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## Current Population Survey, August 1977

## Record Group 29 Records of the Bureau of the Census

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National Archives

Washington, DC 20408

# Current Population Survey (CBP), August 1977

## DOCUMENTATION

RECORD GROUP 029

Records of the Bureau of the Census

001

National Archives

Washington, DC 20408

J. Nelson
September 16, 1992

NOTES ON DOCUMENTATION

The Bureau of the Census provided this copy of abstracts, codes, record formats, data dictionary, glossary, tables, a sample survey, and appendices for the The Current Population Survey, August 1977.

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CURRENT POPULATION SURVEY, AUGUST 1977

TAPE TECHNICAL DOCUMENTATION

This file documentation consists of the following materials--

| | |
|---|---|
| Attachment 1 | Abstract |
| Attachment 2 | Current Population Survey Non-March Record Layouts |
| Attachment 3 | Current Population Survey Interview Record Layout |
| Attachment 4 | Current Population Survey Noninterview Type A Record Layout |
| Attachment 5 | Current Population Survey Noninterview Type B-C Record Layout |
| Attachment 6 | Supplement Record Layout |
| Attachment 7 | Questionnaire Facsimile-- August 1977 |
| Attachment 8 | Estimation of Sampling Errors for the Current Population Survey 1977 Food Stamp Recipiency Supplement File |

NOTE

The documentation accompanying this file is classified as Class B Technical Documentation. If time and resources permit, it may be expanded and revised. If the documentation is revised, a copy will be sent to all file purchasers.

Questions about the accompanying documentation should be directed to Data User Services Division, Data Access and Use Staff, Bureau of the Census, Washington, D.C. 20233. Phone: (301) 449-1667.

Questions about the tape should be directed to Data User Services Division, Customer Services (Tapes), Bureau of the Census, Washington, D.C. 20233. Phone: (301) 449-1600.

Questions about the subject matter should be directed to Demographic Surveys Division, Bureau of the Census, Washington, D.C. 20233. Phone: (301) 763-2773.

ATTACHMENT 1

Abstract

Current Population Survey, August 1977 [machine-readable data file] / conducted by the Bureau of the Census for the Bureau of Labor Statistics. -- Washington: Bureau of the Census [producer and distributor], 1981.

TYPE OF FILE:

Microdata; unit of observation is individuals within housing units.

UNIVERSE DESCRIPTION:

The universe consists of all persons 14 years old and over in the civilian noninstitutional population of the United States living in households. The probability sample selected to represent the universe consists of approximately 55,000 households.

SUBJECT-MATTER DESCRIPTION:

Data are provided on labor force activity for the week prior to the survey. Comprehensive data are available on the employment status, occupation, and industry of persons 14 years old and over. Also shown are personal characteristics such as age, sex, race, marital status, veteran status, household relationship, educational background, and Spanish origin.

Supplemental data are provided on the purchase or receipt of food stamps during the first seven months of 1977, their value and the amount paid for the food stamps in the most recent month of receipt, as well as the number of household members for which stamps were issued. Information is provided for the September 1976-June 1977 school year on the proportion of elementary and secondary school students in a household who ate a complete plate lunch at school, their participation in the school lunch program, and the reason the other children in the household did not eat a complete lunch at school.

GEOGRAPHIC COVERAGE:

All States and 44 SMSA's are identified and ranked by population size (1970). Central city/noncentral city indicators are provided for all SMSA's.

TECHNICAL DESCRIPTION:

FILE STRUCTURE: Rectangular.

FILE SIZE: 129,072 logical records; 360 character logical record length.

FILE SORT SEQUENCE: State rank by SMSA rank by Identification number by line number.

REFERENCE MATERIALS:

"Current Population Survey, August 1977: Technical Documentation" (this document). Documentation contains this abstract, a questionnaire facsimile, record layouts of the file, and a description of three methods of estimating sampling errors for data collected in the 1977 Food Stamp Recipiency Supplement. One copy accompanies each file order. When ordered separately, it is available for $5 from Data User Services Division, Customer Services, (Tapes), Bureau of the Census, Washington, D.C. 20233.

U.S. Bureau of the Census. The Current Population Survey: Design and Methodology (Technical Paper 40). Describes in detail the sample design and survey procedures used as well as accuracy of estimates and sampling errors. Available from Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. GPO Stock No. 003-024-01490-4. Price: $3.75

RELATED PRINTED REPORTS:

U.S. Bureau of Labor Statistics. Employment and Earnings, September 1977. The employment information in Section A of this publication is derived from the Current Population Survey, August 1977. Available from Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Price: $2.25.

FILE AVAILABILITY:

The file may be ordered, using the Customer Services order form on the following page. When ordering, please refer to file number Cu CPS 77 008. The following technical options are available at a cost of $110 per reel.

| | Reels | Cost |
|---|---|---|
| 9 channel, 1600 bpi (EBCDIC or ASCII) | 2 | $220 |
| 9 channel, 6250 bpi (EBCDIC or ASCII) | 1 | $110 |

ATTACHMENT 2

Current Population Survey Non-March Record Layouts

Attached are record layouts for the August 1977 Current Population Survey. Record layouts illustrating basic data collected each month comprise Attachment 3 for interviewed households, Attachment 4 for noninterviewed Type A households, and Attachment 5 for noninterviewed Type B or C households. (See items 14 and 15 on questionnaire for examples of each type.) Next follows the record layout for the supplemental data collected.

In the record layout, location of data is indicated by character position within a word. Each word signifies six character positions on the tape. To determine the location of specific data, calculate the number of positions allocated for all previous words; then, to that figure, add the character location (1-6) specified within the designated word. For example, data for major activity last week (Attachment 3, page 12) corresponds to word 9, character 1. Multiplying the number of previous words by the number of character positions per word equals 48 positions allocated for data. Thus, the first character of word 9 is located in position 49.

| | |
|---|---|
| 8 | Number of previous words |
| x 6 | Number of character positions per word |
| 48 | Number of positions allocated for data |
| + 1 | Character position within designated word |
| 49 | Location of data for word 9, character 1 |

To determine the location of data reflecting the reason a respondent works less than 35 hours a week (word 9, characters 5-6), repeat the above calculations except substitute a "5" (noting character position within word) in place of the "1". Calculations show that this item occupies character positions 53 and 54.

Record layouts are similar for both interviewed and noninterviewed households. Geographic data are provided for both types of records, but employment figures are furnished only for interviewed households. For noninterviewed households, these corresponding character positions are blank or padded. However, in character positions 37 and 38, interview records show data for item 20, whether the household member worked last week, and range of hours worked; noninterview Type A records show race of head and reason for noninterview; noninterview Types B and C records show reason for noninterview.

Attachment 3

CURRENT POPULATION SURVEY
INTERVIEW RECORD LAYOUT
FOR STANDARD TAPE COPIES FOR ARCHIVAL DATA
JANUARY 1977 to DECEMBER 1978



| Word | Char. | Characteristic | Universe | Description | |
|---|---|---|---|---|---|
| 1 | 1 | Record type | All | Interview | 1 |
| | 2 | Month in Sample (Recoded from Month and Rotation) | All | | 1-8 |
| | 3 | Blank | | | |
| 2 | 4-6<br>1-6 | Household ID Number | All | | |
| 3 | 1-3 | | | | |
| | 4 | Region (From M.S.T.) | All | Northeast | 1 |
| | | | | North Central | 2 |
| | | | | South | 3 |
| | | | | West | 4 |

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| Word | Char. | Characteristic | Universe | Description | | |
|---|---|---|---|---|---|---|
| 3 | 5 | Division (From M.S.T.) | All | New England | 1 | Region 1 |
| | | | | Middle Atlantic | 2 | |
| | | | | East North Central | 3 | Region 2 |
| | | | | West North Central | 4 | |
| | | | | South Atlantic | 5 | |
| | | | | East South Central | 6 | Region 3 |
| | | | | West South Central | 7 | |
| | | | | Mountain | 8 | |
| | | | | Pacific | 9 | Region 4 |
| | 5-6 | State (1st digit of State Code is Division Code) (From M.S.T.) | All | <u>New England Division</u> | | |
| | | | | Maine | 11 | |
| | | | | New Hampshire | 12 | |
| | | | | Vermont | 13 | |
| | | | | Massachusetts | 14 | |
| | | | | Rhode Island | 15 | |
| | | | | Connecticut | 16 | |
| | | | | <u>Middle Atlantic Division</u> | | |
| | | | | New York | 21 | |
| | | | | New Jersey | 22 | |
| | | | | Pennsylvania | 23 | |

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| Word | Char. | Characteristic | Universe | Description | |
|---|---|---|---|---|---|
| 3 | 5-6 | State (1st digit of State Code is Division Code) (From M.S.T.) (Con't) | All | | |
| | | | | East North Central Division | |
| | | | | Ohio | 31 |
| | | | | Indiana | 32 |
| | | | | Illinois | 33 |
| | | | | Michigan | 34 |
| | | | | Wisconsin | 35 |
| | | | | West North Central Division | |
| | | | | Minnesota | 41 |
| | | | | Iowa | 42 |
| | | | | Missouri | 43 |
| | | | | North Dakota | 44 |
| | | | | South Dakota | 45 |
| | | | | Nebraska | 46 |
| | | | | Kansas | 47 |
| | | | | South Atlantic Division | |
| | | | | Delaware | 51 |
| | | | | Maryland | 52 |
| | | | | District of Columbia | 53 |
| | | | | Virginia | 54 |
| | | | | West Virginia | 55 |
| | | | | North Carolina | 56 |
| | | | | South Carolina | 57 |
| | | | | Georgia | 58 |
| | | | | Florida | 59 |
| | | | | East South Central Division | |
| | | | | Kentucky | 61 |
| | | | | Tennessee | 62 |
| | | | | Alabama | 63 |
| | | | | Mississippi | 64 |

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| Word | Char. | Characteristic | Universe | Description | |
|---|---|---|---|---|---|
| 3 | 5-6 | State (1st digit of State Code is Division Code) (From M.S.T.) (Con't) | All | West South Central Division | |
| | | | | Arkansas | 71 |
| | | | | Louisiana | 72 |
| | | | | Oklahoma | 73 |
| | | | | Texas | 74 |
| | | | | Mountain Division | |
| | | | | Montana | 81 |
| | | | | Idaho | 82 |
| | | | | Wyoming | 83 |
| | | | | Colorado | 84 |
| | | | | New Mexico | 85 |
| | | | | Arizona | 86 |
| | | | | Utah | 87 |
| | | | | Nevada | 88 |
| | | | | Pacific Division | |
| | | | | Washington | 91 |
| | | | | Oregon | 92 |
| | | | | California | 93 |
| | | | | Alaska | 94 |
| | | | | Hawaii | 95 |

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| Word | Char. | Characteristic | Universe | Description | |
|---|---|---|---|---|---|
| 4 | 1-2 | State Rankings (From M.S.T.) | All | Beginning Jan. '73: | 1970 Ranking |
| | | | | California | 01 |
| | | | | New York | 02 |
| | | | | Pennsylvania | 03 |
| | | | | Texas | 04 |
| | | | | Illinois | 05 |
| | | | | Ohio | 06 |
| | | | | Michigan | 07 |
| | | | | New Jersey | 08 |
| | | | | Florida | 09 |
| | | | | Massachusetts | 10 |
| | | | | Indiana | 11 |
| | | | | North Carolina | 12 |
| | | | | Missouri | 13 |
| | | | | Virginia | 14 |
| | | | | Georgia | 15 |
| | | | | Wisconsin | 16 |
| | | | | Tennessee | 17 |
| | | | | Maryland | 18 |
| | | | | Minnesota | 19 |
| | | | | Louisiana | 20 |
| | | | | Alabama | 21 |
| | | | | Washington | 22 |
| | | | | Kentucky | 23 |
| | | | | Connecticut | 24 |
| | | | | Iowa | 25 |
| | | | | South Carolina | 26 |
| | | | | Oklahoma | 27 |
| | | | | Kansas | 28 |
| | | | | Mississippi | 29 |
| | | | | Colorado | 30 |

| Word | Char. | Characteristic | Universe | Description | |
|---|---|---|---|---|---|
| 4 | 1-2 | State Rankings (Con't) (From M.S.T.) | All | Oregon | 31 |
| | | | | Arkansas | 32 |
| | | | | Arizona | 33 |
| | | | | West Virginia | 34 |
| | | | | Nebraska | 35 |
| | | | | Utah | 36 |
| | | | | New Mexico | 37 |
| | | | | Maine | 38 |
| | | | | Rhode Island | 39 |
| | | | | Hawaii | 40 |
| | | | | District of Columbia | 41 |
| | | | | New Hampshire | 42 |
| | | | | Idaho | 43 |
| | | | | Montana | 44 |
| | | | | South Dakota | 45 |
| | | | | North Dakota | 46 |
| | | | | Delaware | 47 |
| | | | | Nevada | 48 |
| | | | | Vermont | 49 |
| | | | | Wyoming | 50 |
| | | | | Alaska | 51 |

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| Word | Char. | Characteristic | Universe | Description | |
|---|---|---|---|---|---|
| 4 | 3-4 | SMSA Rankings (From M.S.T.) | SMSA's | Beginning Jan. '73: | 1970 Ranking |
| | | | | Not an SMSA and all other SMSA's | 00 |
| | | | | New York, N.Y. | 01 |
| | | | | Los Angeles-Long Beach, Calif. | 02 |
| | | | | Chicago, Ill. | 03 |
| | | | | Philadelphia, Pa.- N.J. | 04 |
| | | | | Detroit, Mich. | 05 |
| | | | | San Francisco-Oakland, Calif. | 06 |
| | | | | Washington, D.C.-Md.-Va. | 07 |
| | | | | Boston, Mass. | 08 |
| | | | | Nassau-Suffolk, N.Y. | 09 |
| | | | | Pittsburgh, Pa. | 10 |
| | | | | St. Louis, Mo.-Ill. | 11 |
| | | | | Baltimore, Md. | 12 |
| | | | | Cleveland, Ohio | 13 |
| | | | | Houston, Texas | 14 |
| | | | | Newark, N.J. | 15 |
| | | | | Minneapolis-St. Paul, Minn. | 16 |
| | | | | Dallas, Texas | 17 |
| | | | | Seattle-Everett, Wash. | 18 |
| | | | | Anaheim-Santa Ana-Garden Grove, Calif. | 19 |
| | | | | Milwaukee, Wis. | 20 |
| | | | | Atlanta, Ga. | 21 |
| | | | | Cincinnati, Ohio-KY. | 22 |
| | | | | Paterson-Clifton-Passaic, N.J. | 23 |
| | | | | San Diego, Calif. | 24 |
| | | | | Buffalo, N.Y. | 25 |
| | | | | Miami, Fla. | 26 |
| | | | | Kansas City, Mo.-Kan. | 27 |
| | | | | Denver, Colo. | 28 |
| | | | | San Bernardino-Riverside- | |

| Word | Char. | Characteristic | Universe | Description | |
|---|---|---|---|---|---|
| 4 | 3-4 | SMSA Rankings (Con't) (From M.S.T.) | SMSA's | Indianapolis, Ind. | 30 |
| | | | | San Jose, Calif. | 31 |
| | | | | New Orleans, La. | 32 |
| | | | | Tampa-St. Petersburg, Fla. | 33 |
| | | | | Portland, Ore. | 34 |
| | | | | Columbus, Ohio | 36 |
| | | | | Rochester, N.Y. | 38 |
| | | | | Sacramento, Calif. | 42 |
| | | | | Fort Worth, Texas | 44 |
| | | | | Birmingham, Ala. | 45 |
| | | | | Albany-Schenectady-Troy, N.Y. | 46 |
| | | | | Norfolk-Portsmouth, Va. | 48 |
| | | | | Akron, Ohio | 49 |
| | | | | Gary-Hammond-East Chicago, Ind. | 53 |
| | | | | Greensboro-Winston-Salem-High Point, N.C. | 57 |
| | 5 | Item 1 - INTERVIEWER CHECK ITEM | All | Blank or Impossible | - |
| | | | | Only CPS-1 for household | 1 |
| | | | | First CPS-1 of cont. household | 2 |
| | | | | Second CPS-1 of cont. household | 3 |
| | | | | Third, fourth, etc. CPS-1 | 4 |
| | 6 | Blank | | | |



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| Word | Char. | Characteristic | Universe | Description | |
|---|---|---|---|---|---|
| | | | All | | |
| 5 | 1-3 | Blank | | | |
| | 4-6 | Item 10 - INTERVIEWER CODE | All | Blank or Impossible in any digit | -NA, or A00-N99 (Excluding I--) |
| 6 | 1 | Item 12 - LINE NO. H'HLD RESP. | All | Blank or Impossible | - |
| | | | | | 1-6 |
| | | | | Non H'hld Resp. | 7 |
| | 2 | Item 13 - TYPE INTERVIEW | All | Blank | - |
| | | | | Noninterview | 1 |
| | | | | Personal | 2 |
| | | | | Tel. - Regular | 3 |
| | | | | Tel. - Callback | 4 |
| | | | | ICR Filled | 5 |
| | 3-4 | Item 11 - DATE COMPLETED | All | Day of Month | -- or 10-29 |
| | 5-6 | PADDING | | | |

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| Word | Char. | Characteristic | Universe | Description | |
|---|---|---|---|---|---|
| 7 | 1 | Item 20 - Did...do any work at all LAST WEEK? | All | Blank or Impossible<br>Yes<br>No | -<br>1<br>2 |
| | 2 | Item 20B - INTERVIEWER CHECK | All | Blank or Impossible<br>49+ hours<br>1-34 hours<br>35-48 hours | -<br>1<br>2<br>3 |
| | 3 | Item 21 - Did...have a job or business from which he was temporarily absent or on layoff LAST WEEK? | All | Blank or Impossible<br>Yes<br>No | -<br>1<br>2 |
| | 4 | Item 22 - Has...been looking for work during the past 4 weeks? | All | Blank or Impossible<br>Yes<br>No | -<br>1<br>2 |
| | 5 | Item 24 - INTERVIEWER CHECK ITEM | All | Blank or Impossible<br>Unit is in continuing rotation<br>Unit is in departing rotation | -<br>1<br>2 |
| | 6 | Blank | | | |

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| Word | Char. | Characteristic | Universe | Description | |
|---|---|---|---|---|---|
| 8 | 1 | Land Usage (Recode) (Edited using Urban/Rural Code from M.S.T. and CPS-1 Document Items 5a. and 5b-new in Feb. 76) Recode reflects "old" Farm Definition. | All | Nonfarm<br>Farm $\geq$ 10 acres<br>Farm $\leq$ 10 acres | 1<br>2<br>3 |
| | 2-3 | Item 4 - TYPE OF LIVING QUARTERS (Recode) | All | Housing Unit<br>House, apt., flat<br>HU in nontransient hotel, etc.<br>HU, permanent, in trans. hotel, motel, etc.<br>HU in rooming house<br>Mobile home or Trailer<br>HU not specified above<br>Other Unit<br>Qtrs. not HU in rooming or boarding house<br>Unit not permanent in trans. hotel, motel, etc.<br>Tent or trailer site<br>Other not HU | 01<br>02<br>03<br>04<br>05<br>06<br><br>07<br>08<br>09<br>10 |
| | 4 | 'New' Farm Definition (Recode) Effective February 1976. (Edited using Urban/Rural Code from M.S.T. and CPS-1 Document Items 5a. and 5b.) | All | Nonfarm<br>Farm $\geq$ 10 acres<br>Farm $\leq$ 10 acres | 1<br>2<br>3 |

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| Word | Char. | Characteristic | Universe | Description | |
|---|---|---|---|---|---|
| 8 | 5 | Blank | | | |
| | 6 | Item 9 - HOUSEHOLD NUMBER | All | | 1-8 |
| 9 | 1 | Item 19 (Recode) - What was...doing most of LAST WEEK (Major Activity)? | All | Working<br>With a job<br>Looking<br>House<br>School<br>Unable<br>Other (Incl. Retired) | 1<br>2<br>3<br>4<br>5<br>6<br>7 |
| | 2-3 | Item 20A - How many hours did...work LAST WEEK at all jobs? | ESR 1 | Number of Hours | 01-99 |
| | 4 | Item 20C - Does...USUALLY work 35 hours or more a week at this job? | ESR 1 & Item 20A less than 35 hours | Yes<br>No | 1<br>2 |
| | 5-6 | Item 20C - Reason less than 35 hours a week (Recoded) | ESR 1 & Item 20A less than 35 hours | Slack work<br>Material shortage<br>Plant or machine repair<br>New job started during week<br>Job terminated during week<br>Could find only part-time work<br>Holiday (Legal or Religious)<br>Labor dispute<br>Bad weather<br>Own illness<br>On vacation<br>Too busy with house, school, etc.<br>Did not want full-time work<br>Full-time work week under 35 hours<br>Other reason | 01<br>02<br>03<br>04<br>05<br>06<br>07<br>08<br>09<br>10<br>11<br>12<br>13<br>14<br>15 |

| Word | Char. | Characteristic | Universe | Description | |
|---|---|---|---|---|---|
| 10 | 1 | Item 21A - Why was...absent from work LAST WEEK? | ESR 2 | Own illness | 1 |
| | | | | On vacation | 2 |
| | | | | Bad weather | 3 |
| | | | | Labor dispute | 4 |
| | | | ESR 3 | New job to begin within 30 days | 5 |
| | | | | Temporary layoff (under 30 days) | 6 |
| | | | | Indefinite layoff (30 days or more or no definite recall date) | 7 |
| | | | ESR 2 | Other | 8 |
| | 2 | Item 21B - Is...getting wages or salary for any of the time off LAST WEEK? | ESR 2 | Yes | 1 |
| | | | | No | 2 |
| | | | | Self employed | 3 |
| | 3 | Item 21C - Does...usually work 35 hours or more a week at this job? | ESR 2 | Yes | 1 |
| | | | | No | 2 |
| | | Item 22A - What has...been doing in the last 4 weeks to find work? | | | |
| | | Methods used - through word 11:4. Multiple entries are possible. | | | |
| | 4 | Checked with public employment agency. | ESR 3 | Blank | - |
| | | | | Entry | 1 |
| | 5 | Checked with private employment agency. | ESR 3 | Blank | - |
| | | | | Entry | 1 |

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| Word | Char. | Characteristic | Universe | Description | |
|---|---|---|---|---|---|
| | | Item 22A - Methods (Con't) | | | |
| 10 | 6 | Checked with employer directly. | ESR 3 | Blank<br>Entry | -<br>1 |
| 11 | 1 | Checked with friends or relatives. | ESR 3 | Blank<br>Entry | -<br>1 |
| | 2 | Placed or answered ads. | ESR 3 | Blank<br>Entry | -<br>1 |
| | 3 | Nothing | ESR 4-7 | Blank<br>Entry | -<br>1 |
| | 4 | Other | ESR 3 | Blank<br>Entry | -<br>1 |
| | 5 | Item 22B - Why did...start looking for work? | ESR 3<br>Except Layoff in Item 21A, codes 6 & 7 | Lost job<br>Quit job<br>Left school<br>Wanted temporary work<br>Other | 1<br>2<br>3<br>4<br>5 |
| 12 | 6<br>1 | Item 22C - Weeks unemployed (New Job starting in 30 days, weeks laid off, or weeks looking for work) | ESR 3 | Number of Weeks | 00-99 |
| | 2 | Item 22D - Has...been looking for full-time or part-time work? | ESR 3 | Full<br>Part | 1<br>2 |



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| Word | Char. | Characteristic | Universe | Description | |
|---|---|---|---|---|---|
| 12 | 3 | Item 22E - Digit 1 - Is there any reason why...could not take a job LAST WEEK? | ESR 3 | Yes<br>No | 1<br>2 |
| | 4 | Item 22E - Digit 2 - Is there any reason why...could not take a job LAST WEEK? | ESR 3 & Yes in Digit 1 | Already had a job<br>Temporary illness | 1<br>2 |
| | | | ESR 4-7 | Going to school<br>Other | 3<br>4 |
| | 5 | Item 22F - When did...last work at a full-time job or business lasting 2 consecutive weeks or more? (Recode as of April 1977) | ESR 3 Re-entrants to Labor Force | In Last 5 years<br>Before Last 5 years | 1<br>2 |
| | | | New entrants to Labor Force | Never worked full-time 2 weeks or more<br>Never worked at all | 3<br>4 |
| | 6 | Item 24A - When did...last work for pay at a regular job or business, either full- or part-time? | ESR 4-7 and Month in Sample is 4 or 8 (Departing rotations) | Within past 12 months<br>1 up to 2 years ago<br>2 up to 3 years ago<br>3 up to 4 years ago<br>4 up to 5 years ago<br>5 or more years ago<br>Never worked | 1<br>2<br>3<br>4<br>5<br>6<br>7 |

