Survëy of Income and Program Participation (SIPP) 1991 Panel
Wave 5 Topical Module Microdata File
TECHNICAL DOCUMENTATION
SIPP-91-5T

# SURVEY OF INCOME AND PROGRAM PARTICIPATION (SIPP) 1991 PANEL <br> WAVE 5 TOPICAL MODULE MICRODATA FILE 

## Technical Documentation

Washington, D.C.

U.S. DEPARTMENT OF COMMERCE

Ronald H. Brown, Secretary

Economic and Statistics Administration

Bureau Of The Census
Harry A. Scarr, Acting Director


# BUREAU OF THE CENSUS 

Harry A. Scarr, Acting Director

# DATA USER SERVICES DIVISION 

Marshall L. Turner, Jr., Chief<br>Marie G. Argana, Assistant Chief for User Services

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For additional information concerning the questionnaire content, contact Enrique Lamas (763-8578) in Housing and Household Economics Statistics Division, Bureau of the Census, Washington, D.C. 20233.

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#### Abstract

Survey of Income and Program Participation (SIPP) 1991 Panel Wave 5 Topical Module Microdata File [machine-readable data file] / conducted by the U.S. Bureau of the Census. Washington: The Bureau [producer and distributor], 1993.


## 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 demographic and social characteristics that are also contained in the core file. The identifying information includes sample unit, household address, and entry address identification. Demographic and social characteristcs include age, sex, race (White; Black; American Indian, Eskimo, and Aleut; Asian or Pacific Islander; and Other), ethnic origin ( 23 categories including 7 Spanish origin categories), marital status, and education. Data in this topical module file include annual income and retirement accounts, taxes, and school enrollment and financing.

The sample consists of 4 rotation groups, each interviewed in a different month from June to September 1992. 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 8 interviews or "waves." This file contains the results of the fifth 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. Codes are included for 41 individual States and the District of Columbia, although the sample was not designed to produce State estimates. Areas in the SIPP sample in nine other States are identified in groups for confidentiality reasons. The file identifies a subsample of metropolitan residents, along with codes for selected metropolitan statistical areas (MSA's) and consolidated metropolitan statistical areas (CMSA's).

## Technical Description:

File Structure: 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 and each source of income received during the period.

File Size: $\mathbf{3 7 , 4 2 3}$ logical records; 180 character logical record length.
File Sort Sequence of Sample Units: Sampling unit identification number by entry address ID and person number within sampling unit.

## Reference Materials:

Survey of Income and Program Participation (SIPP) 1991 Panel, Wave 5 Topical Module Microdata File Technical Documentation. The documentation includes this abstract, the data dictionary, an index to the data dictionary, relevant code lists, a questionnaire facsimile, and general information relative to SIPP. One copy of the technical documentation accompanies each file order but also may be purchased separately for $\$ 25$ from Data User Services Division, Customer Services, Bureau of the Census,Washington, D.C. 20233.

Interviewers' Manual (1985). Survey of Income and Program Participation. U.S. Department of Commerce, Bureau of the Census. The manual is available for $\$ 10$ from Data User Services Division, Customer Services, Bureau of the Census, Washington, D.C. 20233.

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. A single copy accompanies each technical documentation or tape order. Additional copies are available for $\$ 15$ each from Customer Services, Data User Services Division, Bureau of the Census, Washington, D.C. 20233.

## Related Printed Reports:

Related printed 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. See the Users' Guide that accompanies the documentation for ordering information.

## Related Machine-Readable Data Files:

SIPP files from all Waves of the 1984 through 1990 Panels as well as Waves 1 through 4 of the 1991 Panel are available from Customer Services, Data User Services Division, Bureau of the Census, Washington, D.C. 20233. An order form is on the following page for your convenience.

## File Availability:

Survey of Income and Program (SIPP) 1991 Panel, Wave 5 Topical Module File is available at either 6250 or 1600 bpi; ASCII or EBCDIC, labeled or unlabeled. The file is also available on tape cartridges (IBM 3480 compatible). A machine-readable dictionary is contained at the end of the file. When ordering, please use the order form on the following page.

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## 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.

| Variable | Brief Description |
| :--- | :--- |
| ID | Sample Unit ID (scrambled) |
| ADDID | Household address ID |
| ITEM36B | Interview status code |
| INTWW | Person's interview status |
| PP-MIS* | Person's monthly interview status |
| ENTRY | Edited entry address ID |
| PNUM | Edited person number |
| FINALWGT | Weighting factor |
| RRP | Edited relationship to reference person |
| AGE | Edited and imputed age as of last birthday |
| SEX | Sex of person |
| PNSP | Person number of spouse |
| PNPT | Person number of parent |
| HIGRADE | Highest grade of year of school attended |
| GRD-COMPL | Highest grade completed |
| ETHNICTY | Ethnic origin |

In order to confirm that the appropriate number of matches occur when merging data from core and topical module files, fields PP-MIS(1) through PP-MIS(4) for the four reference months and PP-MIS(5) for the interview month have been added. PP-MIS defines the monthly person interview status with 1 signifying an interview and 2 signifying a noninterview. Matching topical module records to month four on the person-month file should result in a match of all topical module records where PP-MIS(4) is equal to one. Although any reference month can be used for matching, month four is used because it is the closest month to the interview month available on the person-month files.

## Geographic Coverage

State codes are shown except for nine States which are identified in three groups. A subsample of metropolitan residents is identified along with codes for selected metropolitan statistical areas (MSA's) and consolidated metropolitan statistical areas (CMSA's). The sample was not designed to produce State or MSA/CMSA level estimates. State codes are primarily useful in relating a respondent's recipiency of benefits to thresholds which may vary from State to State. MSA/CMSA codes may be used in relating respondent characteristics with contextual variables.

## 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:
Sample Unit Identification Number
Address ID
Entry Address ID
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 that are the same as 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 $\$ 100,000$ are revealed. While the data dictionary indicates a topcode of $\$ 33,332$ for monthly income, this topcode will rarely be used. In most cases the monthly income is shown as an individual dollar amount of $\$ 8,333$, with $\$ 8,333$ actually representing " $\$ 8,333$ or more." (the $\$ 100,000$ annual income topcode is $\$ 8,333$ multiplied by. 12 months). Individual monthly amounts above $\$ 8333$ may occasionally be shown if the respondent's income varied considerably from month to month, as long as the average does not exceed $\$ 8,333$. 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 $\$ 33,332$ 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 $\$ 100,000$, 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 $\$ 8,333$, 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.

## GLOSSARY OF SELECTED TERMS

Absent 1 or more weeks. Absent 1 or more weeks means absent without pay from a job or business. Persons were absent without pay in a month if they were 'with a job' during the entire month, but were not at work at that job during at least 1 full week (Sunday through Saturday) during the month, and did not receive wages or a salary for any time during that week. Reasons for an unpaid absence include vacation, illness, layoff, bad weather, labor disputes, and waiting to start a new job.

Family household. A family household is a household maintained by a family; any unrelated persons (unrelated subfamily members and/or secondary individuals) who may be residing there are included. The number of family households is equal to the number of families. The count of family household members differs from the count of family members, however, in that the family household members include all persons living in the household, whereas family members include only the householder and his/her relatives.

Family. A family is a group of two or more persons (one of whom is the householder) related by birth, marriage, or adoption and residing together; all such persons (including related subfamily members) are considered members of one family.

Farm-nonfarm residence. The farm population refers to rural residents living on farms. Under this definition, a farm is any place in rural territory from which sales of crops, livestock, and other agricultural products amounted to $\$ 1,000$ or more during the previous 12 -month period.

Full-time and part-time. The data on full- and part-time workers pertain to the number of hours a person usually worked per week during the weeks worked in the 4 -month reference period of the survey. If the hours worked per week varied considerably, the respondent was asked to report an approximate average of the actual hours worked each week.

Persons 16 years old and over who reported usually working 35 or more hours each week during the weeks they worked are classified as 'full-time' workers; persons who reported that they usually worked fewer than 35 hours are classified as 'part-time' workers. The same definitions are used in the CPS.

Household. A household consists of all persons who occupy a housing unit. A house, an apartment or other group of rooms, or a single room is regarded as a housing unit when it is occupied or intended for occupancy as separate living quarters; that is, when the occupants do not live and eat with any other persons in the structure and there is either (1) direct access from the outside or through a common hall or (2) a kitchen or cooking equipment for the exclusive use of the occupants.

A household includes the related family members and all the unrelated persons, if any, such as lodgers, foster children, wards, or employees who share the housing unit. A person living alone in a housing unit or a group of unrelated persons sharing a housing unit as partners is also counted as a household. The count of households excludes group quarters. Examples of group quarters include rooming and boarding houses, college dormitories, and convents and monasteries.

Householder. Survey procedures call for listing first the person (or one of the persons) in whose name the home is owed or rented. If the house is owned jointly by a married couple, either the husband or the wife may be listed first, thereby becoming the reference person, or householder, to whom the relationship of the other household members is recorded. One person in each household is designated as the 'householder.' The number of householders, therefore, is equal to the number of households.

Layoff. In general, the word 'layoff' means release from a job because of slack work, material shortages, inventory taking, plant remodeling, installation of machinery, or other similar reasons. For this survey, persons were also on 'layoff' who did not have job but who responded that they has spent at least 1 week on layoff from a job and that they were available to accept a job.

In addition, persons were on 'layoff' in a given month if they were 16 years old or over and (a) were 'with a job' but 'absent without pay' from that job for at least 1 full week during that month, and (b) they responded that their main reason for being absent from their job or business was 'layoff.' 'On layoff' also includes a small number of persons who responded that they were waiting to report to a new wage and salary job that was to begin within 30 days. In other words, persons waiting to begin a new job are classified together with persons waiting to return to a job from which they have been laid off.

Looking for work. Persons who 'looked for work' in a given month are those who were 16 years old or over and (a) were without a job during at least 1 week during the month, (b) tried to get work or establish a business or profession in that week, and (c) were available to accept a job. Examples of jobseeking activities are (1) registering at a public or private employment office, (2) meeting with prospective employers, (3) investigating possibilities for starting a professional practice or opening a business, (4) placing or answering advertisements, (5) writing letters of application, and (6) being on a professional register.

The CPS uses a similar concept of 'looking for work.' The term 'unemployed' as used in the CPS includes persons who were looking for work in the reference week and those who were 'on layoff' or 'waiting to begin a new job in 30 days."

Low-Income Home Energy Assistance Program. Benefits from the Federally funded LIHEAP authorized by Title XXVI of the Omnibus Budget Reconciliation Act of 1981, or comparable assistance provided through State funded assistance programs, may be received in the form of direct payment to the household as reimbursement for heating or cooling expenses or paid directly to the fuel dealer or landlord.

Means-tested benefits. The term means-tested benefits refers to programs that require the income or assets (resources) of the individual or family be below specified guidelines in order to qualify for benefits. These programs provide cash and noncash assistance to the low-income population. The major sources of meanstested cash and noncash assistance are shown in Appendix B-2.

Medicaid. This term refers to the Federal-State program of medical assistance for low-income individuals and their families as provided for by Title XIX of the Social Security Act. The phrase 'Medicaid covered' refers to persons enrolled in the Medicaid program, regardless of whether they actually utilized any Medicaid covered health care services during the survey reference period.

Medicare. This term refers to the Federal Health Insurance Program for the Aged and Disabled as provided for by Title XVIII of the Social Security Act. The phrase 'Medicare covered' refers to persons enrolled in the Medicare program, regardless of whether they actually utilized any Medicare covered health care services during the survey reference period.

Monthly income. The monthly income estimates for households are based on the sum of the monthly income received by each household member age 15 years old or over.

Cash income includes all income received from any of the sources listed in Appendix B-1. Rebates, refunds, loans, and capital gain or loss amounts from the sale of assets, and interhousehold transfers of cash such as allowances are not included. Accrued interest on Individual Retirement Accounts, KEOUGH retirement plans. and U.S. Savings bonds are also excluded. This definition differs somewhat from that used in the annual income reports based on the March CPS Income supplement questionnaire. These data, published in the Consumer Income Series, P-6O, are based only on income received in a regular or periodic manner and, therefore, exclude lump-sum or one-time payments such as inheritances and insurance settlements. The March CPS income definition, however, does exclude the same income sources excluded by SIPP.

The income amounts represent amounts actually received during the month, before deductions for income and payroll taxes, union dues, Part B Medicare premiums, etc.

The SIPP income definition includes three types of earnings: wages and salary, nonfarm self-employment, and farm self-employment. The definition of nonfarm self-employment and farm self-employment is not based on the net difference between gross receipts or sales and operating expenses, depreciation, etc. The monthly amounts for these income types are based on the salary or other income received from the business by the owner of the business or farm during the 4 -month reference period.

The Bureau of Labor Statistics publishes quarterly averages for an earnings concept called 'usual weekly earnings' for employed wage and salary workers. The concept differs from the SIPP earnings concept since it is based on usual, not actual earnings, excludes the self-employed, and excludes earnings from secondary jobs.

While the income amounts from most sources are recorded monthly for the 4-month reference period, property income amounts, interest, dividends, rental income, etc., were recorded as totals for the 4 -month period. These totals were distributed equally between months of the reference period for purposes of calculating monthly averages.

Nonfamily household. A nonfamily household is a household maintained by a person living alone or with nonrelatlves only.

Persons of Spanish origin. Persons of Spanish origin were determined on the basis of a question that asked for self-identification of the person's origin or descent. Respondents were asked to select their origin (or the origin of some other household member) from a 'flash card' listing ethnic origins. Persons of Spanish origin, in particular, were those who indicated that their origin was Mexican, Puerto Rican, Cuban, Central or South American, or some other Spanish origin: It should be noted that persons of Spanish origin may be of any race.

Population coverage. The estimates are restricted to the clvilian noninstitutional population of the 50 States and members of the Armed Forces living off post or with their families on post.

Race. The population is divided into groups on the basis of race: White; Black; American Indian, Eskimo, or Aleut; Asian or Pacific Islander; and 'other races.'

Special Supplemental Food Program for women, Infants, and Children (WIC). Benefits are received in the form of vouchers that are redeemed at retail stores for specific supplemental nutritious foods. Eligible lowincome recipients are infants and children up to age five and pregnant, postpartum, and breastfeeding women.

Unemployment compensation. This term refers to cash benefits paid to unemployed workers through a State or local unemployment agency. These include all benefits paid under the Federal-State unemployment insurance program as established under the Social Security Act, as well as those benefits paid to State and local government employees, Federal civillan employees, and veterans.

