	43,176	36,195	5,693	13.2%	1,288	2.9%	1.03	32.4%	83.9%
5	43,422	35,873	6,060	14.0%	1,489	3.3%	1.04	33.3%	82.7%
6	43,544	34,891	6,894	15.9%	1,759	4.0%	1.04	35.5%	80.1%
7	43,619	33,827	7,901	18.2%	1,891	4.2%	1.05	37.5%	77.6%
8	43,609	33,417	8,231	19.0%	1,961	4.3%	1.05	38.2%	76.7%
9	43,621	32,567	8,880	20.4%	2,174	4.7%	1.04	39.7%	74.9%
10	43,690	31,445	9,877	22.7%	2,368	5.1%	1.05	41.9%	72.2%
11	43,720	31,007	10,256	23.5%	2,457	5.3%	1.05	42.7%	71.2%
12	43,678	30,716	10,381	24.0%	2,581	5.6%	1.05	43.4%	70.4%
13	43,654	30,213	10,901	25.2%	2,540	5.6%	1.05	44.4%	69.2%
14	43,600	29,810	11,272	26.0%	2,518	5.5%	1.05	44.9%	68.5%
15	43,653	28,885	11,982	27.5%	2,786	5.8%	1.06	46.5%	66.7%
16[3]	32,566	20,135	10,228	31.4%	2,203	6.1%	1.06	53.0%	62.5%

[3] Wave 16 is missing data from rotation 2 due to the government shutdown.

Table B. Percent of Type As by Nonresponse Status for SIPP 2008						
Wave	**Language Problem**	**Unable to Locate**	**No One Home**	**Temporarily Absent**	**Household Refused**	**Other**
1	1.2%	0.8%	16.6%	3.4%	67.2%	10.9%
2	0.8%		19.2%	5.2%	61.3%	13.4%
3	0.5%		18.6%	5.7%	60.7%	14.5%
4	0.4%		18.4%	3.9%	62.5%	14.7%
5	0.4%		16.6%	3.4%	64.7%	15.1%
6	0.4%		14.8%	3.7%	67.8%	13.3%
7	0.4%		15.3%	2.9%	62.8%	18.7%
8	0.2%		13.7%	2.4%	62.7%	20.9%
9	0.3%		13.8%	2.7%	62.7%	20.5%
10	0.3%		12.0%	2.2%	65.7%	19.9%
11	0.3%		10.8%	1.8%	71.4%	15.8%
12	0.2%		11.1%	2.3%	72.5%	13.9%
13	0.2%		11.1%	2.2%	72.8%	13.7%
14	0.2%		9.6%	1.7%	78.3%	10.3%
15	0.2%		10.0%	2.0%	78.1%	9.8%
16	0.2%		12.1%	1.7%	72.1%	13.9%

Note that in Table A the Wave 1 weighted sample loss rate is the same as the weighted Type A rate since growth factors and Type D (movers) are not applicable until Wave 2.

The public use files include core and supplemental (topical module) data. Core questions are repeated at each interview over the life of the panel. Topical modules include questions which are asked only in certain waves. The 2008 panel topical modules are given in Table 1.

Table 2 indicates the reference months and interview months for the collection of data from each rotation group for the 2008 panel. For example, Wave 1 rotation group 1 of the 2008 panel was interviewed in September 2008 and data for the reference months May 2008 through August 2008 were collected.

Estimation. The SIPP estimation procedure involves several stages of weight adjustments to derive the cross-sectional person level weights. First, each person is given a base weight (BW) equal to the inverse of the probability of selection of a person's household. Next, a Duplication Control Factor (DCF) is used to adjust for subsampling done in the field when the number of sample units is much larger than expected. Then a noninterview adjustment factor is applied to account for households which were eligible for the sample but which FRs could not interview in Wave 1(F_{N1})**.** Similarly for subsequent waves *i*, the noninterview adjustment factor is (F_{Ni}). A Mover's Weight (MW) is applied in Waves 2+ to adjust for persons in the SIPP universe who

move into sample households after Wave 1. The last adjustment is the Second Stage Adjustment Factor (F_{2S}). This adjusts estimates to population controls and equalizes husbands' and wives' weights. The 2008 Panel adjusts weights to both national and state level controls.

The final cross-sectional weight is $FW_c = BW * DCF * FN_1 * F_{2S}$ for Wave 1 and is $FW_c = IW * FN_2 * F_{2S}$ for Waves 2+, where IW is either $BW * DCF * F_{N1}$ or MW. Additional details of the weighting process are in *SIPP 2008: Cross-Sectional Weighting Specifications for Wave 1 and Wave 2+*.

Population Controls. The 2008 SIPP estimation procedure adjusts weighted sample results to agree with independently derived population estimates of the civilian noninstitutional population. National family type controls are obtained by taking the Current Population Survey (CPS) weights and doing a "March type" family equalization. That is, wives' weights are assigned to husbands and then proportionally adjusted to the weights of persons by month, rotation group, race, sex, age, and by the marital and family status of householders. This attempts to correct for undercoverage and thereby reduces the mean square error of the estimates. The national and state level population controls are obtained directly from the Population Division and are prepared each month to agree with the most current set of population estimates released by the U.S. Census Bureau's population estimates and projections program.

The national level controls are distributed by demographic characteristics as follows:

- Age, Sex, and Race (White Alone, Black Alone, and all other groups combined)
- Age, Sex, and Hispanic Origin

The state level controls are distributed by demographic characteristics as follows:

- State by Age and Sex
- State by Hispanic origin
- State by Race (Black Alone, all other groups combined)

The estimates begin with the latest decennial census as the base and incorporate the latest available information on births and deaths along with the latest estimates of net international migration.

The net international migration component in the population estimates includes a combination of:

- Legal migration to the U.S.,
- Emigration of foreign born and native people from the U.S.,
- Net movement between the U.S. and Puerto Rico,
- Estimates of temporary migration, and
- Estimates of net residual foreign-born population, which include unauthorized migration.

Because the latest available information on these components lags the survey date, to develop the estimate for the survey date, it is necessary to make short-term projections of these components.

Use of Weights. There are three primary weights for the analysis of SIPP data. The person month weight (one for each reference month) is for analyzing data at the person level. Everyone in the sample in a given reference month has a person month weight. The person month weight of the household reference person is used to analyze data at the household level (a household may consist of related and unrelated persons). The person month weight of the family reference person is the family weight. Use this weight to analyze family level questions. Weights are also available in the public use files for related subfamilies. Chapter 8 of the *SIPP Users' Guide* provides additional information on how to use these weights.

By selecting the appropriate reference month weight an analyst can obtain the average of an item such as income across several calendar months.

> **Example.** Using the proper weights, one can estimate the monthly average number of households in a specified income range over August 2008 to September 2008. To estimate monthly averages of a given measure, e.g., total, mean, over a number of consecutive months, sum the monthly estimates and divide by the number of months. To form an estimate for a particular month, use the <u>reference month</u> weight for the month of interest, summing over all persons or households with the characteristic of interest whose reference period includes the month of interest.

The core wave file does not contain weights for characteristics that involve a person's or household's status over two or more months (such as, number of households with a 50 percent increase in income between December 2008 and January 2009).

Adjusting Estimates Which Use Less than the Full Sample. When estimates for months with less than four rotations worth of data are constructed from a wave file, factors greater than 1 must be applied. Multiply the sum by a factor to account for the number of rotations contributing data for the month. This factor equals 4 divided by the number of rotations contributing data for the month. For example, July 2008 data are only available from rotations 1-3 for Wave 1 of the 2008 Panel, so a factor of 4/3 or 1.3333 must be applied. A list of appropriate factors is in Table 3a.

ACCURACY OF ESTIMATES

SIPP estimates are based on a sample; they may differ somewhat from the figures that would have been obtained if a complete census had been taken using the same questionnaire, instructions, and enumerators. There are two types of errors possible in an estimate based on a sample survey: sampling and nonsampling. For a given estimator, the difference between an estimate based on a sample and the estimate that would result if the sample were to include the entire population is known as sampling error. For a given estimator, the difference between the estimate that would result if the sample were to include the entire population and the true population value being estimated is known as nonsampling error. We are able to provide estimates of the magnitude of SIPP sampling error, but this is not true of nonsampling error.

Nonsampling Error. Nonsampling errors can be attributed to many sources:

- inability to obtain information about all cases in the sample
- definitional difficulties
- differences in the interpretation of questions
- inability or unwillingness on the part of the respondents to provide correct information
- errors made in the following: collection such as in recording or coding the data, processing the data, estimating values for missing data
- biases resulting from the differing recall periods caused by the interviewing pattern used and undercoverage.

Quality control and edit procedures were used to reduce errors made by respondents, coders and interviewers. More detailed discussions of the existence and control of nonsampling errors in the SIPP can be found in the *SIPP Quality Profile, 1998 SIPP Working Paper Number 230*, issued May 1999.

Undercoverage in SIPP results from missed HUs and missed persons within sample HUs. It is known that undercoverage varies with age, race, and sex. Generally, undercoverage is larger for males than for females and larger for Blacks than for non-Blacks. Ratio estimation to independent age-race-sex population controls partially corrects for the bias due to survey undercoverage. However, biases exist in the estimates to the extent that persons in missed households or missed persons in interviewed households have characteristics different from those of interviewed persons in the same age-race-sex group.

A common measure of survey coverage is the coverage ratio, the estimated population before ratio adjustment divided by the independent population control. Table C below shows SIPP coverage ratios for age-sex-race groups for one month, August 2013, prior to the ratio adjustment. The SIPP coverage ratios exhibit some variability from month to month, but these are a typical set of

coverage ratios. Other Census Bureau household surveys [like the CPS] experience similar coverage.

Table C. SIPP Average Coverage Ratios for August 2013 for Age by Race and Sex

Age	White Only		Black Only		Residual	
	Male	Female	Male	Female	Male	Female
<15	0.81	0.82	0.62	0.65	0.62	0.68
15	0.82	0.77	0.78	0.69	0.69	0.71
16-17	0.86	0.85	0.81	0.76	0.75	0.71
18-19	0.83	0.82	0.77	0.76	0.72	0.65
20-21	0.74	0.76	0.56	0.67	0.72	0.65
22-24	0.66	0.65	0.60	0.63	0.70	0.65
25-29	0.62	0.62	0.45	0.46	0.54	0.58
30-34	0.69	0.82	0.49	0.58	0.52	0.59
35-39	0.79	0.83	0.54	0.78	0.64	0.69
40-44	0.79	0.83	0.60	0.74	0.65	0.74
45-49	0.82	0.83	0.69	0.76	0.88	0.86
50-54	0.82	0.88	0.69	0.82	0.93	0.86
55-59	0.92	0.95	0.91	0.97	0.95	1.03
60-61	1.02	1.07	0.91	1.06	0.92	1.00
62-64	0.99	1.06	0.94	1.00	0.99	0.99
65-69	0.87	0.89	1.12	1.02	0.96	0.89
70-74	0.88	0.95	1.05	1.07	0.98	0.89
75-79	0.93	0.91	0.95	1.09	0.94	0.88
80-84	1.00	1.04	1.06	1.03	0.94	0.95
85+	1.00	0.95	1.07	0.99	0.95	0.94

Comparability with Other Estimates. Caution should be exercised when comparing this data with data from other SIPP products or with data from other surveys. The comparability problems are caused by such sources as the seasonal patterns for many characteristics, different nonsampling errors, and different concepts and procedures. Refer to the *SIPP Quality Profile* for known differences with data from other sources and further discussions.