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| Word | Char. | Characteristic | Universe | Description | |
|---|---|---|---|---|---|
| 13 | 1 | Item 24B - Why did...leave that job? | ESR 4-7 and 1-5 in Item 24A | Personal, family or school | 1 |
| | | | | Health | 2 |
| | | | | Retirement or old age | 3 |
| | | | | Seasonal job completed | 4 |
| | | | | Slack work or business conditions | 5 |
| | | | | Temporary nonseasonal job completed | 6 |
| | | | | Unsatisfactory work arrangements | 7 |
| | | | | Other | 8 |
| | 2 | Item 24C - Does...want a regular job now, either full- or part-time? | ESR 4-7 and Month in Sample is 4 or 8 (Departing rotations) | Yes | 1 |
| | | | | Maybe, it depends | 2 |
| | | | | No | 3 |
| | | | | Don't Know | 4 |
| | | Item 24D - What are the reasons...is not looking for work? | | | |
| | | Reasons through 15:1. Multiple entries possible. | | | |
| | 3 | Believes no work available in line of work or area | Item 24C is 1 or 2. | Blank | - |
| | | | | Entry | 1 |
| | 4 | Couldn't find any work | Item 24C is 1 or 2 | Blank | - |
| | | | | Entry | 1 |
| | 5 | Lacks necessary schooling, training, skills or experience | Item 24C is 1 or 2 | Blank | - |
| | | | | Entry | 1 |
| | 6 | Employers think too young or too old | Item 24C is 1 or 2 | Blank | - |
| | | | | Entry | 1 |



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| Word | Char. | Characteristic | Universe | Description | |
|---|---|---|---|---|---|
| | | Item 24D - Reasons (Con't) | | | |
| 14 | 1 | Other personal handicap in finding job | Item 24C is 1 or 2 | Blank<br>Entry | –<br>1 |
| | 2 | Can't arrange child care | Item 24C is 1 or 2 | Blank<br>Entry | –<br>1 |
| | 3 | Family responsibilities | Item 24C is 1 or 2 | Blank<br>Entry | –<br>1 |
| | 4 | In school or other training | Item 24C is 1 or 2 | Blank<br>Entry | –<br>1 |
| | 5 | Ill health, physical disability | Item 24C is 1 or 2 | Blank<br>Entry | –<br>1 |
| | 6 | Other | Item 24C is 1 or 2 | Blank<br>Entry | –<br>1 |
| 15 | 1 | Don't Know | Item 24C is 1 or 2 | Blank<br>Entry | –<br>1 |
| | 2 | Item 24E - Does...intend to look for work of any kind in the next 12 months? | ESR 4-7 and Month in Sample is 4 or 8 (Departing rotations) | Yes<br>It depends<br>No<br>Don't Know | 1<br>2<br>3<br>4 |

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| Word | Char. | Characteristic | Universe | Description | |
|---|---|---|---|---|---|
| 15 | 3 | Item 23E - Class of worker (Edited and Recoded) | a) ESR 1 or 2<br>b) ESR 3<br>c) ESR 4-7, Month in Sample is 4 or 8 & Item 24A is 1-5. | Private<br>Government<br>Self employed<br>Without pay<br>Never worked or Never worked Full-time | 1<br>2<br>3<br>4<br>5 |
| | 4-6 | Item 23B - INDUSTRY | Same as Item 23E (Excluding Never worked) | | 017-937 |
| | | Reference for Industry and Occupation: 1970 Census of Population - INDEX of Industries and Occupations. | | | |
| 16 | 1-3 | Item 23C - OCCUPATION | Same as Item 23E (Excluding Never worked) | | 001-984 |
| | 4-5 | Item 25 - LINE NUMBER | All | | 01-39 |
| | 6 | Item 26 - RELATIONSHIP TO HEAD OF HOUSEHOLD | All | Head with other relatives (incl. wife) in household<br>Head with no other relatives in household<br>Wife of head<br>Other relative of head<br>Nonrelative of head with own relatives (incl. wife) in household<br>Nonrelative of head with no own relatives in household | 1<br>2<br>3<br>4<br>5<br>6 |

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| Word | Char. | Characteristic | Universe | Description | |
|---|---|---|---|---|---|
| 17 | 1-2 | Item 27 - AGE | All | | 14-99 |
| | 3 | Item 28 - MARITAL STATUS | All | Married, civilian spouse present | 1 |
| | | | | Married, Armed Force spouse present | 2 |
| | | | | Married, spouse absent (incl. separated) | 3 |
| | | | | Widowed or divorced | 4 |
| | | | | Never Married | 5 |
| | 4 | Item 29 - RACE | All | White | 1 |
| | | | | Negro | 2 |
| | | | | Other | 3 |
| | 5 | Item 30 - SEX | All | Male | 1 |
| | | | | Female | 2 |
| | 6 | Item 30 - VETERAN STATUS | Males | Vietnam Era | 1 |
| | | | | Korean War | 2 |
| | | | | World War II | 3 |
| | | | | World War I | 4 |
| | | | | Other Service | 5 |
| | | | | Nonveteran | 6 |

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| Word | Char. | Characteristic | Universe | Description | |
|---|---|---|---|---|---|
| 18 | 1-2 | Item 31 - HIGHEST GRADE (OF SCHOOL) ATTENDED | All | None | 01 |
| | | | | E1 | 02 |
| | | | | E2 | 03 |
| | | | | E3 | 04 |
| | | | | E4 | 05 |
| | | | | E5 | 06 |
| | | | | E6 | 07 |
| | | | | E7 | 08 |
| | | | | E8 | 09 |
| | | | | H1 | 10 |
| | | | | H2 | 11 |
| | | | | H3 | 12 |
| | | | | H4 | 13 |
| | | | | C1 | 14 |
| | | | | C2 | 15 |
| | | | | C3 | 16 |
| | | | | C4 | 17 |
| | | | | C5 | 18 |
| | | | | C6+ | 19 |
| | 3 | Item 32 - GRADE COMPLETED | All | Yes | 1 |
| | | | | No | 2 |
| | 4 | PADDING | | | |
| | 5 | Blank | | | |
| | 6 | PADDING | | | |



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| Word | Char. | Characteristic | Universe | Description | | |
|---|---|---|---|---|---|---|
| 19 | 1 | ESR - Employment Status Recode (Last Week) | All | Employed | Working | 1 |
| | | | | | With job, not at work | 2 |
| | | | | Unemployed | Looking | 3 |
| | | | | Not in Labor Force | House | 4 |
| | | | | | School | 5 |
| | | | | | Unable | 6 |
| | | | | | Other (Includes Retired) | 7 |
| | 2 | PADDING | | | | |
| | 3 | Indicator for principal person of household | All | | No | 0 |
| | | | | | Yes | 1 |
| | 4-6 | Document Count (Within Work Unit) | All | | | ØØ1-999 |
| 20 | 1-3 | Work Unit Number (From Breaker Sheet) | All | | If Breaker was missing | 001 or ΔΔ1-999<br>9XX Assigned |
| | 4-5 | Month | All | | | 01-12 |
| | 6 | Year - Last Digit | All | | | 0-9 |
| 21 & 22 | All | Final Weight | All | | Two Understood Decimal Places. (Right justified, space fill -01) | |

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| Word | Char. | Characteristic | Universe | Description |
|---|---|---|---|---|
| 23 | All | PADDING | | |



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| Word | Char. | Characteristic | Universe | Description | |
|---|---|---|---|---|---|
| 24 | 1 | PADDING | | | |
| | 2-3 | PADDING | | | |
| | 4-6 | JRCERR | All | No. of errors charged to Enumerator | 000-999 |
| 25 | 1-2 | Blank | | | |
| | 3 | PADDING | | | |
| | 4-6 | Blank | | | |
| 26 | 1 | SMSA Status Code | All | SMSA<br>Non SMSA<br>Not Identifiable | 1<br>2<br>3 |
| | 2 | Central City Status Code | All | Central City<br>Balance of SMSA<br>Non SMSA<br>Not Identifiable | 1<br>2<br>3<br>4 |
| | 3 | Blank | | | |
| | 4 | SMSA Size (From M.S.T. - Beginning Jan. 1973 reflecting 1970 Census Population) | All | 3 million+<br>1 million-2,999,999<br>Not Identifiable | 1<br>2<br>Blank |

029

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| Word | Char. | Characteristic | Universe | Description | | |
|---|---|---|---|---|---|---|
| 26 | 5 | Item 33 - ETHNICITY<br>EFFECTIVE DATE - MARCH 1973<br>Jan. and Feb. 1973 - PADDING<br><br>(Effective Sept. 74 range is expanded to include 'Don't know') | All | | | Effective Sept. 1974 |
| | | | | Mexican American | 1 | 1 |
| | | | | Chicano | 2 | 2 |
| | | | | Mexican (Mexicano) | 3 | 3 |
| | | | | Puerto Rican | 4 | 4 |
| | | | | Cuban | 5 | 5 |
| | | | | Central or South American | 6 | 6 |
| | | | | Other Spanish | 7 | 7 |
| | | | | All other | 8 | 8 |
| | | | | NA | 9 | Don't know 9 |
| | | | | | | NA A |
| | 6 | PADDING | | | | |
| 27 | 1-2 | Weighting Age Recode | All | 14-15 Years old | | 01 |
| | | | | 16-17 | | 02 |
| | | | | 18-19 | | 03 |
| | | | | 20-21 | | 04 |
| | | | | 22-24 | | 05 |
| | | | | 25-29 | | 06 |
| | | | | 30-34 | | 07 |
| | | | | 35-39 | | 08 |
| | | | | 40-44 | | 09 |
| | | | | 45-49 | | 10 |
| | | | | 50-54 | | 11 |
| | | | | 55-59 | | 12 |
| | | | | 60-61 | | 13 |
| | | | | 62-64 | | 14 |
| | | | | 65-69 | | 15 |
| | | | | 70-74 | | 16 |
| | | | | 75+ | | 17 |

U30

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| Word | Char. | Characteristic | Universe | Description | |
|---|---|---|---|---|---|
| 27 | 3 | Blank | | | |
| | 4 | RACE Recode | All | White<br>Other | 1<br>2 |
| | 5 | Blank | | | |
| | 6 | Blank | | | |
| 28 | 1 | Part time status | All | P.T. for Econ. reason<br>Vol. Part time workers<br>All other | 5<br>6<br>0 |

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| Word | Char. | Characteristic | Universe | Description | |
|---|---|---|---|---|---|
| 28 | 2 | Race-Sex Recode | All | Male white | 1 |
| | | | | Female white | 2 |
| | | | | Male other | 3 |
| | | | | Female other | 4 |
| | 3 | Agri. Wage and Salary | All | Not in Universe | 0 |
| | | | | In Universe | 1 |
| | 4 | Labor Force status | All | Civilian Labor Force | 3 |
| | | | | Not in Labor Force | 4 |
| | 5 | Full time or Part time status | All | Not in Labor Force | 0 |
| | | | | Employed full time | 1 |
| | | | | Part time for economic reasons | 2 |
| | | | | Unemployed full time | 3 |
| | | | | Employed part time | 4 |
| | | | | Unemployed part time | 5 |
| | 6 | Experienced Labor Force Employment Status | All | Not in experienced Labor Force | 0 |
| | | | | Employed | 1 |
| | | | | Unemployed | 2 |
| 29 | 1 | Household relationship | All | Male head, living with relatives | 1 |
| | | | | Male head, living without relatives | 2 |
| | | | | Male relative of head | 3 |
| | | | | Male nonrelative of head | 4 |
| | | | | Female head, living with relatives | 5 |
| | | | | Female head, living without relatives | 6 |
| | | | | Wife of head | 7 |
| | | | | Female relative of head | 8 |
| | | | | Female nonrelative of head | 9 |



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| Word | Char. | Characteristic | Universe | Description | |
|---|---|---|---|---|---|
| 29 | 2 | Employed Class of Worker | All | Not Employed | 0 |
| | | | | Private | 1 |
| | | | | Government | 2 |
| | | | | Self-employed | 3 |
| | | | | Unpaid family | 4 |
| | 3 | Major Occupation W & S Group (II) | Wage & Salary | Agri., Pri. Hhld & Never Worked | 0 |
| | | | | Professional, technical, & kindred workers | 1 |
| | | | | Managers & administrators, except farm | 2 |
| | | | | Sales Workers | 3 |
| | | | | Clerical & kindred workers | 4 |
| | | | | Craftsmen & kindred workers | 5 |
| | | | | Operatives, except transport | 6 |
| | | | | Transport Equipment operatives | 7 |
| | | | | Nonfarm Laborers | 8 |
| | | | | Service workers, except private household | 9 |
| | 4 | Labor Force by time worked or lost | All | Not in Labor Force | 0 |
| | | | | At work | 1 |
| | | | | With job, not at work | 2 |
| | | | | Unemployed, seeking full time | 3 |
| | | | | Unemployed, seeking part time | 4 |
| | 5 | Duration of unemployment | All | Not Unemployed | 0 |
| | | | | Less than 5 weeks | 1 |
| | | | | 5 and 6 weeks | 2 |
| | | | | 7 to 10 weeks | 3 |
| | | | | 11 to 14 weeks | 4 |
| | | | | 15 to 26 weeks | 5 |
| | | | | 27 to 39 weeks | 6 |
| | | | | 40 to 51 weeks | 7 |
| | | | | 52 weeks and over | 8 |

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| Word | Char. | Characteristic | Universe | Description | |
|---|---|---|---|---|---|
| 29 | 6 | Civilian Labor Force | All | Not in Universe<br>In Universe | 0<br>1 |
| 30 | 1 | Unemployed | All | Not in Universe<br>In Universe | 0<br>1 |
| | 2 | Unemployed 15 weeks, or more | All | Not in Universe<br>In Universe | 0<br>1 |
| | 3 | Other NILF | All | Not in Universe<br>In Universe | 0<br>1 |
| | 4 | Full Time Labor Force | All | Not in Universe<br>In Universe | 0<br>1 |
| | 5 | Looking for full time work | All | Not in Universe<br>In Universe | 0<br>1 |
| | 6 | Wage and salary worker | All | Not in Universe<br>In Universe | 0<br>1 |
| 31 | 1 | Employed persons | All | Not in Universe<br>In Universe | 0<br>1 |
| | 2 | Employed persons (Excluding farm worker & Private H'hld Workers) | All | Not in Universe<br>In Universe | 0<br>1 |
| | 3 | Experienced Labor Force | All | Not in Universe<br>In Universe | 0<br>1 |
| | 4 | Full time experienced Labor Force | All | Not in Universe<br>In Universe | 0<br>1 |

| Word | Char. | Characteristic | Universe | Description | |
|---|---|---|---|---|---|
| 31 | 5 | Full time employed and economic part time | All | Not in Universe<br>In Universe | 0<br>1 |
| | 6 | Non-agriculture industries | All | Not in Universe<br>In Universe | 0<br>1 |
| 32 | 1 | Non-agriculture wage and salary worker | All | Not in Universe<br>In Universe | 0<br>1 |
| | 2 | Agriculture | All | Not in Universe<br>In Universe | 0<br>1 |
| | 3 | White collar workers | All | Not in Universe<br>In Universe | 0<br>1 |
| | 4 | Blue collar workers | All | Not in Universe<br>In Universe | 0<br>1 |
| | 5 | Manufacturing wage and salary | All | Not in Universe<br>In Universe | 0<br>1 |
| | 6 | Private wage and salary | All | Not in Universe<br>In Universe | 0<br>1 |
| 33 | 1 | Part time for noneconomic reasons | All | Not in Universe<br>In Universe | 0<br>1 |
| | 2 | Persons seeking full time work (W & S) | All | Not in Universe<br>In Universe | 0<br>1 |
| | 3 | Unemployed with no previous work experience | All | Not in Universe<br>In Universe | 0<br>1 |

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| Word | Char. | Characteristic | Universe | Description | |
|---|---|---|---|---|---|
| 33 | 4 | Full time Labor Force Recode | All | Not in Universe | 0 |
| | | | | Employed Full Time | 3 |
| | | | | Looking for Full Time Work | 4 |
| | | | | | 0 |
| | 5 | Program Signal | All | | 1 |
| | 6 | Program Signal | All | | 00 |
| 34 | 1-2 | Age 1 | All | 14-15 | 01 |
| | | | | 16-17 | 02 |
| | | | | 18-19 | 03 |
| | | | | 20-24 | 04 |
| | | | | 25-34 | 05 |
| | | | | 35-44 | 06 |
| | | | | 45-54 | 07 |
| | | | | 55-59 | 08 |
| | | | | 60-64 | 09 |
| | | | | 65+ | |
| | 3-4 | Age 1A (16-21 years) | All | Not 16-21 | 00 |
| | | | | 16-21 Yrs. School | 10 |
| | | | | 16-21 Yrs. Other | 11 |
| | 5-6 | Age 2 | All | Less than 25 years | 00 |
| | | | | 25-29 | 01 |
| | | | | 30-34 | 02 |
| | | | | 35-39 | 03 |
| | | | | 40-44 | 04 |
| | | | | 45-49 | 05 |
| | | | | 50-54 | 06 |
| | | | | 55-59 | 07 |
| | | | | 60-61 | 08 |
| | | | | 62-64 | 09 |
| | | | | 65-69 | 10 |
| | | | | 70+ | 11 |

| Word | Char. | Characteristic | Universe | Description |
|---|---|---|---|---|
| 35 | 1-2 | Major Activity Ages 16-24 | All | Major Activity |

| Age | School | Other: MALE or FEM. MSP | Other: FEM Not MSP |
|---|---|---|---|
| 16 | 1 | 10 | 19 |
| 17 | 2 | 11 | 20 |
| 18 | 3 | 12 | 21 |
| 19 | 4 | 13 | 22 |
| 20 | 5 | 14 | 23 |
| 21 | 6 | 15 | 24 |
| 22 | 7 | 16 | 25 |
| 23 | 8 | 17 | 26 |
| 24 | 9 | 18 | 27 |
| All Others | | | 00 |

| Word | Char. | Characteristic | Universe | Description |
|---|---|---|---|---|
| | 3-4 | Age 4 | All | |

| | |
|---|---|
| Less than 55 years | 00 |
| 55 years | 01 |
| 56 " | 02 |
| 57 " | 03 |
| 58 " | 04 |
| 59 " | 05 |
| 60 " | 06 |
| 61 " | 07 |
| 62 " | 08 |
| 63 " | 09 |
| 64 " | 10 |
| 65 " | 11 |
| 66 " | 12 |
| 67 " | 13 |
| 68 " | 14 |
| 69 " | 15 |
| 70 " | 16 |
| 71 " | 17 |
| 72 " | 18 |
| 73 " | 19 |
| 74 " | 20 |
| 75+ " | 21 |

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| Word | Char. | Characteristic | Universe | Description |
|---|---|---|---|---|
| 35 | 5-6 | Employed status (civilian noninstitutional population) | All | Employed in Agriculture 01<br>Employed in Nonagriculture 02<br>Unemployed 03<br>NILF<br>House 04<br>School 05<br>Unable 06<br>Other<br>Unpaid family worker (1-14 hours,) Agriculture 07<br>Unpaid family worker (1-14 hours,) Nonagriculture 08<br>Farm residents 09<br>Nonfarm residents 10 |
| 36 | 1-2 | Marital status by Age 1 | All | Age / Single / MSP / MSA / WID/DIV<br>16-17 / 01 / 12 / 23 / 34<br>18-19 / 02 / 13 / 24 / 35<br>20-24 / 03 / 14 / 25 / 36<br>25-34 / 04 / 15 / 26 / 37<br>35-44 / 05 / 16 / 27 / 38<br>45-54 / 06 / 17 / 28 / 39<br>55-59 / 07 / 18 / 29 / 40<br>60-64 / 08 / 19 / 30 / 41<br>65+ / 09 / 20 / 31 / 42<br>Less than 16 years old - 00 |
| | 3-4 | Marital status by activity Age 1A | All | Activity / Single / MSP / MSA / WID/DIV<br>School / 10 / 21 / 32 / 43<br>Other / 11 / 22 / 33 / 44<br>Not 16-21 years old - 00 |

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| Word | Char. | Characteristic | Universe | Description | |
|---|---|---|---|---|---|
| 36 | 5-6 | Major Industry (II) | Civ. Labor Force | Never Worked | 00 |
| | | | | Agriculture | 01 |
| | | | | Mining | 02 |
| | | | | Construction | 03 |
| | | | | Manufacturing | |
| | | | | Durable goods | 04 |
| | | | | Nondurable goods | 05 |
| | | | | Transportation and public utilities | |
| | | | | Railroads and railway express | 06 |
| | | | | Other transportation | 07 |
| | | | | Other utilities | 08 |
| | | | | Wholesale and retail trade | |
| | | | | Wholesale trade | 09 |
| | | | | Retail trade | 10 |
| | | | | Finance, insurance, and real estate | 11 |
| | | | | Private household service | 12 |
| | | | | Miscellaneous service | |
| | | | | Business and repair | 13 |
| | | | | Personal, except private household | 14 |
| | | | | Entertainment and recreation | 15 |
| | | | | Medical, except hospitals | 16 |
| | | | | Hospitals | 17 |
| | | | | Welfare and religious | 18 |
| | | | | Education | 19 |
| | | | | Other professional services | 20 |
| | | | | Forestry and fisheries | 21 |
| | | | | Public administration | 22 |

| Word | Char. | Characteristic | Universe | Description | |
|---|---|---|---|---|---|
| 37 | 1-2 | Detailed class of worker | All | Not in Labor Force | 00 |
| | | | | Agriculture | |
| | | | | Wage & Salary | 01 |
| | | | | Self-employed | 02 |
| | | | | Unpaid family | 03 |
| | | | | Nonagriculture wage and salary | |
| | | | | Private households | 04 |
| | | | | Government | 05 |
| | | | | Other private | |
| | | | | Goods - producing industries | |
| | | | | White collar occupations | 06 |
| | | | | Blue collar occupations | 07 |
| | | | | Service occupations | 08 |
| | | | | Service-producing industries | |
| | | | | White collar occupations | 09 |
| | | | | Blue collar occupations | 10 |
| | | | | Service occupations | 11 |
| | | | | Self-employed | 12 |
| | | | | Unpaid family | 13 |
| | | | | No previous full time work experience | 14 |
| | 3-4 | Class of worker Employed-Unemployed | Civ. Labor Force | C/W | EMP / UNEMP |
| | | | | Private | 01 / 05 |
| | | | | Government (Federal, Local, and State) | 02 / 06 |
| | | | | Self-employed | 03 / 07 |
| | | | | Unpaid family | 04 / 08 |
| | | | | Never Worked | 00 |

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| Word | Char. | Characteristic | Universe | Description | |
|---|---|---|---|---|---|
| 37 | 5-6 | Major Industry (I) | Civ. Labor Force | Agriculture, Private Household workers & Never worked | 00 |
| | | | | Mining | 01 |
| | | | | Construction | 02 |
| | | | | Manufacturing | |
| | | | | Durable goods | 03 |
| | | | | Nondurable goods | 04 |
| | | | | Transportation and public utilities | |
| | | | | Railroads and railway express | 05 |
| | | | | Other transportation | 06 |
| | | | | Other utilities | 07 |
| | | | | Wholesale and retail trade | |
| | | | | Wholesale trade | 08 |
| | | | | Retail trade | 09 |
| | | | | Finance, insurance, and real estate | 10 |
| | | | | Miscellaneous services | |
| | | | | Business and repair | 11 |
| | | | | Personal, except private household | 12 |
| | | | | Entertainment and recreation | 13 |
| | | | | Medical, except hospitals | 14 |
| | | | | Hospitals | 15 |
| | | | | Welfare and religious | 16 |
| | | | | Education | 17 |
| | | | | Other professional services | 18 |
| | | | | Forestry and fisheries | 19 |
| | | | | Public administration | 20 |

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| Word | Char. | Characteristic | Universe | Description | |
|---|---|---|---|---|---|
| 38 | 1-2 | Detailed Industry | Civ. Labor Force | Never Worked | 00 |
| | | | | Goods-producing industries | |
| | | | | Agricultural production | 01 |
| | | | | Agricultural services | 02 |
| | | | | Mining | 03 |
| | | | | Construction | 04 |
| | | | | Manufacturing | |
| | | | | Durable goods | |
| | | | | Ordnance | 05 |
| | | | | Lumber | 06 |
| | | | | Furniture | 07 |
| | | | | Stone, clay, glass | 08 |
| | | | | Primary metals | 09 |
| | | | | Fabricated metals (incl. not spec. metal) | 10 |
| | | | | Machinery, exc. elect. | 11 |
| | | | | Electrical equipment | 12 |
| | | | | Transportation equipment | |
| | | | | Automobiles | 13 |
| | | | | Aircraft | 14 |
| | | | | Other transportation equip. | 15 |
| | | | | Instruments | 16 |
| | | | | Miscellaneous | 17 |
| | | | | Nondurable goods | |
| | | | | Food | 18 |
| | | | | Tobacco | 19 |
| | | | | Textiles | 20 |
| | | | | Apparel | 21 |
| | | | | Paper | 22 |
| | | | | Printing | 23 |
| | | | | Chemicals | 24 |
| | | | | Petroleum | 25 |
| | | | | Rubber and plastics | 26 |
| | | | | Leather and not specified manufacturing | 27 |