With a Job. Persons are classified 'with a job' in a given month if they were 16 years old or over and, during the month, either (a) worked as paid employees or worked in their own business or profession or on their own farm or worked without pay in a family business or farm or (b) were temporarily absent from work either with or without pay. In general, the word 'job' implies an arrangement for regular work for pay where payment is in cash wages or salaries, at piece rates, in tips, by commission, or in kind (meals, living quarters, supplies received). 'Job' also includes self-employment at a business, professional practice, or farm. A business is defined as an actlvity which involves the use of machinery or equipment in which money has been invested or an actlvity requiring an office or 'place of business' or an activity which requires advertising; payment may be in the form of profits or fees.

The Current Population Survey (CPS), the official source of labor force statistics for the Nation, uses the same definition for a job or business. The term 'with a job,' however, should not be confused with the term 'employed' as used in the CPS. 'With a job' includes those who were temporarily absent from a job because of layoff and those waiting to begin a new job In 30 days; in the CPS these persons are not considered 'employed.' See 'Worked each week' below.

With labor force activity. The term 'with labor force activity' includes all persons with a job (as defined above) and those looking for work or on layoff from a job for at least 1 week during a given month. Conversely, those persons 'with no labor force activity' had no job, were not on layoff from a job and made no effort to find a job during the month.

Work disability. Persons were classified as having a work disability if they were identified by the respondent as having a physical, mental, or other health condition that limits the kind or amount of work they can do.

Worked each week. Persons 'worked each week' in a month if, for the entire month, they were 'with a job' and not 'absent without pay' from the job. In other words, a person worked each week in any month when they were (a) on the job the entire month, or (b) they received wages or a salary for all weeks in the month, whether they were on the job or not. Persons also worked each week if they were self-employed and spent time during each week of the month at or on behalf of the business or farm they owned, as long as they received or expected to receive profit or fees for their work.

In the CPS, the concept at 'work' includes those persons who spent at least 1 hour during the reference week at their job or business. In the CPS, however, 'at work' does not include persons who were temporarily absent from their jobs during the entire reference week on paid vacation, sick leave, etc. In SIPP, 'worked each week' does include persons on paid absences.

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GRD-CMPL Grade Attended Was Completed, Highest ..... 62
HIGRADE Grade or Year of School Attended, Highest ..... 60
ID. Identifier, Sample Unit ..... 6
INTVW Interview Status, Person's ..... 24
ITEM36B Interview Status Code ..... 22
MS Marital Status ..... 53
PINX Index From Core, Person ..... 18
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PNSP Person Number of Spouse ..... 54
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TM9674 Educational Assistance From Other Source-Amount ..... 151
TMETCNT Number of Educational Assistance Sources ..... 156
TMTEDFIN Educational Assistance, Total Amount of. ..... 176
WAVE Wave Number Within Panel ..... 65

## HOW TO USE THE DATA DICTIONARY

The Data Dictionary describes the contents and record layout of the public-use computer tape file. The first line of each data item description gives the data name, size of the data field, and the begin position of the field.

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. Comments should be removed from the machine-readable version of the data dictionary before using it to help access the data file.

Data. Alphabetic, numeric, and the special character (-). No other special characters are used. It may be a mnemonic such as "STATE" or "SE1-OCC", or a sequential identifier such as "SC1176" or "WS-IMP01". Data item names are unique throughout the entire file.

Size. Numeric. The size of a data item is given in characters. Indication of implied decimal places is provided in notes.

Begin. Numeric. Contains the location in the data record of the first character position of the data item field.

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, relative begin and begin position of each data item. This information (in machine-readable form) can be used to help access the data file. 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:

```
DSC1218 12805
    What was the main reason ... could
    not take a job during those weeks
U Persons }15\mathrm{ years old or older
V 0.Not in universe
V. 1.Already had a job
V 2.Temporary illness
V 3.School
V 4.Other
D RR3064 2 3760
    Railroad retirement sends out two types
    of checks; which color check does ...
    receive.
U Persons age 15 years or older receiving
railroad retirement
V -1.DK
V 00.Not in universe
V 01 .Blue
V 02 .Buff
V 03.Direct deposit
V 04 Other
```


## SIPP 1991 WAVE 5 TOPICAL MODULE DATA DICTIONARY






|  | SA SIZE BEGIN |
| :---: | :---: |
| D TM9628 $\quad 1$The GI bill? |  |
| $U$ Persons enrolled in other than public school who received educational assistance |  |
| O .Not marked as received |  |
| $V$. or not applicable |  |
| 1 .Received |  |
| D TM9630 422 Percent received from GI bill |  |
| U. Persons enrolled in other than public school who received educational assistance from the GI bill <br> $v$ 0000-0100. Percent of total assistance |  |
| D TM9632 196 |  |
|  | Other veteran's educational assistance programs? (Include survivors and dependents, vocational rehabilitation and post-Vietnam veterans assistance.) |
| $U$ Persons enrolled in other than public school who received educational assistance |  |
| : O Not marked as received |  |
| $V$.or not applicable |  |
| 1 .Received : |  |
| TM9634 $5 \quad 97$Percent received from veteran'sprograms |  |
| Persons enrolled in other than public school who received educational assistance from veteran's programs |  |
| 0-00100 .Percent of total assistance |  |
| TM9636 102College work study program? |  |
| U Persons enrolled in other than public school who received educational assistance |  |
| O .Not marked as received |  |
| $v$ | . or not applicable |
| $V$ | 1 .Received |
| TM9638 . 4103 <br> Percent received from college work study program |  |
|  | Persons enrolled in other than public school who received educational assistance from college work study program |
| $v$ | 0000-0100 .Percent of total assistance |
| A Pell grant? | TM9640 107 |
|  | assistance |
| V | 0 . Not marked as received |
| $V$ | or not applicable |
| $V$ | 1 .Received |
| D TM9642 408 |  |
|  | . Percent received from Pell grant |
|  | Persons enrolled in other than public school who received educational assistance from Pell grant |
|  | 0000-0100 .Percent of total assistance |

```
DATA SIZE BEGIN
D TM9644 1 112
        A Supplemental Educational
        Opportunity Grant(SEOG)
U Persons enrolled in other than public
    school and received educational
    assistance.
V O Not marked as received
v
V
                                    or not applicable
        1.Received
D TM9646 4 113
            Percent received from SEOG
U Persons enrolled in other than public
    school who received educational
    assistance from SEOG
V 0000-0100 .Percent of total assistance
D TM9648 1 117
            A national direct student loan?
U Persons enrolled in other than public
    school who received educational
    assistance
V
v
v
                                    .Not marked as received
                                    .or not applicable
                                    1 .Received
D TM9650 4 118
    Percent received from a national
            direct student loan
U Persons enrolled in other than public
    school who received educational
    assistance from a national direct
    student loan
V 0000-0100.Percent of total assistance
D TM9652 1 122
            A guaranteed student loan
U Persons enrolled in other than public
    school who received educational.
    assistance
V O .Not marked as received
v .or not applicable
V
                                    1 :Received
D TM9654 5 123.
            Percent received from a guaranteed
            student loan
U Persons enrolled in other than public
    school who received educational
    assistance from a guaranteed student loan
v 0-00100.Percent of total assistance
D TM9656 1 128
            A JTPA training program
U Persons enrolled in other than public
    school who received educational
    assistance
V O .Not marked as received
v .or not applicable
v 1 .Received
D TM9658 4 }12
            Percent received from JTPA
U Persons enrolled in other than public
    school who received educational
    assistance from JTPA
V 0000-0100 .Percent of total assistance
```


dATA SIZE BEGIN
*********************************************
*. Part C - Imputation flags *
*********************************************
D TM-IFC1 1.158
Part C imputation flag \#01
Imputation flag for field 'TM9612'
$v \quad 0$.Not imputed
$V \quad 1$.Imputed
D TM-IFC2 1.159
Part C imputation flag \#02
Imputation flag for field 'TM9616'
$v \quad 0$.Not imputed
V 1 .Imputed
D TM-IFC3 $1 \quad .160$

Part C imputation flag \#03
Imputation flag for field 'TM9618'
$v \quad 0$.Not imputed
$V \quad 1$.Imputed
D TM-IFC4 1161
Part C imputation flag \#04
Imputation flag for field 'TM9620'
$v \quad 0$.Not imputed
$v \quad 1$.Imputed
D TM-IFC5 1162
Part C imputation flag \#05
Imputation flag for field 'TM9622'
$V \quad 0$.Not imputed
v 1 .Imputed


## SOURCE AND ACCURACY ETATEMENT FOR THE 1991 <br> PUBLIC USE FILES FROM THE SURVEY OF INCOME AND PROGRAM PARTICIPATION

## SOURCE OF DATA

The data were collected in the 1991 panel of the Survey of Income and Program Participation (SIPP). The SIPP universe is the noninstitutionalized resident population living in the United states. The population includes persons living in group quarters, such as dormitories, rooming houses, and religious group dwellings. Crew members of merchant vessels, Armed Forces personnel living in military barracks, and institutionalized persons, such as correctional facility inmates and nursing home residents, were not eligible to be in the survey. Also, United States citizens residing abroad were not eligible to be in the survey. Foreign visitors who work or attend school in this country and their families were eligible; all others were not eligible to be in the survey. With the exceptions noted above, persons who were at least 15 years of age at the time of the interview were eligible to be in the survey.

The 1991 panel of the SIPP sample is located in 230 Primary Sampling Units (PSUs) each consisting of a county or a group of contiguous counties. Within these PSUs, expected clusters of two living quarters (LQs) were systematically selected from lists of addresses prepared for the 1980 decennial census to form the bulk of the sample: To account for LQs built within each of the sample areas after the 1980 census, a sample containing clusters of four LQs was drawn of permits issued for construction of residential LQs up until shortly before the beginning of the panel.

In jurisdictions that don't issue building permits or have incomplete addresses, small land areas were sampled and expected clusters of four LQs within were listed by field personnel and then subsampled. In addition, sample LQs were selected from a supplemental frame that included LQs identified as missed in the 1980 census.

Approximately. 19,300 living quarters were originally designated for the 1991 panel. For Wave 1 of the panel, interviews were obtained from occupants of about 14,300 of the 19,300 designated living quarters. Most of the remaining 5,000 living quarters in the panel were found to be vacant, demolished, converted to nonresidential use, or otherwise ineligible for the survey. However, approximately 1,300 of the 5,000 living quarters in the panel were not interviewed because the occupants refused to be interviewed, could not be found at home, were temporarily absent, or were otherwise unavailable. Thus, occupants of about 92 percent of all eligible living quarters participated in the first interview of the panel.

For subsequent interviews, only original sample persons (those in Wave 1 sample households and interviewed in Wave 1) and persons living. with them were eligible to be interviewed. Original sample persons were followed if they moved to a new address, unless the new address was more than 100 miles from a SIPp sample area. Then, telephone interviews were attempted.

Sample households within a given panel are divided into four subsamples of nearly equal size. These subsamples are called rotation groups $1,2,3$, or 4 and one rotation group is interviewed each month. Each household in the sample was scheduled to be interviewed at 4 month intervals over a period of roughly 2 years beginning in February 1991. The reference period for the questions is the 4 -month period preceding the interview month. In general, one cycle of four interviews covering the entire sample, using the same questionnaire, is called a wave.

A unique feature of the SIPP design is overlapping panels. The overlapping design allows panels to be combined and essentially doubles the sample sizes. Selected interviews for the 1991 panels can be combined with interviews from the 1990 panels. Information necessary to do this is included later in this statement.

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 1991 and 1990 panel topical modules are given in tables 1 and 2 respectively.

Tables 3 and 4 indicate the reference months and interview months for the collection of data from each rotation group for the 1991 and 1990 panels respectively. For example, Wave 1 rotation group 2 of the 1991 panel was interviewed in February 1991 and data for the reference months October 1990 through January 1991 were collected.

Estimation. The estimation procedure used to derive SIPP person weights involved several stages of weight adjustments. In the first wave, each person received a base weight equal to the inverse of his/her probability of selection. For each subsequent interview, each person received a base weight that accounted for the following movers.

A noninterview factor was applied to the weight of every occupant of interviewed households to account for persons in noninterviewed occupied households which were eligible for the sample. (Individual nonresponse within partially interviewed households was treated with imputation. No special adjustment was made for noninterviews in group quarters.)

A factor was applied to each interviewed person's weight to account for the SIPP sample areas not having the same population distribution as the strata from which they were selected.

The Bureau has used complex techniques to adjust the weights for nonresponse. For a further explanation of the techniques used, see the Nonresponse Adjustment Methods for Demographic Surveys at the U.S. Bureau of the Census, November 1988, Working paper 8823, by R. Singh and R. Petroni. The success of these techniques in avoiding bias is unknown. An example of successfully avoiding bias can be found in "Current Nonresponse Research for the Survey of Income and Program Participation" (paper by Petroni, presented at the Second International Workshop on Household Survey Nonresponse, October 1991).

An additional stage of adjustment to persons' weights was performed to reduce the mean square errors of the survey estimates. This was accomplished by ratio adjusting the sample estimates to agree with monthly Current Population Survey (CPS) type estimates of the civilian (and some military) noninstitutional population of the United States by demographic characteristics including age, race, and sex as of the specified date. The CPS estimates by age, race, and sex were themselves brought into agreement with estimates from the 1980 decennial census which have been adjusted to reflect births, deaths, immigration, emigration, and changes in the Armed Forces since 1980. In addition, SIPP estimates were controlled to independent Hispanic controls and an adjustment was made so that husbands and wives within the same household were assigned equal weights. All of the above adjustments are implemented for each reference month and the interview month.

Use of Weights. Each household and each person within each household on each wave tape has five weights. Four of these weights are reference month specific and therefore can be used only to form reference month estimates. Reference month estimates can be averaged to form estimates of monthly averages over some period of time. For example, using the proper weights, one can estimate the monthly average number of households in a specified income range over November and December 1991. 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.

The remaining weight is interview month specific. This weight can be used to form estimates that specifically refer to the interview month (e.g., total persons currently looking for work), as well as estimates referring to the time period including the interview month and all previous months (e.g.. total persons who have ever served in the military).

To form an estimate for a particular month, use the reference month 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. Multiply the sum by a factor to account for the number of rotations contributing data
for the month. This factor equals four divided by the number of rotations contributing data for the month. For example, December 1990 data is only available from rotations 2, 3, and 4 for Wave 1 of the 1991 panel (See table 3), so a factor of $4 / 3$ must be applied. To form an estimate for an interview month, use the procedure discussed above using the interview month weight provided on the file.

When estimates for months with four rotations worth of data are constructed from a wave file, factors greater than 1 must be applied. However, when core data from consecutive waves are used together, data from all four rotations may be available, in which case the factors are equal to 1.

These tapes contain no weight for characteristics that involve a persons's or household's status over two or more months (e.g., number of households with a 50 percent increase in income between November and December 1990).