Sampling Variability. Standard errors indicate the magnitude of the sampling error. They also partially measure the effect of some nonsampling errors in response and enumeration, but do not measure any systematic biases in the data. The standard errors for the most part measure the variations that occurred by chance because a sample rather than the entire population was surveyed.

USES AND COMPUTATION OF STANDARD ERRORS

Confidence Intervals. The sample estimate and its standard error enable one to construct a confidence interval. A confidence interval is a range about a given estimate that has a known probability of including the result of a complete enumeration. For example, if all possible samples were selected, each of these being surveyed under essentially the same conditions and using the same sample design, and if an estimate and its standard error were calculated from each sample, then:

1. Approximately 68 percent of the intervals from one standard error below the estimate to one standard error above the estimate would include the average result of all possible samples.

2. Approximately 90 percent of the intervals from 1.645 standard errors below the estimate to 1.645 standard errors above the estimate would include the average result of all possible samples.

3. Approximately 95 percent of the intervals from two standard errors below the estimate to two standard errors above the estimate would include the average result of all possible samples.

The average estimate derived from all possible samples is or is not contained in any particular computed interval. However, for a particular sample, one can say with a specified confidence that the average estimate derived from all possible samples is included in the confidence interval.

Hypothesis Testing. Standard errors may also be used for hypothesis testing, a procedure for distinguishing between population characteristics using sample estimates. The most common types of hypotheses tested are 1) the population characteristics are identical versus 2) they are different. Tests may be performed at various levels of significance, where a level of significance is the probability of concluding that the characteristics are different when, in fact, they are identical.

To perform the most common test, compute the difference $X_A - X_B$, where X_A and X_B are sample estimates of the characteristics of interest. A later section explains how to derive an estimate of the standard error of the difference $X_A - X_B$. Let that standard error be S_{DIFF}. If $X_A - X_B$ is between $(-1.645 \times S_{DIFF})$ and $(+1.645 \times S_{DIFF})$, no conclusion about the characteristics is justified at the 10 percent significance level. If, on the other hand $X_A - X_B$, is smaller than $(-1.645 \times S_{DIFF})$ or larger than $(+1.645 \times S_{DIFF})$, the observed difference is significant at the 10 percent level. In this event, it is commonly accepted practice to say that the characteristics are different. We recommend that users report only those differences that are significant at the 10 percent level or better. Of course, sometimes this conclusion will be wrong. When the characteristics are the same, there is a 10 percent chance of concluding that they are different.

Note that as more tests are performed, more erroneous significant differences will occur. For example, at the 10 percent significance level, if 100 independent hypothesis tests are performed in which there are no real differences, it is likely that about 10 erroneous differences will occur.

Therefore, the significance of any single test should be interpreted cautiously. A Bonferroni correction can be done to account for this potential problem that consists of dividing your stated level of significance by the number of tests you are performing. This correction results in a conservative test of significance.

Note Concerning Small Estimates and Small Differences. Because of the large standard errors involved, there is little chance that estimates will reveal useful information when computed on a base smaller than 75,000. Also, nonsampling error in one or more of the small number of cases providing the estimation can cause large relative error in that particular estimate. Care must be taken in the interpretation of small differences since even a small amount of nonsampling error can cause a borderline difference to appear significant or not, thus distorting a seemingly valid hypothesis test.

Calculating Standard Errors for SIPP Estimates. There are three main ways we calculate the Standard Errors (SEs) for SIPP Estimates. They are as follows:

- Direct estimates using replicate weighting methods;
- Generalized variance function parameters (denoted as a and b); and
- Simplified tables of SEs based on the a and b parameters.

While the replicate weight methods provide the most accurate variance estimates, this approach requires more computing resources and more expertise on the part of the user. The Generalized Variance Function (GVF) parameters provide a method of balancing accuracy with resource usage as well as smoothing effect on SE estimates across time. SIPP uses the Replicate Weighting Method to produce GVF parameters (see K. Wolter, *Introduction to Variance Estimation,* for more information). The GVF parameters are used to create the simplified tables of SEs.

Standard Error Parameters and Tables and Their Use. Most SIPP estimates have greater standard errors than those obtained through a simple random sample because of its two-stage cluster sample design. To derive standard errors that would be applicable to a wide variety of estimates and could be prepared at a moderate cost, a number of approximations were required.

Estimates with similar standard error behavior were grouped together and two parameters (denoted as a and b) were developed to approximate the standard error behavior of each group of estimates. Because the actual standard error behavior was not identical for all estimates within a group, the standard errors computed from these parameters provide an indication of the order of magnitude of the standard error for any specific estimate. These a and b parameters vary by characteristic and by demographic subgroup to which the estimate applies. Table 4 provides a and b parameters for the core domains to be used for the 2008 Panel Wave 1 to Wave 16 estimates. The base a and b parameters for the topical modules for Wave 1 to Wave 11 are found in Table 5.

For those users who wish further simplification, we have also provided base standard errors for estimates of totals and percentages in Tables 6 through 9. Note that these base standard errors only apply when data from all four rotations are used and must be adjusted by an f factor provided in Table 4. The standard errors resulting from this simplified approach are less accurate.

Methods for using these parameters and tables for computation of standard errors are given in the following sections

Adjusting Standard Error Parameters for Estimates Which Use Less Than the Full Sample
If some rotation groups are unavailable to contribute data to a given estimate, then the estimate and its standard error need to be adjusted. The adjustment of the estimate is described in the previous section. The standard error is adjusted by multiplying the appropriate a and b parameters by a factor equal to 4 divided by the number of rotation groups contributing data to the estimate or it can be taken from Table 3a where the factor is given for each single reference month, May 2008 to August 2008.

For monthly and quarterly estimates, use Table 3a to select the adjustment factor appropriate to the number of rotation months. Multiply this factor by the a and b base parameters of Table 4 to produce a and b parameters for the variance estimate for a specific subgroup and reference period.

<u>Illustration 1.</u>
Using Table 4 for Wave 1 of the 2008 panel, the base a and b parameters for total number of households are -0.00002703 and 3,179, respectively. Using Table 3a for Wave 1, the factor for June 2008 is 2 *since only two rotation months of data are available*. So the a and b parameters for the variance estimate of a white household characteristic in June 2008 based on Wave 1 are:

$$-0.00002703 \times 2 = -0.00005406 \; and \; 3{,}179 \times 2 = 6{,}358, respectively.$$

Similarly, the factor from Table 3a for the third quarter of 2008 is 1.0370, since the only data available are the eleven rotation months from Wave 1. (Rotation 1 provides three rotation months, rotation 2 provides three rotation months, rotation 3 provides three rotation months, and rotation 4 provides two rotation months of data.) Thus, the a and b parameters for the variance estimate of a white household characteristic in the third quarter of 2008 are:

$$-0.00002703 \times 1.0370 = -0.00002803 \; and \; 3{,}179 \times 1.0370 = 3{,}297, respectively.$$

Standard Errors of Estimated Numbers. The approximate standard error, s_x, of an estimated number of persons, households, families, unrelated individuals and so forth, can be obtained in two ways. Both apply when data from all four rotations are used to make the estimate. However, only Formula (2) should be used when less than four rotations of data are available for the estimate. Note that neither method should be applied to dollar values.

The standard error may be obtained by the use of Formula (2):

$$s_x = f \times s, \tag{2}$$

where f is the appropriate f factor from Table 4, and s is the base standard error on the estimate obtained by interpolation from Tables 6 or 7.

Alternatively, s_x may be approximated by Formula (3):

$$s_x = \sqrt{ax^2 + bx} \tag{3}$$

This formula was used to calculate the base standard errors in Tables 6 and 7. Here x is the size of the estimate and a and b are the parameters from Table 4 which are associated with the characteristic being estimated (and the wave which applies). Use of Formula (3) will generally provide more accurate results than the use of Formula (2).

<u>Illustration 2.</u>

Suppose SIPP estimates based on Wave 1 of the 2008 panel show that there were 2,000,000 females aged 25 to 44 with a monthly income of greater than $6,000 in September 2008. The appropriate parameters and factor from Table 4 and the appropriate general standard error from Table 7 are:

$$a = -0.00002917 \qquad b = 3{,}584 \qquad f = 0.989 \qquad s = 85{,}282$$

Using Formula (2), the approximate standard error is:

$$s_x = 0.989 \times 85{,}282 = 84{,}344.$$

Using Formula (3), the approximate standard error is:

$$s_x = \sqrt{(-0.00002917 \times 2{,}000{,}000^2) + (3{,}584 + 2{,}000{,}000)} = 83{,}972\ females.$$

Using the standard error based on Formula (3), the approximate 90-percent confidence interval as shown by the data is from 1,861,866 to 2,138,134 females $(i.e., 2{,}000{,}000 \pm 1.645 \times 83{,}972)$. Therefore, a conclusion that the average estimate derived from all possible samples lies within a range computed in this way would be correct for roughly 90% of all samples.

Standard Error of a Mean. A mean is defined here to be the average quantity of some item (other than persons, families, or households) per person, family or household. For example, it could be the average monthly household income of females age 25 to 34. The standard error of a mean can be approximated by Formula (4) below. Because of the approximations used in developing Formula (4), an estimate of the standard error of the mean obtained from this formula will generally underestimate the true standard error. The formula used to estimate the standard error of a mean $\bar{x}$ is:

$$s_{\bar{x}} = \sqrt{\left(\frac{b}{y}\right) s^2}, \tag{4}$$

where y is the size of the base, s^2 is the estimated population variance of the item and b is the parameter associated with the particular type of item.