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| Word | Char. | Characteristic | Universe | Description | |
|---|---|---|---|---|---|
| 38 | 1-2 | Detailed Industry (Con't) | Civ. Labor Force | Service-producing industries | |
| | | | | Transportation and public utilities | |
| | | | | Railroads and railway express | 28 |
| | | | | Other transportation | 29 |
| | | | | Communications | 30 |
| | | | | Other public utilities | 31 |
| | | | | Trade | |
| | | | | Wholesale | 32 |
| | | | | Retail | |
| | | | | Eating and drinking places | 33 |
| | | | | Other retail | 34 |
| | | | | Finance, insurance, and real estate | |
| | | | | Banking and other finance | 35 |
| | | | | Insurance and real estate | 36 |
| | | | | Private household service | 37 |
| | | | | Miscellaneous services | |
| | | | | Business and repair | |
| | | | | Business | 38 |
| | | | | Repair | 39 |
| | | | | Personal services, except private household | 40 |
| | | | | Entertainment and recreation | 41 |
| | | | | Professional services | |
| | | | | Medical, except hospitals | 42 |
| | | | | Hospitals | 43 |
| | | | | Welfare and religious | 44 |
| | | | | Educational | 45 |
| | | | | Other professional | 46 |
| | | | | Forestry and fisheries | 47 |
| | | | | Public administration | |
| | | | | Postal | 48 |
| | | | | Other federal | 49 |
| | | | | State | 50 |
| | | | | Local | 51 |

| Word | Char. | Characteristic | Universe | Description | |
|---|---|---|---|---|---|
| 38 | 3-4 | Major Occupation Group (I) | Civ. Labor Force | White-collar workers | |
| | | | | Professional, technical, and kindred workers | 01 |
| | | | | Managers and administrators, except farm | 02 |
| | | | | Sales workers | 03 |
| | | | | Clerical and kindred workers | 04 |
| | | | | Blue-collar workers | |
| | | | | Craftsmen and kindred workers | 05 |
| | | | | Operatives, except transport | 06 |
| | | | | Transport equipment operatives | 07 |
| | | | | Nonfarm laborers | 08 |
| | | | | Service workers | |
| | | | | Private household workers | 09 |
| | | | | All other service workers | 10 |
| | | | | Farm workers | |
| | | | | Farmers and farm managers | 11 |
| | | | | Farm laborers and foremen | 12 |
| | | | | No previous full-time work experience | 13 |
| | 5-6 | Detailed Occupation | Civ. Labor Force | Never worked | 00 |
| | | | | Professional, technical, and kindred workers | |
| | | | | Engineers | 01 |
| | | | | Physicians, dentists, and related practitioners | 02 |
| | | | | Health workers, except practitioners | 03 |
| | | | | Teachers, except college | 04 |
| | | | | Engineering and science technicians | 05 |
| | | | | Other professional--salaried | 06 |
| | | | | Other professional--self-employed | 07 |



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| Word | Char. | Characteristic | Universe | Description | |
|---|---|---|---|---|---|
| 38 | 5-6 | Detailed Occupation (Con't) | Civ. Labor Force | Managers and administrator, except farm | |
| | | | | Salaried--Manufacturing | 08 |
| | | | | Salaried--Other industries | 09 |
| | | | | Self-employed--retail trade | 10 |
| | | | | Self-employed--other industries | 11 |
| | | | | Sales workers | |
| | | | | Retail trade | 12 |
| | | | | Other | 13 |
| | | | | Clerical workers | |
| | | | | Bookkeepers | 14 |
| | | | | Office machine operators | 15 |
| | | | | Stenographers, typists, and secretaries | 16 |
| | | | | Other clerical workers | 17 |
| | | | | Craftsmen and kindred workers | |
| | | | | Carpenters | 18 |
| | | | | Other construction craftsmen | 19 |
| | | | | Foremen (n.e.c.) | 20 |
| | | | | Machinists and job setters | 21 |
| | | | | Metal craftsmen, except mechanics and machinists and job setters | 22 |
| | | | | Mechanics--auto | 23 |
| | | | | Mechanics, except auto | 24 |
| | | | | All other craftsmen | 25 |
| | | | | Operatives, except transport | |
| | | | | Mine workers | 26 |
| | | | | Motor vehicles and equipment | 27 |
| | | | | Other durable goods | 28 |
| | | | | Nondurable goods | 29 |
| | | | | All other | 30 |
| | | | | Transport equipment operatives | |
| | | | | Drivers and deliverymen | 31 |
| | | | | All others | 32 |

-more-

| Word | Char. | Characteristic | Universe | Description | |
|---|---|---|---|---|---|
| 38 | 5-6 | Detailed Occupation (Con't) | Civ. Labor Force | Nonfarm laborers | |
| | | | | Construction | 33 |
| | | | | Manufacturing | 34 |
| | | | | All other | 35 |
| | | | | Private household workers | 36 |
| | | | | Service workers, except private household | |
| | | | | Cleaning service | 37 |
| | | | | Food service | 38 |
| | | | | Health service | 39 |
| | | | | Personal service | 40 |
| | | | | Protective service | 41 |
| | | | | Farmers and farm managers | 42 |
| | | | | Farm laborers and foremen | |
| | | | | Paid laborers and foremen | 43 |
| | | | | Unpaid family laborers | 44 |
| 39 | 1-2 | Manufacturing | Civ. Labor Force | Never worked or not Mfg. Ind. | 00 |
| | | | | Durable goods | |
| | | | | Ordnance | 01 |
| | | | | Lumber | 02 |
| | | | | Furniture | 03 |
| | | | | Stone, clay, glass | 04 |
| | | | | Primary metals | 05 |
| | | | | Fabricated metals (incl. not spec. metal) | 06 |
| | | | | Machinery, exc. elect. | 07 |
| | | | | Electrical equipment | 08 |
| | | | | Transportation equipment | |
| | | | | Automobiles | 09 |
| | | | | Aircraft | 10 |
| | | | | Other transportation equipment | 11 |
| | | | | Instruments | 12 |
| | | | | Miscellaneous | 13 |

| Word | Char. | Characteristic | Universe | Description | |
|---|---|---|---|---|---|
| 39 | 1-2 | Manufacturing (Con't) | Civ. Labor Force | Nondurable goods | |
| | | | | Food | 14 |
| | | | | Tobacco | 15 |
| | | | | Textiles | 16 |
| | | | | Apparel | 17 |
| | | | | Paper | 18 |
| | | | | Printing | 19 |
| | | | | Chemicals | 20 |
| | | | | Petroleum | 21 |
| | | | | Rubber and plastics | 22 |
| | | | | Leather and not specified manufacturing | 23 |
| | 3-4 | Reason not at work or hours at work | All | Unemployed and NILF | 00 |
| | | | | With a job but not at work | |
| | | | | Illness | 01 |
| | | | | Vacation | 02 |
| | | | | Bad weather | 03 |
| | | | | Labor dispute | 04 |
| | | | | All other | 05 |
| | | | | At work | |
| | | | | 1-4 hours | 06 |
| | | | | 5-14 hours | 07 |
| | | | | 15-21 hours | 08 |
| | | | | 22-29 hours | 09 |
| | | | | 30-34 hours | 10 |
| | | | | 35-39 hours | 11 |
| | | | | 40 hours | 12 |
| | | | | 41-47 hours | 13 |
| | | | | 48 hours | 14 |
| | | | | 49-59 hours | 15 |
| | | | | 60 hours or more | 16 |

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| Word | Char. | Characteristic | Universe | Description | |
|---|---|---|---|---|---|
| 39 | 5-6 | At work 1-34 hours by hours at work | ESR = 1 (Person's at work) and 20A is less than 35 | Usually full time, part time for noneconomic reasons | 00 |
| | | | | Usually work full time, part time for economic reasons | |
| | | | | 1-4 hours | 01 |
| | | | | 5-14 hours | 02 |
| | | | | 15-29 hours | 03 |
| | | | | 30-34 hours | 04 |
| | | | | Usually work part time, economic reasons | |
| | | | | 1-4 hours | 05 |
| | | | | 5-14 hours | 06 |
| | | | | 15-29 hours | 07 |
| | | | | 30-34 hours | 08 |
| | | | | Usually work part time, noneconomic reasons | |
| | | | | 1-4 hours | 09 |
| | | | | 5-14 hours | 10 |
| | | | | 15-29 hours | 11 |
| | | | | 30-34 hours | 12 |
| 40 | 1-2 | Detailed reason by hours 1-34 | ESR = 1 (At Work) and 20A is less than 35 | Not In Universe | 00 |
| | | | | Usually work full time | |
| | | | | Slack work | 01 |
| | | | | Material shortages; plant or machine repair | 02 |
| | | | | New job started | 03 |
| | | | | Job terminated | 04 |
| | | | | Holiday | 05 |
| | | | | Labor dispute | 06 |
| | | | | Bad weather | 07 |
| | | | | Own illness | 08 |
| | | | | On vacation | 09 |
| | | | | All other | 10 |

| Word | Char. | Characteristic | Universe | Description | |
|---|---|---|---|---|---|
| 40 | 1-2 | Detailed reason by hours 1-34 (Con't) | ESR = 1 (At work) and 20A is less than 35 | Usually work part time | |
| | | | | Slack work | 11 |
| | | | | Could find only part time work | 12 |
| | | | | Own illness | 13 |
| | | | | Too busy or did not want full time | 14 |
| | | | | Full-time work week is under 35 hours | 15 |
| | | | | All other | 16 |
| | 3-4 | Reason not at work and pay status | ESR = 2 (with job; not at work) | Not In Universe | 00 |
| | | | | Usually work full time | |
| | | | | Paid | |
| | | | | Vacation | 01 |
| | | | | Illness | 02 |
| | | | | All other | 03 |
| | | | | Not Paid | |
| | | | | Vacation | 04 |
| | | | | Illness | 05 |
| | | | | All other | 06 |
| | | | | Usually work part time | |
| | | | | Paid | |
| | | | | Vacation | 07 |
| | | | | Illness | 08 |
| | | | | All other | 09 |
| | | | | Not Paid | |
| | | | | Vacation | 10 |
| | | | | Illness | 11 |
| | | | | All other | 12 |
| | 5-6 | Program Signal | All | | 50 |

| Word | Char. | Characteristic | Universe | Description |
|---|---|---|---|---|
| 41 | 1 | Item 5a | All | Not Allocated, Allocated: 0, 1 |
| | 2 | 4 | | |
| | 3 | 5b | | |
| | 4 | 9 | | |
| | 5 | All Labor Force Items | | |
| | 6 | ESR | | |
| 42 | 1 | 26 | | |
| | 2 | 30 - Sex | | |
| | 3 | 29 | | |
| | 4 | 28 | | |
| | 5 | 27 | | |
| | 6 | 32 | | |
| 43 | 1 | 31 | | |
| | 2 | 30 - Veteran Status | | |
| | 3 | 19 | | |
| | 4 | 23B | | |
| | 5 | 23C | | |
| | 6 | 23E | | |

| Word | Char. | Characteristic | Universe | Description | |
|---|---|---|---|---|---|
| 44 | 1 | 20A | All | Not Allocated | 0 |
| | | | | Allocated | 1 |
| | 2 | 20C | | | |
| | 3 | 21A | | | |
| | 4 | 21B | | | |
| | 5 | 21C | | | |
| | 6 | 22C | | | |
| 45 | 1 | 22D | | | |
| | 2 | 22F | | | |
| | 3 | 24A | | | |
| | 4 | 24B | | | |
| | 5 | 24C | | | |
| | 6 | 24D | | | |
| 46 | 1 | 22A | | | |
| | 2 | 22E | | | |
| | 3 | 25 | | | |
| | 4 | 22B | | | |
| | 5 | 24E | | | |
| | 6 | Geographic Identification | | | |

ATTACHMENT 4

CURRENT POPULATION SURVEY

1107 NONINTERVIEW TYPE A RECORD LAYOUT



| Word | Char. | Characteristic | Universe | Description | |
|---|---|---|---|---|---|
| 1 | 1 | Record type | All | Noninterview Type A | 2 |
| | 2 | Month in Sample (Recoded from Month and Rotation) | All | | 1-8 |
| | 3 | Blank | | | |
| 1 | 4-6 | Random Cluster Code 1/ | All | | 00100-99999 |
| 2 | 1-2 | | | | |
| 2 | 3-6 | Item 7 - SEGMENT NO. | All | Thousand's Digit is Rotation, 1000-8999 | |
| 3 | 1-2 | Serial No. | All | | 00-99 |
| | 3 | Subdivided Household No. | Households with duplicate Random Cluster Code, Segment, and Serial Numbers | No Duplicates | -,0 |
| | | | | Duplicates | 1-9 |

1/ Random Cluster Code, Segment Number, Serial Number, and Subdivided Household Number form a unique identifier for each sample housing unit.

| Word | Char. | Characteristic | Universe | Description |
|---|---|---|---|---|
| 3 | 4 | Region (From M.S.T.) | All | Northeast 1<br>North Central 2<br>South 3<br>West 4 |
| | 5 | Division (From M.S.T.) | All | New England 1 } Region 1<br>Middle Atlantic 2<br>East North Central 3 } Region 2<br>West North Central 4<br>South Atlantic 5<br>East South Central 6 } Region 3<br>West South Central 7<br>Mountain 8<br>Pacific 9 } Region 4 |
| | 5-6 | State (1st digit of State Code is Division Code) (From M.S.T.) | All | <u>New England Division</u><br>Maine 19<br>New Hampshire 19<br>Vermont 19<br>Massachusetts 14<br>Rhode Island 19<br>Connecticut 16<br><br><u>Middle Atlantic Division</u><br>New York 21<br>New Jersey 22<br>Pennsylvania 23<br><br><u>East North Central Division</u><br>Ohio 31<br>Indiana 32<br>Illinois 33<br>Michigan 39<br>Wisconsin 39 |

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| Word | Char. | Characteristic | Universe | Description | |
|---|---|---|---|---|---|
| 3 | 5-6 | State (1st digit of State Code is Division Code) (From H.S.T.) (Con't) | All | West North Central Division | |
| | | | | Minnesota | 49 |
| | | | | Iowa | 49 |
| | | | | Missouri | 49 |
| | | | | North Dakota | 49 |
| | | | | South Dakota | 49 |
| | | | | Nebraska | 49 |
| | | | | Kansas | 49 |
| | | | | South Atlantic Division | |
| | | | | Delaware | 57 |
| | | | | Maryland | 57 |
| | | | | District of Columbia | 53 |
| | | | | Virginia | 57 |
| | | | | West Virginia | 57 |
| | | | | North Carolina | 56 |
| | | | | South Carolina | 58 |
| | | | | Georgia | 58 |
| | | | | Florida | 59 |
| | | | | East South Central Division | |
| | | | | Kentucky | 67 |
| | | | | Tennessee | 67 |
| | | | | Alabama | 69 |
| | | | | Mississippi | 69 |
| | | | | West South Central Division | |
| | | | | Arkansas | 79 |
| | | | | Louisiana | 79 |
| | | | | Oklahoma | 79 |
| | | | | Texas | 72 |

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| Word | Char. | Characteristic | Universe | Description | |
|---|---|---|---|---|---|
| 3 | 5-6 | State (1st digit of State Code is Division Code) (From M.S.T.) (Con't) | All | Mountain Division | |
| | | | | Montana | 89 |
| | | | | Idaho | 89 |
| | | | | Wyoming | 89 |
| | | | | Colorado | 89 |
| | | | | New Mexico | 89 |
| | | | | Arizona | 89 |
| | | | | Utah | 89 |
| | | | | Nevada | 89 |
| | | | | Pacific Division | |
| | | | | Washington | 99 |
| | | | | Oregon | 99 |
| | | | | California | 92 |
| | | | | Alaska | 99 |
| | | | | Hawaii | 99 |
| 4 | 1-2 | Blank | All | | |

-more-

| Word | Char. | Characteristic | Universe | Description |
|---|---|---|---|---|
| 4 | 3-4 | SMSA Rankings (From M.S.T.) | SMSA's | |

| Beginning Jan. '73: | 1970 Ranking |
|---|---|
| All other records | 00 |
| New York, N.Y. | 01 |
| Los Angeles-Long Beach, Calif. | 02 |
| Chicago, Ill. | 03 |
| Philadelphia, Pa. | 04 |
| Detroit, Mich. | 05 |
| San Francisco-Oakland, Calif. | 06 |
| Washington, D.C.-Md.-Va. | 07 |
| Boston, Mass. | 08 |
| Nassau-Suffolk, N.Y. | 09 |
| Pittsburgh, Pa. | 10 |
| St. Louis, Mo.-Ill. | 11 |
| Baltimore, Md. | 12 |
| Cleveland, Ohio | 13 |
| Houston, Texas | 14 |
| Newark, N.J. | 15 |
| Minneapolis-St. Paul, Minn. | 16 |
| Dallas, Texas | 17 |
| Seattle-Everett, Wash. | 18 |
| Anaheim-Santa Ana-Garden Grove, Calif. | 19 |
| Milwaukee, Wis. | 20 |
| Atlanta, Ga. | 21 |
| Cincinnati, Ohio | 22 |
| Paterson-Clifton-Passaic, N.J. | 23 |
| San Diego, Calif. | 24 |
| Buffalo, N.Y. | 25 |

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| Word | Char. | Characteristic | Universe | Description | |
|---|---|---|---|---|---|
| 4 | 3-4 | SMSA Rankings (Con't) (From M.S.T.) | SMSA's | Miami, Fla. | 26 |
| | | | | Kansas City, Mo.-Kan. | 27 |
| | | | | Denver, Colo. | 28 |
| | | | | San Bernardino-Riverside-Ontario, Calif. | 29 |
| | | | | Indianapolis, Ind. | 30 |
| | | | | San Jose, Calif. | 31 |
| | | | | New Orleans, La. | 32 |
| | | | | Tampa-St. Petersburg, Fla. | 33 |
| | | | | Portland, Ore.-Wash. | 34 |

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| Word | Char. | Characteristic | Universe | Description | |
|---|---|---|---|---|---|
| 4 | 5 | Item 1 - INTERVIEWER CHECK ITEM | All | Blank or Impossible | - |
| | | | | Only CPS-1 for household | 1 |
| | | | | First CPS-1 of cont. household | 2 |
| | | | | Second CPS-1 of cont. household | 3 |
| | | | | Third, fourth, etc. CPS-1 | 4 |
| | 6 | Type Noninterview Cluster (From M.S.T.) | All | SMSA Cluster | 1 |
| | | | | Non-SMSA Cluster | 2 |
| 5 | 1-2 | Blank | All | | |

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| Word | Char. | Characteristic | Universe | Description | |
|---|---|---|---|---|---|
| 5 | 3 | Blank | All | | |
| | 4-6 | Item 10 - INTERVIEWER CODE | All | Blank or Impossible in any digit | -NA, or A00-H99 (Excluding I--) |
| 6 | 1 | Item 12 - LINE NO. H'HLD RESP. | All | Blank or Impossible | - |
| | | | | | 1-6 |
| | | | | Non H'hld Resp. | 7 |
| | 2 | Item 13 - TYPE INTERVIEW | All | Noninterview | 1 |
| | 3-4 | Item 11 - DATE COMPLETED | All | Day of Month | -- or 10-29 |
| | 5 | PADDING | | | |
| | 6 | | | | |
| 7 | 1 | Item 14 - RACE OF HEAD | All | White | 1 |
| | | | | Negro | 2 |
| | | | | Other | 3 |
| | 2 | Item 14 - REASON | All | No one home | 1 |
| | | | | Temporarily absent | 2 |
| | | | | Refused | 3 |
| | | | | Other - Occ. | 4 |
| | 3-5 | PADDING | | | |

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| Word | Char. | Characteristic | Universe | Description |
|---|---|---|---|---|
| 7 | 6 | Blank | All | |
| 8 | 1 | Land Usage (Recode) (Edited using Urban/Rural Code from M.S.T. and CPS-1 Document Items 5a. and 5b-new in Feb. 76) Recode reflects "old" Farm Definition. | All | Nonfarm 1<br>Farm ≥ 10 acres 2<br>Farm < 10 acres 3 |
| | 2-3 | Item 4 - TYPE OF LIVING QUARTERS (Recode) | All | Housing Unit<br>House, apt., flat 01<br>HU in nontransient hotel, etc. 02<br>HU, permanent, in trans. hotel, motel, etc. 03<br>HU in rooming house 04<br>Mobile home or Trailer 05<br>HU not specified above 06<br>Other Unit<br>Qtrs. not HU in rooming or boarding house 07<br>Unit not permanent in trans. hotel, motel, etc. 08<br>Tent or trailer site 09<br>Other not HU 10 |

| Word | Char. | Characteristic | Universe | Description | |
|---|---|---|---|---|---|
| 8 | 4 | "New" Farm Definition (Recode) Effective February 1976. (Edited using Urban/ Rural Code from M.S.T. and CPS-1 Document Items 5a. and 5b.) | All | Nonfarm | 1 |
| | | | | Farm ≥ 10 acres | 2 |
| | | | | Farm < 10 acres | 3 |
| | | Blank prior to February 1976 | | | |
| | 5 | SMSA Status Code (From M.S.T.) | All | In SMSA, central city | 1 |
| | | | | In SMSA, not central city | 2 |
| | | | | Not in SMSA | 3 |
| | 6 | Item 9 - HOUSEHOLD NUMBER (Unedited) | All | Blank | - |
| | | | | 1-8 | 1-8 |

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| Word | Char. | Characteristic | Universe | Description | |
|---|---|---|---|---|---|
| 9 through 19 | 1 2 | PADDING | | | |
| | 3 | Household Indicator | All | | 1 |
| | 4-6 | Document Count (Within Work Unit | All | | ØØ1-999 |
| 20 | 1-3 | Work Unit Number (From Breaker Sheet) | All | If Breaker was missing | 001 or ΔΔ1-999<br>9XX Assigned |
| | 4-5 | Month | All | | 01-12 |
| | 6 | Year - Last Digit | All | | 0-9 |
| 21 | 1-6 | Fill | All | (Binary 01) | |
| 22 | 1-5 | | | | |
| | 6 | Final Weight | All | "Regular Type A" Sub Sample | 1<br>1-4 |
| 23 | All | Padding | | | |



062

| Word | Char. | Characteristic | Universe | Description |
|---|---|---|---|---|
| 24 | 1-3 | PADDING | | |
| | 4-6 | JRCERR | | No. of errors charged to enumerator 000-999 |
| 25 | 1 | Blank | | |
| | 2 | Blank | | |
| | 3 | PADDING | | |
| | 4-6 | Blank | | |

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| Word | Char. | Characteristic | Universe | Description | |
|---|---|---|---|---|---|
| 26 | 1-3 | Blank | | | |
| | 4 | SMSA Size (From M.S.T. - Beginning Jan. 1973 reflecting 1970 Census Population) | All | 3 million+<br>1 million-2,999,999<br>All other records | 1<br>2<br>Blank |
| | 5-6 | PADDING | | | |
| 27 | 1-2 | PADDING | | | |

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| Word | Char. | Characteristic | Universe | Description | |
|---|---|---|---|---|---|
| 27 | 3 | Blank | | | |
| | 4 | RACE Recode | All | White | 1 |
| | | | | Other | 2 |
| | 5 | Blank | | | |
| | 6 | Blank | | | |

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| Word | Char. | Characteristic | Universe | Description |
|---|---|---|---|---|
| 28 Through 46 | 1 Through 6 | PADDING | | |

ATTACHMENT 5

CURRENT POPULATION SURVEY

1107 NONINTERVIEW TYPE B-C RECORD LAYOUT



| Word | Char. | Characteristic | Universe | Description | |
|---|---|---|---|---|---|
| 1 | 1 | Record Type | All | Noninterview Type B-C | 3 |
| | 2 | Month in Sample (Recoded from Month and Rotation) | All | | 1-8 |
| | 3 | Blank | | | |
| 1 | 4-6 | Random Cluster Code 1/ | All | | 00100-99999 |
| 2 | 1-2 | | | | |
| 2 | 3-6 | Item 7 - SEGMENT NO. | All | Thousand's Digit is Rotation. | 1000-8999 |
| 3 | 1-2 | Serial No. | All | | 00-99 |
| | 3 | Subdivided Household No. | Households with duplicate Random Cluster Code, Segment, and Serial Numbers. | No Duplicates | -,0 |
| | | | | Duplicates | 1-9 |

1/ Random Cluster Code, Segment Number, Serial Number, and Subdivided Household Number form a unique identifier for each sample housing unit.