Producing Estimates for Census Regions and states. The total estimate for a region is the sum of the state estimates in that region. Using this sample, estimates for individual states are subject to very high variance and are not recommended. The state codes on the file are primarily of use for linking respondent characteristics with appropriate contextual variables (e.g., state-specific welfare criteria) and for tabulating data by userdefined groupings of states.

Producing Estimates for the Metropolitan Population. For Washington, DC and 11 states, metropolitan or non-metropolitan residence is identified (variable $\mathrm{H}^{*}-\mathrm{METRO}$ ). In 34 additional states, where the non-metropolitan population in the sample was small enough to present a disclosure risk, a fraction of the metropolitan sample was recoded to be indistinguishable from nonmetropolitan cases (H*-METRO=2). In these states, therefore, the cases coded as metropolitan ( $H *-M E T R O=1$ ) represent only a subsample of that population.

In producing state estimates for a metropolitan characteristic, multiply the individual, family, or household weights by the metropolitan inflation factor for that state, presented in table 5. (This inflation factor compensates for the subsampling of the metropolitan population and is 1.0 for the states with complete identification of the metropolitan population.)

The same procedure applies when creating estimates for particular identified MSA's or CMSA's--apply the factor appropriate to the state. For multi-state MSA's, use the factor appropriate to each state part. For example, to tabulate data for the Washington, DC-MD-VA MSA, apply the Virginia factor of 1.0521 to weights for residents of the Virginia part of the MSA; Maryland and DC
residents require no modification to the weights (i.e., their factors equal 1.0).

In producing regional or national estimates of the metropolitan population, it is also necessary to compensate for the fact that no metropolitan subsample is identified within two states (Mississippi and West Virginia) and one state-group (North Dakota - South Dakota - Iowa). Thus, factors in the right-hand column of table 5 should be used for regional and national estimates. The results of regional and national tabulations of the metropolitan population will be biased slightly. However, less than one-half of one percent of the metropolitan population is not represented.

Producing Estimates for the Non-Metropolitan Population. State, regional, and national estimates of the non-metropolitan population cannot be computed directly, except for Washington, DC and the 11 states where the factor for state tabulations in table 5 is 1.0. In all other states, the cases identified as not in the metropolitan subsample (METRO=2) are a mixture of nonmetropolitan and metropolitan households. Only an indirect method of estimation is available: first compute an estimate for the total population, then subtract the estimates for the metropolitan population. The results of these tabulations will be slightly biased.

Combined Panel Estimates. Both the 1991 and 1990 panels provide data for October 1990-August 1992. Thus, estimates for these time periods may be obtained by combining the corresponding panels. However, since the Wave 1 questionnaire differs from the subsequent waves' questionnaire and since there were some procedural changes between the 1990 and 1991 panels, we recommend that estimates not be obtained by combining wave 1 data of the 1991 panel with data from another panel. In this case, use the estimate obtained from either panel. Additionally, even for other waves, care.should be taken when combining data from two panels since questionnaires for the two panels differ somewhat and since the length of time in sample for interviews from the two panels differ.

Combined panel estimates may be obtained either (1) by combining estimates derived separately for the two panels or (2) by first combining data from the two files and then producing an estimate.

## 1. Combining Separate Estimates

Corresponding estimates from two consecutive year panels can be combined to create joint estimates by using the formula
$\hat{S}=W \hat{J}_{1}+(1-W) \hat{I}_{2}$

I = joint estimate (total, mean, proportion, etc) ;
$\mathcal{S}_{1}=$ estimate from the earlier panel:
$g_{2}=$ estimate from the later panel:
$W=$ weighting factor of the earlier panel.

To combine the 1990 and 1991 panels use a $W$ value of 0.613 unless one of the panels contributes no information to the estimate. In that case, the panel contributing information receives a factor of 1. The other receives a factor of $z e r o$.

## 2. Combining Data from Separate Files

Start by first creating a file containing the data from the two panel files. Apply the weighting factor, w, to the weight of each person from the earlier panel and apply (1-W) to the weight of each person from the later panel. Estimates can then be produced using the same methodology as used to obtain estimates from a single panel.

## Illustration for computing combined panel estimate.

Suppose SIPP estimates for Wave 5, 1990 panel show there were 441,000 households with monthly December income above $\$ 6,000$. Also, suppose SIPP estimates for Wave 2, 1991 panel show there were 435,000 households with monthly December income above $\$ 6,000$. Using formula (A), the joint level estimate is

$$
I=(0.613)(441,000)+(0.387)(435,000)=439,000
$$

## 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: nonsampling and sampling. We are able to provide estimates of the magnitude of SIPP sampling error, but this is not true of nonsampling error. Found in the next sections are descriptions of sources of SIPP nonsampling error, followed by a discussion of sampling error, its estimation, and its use in data analysis.

Nonsampling Variability. Nonsampling errors can be attributed to many sources, e.g., 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; inability to recall 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 Ouality Profile.

Undercoverage in SIPP results from missed living quarters and missed persons within sample households. 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 nonBlacks. 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. Further, the independent population controls used have not been adjusted for undercoverage in the Census.

Comparability with Other Estimates. Caution should be exercised when comparing data from this report with data from other SIPP publications 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 ouality Profile for known differences with data from other sources and further discussion.
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 confidence intervals, ranges that would include the average result of all possible samples with a known probability. 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 1.6 standard errors below the estimate to 1.6 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 $X_{A}-X_{p}$. Let that standard error be $s_{\text {DIFF }}$ If $X_{A}-X_{g}$ is between -1.6 times $s_{\text {DIFF }}$ and +1.6 times $s_{\text {DIFF }}$ 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 -1.6 times $s_{\text {piff }}$ or larger than +1.6 times Soiff, 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. of course, sometimes
this conclusion will be wrong. When the characteristics are, in fact, 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.

Note Concerning small Estimates and 8 mall 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 200,000. 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.
standard Error Parameters and Tables and Their Use. Most SIPP estimates have greater standard errors than those obtained through a simple random sample because clusters of living quarters are sampled for the SIPP. 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 "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 6 provides base "a" and "b" parameters to be used for the 1991 panel estimates.

The factors provided in table 7 when multiplied by the base parameters of table 6 for a given subgroup and type of estimate give the "a" and "b" parameters for that subgroup and estimate type for the specified reference period. For example, the base "a" and "b" parameters for total number of households are -0.0001005 and 9,286, respectively. For Wave 1 the factor for October 1990 is 4 since only 1 rotation month of data is available. So, the "a" and "b" parameters for total household income in October 1990 based on Wave 1 are -0.0004020 and 37.144, respectively. Also for Wave 1, the factor for the first quarter of 1991 is 1.2222 since 9 rotation months of data are available (rotations 1 and 4 provide 3 rotations months each, while rotations 2 and 3 provide 1 and 2 rotation months, respectively). So the "a" and "b" parameters for total number of households in
the first quarter of 1991 are -0.0001228 and 11,349 , respectiveiy for Wave 1.

The "a" and "b" parameters may be used to calculate the standard error for estimated numbers and percentages. 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. Methods for using these parameter for computation of approximate standard errors are given in the following sections.

For those users who wish further simplification, we have also provided general standard errors in tables 8 through 11. Note that these standard errors only apply when data from all four rotations are used and must be adjusted by a factor from table 6. 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.

For the 1990, 1991 combined panel parameters, multiply the parameters in table 6 by the appropriate factor from table 15. The factors provided in table 16 adjust parameters for the number of rotation months available for a given estimate. These factors, when multiplied by the combined panel parameters derived from table 6 for a given subgroup and type of estimate, give the "an and "b" parameters for that subgroup and estimate type for the specified combined reference period.

Table 12 provides base "a" and "b" parameters for calculating 1991 topical module variances. Table 13 provides base "an and "b" parameters for computing the 1990, 1991 combined panel topical module variances.

Procedures for calculating standard errors for the types of estimates most commonly used are described below. Note specifically that these procedures apply only to reference month estimates or averages of reference month estimates. Refer to the section "Use of Weights" for a more detailed discussion of the construction of estimates. Stratum codes and half sample codes are included on the tapes to enable the user to compute the variances directly by methods such as balanced repeated replications ( $B R R$ ). William G. Cochran provides a list of references discussing the application of this technique. (See Sampling Techniques, 3rd Ed., New York: John Wiley and Sons, 1977, p. 321.)

8tandard 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 the second method 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 the formula

$$
\begin{equation*}
s_{x}=f s \tag{1}
\end{equation*}
$$

where $f$ is the appropriate "f" factor from table 6, and $s$ is the standard error on the estimate obtained by interpolation from table 8 or 9. Alternatively, $s_{x}$ may be approximated by the formula

$$
\begin{equation*}
s_{x}=\sqrt{a x^{2}+b x} \tag{2}
\end{equation*}
$$

from which the standard errors in tables 8 and 9 were calculated. Here $x$ is the size of the estimate and "a" and "b" are the parameters associated with the particular type of characteristic being estimated. Use of formula 2 will provide more accurate results than the use of formula 1.

## Illustration.

Suppose SIPP estimates for Wave 1 of the 1991 panel show that there were 472,000 households with monthly household income above $\$ 6,000$. The appropriate parameters and factor from table 6 and the appropriate general standard error from table 8 are
$a=-0.0001005$.
$b=9,286$
$f=1.00$
$s=66,000$

Using formula 1 , the approximate standard error is

$$
s_{x}=66,000
$$

Using formula 2, the approximate standard error is

$$
\sqrt{(-0.0001005)(472,000)^{2}+(9,286)(472,000)}=66,000
$$

Using the standard error based on formula 2, the approximate 90percent confidence interval as shown by the data is from 366,000 to 578,000. 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.

## Illustration for computing standard errors for combined panel estimates.

Suppose the combined SIPP estimate for total number of households for Wave 5, 1990 panel and Wave 2, 1991 panel was $92,398,000$. The combined panel parameters for total households are obtained by multiplying the appropriate "a" and "b" values from table 6 by the appropriate factors from tables 15 and 16. The 1991 parameters and factors are $a=-0.0001005, b=9,286, g=0.4163$ and factor $=1.0000$, respectively. Thus, the combined panel parameters are $a=-0.0000418$ and $b=3,866$. Using formula 2 , the approximate standard error is

$$
S=\sqrt{(-0.0000418)(92,398,000)^{2}+(3866)(92,398,000)}=19,000
$$

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 3 below. Because of the approximations used in developing formula 3, 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

$$
\begin{equation*}
s_{\bar{x}}=\sqrt{\left(\frac{b}{y}\right) s^{2}} \tag{3}
\end{equation*}
$$

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 unit i. (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 upper and lower boundaries of interval $j$ are $Z_{j-1}$ and $Z_{j}$ respectively. Each unit is placed into one of $c$ groups such that $Z_{j-1}<X_{1} \leq Z_{j}$.
The estimated population variance, $s^{2}$; is given by the formula:

$$
\begin{equation*}
s^{2}=\sum_{j=1}^{c} \quad p_{f} m_{j}^{2}-\bar{x}^{2} \tag{4}
\end{equation*}
$$

where $p_{j}$ is the estimated proportion of units in group $j$, and $m_{j}$ $=\left(Z_{j-1}+Z_{j}\right) / 2$. The most representative value of the item in group $j$ is assumed to be $m_{1}$. If group $c$ is open-ended, i.e., no upper interval boundary exists, then an approximate value for $m_{c}$ is

$$
m_{c}=\frac{3}{2} z_{c-1}
$$

The mean, $\bar{x}$ can be obtained using the following formula:

$$
\bar{x}=\sum_{j=1}^{c} p_{f} m_{j}
$$

In the second method, the estimated population variance is given by

$$
\begin{equation*}
s^{2}=\frac{\sum_{i=1}^{n} w_{1} x_{1}^{2}}{\sum_{i=1}^{n} w_{1}}-\overline{x^{2}} \tag{5}
\end{equation*}
$$

where there are $n$ units with the item of interest and $w_{i}$ is the final weight for unit i. The mean, $\overline{\boldsymbol{X}}$, can be obtained from the formula

$$
\bar{x}=\frac{\sum_{i=1}^{n} w_{1} x_{1}}{\sum_{i=1}^{n} w_{1}}
$$

When forming combined estimates using formula (A) from the section on combined panel estimates, $s^{2}$, given by formula (4), should be calculated by forming a distribution for each panel. The range of values for the item will be divided into intervals. Combined estimates for each interval can be obtained using formula (A). Formula (4) can be applied to the combined distribution. To calculate $\bar{x}$ and $s^{2}$ given by formula (5), replace $x_{i}$ by $W x_{i}$ for $x_{j}$ from the earlier panel and (1-W) $x_{i}$ for $x_{i}$ from the later panel.

## Illustration.

Suppose that based on Wave 1 data, the distribution of monthly cash income for persons age 25 to 34 during the month of January 1991 is given in table 14.

Using formula 4 and the mean monthly cash income of $\$ 2,530$ the approximate population variance, $s^{2}$, is

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

Using formula 3, the appropriate base "b" parameter and factor from table 6, the estimated standard error of a mean $\bar{x}$ is

$$
s_{\bar{x}}=\sqrt{\left(\frac{7,514}{39,851,000}\right)(3,159,887)}=\$ 24
$$

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 6.

As with the estimate of the standard error of a mean, the estimate of the standard error of an aggregate will generally underesfimate 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 (4) or (5) and b be the parameter associated with the particular type of item. The standard error of an aggregate is:

$$
\begin{equation*}
s_{x}=\sqrt{(b)(y) s^{2}} \tag{6}
\end{equation*}
$$

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 persons, families or households sharing a particular characteristic such as the percent of persons owning their own home. The second type is the percentage of money or some similar concept held by a particular group of persons or held in a particular form. Examples are the percent of total wealth held by persons with high income and the percent of total income received by persons on welfare.

For the percentage of persons, families, or households, the approximate standard error, $s_{(x, p) \text {, of the estimated percentage } p}^{p}$ can be obtained by the formula

$$
\begin{equation*}
S_{(x, p)}=f s \tag{7}
\end{equation*}
$$

when data from all four rotations are used to estimate p.
In this formula, $f$ is the appropriate "f" factor from table 6 and $s$ is the standard error of the estimate from table 10 or 11.

Alternatively, it may be approximated by the formula

$$
\begin{equation*}
s_{(x, p)}=\sqrt{\frac{b}{x}(p)(100-p)} \tag{8}
\end{equation*}
$$

from which the standard errors in tables 10 and 11 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 this formula will give more accurate results than use of formula 7 above and should be used when data from less than four rotations are used to estimate p.