The population variance s^2 may be estimated by one of two methods. In both methods, we assume x_i is the value of the item for i^{th} unit. (A unit may be person, family, or household). To use the first method, the range of values for the item is divided into c intervals. The lower and upper boundaries of interval j are Z_{j-1} and Z_j, respectively. Each unit, x_i, is placed into one of c intervals such that $Z_{j-1} < x_i \leq Z_j$. The estimated population mean, $\bar{x}$, and variance, s^2, are given by the formulas:

$$\bar{x} = \sum_{j=1}^{c} p_j m_j$$

$$s^2 = \sum_{j=1}^{c} p_j m_j^2 - \bar{x}^2 \tag{5}$$

where $m_j = (Z_{j-1} + Z_j)/2$, and p_j is the estimated proportion of units in the interval j. The most representative value of the item in the interval j is assumed to be m_j. If the interval c is open-ended, or no upper interval boundary exists, then an approximate value for m_c is

$$m_c = \frac{3}{2} Z_{c-1}.$$

In the second method, the estimated population mean, $\bar{x}$, and variance, s^2 are given by:

$$\bar{x} = \frac{\sum_{i=1}^{n} w_i x_i}{\sum_{i=1}^{n} w_i}$$

$$s^2 = \frac{\sum_{i=1}^{n} w_i x_i^2}{\sum_{i=1}^{n} w_i} - \bar{x}^2 \tag{6}$$

where there are n units with the item of interest and w_i is the final weight for i^{th} unit. (Note that $\sum w_i = y$.)

<u>Illustration 3.</u>
Suppose that based on Wave 1 data, the distribution of monthly cash income for persons age 25 to 34 during the month of September 2008 is given in Table 10. Using these data, the mean monthly cash income for persons aged 25 to 34 is $2,530. Applying Formula (5), the approximate population variance, s^2, is:

$$s^2 = \left(\frac{1{,}371}{39{,}851}\right)(150)^2 + \left(\frac{1{,}651}{39{,}851}\right)(450)^2 + \cdots + \left(\frac{1{,}493}{39{,}851}\right)(9{,}000)^2 - (2{,}530)^2 = 3{,}159{,}887.$$

Using Formula (4) and a base b parameter of 3,584, the estimated standard error of a mean $\bar{x}$ is:

$$s_{\bar{x}} = \sqrt{\frac{3{,}584}{39{,}851{,}000} \times 3{,}159{,}887} = \$16.86$$

Thus, the approximate 90-percent confidence interval as shown by the data ranges from $2,502.27 to $2,557.73.

Standard Error of an Aggregate. An aggregate is defined to be the total quantity of an item summed over all the units in a group. The standard error of an aggregate can be approximated using Formula (7). As with the estimate of the standard error of a mean, the estimate of the standard error of an aggregate will generally underestimate the true standard error. Let y be the size of the base, s^2 be the estimated population variance of the item obtained using Formula (5) or Formula (6) and b be the parameter associated with the particular type of item. The standard error of an aggregate is:

$$s_x = \sqrt{b \times y \times s^2}. \tag{7}$$

Standard Errors of Estimated Percentages. The reliability of an estimated percentage, computed using sample data for both numerator and denominator, depends upon both the size of the percentage and the size of the total upon which the percentage is based. Estimated percentages are relatively more reliable than the corresponding estimates of the numerators of the percentages, particularly if the percentages are 50 percent or more, e.g., the percent of people employed is more reliable than the estimated number of people employed. When the numerator and denominator of the percentage have different parameters, use the parameter (and appropriate factor) of the numerator. If proportions are presented instead of percentages, note that the standard error of a proportion is equal to the standard error of the corresponding percentage divided by 100.

There are two types of percentages commonly estimated. The first is the percentage of people sharing a particular characteristic such as the percent of people owning their own home. The second type is the percentage of money or some similar concept held by a particular group of people or held in a particular form. Examples are the percent of total wealth held by people with high income and the percent of total income received by people on welfare.

For the percentage of people, the approximate standard error, $s_{(x,p)}$, of the estimated percentage p can be obtained by the formula:

$$s_{(x,p)} = f \times s, \tag{8}$$

when data from all four rotations are used to estimate p. In this formula, f is the appropriate f factor from Table 4 (for the appropriate wave) and s is the base standard error of the estimate from Tables 8 or 9.

Alternatively, it may be approximated by the formula:

$$s_{(x,p)} = \sqrt{\frac{b}{x}(p)(100-p)}, \tag{9}$$

from which the standard errors in Tables 8 and 9 were calculated. Here x is the size of the subclass of social units which is the base of the percentage, p is the percentage $(0 < p < 100)$, and b is the parameter associated with the characteristic in the numerator. Use of Formula (9) will give more accurate results than use of Formula (8) above and should be used when data from less than four rotations are used to estimate p.

<u>Illustration 4.</u>
Suppose that in September 2008, 6.7 percent of the 16,812,000 persons in nonfarm households with a mean monthly household cash income of $4,000 to $4,999 were black. Using Formula (9), a b parameter of 3,534, and a factor of 1 from Table 3a since all four rotations are used, the approximate standard error is:

$$s_{(x,p)} = \sqrt{\frac{3{,}534}{16{,}812{,}000} \times 6.7 \times (100 - 6.7)} = 0.36\ percent$$

Consequently, the 90 percent confidence interval as shown by these data is from 6.11 to 7.29 percent.

For percentages of money, a more complicated formula is required. A percentage of money will usually be estimated in one of two ways. It may be the ratio of two aggregates:

$$p_I = 100\left(\frac{x_A}{x_N}\right),$$

or it may be the ratio of two means with an adjustment for different bases:

$$p_I = 100\left(\hat{p}_A\left(\frac{\bar{x}_A}{\bar{x}_N}\right)\right),$$

where x_A and x_N are aggregate money figures, $\bar{x}_A$ and $\bar{x}_N$ are mean money figures, and $\hat{p}_A$ is the estimated number in group A divided by the estimated number in group N. In either case, we estimate the standard error as

$$s_I = \sqrt{\left(\frac{\hat{p}_A\bar{x}_A}{\bar{x}_N}\right)^2\left[\left(\frac{s_p}{\hat{p}_A}\right)^2 + \left(\frac{s_A}{\bar{x}_A}\right)^2 + \left(\frac{s_B}{\bar{x}_N}\right)^2\right]}, \tag{10}$$

where s_p is the standard error of $\hat{p}_A, s_A$ is the standard error of $\bar{x}_A$ and s_B is the standard error of $\bar{x}_N$. To calculate s_p, use Formula (9). The standard errors of $\bar{x}_N$ and $\bar{x}_A$ may be calculated using Formula (4).

It should be noted that there is frequently some correlation between $\hat{p}_A, \bar{x}_N,$ and $\bar{x}_A$. Depending on the magnitude and sign of the correlations, the standard error will be over or underestimated.

Illustration 5.
Suppose that in September 2008, 9.8% of the households own rental property, the mean value of rental property is $72,121, the mean value of assets is $78,734, and the corresponding standard errors are 0.18%, $5,468, and $2,703, respectively. In total there are 86,790,000 households. Then, the percent of all household assets held in rental property is:

$$100\left(0.098 \times \frac{72{,}121}{78{,}734}\right) = 9.0\%$$

Using Formula (10), the appropriate standard error is:

$$s_I = \sqrt{\left(\frac{0.098 \times 72{,}121}{78{,}734}\right)^2 \left[\left(\frac{0.0018}{0.098}\right)^2 + \left(\frac{5{,}468}{72{,}121}\right)^2 + \left(\frac{2{,}703}{78{,}734}\right)^2\right]} = 0.7\%.$$

Standard Error of a Difference. The standard error of a difference between two sample estimates is approximately equal to

$$s_{(x-y)} = \sqrt{s_x^2 + s_y^2}, \tag{11}$$

where s_x and s_y are the standard errors of the estimates x and y. The estimates can be numbers, percents, ratios, etc. The above formula assumes that the correlation coefficient between the characteristics estimated by x and y is zero. If the correlation is really positive (negative), then this assumption will tend to cause overestimates (underestimates) of the true standard error.

Illustration 6.
Suppose that for September 2008 SIPP estimates show the number of persons age 35-44 years with monthly cash income of $4,000 to $4,999 was 4,880,200 and the number of persons age 25-34 years with monthly cash income of $4,000 to $4,999 in the same time period was 4,810,800. Then, using the parameters $a = -0.00001504 \; and \; b = 3{,}584$ from Table 4 and Formula (3), the standard errors of these numbers are approximately 130,891 and 129,976, respectively. The difference in sample estimates is 69,400 and using Formula (11), the approximate standard error of the difference is:

$$\sqrt{130{,}891^2 + 129{,}976^2} = 184{,}462.$$

Suppose that it is desired to test at the 10 percent significance level whether the number of persons with monthly cash income of $4,000 to $4,999 was different for people age 35-44 years than for people age 25-34 years. To perform the test, compare the difference of 69,400 to the product $1.645 \times 184{,}462 = 303{,}440$. Since the difference is not greater than 1.645 times the standard

error of the difference, the data show that the two age groups are not significantly different at the 10 percent significance level.

Standard Error of a Median. The median quantity of some items such as income for a given group of people is that quantity such that at least half the group have as much or more and at least half the group have as much or less. The sampling variability of an estimated median depends upon the form of the distribution of the item as well as the size of the group. To calculate standard errors on medians, the procedure described below may be used.

The median, like the mean, can be estimated using either data which have been grouped into intervals or ungrouped data. If grouped data are used, the median is estimated using Formulas (12) or (13) with $\square = 0.5$. If ungrouped data are used, the data records are ordered based on the value of the characteristic, then the estimated median is the value of the characteristic such that the weighted estimate of 50 percent of the subpopulation falls at or below that value and 50 percent is at or above that value. Note that the method of standard error computation which is presented here requires the use of grouped data. Therefore, it should be easier to compute the median by grouping the data and using Formulas (12) or (13).

An approximate method for measuring the reliability of an estimated median is to determine a confidence interval about it. (See the section on sampling variability for a general discussion of confidence intervals.) The following procedure may be used to estimate the 68-percent confidence limits and hence the standard error of a median based on sample data.

1. Determine, using either Formula (8) or Formula (9), the standard error of an estimate of 50 percent of the group.

2. Add to and subtract from 50 percent the standard error determined in step 1.

3. Using the distribution of the item within the group, calculate the quantity of the item such that the percent of the group with more of the item is equal to the smaller percentage found in step 2. This quantity will be the upper limit for the 68-percent confidence interval. In a similar fashion, calculate the quantity of the item such that the percent of the group with more of the item is equal to the larger percentage found in step 2. This quantity will be the lower limit for the 68-percent confidence interval.

4. Divide the difference between the two quantities determined in step 3 by two to obtain the standard error of the median.

To perform step 3, it will be necessary to interpolate. Different methods of interpolation may be used. The most common are simple linear interpolation and Pareto interpolation. The appropriateness of the method depends on the form of the distribution around the median. If density is declining in the area, then we recommend Pareto interpolation. If density is fairly constant in the area, then we recommend linear interpolation. Note, however, that Pareto interpolation can never be used if the interval contains zero or negative measures of the item of interest. Interpolation is used as follows.