| Word | Char. | Characteristic | Universe | Description | | |
|---|---|---|---|---|---|---|
| 3 | 4 | Region (From M.S.T.) | All | Northeast | | 1 |
| | | | | North Central | | 2 |
| | | | | South | | 3 |
| | | | | West | | 4 |
| | 5 | Division (From M.S.T.) | All | New England | 1 | Region 1 |
| | | | | Middle Atlantic | 2 | |
| | | | | East North Central | 3 | Region 2 |
| | | | | West North Central | 4 | |
| | | | | South Atlantic | 5 | Region 3 |
| | | | | East South Central | 6 | |
| | | | | West South Central | 7 | |
| | | | | Mountain | 8 | Region 4 |
| | | | | Pacific | 9 | |
| | 5-6 | State (1st digit of State Code is Division Code) (From M.S.T.) | All | New England Division | | |
| | | | | Maine | | 19 |
| | | | | New Hampshire | | 19 |
| | | | | Vermont | | 19 |
| | | | | Massachusetts | | 14 |
| | | | | Rhode Island | | 19 |
| | | | | Connecticut | | 16 |
| | | | | Middle Atlantic Division | | |
| | | | | New York | | 21 |
| | | | | New Jersey | | 22 |
| | | | | Pennsylvania | | 23 |
| | | | | East North Central Division | | |
| | | | | Ohio | | 31 |
| | | | | Indiana | | 32 |
| | | | | Illinois | | 33 |
| | | | | Michigan | | 39 |
| | | | | Wisconsin | | 39 |

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| Word | Char. | Characteristic | Universe | Description | |
|---|---|---|---|---|---|
| 3 | 5-6 | State (1st digit of State Code is Division Code) (From M.S.T.) (Con't) | All | West North Central Division | |
| | | | | Minnesota | 49 |
| | | | | Iowa | 49 |
| | | | | Missouri | 49 |
| | | | | North Dakota | 49 |
| | | | | South Dakota | 49 |
| | | | | Nebraska | 49 |
| | | | | Kansas | 49 |
| | | | | South Atlantic Division | |
| | | | | Delaware | 57 |
| | | | | Maryland | 57 |
| | | | | District of Columbia | 53 |
| | | | | Virginia | 57 |
| | | | | West Virginia | 57 |
| | | | | North Carolina | 56 |
| | | | | South Carolina | 58 |
| | | | | Georgia | 58 |
| | | | | Florida | 59 |
| | | | | East South Central Division | |
| | | | | Kentucky | 67 |
| | | | | Tennessee | 67 |
| | | | | Alabama | 69 |
| | | | | Mississippi | 69 |
| | | | | West South Central Division | |
| | | | | Arkansas | 79 |
| | | | | Louisiana | 79 |
| | | | | Oklahoma | 79 |
| | | | | Texas | 72 |

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| Word | Char. | Characteristic | Universe | Description | |
|---|---|---|---|---|---|
| 3 | 5-6 | State (1st digit of State Code is Division Code) (From M.S.T.) (Con't) | All | Mountain Division | |
| | | | | Montana | 89 |
| | | | | Idaho | 89 |
| | | | | Wyoming | 89 |
| | | | | Colorado | 89 |
| | | | | New Mexico | 89 |
| | | | | Arizona | 89 |
| | | | | Utah | 89 |
| | | | | Nevada | 89 |
| | | | | Pacific Division | |
| | | | | Washington | 99 |
| | | | | Oregon | 99 |
| | | | | California | 92 |
| | | | | Alaska | 99 |
| | | | | Hawaii | 99 |
| 4 | 1-2 | Blank | All | | |

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| Word | Char. | Characteristic | Universe | Description |
|---|---|---|---|---|
| 4 | 3-4 | SMSA Rankings (From M.S.T.) | SMSA's | |

| Beginning Jan. '73: | 1970 Ranking |
|---|---|
| All other records | 00 |
| New York, N.Y. | 01 |
| Los Angeles-Long Beach, Calif. | 02 |
| Chicago, Ill. | 03 |
| Philadelphia, Pa. | 04 |
| Detroit, Mich. | 05 |
| San Francisco-Oakland, Calif. | 06 |
| Washington, D.C.-Md.-Va. | 07 |
| Boston, Mass. | 08 |
| Nassau-Suffolk, N.Y. | 09 |
| Pittsburgh, Pa. | 10 |
| St. Louis, Mo.-Ill. | 11 |
| Baltimore, Md. | 12 |
| Cleveland, Ohio | 13 |
| Houston, Texas | 14 |
| Newark, N.J. | 15 |
| Minneapolis-St. Paul, Minn. | 16 |
| Dallas, Texas | 17 |
| Seattle-Everett, Wash. | 18 |
| Anaheim-Santa Ana-Garden Grove, Calif. | 19 |
| Milwaukee, Wis. | 20 |
| Atlanta, Ga. | 21 |
| Cincinnati, Ohio | 22 |
| Paterson-Clifton-Passaic, N.J. | 23 |
| San Diego, Calif. | 24 |
| Buffalo, N.Y. | 25 |

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| Word | Char. | Characteristic | Universe | Description | |
|---|---|---|---|---|---|
| 4 | 3-4 | SMSA Rankings (Con't) (From M.S.T.) | SMSA's | Miami, Fla. | 26 |
| | | | | Kansas City, Mo.-Kan. | 27 |
| | | | | Denver, Colo. | 28 |
| | | | | San Bernardino-Riverside-Ontario, Calif. | 29 |
| | | | | Indianapolis, Ind. | 30 |
| | | | | San Jose, Calif. | 31 |
| | | | | New Orleans, La. | 32 |
| | | | | Tampa-St. Petersburg, Fla. | 33 |
| | | | | Portland, Ore.-Wash. | 34 |

-more-

| Word | Char. | Characteristic | Universe | Description | |
|---|---|---|---|---|---|
| 4 | 5 | Item 1 - INTERVIEWER CHECK ITEM | All | Blank or Impossible | - |
| | | | | Only CPS-1 for household | 1 |
| | | | | First CPS-1 of cont. household | 2 |
| | | | | Second CPS-1 of cont. household | 3 |
| | | | | Third, fourth, etc. CPS-1 | 4 |
| | 6 | Type Noninterview Cluster (From M.S.T.) | All | SMSA Cluster | 1 |
| | | | | Non-SMSA Cluster | 2 |
| 5 | 1-2 | Blank | All | | |

-more-

| Word | Char. | Characteristic | Universe | Description | |
|---|---|---|---|---|---|
| 5 | 3 | Blank | All | | |
| | 4-6 | Item 10 - INTERVIEWER CODE | All | Blank or Impossible in any digit | -NA, or A00-H99 (Excluding I--) |
| 6 | 1 | Item 12 - LINE NO. H'HLD RESP. | All | Blank or Impossible | - |
| | | | | Non H'hld Resp. | 1-6<br>7 |
| | 2 | Item 13 - TYPE INTERVIEW | All | Noninterview | 1 |
| | 3-4 | Item 11 - DATE COMPLETED | All | Day of Month | --, or 10-29 |
| | 5<br>6 | PADDING | | | |
| 7 | 1-2 | Item 15 - TYPE B OR C (Recode) | All | Type B | |
| | | | | Vacant - regular | 01 |
| | | | | Vacant - storage of h'hld furniture | 02 |
| | | | | Temp. occ. by persons with URE | 03 |
| | | | | Unfit or to be demolished | 04 |
| | | | | Under construction, not ready | 05 |
| | | | | Converted to temp. business or storage | 06 |
| | | | | Occ. by AF members or persons under 14 | 07 |
| | | | | Unoccupied tent site or trailer site | 08 |
| | | | | Permit granted, construction not started | 09 |
| | | | | Other | 10 |

-more-

074

| Word | Char. | Characteristic | Universe | Description |
|---|---|---|---|---|
| 7 | 1-2 | Item 15 - TYPE B OR C (Con't) (Recode) | All | Type C<br>Demolished 11<br>House or trailer moved 12<br>Outside segment 13<br>Converted to permanent business or storage 14<br>Merged 15<br>Condemned 16<br>Built after April 1, 1960 (1970) 17<br>Other 18 |
| | 3-5 | PADDING | | |
| | 6 | Blank | All | |
| 8 | 1 | Land Usage (Recode) (Edited using Urban/Rural Code from M.S.T. and CPS-1 Document Items 5a and 5b-new in Feb. 76) Recode reflects "old" Farm Definition. | All | Nonfarm 1<br>Farm ≥ 10 acres 2<br>Farm < 10 acres 3 |

-more-

| Word | Char. | Characteristic | Universe | Description | |
|---|---|---|---|---|---|
| 8 | 2-3 | Item 4 - TYPE OF LIVING QUARTERS (Recode) | All | Housing Unit | |
| | | | | House, apt., flat | 01 |
| | | | | HU in nontransient hotel, etc. | 02 |
| | | | | HU, permanent, in trans. hotel, motel, etc. | 03 |
| | | | | HU in rooming house | 04 |
| | | | | Mobile home or Trailer | 05 |
| | | | | HU not specified above | 06 |
| | | | | Other Unit | |
| | | | | Qtrs. not HU in rooming or boarding house | 07 |
| | | | | Unit not permanent in trans. hotel, motel, etc. | 08 |
| | | | | Tent or trailer site | 09 |
| | | | | Other not HU | 10 |
| | 4 | "New" Farm Definition (Recode) Effective February 1976. (Edited using Urban/Rural Code from M.S.T. and CPS-1 Document Items 5a. and 5b.) | All | Nonfarm | 1 |
| | | | | Farm ≥ 10 acres | 2 |
| | | | | Farm < 10 acres | 3 |
| | | Blank prior to February 1976 | | | |
| | 5 | SMSA Status Code (From M.S.T.) | All | In SMSA, central city | 1 |
| | | | | In SMSA, not central city | 2 |
| | | | | Not in SMSA | 3 |
| | 6 | Item 9 - HOUSEHOLD NUMBER (Unedited) | All | Blank | - |
| | | | | 1-8 | 1-8 |

-more-

| Word | Char. | Characteristic | Universe | Description |
|---|---|---|---|---|
| 9 through 19 | 1 2 | PADDING | | |
| | 3 | Household Indicator | All | 1 |
| | 4-6 | Document Count (Within Work Unit) | All | ØØ1-999 |
| 20 | 1-3 | Work Unit Number (from Breaker Sheet) | All | 001 or ΔΔ1-999<br>If Breaker was missing 9XX Assigned |
| | 4-5 | Month | All | 01-12 |
| | 6 | Year - last digit | All | 0-9 |
| 21 through 22 | 1-6 1-5 | Fill | All | (Binary 01) |

-more-

077

| Word | Char. | Characteristic | Universe | Description | |
|---|---|---|---|---|---|
| 22 | 6 | Final Weight | All | "Regular Type B-C"<br>Sub Sample | 1<br>1-4 |
| 23 | All | Padding | | | |
| 24 | 1 | Padding | | | |
| | 2-3 | PADDING | | | |
| | 4-6 | JRCERR | All | No. of errors charged to enumerator | 000-999 |
| 25 | 1 | Blank | | | |
| | 2 | Blank | | | |

-more-

| Word | Char. | Characteristic | Universe | Description | |
|---|---|---|---|---|---|
| 25 | 3 | PADDING | | | |
| | 4-6 | Blank | | | |
| 26 | 1-3 | Blank | | | |
| | 4 | SMSA Size (From M.S.T. - Beginning Jan. 1973 reflecting 1970 Census Population) | All | 3 million+<br>1 million-2,999,999<br>All other records | 1.<br>2<br>Blank |
| | 5-6 | PADDING | | | |
| 27 | 1-2 | PADDING | | | |
| | 3 | Blank | | | |

-more-

| Word | Char. | Characteristic | Universe | Description |
|---|---|---|---|---|
| 27 | 4 | PADDING | | |
| | 5 | Blank | | |
| 27 | 6 | Blank | | |
| 28 through 46 | 1 through 6 | PADDING | | |

-more-

AUGUST 1977 FOOD STAMP AND
SCHOOL LUNCH SUPPLEMENT

PUBLIC USE VERSION



| Word | Character | Characteristics | Universe | Description | | |
|---|---|---|---|---|---|---|
| 47 thru 51 | 1 thru 6 | BLANK | | | | |
| | | EDITED DATA | | | | |
| 52 | 1 | I47- TOTAL FAMILY INCOME | ALL | Blank<br>0-9, A-D 1/<br>Plugged NA * | | -<br><br> |
| 52 | 2 | I34- Did you or any other person now living here purchase or receive government food stamps during the past 7 months; that is, from JAN 77 thru JULY 77? | ALL | NA<br>Yes<br>No | | -<br>1<br>2 |
| | 3 | I35- Were they purchased or received in? | I34 = Yes | July? | | |
| | 4 | | | June | | |
| | 5 | | | May | NA | - |
| | 6 | | | April | Yes | 1 |
| 53 | 1 | | | March | No | 2 |
| | 2 | | | Feb. | | |
| | 3 | | | Jan. | | |
| 53 | 4 | I36- For the month of _____, for how many members of this household were stamps issued? | I34 = Yes | Blank<br>All | | -<br>1 |
| | 5-6 | I36- Number | I34 = Yes | Blank | | -<br>ØØ-39 |

1/ For income codes, see page 3 of this supplement record layout.

- more -

| Word | Character | Characteristics | Universe | Description | |
|---|---|---|---|---|---|
| 54 | 1 | I37- How much was paid for the food stamps obtained in _____? | I34 = Yes | Blank<br>Did Not Pay<br>Don't Know | -<br>1<br>2 |
| | 2-4 | I37- Nearest Dollar | I34 = Yes | | Ø-299 |
| | | | | Blank | - |
| | 5 | I38- What was the total value of these stamps? | I34 = Yes | Blank<br>Don't Know | -<br>1 |
| 54 and 55 | 6<br>1-2 | I38- Nearest Dollar | I34 = Yes | | Ø-599 |
| 55 | 3 | I39- Interviewer check item Are there household members aged 4-18? | ALL | NA<br>Yes<br>No | -<br>1<br>2 |
| 55 | 4 | I40- How many children now living here aged 4-18 were enrolled in elementary or secondary school last school year; that is, from Sept. 76 to June 77? | I39 = Yes | NA | - |
| | | | | | 1-9 |
| | | | | None | A |
| 55 | 5 | I41- How many of these children ate a complete plate lunch prepared by the school at least twice a week? | I40 = number | NA<br>ALL<br>Some but not all<br>None | --<br>1<br>2<br>3 |
| 55 | 6 | I41- Number | I41 = some | | 0-9 |

282

| Word | Character | Characteristics | Universe | Description | |
|---|---|---|---|---|---|
| 56 | 1 | I42- Did any of these children receive the lunch free or reduced prices because their household applied and qualified for the Fed. Govn's School Lunch Program? | I41 = All or some | NA<br>Yes<br>No | -<br>1<br>2 |
| 56 | 2 | I43- Interivewer check item Entry in item 41 is: | I41 = All or some | NA<br>ALL<br>Some but not all | -<br>1<br>2 |
| 56 | 3 | I44- What was the main reason they did not eat a complete plate lunch at school? | I41 = None or some | NA<br>School did not offer lunches<br>Took lunch from home<br>Ate lunch at home or bought lunch away from school<br>Other<br>Plugged | -<br>1<br>2<br>3<br>4<br>* |
| 56 | 4 | I45- What was the total income from all sources for this family in the month of July? | ALL | Blank<br>A. Under $100<br>B. $100-199<br>C. $200-299<br>D. $300-399<br>E. $400-499<br>F. $500-599<br>G. $600-749<br>H. $750-999<br>J. $1,000-1,249<br>K. $1,250-1,499<br>L. $1,500 and over<br>None<br>Plugged NA | -<br>1<br>2<br>3<br>4<br>5<br>6<br>7<br>8<br>9<br>A<br>B<br>C<br>* |



- more -

| Word | Character | Characteristics | Universe | Description | |
|---|---|---|---|---|---|
| 56 | 5 | I46- Household members 0-13 years old | ALL | Blank | - |
| | | | | | 0-9 |
| | | | | Plugged NA | * |
| 56 THRU 58 | 6 3 | BLANK | | | |
| 58 | 4-5 | PADDING | | | |
| 56 thru 60 | 6 6 | BLANK | | | |

ATTACHMENT 7

Questionnaire Facsimile--

August 1977

| INTERVIEWER CHECK ITEM | FORM CPS-1 | CONTROL NUMBER |
|---|---|---|
| Only CPS-1 for household ☐<br>First CPS-1 of continuation household ☐<br>Second CPS-1 of continuation household ☐<br>Third, fourth, and 5th CPS-1 ☐ | U.S. DEPARTMENT OF COMMERCE Bureau of the Census<br>CURRENT POPULATION SURVEY<br>*Form Approved — O.M.B. No. 41-R1202-14* | PSU SEGMENT SERIAL |

LINE NO. OF H'HOLD RESP. _____

NON H'HOLD RESPONDENT ☐
*(Specify and Send Intercomm)*

INTERVIEW
ANY ENTRY OTHER THAN *NEVER WORKED* IN ITEMS Z3A–E IN THIS CPS-1 ..... Yes ☐ No ☐

NONINTERVIEW
TYPE A ☐
TYPE B ☐
TYPE C ☐
*(SEND INTER COMM)*

# CURRENT

# POPULATION

# SURVEY

AUGUST 1977

Forane 28.1:1

1. INTERVIEWER CHECK ITEM

Only CPS-1 for household . . . . . (Fill all applicable items on this page)
First CPS-1 of continuation n'hld. . . (Transcribe items 2–13 from first CPS-1)
Second CPS-1 of continuation n'hld. . .
Third, fourth, etc. CPS-1 . . . . . .

FORM CPS-1

U. S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS

# CURRENT POPULATION SURVEY

Form Approved – O.M.B. No. 41-R1202-14

AUGUST 1977

2. SAMPLE
A C D

3. CONTROL NUMBER

MONTH

YEAR

4. TYPE OF LIVING QUARTERS

| HOUSING UNIT | | OTHER UNIT | |
|---|---|---|---|
| House, apartment, flat | | Quarters not HU in rooming or boarding house | |
| HU in nontransient hotel, motel, etc. | | Unit not permanent in transient hotel, motel, etc. | |
| HU, permanent, in transient hotel, motel, etc. | | Tent site or trailer site | |
| HU in rooming house | | Other not HU (Describe below) | |
| Mobile home or trailer | | | |
| HU not specified above (Describe below) | | | |

5a. LAND USAGE (TRANSCRIBE from C.C. item 10 or 11)
A
B (Fill 5b)
C

5b. FARM SALES (TRANSCRIBE from C.C. item 12)
A
B
C
D

6. PSU NO.

7. SEGMENT NO.

8. SERIAL NO.

9. HOUSEHOLD NO.

10. INTERVIEWER CODE
A B C D E F G H J K L M

11. DATE COMPLETED

12. LINE NO. OF H'HOLD RESP.

Non h'hld resp. (Specify) (Send Inter Comm)

13. TYPE INTERVIEW
Noninterview
Personal
Tel – regular
Tel – callback
ICR filled

## NONINTERVIEW

### TYPE A

14. (Mark reason and race.)

| REASON | RACE OF HEAD |
|---|---|
| No one home | |
| Temporarily absent | White |
| Refused | Negro |
| Other – Occ. (Describe below) | Other |

### TYPE B

15.
Vacant – regular
Vacant – storage of h'hld furniture (Fill 16)
Temp. occ. by persons with URE
Unfit or to be demolished
Under construction, not ready
Converted to temp. business or storage
Occ. by Armed Force members or persons under 14 (Omit 16–17)
Unoccupied tent site or trailer site
Permit granted, construction not started
Other (Specify below)

### TYPE C (Send Inter Comm)

Demolished
House or trailer moved
Outside segment
Converted to permanent business or storage (Omit 16–17)
Merged
Condemned
Built after April 1, 1970
Unused line of listing sheet
Other (Describe below)

### SEASONAL STATUS

16. This unit is intended for occupancy:
Year round (Fill HVS if HU in item 4)
By migratory workers (Fill item 17 below if HU in item 4)
Seasonally

17. Is this unit usually occupied:
Summers only (Transcribe as instructed on back of Control Card.)
Winters only
Other (Describe below)

34. Did you or any other person now living here purchase or receive government food stamps during the past 7 months; that is, from January 1977 through July 1977?
Yes No (Skip to 39)

35. Were they purchased or received in?

| | Yes | No | | Yes | No |
|---|---|---|---|---|---|
| • July? | | | • March? | | |
| • June? | | | • Feb.? | | |
| • May? | | | • Jan.? | | |
| • April? | | | | | |

36. For the month of _____ (most recent month in which the stamps were purchased or received), for how many members of this household were stamps issued?
All

37. How much was paid for the food stamps obtained in _____? (Most recent month in item 35)
$ (Nearest Dollar)
Did not pay
Don't know

38. What was the total value of these stamps?
$ (Nearest Dollar)
Don't know

39. INTERVIEWER CHECK ITEM
Are there household members aged 4–18?
(Control Card items 14C and 18)
Yes (Ask 40)
No (Skip to 45)

40. How many children now living here aged 4–18 were enrolled in elementary or secondary school last school year; that is, from September 1976 to June 1977?
None (Skip to 45)

41. How many of these children ate a complete plate lunch prepared by the school at least twice a week?
All
Some, but not all — Mark number
None (Skip to 44)

42. Did any of these children receive the lunch free or at a reduced price because this household applied and qualified for the Federal Government's School Lunch Program?
Yes
No

43. INTERVIEWER CHECK ITEM
Entry in item 41 is:
All (Skip to 45)
Some, but not all (Ask 44)

44. What was the main reason they (the other children) did not eat a complete plate lunch at school?
School did not offer lunches
Took lunch from home
Ate lunch at home or bought lunch away from school
Other

45. What was the total income from all sources for this family in the month of July? (Show flashcard)

| | | | |
|---|---|---|---|
| A. Under $100 | | G. 600–749 | |
| B. 100–199 | | H. 750–999 | |
| C. 200–299 | | J. 1,000–1,249 | |
| D. 300–399 | | K. 1,250–1,499 | |
| E. 400–499 | | L. 1,500 and over | |
| F. 500–599 | | None | |

TRANSCRIPTION ITEMS Fill items 46 and 47 on "first" CPS-1 for all interviewed households.

46. Household Members 0–13 years old

47. Total Family Income (C.C. item 33)

| | | | |
|---|---|---|---|
| A | E | I | M |
| B | F | J | N |
| C | G | K | |
| D | H | L | |

CODER NUMBER
A B C D E F G H J K L M

**18. LINE NUMBER**

**19. What was . . . doing most of LAST WEEK —**

Working
Keeping house
Going to school
or something else?

| | |
|---|---|
| Working *(Skip to 20A)* | WK |
| With a job but not at work | J |
| Looking for work | LK |
| Keeping house | H |
| Going to school | S |
| Unable to work *(Skip to 24)* | U |
| Retired | R |
| Other *(Specify)* | OT |

**20. Did . . . do any work at all LAST WEEK, not counting work around the house?** *(Note: If farm or business operator in hh., ask about unpaid work)*

Yes — No — *(Go to 21)*

**20A. How many hours did . . . work LAST WEEK at all jobs?**

**20B. INTERVIEWER CHECK ITEM**

49+ — *(Skip to item 23)*
1–34 — *(Go to 20C)*
35–48 — *(Go to 20D)*

**20C. Does . . . USUALLY work 35 hours or more a week at this job?**

Yes — What is the reason . . . worked less than 35 hours LAST WEEK?

No — What is the reason . . . USUALLY works less than 35 hours a week?

*(Mark the appropriate reason)*

- Slack work
- Material shortage
- Plant or machine repair
- New job started during week
- Job terminated during week
- Could find only part-time work
- Holiday (Legal or religious)
- Labor dispute
- Bad weather
- Own illness
- On vacation
- Too busy with housework, school, personal bus., etc.
- Did not want full-time work
- Full-time work week under 35 hours
- Other reason *(Specify)*

*(Skip to 23 and enter job worked at last week)*

**20D. Did . . . lose any time or take any time off LAST WEEK for any reason such as illness, holiday or slack work?**

Yes — How many hours did . . . take off?

*(Correct 20A if lost time not already deducted; if 20A reduced below 35, correct 20B and fill 20C, otherwise, skip to 23.)*

No —

**20E. Did . . . work any overtime or at more than one job LAST WEEK?**

Yes — How many extra hours did . . . work?