Illustration.
Suppose that, in the month of January 1991, 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 8 and the "b" parameter of 10,110 from table 6 and a factor of 1 for the month of January 1991 from table 7, the approximate standard error is

$$
\sqrt{\frac{10,110}{(16,812,000)}(6.7)(100-6.7)}=0.61 \text { percent }
$$

Consequently, the 90 percent confidence interval as shown by these data is from 5.7 to 7.7 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:

$$
p_{I}=100\left(X_{\lambda} / X_{\lambda}\right)
$$

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

$$
p_{I}=100\left(\beta_{A} \bar{X}_{A} / \bar{X}_{N}\right)
$$

where $x_{A}$ and $x_{N}$ are aggregate money figures, $\bar{x}_{\lambda}$ and, $\bar{x}_{N}$ are mean money figures, and $\hat{P}_{\boldsymbol{A}}$ is the estimated number in group $A$ divided by the estimated number in group N. In either case, we estimate the standard error as

$$
\begin{equation*}
s_{I}=\sqrt{\left(\frac{\hat{A}_{A_{A}} \bar{x}_{A}}{\bar{x}_{A}}\right)^{2}\left[\left(\frac{s_{p}}{\bar{B}_{A}}\right)^{2}+\left(\frac{s_{A}}{\bar{x}_{A}}\right)^{2}+\left(\frac{s_{B}}{\bar{x}_{X}}\right)^{2}\right]} . \tag{9}
\end{equation*}
$$

where $s_{p}$ is the standard error of $f_{A}, S_{A}$ is the standard error of $\bar{x}_{\lambda}$ and $s_{B}$ is the standard error of $\bar{x}_{H}$ - To calculate $s_{p}$, use formula 8. The standard errors of $\bar{x}_{k}$ and $\bar{x}_{\lambda}$ may be calculated using formula 3.

It should be noted that there is frequently some correlation between $\bar{B}_{1}, \bar{x}_{N}$, and $\bar{x}_{A}$. Depending on the magnitude and sign of the correlations, the standard error will be over or underestimated.

## Illustration.

Suppose that in January 1991, $9.8 \%$ 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 0.31\%, \$5799, and \$2867. In total there are 86,790,000 households. Then; the percent of all household assets held in rental property is

$$
=100\left((0.098) \frac{72121}{78734}\right)=9.08
$$

Using formula (9), the appropriate standard error is

$$
\begin{aligned}
s_{I} & =\sqrt{\left(\frac{(0.098)(72121)}{78734}\right)^{2}\left[\left(\frac{0.0031}{0.098}\right)^{2}+\left(\frac{5799}{72121}\right)^{2}+\left(\frac{2867}{78734}\right)^{2}\right]} \\
& =0.008 \\
& =0.8 \%
\end{aligned}
$$

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

$$
\begin{equation*}
S_{(x-y)}=\sqrt{S_{x}^{2}+S_{y}^{2}} \tag{10}
\end{equation*}
$$

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.

Suppose that SIPP estimates show the number of persons age 35-44 years with monthly cash income of $\$ 4,000$ to $\$ 4,999$ was $3,186,000$ in the month of January 1991 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 $2,619,000$. Then, using parameters from table 6 and formula 2, the standard errors of these numbers are approximately $153 ; 000$ and 139,000 , respectively. The difference in sample estimates is 567,000 and, using formula 10 , the approximate standard error of the difference is

$$
\sqrt{(153,000)^{2}+(139,000)^{2}}=207,000
$$

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 persons age 35-44 years than for persons age 25-34 years. To perform the test, compare the difference of 567,000 to the product $1.6 \times 207,000=331,200$. Since the difference is greater than 1.6 times the standard error of the difference, the data show that the two age groups are significantly different at the 10 percent significance level.
standard Error of a Median. The median quantity of some item such as income for a given group of persons, families, or households 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.

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 7 or formula 8 , 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

$$
\begin{equation*}
X_{p N T}=\exp \left[\left(\operatorname{Ln}\left(\frac{p N}{N_{1}}\right) / \operatorname{Ln}\left(\frac{N_{2}}{N_{1}}\right)\right) \operatorname{Ln}\left(\frac{A_{2}}{A_{1}}\right)\right] A_{1} \tag{11}
\end{equation*}
$$

if Pareto Interpolation is indicated and

$$
\begin{equation*}
X_{P N}=\left[\frac{P N-N_{2}}{N_{2}-N_{1}} \quad\left(A_{2}-A_{1}\right)+A_{1}\right] \tag{12}
\end{equation*}
$$

if linear interpolation is indicated, where

N
is the size of the group,
$A_{1}$ and $A_{2} \quad$ are the lower and upper bounds, respectively, of the interval in which $X_{p l}$ 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
In refers to the natural logarithm function.
Illustration.
To illustrate the calculations for the sampling error on a median, we return to table 14. The median monthly income for this group is $\$ 2,158$. The size of the group is $39,851,000$.

1. Using formula 8, the standard error of 50 percent on a base of $39,851,000$ is about 0.7 percentage points.
2. Following step 2, the two percentages of interest are 49.3 and 50.7.
3. By examining table 14, we see that the percentage 49.3 falls in the income interval from 2000 to 2499. (Since 55.5\% receive more than $\$ 2,000$ per month, the dollar value corresponding to 49.3 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, the upper bound of a $68 \%$ confidence interval for the median is

$$
\$ 2,000 \exp \left[\left(\operatorname{Lq}\left(\frac{(.493)(39,851,000)}{22,106,000}\right) / \operatorname{Lo}\left(\frac{16,307,000}{22,106,000}\right)\right) \operatorname{Lr}^{2}\left(\frac{2,500}{2,000}\right)\right]=\$ 2181
$$

Also by examining table 14, we see that 50.7 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

$$
\$ 2,000 \exp \left[\left(\operatorname{Ln}\left(\frac{(.507)(39,851,000)}{22,106,000}\right) / \operatorname{Lu}\left(\frac{16,307,000}{22,106,000}\right)\right) \Sigma n\left(\frac{2,500}{2,000}\right)\right]=\$ 2136
$$

Thus, the 68-percent confidence interval on the estimated median is from \$2136 to \$2181. An approximate standard error is

$$
\frac{\$ 2181-\$ 2136}{2}=\$ 23
$$

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

$$
\begin{equation*}
s_{\frac{x}{y}}=\sqrt{\left(\frac{x}{y}\right)^{2}\left[\left(\frac{s_{y}}{y}\right)^{2}+\left(\frac{s_{x}}{x}\right)^{2}\right]} \tag{13}
\end{equation*}
$$

where $x$ and $y$ are the means or medians, and $s_{x}$ and $s_{y}$ are their associated standard errors. Formula 13 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.

| Wave | Topical Module |
| :---: | :---: |
| 1 | None |
| 2 | Recipiency History |
|  | Employment History |
|  | Work Disability History |
|  | Education and Training History |
|  | Marital History |
|  | Migration History |
|  | Fertility History |
|  | Household Relationships |
| 3 | Child Care Arrangements |
|  | Child Support Agreements |
|  | Support of Non-household Members |
|  | Functional Limitations and Disability |
|  | Utilization of Health Care Services |
|  | Work Schedule |
| 4 | Selected Financial Assets |
|  | Medical Expenses and Work Disability |
|  | Real Estate, Shelter Costs, Dependent Care, |
|  |  |
| 5 | Taxes |
|  | Annual Income and Retirement Accounts |
|  | School Enrollment and Financing |
| 6 | Extended Measures of Wellbeing |
|  | (Consumer Durables, |
|  | Living Conditions, |
|  | Basic Needs, |
|  | Expenditures, |
|  | Minimum Income) |
|  |  |
| 7 | Assets and Liabilities |
|  | Retirement Expectations and Pension Plan Coverage |
|  | Real Estate Property and Vehicles |
| 8 | Taxes |
|  | Annual Income and Retirement Accounts |
|  | School Enrollment and Financing. |

Table 2. 1990 Panel Topical Modules

| Wave | Topical Module |
| :---: | :---: |
| 1 | None |
| 2 | Recipiency History |
|  | Employment History |
|  | Work Disability History |
|  | Education and Training History |
|  | Marital History |
|  | Migration History |
|  | Fertility History |
|  | Household Relationships |
| 3 | Work Schedule |
|  | Child Care |
|  | Child Support Agreements |
|  | Support of Non-household Members |
|  | Functional Limitations and Disability |
|  | Utilization of Health Care Services |
| 4 | Assets and Liabilities |
|  | Retirement Expectations and Pension Plan Coverage |
|  | Real Estate Property and Vehicles |
| 5 | Taxes |
|  | Annual Income and Retirement Accounts |
|  | School Enrollment and Financing |
| 6 | Child Support Agreements |
|  | Support for Non-household Members |
|  | Functional Limitations and Disability |
|  | Utilization of Health Care Services |
|  | Not in Labor Force Spells |
| 7 | Selected Financial Assets |
|  | Medical Expenses and Work Disability |
|  | Real Estate, Shelter Costs, Dependent Care and |
|  | Vehicles |
| 8 | Taxes |
|  | Annual Income and Retirement Accounts |
|  | School Enrollment and Financing |

Table 3. Reference Months for Each Interview Month - 1991 Panel


Table 4. Reference Months for Each Interview Month - 2990 Panel


Table 5. Metropolitan Subsample Factors to be appiled to Compute National and Eubnational Estimates

| - |  | Factors for use in State or CMSA (MSA) Tabulations | Factors for use in Regional or National Tabulations |
| :---: | :---: | :---: | :---: |
| Northeast: | Connecticut | 1.0387 | 1.0387 |
|  | Maine | 1.2219 | 1.2219 |
|  | Massachusetts | 1.0000 | 1.0000 |
|  | New Hampshire | 1.2234 | 1.2234 |
|  | New Jersey | 1.0000 | 1.0000 |
|  | New York | 1.0000 | 1.0000 |
|  | Pennsylvania | 1.0096 | 1.0096 |
|  | Rhode Island | 1.2506 | 1.2506 |
|  | Vermont | 1.2219 | 1.2219 |
| Midwest: | Illinois | 1.0000 | 1.0110 |
|  | Indiana | 1.0336 | 1.0450 |
|  | Iowa | --- |  |
|  | Kansas | 1.2912 | 1.3055 |
|  | Michigan | 1.0328 | 1.0442 |
|  | Minnesota | 1.0366 | 1.0480 |
|  | Missouri | 1.0756 | 1.0874 |
|  | Nebraska | 1.6289 | 1.6468 |
|  | North Dakota | - | - |
|  | Ohio | 1.0233 | 1.0346 |
|  | South Dakota | -0233 | 1.0346 |
|  | Wisconsin | 1.0188 | 1.0300 |
| South: | Alabama | 1.1574 | 1.1595 |
|  | Arkansas | 1.6150 | 1.6179 |
|  | Delaware | 1.5593 | 1.5621 |
|  | D.C. | 1.0000 | 1.0018 |
|  | Florida | 1.0140 | 1.0158 |
|  | Georgia | 1.0142 | 1.0160 |
|  | Kentucky | 1.2120 | 1.2142 |
|  | Louisiana | 1.0734 | 1.0753 |
|  | Maryland | 1.0000 | 1.0018 |
|  | Mississippi | 000 | -0018 |
|  | North Carolina | 1.0000 | 1.0018 |
|  | Oklahoma | 1.0793 | 1.0812 |
|  | South Carolina | 1.0185 | 1.0203 |
|  | Tennessee | 1.0517 | 1.0536 |
|  | Texas | 1.0113 | 1.0131 |
|  | Virginia | 1.0521 | 1.0540 |
|  | West Virginia | --- | --- |

- indicates no metropolitan subsample is identified for the state

Table 5 cont'd. Metropolitan subsample Factors to be Applied to Compute National and Eubnational Estimates

|  |  | Factors for use in state or CMSA (MSA) Tabulations | Factors for use in Regional or National Tabulations |
| :---: | :---: | :---: | :---: |
| West: | Alaska | 1.4339 | 1.4339 |
|  | Arizona | 1.0117 | 1.0117 |
|  | California | 1.0000 | 1.0000 |
|  | Colorado | 1.1306 | 1.1306 |
|  | Hawail | 1.0000 | 1.0000 |
|  | Idaho | 1.4339 | 1.4339 |
|  | Montana | 1.4339 | 1.4339 |
|  | Nevada | 1.0000 | 1.0000 |
|  | New Mexico | 1.0000 | 1.0000 |
|  | Oregon | 1.1317 | 1.1317 |
|  | Utah | 1.0000 | 1.0000 |
|  | Washington | 1.0456 | 1.0456 |
|  | Wyoming | 1.4339 | 1.4339 |

- indicates no metropolitan subsample is identified for the state

Table 6: SIPP Indirect Generalized Variance Parameters for the 1991 Panel

Characteristics ${ }^{1}$
PERSONS
Total or White
16+ Program Participation and Benefits, Poverty
Both Sexes
Male
Female
16+ Income and Labor Force (5)
Both Sexes
Male
Female
16+ Pension Plan ${ }^{2}$
Both Sexes
Male
Female

$$
-0.0001425 \quad 13,761
$$

All Others ${ }^{2}$
(6)

Both Sexes
Male

$$
\begin{array}{lll}
-0.0001134 & 27,327 & 1.00
\end{array}
$$

Female

$$
-0.0002203 \quad 27,327
$$

Black
Poverty (1)
Both Sexes
Male
Female
(4)

| -0.0001342 | 22,040 | 0.90 |
| :--- | :--- | :--- |
| -0.0002789 | 22,040 |  |
| -0.0002587 | 22,040 |  |
|  |  |  |
| -0.0000407 | 7,514 | 0.52 |
| -0.0000850 | 7,514 |  |
| -0.0000778 | 7,514 |  |

$$
\begin{array}{lll}
-0.0000744 & 13,761 & 0.71
\end{array}
$$

$$
\begin{array}{lll}
-0.0006397 & 18,800 & 0.83 \\
-0.0013668 & 18,800 \\
-0.0012028 & 18,800
\end{array}
$$

All Others (2)
Both Sexes
Male
Female

| -0.0003441 | 10,110 | 0.61 |
| :--- | :--- | :--- |
| -0.0007350 | 10,110 |  |
| -0.0006468 | 10,110 |  |

HOUSEHOLDS

| Total or White $\quad$ | -0.0001005 | 9,286 | 1.00 |
| :--- | :--- | :--- | :--- |
| Black | -0.0006115 | 6,416 | 0.83 |

Parameters
b
f

(3)

로
a

$$
-0.0001556 \quad 13,761
$$

$$
-0.0002334 \quad 27,327
$$

Table 7. Factors to be Applied to Table 6 Base Parameters to Obtain Parameters for Various Reference Periods
\# of available,
rotation months ${ }^{1}$
factor
Monthly estimate
1 4.0000
2
3
4
2.0000
1.3333
1.0000
Quarterly estimate
6
8
1.8519
1.4074
9
10
11
.
1.0494
12
1.0370
1.0000

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

Table 8. Standard Errors of Estimated Numbers of Eouseholds, Families or Unrelated Persons (Numbers in Thousands)

| Size of Estimate | Standard <br> Error | Size of Estimate | Standard <br> Error |
| :---: | :---: | :---: | :---: |
| 200 | 43 | 15,000 | 342 |
| 300 | 53 | 25,000 | 412 |
| 500 | 68 | 30,000 | 434 |
| 750 | 83 | 40,000 | 459 |
| 1,000 | 96 | 50,000 | 462 |
| 2,000 | 135 | 60,000 | 442 |
| 3,000 | 164 | 70,000 | 397 |
| 5,000 | 210 | 80,000 | 316 |
| 7,500 | 253 | 90,000 | 147 |
| 10,000 | 288 | 92,000 | 61 |

1
To account for sample attrition, multiply the standard error of the estimate by 1.04 for estimates which include data from Wave 5 and beyond.