The quantity of the item such that p percent have more of the item is:

$$X_{pN} = A_1 \times \exp\left[\left(\frac{\ln\left(\frac{pN}{N_1}\right)}{\ln\left(\frac{N_2}{N_1}\right)}\right)\ln\left(\frac{A_2}{A_1}\right)\right] \tag{12}$$

if Pareto Interpolation is indicated and:

$$X_{pN} = \left[A_1 + \left(\frac{PN - N_1}{N_2 - N_1}\right)(A_2 - A_1)\right], \tag{13}$$

if linear interpolation is indicated, where:

N	is the size of the group,
A_1 *and* A_2	are the lower and upper bounds, respectively, of the interval in which X_{pN} falls
N_1 *and* N_2	are the estimated number of group members owning more than A_1 and A_2, respectively
exp	refers to the exponential function and
ln	refers to the natural logarithm function

<u>Illustration 7</u>.
To illustrate the calculations for the sampling error on a median, we return to Table 10. The median monthly income for this group is $2,158. The size of the group is 39,851,000.

1. Using Formula (9), the standard error of 50 percent on a base of 39,851,000 is about 0.5 percentage points.

2. Following step 2, the two percentages of interest are 49.5 and 50.5.

3. By examining Table 10, we see that the percentage 49.5 falls in the income interval from $2,000 to $2,499. (Since 55.5% receive more than $2,000 per month, the dollar value corresponding to 49.5 must be between $2,000 and $2,500.) Thus, $A_1 = \$2{,}000, A_2 = \$2{,}500, N_1 = 22{,}106{,}000$ *and* $N_2 = 16{,}307{,}000$.

In this case, we decided to use Pareto interpolation. Therefore, using Formula (12), the upper bound of a 68% confidence interval for the median is

$$\$2{,}000 \times \exp\left[\left(\frac{\ln\left(\frac{0.495 \times 39{,}851{,}000}{22{,}106{,}000}\right)}{\ln\left(\frac{16{,}307{,}000}{22{,}106{,}000}\right)}\right) \times \ln\left(\frac{2{,}500}{2{,}000}\right)\right] = \$2{,}174.$$

Also by examining Table 10, we see that 50.5 falls in the same income interval. Thus, $A_1, A_2, N_1 and\ N_2$ are the same. We also use Pareto interpolation for this case. So the lower bound of a 68% confidence interval for the median is

$$\$2{,}000 \times \exp\left[\left(\frac{\ln\left(\frac{0.505 \times 39{,}851{,}000}{22{,}106{,}000}\right)}{\ln\left(\frac{16{,}307{,}000}{22{,}106{,}000}\right)}\right) \times \ln\left(\frac{2{,}500}{2{,}000}\right)\right] = \$2{,}142.$$

Thus, the 68-percent confidence interval on the estimated median is from $2,142 to $2,174.

4. Then the approximate standard error of the median is

$$\frac{\$2{,}174 - \$2{,}142}{2} = \$16$$

Standard Errors of Ratios of Means and Medians. The standard error for a ratio of means or medians is approximated by:

$$s_{\frac{x}{y}} = \sqrt{\left(\frac{x}{y}\right)^2 \left[\left(\frac{s_y}{y}\right)^2 + \left(\frac{s_x}{x}\right)^2\right]}, \tag{14}$$

where x and y are the means or medians, and s_x and s_y are their associated standard errors. Formula (14) assumes that the means are not correlated. If the correlation between the population means estimated by x and y are actually positive (negative), then this procedure will tend to produce overestimates (underestimates) of the true standard error for the ratio of means.

Standard Errors Using SAS or SPSS. Standard errors and their associated variance, calculated by SAS or SPSS statistical software package, do not accurately reflect the SIPP's complex sample design. Erroneous conclusions will result if these standard errors are used directly. We provide adjustment factors by characteristics that should be used to correctly compensate for likely under-estimates. The design effect (DEFF) factors that are available in Table 4, must be applied to SAS or SPSS generated variances. The square root of DEFF can be directly applied to similarly generated standard errors. These factors approximate design effects which adjust statistical measures for sample designs more complex than a simple random sample.

Cross-sectional replicate weights for SIPP are also provided and can be used to estimate more accurate standard errors and variances. While replicate weighting methods require more computing resources, many statistical software packages, including SAS, have procedures that simplify the use of replicate weights for users. To calculate variances using replicate weights use the formula:

$$Var(\theta_0) = \frac{1}{G(0.5)^2} \times \sum_{i=1}^{G} (\theta_i - \theta_0)^2 \tag{15}$$

where G is the number of replicates, θ_0 is the estimate using the full sample weights, and θ_i is the estimate using the replicate weights. For the 2008 panel, G=120 for the number of replicate weights provided in the public use files. Replicate weights are created using Fay's method, with a Fay coefficient of 0.5.

Instead of direct computation, various SAS procedures include options to use replicate weights when estimating standard errors or variances. To use replicate weights in SAS include the VARMETHOD=BRR(FAY=0.5) option in the PROC statement and specify the replicate weights with a REPWEIGHTS statement.

<u>Illustration 8.</u>

In SAS, the SURVEYMEANS procedure is used to estimate statistics such as means, totals, proportions, quantiles, and ratios for a survey sample. An example syntax for estimating the mean of the total household income (THTOTINC) using SIPP replicate weights is:

```
proc surveymeans data=l08puw1 varmethod=brr(Fay=0.5) mean;
   var THTOTINC;
   weight WPFINWGT;
   repweights REPWGT1-REPWGT120;
run;
```

Similarly, replicate weights can be used to estimate standard errors in the SURVEYFREQ (for frequency tables and cross-tabulations), SURVEYREG (for regression analysis), SURVEYLOGISTIC (for logistic regression analysis), and SURVEYPHREG (for proportional hazards regression analysis) SAS procedures by using the same VARMETHOD=BRR(FAY=0.5) option and the REPWEIGHTS statement.

In Stata, the SVY command is used to fit a statistical model to a complex survey dataset. SVYSET is used to determine the survey design and provide information about the variance estimation. The following Stata syntax is equivalent to using SURVEYMEANS by SAS:

```
use lgt08puw1.dta
svyset [pweight=wpfinwgt], brrweight(repwgt1-repwgt120) fay(.5) vce(brr) mse
svy: mean thtotinc
```

REFERENCES

U.S. Census Bureau (1999). *SIPP Quality Profile, 1998,* SIPP Working Paper No. 230. Washington, DC: U.S. Census Bureau, May 1999.

U.S. Census Bureau (2008). "Chapter 8: Using Sampling Weights on SIPP Files," *Survey of Income and Program Participation Users' Guide,* 3rd Ed. Washington, DC: U.S. Census Bureau.

Wolter, Kirk M. (2007). "Chapter 7: Generalized Variance Functions," *Introduction to Variance Estimation,* 2nd Ed. New York: Springer, pp. 272-297.

TABLES

Table 1. 2008 Panel Topical Modules			
W1	• Recipiency History • Employment History • Tax Rebates	W7	• Assets and Liabilities • Real Estate, Dependent Care, and Vehicles • Int Acct, Stocks, Mortg, Rental, Val of Bus, Other • Medical Expenses/Utilization of Health Care Services • Poverty (Work-related Expenses/Child Support Paid)
W2	• Work Disability • Education & Training History • Marital History • Migration History • Fertility History • Household Relationships • Tax Rebates	W8	• Annual Income and Retirement Accounts • Taxes • Child Care • Work Schedule
W3	• Welfare Reform • Retirement and Pension Plan Coverage	W9	• Informal Care-giving • Adult Well-being
W4	• Assets and Liabilities • Real Estate, Dependent Care, and Vehicles • Int Accts, Stocks, Mortg.,Val of Bus, Rental, Other • Medical Expenses/Utilization of Health Care Services • Poverty (Work-related Expenses/Child Support Paid) • Child Well-Being	W10	• Assets and Liabilities • Real Estate, Dependent Care, and Vehicles • Int Acct, Stocks, Mortg, Rental, Val of Bus, Other • Medical Expenses/Utilization of Health Care Services • Poverty (Work-related Expenses/Child Support Paid) • Child Well-Being
W5	• Annual Income and Retirement Accounts • Taxes • Child Care • Work Schedule	W11	• Retirement and Pension Plan Coverage
W6	• Adult Well-being • Child Support Agreements • Support for Non-household Memebers • Functional Limitations and Disability-Adults • Functional Limitations and Disability-Children • Employer-Provided Health Benefits	W13	• Professional Certifications and Educational Certificates

Table 2. SIPP Panel 2008 Reference Months (horizontal) for Each Interview Month (vertical)

		2008						2009												2010											
		2nd Quar.		3rd Quarter			4th Quarter			1st Quarter			2nd Quarter			3rd Quarter			4th Quarter			1st Quarter			2nd Quarter			3rd Quarter			4th Quarter		
Month of Interview	Wave/ Rotation	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Sep 08	1/1	1	2	3	4																												
Oct	1/2		1	2	3	4																											
Nov	1/3			1	2	3	4																										
Dec	1/4				1	2	3	4																									
Jan 09	2/1					1	2	3	4																								
Feb	2/2						1	2	3	4																							
Mar	2/3							1	2	3	4																						
Apr	2/3								1	2	3	4																					
May	3/1									1	2	3	4																				
Jun	3/2										1	2	3	4																			
July	3/3											1	2	3	4																		
Aug	3/4												1	2	3	4																	
Sep	4/1													1	2	3	4																
Oct	4/2														1	2	3	4															
Nov	4/3															1	2	3	4														
Dec	4/4																1	2	3	4													
Jan 10	5/1																	1	2	3	4												
Feb	5/2																		1	2	3	4											
Mar	5/3																			1	2	3	4										
Apr	5/4																				1	2	3	4									
May	6/1																					1	2	3	4								
Jun	6/2																						1	2	3	4							
July	6/3																							1	2	3	4						
Aug	6/4																								1	2	3	4					
Sep	7/1																									1	2	3	4				
Oct	7/2																										1	2	3	4			
Nov	7/3																											1	2	3	4		
Dec	7/4																												1	2	3	4	
Jan 11	8/1																													1	2	3	4
Feb	8/2																														1	2	3
Mar	8/3																															1	2
Apr	8/4																																1
May	9/1																																
Jun	9/2																																
July	9/3																																
Aug	9/4																																
Sep	10/1																																
Oct	10/2																																
Nov	10/3																																
Dec	10/4																																
Jan 12	11/1																																
Feb	11/2																																
Mar	11/3																																
Apr	11/4																																
May	12/1																																
Jun	12/2																																
July	12/3																																
Aug	12/4																																
Sep	13/1																																
Oct	13/2																																
Nov	13/3																																
Dec	13/4																																
Jan 13	14/1																																
Feb	14/2																																
Mar	14/3																																
Apr	14/4																																
May	15/1																																
Jun	15/2																																
July	15/3																																
Aug	15/4																																
Sep	16/1																																
Oct	16/2																																
Nov	16/3																																
Dec	16/4																																