*(Correct 20A and 20B as necessary if extra hours not already included and skip to 23.)*

No —

*(Skip to 23)*

**21. *(If J in 19, skip to 21A.)* Did . . . have a job or business from which he was temporarily absent or on layoff LAST WEEK?**

Yes — No — *(Go to 22)*

**21A. Why was . . . absent from work LAST WEEK?**

| | |
|---|---|
| Own illness | |
| On vacation | |
| Bad weather | |
| Labor dispute | |
| New job to begin within 30 days | *(Skip to 22B and 22C)* |
| Temporary layoff *(Under 30 days)* | |
| Indefinite layoff *(30 days or more or no def. recall date)* | *(Skip to 22C)* |
| Other *(Specify)* | |

**21B. Is . . . getting wages or salary for any of the time off LAST WEEK?**

Yes
No
Self-employed

**21C. Does . . . usually work 35 hours or more a week at this job?**

Yes
No

*(Skip to 23 and enter job held last week)*

**22. *(If LK in 19, Skip to 22A.)* Has . . . been looking for work during the past 4 weeks?**

Yes — No — *(Go to 24)*

**22A. What has . . . been doing in the last 4 weeks to find work?** *(Mark all methods used, do not read list.)*

Checked with —

- pub. employ. agency
- pvt. employ. agency
- employer directly
- friends or relatives
- Placed or answered ads
- Nothing *(Skip to 24)*
- Other *(Specify in notes, e.g., CETA, union or prof. register, etc.)*

**22B. Why did . . . start looking for work? Was it because . . . lost or quit a job at that time** *(pause)* **or was there some other reason?**

- Lost job
- Quit job
- Left school
- Wanted temporary work
- Other *(Specify in notes)*

**22C.** 1) How many weeks has . . . been looking for work?

2) How many weeks ago did . . . start looking for work?

3) How many weeks ago was . . . laid off?

**22D. Has . . . been looking for full-time or part-time work?**

Full — Part —

**22E. Is there any reason why . . . could not take a job LAST WEEK?**

Yes — Already has a job; Temporary illness; Going to school; Other *(Specify in notes)*

No —

**22F. When did . . . last work at a full-time job or business lasting 2 consecutive weeks or more?**

Within last 12 months *(Specify)* / Month

- One to five years ago
- More than 5 years ago
- Nev. worked full-time 2 wks. or more
- Never worked at all

*(SKIP to 23. If layoff entered in 21A, enter job, either full or part time, from which laid off. Else enter last full time civilian job lasting 2 weeks or more, or "never worked.")*

**24. INTERVIEWER CHECK ITEM**

Unit in rotation group

*(Mark one circle only)*

1, 3, 4, 5, 7 or 8 *(End questions)*
2 or 6 *(Go to 24A)*

**24A. When did . . . last work for pay at a regular job or business, either full- or part-time?**

| | |
|---|---|
| Within past 12 months | |
| 1 up to 2 years ago | |
| 2 up to 3 years ago | *(Go to 24B)* |
| 3 up to 4 years ago | |
| 4 up to 5 years ago | |
| 5 or more years ago | *(Skip to 24C)* |
| Never worked | |

**24B. Why did . . . leave that job?**

- Personal, family *(incl. pregnancy)* or school
- Health
- Retirement or old age
- Seasonal job completed
- Slack work or business conditions
- Temporary nonseasonal job completed
- Unsatisfactory work arrangements *(Hours, pay, etc.)*
- Other

**24C. Does . . . want a regular job now, either full- or part-time?**

Yes
Maybe — it depends *(Specify in notes)* — *(Go to 24D)*
No — *(Skip to 24E)*
Don't know

**24D. What are the reasons . . . is not looking for work?** *(Mark each reason mentioned)*

- Believes no work available in line of work or area
- Couldn't find any work
- Lacks nec. schooling, training, skills or experience
- Employers think too young or too old
- Other pers. handicap in finding job
- Can't arrange child care
- Family responsibilities
- In school or other training
- Ill health, physical disability
- Other *(Specify in notes)*
- Don't know

**24E. Does . . . intend to look for work of any kind in the next 12 months?**

Yes
It depends *(Specify in notes)*
No
Don't know

*(If entry in 24B, describe job in 23)*

**25. LINE NUMBER**

**26. RELATIONSHIP TO HEAD OF HOUSEHOLD**

- Head with other relatives *(incl. wife)* in h'hld.
- Head with no other relatives in h'hld.
- Wife of head
- Other relative of head
- Non-rel. of head with own rels. *(incl. wife)* in h'hld.
- Nonrelative of head with no own relatives in h'hld

**27. AGE**

**28. MARITAL STATUS**

- Married — civilian spouse present
- Married — Armed Forces spouse present
- Married — spouse absent — *(include separated)*
- Widowed or divorced
- Never married

**29. RACE**

- White
- Negro
- Other

**30. SEX AND VETERAN STATUS**

Male
- Vietnam Era
- Korean War
- World War II
- World War I
- Other Service
- Nonveteran

Female

**31. HIGHEST GRADE ATTENDED**

E H C

**32. GRADE COMPLETED**

Yes
No
None

**33. ORIGIN**

**OFFICE USE ONLY**

| INDUSTRY | | OCCUPATION | |
|---|---|---|---|
| | A | | N |
| | B | | P |
| | C | | Q |
| | D | | R |
| | E | | S |
| | F | | T |
| | G | | U |
| | H | | V |
| | J | | W |
| | K | | X |
| | L | | Y |
| Ref. | M | Ref. | Z |

**23. DESCRIPTION OF JOB OR BUSINESS**

**23A. For whom did . . . work?** *(Name of company, business, organization or other employer.)*

**23B. What kind of business or industry is this?** *(For example: TV and radio mfg., retail shoe store, State Labor Dept., farm.)*

**23C. What kind of work was . . . doing?** *(For example: electrical engineer, stock clerk, typist, farmer.)*

**23D. What were . . . 's most important activities or duties?** *(For example: types, keeps account books, tiles, sells cars, operates printing press, finishes concrete.)*

**23E. Was this person**

- An employee of PRIVATE Co., bus., or individual for wages, salary or comm. — P
- A FEDERAL government employee — F
- A STATE government employee — S
- A LOCAL government employee — L

Self-empl. in OWN bus., prof. practice, or farm

Is the business incorporated? Yes — I; No *(or farm)* — SE

Working WITHOUT PAY in fam. bus. or farm — WP

NEVER WORKED — NEV



U87

ATTACHMENT 8

# Estimation of Sampling Errors for the Current Population Survey - 1977 Food Stamp Recipiency Supplement File

## Table of Contents


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| Reliability of the Estimates | 12 |
| State and SMSA Estimates and Their Reliability | 30 |
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# ESTIMATION OF SAMPLING ERRORS FOR THE CURRENT POPULATION SURVEY - 1977 FOOD STAMP RECIPIENCY SUPPLEMENT FILE

## Foreword

The monthly Current Population Survey (CPS) deals mainly with labor force data for the civilian noninstitutional population. Questions relating to labor force participation are asked every month about each member 14 years old and older in each sample household. In April and August 1977 additional questions were asked covering household participation in the food stamp program.

This appendix describes three methods of estimating sampling errors for data collected in April and August 1977 by the Census Bureau from the CPS and contained in the 1977 Food Stamp Recipiency Supplement Files. The first source is tables of generalized sampling errors of estimated U.S. totals and percentages of selected characteristics. The second source results from computing the standard errors directly and thus utilizes the method by which the generalized standard error tables were derived. The third source is a procedure for directly computing rough approximations to the sampling errors for the larger standard metropolitan statistical areas (SMSA's--integrated economic and social units with a recognized large population nucleus) from the CPS files; confidentiality requirements preclude direct computation of sampling errors for other areas.

A detailed description of the present sample design and the monthly CPS weighting procedure is given to aid in the understanding and utilization of the above three methods. A more complete description of the CPS design and methodology can be found in "The Current Population Survey: Design and Methodology," U.S. Department of Commerce, Bureau of the Census, Technical Paper 40. Also included is a section which discusses the problem of producing State and SMSA tabulations from the CPS. It presents recommended guidelines to follow when producing these tabulations as well as standard errors which are applicable to the resulting estimates.

# CPS SAMPLE DESIGN

## Historical Summary

The sample design of the CPS has had many changes since its inception. The number of strata and the number of housing units designated for the sample have been periodically increased since late in 1943 when the program was taken over by the Census Bureau.

Initially the sample was drawn by sorting the population of the country into 68 strata and selecting one primary sampling unit (PSU) out of each stratum. (A PSU, with some minor exceptions, consists of a county or a number of contiguous counties.) The PSU's were restratified, and sample units were selected from within 230 strata and introduced into the CPS in February 1954. In May 1956 the sample was expanded to 330 areas; it was further expanded to 333 areas in January 1960 after Hawaii and Alaska achieved statehood.

Beginning in March 1963 the sample used was selected from 357 strata comprising 701 counties and independent cities with coverage in each of the 50 States and the District of Columbia. The sample of about 35,000 occupied units selected from these 357 PSU's was referred to as the "A sample." In January 1967 a "C sample," one-half of the A sample in size, was added, bringing the total sample to about 52,500 occupied units. The combination of the A and C sample was spread over 449 different PSU's, 112 of which were self-representing (SR) and 337 nonself-representing (NSR). The basic sampling method used beginning in January 1967 and phased out by February 1973 is the same as that used in the national 461 PSU sample design, so the detailed explanation of A and C samples and SR and NSR PSU selection found in the following section also applies to the 449 PSU design with only the numerical levels having changed.

## National Design as of March 1973

The sample design used for the CPS is based to a large extent on the distribution of the population reported in the most recent decennial census. Consequently, the CPS sample was revised to take account of the results of the 1970 Census, with the changes taking place between December 1971 and February 1973. Therefore, some parts of the following description of the new design apply to only a portion of the sample during the transition period.

Since March 1973 the A/C sample has been located in 376 strata comprising 923 counties and independent cities, with coverage in every State and the District of Columbia. The A sample is spread over 376 sample PSU's and the C sample over 266 sample PSU's. Either sample alone is a national probability sample available for surveys where the designated households in the combined A and C samples are more than desired.

Of the 376 strata within which the A sample is selected, 156 consist of a single PSU which is necessarily in sample. The sample PSU's from these strata are called self-representing (SR) and are generally made up of the larger SMSA's. The other 220 strata of the A sample contain more than one PSU each; the sample PSU's from these strata are called nonself-representing (NSR) since the sample PSU also represents other PSU's in the same stratum. Each of these 220 NSR strata contains an A-sample PSU which has been selected with probability proportionate to the 1970 census population of the PSU.

The PSU's forming the C sample were selected as follows. The 220 NSR strata were grouped into 110 pairs. From each pair of the strata one stratum was picked at random, each stratum having equal probability of selection. From the selected stratum one additional PSU was chosen for the C sample with probability proportionate to the 1970 census population of the PSU. The selection was made independent of the selection of the original A sample PSU in the stratum; as a result, in 25 strata the C sample PSU's chosen were the same as the A sample PSU's, and in 85 strata the sample PSU's were different. Within each of the sample PSU's a sample of housing units was designated such that the overall probability of selection was one-half that used for the A sample. In addition, a C sample at half the A sample rate was designated in each of the 156 SR PSU's. The combined A and C sample is spread over 461 different PSU's, 156 of which are SR and the balance NSR.

Two stages of sampling are used in selecting the units to be enumerated within each of the 461 PSU's. The first stage is the selection of a sample of census enumeration districts (ED's). These are administrative units designated in the 1970 Census and contain, on the average, about 300 households. ED's are selected systematically from a geographically arranged listing, so that the sample ED's are spread over the entire PSU. The probability of selection of any one ED is proportionate to its 1970 population. The next stage is to select a cluster of approximately four contiguous housing units to be enumerated within each designated ED.

This design results in approximately 47,000 occupied housing units being eligible for interview each month. Of this number, 2,000 occupied units on the average are visited but interviews are not obtained because the occupants are not found at home after repeated calls or are unavailable for some other reason. In addition to the 47,000 occupied housing units, there are about 8,000 sample units in an average month which are

visted but are found to be vacant or otherwise not eligible for interview.

State Expansion

Beginning in March 1977, data for the CPS supplements are based on a sample designed to produce a reliable annual average estimate of unemployment for each State. This sample was created by adding additional housing units to the national sample in 24 States and the District of Columbia (these areas did not meet the reliability requirement) and thus is called the expanded sample. Each national sample PSU in a State is also in sample for the State and represents the portion of its national stratum within the State. Portions of national strata in a State which were sufficiently large were subdivided. PSU's from national strata and subdivided national strata not represented by sample PSU's in that State were regrouped into strata within the State, and one PSU was then selected to represent each new "State-stratum" with probability proportionate to the 1970 census PSU population. This process resulted in 153 new sample PSU's designated for the CPS sample each month. Sample housing units were selected within the new sample PSU's using the same procedures as for the national A/C sample.

The expanded CPS sample is located in 614 areas comprising 1,113 counties, independent cities, and divisions with coverage in every State and the District of Columbia. Approximately 65,500 housing units are assigned for interview each month; about 56,000 of them are occupied by households eligible for interview. The remaining units are found to be vacant, converted to nonresidential use, contain persons with residence elsewhere, or otherwise are not eligible for interview. Of the occupied units eligible for enumeration, interviews are not obtained at about 2,500 in a given month because the residents are not found at home after repeated calls, are temporarily absent, refuse to be interviewed, or are unavailable for other reasons.

As a result of the expansion, the States that previously did not meet the reliability requirement attained a relative reliability about equal to that of the least reliable unsupplemented State. However, at the national level there was generally no significant increase in reliability for most characteristics since sample design and estimation variably affect the standard errors.

Rotation of the CPS Sample

Each month one-eighth of the households in a CPS sample is replaced by an equivalent set of units in sample for the first time. Each of the subsamples of one-eighth is called a "rotation group." This rotation scheme for CPS has the following features:

1. Each rotation group is included in CPS for 4 months, excluded (rested) for 8 months, and returned for an additional 4 months, after which it is permanently retired from the CPS. Thus, one entirely new rotation group and one rotation group which has been at rest for 8 months are introduced into the survey each month.

2. The expanded CPS sample consists of a systematic sample of roughly 17,000 clusters (segments), each of about 4 housing units. The complete list of sample segments has been systematically divided into eight rotation groups. When the segments in a given rotation group are retired from the sample, they are replaced by an equivalent number of new segments, each of which is made up of housing units chosen to be geographically adjacent to the units in the retired segment.

3. For any month, the sample units in any six of the eight rotation groups were also in the survey the previous month (i.e., there is a 75 percent month-to-month overlap of the sample). This feature improves the reliability of estimated month-to-month change over what would be produced by an equivalent number of independent units, especially for those characteristics having a high correlation over time.

4. For any month, four of the eight rotation groups were also in the survey the same month one year ago (i.e., there is a 50 percent year-to-year overlap in the sample). This improves estimates of year-to-year change.

5. Each rotation group constitutes an one-eighth systematic subsample of the full monthly sample. This permits the use of a single or combination of rotation groups as national samples of smaller sizes.

Rotation of PSU's

The CPS provides that, in a given decade, a housing unit once interviewed its quota of eight times is not eligible for further assignment to another CPS sample. All SR and most NSR PSU's are large enough to provide the required number of sample housing units needed until the next review of the design. In some cases, however, sample PSU's will be exhausted before a new redesign, and a new PSU must be introduced to provide the necessary housing units for the sample. The introduction of such new PSU's is accomplished in an ordered system which combines small PSU's together and rotates the sample among the combination so that an unbiased sample is always possible.

# WEIGHTING OF THE SUPPLEMENT FILE

## I. Basic CPS Weighting

Since the CPS is a probability sample, simple unbiased estimates could be prepared by multiplying the sample counts by the reciprocal of the sampling fraction (base weight). However, the reliability of the sample estimates is increased by making use of available auxiliary data and performing additional weighting as discussed below. For this reason and the fact that the sampling fraction is not the same for all segments of the population, unweighted sample counts should not be used in the analysis of data from the Supplement File, even though most statistical analyses, regression and multivariate analysis, for example, are generally presented in the literature only for the simple random sample (unweighted) case.

### A. Two Special Base Weight Adjustments

1. As mentioned in the above section, Rotation of the CPS Sample, the average number of housing units in a sample segment is about four. Sometimes a segment will contain an unusually large number of units, however, and subsampling will be required to keep the interviewer workload manageable. A special weight is applied to the base weight for such units to adjust for this subsampling.

2. Some housing units in a PSU were missed in the 1970 Census but were identified by the census supplemental sample. Such units are sometimes selected for the CPS with lower probabilities in order to save money. Their base weights must then be adjusted to account for the reduced probability of selection.

### B. Noninterview Adjustment

In a given month's sample there are a few sample units (typically totaling about 4 percent of the units eligible for interview) at which the CPS interviewer is unable to obtain a response because no one is at home, the respondent refuses to cooperate, or for some other reason. The base weights assigned to the units for which a response was obtained are adjusted to account for these cases. The procedure used to make this adjustment is as follows:

1. Noninterview clusters, each a group of PSU's, have been defined within each State. These clusters do not cross State lines and are designated either SMSA (Standard Metropolitan Statistical Area) or non-SMSA.

2. For each of these 113 noninterview clusters, cross-tabulated by four pairs of rotation groups, the number of interviewed households and noninterviewed households is tabulated separately into one of the following race-residence categories:

| For Non-SMSA Clusters | For SMSA Clusters |
|---|---|
| Urban-White | Central City-White |
| Urban-Nonwhite | Central City-Nonwhite |
| Rural-Nonfarm-White | Balance-Urban-White |
| Rural-Nonfarm-Nonwhite | Balance-Urban-Nonwhite |
| Rural-Farm-White | Balance-Rural-White |
| Rural-Farm-Nonwhite | Balance-Rural-Nonwhite |

3. For each of the six categories in each cluster, the ratio:

$$\frac{\text{Interviewed households + noninterviewed households}}{\text{Interviewed households}}$$

is computed.

4. These ratios are applied to the base weights of all persons in interviewed households in the corresponding categories, except when the ratio equals or exceeds two or fewer than 30 sample households are in a category. In such cases, provision is made for the combination of the categories in a specified order before the ratio is applied to the data for the interviewed household.

C. Ratio Estimation

The distribution of the population selected for the sample may differ somewhat, by chance, from that of the nation as a whole in such basic characteristics as race, sex, farm-nonfarm residence, and age. These particular population characteristics are closely correlated with labor force participation and other primary measurements made from the sample. Some of the sample measurements are improved substantially when, by appropriate weighting of the sample returns, the population in the sample is brought into agreement with the known distribution of the entire population with respect to these characteristics. This weighting is accomplished through the following two stages of ratio estimation:

1. First Stage Ratio Estimate

The purpose of the first-stage ratio estimate is to reduce the contribution to the variance arising from the sampling of PSU's--i.e., to reduce the variance that would still be associated with estimates even if the survey each month included all households in every sample PSU.

The first-stage ratios are calculated independently by State, are based on 1970 census data, and are applied only to the sample data for the NSR PSU's.

For the NSR PSU's in each State, a ratio is computed for each of 12 race-residence categories (the same categories as used in the noninterview adjustments) as follows:

$$\frac{\text{1970 census population in the race-residence category for all NSR Strata in the State}}{\text{Estimate of this population based on the 1970 census population for sample PSU's in the State.}}$$

2. Second-Stage Ratio Estimate

The second-stage ratio estimate adjusts the sample estimates of population made from the CPS (the estimates employ all the stages of adjustment discussed above) to independently derived current estimates of the U.S. population for each of 68 age-sex-race groups. These independent estimates are prepared each month by carrying forward data from the 1970 census, taking account of subsequent aging of the population, current figures for mortality, births, and migration between the U.S. and other countries. The CPS sample returns, after application of the base weight and noninterview adjustments and first-stage ratios, are actually used to determine the percentage distribution of the population within each age-sex-race group for the characteristics of interest. Totals are obtained by applying the CPS estimated percentages to the independently obtained control totals for the appropriate age-sex-race group.

Since March 1968 the second-stage factors have been computed in two phases. Each phase is carried out for each of the eight rotation groups separately.

In the first phase, factors are computed for persons of Black and other races only. Factors are computed for 34 age-sex categories for Blacks and 14 age-sex categories for other races. The numerator of each factor is the independently derived estimate, and the denominator is the CPS sample estimate resulting from all the adjustments mentioned above. The factors are then applied to the weights for persons of Black and other races after application of first-stage and noninterview factors. The categories in this phase are as follows:

Blacks, by sex, separately for ages:

| | | | |
|---|---|---|---|
| 14-15 | 22-24 | 40-44 | 60-61 |
| 16-17 | 25-29 | 45-49 | 62-64 |
| 18-19 | 30-34 | 50-54 | 65-69 |
| 20-21 | 35-39 | 55-59 | 70-74 |
| | | | 75 and over |

Other races, by sex, separately for ages:

| | | | |
|---|---|---|---|
| 14-17 | 25-34 | 45-54 | 65 and over |
| 18-24 | 35-44 | 55-64 | |

In the second phase, 68 age-sex-race factors are computed to cover the entire population. The groupings used in this phase are total population by sex, race (White, Nonwhite), separately for the same 17 age groupings as used for Blacks in the first phase. The numerator and denominator of each factor are defined as for the first phase, except estimates of Black and other races for the denominator include the first phase adjustment.

The results of all of the above mentioned adjustments are applied to the base weight, and the final result of these computations is placed on the record for each person in the sample (labeled WEIGHT).

D. Composite Estimates

Composite estimates are regularly derived from data tabulated routinely from the monthly CPS but not from data gathered occasionally from supplements. The composite estimate for a given item as estimated from the monthly CPS is a weighted average of two estimates for the current month. The first of these two estimates is the result of all the adjustments described above. The second estimate consists of the composite estimate for the preceding month to which has been added an estimate of the change from the preceding month to the present month based on the six rotation groups common to the two months. The composite estimate differs from the estimator previously described in that the weights assigned to the CPS sample records are not affected; the composite estimator operates on estimated totals.

# RELIABILITY OF THE ESTIMATES

Since the data contained in the Supplement File are based on a sample, they may differ somewhat from figures that would have been obtained if a complete census had been taken using the same questionnaires, instructions and enumerators. There are two types of errors possible in an estimate based on a sample survey - sampling and nonsampling. The standard errors provided in this appendix primarily 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 full extent of nonsampling error is unknown. Consequently, particular care should be exercised in the interpretation of figures based on a relatively small number of cases or on small differences between estimates.

## I. Nonsampling Variability

As in any survey work, the results are subject to errors of response and nonreporting in addition to sampling 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 to provide correct information on the part of respondents, inability to recall information, errors made in collection such as in recording or coding the data, errors made in processing the data, errors made in estimating values for missing data, and failure to represent all units with the sample (undercoverage).

Undercoverage in the CPS results from missed housing units and missed persons within sample households. Overall undercoverage, as compared to the level of the decennial census, is about 5 percent. It is known that CPS undercoverage varies with age, sex, and race. Generally, undercoverage is greater for males than for females and larger for Blacks and other races than for Whites. Ratio estimation to independent age-sex-race population controls, as described previously, partially corrects for the bias due to survey undercoverage. However, biases exist in the estimates to the extent that missed persons in missed households or missed persons in interviewed households have different characteristics than interviewed persons in the same age-sex-race group. Further, the independent population controls used have not been adjusted for undercoverage in the 1970 census, which was estimated at 2.5 percent of the population with similar undercoverage differentials by age, sex, and race as is observed in CPS.

The approximate magnitude of two sources of undercoverage of housing units is known. Of the 83,000,000 housing units in the U.S., about 600,000 new construction housing units other than mobile homes are not represented in the CPS sample because they were assigned building permits prior to the 1970 census, but building was not completed by the time of the census, (i.e., April 1970). Conventional new construction, for which building permits were issued after 1969, is represented. About 290,000 occupied mobile homes are not represented in CPS; these units were either missed in the census or have been built or occupied since the census. These estimates of missed units are relevant to the present sample only and not to earlier designs where the extent of undercoverage was generally less. The extent of other sources of undercoverage of housing units is unknown, but believed to be small.

Use of Metropolitan and Nonmetropolitan Data

In using metropolitan and nonmetropolitan data, particular care should be exercised in comparing estimates from 1977 and later years to each other and to those from earlier years. Methodological and sample design changes have occurred in these recent years resulting in relatively large differences between years in the metropolitan and non-metropolitan area estimates.

## II. Sampling Variability

Estimating sampling errors for a survey such as CPS, which employs complex estimation procedures, is a complicated undertaking. An analytical statement of the variance of the CPS can be expressed as the sum of several variance components - one for each stage of sampling in the CPS. Thus, a variance component is associated with each of the following:

1. The selection of one of the strata in each pair of NSR strata formed in the selection of the C-sample (the "between stratum" component).

2. The selection of a sample of PSU's out of each NSR stratum (the "between PSU" component).

3. The selection and interview of only a sample (rather than all) of the housing units within each sample PSU (the "within PSU" component).

4. The choice of the interviewer and the respondent (the "respondent-interviewer" component).

In addition, the variance of the CPS also involves the effect of each of the estimation steps, which were introduced with the intention of reducing the variance of the CPS estimates. The following generalizations about the variance components usually apply.

1. The within-PSU component is a very large variance component.

2. The between-PSU component arises from the sampling of PSU's, i.e., the variance that would still be associated with the estimates even if a complete census of all households in every sample PSU could be included in the survey. The first-stage ratio estimate is intended to reduce the magnitude of this component.

3. The respondent-interviewer component does not directly result from the sampling itself, but rather from the actual interviewing process of the survey. Because of the variance estimation procedure used at the Census Bureau, these components are included in the between-PSU and between-strata variance estimates for NSR strata but are not included in the variance estimates for SR PSU's.