Table 9. Standard Errors of Estimated Numbers of Persons (Numbers in Thousands)

| Size of Estimate | Standard <br> Error | Size of Estimate | Standard <br> Error |
| :---: | :---: | :---: | :---: |
| 200 | 74 | 50,000 | 1041 |
| 300 | 90 | 80,000 | 1208 |
| 600 | 128 | 100,000 | 1264 |
| 1,000 | 165 | 130,000 | 1279 |
| 2,000 | 233 | 135,000 | 1274 |
| 5,000 | 366 | 150,000 | 1244 |
| 8,000 | 460 | 160,000 | 1212 |
| 11,000 | 536 | 180,000 | 1116 |
| 13,000 | 580 | 200,000 | 964 |
| 15,000 | 620 | 210,000 | 859 |
| 17,000 | 657 | 220,000 | 723 |
| 22,000 | 739 | 230,000 | 535 |
| 26,000 | 796 | 240,000 | 163 |
| 30,000 | 847 |  |  |

To account for sample attrition, multiply the standard error of the estimate by 1.04 for estimates which include data from Wave 5 and beyond.

Table 10. Standard Errors of Estimated Percentages of of Households Families or Unrelated Persons

| Base of Estimated Percentage (Thousands) | Estimated Percentages ${ }^{1}$ |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\leq 1$ or $\geq 99$ | 2 or 98 | 5 or 95 | 10 or 90 | 25 or 75 | 50 |
| 200 | 2.1 | 3.0 | 4.7 | 6.5 | 9.3 | 10.8 |
| 300 | 1.8 | 2.5 | 3.8 | 5.3 | 7.6 | 8.8 |
| 500 | 1.4 | 1.9 | 3.0 | 4.1 | 5.9 | 6.8 |
| 750 | 1.1 | 1.6 | 2.4 | 3.3 | 4.8 | 5.6 |
| 1,000 | 1.0 | 1.3 | 2.1 | 2.9 | 4.2 | 4.8 |
| 2,000 | 0.68 | 1.0 | 1.5 | 2.0 | 3.0 | 3.4 |
| 3,000 | 0.55 | 0.78 | 1.2 | 1.7 | 2.4 | 2.8 |
| 5,000 | 0.43 | 0.60 | 0.9 | 1.3 | 1.9 | 2.2 |
| 7,500 | 0.35 | 0.49 | 0.8 | 1.1 | 1.5 | 1.8 |
| 10,000 | 0.30 | 0.43 | 0.66 | 0.9 | 1.3 | 1.5 |
| 15,000 | 0.25 | 0.35 | 0.54 | 0.75 | 1.1 | 1.2 |
| 25,000 | 0.19 | 0.27 | 0.42 | 0.58 | 0.8 | 1.0 |
| 30,000 | 0.18 | 0.25 | 0.38 | 0.53 | 0.76 | 0.9 |
| 40,000 | 0.15 | 0.21 | 0.33 | 0.46 | 0.66 | 0.76 |
| 50,000 | 0.14 | 0.19 | 0.30 | 0.41 | 0.59 | 0.68 |
| 60,000 | 0.12 | 0.17 | 0.27 | 0.37 | 0.54 | 0.62 |
| 70,000 | 0.11 | 0.16 | 0.25 | 0.35 | 0.50 | 0.58 |
| 80,000 | 0.11 | 0.15 | 0.23 | 0.32 | 0.47 | 0.54 |
| 90,000 | 0.10 | 0.14 | 0.22 | 0.30 | 0.44 | 0.51 |
| 92,000 | 0.10 | 0.14 | 0.22 | 0.30 | 0.44 | 0.50 |

To account for sample attrition, multiply the standard error of the estimate by 1.04 for estimates which include data from Wave 5 and beyond.

Table 11. 8tandard Errors of Estimated Percentages of Persons

| Base of Estimated Percentage (Thousands.) | Estimated Percentages |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\leq 1$ or $\geq 99$ | 2 or 98 | 5 or 95 | 10 or 90 | 25 or 75 | 50 |
| 200 | 3.7 | 5.2 | 8.1 | 11.1 | 16.0 | 18.5 |
| 300 | 3.0 | 4.2 | 6.6 | 9.1 | 13.1 | 15.1 |
| 600 | 2.1 | 3.0 | 4.7 | 6.4 | 9.2 | 10.7 |
| 1,000 | 1.6 | 2.3 | 3.6 | 5.0 | 7.2 | 8.3 |
| 2,000 | 1.2 | 1.6 | 2.5 | 3.5 | 5.1 | 5.8 |
| 5,000 | 0.74 | 1.0 | 1.6 | 2.2 | 3.2 | 3.7 |
| 8,000 | 0.58 | 0.8 | 1.3 | 1.8 | 2.5 | 2.9 |
| 11,000 | 0.50 | 0.70 | 1.1 | 1.5 | 2.2 | 2.5 |
| 13,000 | 0.46 | 0.64 | 1.0 | 1.4 | 2.0 | 2.3 |
| 17,000 | 0.40 | 0.56 | 0.9 | 1.2 | 1.7 | 2.0 |
| 22,000 | 0.35 | 0.49 | 0.8 | 1.1 | 1.5 | 1.8 |
| 26,000 | 0.32 | 0.45 | 0.71 | 1.0 | 1.4 | 1.6 |
| 30,000 | 0.30 | 0.42 | 0.66 | 0.9 | 1.3 | 1.5 |
| 50,000 | 0.23 | 0.33 | 0.51 | 0.70 | 1.0 | 1.2 |
| 80,000 | 0.18 | 0.26 | 0.40 | 0.55 | 0.8 | 0.9 |
| 100,000 | 0.16 | 0.23 | 0.36 | 0.50 | 0.72 | 0.8 |
| 130,000 | 0.14 | 0.20 | 0.32 | 0.43 | 0.63 | 0.72 |
| 200,000 | 0.12 | 0.16 | 0.25 | 0.35 | 0.51 | 0.58 |
| 220,000 | 0.11 | 0.16 | 0.24 | 0.33 | 0.48 | 0.56 |
| 230,000 | 0.11 | 0.15 | 0.24 | 0.33 | 0.47 | 0.55 |
| 240,000 | 0.11 | 0.15 | 0.23 | 0.32 | 0.46 | 0.53 |

To account for sample attrition, multiply the standard error of the estimate by 1.04 for estimates which include data from Wave 5 and beyond.

Table 12. 1991 Topical Module Generalized Variance Parameters ${ }^{1}$

|  | a | b |
| :---: | :---: | :---: |
| Fertility |  |  |
| \# Women | -0.0000748 | 6,119 |
| Births | -0.0000670 | 11,158 |
| Educational Attainment ${ }^{2}$ |  |  |
| Wave 2 | -0.0000457 | 8,335 |
| Wave 5 | -0.0000511 | 9,085 |
| Wave 8 | -0.0000511 | 9,085 |
| Marital Status and |  |  |
| Person's Family Characteristics |  |  |
| Some HH members | -0.0000644 | 12,613 |
| All HH members | -0.0000804 | 15,326 |
| Child Support |  |  |
| Wave 3 | -0.0000883 | 9,286 |
| Support for non-household members |  |  |
| Wave 3 | -0.0000961 | 9,286 |
| Health and Disability | -0.0000499 | 12,014 |
| 0-15 Child Care |  |  |
| Wave 3 | -0.0001340 | 7,514 |
| Welfare History and AFDC |  |  |
| Both sexes 18+ | -0.0001241 | 22,040 |
| Males 18+ | -0.0002604 | 22,040 |
| Females 18+ | -0.0002372 | 22,040 |

1 Use the "16+ Income and Labor Force" core parameter for tabulations of reasons for not working/reservation wage and work related income.

2
The parameter also applies to the School Enrollment and Finance Topical Module Subject.

Table 13. SIPP 1990, 1991 Combined Panel Topical Module Generalized Variance Parameters

|  | 르 | b |
| :---: | :---: | :---: |
| Educational Attainment |  |  |
| 1990 Wave 5/1991 Wave 2 | -0.0000190 | 3,470 |
| 1990 Wave 8/1991 Wave 5 | -0.0000201 | 3,582 |
| Support for non-household members 1990 Wave 6/1991 Wave 3 | -0.0000400 | 3,866 |
| Health and Disability 1990 Wave 6/1991 Wave 3 | -0.0000208 | 5,001 |
| 0-15 Child Care 1990 Wave 6/1991 Wave 3 | -0.0000558 | 3,128 |
| Child Support <br> 1990 Wave 6/1991 Wave 3 | -0.0000368 | 3,866 |

Table 14. Distribution of Monthly Cash Income Among Persons 25 to 34 Years 0ld

|  | Total | $\underset{\substack{\text { matar } \\ 300}}{ }$ |  | 边边 | $\begin{aligned} & 580 \\ & 50,1,100 \\ & 5000 \end{aligned}$ |  | $\begin{array}{\|l\|l\|l\|l\|l\|l\|} \substack{1 \\ 3,20} \end{array}$ |  | $\begin{array}{\|c} 82,50 \\ 32,50 \\ \hline 2,500 \end{array}$ | $\begin{aligned} & \begin{array}{l} 3.000 \\ 38,60 \end{array} \\ & \hline 80 \end{aligned}$ | $\begin{array}{\|c} 3,505000 \\ 30,509 \end{array}$ | (tamo |  | ${ }^{\text {S.and }}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 30,651 | 137 | 1 L 1 | 238 | 273 | $3 \mathrm{ss2}$ | 6278 | 550 | 4\%0 | 373 | ${ }_{\text {zi9 }}$ | 2619 | 1223 | 1483 |
|  | - | 100.0 | 8.6 | 92.6 | ${ }^{8.7}$ | m. 9 | 7.2 | 55.5 | 60.9 | 29.1 | 19.7 | ${ }^{13.6}$ | ${ }^{6.8}$ | ${ }^{3.7}$ |

Table 15. SIPP Factors to be Applied to the 1991 Base Parameters to Obtain the 1990, 1991 Combined Panel Parameters

|  | Waves to be Combined |  |
| :---: | :---: | :---: |
| 1990 panel | 1991 panel |  |
| 5 | 2 | 0.4163 |
| 6 | 3 | 0.4163 |
| 7 | 4 | 0.4163 |
| 8 | 5 | 0.3943 |

1 When deriving estimates based on two or more waves of data from the same panel, choose the corresponding gfactor with the greatest value. Apply only this factor to the base parameter.

## Table 16. Factors to be Applied to Base Parameters to Obtain Combined Panel Parameters for Estimates from Various Reference Periods.

```
# of available
rotation months
for 2 panels combined}\mp@subsup{}{}{2
```

factor

Monthly Estimate

| 2 | 4.0000 |
| :--- | ---: |
| 3 | 3.0000 |
| 4 | 2.0000 |
| 5 | 1.6667 |
| 6 | 1.3333 |
| 7 | 1.1667 |
| 8 | 1.0000 |

Quarterly Estimates
12
1.8519
1.5631

15
1.2222

18
1.1470

19
1.0000

24

Annual Estimates

$$
1.0000
$$

96

Estimates are based on monthly averages.
The number of available rotation months for a given estimate is the sum of the number of rotations available for each month of the estimate for the two panels. There must be at least one rotation month available for each month from each panel for monthly and quarterly estimates.

## APPENDIX A-1

Income Source Code List

## Code Income Sources

1 - Social Security
2 - U.S. Government Railroad Retirement pay
3 - Federal Supplemental Security Income (SSI)
5 - State unemployment compensation
6 - Supplemental Unemployment Benefits
7 - Other unemployment compensation (Trade Adjustment Act benefits, strike pay, other)
8 - Veterans compensation or pensions
10 - Worker's compensation
12 - Employer or union temporary sickness policy
13 - Payments from a sickness, accident or disability insurance policy purchased on your own
20 - Aid to Families with Dependent Children (AFDC, ADC)
21 - General assistance or General relief
23 - Foster child care payments
24 - Other welfare
25 - WIC (Women, Infants and Children) Nutrition Program
27 - Food stamps
28 - Child support payments
29 - Alimony payments
30 - Pension from company or union
31 - Federal Civil Service or other Federal civilian employee pensions
32 - U.S. Military retirement pay
34 - State government pensions
35 - Local government pensions
36 - Income from paid-up life insurance policies or annuities
37 - Estates and trusts
38 - Other payments for retirement, disability or survivor -
40 - G.I. Bill/VEAP education benefits
41 - Other VA educational assistance
50 - Income assistance from a charitable group
51 - Money from relatives or friends
52 - Lump sum payments
53 - Income from roomers or boarders
54 - National Guard or Reserve pay
55 - Incidental or casual earnings
56 - Other cash income not included elsewhere
75 - Categories combined and recoded for confidentiality reasons
State Administered Supplemental Security Income (old code 4)
Black lung payments (old code 9)
State temporary sickness or disability benefits (old code 11)
Indian, Cuban, or Refugee Assistance (old code 22)
National Guard or Reserve Force retirement (old code 33)

## Code Asset List

100 - Regular/passbook savings accounts in a bank, savings and loan or credit union
101 - Money market deposit accounts
102 - Certificates of Deposit or other savings certificates
103 - NOW, Super NOW or other interest earning checking accounts
104 - Money market funds
105 - U.S. Government securities
106 - Municipal or corporate bonds
107 - Other interest-earning assets
110 - Stocks or mutual fund shares
120- Rental property
130 - Mortgages
140 - Royalties
150-Other financial investments

## Code Special Indicators

170 - Worked
171 - Disabled
172 - Medicare
173 - Medicaid
174 - U.S. Saving Bonds (E, EE)
175 - College Work Study
176 - PELL Grant
177 - Supplemental Educational Opportunity Grant (SEOG)
178 - National Direct Student Loan (NSL)
179 - Guaranteed Student Loan
180 - JTPA Training
181 - Employer assistance
182 - Fellowship/Scholarship
183 - Other financial aid
200 - VA disability rating of 100\%
201 - VA disibility of less than $100 \%$