		2011												2012												2013							
		1st Quarter			2nd Quarter			3rd Quarter			4th Quarter			1st Quarter			2nd Quarter			3rd Quarter			4th Quarter			1st Quarter			2nd Quarter			3rd Quarter			4th Quarter	
Month of Interview	Wave/ Rotation	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Sep 08	1/1																																			
Oct	1/2																																			
Nov	1/3																																			
Dec	1/4																																			
Jan 09	2/1																																			
Feb	2/2																																			
Mar	2/3																																			
Apr	2/3																																			
May	3/1																																			
Jun	3/2																																			
July	3/3																																			
Aug	3/4																																			
Sep	4/1																																			
Oct	4/2																																			
Nov	4/3																																			
Dec	4/4																																			
Jan 10	5/1																																			
Feb	5/2																																			
Mar	5/3																																			
Apr	5/4																																			
May	6/1																																			
Jun	6/2																																			
July	6/3																																			
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Sep	7/1																																			
Oct	7/2																																			
Nov	7/3																																			
Dec	7/4																																			
Jan 11	8/1																																			
Feb	8/2																																			
Mar	8/3	3	4																																	
Apr	8/4	2	3	4																																
May	9/1	1	2	3	4																															
Jun	9/2		1	2	3	4																														
July	9/3			1	2	3	4																													
Aug	9/4				1	2	3	4																												
Sep	10/1					1	2	3	4																											
Oct	10/2						1	2	3	4																										
Nov	10/3							1	2	3	4																									
Dec	10/4								1	2	3	4																								
Jan 12	11/1									1	2	3	4																							
Feb	11/2										1	2	3	4																						
Mar	11/3											1	2	3	4																					
Apr	11/4												1	2	3	4																				
May	12/1													1	2	3	4																			
Jun	12/2														1	2	3	4																		
July	12/3															1	2	3	4																	
Aug	12/4																1	2	3	4																
Sep	13/1																	1	2	3	4															
Oct	13/2																		1	2	3	4														
Nov	13/3																			1	2	3	4													
Dec	13/4																				1	2	3	4												
Jan 13	14/1																					1	2	3	4											
Feb	14/2																						1	2	3	4										
Mar	14/3																							1	2	3	4									
Apr	14/4																								1	2	3	4								
May	15/1																									1	2	3	4							
Jun	15/2																										1	2	3	4						
July	15/3																											1	2	3	4					
Aug	15/4																												1	2	3	4				
Sep	16/1																													1	2	3	4			
Oct	16/2																														1	2	3	4		
Nov	16/3																															1	2	3	4	
Dec	16/4																																1	2	3	4

Wave 16 is missing data from rotation 2 due to the government shutdown (see Tables 3a and 3b for missing rotation).

Table 3a. Factors to be Used When Using Less Than Full Sample	
Number of Available Rotation Months[4]	**Factor**
Monthly Estimate[5]	
1	4.0000
2	2.0000
3	1.3333
4	1.0000
Quarterly Estimate[6]	
6	1.8519
8	1.4074
9	1.2222
10	1.0494
11	1.0370
12	1.0000

Table 3b. Factors to be Used When Using June – November 2013		
2013 Monthly Estimate	**Number of Available Rotation Per Month**	**Factor**
June, July, and August	3	1.3333
September and October	2	2.0000
November	1	1.0000

4 The number of available rotation months for a given estimate is the sum of the number of rotations available for each month of the estimates.

5 Adjustment factors for monthly estimates are equal to 4 divided by the number of rotation groups contributing data to the estimate.

6 Adjustment factors for quarterly estimates are calculated as follows:
Assume:

1. No change within rotation (i.e., no change in value for a variable across months).
2. Rotations are independent.
3. All sigmas are equal.

The monthly factor for each month are equal to 4 divided by the number of rotation groups contributing data to the estimate. Therefore, the variance of the estimate for the full sample is: $\sum_{Rotation} Var\left(X_{Jan} + X_{Feb} + X_{March}\right) = 36\sigma^2$. The variance of the estimate for less than a full sample is: the sum of the squared monthly factors for each rotation month $* \sigma^2$. The adjustment factor for the quarterly estimate is: (the sum of the squared monthly factors for each rotation month $* \sigma^2$) $/(36\sigma^2)$.

Table 4. SIPP Generalized Variance Parameters for the 2008 Panel, Wave 1				
Domain	**Parameters**		**DEFF[6]**	***f***
	a	***b***		
Poverty and Program Participation, Persons 15+				
Total	-0.00001532	3,651	1.84	1.000
Male	-0.00003163	3,651		
Female	-0.00002971	3,651		
Income and Labor Force Participation, Persons 15+				
Total	-0.00001504	3,584	1.80	0.989
Male	-0.00003105	3,584		
Female	-0.00002917	3,584		
Other, Persons 0+				
Total (or White)	-0.00001223	3,661	1.84	1.000
Male	-0.00002496	3,661		
Female	-0.00002397	3,661		
Black, Persons 0+	-0.00009339	3,534	1.78	0.983
Male	-0.00020096	3,534		
Female	-0.00017447	3,534		
Hispanic, Persons 0+	-0.00009852	4,588	2.31	1.119
Male	-0.00019194	4,588		
Female	-0.00020241	4,588		
Households				
Total (or White)	-0.00002703	3,179	1.60	1.000
Black	-0.00021922	3,179		
Hispanic	-0.00023147	3,179		

Notes on Domain Usage for Table 4:

Poverty and Program Participation	Use these parameters for estimates concerning poverty rates, welfare program participation (e.g., SNAP, SSI, TANF), and other programs for adults with low incomes.
Income and Labor Force	These parameters are for estimates concerning income, sources of income, labor force participation, economic well being other than poverty, employment related estimates (e.g., occupation, hours worked a week), and other income, job, or employment related estimates.
Other Persons	Use the "Other Persons" parameters for estimates of total (or white) persons aged 0+ in the labor force, and all other characteristics not specified in this table, for the total or white population.
Black/Hispanic Persons	Use these parameters for estimates of Black and Hispanic persons 0+.
Households	Use these parameters for all household level estimates.

[6] DEFF=b/sample interval, where sample interval=1,989

Table 4.(Cont.) SIPP Generalized Variance Parameters for the 2008 Panel, Wave 2-3				
Domain	**Parameters**		**DEFF[6]**	***f***
	a	***b***		
Poverty and Program Participation, Persons 15+				
Total	-0.00001786	4,295	2.16	1.083
Male	-0.00003687	4,295		
Female	-0.00003465	4,295		
Income and Labor Force Participation, Persons 15+				
Total	-0.00001721	4,137	2.08	1.063
Male	-0.00003552	4,137		
Female	-0.00003338	4,137		
Other, Persons 0+				
Total (or White)	-0.00001434	4,327	2.18	1.087
Male	-0.00002926	4,327		
Female	-0.00002811	4,327		
Black, Persons 0+	-0.00011484	4,376	2.20	1.093
Male	-0.00024713	4,376		
Female	-0.00021452	4,376		
Hispanic, Persons 0+	-0.00011685	5,561	2.80	1.232
Male	-0.00022778	5,561		
Female	-0.00023994	5,561		
Households				
Total (or White)	-0.00003137	3,722	1.87	1.082
Black	-0.00025251	3,722		
Hispanic	-0.00026735	3,722		

Notes on Domain Usage for Table 4:

Poverty and Program Participation	Use these parameters for estimates concerning poverty rates, welfare program participation (e.g., SNAP, SSI, TANF), and other programs for adults with low incomes.
Income and Labor Force	These parameters are for estimates concerning income, sources of income, labor force participation, economic well being other than poverty, employment related estimates (e.g., occupation, hours worked a week), and other income, job, or employment related estimates.
Other Persons	Use the "Other Persons" parameters for estimates of total (or white) persons aged 0+ in the labor force, and all other characteristics not specified in this table, for the total or white population.
Black/Hispanic Persons	Use these parameters for estimates of Black and Hispanic persons 0+.
Households	Use these parameters for all household level estimates.

[6] DEFF=b/sample interval, where sample interval=1,989

Table 4.(Cont.) SIPP Generalized Variance Parameters for the 2008 Panel, Wave 4-6				
Domain	**Parameters**		**DEFF[6]**	***f***
	a	***b***		
Poverty and Program Participation, Persons 15+				
Total	-0.00001993	4,834	2.43	1.149
Male	-0.00004111	4,834		
Female	-0.00003867	4,834		
Income and Labor Force Participation, Persons 15+				
Total	-0.00001855	4,500	2.26	1.109
Male	-0.00003827	4,500		
Female	-0.00003600	4,500		
Other, Persons 0+				
Total (or White)	-0.00001592	4,851	2.44	1.151
Male	-0.00003248	4,851		
Female	-0.00003122	4,851		
Black, Persons 0+	-0.00012441	4,818	2.42	1.147
Male	-0.00026711	4,818		
Female	-0.00023288	4,818		
Hispanic, Persons 0+	-0.00012848	6,302	3.17	1.312
Male	-0.00025001	6,302		
Female	-0.00026432	6,302		
Households				
Total (or White)	-0.00003401	4,037	2.03	1.127
Black	-0.00026961	4,037		
Hispanic	-0.00029139	4,037		

Notes on Domain Usage for Table 4:

Poverty and Program Participation	Use these parameters for estimates concerning poverty rates, welfare program participation (e.g., SNAP, SSI, TANF), and other programs for adults with low incomes.
Income and Labor Force	These parameters are for estimates concerning income, sources of income, labor force participation, economic well being other than poverty, employment related estimates (e.g., occupation, hours worked a week), and other income, job, or employment related estimates.
Other Persons	Use the "Other Persons" parameters for estimates of total (or white) persons aged 0+ in the labor force, and all other characteristics not specified in this table, for the total or white population.
Black/Hispanic Persons	Use these parameters for estimates of Black and Hispanic persons 0+.
Households	Use these parameters for all household level estimates.