## III. Variance Estimation Method

The variance estimation method currently used for CPS is based on a proposal by Keyfitz[1] which has been more recently generalized by Tepping[2] and Woodruff.[3] Keyfitz showed that consistent estimates of the variance for complex ratio estimates are provided by relatively simple quadratic functions of the observations in each stratum. Strictly speaking, the method applies only when two primary units are selected from each stratum; however, useful approximations can be obtained for other sample designs by grouping or subdividing strata as required.

This method is not used to calculate the variance for each CPS estimate; instead, the variances of a subset of characteristics are calculated using this procedure, and generalized standard error tables are then obtained by use of the curve-fitting procedure described below. The major reasons for employing the curve-fitting approach are: first, curve-fitting is a form of averaging sampling errors for items having similar variance behavior and therefore, induces an added dimension of stability; i.e., estimated sampling errors are themselves sample statistics and thus subject to sampling errors of their own, and curve fitting reduces this variance. Secondly, there are time and money savings realized if a generalized variance curve based on computation from a few statistics can be made applicable to a large number of items.

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1 Keyfitz, Nathan, "Estimates of Sampling Variance Where Two Units are Selected for Each Stratum." Journal of the American Statistical Association. 52:503-51. (1957).

2 Tepping, Benjamin J. "Variance Estimation in Complex Surveys," Proceedings of the Social Statistics Section, American Statistical Association, 1968:11-18

3 Woodruff, Ralph S., "A Simple Method for Approximating the Variance of a Complicated Estimate." Journal of the American Statistical Association. 66:411-414 (1971).

As a result, the sets of standard errors provided give an indication of the order of magnitude of the standard error of an estimate rather than the precise standard error.

The Curve-Fitting Procedure

In curve-fitting it is assumed that the variance of an estimate is a function of the proportion of the sample having the desired characteristic, and that this is the only factor affecting the magnitude of the variances. All other variation in the variance estimates not explained by this factor is assumed to be the result of the lack of reliability of the estimates.

A curve of the form $V_x^2 = a + \frac{b}{x}$ is fitted to a set of k estimates, $x_i$, and their estimated relvariances, $V_{x_i}^2$, these relvariances having been calculated by the Keyfitz-Tepping method at the Census Bureau. This procedure minimizes the sum of squared differences between the observed relvariances, $V_{x_i}^2$, and the predicted relvariances, $a + \frac{b}{x_i}$, divided by the predicted relvariance; i.e., the quantity

$$\sum_{i=1}^{k} \left[ \frac{V_{x_i}^2 - a - \frac{b}{x_i}}{a + \frac{b}{x_i}} \right]^2 \qquad (1)$$

is minimized. Since the values of a and b are not known before minimization, an iterative method is necessary. Thus, we begin by minimizing the quantity:

$$\sum_{i=1}^{k} \left[ \frac{V_{x_i}^2 - a_1 - \frac{b_1}{x_i}}{V_{x_i}^2} \right]^2 \qquad (2)$$

This minimization is produced by differentiating (2) with respect to $a_1$ and equating to zero, differentiating (2) with respect to $b_1$ and equating to zero, and solving these two equations simultaneously for $a_1$ and $b_1$. The second approximation is obtained by differentiating the quantity,

$$\sum_{i=1}^{k} \left[ \frac{V_{x_i}^2 - a_2 - \frac{b_2}{x_1}}{a_1 + \frac{b_1}{x_i}} \right]^2 \qquad (3)$$

with respect to $a_2$ and $b_2$, equating to zero, and solving these two equations simultaneously for $a_2$ and $b_2$. The process continues by substituting the computed values of $a_2$ and $b_2$ for $a_1$ and $b_1$ in (3) and solving for $a_3$ and $b_3$. This iterative process is carried out until $a_{i+1}$ and $b_{i+1}$ do not differ materially from $a_i$ and $b_i$. (Ten iterations are usually carried out). With this final curve a table of generalized standard errors may be derived by multiplying the relvariance obtained from the curve by the estimate squared and then taking the square root of this number. Two computer programs to produce the "a" and "b" parameters using the iterative procedure are available from the Census Bureau upon request. One program is written in FORTRAN and the other is in OMNITAB.

In addition to the curve of the form, $V_x^2 = a + \frac{b}{x}$, curves of the form $V_x^2 = -\frac{b}{T_x} + \frac{b}{x}$ and, less frequently, of the form $V_x^2 = \frac{a}{T_x} + \frac{b}{x}$ have been fitted, where $T_x$ is the control total for the sum of the age-race-sex cells[4/] over which the characteristic x is defined; thus, $x_i$ is less than $T_x$ for all i. These models assume that, in addition to the size of the estimate, the control total affects the magnitude of the variance. Use of control totals in curve fitting can result in a better fit than the usual model when fitting items are defined over different age-race-sex cells. It has been observed that items that are large proportions of their respective control totals have relatively smaller variances than items of the same size which represent smaller proportions of control totals.

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4/ See section on Weighting of the Supplement File, part I.C.2., Second-Stage Ratio Estimate, for more details on the use of control totals in the weighting procedure.

When the model $V_x^2 = a + \frac{b}{X}$ is fitted under the contraint $x_i < T_x$ for all i and $V_{T_x}^2 = 0$, an iterative procedure is not needed.

Now a and b can be calculated easily using a hand calculator and the following formulas:

$$b = \frac{T_x \sum_{i=1}^{k} \left[ \frac{V_{x_i}^2}{\frac{T_x}{x_i} - 1} \right]^2}{\sum_{i=1}^{k} \frac{V_{x_i}^2}{\frac{T_x}{x_i} - 1}} \qquad (4)$$

and

$$a = -\frac{b}{T_x} \qquad (5)$$

If the user has computed variances directly from CPS sample records for items from a common subject matter area, as described in the section, "Direct Computation of Standard Errors for SMSA's," then he can fit a curve to produce generalized standard error tables using one of the two methods shown above. A FORTRAN program is also available upon request from the Census Bureau for the direct computation of variances.[5/]

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5/ Woodruff, Ralph S. and Causey, Beverly D. "Computerized Method for Approximating the Variance of a Complicated Estimate." Journal of the American Statistical Association 71 (June 1976): 315-321.

Standard Error Tables

The figures presented in the tables at the end of the appendix are approximations to the standard errors of various estimates from the Supplement File, but only for the national sample. They were calculated using the iterative curve-fitting procedure described above. These standard errors reflect the CPS first- and second-stage ratio estimates but not the composite estimator. The effect of the composite estimate is omitted since the user cannot reproduce composite estimates from the purchased CPS tape. The magnitude of the sampling error for the expanded sample has not been fully measured, but the standard errors are not expected to differ from those for the national sample by more than 5 percent for most characteristics.

The sampling errors provided in the appendix are considered to be close approximations for data produced from the Supplement File. They are primarily measures of sampling variability, that is, of the variations that occurred by chance because a sample rather than the entire population was surveyed. The sample estimate and its estimated 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 surveyed under essentially the same general conditions and using the same sample design, and an estimate and its estimated 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.

Tables I.A. and II.A show standard errors of estimated totals, and tables I.B.1 through I.B.9 and tables II.B.1 through II.B.5 show standard errors of estimated percentages for different subjects appearing in the Supplement File as shown in the index. Estimated standard errors of percentages cannot be obtained from tables I.B.1 through I.B.9 or II.B.1 through II.B.5 without using the factors in table III. These factors must be applied to the generalized standard errors in order to adjust for the combined effect of sample design and estimation on the value of the characteristic. Standard errors for intermediate values not shown in the tables may be obtained by linear interpolation.

When calculating standard errors for totals from cross-tabulations involving different characteristics, use the standard error table or set of parameters which will give the largest standard error. For example, if a standard error is desired for the number of Black unemployed high school graduates, then the standard error table or parameters for educational attainment would be used.

The reliability of an estimated percentage computed by using sample data for both numerator and denominator depends upon both the size of the percentage and size of the total upon which the percentage is based. Estimated percentages are relatively more reliable than the corresponding estimates of the numerator of the percentage, particularly if the percentage is 50 percent or more. When the numerator and denominator of the percentage are in different categories, use the factor or parameters indicated by the numerator.

Illustration of the Use of Standard Error Tables

Suppose that the sample shows there were 8,419,000 persons aged 20 to 24 years who had completed 4 years of high school and no more. Interpolation in table I.A. shows the standard error for an estimate of this size to be approximately 126,000. The 68 percent confidence interval as shown by these data is from 8,293,000 to 8,545,000 (8,419,000 $\pm$ 126,000). 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 68 percent of all possible samples. Similarly, we would conclude that the average estimate derived from all possible samples lies within the interval from 8,167,000 to 8,671,000 (using twice the standard error) with 95 percent confidence.

Suppose, of the 8,419,000 high school graduates, 1,014,000 or 12.0 percent were Black. The standard error on a percentage is found by using the formula

$$\sigma_{(x,p)} = f\sigma \qquad (6)$$

where f is the appropriate factor from table III and $\sigma$ is the generalized standard error found by interpolation. For our example, the correct factor from table III is 1.16; linear interpolation in table I.B.1 shows the standard error on 12.0 percent with a base of 8,419,000 to be approximately 0.5. Therefore, the correct standard error is approximately 1.16 x 0.5 = 0.6 percentage points. Consequently, the 68 percent confidence interval is from 11.4 to 12.6 percent, and a conclusion that the average estimate derived from all possible samples lies within a range computed in this way would be correct for roughly 68 percent of all possible samples. Similarly, we could conclude that the average estimate derived from all possible samples lies within the interval from 10.8 to 13.2 (using twice the standard error) with 95 percent confidence.

Estimation of Standard Errors Using Parameters

Each of the standard error tables I.A. through II.B.5 were produced from curves that had been fitted to the relvariance estimates for these items (see section, The Curve-Fitting Procedure, above). The a and b parameters given in table IV resulted from this fitting process. The standard errors in tables I.A. and II.A were computed using these parameters and the following formula:

$$\sigma_x = \sqrt{ax^2 + bx} \qquad (7)$$

where x is the estimate of the characteristic and a and b are the parameters associated with this characteristic. The standard errors in tables I.B.1 through I.B.9 and II.B.1 through II.B.5 were calculated using formula (8):

$$\sigma_{(y,p)} = \sqrt{\frac{b}{y} p\ (100 - p)} \qquad (8)$$

where y is the base of the percentage, p is the percentage ($0 \leq p \leq 100$), and b is the parameter in table IV associated with the particular type of characteristic in the numerator of the percentage. Use of the parameters in table IV and formulas (7) and (8) will result in more accurate estimates of standard errors than use of the generalized standard error tables.

Using formula (7) for the example from the section, Illustration of the Use of Standard Error Tables, with a = -0.000016 and b = 2064, the standard error on the 8,419,000 high school graduates aged 20 to 24 years is approximately

$$127{,}000 \doteq \sqrt{-0.000016\ (8{,}419{,}000)^2 + 2064\ (8{,}419{,}000)}.$$

Using formula (8) for the same example with b = 2792, the standard error on the 12.0 percent of high school graduates aged 20 to 24 who were Black is found to be approximately

$$0.6 \doteq \sqrt{\frac{2792}{8{,}419{,}000}\ (12)\ (100 - 12)}.$$

Standard Error of a Difference

For a difference between two sample estimates, the standard error is approximately equal to

$$\sigma_{(x-y)} = \sqrt{\sigma_x^2 + \sigma_y^2} \qquad (9)$$

where $\sigma_x$ and $\sigma_y$ are the standard errors of the estimates x and y; the estimates can be of numbers, percents, ratios, etc. This will represent the actual standard error quite accurately for the difference between two estimates of the same characteristic in two different areas, or for the difference between separate and uncorrelated characteristics in the same area. If, however, there is a high positive (negative) correlation between the two characteristics, the formula will overestimate (underestimate) the true standard error.

For example, suppose the sample shows that 8,228,000 persons aged 25 to 29 years had completed four years of high school and no more. Thus, the apparent difference between 20 to 24 and 25 to 29 years old is 8,419,000-8,228,000 or 191,000 persons. The standard error on 8,419,000 was previously shown in the section "Illustration on the Use of Standard Error Tables" to be approximately 126,000 persons. From interpolation in table I.A., the standard error on 8,228,000 is found to be approximately 125,000 persons. Then the standard error on the difference of 191,000 is

$$177{,}000 \doteq \sqrt{125{,}000^2 + 126{,}000^2}$$

This means the 68 percent confidence interval for the difference is from 14,000 to 368,000. Therefore, a conclusion that the average estimated difference, derived from all possible samples, lies within the range computed in this manner would be correct for 68 percent of all samples. Similarly, the 95 percent confidence interval for the difference is from - 163,000 to 545,000 (using twice the standard error). But since this confidence interval does not exclude negative values, we can not conclude with 95 percent confidence that there is a difference between the number of persons aged 20 to 24 and the number 25 to 29 years who had completed 4 years of high school and no more.

Standard Error of an Arithmetic Mean

The standard error of an arithmetic mean can be approximated by formula (10) below. Because of the approximations used in developing formula (10), an estimate of the standard error of the mean obtained from that formula will generally underestimate the true standard error. The formula used to estimate the standard error of a mean is

$$\sigma_{\bar{x}} = \sqrt{\frac{b}{y} s^2} \qquad (10)$$

where y is the size of the base and b is the parameter from table IV corresponding to the characteristic of interest. The variance, $s^2$, is given by formula (11)

$$s^2 = \sum_{i=1}^{c} p_i \bar{x}_i^2 - \bar{x}^2 \qquad (11)$$

where $\bar{x}$ is the mean of the distribution;

c is the number of groups defined in the distribution;

i indicates a specific group, thus taking on values 1 through c;

$P_i$ is the estimated proportion of families or persons whose value for the characteristic (x - values) being considered falls in group i;

$\bar{x}_i = (Z_{i-1} + Z_i)/2$ where $Z_{i-1}$ and $Z_i$ are the lower and upper interval boundaries, respectively, for group i.

$\bar{x}_i$ is assumed to be the most representative value for the characteristic of interest for persons or families in group i. Group i=c usually is open-ended, i.e., no upper interval boundary exists. For this group an approximate average value can be estimated as

$$\bar{x}_c = \frac{3}{2} Z_{c-1}$$

Illustration of the Computation of the Standard Error of an Arithmetic Mean

Suppose that the estimated mean income of families and unrelated individuals is $15,000. The following table gives the hypothetical distribution of the income groups.

| | Families and Unrelated Individuals | |
|---|---|---|
| | Number (thousands) | Percent Distribution |
| Total | 78,171 | 100.0 |
| Under $2,000 | 3,774 | 4.8 |
| $2,000 to $2,999 | 4,251 | 5.4 |
| $3,000 to $3,999 | 4,302 | 5.5 |
| $4,000 to $4,999 | 3,662 | 4.7 |
| $5,000 to $5,999 | 3,776 | 4.8 |
| $6,000 to $6,999 | 3,548 | 4.5 |
| $7,000 to $7,999 | 3,371 | 4.3 |
| $8,000 to $8,999 | 3,382 | 4.3 |
| $9,000 to $9,999 | 3,074 | 3.9 |
| $10,000 to $10,999 | 3,334 | 4.3 |
| $11,000 to $11,999 | 2,848 | 3.6 |
| $12,000 to $12,999 | 3,003 | 3.8 |
| $13,000 to $13,999 | 2,745 | 3.5 |
| $14,000 to $14,999 | 2,659 | 3.4 |
| $15,000 to $15,999 | 2,902 | 3.7 |
| $16,000 to $16,999 | 2,436 | 3.1 |
| $17,000 to $17,999 | 2,501 | 3.2 |
| $18,000 to $19,999 | 4,271 | 5.5 |
| $20,000 to $24,999 | 7,785 | 10.0 |
| $25,000 to $49,999 | 9,378 | 12.0 |
| $50,000 and over | 1,169 | 1.5 |

$b = 1063$ $\quad c = 21$ $\quad y = 78,171,000$

$$s^2 = \sum_{i=1}^{21} P_i \bar{x}_i^2 - \bar{x}^2 \doteq 169,110,000$$

Therefore, $\sigma_{\bar{x}} = \sqrt{\frac{1063}{78,171,000}(169,110,000)} \doteq 48$

Consequently, the 68 percent confidence interval for the mean income is from 14,952 to 15,048. A conclusion that the average estimated mean income derived from all possible samples lies within a range computed in this way would be correct for roughly 68 percent of all possible samples. Similarly, we could conclude that the average estimated mean income derived from all possible samples lies within the interval from 14,904 to 15,096 (using twice the standard error) with 95 percent confidence.

Standard Error of a Median

The sampling variability of an estimated median depends upon the form of the distribution as well as the size of its base. An approximate method for measuring the reliability of a median is to determine an interval about the estimated median, such that there is a stated degree of confidence that the median based on all possible samples lies within the interval. The following procedure may be used to estimate the 68-percent confidence limits of a median based on sample data.

(1) Determine, using the standard error tables and factors or formula (8), the standard error of the estimate of 50 percent from the distribution.

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

(3) Using the distribution of the characteristic, calculate the confidence interval corresponding to the two points established in step (2).

A 95-percent confidence interval may be determined by finding the values corresponding to 50 percent plus and minus twice the standard error determined in step (1).

For calculation of a confidence interval in step (3), use linear interpolation for all characteristics except income. For income intervals greater than $1,000 in width, better estimates of median income and associated standard errors can be calculated by using Pareto interpolation than by using linear interpolation. Pareto interpolation assumes a decreasing density of population within an income interval, whereas linear interpolation assumes a constant density of population within an income interval. However, linear interpolation can be used to obtain approximate estimates. For any point in an income interval of $1,000 or less in width use linear interpolation. The formulas for Pareto and linear interpolation are:

$$\text{Pareto:}\quad X_{pN} = A_1 \exp\left[\ln\left(\frac{qN}{N_1}\right) \ln\left(\frac{A_2}{A_1}\right) \Big/ \ln\left(\frac{N_2}{N_1}\right)\right] \qquad (12)$$

$$\text{Linear: } X_{pN} = \frac{N_1 - qN}{N_1 - N_2} (A_2 - A_1) + A_1 \qquad (13)$$

where N = total number of families or persons in the distribution.

pN = the number of families or persons in the distribution corresponding to the percentage of interest ($0 < p < 1$). To calculate the confidence interval, p takes on the two values in step (2). Note that the median can be obtained by using p = 0.50 in the formulas.

$q = 1 - p$

$A_1$, $A_2$ = the lower and upper bound, respectively, of the income interval in which the cumulative value of the distribution falls when that value equals qN.

$N_1$, $N_2$ = the estimated number of families or persons with incomes greater than $A_1$ and $A_2$, respectively.

$X_{pN}$ = estimated income for which pN number of families or persons in the distribution have that income or a larger income.

exp refers to the exponential function.

ln refers to the natural logarithm function.

It should be noted that a mathematically equivalent result is obtained by using common logarithms (base 10) and antilogs.

Illustration of the Computation of a Confidence Interval for a Median Using Linear Interpolation

Suppose that the median income of families whose head is age 65 years or over is estimated to be $8,721. Suppose also that the base of the distribution from which this median was determined is 8,141,000.

(1) Using formula (8), the standard error of 50 percent on a base of 8,141,000 is about 0.6 percent.

(2) To obtain a 95-percent confidence interval on the estimated median, add to and subtract from 50 percent twice the standard error found in step 1. This yields percent limits of 48.8 and 51.2.

(3) Suppose that the income of 4,466,000 (or 54.9 percent) of these families is at least $8,000 and the income of 3,916,000 (or 48.1 percent) of these families is at least $9,000. The entire 95-percent confidence interval falls in the income interval $8,000 to $9,000. Therefore, the upper and lower limits on the confidence interval are to be calculated using linear interpolation. Using formula (13), the lower limit on the estimate is found to be about

$$\frac{4,466,000 - (0.512)(8,141,000)}{4,466,000 - 3,916,000} (9,000 - 8,000) + 8,000 = \$8,541$$

Similarly, the upper limit is found by linear interpolation to be about

$$\frac{4,466,000 - (0.488)(8,141,000)}{4,466,000 - 3,916,000} (9,000 - 8,000) + 8,000 = \$8,897.$$

Thus, the 95-percent confidence interval for the median income is from $8,541 to $8,897. A conclusion that the average estimated median lies within this range would be correct for roughly 95 percent of all possible samples.

Illustration of the Computation of a Confidence Interval for a Median Using Pareto Interpolation

Suppose that the median income for families whose head is age 45 to 54 was estimated to be $19,037. Suppose also that the base of the distribution from which this median was determined is 11,170,000 families.

(1) Using formula (8), the standard error of 50 percent on a base of 11,170,000 is about 0.5 percent.

(2) To obtain a 95-percent confidence interval on an estimated median, add to and subtract from 50 percent twice the standard error found in step (1). This yields percent limits of 49.0 and 51.0.

(3) Suppose that the income of 6,057,000 (54.2 percent) of these families was at least $18,000 and the income of 5,199,000 (46.5 percent) of these families was at least $20,000. The entire 95-percent confidence interval falls in the income interval $18,000 to $20,000. Therefore the upper and lower limits on the confidence interval are to be calculated using Pareto interpolation. Thus, using formula (12), the lower limit on the estimate is found to be about

$$18,000 \exp \left[ \ln \left(\frac{0.510 \times 11,170,000}{6,057,000}\right) \ln \left(\frac{20,000}{18,000}\right) / \ln \left(\frac{5,199,000}{6,057,000}\right) \right]$$

$$= \$18,778.$$

Similarly, the upper limit may be found by Pareto interpolation to be about

$$18{,}000 \exp \left[ \ln \left( \frac{0.490 \times 11{,}170{,}000}{6{,}057{,}000} \right) \ln \left( \frac{20{,}000}{18{,}000} \right) / \ln \left( \frac{5{,}199{,}000}{6{,}057{,}000} \right) \right]$$

$$= \$19{,}303.$$

Thus, the 95-percent confidence interval for the median income is from $18,778 to $19,303. A conclusion that the average estimated median lies within this range would be correct for roughly 95 percent of all possible samples.

Reliability of Regression and Other Estimates

The calculation of standard errors for regression and other estimates has not been done. Such calculations could be performed for specific estimates using a jackknife or replication method. However, the generalization of these standard errors for various types of characteristics is hard to do.

# STATE AND SMSA ESTIMATES AND THEIR RELIABILITY

## Estimates for States and SMSA's

Estimates for States, combinations of States, and SMSA's may be made by tallying the weights for records identified with the area. The reliability of estimates of totals prepared in this way may be improved by introducing an additional stage of ratio estimation. This process requires an independent estimate of the total civilian noninstitutional population of the tabulation area in question. The additional estimation stage will improve estimates of levels, but it will not affect the reliability of estimates of proportions. For each tabulation area, the following ratio should be computed:

$$\frac{\text{Independent estimate of the total civilian noninstitutional population for the area}}{\text{CPS estimate of the total civilian noninstitutional population for the area}}$$

The independent estimate of the total civilian noninstitutional population for each State, the District of Columbia, and some SMSA's are available on request from the Population Division of the Bureau of the Census. The CPS estimate of the total civilian noninstitutional population for each subordinate area can be computed from the CPS records on the Supplement File. For each area, the sum of the existing weights on the records for the persons in the area should be used as the CPS estimate of total population for that area. The additional stage of ratio estimation is applied by multiplying the existing weight on each record in the area by the appropriate ratio for that area, and the revised weights should then be used when tabulating the records in that area. Alternatively, the estimated totals produced using the existing weights may be adjusted by applying this factor.

## Reliability of the Estimates

Introduction of the expanded sample caused reductions in the relative sampling error associated with estimates for the least reliable States; however, the relative reliability for these States is no higher than that of the least reliable unsupplemented State. National estimates will have the lowest relative sampling errors of any of the area tabulations made from the CPS records. There are two major reasons for this, and care should be exercised lest these considerations combine to produce meaningless results for small areas.

First, the national sample was designed with the primary objective of maximizing the reliability of national and regional estimates; the reliability of subordinate areas was not considered as an ingredient of the design. In addition, the sample was expanded dependent on the national sample. As a consequence of this ordering of priorities, NSR strata in States unsupplemented for the expanded sample are often comprised of PSU's from more than one State (although all NSR PSU's in a stratum are from the same region). Although the first-stage ratio estimation procedure adjusts for this situation and the resulting estimates are unbiased when considered over all possible samples of PSU's, a substantial component of sampling error is introduced for unsupplemented States, especially when the State has a large proportion of its population in NSR strata.

Secondly, the reliability of a sample estimate is a function of the number of sample cases employed in creating the estimate; as the number of sample cases decreases, the reliability of the estimates will deteriorate. The reliability problem is further aggravated for estimates involving detailed cross-tabulations of the sample cases within an area.