## APPENDIX A-2

## Income Sources Included in Monthly Cash Income

## Earnings from Employment

Wages and salaries
Nonfarm self-employment income
Farm self-employment income

## Income from Assets (Property Income)

Regular/passbook savings accounts in a bank, savings and loan or credit union
Money market deposit accounts
Certificates of Deposit or other savings certificates
NOW, Super NOW or other interest-earning checking accounts
Money market funds
U.S. Government securities

Municipal or corporate bonds
Other interest-earning assets
Stocks or mutual fund shares
Rental property
Mortgages
Royalties
Other financial investments

## Other Income Sources

## Social Security

U.S. Government Railroad Retirement pay

Federal Supplemental Security Income (SSI)
State Administered Supplemental Security Income
State unemployment compensation
Supplemental Unemployment Benefits
Other unemployment compensation (Trade Adjustment Act benefits, strike pay, other)
Veterans compensation or pensions
Black lung payments
Worker's compensation
State temporary sickness or disability benefits
Payments from a sickness, accident or disability insurance policy purchased on your own
Aid to Families with Dependent Children (AFDC, ADC)
General Assistance or General Relief
Indian, Cuban, or Refugee Assistance
Foster child care payments
Other welfare
Child support payments
Alimony payments
Pension from company or union
Federal Civil Service or other Federal civilian employee pensions
U.S. Military retirement pay

National Guard or Reserve Forces retirement
State government pensions
Local government pensions
Income from paid-up life insurance policies or annuities
Estates and trusts

Other payments for retirement, disability or survivor benefits
G.I. Bill /VEAP education benefits Income assistance from a charitable group Money from relatives or friends
Lump sum payments
Income from roomers or boarders
National Guard or Reserve pay
Incidental or casual earnings
Other cash income not included elsewhere

## APPENDIX A-3

## Sources of Means-Tested Benefits Covered in SIPP

Cash Benefits<br>Federal Supplemental Security Income (SSI)<br>State Administered Supplemental Security Income<br>Veterans' pensions<br>Aid to Families with Dependent Children (AFDC, ADC)<br>General Assistance or General Relief<br>Indian, Cuban, or Refugee Assistance<br>Other welfare<br>Foster child care payments<br>Noncash Benefits<br>Food Stamps<br>Special Supplemental Food Program for Women, Infants, and Children (WIC)<br>Low-Income Home Energy Assistance<br>Medicaid<br>Free or reduced price school lunches<br>Free or reduced price school breakfasts<br>Public or subsidized rental housing

A3-2

## APPENDIX A-4

1980 Census of Population Occupation Classification System
(The numbers in parentheses refer to the 1980 Standard Occupational Classification code equivalents. Pt means part. N.e.c. means not elsewhere classified.)

# MANAGERIAL AND PROFESSIONAL SPECIALTY OCCUPATIONS 

Legislators (111)

Chief executives and general administrators, public administration (112)
Administrators and officials, public administration (1132-1139)
Administrators, protective services (1131)
Financial managers (122)
Personnel and labor relations managers (123)
Purchasing managers (124)
Managers, marketing, advertising, and public relations (125)
Administrators, education and related fields (128)
Managers, medicine and health (131)
Managers, properties and real estate (1353)
Postmasters and mail superintendents (1344)
Funeral directors (pt 1359)
Managers and administrators, n.e.c. (121, 126, 127, 132-139, exc. 1344, 1353, pt 1359)
Management related occupations
Accountants and auditors (1412)
Underwriters (1414)
Other financial officers $(1415,1419)$
Management analysts (142)
Personnel, training, and labor relations specialists (143)
Purchasing agents and buyers, farm products (1443)
Buyers, wholesale and retail trade except farm products (1442)
Purchasing agents and buyers, n.e.c. (1449)
Business and promotion arents (145)
Construction inspectors (1472)
inspectors and compliance officers, exc. construction (1473)
Management related occupations, n.e.c. (149)
Professional Specialty Occupations
Engineers, Architects, and Surveyors
Architects (161)
Engineers
Aerospace (1622)
Metallurgical and materials (1623)
Mining (1624)
Petroleum (1625)
Chemical (1626)
Nuclear (1627)
Civil (1628)
Agricultural (1632)
Electrical and electronic $(1633,1636)$
Industrial (1634)
Mechanical (1635)

Marine and naval architects (1637)
Engineers, n.e.c. (1639)
Surveyors and mapping scientists (164)
Mathematical and Computer Scientists
Computer systems analysts and scientists (171)
Operations and systems researchers and analysts (172)
Actuaries (1732)
Statisticians (1733)
Mathematical scientists, n.e.c. (1739)
Natural Scientists
Physicists and astronomers (1842, 1843)
Chemists, except biochemists (1845)
Atmospheric and space scientists (1846)
Geologists and geodesists (1847).
Physical scientists, n.e.c. (1849)
Agricultural and food scientists (1853)
Biological and life scientists (1854)
Forestry and conservation scientists (1852)
Medical scientists (1855)
Health Diagnosing Occupations
Physicians (261)
Dentists (262)

- Veterinarians (27)

Optometrists (281)
Podiatrists (283)
Health diagnosing practitioners, n.e.c. (289)
Health Assessment and Treating Occupations
Registered nurses (29)
Pharmacists (301)
Dietitians (302)
Therapists
Inhalation therapists (3031)
Occupational therapists (3032)
Physical therapists (3033)
Speech therapists (3034)
Therapists, n.e.c. (3039)
Physicians' assistants (304)
Teachers, Postsecondary
Earth, environmental, and marine science teachers (2212)
Biological science teachers (2213)
Chemistry teachers (2214)
Physics teachers (2215)
Natural science teachers, n.e.c. (2216)
Psychology teachers (2217)
Economics teachers (2218)
History teachers (2222)
Political science teachers (2223)
Sociology teachers (2224)
Social science teachers, n.e.c. (2225)
Engineering teachers (2226)
Mathematical science teachers (2227)
Computer science teachers (2228) .
Medical science teachers (2231)
Health specialties teachers (2232)
Business, commerce, and marketing teachers (2233)
Agriculture and forestry teachers (2234)

137
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153
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N(156)
P(157)
158
159

Art, drama, and music teachers (2235)
Physical education teachers (2236)
Education teachers (2237)
English teachers (2238)
Foreign language teachers (2242)
Law teachers (2243)
Social work teachers (2244)
Theology teachers (2245)
Trade and industrial teachers (2246)
Home economics teachers (2247)
Teachers, postsecondary, n.e.c. (2249)
Postsecondary teachers, subject not specified
Teachers, Except Postsecondary
Teachers, prekindergarten and kindergarten (231)
Teachers, elementary school (232)
Teachers, secondary school (233)
Teachers, special education (235)
Teachers, n.e.c. $(236,239)$
Counselors, educational and vocational (24)
Librarians, Archivists, and Curators
Librarians (251)
Archivists and curators (252)
Social Scientists and Urban Planners
Economists (1912)
Psychologists (1915)
Sociologists (1916)
Social scientists, n.e.c. $(1913,1914,1919)$
Urban planners (192)
Social, Recreation, and Religious Workers
Social workers (2032)
Recreation workers (2033)
Clergy (2042)
Religious workers, n.e.c. (2049)
Lawyers and Judges
Lawyers (211)
Judges (212)
Writers, Artists, Entertainers, and Athletes
Authors (321)
Technical writers (398)
Designers (322)
Musicians and composers (323)
Actors and directors (324)
Painters, sculptors, craft-artists, and artist printmakers (325)
Photographers (326)
Dancers (327)
Artists, performers, and related workers, n.e.c. $(328,329)$
Editors and reporters (331)
Public relations specialists (332)
Announcers (333)
Athletes (34)

## TECHNICAL, SALES, AND ADMINISTRATIVE SUPPORT OCCUPATIONS

## Technicians and Related Support Occupations

Health Technologists and Technicians
Clinical laboratory technologists and technicians (362)
Dental hygienists (363)
Health record technologists and technicians (364)
Radiologic technicians (365)
Licensed practical nurses (366)
Health technologists and technicians, n.e.c. (369)
Technologists and Technicians, Except Health
Engineering and Related Technologists and Technicians
Electrical and electronic technicians (3711).
Industrial engineering technicians (3712)
Mechanical engineering technicians (3713)
Engineering technicians, n.e.c. (3719)
Drafting occupations (372)
Surveying and mapping technicians (373)
Science Technicians
Biological technicians (382)
Chemical technicians (3831)
Science technicians, n.e.c. $(3832,3833,384,389)$
Technicians; Except Health, Engineering, and Science
Airplane pilots and navigators (825)
Air traffic controllers (392)
Broadcast equipment operators (393)
Computer programmers $(3971,3972)$
Tool programmers, numerical control (3974)
Legal assistants (396)
Technicians, n.e.c. (399)

## Sales Occupations

Supervisors and proprietors, sales occupations (40)
Sales Representatives, Finance and Business Services
Insurance sales occupations (4122)
Real estate sales occupations (4123)
Securities and financial services sales occupations (4124)
Advertising and related sales occupations (4153)
Sales occupations, other business services (4152)
Sales Representatives, Commodities Except Retail
Sales engineers (421)
Sales representatives, mining, manufacturing, and wholesale $(423,424)$
Sales Workers, Retail and Personal Services
Sales workers, motor vehicles and boats $(4342,4344)$
Sales workers, apparel (4346)
Sales workers, shoes (4351)
Sales workers, furniture and home furnishings (4348)
Sales workers; radio, TV, hi-fi, and appliances (4343, 4352)
Sales workers, hardware and building supplies (4353)
Sales workers, parts (4367)
Sales workers, other commodities (4345, 4347, 4354, 4356, 4359,4362, 4369)
Sales counter clerks (4363)
Cashiers (4364)
Street and door-to-door sales workers (4366)
News vendors (4365)
Sales Related Occupations
Demonstrators, promoters and models, sales (445)
Auctioneers (447)
Sales support occupations, n.e.c. $(444,446,449)$

## Administrative Support Occupations, Including Clerical

Supervisors, Administrative Support Occupations
Supervisors, general office ( $4511,4513,4514,4516,4519,4529$ )
Supervisors, computer equipment operators (4512)
Supervisors, financial records processing (4521)
Chief communications operators (4523)
Supervisors; distribution, scheduling, and adjusting clerks (4522, 4524-4528)
Computer Equipment Operators
Computer operators (4612)
Peripheral equipment operators (4613)
Secretaries, Stenographers, and Typists
Secretaries (4622)
Stenographers (4623)
Typists (4624)
Information Clerks
Interviewers (4642)
Hotel clerks (4643)
Transportation ticket and reservation agents (4644)
Receptionists (4645)
Information clerks, n.e.c. (4649)
Records Processing Occupations, Except Financial
Classified-ad clerks (4662)
Correspondence clerks (4663)
Order clerks (4664)
Personnel clerks, except payroll and timekeeping (4692)
Library clerks (4694)
File clerks (4696)
Records clerks (4699)
Financial Records Processing Occupations
Bookkeepers, accounting, and auditing clerks (4712)
Payroll and timekeeping clerks (4713)
Billing clerks (4715)
Cost and rate clerks (4716)
Billing, posting, and calculating machine operators (4718)
Duplicating, Mail and Other Office Machine Operators
Duplicating machine operators (4722)
Mail preparing and paper handling machine operators (4723)
Office machine operators, n.e.c. (4729)
Communications Equipment Operators
Telephone operators (4732)
Telegraphers (4733)
Communications equipment operators, n.e.c. (4739)
Mail and Message Distributing Occupations
Postal clerks, exc. mail carriers (4742)
Mail carriers, postal service (4743)
Mail clerks, exc. postal service (4744)
Messengers (4745)
Material Recording, Scheduling, and Distributing Clerks .
Dispatchers (4751).

Production coordinators (4752)
Traffic, shipping, and receiving clerks (4753)
Stock and inventory clerks (4754)
Meter readers (4755)
Weighers, measurers, and checkers (4756)
Samplers (4757)
Expediters (4758)
Material recording, scheduling, and distributing clerks, n.e.c. (4759)
Adjusters and Investigators
Insurance adjusters, examiners, and investigators (4782)
Investigators and adjusters, except insurance (4783)
Eligibility clerks, social welfare (4784)
Bill and account collectors (4786)
Miscellaneous Administrative Support Occupations
General office clerks (463)
Bank tellers (4791)
Proofreaders (4792)
Data-entry keyers (4793)
Statistical clerks (4794)
Teachers' aides (4795)
Administrative support occupations, n.e.c. $(4787,4799)$

## SERVICE OCCUPATIONS

## Private Household Occupations

Launderers and ironers (503)
Cooks, private household (504)
Housekeepers and butlers (505)
Child care workers, private household (506)
Private household cleaners and servants $(502,507,509)$

## Protective Service Occupations

Supervisors, Protective Service Occupations
Supervisors, firefighting and fire prevention occupations (5111)
Supervisors, police and detectives (5112)
Supervisors, guards (5113)
Firefighting and Fire Prevention Occupations
Fire inspection and fire prevention occupations (5122)
Firefighting occupations (5123)
Police and Detectives
Police and detectives, public service (5132)
Sheriffs bailiffs, and other law enforcement officers (5134)
Correctional institution officers (5133)
Guards
Crossing guards (5142)
Guards and police, exc. public service (5144)
Protective service occupations, n.e.c. (5149)

## Service Occupations, Except Protective and Household

Food Preparation and Service Occupations
Supervisors, food preparation and service occupations (5211)
Bartenders (5212)
Waiters and waitresses (5213)

Cooks, except short order (5214)
. Short-order cooks (5215)
Food counter, fountain and related occupations (5216)
Kitchen workers, food preparation (5217)
Waiters'/waitresses' assistants (5218)
Miscellaneous food preparation occupations (5219)
Health Service Occupations
Dental assistants (5232)
Health aides, except nursing (5233)
Nursing aides, orderlies, and attendants (5236)
Cleaning and Building Service Occupations, except Household
Supervisors, cleaning and building service workers (5241)
Maids and housemen (5242, 5249)
Janitors and cleaners (5244)
Elevator operators (5245)
Pest control occupations (5246)
Personal Service Occupations
Supervisors, personal service occupations (5251)
Barbers (5252)
Hairdressers and cosmetologists (5253)
Attendants, amusement and recreation facilities (5254)
Guides (5255)
Ushers (5256)
Public transportation attendants (5257)
Baggage porters and bellhops (5262)
Welfare service aides (5263)
Child care workers,except private household (5264)
Personal service occupations, n.e.c. $(5258,5269)$
FARMING, FORESTRY, AND FISHING OCCUPATIONS