[6] DEFF=b/sample interval, where sample interval=1,989

Table 4.(Cont.) SIPP Generalized Variance Parameters for the 2008 Panel, Wave 7-9				
Domain	**Parameters**		**DEFF[6]**	***f***
	a	***b***		
Poverty and Program Participation, Persons 15+				
Total	-0.00002221	5,426	2.73	1.217
Male	-0.00004571	5,426		
Female	-0.00004319	5,426		
Income and Labor Force Participation, Persons 15+				
Total	-0.00002011	4,913	2.47	1.158
Male	-0.00004139	4,913		
Female	-0.00003911	4,913		
Other, Persons 0+				
Total (or White)	-0.00001765	5,409	2.72	1.216
Male	-0.00003594	5,409		
Female	-0.00003467	5,409		
Black, Persons 0+	-0.00014401	5,635	2.83	1.241
Male	-0.00030883	5,635		
Female	-0.00026984	5,635		
Hispanic, Persons 0+	-0.00013176	6,604	3.32	1.343
Male	-0.00025629	6,604		
Female	-0.00027116	6,604		
Households				
Total (or White)	-0.00003687	4,425	2.22	1.180
Black	-0.00028880	4,425		
Hispanic	-0.00031165	4,425		

Notes on Domain Usage for Table 4:

Poverty and Program Participation	Use these parameters for estimates concerning poverty rates, welfare program participation (e.g., SNAP, SSI, TANF), and other programs for adults with low incomes.
Income and Labor Force	These parameters are for estimates concerning income, sources of income, labor force participation, economic well being other than poverty, employment related estimates (e.g., occupation, hours worked a week), and other income, job, or employment related estimates.
Other Persons	Use the "Other Persons" parameters for estimates of total (or white) persons aged 0+ in the labor force, and all other characteristics not specified in this table, for the total or white population.
Black/Hispanic Persons	Use these parameters for estimates of Black and Hispanic persons 0+.
Households	Use these parameters for all household level estimates.

[6] DEFF=b/sample interval, where sample interval=1,989

Table 4.(Cont.) SIPP Generalized Variance Parameters for the 2008 Panel, Wave 10-11				
Domain	**Parameters**		**DEFF[6]**	***f***
	a	***b***		
Poverty and Program Participation, Persons 15+				
Total	-0.00002316	5,688	2.86	1.247
Male	-0.00004766	5,688		
Female	-0.00004507	5,688		
Income and Labor Force Participation, Persons 15+				
Total	-0.00002171	5,331	2.68	1.207
Male	-0.00004467	5,331		
Female	-0.00004224	5,331		
Other, Persons 0+				
Total (or White)	-0.00001851	5,701	2.87	1.250
Male	-0.00003769	5,701		
Female	-0.00003638	5,701		
Black, Persons 0+	-0.00015183	5,978	3.01	1.279
Male	-0.00032574	5,978		
Female	-0.00028438	5,978		
Hispanic, Persons 0+	-0.00013671	6,966	3.50	1.379
Male	-0.00026565	6,966		
Female	-0.00028165	6,966		
Households				
Total (or White)	-0.00003865	4,637	2.33	1.125
Black	-0.00030277	4,637		
Hispanic	-0.00032246	4,637		

Notes on Domain Usage for Table 4:

Poverty and Program Participation	Use these parameters for estimates concerning poverty rates, welfare program participation (e.g., SNAP, SSI, TANF), and other programs for adults with low incomes
Income and Labor Force	These parameters are for estimates concerning income, sources of income, labor force participation, economic well being other than poverty, employment related estimates (e.g., occupation, hours worked a week), and other income, job, or employment related estimates.
Other Persons	Use the "Other Persons" parameters for estimates of total (or white) persons aged 0+ in the labor force, and all other characteristics not specified in this table, for the total or white population.
Black/Hispanic Persons	Use these parameters for estimates of Black and Hispanic persons 0+.
Households	Use these parameters for all household level estimates.

[6] DEFF=b/sample interval, where sample interval=1,989

Table 4.(Cont.) SIPP Generalized Variance Parameters for the 2008 Panel, Wave 12-13				
Domain	**Parameters**		**DEFF[6]**	***f***
	a	***b***		
Poverty and Program Participation, Persons 15+				
Total	-0.00002420	6,019	3.03	1.283
Male	-0.00005011	6,019		
Female	-0.00004678	6,019		
Income and Labor Force Participation, Persons 15+				
Total	-0.00002233	5,556	2.79	1.231
Male	-0.00004625	5,556		
Female	-0.00004318	5,556		
Other, Persons 0+				
Total (or White)	-0.00001940	6,012	3.02	1.281
Male	-0.00003972	6,012		
Female	-0.00003791	6,012		
Black, Persons 0+	-0.00014983	5,986	3.01	1.279
Male	-0.00032196	5,986		
Female	-0.00028026	5,986		
Hispanic, Persons 0+	-0.00014633	7,735	3.89	1.454
Male	-0.00029028	7,735		
Female	-0.00029508	7,735		
Households				
Total (or White)	-0.00004077	4,991	2.51	1.252
Black	-0.00031806	4,991		
Hispanic	-0.00032259	4,991		

Notes on Domain Usage for Table 4:

Poverty and Program Participation	Use these parameters for estimates concerning poverty rates, welfare program participation (e.g., SNAP, SSI, TANF), and other programs for adults with low incomes
Income and Labor Force	These parameters are for estimates concerning income, sources of income, labor force participation, economic well being other than poverty, employment related estimates (e.g., occupation, hours worked a week), and other income, job, or employment related estimates.
Other Persons	Use the "Other Persons" parameters for estimates of total (or white) persons aged 0+ in the labor force, and all other characteristics not specified in this table, for the total or white population.
Black/Hispanic Persons	Use these parameters for estimates of Black and Hispanic persons 0+.
Households	Use these parameters for all household level estimates.

[6] DEFF=b/sample interval, where sample interval=1,989

Table 4.(Cont.) SIPP Generalized Variance Parameters for the 2008 Panel, Wave 14-16				
Domain	**Parameters**		**DEFF[6]**	***f***
	a	***b***		
Poverty and Program Participation, Persons 15+				
Total	-0.00002550	6,381	3.21	1.321
Male	-0.00005281	6,381		
Female	-0.00004931	6,381		
Income and Labor Force Participation, Persons 15+				
Total	-0.00002303	5,763	2.90	1.255
Male	-0.00004769	5,763		
Female	-0.00004453	5,763		
Other, Persons 0+				
Total (or White)	-0.00002029	6,316	3.18	1.315
Male	-0.00004154	6,316		
Female	-0.00003965	6,316		
Black, Persons 0+	-0.00016289	6,562	3.30	1.339
Male	-0.00034931	6,562		
Female	-0.00030524	6,562		
Hispanic, Persons 0+	-0.00014824	7,903	3.97	1.469
Male	-0.00029449	7,903		
Female	-0.00029848	7,903		
Households				
Total (or White)	-0.00004256	5,256	2.64	1.285
Black	-0.00032875	5,256		
Hispanic	-0.00033469	5,256		

Notes on Domain Usage for Table 4:

Poverty and Program Participation	Use these parameters for estimates concerning poverty rates, welfare program participation (e.g., SNAP, SSI, TANF), and other programs for adults with low incomes
Income and Labor Force	These parameters are for estimates concerning income, sources of income, labor force participation, economic well being other than poverty, employment related estimates (e.g., occupation, hours worked a week), and other income, job, or employment related estimates.
Other Persons	Use the "Other Persons" parameters for estimates of total (or white) persons aged 0+ in the labor force, and all other characteristics not specified in this table, for the total or white population.
Black/Hispanic Persons	Use these parameters for estimates of Black and Hispanic persons 0+.
Households	Use these parameters for all household level estimates.

[6] DEFF=b/sample interval, where sample interval=1,989

Table 5. SIPP Topical Module Generalized Variance Parameters for the 2008 Panel

Characteristics	Parameters	
	a	***b***
Employment History, Wave 1		
Both Sexes, Age 18+	-0.00001504	3,584
Male, Age 18+	-0.00003105	3,584
Female, Age 18+	-0.00002917	3,584
Recipiency History, Wave 1		
Both Sexes, Age 18+	-0.00001532	3,651
Male, Age 18+	-0.00003163	3,651
Female, Age 18+	-0.00002971	3,651
Fertility History, Wave 2		
Women	-0.00002596	3,240
Births	-0.00004735	5,907
Education History, Wave 2	-0.00001836	4,412
Marital History, Wave 2		
Some Household Members	-0.00002780	6,677
All Household Members	-0.00002566	8,113
Migration History, Wave 2	-0.00002060	4,939
Household Relationship, Wave 2	-0.00001359	4,093
Welfare Reform, Wave 3	-0.00005229	12,135
Assets and Liabilities		
Wave 4	-0.00001905	4,671
Wave 7	-0.00002124	5,178
Wave 10	-0.00002321	5,696
Child Well-Being (Under 18),		
Wave 4	-0.00005835	4,508
Wave 10	-0.00006757	5,292
Child Care (Age 0 to 15), Wave 5	-0.00006277	4,821
Wave 8	-0.00006694	5,216
Work Schedule (15+), Wave 5	-0.00001826	4,423
Child Support, Wave 6	-0.00004807	6,062
Support for Non-Household Members, Wave 6	-0.00002493	6,062
Health and Disability - Adults, Wave 6	-0.00002375	7,585

Table 6. Base Standard Errors of Estimated Numbers of Households or Families			
Size of Estimate	**Standard Error**	**Size of Estimate**	**Standard Error**
200,000	25,194	30,000,000	266,539
300,000	30,843	40,000,000	289,676
500,000	39,784	50,000,000	302,283
750,000	48,673	60,000,000	305,666
1,000,000	56,142	70,000,000	300,138
2,000,000	79,056	80,000,000	285,181
3,000,000	96,404	90,000,000	259,166
5,000,000	123,366	95,000,000	240,955
7,500,000	149,406	99,500,000	220,696
10,000,000	170,549	105,000,000	189,180
15,000,000	203,969	110,000,000	150,423
25,000,000	250,162	117,610,000	447

Note: These estimates are calculations using the Household Total (or White) a and b parameters from Table 4.

Table 7. Base Standard Errors of Estimated Numbers of Persons			
Size of Estimate	**Standard Error**	**Size of Estimate**	**Standard Error**
200,000	27,050	110,000,000	504,705
300,000	33,124	120,000,000	513,038
500,000	42,749	130,000,000	518,886
750,000	52,334	140,000,000	522,333
1,000,000	60,405	150,000,000	523,426
2,000,000	85,282	160,000,000	522,180
3,000,000	104,273	170,000,000	518,578
5,000,000	134,161	180,000,000	512,570
7,500,000	163,614	190,000,000	504,070
10,000,000	188,114	200,000,000	492,950
15,000,000	228,393	210,000,000	479,027
25,000,000	289,623	220,000,000	462,048
30,000,000	314,361	230,000,000	441,659
40,000,000	356,191	240,000,000	417,363
50,000,000	390,480	250,000,000	388,426
60,000,000	419,085	260,000,000	353,712
70,000,000	443,106	270,000,000	311,292
80,000,000	463,258	275,000,000	286,149
90,000,000	480,028	280,000,000	257,387
100,000,000	493,761	299,340,000	4,636

Notes: (1) These estimates are calculations using the Other Persons 0+ a and b parameter from Table 4.