Standard Errors for States and SMSA's

Standard errors for States, selected groups of States, and SMSA's may be obtained from the generalized standard error tables by applying an additional factor to these figures. These factors do not reflect the increase in reliability that would be obtained by the additional stage of ratio estimation as discussed in the above section, Estimates for States and SMSA's. Table V shows factors by which the standard errors in tables I.A. and II.A. should be multiplied for estimates of levels for States and SMSA's; for percents, these factors should be used in conjunction with the factors in table III and the standard errors in tables I.B.1 through I.B.9 or II.B.1 through II.B.5. To obtain a and b parameters as in table IV for such areas, multiply the national a and b parameters from table IV by the square of the factor in table V for the area of interest.

As an example, suppose the sample shows that there were 1,040,000 persons of Spanish origin living in New York, 32.4 percent of whom had completed four years of high school or more. Interpolation in table I.B.1 shows the standard error on 32.4 percent to be approximately 2.07. Applying the appropriate factor for education from table III, the approximate standard error is 2.07 x 1.37 = 2.84. The appropriate factor for New York from table V is 1.09. Thus, the standard error on the 32.4 percent of persons of Spanish origin who completed four years of high school or more is approximately equal to 3.1 = 2.84 x 1.09.

The factor for a group of States may be obtained by computing a weighted sum of the factors for the individual States comprising the group; depending on the combination of States, the resulting figure can be an overestimate. The factor for a group of n States is given by

$$f = \sum_{i=1}^{n} \omega_i f_i$$

where $f_i$ is the factor for State i obtained from table V and $\omega_i$ is the State's weight calculated from the following formula:

$$\omega_i = \frac{\text{1970 census population of State i}}{\sum_{j=1}^{n} \text{1970 census population of State j}}$$

The 1970 census population for each State is given in table V.

Suppose a factor for the State group Illinois-Wisconsin-Michigan was desired. The correct weights would be

$$\text{Illinois:} \quad 0.46 = \frac{11,113,976}{11,113,976 + 4,417,731 + 8,875,083}$$

$$\text{Wisconsin:} \quad 0.18 = \frac{4,417,731}{11,113,976 + 4,417,731 + 8,875,083}$$

$$\text{Michigan:} \quad 0.36 = \frac{8,875,083}{11,113,976 + 4,417,731 + 8,875,083}$$

and the resulting factor would be

$$f = (0.46)(1.10) + (0.18)(1.13) + (0.36)(1.10) = 1.11$$

Direct Computation of Standard Errors for SMSA's

Rough approximations to standard errors for the larger SMSA's can be calculated directly from the CPS Supplement File. The procedure is based on the assumption of equally weighted sample values. Thus, it generally cannot be used to calculate standard errors for other areas, such as a balance-of-state or a State, since either nonself-representing sample exists which represents an area outside the State or the sample values are not equally weighted. The procedure estimates the variance between clusters of households within the SMSA of interest.

The file can be used to calculate standard errors for household or person characteristics. The following information must be obtained from the records for both cases (refer to the Data Base Dictionary):

1. SMSA rank, beginning in character 21 and of length 2.

2. "Cluster number," consisting of 4 digits and located in a 12-character code, IDENT-NUM, which begins in character 4. The twelfth character in the code corresponds to the first digit of the cluster number, the fourth to the second, the eighth to the third, and the fifth to the fourth.

3. For person characteristics, obtain the person's weight, WEIGHT, beginning in character 126 and 7 characters in length.

4. For household characteristics, obtain the weight for the principal person (character 111 = 1). The weight is in character 126 and is 7 characters in length.

Calculate standard errors in the following manner:

1. Identify the records for all households or persons in the SMSA of interest.

2. Sort these records by cluster number.

3. Create a file of cluster totals by tallying the weights for all households or persons having the characteristic of interest within each cluster.

4. The standard error, $\sigma$, of an estimated total, x, for the characteristic of interest is then given by the formula:

$$\sigma = \sqrt{m \sum_{i=1}^{m-1} (x_i - x_{i+1})^2 / 2\,(m-1)} \qquad (14)$$

where

$m$ = number of clusters in the SMSA

$x_i$ = weighted total for cluster i, i=1,2, ..., m

$$x = \sum_{i=1}^{m} x_i$$

5. The standard error of an estimated percentage, $\sigma_p$, where $p = \frac{x}{y}$, is given by the following formula:

$$\sigma_p = p\sqrt{\frac{\sigma_x^2}{x^2} + \frac{\sigma_y^2}{y^2}}$$

Here $x = \sum_{i=1}^{m} x_i$ and $y = \sum_{i=1}^{m} y_i$ are estimated totals; the characteristic in the numerator of the percentage is a subset of the characteristic in the denominator; $\sigma_x$ and $\sigma_y$ are calculated using formula (14).

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Table II.A. For the following characteristics by Total or White, Black and Other Races, and Spanish Origin:

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2. Income or Poverty or Food Stamps
3. Marital Status, Household and Family Characteristics
4. U.S. Population Distribution by Age and/or Sex
5. State, Region, or SMSA-Non-SMSA Residence
6. Unemployment

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(68 chances out of 100)

| Characteristic | Size of Estimate (in thousands) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 25 | 50 | 100 | 250 | 500 | 1,000 | 2,500 | 5,000 | 10,000 | 25,000 | 50,000 | 100,000 |
| Educational Attainment[1] | | | | | | | | | | | | |
| Total or White | 7 | 10 | 14 | 23 | 32 | 45 | 71 | 100 | 138 | 204 | 251 | 215 |
| Black and Other Races | 8 | 12 | 17 | 26 | 37 | 51 | 76 | 96 | 97 | -- | -- | -- |
| Spanish Origin | 10 | 14 | 20 | 31 | 44 | 62 | 97 | 136 | 190 | -- | -- | -- |
| Employment[1] | | | | | | | | | | | | |
| Total or White | 7 | 10 | 14 | 23 | 32 | 45 | 71 | 100 | 138 | 205 | 253 | 219 |
| Black and Other Races | 7 | 10 | 14 | 23 | 32 | 44 | 66 | 84 | 86 | -- | -- | -- |
| Spanish Origin | 10 | 15 | 21 | 33 | 47 | 66 | 104 | 146 | 202 | -- | -- | -- |
| Persons Tabulated by Family Income[1] | | | | | | | | | | | | |
| Total or White | 9 | 12 | 18 | 28 | 39 | 55 | 87 | 122 | 171 | 261 | 344 | 408 |
| Black and Other Races | 8 | 12 | 17 | 26 | 37 | 52 | 79 | 106 | 132 | -- | -- | -- |
| Spanish Origin | 14 | 19 | 27 | 43 | 61 | 86 | 136 | 191 | 267 | -- | -- | -- |
| Income[1] | | | | | | | | | | | | |
| Total or White | 6 | 9 | 12 | 20 | 28 | 39 | 62 | 87 | 121 | 184 | 243 | 289 |
| Black and Other Races | 6 | 8 | 12 | 19 | 26 | 37 | 56 | 75 | 93 | -- | -- | -- |
| Spanish Origin | 10 | 14 | 19 | 31 | 43 | 61 | 96 | 135 | 189 | -- | -- | -- |
| Marital Status, Household and Family Characteristics[1] | | | | | | | | | | | | |
| Total or White | 9 | 13 | 19 | 30 | 42 | 59 | 93 | 131 | 182 | 277 | 364 | 424 |
| Black and Other Races | 11 | 16 | 22 | 35 | 50 | 69 | 106 | 141 | 171 | -- | -- | -- |
| Spanish Origin | 14 | 19 | 27 | 43 | 61 | 86 | 136 | 190 | 265 | -- | -- | -- |
| U.S. Population Distribution by Age and/or Sex | | | | | | | | | | | | |
| Total or White | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Black and Other Races | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spanish Origin | 19 | 27 | 39 | 61 | 87 | 122 | 193 | 271 | 378 | -- | -- | -- |
| Poverty[1] | | | | | | | | | | | | |
| Total or White | 12 | 18 | 25 | 39 | 55 | 78 | 123 | 173 | 242 | 367 | 481 | 560 |
| Black and Other Races | 12 | 17 | 24 | 37 | 52 | 73 | 112 | 150 | 186 | -- | -- | -- |
| Spanish Origin | 19 | 27 | 39 | 61 | 87 | 122 | 193 | 271 | 278 | -- | -- | -- |
| State, Region, or SMSA-non-SMSA Residence[2] | | | | | | | | | | | | |
| Total or White | 10 | 15 | 21 | 33 | 46 | 65 | 103 | 144 | 201 | 306 | 403 | 475 |
| Black and Other Races | 14 | 19 | 27 | 43 | 60 | 84 | 129 | 171 | 208 | -- | -- | -- |
| Spanish Origin | 19 | 27 | 39 | 61 | 87 | 122 | 193 | 271 | 378 | -- | -- | -- |
| Unemployment[1] | | | | | | | | | | | | |
| Total or White | 7 | 10 | 14 | 22 | 31 | 44 | 70 | 97 | 135 | 200 | 247 | 217 |
| Black and Other Races | 8 | 11 | 15 | 24 | 33 | 46 | 69 | 89 | 94 | -- | -- | -- |
| Spanish Origin | 7 | 10 | 14 | 22 | 30 | 43 | 68 | 95 | 132 | -- | -- | -- |

[1] Multiply standard errors by 1.41 when national, regional, or State data for this characteristic is tabulated by SMSA-non-SMSA, central city-balance, etc.

[2] Also, central city-balance, etc.

Table I.B.1 Standard Errors of Estimated Percentages for Persons Educational Attainment[1]

(68 chances out of 100)

| Base of Percentage (thousands) | Estimated Percentage | | | | | |
|---|---|---|---|---|---|---|
| | 1 or 99 | 2 or 98 | 5 or 95 | 10 or 90 | 25 or 75 | 50 |
| 25 | 2.9 | 4.0 | 6.3 | 8.6 | 12.4 | 14.4 |
| 50 | 2.0 | 2.8 | 4.4 | 6.1 | 8.8 | 10.2 |
| 100 | 1.4 | 2.0 | 3.1 | 4.3 | 6.2 | 7.2 |
| 250 | 0.9 | 1.3 | 2.0 | 2.7 | 3.9 | 4.5 |
| 500 | 0.6 | 0.9 | 1.4 | 1.9 | 2.8 | 3.2 |
| 1,000 | 0.5 | 0.6 | 1.0 | 1.4 | 2.0 | 2.3 |
| 2,500 | 0.3 | 0.4 | 0.6 | 0.9 | 1.2 | 1.4 |
| 5,000 | 0.2 | 0.3 | 0.4 | 0.6 | 0.9 | 1.0 |
| 10,000 | 0.14 | 0.2 | 0.3 | 0.4 | 0.6 | 0.7 |
| 25,000 | 0.09 | 0.13 | 0.2 | 0.3 | 0.4 | 0.5 |
| 50,000 | 0.06 | 0.09 | 0.14 | 0.2 | 0.3 | 0.3 |
| 100,000 | 0.05 | 0.06 | 0.10 | 0.14 | 0.2 | 0.2 |

[1] Multiply standard errors by 1.41 when national, regional, or State data for this characteristic is tabulated by SMSA-non-SMSA, central city-balance, etc.

Table I.B.2 Standard Errors of Estimated Percentages for Persons Employment[1]

(68 chances out of 100)

| Base of Percentage (thousands) | Estimated Percentage | | | | | |
|---|---|---|---|---|---|---|
| | 1 or 99 | 2 or 98 | 5 or 95 | 10 or 90 | 25 or 75 | 50 |
| 25 | 2.9 | 4.0 | 6.3 | 8.6 | 12.5 | 14.4 |
| 50 | 2.0 | 2.9 | 4.4 | 6.1 | 8.8 | 10.2 |
| 100 | 1.4 | 2.0 | 3.1 | 4.3 | 6.2 | 7.2 |
| 250 | 0.9 | 1.3 | 2.0 | 2.7 | 3.9 | 4.6 |
| 500 | 0.6 | 0.9 | 1.4 | 1.9 | 2.8 | 3.2 |
| 1,000 | 0.5 | 0.6 | 1.0 | 1.4 | 2.0 | 2.3 |
| 2,500 | 0.3 | 0.4 | 0.6 | 0.9 | 1.2 | 1.4 |
| 5,000 | 0.2 | 0.3 | 0.4 | 0.6 | 0.9 | 1.0 |
| 10,000 | 0.14 | 0.2 | 0.3 | 0.4 | 0.6 | 0.7 |
| 25,000 | 0.09 | 0.13 | 0.2 | 0.3 | 0.4 | 0.5 |
| 50,000 | 0.06 | 0.09 | 0.14 | 0.2 | 0.3 | 0.3 |
| 75,000 | 0.05 | 0.07 | 0.12 | 0.2 | 0.2 | 0.3 |

[1] Multiply standard errors by 1.41 when national, regional, or State data for this characteristic is tabulated by SMSA-non-SMSA, central city-balance, etc.

Table I.B.3 Standard Errors of Estimated Percentages for Persons Persons Tabulated by Family Income[1]

(68 chances out of 100)

| Base of Percentage (thousands) | Estimated Percentage | | | | | |
|---|---|---|---|---|---|---|
| | 1 or 99 | 2 or 98 | 5 or 95 | 10 or 90 | 25 or 75 | 50 |
| 25 | 3.5 | 4.9 | 7.6 | 10.5 | 15.2 | 17.5 |
| 50 | 2.5 | 3.5 | 5.5 | 7.4 | 10.7 | 12.4 |
| 100 | 1.7 | 2.5 | 3.8 | 5.3 | 7.6 | 8.8 |
| 250 | 1.1 | 1.5 | 2.4 | 3.3 | 4.8 | 5.5 |
| 500 | 0.8 | 1.1 | 1.7 | 2.3 | 3.4 | 3.9 |
| 1,000 | 0.6 | 0.8 | 1.2 | 1.7 | 2.4 | 2.8 |
| 2,500 | 0.3 | 0.5 | 0.8 | 1.1 | 1.5 | 1.8 |
| 5,000 | 0.2 | 0.3 | 0.5 | 0.7 | 1.1 | 1.2 |
| 10,000 | 0.2 | 0.2 | 0.4 | 0.5 | 0.8 | 0.9 |
| 25,000 | 0.08 | 0.11 | 0.2 | 0.2 | 0.3 | 0.4 |
| 50,000 | 0.06 | 0.09 | 0.14 | 0.2 | 0.3 | 0.3 |
| 75,000 | 0.06 | 0.08 | 0.12 | 0.2 | 0.2 | 0.3 |

[1] Multiply standard errors by 1.41 when national, regional, or State data for this characteristic is tabulated by SMSA-non-SMSA, central city-balance, etc.

Table I.B.4 Standard Errors of Estimated Percentages for Persons Income[1]

(68 chances out of 100)

| Base of Percentage (thousands) | Estimated Percentage | | | | | |
|---|---|---|---|---|---|---|
| | 1 or 99 | 2 or 98 | 5 or 95 | 10 or 90 | .25 or 75 | 50 |
| 25 | 2.5 | 3.5 | 5.4 | 7.4 | 10.7 | 12.4 |
| 50 | 1.7 | 2.5 | 3.8 | 5.3 | 7.6 | 8.8 |
| 100 | 1.2 | 1.7 | 2.7 | 3.7 | 5.4 | 6.2 |
| 250 | 0.8 | 1.1 | 1.7 | 2.3 | 3.4 | 3.9 |
| 500 | 0.6 | 0.8 | 1.2 | 1.7 | 2.4 | 2.8 |
| 1,000 | 0.4 | 0.5 | 0.9 | 1.2 | 1.7 | 2.0 |
| 2,500 | 0.2 | 0.3 | 0.5 | 0.7 | 1.1 | 1.2 |
| 5,000 | 0.2 | 0.2 | 0.4 | 0.5 | 0.8 | 0.9 |
| 10,000 | 0.12 | 0.2 | 0.3 | 0.4 | 0.5 | 0.6 |
| 25,000 | 0.08 | 0.11 | 0.2 | 0.2 | 0.3 | 0.4 |
| 50,000 | 0.06 | 0.08 | 0.12 | 0.2 | 0.2 | 0.3 |
| 75,000 | 0.05 | 0.06 | 0.10 | 0.14 | 0.2 | 0.2 |

[1] Multiply standard errors by 1.41 when national, regional, or State data for this characteristic is tabulated by SMSA-non-SMSA, central city-balance, etc.

Table I.B.5 Standard Errors of Estimated Percentages for Persons, Marital Status, Household and Family Characteristics[1]

(68 chances out of 100)

| Base of Percentage (thousands) | Estimated Percentage | | | | | |
|---|---|---|---|---|---|---|
| | 1 or 99 | 2 or 98 | 5 or 95 | 10 or 90 | 25 or 75 | 50 |
| 25 | 3.7 | 5.2 | 8.2 | 11.2 | 16.2 | 18.7 |
| 50 | 2.6 | 3.7 | 5.8 | 7.9 | 11.5 | 13.2 |
| 100 | 1.9 | 2.6 | 4.1 | 5.6 | 8.1 | 9.4 |
| 250 | 1.2 | 1.7 | 2.6 | 3.6 | 5.1 | 5.9 |
| 500 | 0.8 | 1.2 | 1.8 | 2.5 | 3.6 | 4.2 |
| 1,000 | 0.6 | 0.8 | 1.3 | 1.8 | 2.6 | 3.0 |
| 2,500 | 0.4 | 0.5 | 0.8 | 1.1 | 1.6 | 1.9 |
| 5,000 | 0.3 | 0.4 | 0.6 | 0.8 | 1.1 | 1.3 |
| 10,000 | 0.2 | 0.3 | 0.4 | 0.6 | 0.8 | 0.9 |
| 25,000 | 0.12 | 0.2 | 0.3 | 0.4 | 0.5 | 0.6 |
| 50,000 | 0.08 | 0.12 | 0.2 | 0.3 | 0.4 | 0.4 |
| 100,000 | 0.06 | 0.08 | 0.13 | 0.2 | 0.3 | 0.3 |

[1] Multiply standard errors by 1.41 when national, regional, or State data for this characteristic is tabulated by SMSA-non-SMSA, central city-balance, etc.

Table I.B.6 Standard Errors of Estimated Percentages for Persons U.S. Population Distribution by Age and/or Sex

(68 chances out of 100)

| Base of Percentage (thousands) | Estimated Percentage | | | | | |
|---|---|---|---|---|---|---|
| | 1 or 99 | 2 or 98 | 5 or 95 | 10 or 90 | 25 or 75 | 50 |
| 25 | 7.7 | 10.9 | 16.9 | 23.3 | 33.6 | 38.8 |
| 50 | 5.5 | 7.7 | 11.9 | 16.4 | 23.7 | 27.4 |
| 100 | 3.9 | 5.4 | 8.4 | 11.6 | 16.8 | 19.4 |
| 250 | 2.4 | 3.4 | 5.3 | 7.4 | 10.6 | 12.3 |
| 500 | 1.7 | 2.4 | 3.8 | 5.2 | 7.5 | 8.7 |
| 1,000 | 1.2 | 1.7 | 2.7 | 3.7 | 5.3 | 6.1 |
| 2,500 | 0.8 | 1.1 | 1.7 | 2.3 | 3.4 | 3.9 |
| 5,000 | 0.5 | 0.8 | 1.2 | 1.6 | 2.4 | 2.7 |
| 10,000 | 0.4 | 0.5 | 0.8 | 1.2 | 1.7 | 1.9 |
| 25,000 | 0.2 | 0.3 | 0.5 | 0.7 | 1.1 | 1.2 |
| 50,000 | 0.2 | 0.2 | 0.4 | 0.5 | 0.8 | 0.9 |

Table I.B.7 Standard Errors of Estimated Percentages for Persons Poverty[1]

(68 chances out of 100)

| Base of Percentage (thousands) | Estimated Percentage | | | | | |
|---|---|---|---|---|---|---|
| | 1 or 99 | 2 or 98 | 5 or 95 | 10 or 90 | 25 or 75 | 50 |
| 25 | 5.0 | 7.0 | 10.8 | 14.9 | 21.4 | 24.8 |
| 50 | 3.5 | 4.9 | 7.6 | 10.5 | 15.2 | 17.5 |
| 100 | 2.5 | 3.5 | 5.4 | 7.4 | 10.7 | 12.4 |
| 250 | 1.6 | 2.2 | 3.4 | 4.7 | 6.8 | 7.8 |
| 500 | 1.1 | 1.6 | 2.4 | 3.3 | 4.8 | 5.5 |
| 1,000 | 0.8 | 1.1 | 1.7 | 2.4 | 3.4 | 3.9 |
| 2,500 | 0.5 | 0.7 | 1.1 | 1.5 | 2.1 | 2.5 |
| 5,000 | 0.3 | 0.5 | 0.8 | 1.1 | 1.5 | 1.8 |
| 10,000 | 0.2 | 0.3 | 0.5 | 0.7 | 1.1 | 1.2 |
| 25,000 | 0.2 | 0.2 | 0.3 | 0.5 | 0.7 | 0.8 |
| 50,000 | 0.11 | 0.2 | 0.2 | 0.3 | 0.5 | 0.6 |

[1] Multiply standard errors by 1.41 when national, regional, or State data for this characteristic is tabulated by SMSA-non-SMSA, central city-balance, etc.

Table I.B.8 Standard Errors of Estimated Percentages for Persons State, Region, or SMSA-Non-SMSA Residence[1]

(68 chances out of 100)

| Base of Percentage (thousands) | Estimated Percentage | | | | | |
|---|---|---|---|---|---|---|
| | 1 or 99 | 2 or 98 | 5 or 95 | 10 or 90 | 25 or 75 | 50 |
| 25 | 4.1 | 5.8 | 9.0 | 12.4 | 17.9 | 20.6 |
| 50 | 2.9 | 4.1 | 6.4 | 8.8 | 12.6 | 14.6 |
| 100 | 2.1 | 2.9 | 4.5 | 6.2 | 8.9 | 10.3 |
| 250 | 1.3 | 1.8 | 2.8 | 3.9 | 5.6 | 6.5 |
| 500 | 0.9 | 1.3 | 2.0 | 2.8 | 4.0 | 4.6 |
| 1,000 | 0.6 | 0.9 | 1.4 | 2.0 | 2.8 | 3.3 |
| 2,500 | 0.4 | 0.6 | 0.9 | 1.2 | 1.8 | 2.1 |
| 5,000 | 0.3 | 0.4 | 0.6 | 0.9 | 1.3 | 1.5 |
| 10,000 | 0.2 | 0.3 | 0.4 | 0.6 | 0.9 | 1.0 |
| 25,000 | 0.13 | 0.2 | 0.3 | 0.4 | 0.6 | 0.7 |
| 50,000 | 0.09 | 0.13 | 0.2 | 0.3 | 0.4 | 0.5 |
| 100,000 | 0.07 | 0.10 | 0.14 | 0.2 | 0.3 | 0.3 |

[1] Also, central city-balance, etc.

Table I.B.9 Standard Errors of Estimated Percentages for Persons Unemployment[1]

(68 chances out of 100)

| Base of Percentage (thousands) | Estimated Percentage | | | | | |
|---|---|---|---|---|---|---|
| | 1 or 99 | 2 or 98 | 5 or 95 | 10 or 90 | 25 or 75 | 50 |
| 25 | 2.8 | 3.9 | 6.1 | 8.4 | 12.2 | 14.0 |
| 50 | 2.0 | 2.8 | 4.3 | 6.0 | 8.6 | 9.9 |
| 100 | 1.4 | 2.0 | 3.1 | 4.2 | 6.1 | 7.0 |
| 250 | 0.9 | 1.2 | 1.9 | 2.7 | 3.8 | 4.4 |
| 500 | 0.6 | 0.9 | 1.4 | 1.9 | 2.7 | 3.1 |
| 1,000 | 0.4 | 0.6 | 1.0 | 1.3 | 1.9 | 2.2 |
| 2,500 | 0.3 | 0.4 | 0.6 | 0.8 | 1.2 | 1.4 |
| 5,000 | 0.2 | 0.3 | 0.4 | 0.6 | 0.9 | 1.0 |
| 10,000 | 0.14 | 0.2 | 0.3 | 0.4 | 0.6 | 0.7 |
| 25,000 | 0.09 | 0.12 | 0.2 | 0.3 | 0.4 | 0.4 |
| 50,000 | 0.06 | 0.09 | 0.14 | 0.2 | 0.3 | 0.3 |
| 100,000 | 0.04 | 0.06 | 0.10 | 0.13 | 0.2 | 0.2 |

[1] Multiply standard errors by 1.41 when national, regional, or State data for this characteristic is tabulated by SMSA-non-SMSA, central city-balance, etc.