## Farm Operators and Managers

. Farmers, except horticultural (5512-5514)
Horticultural specialty farmers (5515)
Managers, farms, except horticultural (5522-5524)
Managers, horticultural specialty farms (5525)

## Other Agricultural and Related Occupations

Farm Occupations, Except Managerial
Supervisors, farm workers (5611)
Farm workers (5612-5617)
Marine life cultivation workers (5618)
Nursery workers (5619)
Related Agricultural Occupations
Supervisors, related agricultural occupations (5621)
Groundskeepers and gardeners, except farm (5622)
Animal caretakers, except farm (5624)
Graders and sorters, agricultural products (5625)
Inspectors, agricultural products (5627)

## Forestry and Logging Occupations

Supervisors, forestry, and logging workers (57.1)
Forestry workers, except logging (572)
Timber cutting and logging occupations $(573,579)$
Fishers, Hunters, and Trappers
Captains and other officers, fishing vessels (pt 8241)
Fishers (583)
Hunters and trappers (584)

## PRECISION PRODUCTION, CRAFT, AND REPAIR OCCUPATIONS

## Mechanics and Repairers

Supervisors, mechanics and repairers (60)
Mechanics and Repairers, Except Supervisors
Vehicle and Mobile Equipment Mechanics and Repairers
Automobile mechanics (pt 6111)
Automobile mechanic apprentices (pt 6111)
Bus, truck, and stationary engine mechanics (6112)
Aircraft engine mechanics (6113)
Small engine repairers (6114)
Automobile body and related repairers (6115)
Aircraft mechanics, exc. engine (6116)
Heavy equipment mechanics (6117)
Farm equipment mechanics (6118)
Industrial machinery repairers (613)
Machinery maintenance occupations (614)
Electrical and Electronic Equipment Repairers
Electronic repairers, communications and industrial equipment $(6151,6153,6155)$
Data processing equipment repairers (6154)
Household appliance and power tool repairers (6156)
Telephone line installers and repairers (6157)
Telephone installers and repairers (6158)
Miscellaneous electrical and electronic equipment repairers $(6152,6159)$
Heating, air conditioning, and refrigeration mechanics (6161)
Miscellaneous Mechanics and Repairers
Camera, watch, and musical instrument repairers $(6171,6172)$
Locksmiths and safe repairers (6173)
Office machine repairers (6174)
Mechanical controls and valve repairers (6175)
Elevator installers and repairers (6176)
Millwrights (6178)
Specified mechanics and repairers, n.e.c. $(6177,6179)$
Not specified mechanics and repairers

## Construction Trades

Supervisors, construction occupations
Supervisors; brickmasons, stonemasons, and tile setters (6312)
Supervisors, carpenters and related workers (6313)
Supervisors, electricians and power transmission installers (6314)
Supervisors; painters, paperhangers, and plasterers (6315)
Supervisors; plumbers, pipefitters, and steamfitters (6316)

Supervisors, n.e.c. $(6311,6318)$
Construction Trades, Except Supervisors
Brickmasons and stonemasons (pt 6412, pt 6413)
Brickmason and stonemason apprentices (pt 6412, pt 6413)
Tile setters, hard and soft (6414, pt 6462)
Carpet installers (pt 6462)
Carpenters (pt 6422)
Carpenter apprentices (pt 6422)
Drywall installers (6424)
Electricians (pt 6432)
Electrician apprentices (pt 6432)
Electrical power installers and repairers (6433)
Painters, construction and maintenance (6442)
Paperhangers (6443)
Plasterers (6444)
Plumbers, pipefitters, and steamfitters (pt 645)
Plumber, pipefitter, and steamfitter apprentices (pt 645)
Concrete and terrazzo finishers (6463)
Glaziers (6464)
Insulation workers (6465)
Paving, surfacing, and tamping equipment operators (6466)
Roofers (6468)
Sheetmetal duct installers (6472)
Structural metal workers (6473) .
Drillers, earth (6474)
Construction trades, n.e.c. $(6467,6475,6476,6479)$
Extractive Occupations
Supervisors, extractive occupations (632)
Drillers, oll well (652)
Explosives workers (653)
Mining machine operators (654)
Mining occupatlons, n.e.c. (656)
Precision Production Occupations
Supervisors, production occupations $(67,71)$
Precision Metal Working Occupations
Tool and die makers (pt 6811)
Tool and die maker apprentices (pt 6811)
Precision assemblers, metal (6812)
Machinists (pt 6813)
Machinist apprentices (pt 6813)
Boilermakers (6814)
Precision grinders, filers, and tool sharpeners (6816)
Patternmakers and model makers, metal (6817)
Lay-out workers (6821)
Precious stones and metals workers (Jewelers) (6822, 6866)
Engravers, metal (6823)
Sheet metal workers (pt 6824)
Sheet metal worker apprentices (pt 6824)
Miscellaneous precision metal workers (6829)
Precision Woodworking Occupations
Patternmakers and model makers, wood (6831)
Cabinet makers and bench carpenters (6832)
Furniture and wood finishers (6835)
Miscellaneous precision woodworkers (6839)
Precision Textile, Apparel, and Furnishings Machine Workers
Dressmakers (pt 6852, pt 7752)

Tailors (pt 6852)
Upholsterers (6853)
Shoe repairers (6854)
Apparel and fabric patternmakers (6856)
Miscellaneous precision apparel and fabric workers (6859, pt 7752)
Precision Workers, Assorted Materials
Hand molders and shapers, except jewelers (6861)
Patternmakers, lay-out workers; and cutters (6862)
Optical goods workers (6864, pt 7477, pt 7677)
Dental laboratory and medical appliance technicians (6865)
Bookbinders (6844)
Electrical and electronic equipment assemblers (6867)
Miscellaneous precision workers, n.e.c. (6869)
Precision Food Production Occupations
Butchers and meat cutters (6871)
Bakers (6872)
Food batchmakers $(6873,6879)$
Precision Inspectors, Testers, and Related Workers
Inspectors, testers, and graders $(6881,828)$
Adjusters and calibrators (6882)
Plant and System Operators
Water and sewage treatment plant operators (691)
Power plant operators (pt 693)
Stationary engineers (pt 693, 7668)
Miscellaneous plant and system operators (692, 694, 695, 696)

## OPERATORS, FABRICATORS, AND LABORERS

## Machine Operators, Assemblers, and Inspectors

Machine Operators and Tenders, except Precision
Metal working and Plastic Working Machine Operators
Lathe and turning machine set-up operators (7312)
Lathe and turning machine operators (7512)
Milling and planing machine operators $(7313,7513)$
Punching and stamping press machine operators $(7314,7317,7514,7517)$
Rolling machine operators $(7316,7516)$
Drilling and boring machine operators $(7318,7518)$
Grinding, abrading, buffing, and polishing machine operators (7322, 7324, 7522)
Forging machine operators (7319, 7519)
Numerical control machine operators (7326)
Miscellaneous metal, plastic, stone, and glass working machine operators (7329, 7529)
Fabricating machine operators, n.e.c. $(7339,7539)$
Metal and Plastic Processing Machine Operators
Molding and casting machine operators (7315, 7342, 7515, 7542)
Metal plating machine operators $(7343,7543)$
Heat treating equipment operators $(7344,7544)$
Miscellaneous metal and plastic processing machine operators $(7349,7549)$
Woodworking Machine Operators
Wood lathe, routing, and planing machine operators (7431, 7432, 7631, 7632)
Sawing machine operators ( 7433,7633 )
Shaping and joining machine operators $(7435,7635)$
Nailing and tacking machine operators (7636)
Miscellaneous woodworking machine operators (7434, 7439, 7634, 7639)

Printing Machine Operators
Printing machine operators $(7443,7643)$
Photoengravers and lithographers ( $6842,7444,7644$ )
Typesetters and compositors $(6841,7642)$
Miscellaneous printing machine operators $(6849,7449,7649)$
Textile, Apparel, and Furnishings Machine Operators
Winding and twisting machine operators $(7451,7651)$
Knitting, looping, taping, and weaving machine operators $(7452,7652)$
Textile cutting machine operators (7654)
Textile sewing machine operators (7655)
Shoe machine operators (7656)
Pressing machine operators (7657)
Laundering and dry cleaning machine operators (6855, 7658)
Miscellaneous textile machine operators $(7459,7659)$
Machine Operators, Assorted Materials
Cementing and gluing machine operators (7661)
Packaging and filling machine operators $(7462,7662)$
Extruding and forming machine operators $(7463,7663)$
Mixing and blending machine operators (7664)
Separating, filtering, and clarifying machine operators $(7476,7666,7676)$
Compressing and compacting machine operators (7467, 7667)
Painting and paint spraying machine operators (7669)
Roasting and baking machine operators, food $(7472,7672)$
Washing, cleaning, and pickling machine operators (7673)
Folding machine operators $(7474,7674)$
Furnace, kiln, and oven operators, exc. food (7675)
Crushing and grinding machine operators (pt 7477, pt 7677)
Slicing and cutting machine operators $(7478,7678)$
Motion picture projectionists (pt 7479)
Photographic process machine operators (6863, 6868,7671)
Miscellaneous machine operators, n.e.c. (pt 7479, 7665, 7679)
Machine operators, not specified
Fabricators, Assemblers, and Hand Working Occupations
Welders and cutters $(7332,7532,7714)$
Solderers and brazers (7333, 7533, 7717)
Assemblers (772, 774)
Hand cutting and trimming occupations (7753)
Hand molding, casting, and forming occupations $(7754,7755)$
Hand painting, coating, and decorating occupations (7756)
Hand engraving and printing occupations (7757)
Hand grinding and polishing occupations (7758)
Miscellaneous hand working occupations (7759)
Production Inspectors, Testers, Samplers, and Weighers
Production inspectors, checkers, and examiners $(782,787)$
Production testers (783)
Production samplers and weighers (784)
Graders and sorters, exc. agricultural (785)

## Transportation and Material Moving Occupations

## Motor Vehicle Operators

Supervisors, motor vehicle operators (8111)
Truck drivers, heavy $(8212,8213)$
Truck drivers, light (8214)
Driver-sales workers (821.8)
Bus drivers (8215)

Taxicab drivers and chauffeurs (8216) Parking lot attendants (874)
Motor transportation occupations, n.e.c. (8219)
Transportation Occupations, Except Motor Vehicles
Rail Transportation Occupations
Railroad conductors and yardmasters (8113)
Locomotive operating occupations (8232)
Railroad brake, signal, and switch operators (8233)
Rail vehicle operators, n.e.c. (8239)
Water Transportation Occupations
Ship captains and mates, except fishing boats (pt 8241, 8242)
Sailors and deckhands (8243)
Marine engineers (8244)
Bridge, lock, and lighthouse tenders (8245)
Material Moving Equipment Operators
Supervisors, material moving equipment operators (812)
Operating engineers (8312)
Longshore equipment operators (8313)
Hoist and winch operators (8314)
Crane and tower operators (8315)
Excavating and loading machine operators (8316)
Grader, dozer, and scraper operators (8317)
Industrial truck and tractor equipment operators (8318)
Miscellaneous material moving equipment operators (8319)

## Handlers, Equipment Cleaners, Helpers, and Laborers

Supervisors, handlers, equipment cleaners, and laborers, n.e.c. (85)
Helpers, mechanics and repairers (863)
Helpers, Construction and Extractive Occupations
Helpers, construction trades (8641-8645, 8648)
Helpers, surveyor (8646)
Helpers, extractive occupations (865)
Construction laborers (871)
Production helpers $(861,862)$
Freight, Stock, and Material Handlers
Garbage collectors (8722)
Stevedores (8723)
Stock handlers and baggers (8724)
Machine feeders and offbearers (8725)
Freight, stock, and material handlers, n.e.c. (8726)
Garage and service station related occupations (873)
Vehicle washers and equipment cleaners (875)
Hand packers and packagers (8761)
Laborers, except construction (8769)
Member of the Armed Forces

## APPENDIX A-5

1980 Census of Population Industry Classification System
(Alphabets parentheses are the 1972 SIC code equivalents 1)

Census
Code
AGRICULTURE, FORESTRY, AND FISHERIES
010 (A) Agricultural production, crops (01)
011 Agricultural production, livestock (02)
020 Agricultural services, except horticultural (07, except 078)
021 Horticultural services (078)
030 Forestry (08)
031 Fishing, hunting, and trapping (09)
MINING

040 Metal mining (10)
041 . Coal mining $(11,12)$
042 Crude petroleum and natural gas extraction (13)
050 Nonmetallic mining and quarrying, except fuel (14)
060 (B) CONSTRUCTION $(15,16,17)$

## MANUFACTURING

## Nondurable Goods

Food and kindred products
Meat products (201)

100
101
102
110
111
112
120
121
122
130
132
140
141
142
150

Dairy products (202)
Canned and preserved fruits and vegetables (203)
Grain mill products (204)
Bakery products (205)
Sugar and confectionery products (206)
Beverage industries (208)
Miscellaneous food preparations and kindred products $(207,209)$
Not specified food industries
Tobacco manufactures (21)
Textile mill products
Knitting mills (225)
Dyeing and finishing textiles, except wool and knit goods (226)
Floor coverings, except hard surface (227)
Yarn, thread, and fabric mills (221-224, 228)
Miscellaneous textile mill products (229)

[^0]Apparel and other finished textile products
Apparel and accessories, except knit (231-238)
Miscellaneous fabricated textile products (239)
Paper and allied products
Pulp, paper, and paperboard mills (261-263, 266)
Miscellaneous paper and pulp products (264)
Paperboard containers and boxes (265)
Printing, publishing, and allied industries
Newspaper publishing and printing (271)
Printing, publishing, and allied industries, except newspapers (272-279)
Chemicals and allied products
Plastics, synthetics, and resins (282)
Drugs (283)
Soaps and cosmetics (284)
Paints, varnishes, and related products (287)
Agricultural chemicals (287)
Industrial and miscellaneous chemicals (281, 286, 289)
Petroleum and coal products
Petroleum refining (291)
Miscellaneous petroleum and coal products $(295,299)$
Rubber and miscellaneous plastics products
Tires and inner tubes (301)
Other rubber products, and plastics footwear and belting (302-304, 306)
Miscellaneous plastics products (307)
Leather and leather products
Leather tanning and finishing (311)
Footwear, except rubber and plastic $(313,314)$
Leather products, except footwear $(315-317,319)$