(2) To calculate the standard for another domain multiply the standard error from this table by the appropriate f factor from Table 4.

Table 8. Base Standard Errors for Percentages of Households or Families						
Base of Estimated Percentages	Estimated Percentages					
	≤ 1 or ≥ 99	2 or 98	5 or 95	10 or 90	25 or 75	50
200,000	1.25%	1.77%	2.75%	3.78%	5.46%	6.30%
300,000	1.02%	1.44%	2.24%	3.09%	4.46%	5.15%
500,000	0.79%	1.12%	1.74%	2.39%	3.45%	3.99%
750,000	0.65%	0.91%	1.42%	1.95%	2.82%	3.26%
1,000,000	0.56%	0.79%	1.23%	1.69%	2.44%	2.82%
2,000,000	0.40%	0.56%	0.87%	1.20%	1.73%	1.99%
3,000,000	0.32%	0.46%	0.71%	0.98%	1.41%	1.63%
5,000,000	0.25%	0.35%	0.55%	0.76%	1.09%	1.26%
7,500,000	0.20%	0.29%	0.45%	0.62%	0.89%	1.03%
10,000,000	0.18%	0.25%	0.39%	0.53%	0.77%	0.89%
15,000,000	0.14%	0.20%	0.32%	0.44%	0.63%	0.73%
25,000,000	0.11%	0.16%	0.25%	0.34%	0.49%	0.56%
30,000,000	0.10%	0.14%	0.22%	0.31%	0.45%	0.51%
40,000,000	0.09%	0.12%	0.19%	0.27%	0.39%	0.45%
50,000,000	0.08%	0.11%	0.17%	0.24%	0.35%	0.40%
60,000,000	0.07%	0.10%	0.16%	0.22%	0.32%	0.36%
70,000,000	0.07%	0.09%	0.15%	0.20%	0.29%	0.34%
80,000,000	0.06%	0.09%	0.14%	0.19%	0.27%	0.32%
90,000,000	0.06%	0.08%	0.13%	0.18%	0.26%	0.30%
105,000,000	0.05%	0.08%	0.12%	0.17%	0.24%	0.28%
110,000,000	0.05%	0.08%	0.12%	0.16%	0.23%	0.27%
117,610,000	0.05%	0.07%	0.11%	0.16%	0.23%	0.26%

Note: These estimates are calculations using the Households Total (or White) b parameter from Table 4.

Table 9. Base Standard Errors for Percentages of Persons						
Base of Estimated Percentages	**Estimated Percentages**					
	≤ 1 or ≥ 99	**2 or 98**	**5 or 95**	**10 or 90**	**25 or 75**	**50**
200,000	1.35%	1.89%	2.95%	4.06%	5.86%	6.76%
300,000	1.10%	1.55%	2.41%	3.31%	4.78%	5.52%
500,000	0.85%	1.20%	1.86%	2.57%	3.71%	4.28%
750,000	0.70%	0.98%	1.52%	2.10%	3.03%	3.49%
1,000,000	0.60%	0.85%	1.32%	1.82%	2.62%	3.03%
2,000,000	0.43%	0.60%	0.93%	1.28%	1.85%	2.14%
3,000,000	0.35%	0.49%	0.76%	1.05%	1.51%	1.75%
5,000,000	0.27%	0.38%	0.59%	0.81%	1.17%	1.35%
7,500,000	0.22%	0.31%	0.48%	0.66%	0.96%	1.10%
10,000,000	0.19%	0.27%	0.42%	0.57%	0.83%	0.96%
15,000,000	0.16%	0.22%	0.34%	0.47%	0.68%	0.78%
25,000,000	0.12%	0.17%	0.26%	0.36%	0.52%	0.61%
30,000,000	0.11%	0.15%	0.24%	0.33%	0.48%	0.55%
40,000,000	0.10%	0.13%	0.21%	0.29%	0.41%	0.48%
50,000,000	0.09%	0.12%	0.19%	0.26%	0.37%	0.43%
60,000,000	0.08%	0.11%	0.17%	0.23%	0.34%	0.39%
70,000,000	0.07%	0.10%	0.16%	0.22%	0.31%	0.36%
100,000,000	0.06%	0.08%	0.13%	0.18%	0.26%	0.30%
110,000,000	0.06%	0.08%	0.13%	0.17%	0.25%	0.29%
120,000,000	0.05%	0.08%	0.12%	0.17%	0.24%	0.28%
130,000,000	0.05%	0.07%	0.12%	0.16%	0.23%	0.27%
140,000,000	0.05%	0.07%	0.11%	0.15%	0.22%	0.26%
150,000,000	0.05%	0.07%	0.11%	0.15%	0.21%	0.25%
160,000,000	0.05%	0.07%	0.10%	0.14%	0.21%	0.24%
170,000,000	0.05%	0.06%	0.10%	0.14%	0.20%	0.23%
180,000,000	0.04%	0.06%	0.10%	0.14%	0.20%	0.23%
190,000,000	0.04%	0.06%	0.10%	0.13%	0.19%	0.22%
200,000,000	0.04%	0.06%	0.09%	0.13%	0.19%	0.21%
210,000,000	0.04%	0.06%	0.09%	0.13%	0.18%	0.21%
220,000,000	0.04%	0.06%	0.09%	0.12%	0.18%	0.20%
230,000,000	0.04%	0.06%	0.09%	0.12%	0.17%	0.20%
240,000,000	0.04%	0.05%	0.09%	0.12%	0.17%	0.20%
250,000,000	0.04%	0.05%	0.08%	0.11%	0.17%	0.19%
280,000,000	0.04%	0.05%	0.08%	0.11%	0.16%	0.18%
299,340,000	0.03%	0.05%	0.08%	0.10%	0.15%	0.17%

Notes: (1) These estimates are calculations using the Other Persons 0+ a and b parameter from Table 4.

(2) To calculate the standard for another domain multiply the standard error from this table by the appropriate f factor from Table 4.

Table 10. Distribution of Monthly Cash Income Among People 25 to 34 Years Old
(Not Actual Data, Only Use for Calculation Illustrations)

	Interval of Monthly Cash Income												
	Under $300	$300 to $599	$600 to $899	$900 to $1,199	$1,200 to $1,499	$1,500 to $1,999	$2,000 to $2,499	$2,500 to $2,999	$3,000 to $3,499	$3,500 to $3,999	$4,000 to $4,999	$5,000 to $5,999	$6,000 and Over
Number of People in Each Interval (in thousands)	1,371	1,651	2,259	2,734	3,452	6,278	5,799	4,730	3,723	2,519	2,619	1,223	1,493
Cumulative Number of People with at Least as Much as Lower Bound of Each Interval (in thousands)	39,851 (Total People)	38,480	36,829	34,570	31,836	28,384	22,106	16,307	11,577	7,854	5,335	2,716	1,493
Percent of People with at Least as Much as Lower Bound of Each Interval	100	96.6	92.4	86.7	79.9	71.2	55.5	40.9	29.1	19.7	13.4	6.8	3.7

WAVE 13 TOPICAL MODULE FREQUENCIES

SINTHHID	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	221	0.29	221	0.29
11	51588	67.85	51809	68.14
21	1086	1.43	52895	69.57
22	9	0.01	52904	69.58
23	9	0.01	52913	69.59
31	1316	1.73	54229	71.32
32	32	0.04	54261	71.36
41	1592	2.09	55853	73.46
42	63	0.08	55916	73.54
51	1463	1.92	57379	75.46
52	57	0.07	57436	75.54
61	1707	2.25	59143	77.78
62	46	0.06	59189	77.85
63	2	0.00	59191	77.85
71	1865	2.45	61056	80.30
72	52	0.07	61108	80.37
73	11	0.01	61119	80.38
81	1778	2.34	62897	82.72
82	66	0.09	62963	82.81
91	1876	2.47	64839	85.28
92	30	0.04	64869	85.32
101	2464	3.24	67333	88.56
102	51	0.07	67384	88.62
111	2279	3.00	69663	91.62
112	66	0.09	69729	91.71
113	3	0.00	69732	91.71
121	2655	3.49	72387	95.20
122	101	0.13	72488	95.34
123	5	0.01	72493	95.34
131	3419	4.50	75912	99.84
132	113	0.15	76025	99.99
133	6	0.01	76031	100.00
134	3	0.00	76034	100.00

EAECUNV	Frequency	Percent	Cumulative Frequency	Cumulative Percent
-1	15717	20.67	15717	20.67
1	60317	79.33	76034	100.00

IPROCERT	Frequency	Percent	Cumulative Frequency	Cumulative Percent
-2	981	1.29	981	1.29
-1	435	0.57	1416	1.86
0	19873	26.14	21289	28.00
1	11243	14.79	32532	42.79
2	43502	57.21	76034	100.00

IWHOPCER	Frequency	Percent	Cumulative Frequency	Cumulative Percent
-2	31	0.04	31	0.04
-1	123	0.16	154	0.20
0	64793	85.22	64947	85.42
1	568	0.75	65515	86.17
2	7073	9.30	72588	95.47
3	257	0.34	72845	95.81
4	1118	1.47	73963	97.28
5	616	0.81	74579	98.09
6	1168	1.54	75747	99.62
7	287	0.38	76034	100.00

IWHYPCER	Frequency	Percent	Cumulative Frequency	Cumulative Percent
-2	16	0.02	16	0.02
-1	12	0.02	28	0.04
0	64795	85.22	64823	85.26
1	10784	14.18	75607	99.44
2	427	0.56	76034	100.00

IFLDPCER	Frequency	Percent	Cumulative Frequency	Cumulative Percent
-2	32	0.04	32	0.04
-1	31	0.04	63	0.08
0	64796	85.22	64859	85.30
1	268	0.35	65127	85.66
2	135	0.18	65262	85.83
3	126	0.17	65388	86.00
4	655	0.86	66043	86.86
5	102	0.13	66145	86.99
6	1514	1.99	67659	88.99
7	1296	1.70	68955	90.69
8	402	0.53	69357	91.22
9	161	0.21	69518	91.43
10	241	0.32	69759	91.75
11	502	0.66	70261	92.41

IFLDPCER	Frequency	Percent	Cumulative Frequency	Cumulative Percent
12	1886	2.48	72147	94.89
13	759	1.00	72906	95.89
14	717	0.94	73623	96.83
15	119	0.16	73742	96.99
16	2292	3.01	76034	100.00