## Durable Goods

Lumber and wood products, except furniture
Logging (241)
Sawmills, planing mills, and millwork $(242,243)$
Wood buildings and mobile homes (245)
Miscellaneous wood products $(244,249)$
Furniture and fixtures (25)
Stone, clay, glass, and concrete products
Glass and glass products (321-323)
Cement, concrete, gypsum, and plaster products $(324,327)$
Structural clay products (325)
Pottery and related products (326)
Miscellaneous nonmetallic mineral and stone products (328, 329).
Metal industries
Blast furnaces, steelworks, rolling and finishing mills (331)
Iron and steel foundries (332).
Primary aluminum industries (3334, part 334, 3353-3355, 3361)
Other primary metal industries (3331-3333, 3339, part 334, 3351, 3356, 3357, 3362, 3369, 339)
Cutlery, handtools, and other hardware (342)
Fabricated structural metal products (344)
Screw machine products (345)
Metal forgings and stampings (346)
Ordnance (348)

Miscellaneous fabricated metal products (341, 343, 347, 349)
Not specifled metal industries
Machinery, except electrical
Engines and turbines (351)
Farm machinery and equipment (352)
Construction and material handling machines (353)
Metalworking machinery (354)
Office and accounting machines (357, except 3573)
Electronic computing equipment (3573)
Machinery, except electrical, n.e.c. $(355,356,358,359)$
Not specified machinery
Electrical machinery, equipment, and supplies
Household appliances (363)
Radio, T.V., and communication equipment $(365,366)$
Electrical machinery, equipment, and supplies, n.e.c. (361, 362, 364, 367, 369)
Not specified electrical machinery, equipment, and supplies
Transportation equipment
Motor vehicles and motor vehicle equipment (371)
Aircraft and parts (372)
Ship and boat building and repairing (373)
Railroad locomotives and equipment (374)
Guided missiles, space vehicles, and parts (376)
Cycles and miscellaneous transportation equipment $(375,379)$
Professional and photographic equipment, and watches
Scientific and controlling instruments (381, 382)
Optical and health services supplies $(383,384,385)$
Photographic equipment and supplies (386)
Watches, clocks, and clockwork operated devices (387)
Not specified professional equipment
Toys, amusement, and sporting goods (394)
Miscellaneous manufacturing industries (39 exc. 394)
Not specified manufacturing industries

## TRANSPORTATION, COMMUNICATIONS, AND OTHER

 PUBLIC UTILITIESTransportation
Railroads (40)
Bus service and urban transit (41, except 412)
Taxicab service (412)
Trucking service $(421,423)$
Warehousing and storage (422)
U.S. Postal Service (43)

Water transportation (44)
Air transportation (45)
Pipe lines, except natural gas (46)
Services incidental to transportation (47)
Communications
Radio and television broadcasting (483)
Telephone (wire and radio) (481)
Telegraph and miscellaneous communication services $(482,489)$
Utilities and sanitary services
Electric light and power (491)

461 Gas and steam supply systems $(492,496)$

510 Sporting goods, toys, and hobby goods (504)
511 Metals and minerals, except petroleum (505)
512 Electrical goods (506)
521 Hardware, plumbing and heating supplies (507)
522 Not specified electrical and hardware products
530 Machinery, equipment, and supplies (508)
531 Scrap and waste materials (5093)
532 Miscellaneous wholesale, durable goods $(5094,5099)$

## Nondurable Goods

Paper and paper products (511)
Electric and gas, and other combinations (493)
Water supply and irrigation $(494,497)$
Sanitary services (495)
Not specified utilities

## WHOLESALE TRADE

## Durable Goods

Motor vehicles and equipment (501)
Furniture and home furnishings (502)
Lumber and constructlon materials (503)

Drugs, chemicals and allied products $(512,516)$
Apparel, fabrics, and notlons (513)
Groceries and related products (514)
Farm products - raw materials (515)
Petroleum products (517)
Alcoholic beverages (518)
Farm supplies (5191)
Miscellaneous wholesale, nondurable goods $(5194,5198,5199)$
Not specified wholesale trade

## RETAIL TRADE

Lumber and building material retailing $(521,523)$
Hardware stores (525)
Retail nurseries and garden stores (526)
Mobile home dealers (527)
(D) Department stores (531)

Variety stores (533)
Miscellaneous general merchandise stores (539)
(E) Grocery stores (541)

Dairy products stores (545)
Retail bakeries (546)
Food stores, n.e.c. $(542,543,544,549)$
Motor vehicle dealers $(551,552)$
Auto and home supply stores (553)
Gasoline service statlons (554)
Miscellaneous vehicle dealers $(555,556,557,559)$
Apparel and accessory stores, except shoe (56, except 566)
Shoe stores (566)

632

## Advertising (731)

Services to dwellings and other buildings (734)
Commercial research, development, and testing labs $(7391,7397)$
Personnel supply services (736)
Business management and consulting services (7392)
Computer and data processing services (737)
Detective and protective services (7393)
Business services, n.e.c. (732, 733, 735, 7394, 7395, 7396, 7399)
Automotive services, except repair $(751,752,754)$
Automotive repair shops (753)
Electrical repair shops $(762,7694)$
Miscellaneous repair services (763, 764, 7692, 7699)

## PERSONAL SERVICES

761 (J) Private households (88)
762 Hotels and motels (701)
770 Lodging places, except hotels and motels $(702,703,704)$
771 Laundry, cleaning, and garment services (721)
772 : Beauty shops (723)
$780 \quad$ Barber shops (724)
$781 \quad$ Funeral service and crematories (726)
782 Shoe repair shops (725)
790 Dressmaking shops (part 729)

Miscellaneous personal services (722, part 729)

## ENTERTAINMENT AND RECREATION SERVICES

800 . Theaters and motion pictures $(78,792)$
801 Bowling alleys, billiard and pool parlors (793)
802 Miscellaneous entertainment and recreation services (791, 794, 799)

## PROFESSIONAL AND RELATED SERVICES

812 Offices of physicians (801, 803)
820 Offices of dentists (802)
821 Offices of chiropractors (8041)
822 Offices of optometrists (8042)
830 Offices of health practitioners, n.e.c. (8049)
831 (K)
832 Nursing and
840 Hursing and personal care facilites (805)
840 Health services, n.e.c. $(807,808,809)$
841 Legal services (81)
842 (L) Elementary and secondary schools (821)
850 (M) Colleges and universities (822)
851 Business, trade, and vocational schools (824)
852 Libraries (823)
860 Educational services, n.e.c. (829)
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891.

892

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## 921

922
930
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932
991
Job training and vocational rehabilitation services (833)
Child day care services (835)
Residential care facilities, without nursing (836)
Social services, n.e.c. $(832,839)$
Museums, art galleries, and zoos (84)
Religious organizations (866)
Membership organizations $(861-865,869)$
Engineering, architectural, and surveying services (891)
Accounting, auditing, and bookkeeping services (893)
Noncommercial educational and scientific research (892)
Miscellaneous professional and related services (899)

## PUBLIC ADMINISTRATION

Executive and legislative offices (911-913)
General government, n.e.c. (919)
Justice, public order, and safety (92)
Public finance, taxation, and monetary policy (93)
Administration of human resources programs (94)
Administration of environmental quality and housing programs (95)
Administration of economic programs (96)
National security and international affairs (97)
Member of the Armed Forces







NOTES




| Section 5 - TOPICAL MODULES (Continued) |  |  |
| :---: | :---: | :---: |
| Part B - TAXES (Continued) |  |  |
| CHECK <br> ITEM T14 | Refer to item $1 b$. <br> Does the respondent have a copy of . . .'s Federal income tax form or a worksheet to refer to? | $9428 \quad{ }^{\square} \square \mathrm{Yes}$ $2 \square \mathrm{No}-$ SKIP to $9 a$ |
| $\begin{aligned} & \text { GHECK } \\ & \text { ITEMT15 } \end{aligned}$ | Refer to item 4. <br> Is "Forim 1040" marked? | $\begin{array}{ll} 9430 \square \text { Yes } \\ 2 \square \mathrm{No}-\text { SKIP to } 8 a \end{array}$ |
| CHECK ITEM T16 | Is "Schedule A, Itemized Deductions". marked "Yes" in item 5(1)? | $9432 \square \mathrm{Yes}$ $2 \square \mathrm{No}-$ SKIP to $6 b$ |
| 6a. How much ware . . .'s (and. . .'s husband's/wife's) Htemized deductions for 1991 ? <br> 100 <br> (Schedule A, line 26) $\square$ <br> $\times 1$ 민 <br> $\times 2 \square$ Ref. - SKIP to Check Item 117 |  |  |
| b. On ...'s Form 1040, did . . . land . . .'s husband/wife) claim - |  | (Ask for each credit claimed.) 6c. What was the amount of the (Read name of credit) claimed? |
|  |  |  |
| (2) A credit for the elderly or the disabled (Form 1040, line 42) |  |  |
| $\begin{aligned} & \text { CHECK } \\ & \text { ITEM } 17 \end{aligned}$ | Refer to item 5(2). <br> Is "Schedule D, Capital Gains and Losses "' marked "Yes"? | $\begin{array}{ll} 9458 \\ & 1 \square \text { Yes } \\ & 2 \mathrm{No}-\text { SKIP to } 8 a \end{array}$ |
| 7. How much were . . .'s land . . .'s husband's/wife's capltal gains or losses from the sale or exchange of personal assets for 1991? <br> (Form 1040, line 13) |  | $\square$ None <br> $\times 1 \square$ $\square$ DK <br> $\times 2$ — $\square$ Ref. $\square$ Lost money - Enter amount of loss in box |
| 8a. Adjusted gross income is total income less certain types of adjustments and exclusions. Please look at your tax return or worksheet. What was .. 's (and . . .'s husband's/wife's) adjusted gross income in 1991? <br> (Form 1040, line 31) <br> (Form 1040A. line 16) <br> (Form 1040EZ, line 3) <br> b. Fedoral Income tax llability is the total tax as determined by the tax table or schedule plus or minus cortain adjustments. What was . . .'s (and . . .'s husband's/wife's) not tax liabilty in 1991 ? <br> (Form 1040, line 53) <br> (Form 1040A, line 27) <br> (Form 1040EZ, line 7) |  |  |
|  |  | 9464 $\square$ $\$$ $\square$ None <br> $x 1 \square D K$ <br> $\times 2 \square$ Ref. |
| CHECK ITEM 188 | Refer to item 8a. <br> What is the amount of adjusted gross income reported? | 9466 , \$21.250 or more - SKIP to Check Item T19 Less than $\$ 21,250$ |





## APPENDIX C

## Working Papers

This appendix provides a list of a SIPP Working Papers. Any of these papers are free of charge. See the order form on page $\mathrm{C}-9$.

1990
9001 - "Recent Developments in the Survey of Income and Program Participation", Census Bureau
9002 - "An Analysis of Leaving Home Using Data From the 1984 Panel of the SIPP", by Alden Speare, Roger Avery, Frances Goldscheider, Brown University

9003 - "The Effect of the Marriage Market on First Marriages: Evidence From SIPP", John Fitzgerald, Bowdoin College

9004 - "Counting Spells of Unemployment", Paul Ryscavage and Kathleen Short, Census Bureau
9005 - "The Elderly and Their Sources of Income: Implications for Rural Development", Robert Hoppe, Economic Research Service, U.S. Department of Agriculture

9006 - "Alternative Estimates of Economic Well-Being by Age Using Data on Wealth and Income, Daniel Radner, Social Security Administration

9007 - "Longitudinal Analysis of Federal Survey Data", Patricia Ruggles, Joint Economic Committee
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## APPENDIX D

## Machine-Readable Data Dictionary Layout

Data dictionary lines are 46 characters. The character on the first position determines the type of lines. Each variable may have the following lines:

1. COMMENTS ("*") lines
2. DATA DICTIONARY (" $D$ ") ; line and DATA DESCRIPTION
3. UNIVERSE (" $U$ ") lines
4. VALUE DESCRIPTION lines
5. One blank line at the end

FORMAT
LINE COMMENTS
a. " *" in the first position indicates that this is a comment line. This line can appear any place in the dictionary. It will be used for short comments or to nullify any value codes.
b. "**" in the first two positions is also comments but it has additional meaning. It indicates this is a block of comments which will be applied to several variables. The first line of this block will ave the COMMENT NO. so that subsequent variable can refer back to this comment block.
"D" LINE DATA DICTIONARY
This line contains the following information:

| ID | "D" | COL. | $1-1$ |
| :--- | :--- | :--- | ---: |
| NAME | Variable name | COL. | $3-10$ |
| SIZE | Size of data field | COL. | $14-15$ |
| BEGIN | Begin position of data field | COL | $19-22$ |
| TYPE | Character variable indicator "CHAR" |  |  |
| DEC | or blanks if numeric variable | COL. | $26-29$ |
| IND | Implied decimal places | COL. | $33-34$ |
|  | TABLE variable indicator "TABLE" with "(aa)" for |  |  |
|  | its dimension; otherwise blanks | COL. | $38-46$ |

Text describing the variable will follow this " $D$ " line. Use COL. 6-46 and repeat as many lines as necessary.
"U" LINE UNIVERSE DEFINITION
This line contains the universe definition. Use COL. 3-46 and repeat as many lines as necessary.

|  | ID | " | COL |
| :--- | :--- | :--- | :--- |
| DESCRIPTION | Universe description | COL. | 1-1 |
|  |  |  |  |

(For continuation use COL. 3-46 and repeat as many lines as necessary.)
"V" LINE VALUE DEFINITION

|  | " $V$ " |  | COL. | $1-1$ |
| :--- | :--- | :--- | :--- | ---: |
| VALUE | Value code-right justified | COL. | $3-12$ |  |
| DESCRIPTION | "." | Value description |  | COL |
| ( |  | COL. | $15-46$ |  |

(Repeat COL. 14-46 format for continued value description.)

## APPENDIX E

## User Notes

This section is reserved for any information relevant to the SIPP 1991 Panel, Wave 5 Topical Module Microdata File that indicates specific problems with the data, or that becomes available after the file is released. Any such information should be filed behind this page.

User Notes will be sent to all users who (1) purchased their file (or technical documentation) from the Census Bureau and (2) returned the coupon following the title page.

## E-2



UNITED STATES DEPARTMENT OF COMMERCE Bureau of the Census
Washington, DC 20233-0001

# SURVEY OF INCOME AND PROGRAM PARTICIPATION (SIPP) 1991 WAVE 5 TOPICAL MODULE RESEARCH. FILE 

## USER NOTE 1

Subject: Corrected Index and Variable Listing
The attached sections 4 and 5 of the technical documentation for this file show corrections to the index and variable listings.

Please replace these two sections with the revised sheets.

## INDEX TO 1991 WAVE 5 TOPICAL MODULE RESEARCH FILE

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[^0]:    1 See Executive Office of the President, Office of Management and Budget, Standard Industrial Classification Manual, 1972 and the 1977 Supplement.