IJOBPCER	Frequency	Percent	Cumulative Frequency	Cumulative Percent
-2	21	0.03	21	0.03
-1	58	0.08	79	0.10
0	64796	85.22	64875	85.32
1	10732	14.11	75607	99.44
2	427	0.56	76034	100.00

IRJPCERT	Frequency	Percent	Cumulative Frequency	Cumulative Percent
-2	15	0.02	15	0.02
-1	39	0.05	54	0.07
0	64797	85.22	64851	85.29
1	8454	11.12	73305	96.41
2	2559	3.37	75864	99.78
3	170	0.22	76034	100.00

ITRNPCER	Frequency	Percent	Cumulative Frequency	Cumulative Percent
-2	24	0.03	24	0.03
-1	54	0.07	78	0.10
0	64797	85.22	64875	85.32
1	10388	13.66	75263	98.99
2	771	1.01	76034	100.00

IEXPCERT	Frequency	Percent	Cumulative Frequency	Cumulative Percent
-2	25	0.03	25	0.03
-1	114	0.15	139	0.18
0	64797	85.22	64936	85.40
1	10188	13.40	75124	98.80
2	910	1.20	76034	100.00

ICDPCERT	Frequency	Percent	Cumulative Frequency	Cumulative Percent
-2	49	0.06	49	0.06
-1	254	0.33	303	0.40
0	64800	85.23	65103	85.62
1	7143	9.39	72246	95.02
2	3788	4.98	76034	100.00

ICERT	Frequency	Percent	Cumulative Frequency	Cumulative Percent
-2	1028	1.35	1028	1.35
-1	521	0.69	1549	2.04
0	19891	26.16	21440	28.20
1	4667	6.14	26107	34.34
2	49927	65.66	76034	100.00

IFLDCERT	Frequency	Percent	Cumulative Frequency	Cumulative Percent
-2	9	0.01	9	0.01
-1	16	0.02	25	0.03
0	71368	93.86	71393	93.90
1	73	0.10	71466	93.99
2	51	0.07	71517	94.06
3	240	0.32	71757	94.37
4	91	0.12	71848	94.49
5	216	0.28	72064	94.78
6	107	0.14	72171	94.92
7	21	0.03	72192	94.95
8	421	0.55	72613	95.50
9	495	0.65	73108	96.15
10	211	0.28	73319	96.43
11	138	0.18	73457	96.61
12	223	0.29	73680	96.90
13	66	0.09	73746	96.99
14	49	0.06	73795	97.06
15	87	0.11	73882	97.17
16	81	0.11	73963	97.28
17	564	0.74	74527	98.02
18	226	0.30	74753	98.32
19	52	0.07	74805	98.38
20	254	0.33	75059	98.72
21	99	0.13	75158	98.85
22	876	1.15	76034	100.00

ISCHCERT	Frequency	Percent	Cumulative Frequency	Cumulative Percent
-2	19	0.02	19	0.02
-1	56	0.07	75	0.10
0	71368	93.86	71443	93.96
1	977	1.28	72420	95.25
2	1276	1.68	73696	96.93
3	1479	1.95	75175	98.87
4	219	0.29	75394	99.16
5	209	0.27	75603	99.43
6	51	0.07	75654	99.50
7	26	0.03	75680	99.53
8	175	0.23	75855	99.76
9	38	0.05	75893	99.81
10	141	0.19	76034	100.00

ISDYCERT	Frequency	Percent	Cumulative Frequency	Cumulative Percent
-2	12	0.02	12	0.02
-1	28	0.04	40	0.05
0	71369	93.86	71409	93.92
1	438	0.58	71847	94.49
2	4187	5.51	76034	100.00

ITIMCERT	Frequency	Percent	Cumulative Frequency	Cumulative Percent
-2	18	0.02	18	0.02
-1	83	0.11	101	0.13
0	71369	93.86	71470	94.00
1	186	0.24	71656	94.24
2	245	0.32	71901	94.56
3	4133	5.44	76034	100.00

WAVE 13 TOPICAL MODULE UNIVARIATES

The UNIVARIATE Procedure
Variable: LGTKEY

Moments

N	76034	Sum Weights	76034
Mean	32884887.2	Sum Observations	2.50037E12
Std Deviation	18965109.2	Variance	3.59675E14
Skewness	-0.0058259	Kurtosis	-1.2046399
Uncorrected SS	1.09572E20	Corrected SS	2.73472E19
Coeff Variation	57.6712002	Std Error Mean	68778.2985

Basic Statistical Measures

Location		Variability	
Mean	32884887	Std Deviation	18965109
Median	32762002	Variance	3.59675E14
Mode	.	Range	65519000
		Interquartile Range	32853999

Tests for Location: Mu0=0

Test	-Statistic-		-----p Value------	
Student's t	t	478.1288	Pr > |t|	<.0001
Sign	M	38017	Pr >= |M|	<.0001
Signed Rank	S	1.4453E9	Pr >= |S|	<.0001

Quantiles (Definition 5)

Quantile	Estimate
100% Max	65520001
99%	64853003
95%	62210002
90%	59159001
75% Q3	49509001
50% Median	32762002
25% Q1	16655002
10%	6386001
5%	3261003
1%	630019
0% Min	1001

Extreme Observations

----Lowest----		------Highest-----	
Value	Obs	Value	Obs
1001	16583	65516002	5803
1002	16584	65516003	5804
1003	16585	65516004	5805
2001	16411	65516005	5806
2002	16412	65520001	9263

Appendix A
Questionnaire

Section	Page
Section: Professional Certifications and Educational Certificates	1

Mark One Only **PROCERT**

```
Now I'd like to ask you about professional certification and licensure.

[FILL C_DODOES] [FILL TEMPNAME] have a professional certification or
state or industry license?
                                                                [r]H[n]
    (1) Yes
    (2) No

     @
```

Mark One Only **WHOPCERT**

```
The next set of questions refers to [FILL HISHER] MOST RECENT
certification or license.  Who awarded this certification or license?

SHOW FLASHCARD AA

    (1) Federal government
    (2) State government
    (3) Local government
    (4) Industry
    (5) Business, company, or non-profit organization
    (6) Professional Association
    (7) Other

     @
```

Mark One Only **WHYPCERT**

```
Did [FILL HESHE] get this certification or license mainly for
work-related reasons or mainly for personal interest?

    (1) Mainly work-related
    (2) Mainly personal interest

     @
```

Mark One Only **FLDPCERT**

What is the major subject or field of study for this certification or license?

SHOW FLASHCARD BB

(1) Architecture and engineering
(2) Computer networking and administration
(3) Computer applications and design
(4) Business/finance management
(5) Administrative support
(6) Nursing/nurse assisting
(7) Other medical/health care
(8) Cosmetology
(9) Culinary arts
(10) Protective services
(11) Legal and social services
(12) Education
(13) Construction and manufacturing trades
(14) Transportation and material moving
(15) Public utilities
(16) Other

@

Mark One Only **JOBPCERT**

Can this certification or license be used if [FILL HESHE] wanted to get a job with any employer in that field?

[b]CERTIFICATIONS AND LICENSES THAT ARE RECOGNIZED STATE-WIDE SHOULD BE RECORDED AS "YES."[n]

(1) Yes
(2) No

@

Mark One Only **REQJOBPCERT**

Is this certification or license required for [FILL HISHER] current or most recent job?

(1) Yes
(2) No
(3) Not applicable (never worked)

@

Mark One Only **TRNPCERT**

Did [FILL HESHE] take courses or training to earn the certification or license?

(1) Yes
(2) No

@

Mark One Only **EXAMPCERT**

```
Did [FILL HESHE] have to demonstrate skills while on the job or
pass a test or exam to earn the certification or license?

    (1) Yes
    (2) No

     @
```

Mark One Only **CEDPCERT**

```
[FILL C_DODOES] [FILL HESHE] have to take periodic tests or continuing
education classes or earn CEUs to maintain the
certification or license?
                                                              [r]H[n]
    (1) Yes
    (2) No

     @
```

Mark One Only **CERT**

```
Some people decide to enroll at a college, university, community
college, or trade school to earn a certificate rather than a degree.
[FILL C_HAVHAS] [FILL HESHE] ever earned this type of certificate?
                                                              [r]H[n]
    (1) Yes
    (2) No

     @
```

Mark One Only **FLDCERT**

```
 The next set of questions refers to [FILL HISHER] MOST RECENT completed
 certificate.
 What is the major subject or field of study for this certificate?
      SHOW FLASHCARD CC
(1)  Architecture and engineering   (11) Health aides
(2)  Communications technologies    (12) Cosmetology
     /technologists                 (13) Culinary arts
(3)  Computer and information       (14) Personal services (other than
     sciences                            cosmetology and culinary arts)
(4)  Engineering and related        (15) Protective services
     technologies                   (16) Public and social services (other
(5)  Business management                 than protective services)
(6)  Business support               (17) Education
(7)  Marketing                      (18) Construction trades
(8)  Health professions,            (19) Manufacturing
     except nursing                 (20) Mechanic and repair technologies
(9)  Nursing                        (21) Transportation and material moving
(10) Health technologists and       (22) Other
     technicians
 @
```

Mark One Only **SCHLCERT**

What type of school or organization provided the certificate program?

SHOW FLASHCARD DD

(1) A community college
(2) A university or college other than a community college
(3) A trade, vocational, technical, or business school
(4) Business or company
(5) Professional organization
(6) Trade union
(7) Non-profit organization
(8) Federal, state, or local government
(9) Military
(10) Someplace else

@

Mark One Only **STUDYCERT**

Was the training for this certificate mainly self-study or mainly classes or courses with an instructor?

(1) Mainly self-study
(2) Mainly instructor

@

Mark One Only **TIMECERT**

How long did it take to earn this certificate?

(1) Less than one week
(2) One week to one month
(3) More than one month

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APPENDIX B

Working Papers

For an updated list of SIPP Working Papers always refer to the U.S. Census Bureau's SIPP Internet site at http://www.census.gov/programs-surveys/sipp/working-papers.html. The Internet site will be updated as additional Working Papers become available.

APPENDIX C

User Notes

This section is reserved for User Notes, which provide any information relevant to the SIPP, *2008 Panel Wave 13 Topical Module Microdata File* that indicates any specific problems with the data. User Notes are organized by Panel and Wave.

For an updated list of User Notes always refer to the U.S. Census Bureau's SIPP Internet site at http://www.census.gov/programs-surveys/sipp/. The User Notes can be found on the "Data" page under the Panel and Wave designation. For example, if you are looking for User Notes for Wave 12 of SIPP 2008 you click the link for "2008 Panel" on the "Data" page, then click the link for "2008 Panel Wave 12" and cursor down the page until you find the "Wave 12 User Notes". The Internet site will be updated as additional User Notes become available.