Table II.A Standard Errors of Estimated Number of Families or Households for Selected Characteristics

(68 chances out of 100)

| Characteristic | Size of Estimate (in thousands) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 25 | 50 | 100 | 250 | 500 | 1,000 | 2,500 | 5,000 | 10,000 | 25,000 | 50,000 |
| Employment[1] | | | | | | | | | | | |
| Total or White | 7 | 9 | 13 | 21 | 30 | 42 | 66 | 91 | 124 | 171 | 166 |
| Black and Other Races | 7 | 9 | 13 | 21 | 29 | 40 | 56 | 59 | -- | -- | -- |
| Spanish Origin | 9 | 13 | 18 | 28 | 39 | 56 | 87 | 121 | -- | -- | -- |
| Income, Poverty, Food Stamps[1] | | | | | | | | | | | |
| Total or White | 5 | 7 | 10 | 16 | 23 | 32 | 51 | 72 | 99 | 147 | 182 |
| Black and Other Races | 5 | 7 | 10 | 15 | 21 | 29 | 44 | 55 | 53 | -- | -- |
| Spanish Origin | 8 | 11 | 15 | 24 | 35 | 49 | 76 | 106 | 144 | -- | -- |
| Marital Status, Household and Family Characteristics[1] | | | | | | | | | | | |
| Total or White | 6 | 8 | 12 | 19 | 26 | 37 | 58 | 82 | 114 | 169 | 211 |
| Black and Other Races | 6 | 8 | 11 | 18 | 25 | 34 | 51 | 64 | 62 | -- | -- |
| Spanish Origin | 8 | 11 | 15 | 24 | 35 | 49 | 76 | 106 | 144 | -- | -- |
| U.S. Population Distribution by Age and/or Sex | | | | | | | | | | | |
| Total or White | 6 | 8 | 12 | 19 | 26 | 37 | 58 | 82 | 114 | 169 | 211 |
| Black and Other Races | 6 | 8 | 11 | 18 | 25 | 34 | 51 | 64 | 62 | -- | -- |
| Spanish Origin | 8 | 11 | 15 | 24 | 35 | 49 | 76 | 106 | 144 | -- | -- |
| State, Region, or SMSA-non-SMSA Residence[2] | | | | | | | | | | | |
| Total or White | 7 | 10 | 15 | 23 | 33 | 46 | 73 | 102 | 142 | 210 | 262 |
| Black and Other Races | 8 | 11 | 16 | 25 | 35 | 49 | 73 | 91 | 88 | -- | -- |
| Spanish Origin | 11 | 15 | 22 | 35 | 49 | 69 | 108 | 149 | 203 | -- | -- |
| Unemployment[1] | | | | | | | | | | | |
| Total or White | 7 | 10 | 14 | 22 | 31 | 44 | 70 | 97 | 135 | 200 | 247 |
| Black and Other Races | 8 | 11 | 15 | 24 | 33 | 46 | 69 | 89 | 94 | -- | -- |
| Spanish Origin | 7 | 10 | 14 | 22 | 30 | 43 | 68 | 95 | 132 | -- | -- |

[1] Multiply standard errors by 1.41 when national, regional, or State data for this characteristic is tabulated by SMSA-non-SMSA, central city-balance, etc.

[2] Also, central city-balance, etc.

Table II.B.1 Standard Errors of Estimated Percentages for Families or Households Employment[1]

(68 chances out of 100)

| Base of Percentage (thousands) | Estimated Percentage | | | | | |
|---|---|---|---|---|---|---|
| | 1 or 99 | 2 or 98 | 5 or 95 | 10 or 90 | 25 or 75 | 50 |
| 25 | 2.7 | 3.8 | 5.8 | 8.0 | 11.6 | 13.4 |
| 50 | 1.9 | 2.7 | 4.1 | 5.7 | 8.2 | 9.5 |
| 100 | 1.3 | 1.9 | 2.9 | 4.0 | 5.8 | 6.7 |
| 250 | 0.8 | 1.2 | 1.8 | 2.5 | 3.7 | 4.2 |
| 500 | 0.6 | 0.8 | 1.3 | 1.8 | 2.6 | 3.0 |
| 1,000 | 0.4 | 0.6 | 0.9 | 1.3 | 1.8 | 2.1 |
| 2,500 | 0.3 | 0.4 | 0.6 | 0.8 | 1.2 | 1.3 |
| 5,000 | 0.2 | 0.3 | 0.4 | 0.6 | 0.8 | 0.9 |
| 10,000 | 0.13 | 0.2 | 0.3 | 0.4 | 0.6 | 0.7 |
| 25,000 | 0.08 | 0.12 | 0.2 | 0.3 | 0.4 | 0.4 |
| 50,000 | 0.06 | 0.08 | 0.13 | 0.2 | 0.3 | 0.3 |

[1] Multiply standard errors by 1.41 when national, regional, or State data for this characteristic is tabulated by SMSA-non-SMSA, central city-balance, etc.

Table II.B.2 Standard Errors of Estimated Percentages for Families or Households Income or Poverty or Food Stamps[1]

(68 chances out of 100)

| Base of Percentage (thousands) | Estimated Percentage | | | | | |
|---|---|---|---|---|---|---|
| | 1 or 99 | 2 or 98 | 5 or 95 | 10 or 90 | 25 or 75 | 50 |
| 25 | 2.1 | 2.9 | 4.5 | 6.2 | 8.9 | 10.3 |
| 50 | 1.5 | 2.0 | 3.2 | 4.4 | 6.3 | 7.3 |
| 100 | 1.0 | 1.4 | 2.2 | 3.1 | 4.5 | 5.2 |
| 250 | 0.6 | 0.9 | 1.4 | 2.0 | 2.8 | 3.3 |
| 500 | 0.5 | 0.6 | 1.0 | 1.4 | 2.0 | 2.3 |
| 1,000 | 0.3 | 0.5 | 0.7 | 1.0 | 1.4 | 1.6 |
| 2,500 | 0.2 | 0.3 | 0.4 | 0.6 | 0.9 | 1.0 |
| 5,000 | 0.15 | 0.2 | 0.3 | 0.4 | 0.6 | 0.7 |
| 10,000 | 0.10 | 0.14 | 0.2 | 0.3 | 0.4 | 0.5 |
| 25,000 | 0.07 | 0.09 | 0.14 | 0.2 | 0.3 | 0.3 |
| 50,000 | 0.05 | 0.07 | 0.10 | 0.14 | 0.2 | 0.2 |

[1] Multiply standard errors by 1.41 when national, regional, or State data for this characteristic is tabulated by SMSA-non-SMSA, central city-balance, etc.

Table II.B.3 Standard Errors of Estimated Percentages for Families or Households
Marital Status, Household and Family Characteristics, and U.S. Population Distribution by Age and/or Sex[1]

(68 chances out of 100)

| Base of Percentage (thousands) | Estimated Percentage | | | | | |
|---|---|---|---|---|---|---|
| | 1 or 99 | 2 or 98 | 5 or 95 | 10 or 90 | 25 or 75 | 50 |
| 25 | 2.3 | 3.3 | 5.1 | 7.1 | 10.2 | 11.8 |
| 50 | 1.7 | 2.3 | 3.6 | 5.0 | 7.2 | 8.3 |
| 100 | 1.2 | 1.7 | 2.6 | 3.5 | 5.1 | 5.9 |
| 250 | 0.7 | 1.0 | 1.6 | 2.2 | 3.2 | 3.7 |
| 500 | 0.5 | 0.7 | 1.1 | 1.6 | 2.3 | 2.6 |
| 1,000 | 0.4 | 0.5 | 0.8 | 1.1 | 1.6 | 1.9 |
| 2,500 | 0.2 | 0.3 | 0.5 | 0.7 | 1.0 | 1.2 |
| 5,000 | 0.2 | 0.2 | 0.4 | 0.5 | 0.7 | 0.8 |
| 10,000 | 0.12 | 0.2 | 0.3 | 0.4 | 0.5 | 0.6 |
| 25,000 | 0.07 | 0.10 | 0.2 | 0.2 | 0.3 | 0.4 |
| 50,000 | 0.05 | 0.07 | 0.12 | 0.2 | 0.2 | 0.3 |

[1] Multiply standard errors by 1.41 when national, regional, or State data for these characteristics are tabulated by SMSA-non-SMSA, central city-balance, etc.

Table II.B.4 Standard Errors of Estimated Percentages for Families or Households State, Region, or SMSA-Non-SMSA Residence[1]

(68 chances out of 100)

| Base of Percentage (thousands) | Estimated Percentage | | | | | |
|---|---|---|---|---|---|---|
| | 1 or 99 | 2 or 98 | 5 or 95 | 10 or 90 | 25 or 75 | 50 |
| 25 | 2.9 | 4.1 | 6.4 | 8.8 | 12.8 | 14.7 |
| 50 | 2.1 | 2.9 | 4.5 | 6.2 | 9.0 | 10.4 |
| 100 | 1.5 | 2.1 | 3.2 | 4.4 | 6.4 | 7.4 |
| 250 | 0.9 | 1.3 | 2.0 | 2.8 | 4.0 | 4.7 |
| 500 | 0.7 | 0.9 | 1.4 | 2.0 | 2.9 | 3.3 |
| 1,000 | 0.5 | 0.7 | 1.1 | 1.4 | 2.0 | 2.3 |
| 2,500 | 0.3 | 0.4 | 0.6 | 0.9 | 1.3 | 1.5 |
| 5,000 | 0.2 | 0.3 | 0.5 | 0.6 | 0.9 | 1.0 |
| 10,000 | 0.15 | 0.2 | 0.3 | 0.4 | 0.6 | 0.7 |
| 25,000 | 0.09 | 0.13 | 0.2 | 0.3 | 0.4 | 0.5 |
| 50,000 | 0.07 | 0.09 | 0.14 | 0.2 | 0.3 | 0.3 |

[1] Also, central city-balance, etc.

Tables II.B.5 Standard Errors of Estimated Percentages for Families or Households Unemployment[1]

(68 chances out of 100)

| Base of Percentage (thousands) | Estimated Percentage | | | | | |
|---|---|---|---|---|---|---|
| | 1 or 99 | 2 or 98 | 5 or 95 | 10 or 90 | 25 or 75 | 50 |
| 25 | 2.8 | 3.9 | 6.1 | 8.4 | 12.2 | 14.0 |
| 50 | 2.0 | 2.8 | 4.3 | 6.0 | 8.6 | 9.9 |
| 100 | 1.4 | 2.0 | 3.1 | 4.2 | 6.1 | 7.0 |
| 250 | 0.9 | 1.2 | 1.9 | 2.7 | 3.8 | 4.4 |
| 500 | 0.6 | 0.9 | 1.4 | 1.9 | 2.7 | 3.1 |
| 1,000 | 0.4 | 0.6 | 1.0 | 1.3 | 1.9 | 2.2 |
| 2,500 | 0.3 | 0.4 | 0.6 | 0.8 | 1.2 | 1.4 |
| 5,000 | 0.2 | 0.3 | 0.4 | 0.6 | 0.9 | 1.0 |
| 10,000 | 0.14 | 0.2 | 0.3 | 0.4 | 0.6 | 0.7 |
| 25,000 | 0.09 | 0.12 | 0.2 | 0.3 | 0.4 | 0.4 |
| 50,000 | 0.06 | 0.09 | 0.14 | 0.2 | 0.3 | 0.3 |

[1] Multiply standard errors by 1.41 when national, regional, or State data for this characteristic is tabulated by SMSA-non-SMSA, central city-balance, etc.

Table III. Factors to be Applied to Tables I.B.1 Through I.B.9 and Tables II.B.1 Through II.B.5

| Characteristic | Factor | | |
|---|---|---|---|
| | Total or White | Black and Other Races | Spanish Origin |
| Persons | | | |
| Educational Attainment | 1.00 | 1.16 | 1.37 |
| Employment | 1.00 | 1.00 | 1.45 |
| Persons Tabulated by Family Income | 1.00 | 0.95 | 1.57 |
| Income | 1.00 | 0.95 | 1.57 |
| Marital Status, Household and Family Characteristics | 1.00 | 1.20 | 1.46 |
| U.S. Population Distribution by Age and/or Sex | 0 | 0 | 1.00 |
| Poverty | 1.00 | 0.95 | 1.57 |
| State, Region, or SMSA-non-SMSA Residence | 1.00 | 1.32 | 1.88 |
| Unemployment | 1.00 | 1.07 | 0.97 |
| Families or Households | | | |
| Employment | 1.00 | 1.00 | 1.32 |
| Income or Poverty or Food Stamps | 1.00 | 0.93 | 1.50 |
| Marital Status, Household and Family Characteristics, and U.S. Population Distribution by Age and/or Sex | 1.00 | 0.95 | 1.31 |
| State, Region, or SMSA-non-SMSA Residence | 1.00 | 1.09 | 1.49 |
| Unemployment | 1.00 | 1.07 | 0.97 |

Table IV. Parameters for Persons, Families or Households

| Characteristic | Total or White | | Black and Other Races | | Spanish Origin | |
|---|---|---|---|---|---|---|
| | a | b | a | b | a | b |
| **Persons** | | | | | | |
| Educational Attainment[1] | -0.000016 | 2064 | -0.000186 | 2792 | -0.000025 | 3851 |
| Employment Characteristics[1] | -0.000016 | 2078 | -0.000133 | 2078 | -0.000030 | 4394 |
| Persons Tabulated by Family Income[1] | -0.000014 | 3067 | -0.000104 | 2770 | -0.000038 | 7514 |
| Income[1] | -0.000007 | 1533 | -0.000052 | 1385 | -0.000019 | 3757 |
| Martial Status, Household and Family Characteristics[1] | -0.000017 | 3500 | -0.000210 | 5020 | -0.000043 | 7469 |
| U.S. Population Distribution by Age and/or Sex | 0 | 0 | 0 | 0 | -0.000075 | 15028 |
| Poverty[1] | -0.000030 | 6134 | -0.000209 | 5539 | -0.000075 | 15028 |
| State, Region, or SMSA-non-SMSA Residence[2] | -0.000020 | 4253 | -0.000308 | 7402 | -0.000075 | 15028 |
| Unemployment Characteristics[1] | -0.000015 | 1971 | -0.000139 | 2265 | -0.000013 | 1864 |
| **Families or Households** | | | | | | |
| Employment[1] | -0.000025 | 1798 | -0.000221 | 1798 | -0.000046 | 3139 |
| Income or Poverty or Food Stamps[1] | -0.000008 | 1063 | -0.000064 | 922 | -0.000033 | 2397 |
| Marital Status, Household and Family Characteristics, and U.S. Population Distribution by Age and/or Sex[1] | -0.000010 | 1389 | -0.000087 | 1255 | -0.000033 | 2397 |
| State, Region, or SMSA-non-SMSA Residence[2] | -0.000016 | 2170 | -0.000178 | 2561 | -0.000066 | 4794 |
| Unemployment[1] | -0.000015 | 1971 | -0.000139 | 2265 | -0.000013 | 1864 |

[1] Multiply a and b parameters by 2.0 when national, regional, or State data for this characteristic is tabulated by SMSA-non-SMSA, central city-balance, etc.

[2] Also, central city-balance, etc.

Table V. Factors to Obtain Standard Errors for States and SMSA's[1]

| Subordinate Area | Factor[2] | 1970 Census Population |
|---|---|---|
| Individual SMSA | 1.41 | -- |
| Alabama | 1.11 | 3,444,165 |
| Alaska | 0.29 | 300,382 |
| Arizona | 0.99 | 1,770,900 |
| Arkansas | 0.89 | 1,923,295 |
| California | 1.09 | 19,953,134 |
| Colorado | 0.94 | 2,207,259 |
| Connecticut | 1.07 | 3,031,709 |
| Delaware | 0.58 | 548,104 |
| District of Columbia | 0.68 | 756,510 |
| Florida | 1.10 | 6,789,443 |
| Georgia | 1.11 | 4,589,575 |
| Hawaii | 0.65 | 768,561 |
| Idaho | 0.56 | 712,567 |
| Illinois | 1.10 | 11,113,976 |
| Indiana | 1.09 | 5,193,669 |
| Iowa | 1.02 | 2,824,376 |
| Kansas | 0.94 | 2,246,578 |
| Kentucky | 1.11 | 3,218,706 |
| Louisiana | 1.09 | 3,641,306 |
| Maine | 0.68 | 992,048 |
| Maryland | 1.16 | 3,922,399 |
| Massachusetts | 1.07 | 5,689,170 |
| Michigan | 1.10 | 8,875,083 |
| Minnesota | 1.10 | 3,804,971 |
| Mississippi | 0.93 | 2,216,912 |
| Missouri | 1.10 | 4,676,501 |
| Montana | 0.52 | 694,409 |
| Nebraska | 0.82 | 1,483,493 |
| Nevada | 0.55 | 488,738 |
| New Hampshire | 0.66 | 737,681 |
| New Jersey | 1.09 | 7,168,164 |
| New Mexico | 0.63 | 1,016,000 |
| New York | 1.09 | 18,236,967 |
| North Carolina | 1.14 | 5,082,059 |
| North Dakota | 0.47 | 617,761 |
| Ohio | 1.09 | 10,652,017 |
| Oklahoma | 1.11 | 2,559,229 |
| Oregon | 1.10 | 2,091,385 |
| Pennsylvania | 1.09 | 11,793,909 |

| Subordinate Area | Factor[2] | 1970 Census Population |
|---|---|---|
| Rhode Island | 0.74 | 946,725 |
| South Carolina | 1.08 | 2,590,516 |
| South Dakota | 0.48 | 665,507 |
| Tennessee | 1.11 | 3,923,687 |
| Texas | 1.12 | 11,196,730 |
| Utah | 0.63 | 1,059,273 |
| Vermont | 0.48 | 444,830 |
| Virginia | 1.17 | 4,648,494 |
| Washington | 1.12 | 3,409,169 |
| West Virginia | 0.83 | 1,744,237 |
| Wisconsin | 1.13 | 4,417,731 |
| Wyoming | 0.39 | 332,416 |

[1] For totals, apply factors to table I.A. and II.A; for percents, apply factors to tables I.B.1 through I.B.9 and II.B.1 through II.B.5 in conjunction with table III.

[2] Apply the square of these factors to the national a and b parameters in table IV to obtain State or SMSA parameters.

# APPENDIX A

## Occupation Classification

| Census Code | PROFESSIONAL, TECHNICAL, AND KINDRED WORKERS |
|---|---|
| 001 | Accountants |
| 002 | Architects |
| | Computer specialists |
| 003 | Computer programmers |
| 004 | Computer systems analysts |
| 005 | Computer specialists, n.e.c. |
| | Engineers |
| 006 | Aeronautical and astronautical engineers |
| 010 | Chemical engineers |
| 011 | Civil engineers |
| 012 | Electrical and electronic engineers |
| 013 | Industrial engineers |
| 014 | Mechanical engineers |
| 015 | Metallurgical and materials engineers |
| 020 | Mining engineers |
| 021 | Petroleum engineers |
| 022 | Sales engineers |
| 023 | Engineers, n.e.c. |
| 024 | Farm management advisors |
| 025 | Foresters and conservationists |
| 026 | Home management advisors |
| | Lawyers and judges |
| 030 | Judges |
| 031 | Lawyers |
| | Librarians, archivists, and curators |
| 032 | Librarians |
| 033 | Archivists and curators |
| | Mathematical specialists |
| 034 | Actuaries |
| 035 | Mathematicians |
| 036 | Statisticians |
| | Life and physical scientists |
| 042 | Agricultural scientists |
| 043 | Atmospheric and space scientists |
| 044 | Biological scientists |
| 045 | Chemists |
| 051 | Geologists |
| 052 | Marine scientists |
| 053 | Physicists and astronomers |
| 054 | Life and physical scientists, n.e.c. |
| 055 | Operations and systems researchers and analysts |
| 056 | Personnel and labor relations workers |
| | Physicians, dentists, and related practitioners |
| 061 | Chiropractors |
| 062 | Dentists |

063 Optometrists
064 Pharmacists
065 Physicians, medical and osteopathic
071 Podiatrists
072 Veterinarians
073 Health practitioners, n.e.c.

Nurses, dietitians, and therapists
074 Dietitians
075 Registered nurses
076 Therapists

Health technologists and technicians
080 Clinical laboratory technologists and technicians
081 Dental hygienists
082 Health record technologists and technicians
083 Radiologic technologists and technicians
084 Therapy assistants
085 Health technologists and technicians, n.e.c.

Religious workers
086 Clergymen
090 Religious workers, n.e.c.

Social scientists
091 Economists
092 Political scientists
093 Psychologists
094 Sociologists
095 Urban and regional planners
096 Social scientists, n.e.c.

Social and recreation workers
100 Social workers
101 Recreation workers

Teachers, college and university
102 Agriculture teachers
103 Atmospheric, earth, marine, and space teachers
104 Biology teachers
105 Chemistry teachers
110 Physics teachers
111 Engineering teachers
112 Mathematics teachers
113 Health specialties teachers
114 Psychology teachers
115 Business and commerce teachers
116 Economic teachers
120 History teachers
121 Sociology teachers
122 Social science teachers, n.e.c.
123 Art, drama, and music teachers
124 Coaches and physical education teachers
125 Education teachers
126 English teachers
130 Foreign language teachers
131 Home economics teachers
132 Law teachers
133 Theology teachers

134 Trade, industrial, and technical teachers
135 Miscellaneous teachers, college and university
140 Teachers, college and university, subject not specified
Teachers, except college and university
141 Adult education teachers
142 Elementary school teachers
143 Prekindergarten and kindergarten teachers
144 Secondary school teachers
145 Teachers, except college and university, n.e.c.
Engineering and science technicians
150 Agricultural and biological technicians, except health
151 Chemical technicians
152 Draftsmen
153 Electrical and electronic engineering technicians
154 Industrial engineering technicians
155 Mechanical engineering technicians
156 Mathematical technicians
161 Surveyors
162 Engineering and science technicians, n.e.c.
Technicians, except health, and engineering and science
163 Airplane pilots
164 Air traffic controllers
165 Embalmers
170 Flight engineers
171 Radio operators
172 Tool programmers, numerical control
173 Technicians, n.e.c.
174 Vocational and educational counselors
Writers, artists, and entertainers
175 Actors
180 Athletes and kindred workers
181 Authors
182 Dancers
183 Designers
184 Editors and reporters
185 Musicians and composers
190 Painters and sculptors
191 Photographers
192 Public relations men and publicity writers
193 Radio and television announcers
194 Writers, artists, and entertainers, n.e.c.
195 Research workers, not specified

MANAGERS AND ADMINISTRATORS, EXCEPT FARM

201 Assessors, controllers, and treasurers; local public administration
202 Bank officers and financial managers

203 Buyers and shippers, farm products
205 Buyers, wholesale and retail trade
210 Credit men
211 Funeral directors
212 Health administrators
213 Construction inspectors, public administration
215 Inspectors, except construction, public administration
216 Managers and superintendents, building
220 Office managers, n.e.c.
221 Officers, pilots, and pursers; ship
222 Officials and administrators; public administration, n.e.c.
223 Officials of lodges, societies, and unions
224 Postmasters and mail superintendents
225 Purchasing agents and buyers, n.e.c.
226 Railroad conductors
230 Restaurant, cafeteria, and bar managers
231 Sales managers and department heads, retail trade
233 Sales managers, except retail trade
235 School administrators, college
240 School administrators, elementary and secondary
245 Managers and administrators, n.e.c.

SALES WORKERS

260 Advertising agents and salesmen
261 Auctioneers
262 Demonstrators
264 Hucksters and peddlers
265 Insurance agents, brokers, and underwriters
266 Newsboys
270 Real estate agents and brokers
271 Stock and bond salesmen
280 Salesmen and sales clerks, n.e.c.
281 Sales representatives, manufacturing industries
282 Sales representatives, wholesale trade
283 Sales clerks, retail trade
284 Salesmen, retail trade
285 Salesmen of services and construction
290 Sales workers - allocated

CLERICAL AND KINDRED WORKERS

301 Bank tellers
303 Billing clerks
305 Bookkeepers
310 Cashiers
311 Clerical assistants, social welfare
312 Clerical supervisors, n.e.c.
313 Collectors, bill and account
314 Counter clerks, except food
315 Dispatchers and starters, vehicle

320 Enumerators and interviewers
321 Estimators and investigators, n.e.c.
325 Expediters and production controllers
325 File clerks
326 Insurance adjusters, examiners, and investigators
330 Library attendants and assistants
331 Mail carriers, post office
332 Mail handlers, except post office
333 Messengers and office boys
334 Meter readers, utilities
Office machine operators
341 Bookkeeping and billing machine operators
342 Calculating machine operators
343 Computer and peripheral equipment operators
344 Duplicating machine operators
345 Key punch operators
350 Tabulating machine operators
355 Office machine operators, n.e.c.
360 Payroll and timekeeping clerks
361 Postal clerks
362 Proofreaders
363 Real estate appraisers
364 Receptionists
Secretaries
370 Secretaries, legal
371 Secretaries, medical
372 Secretaries, n.e.c.
374 Shipping and receiving clerks
375 Statistical clerks
376 Stenographers
381 Stock clerks and storekeepers
382 Teacher aides, exc. school monitors
383 Telegraph messengers
384 Telegraph operators
385 Telephone operators
390 Ticket, station, and express agents
391 Typists
392 Weighers
394 Miscellaneous clerical workers
395 Not specified clerical workers

CRAFTSMEN AND KINDRED WORKERS

401 Automobile accessories installers
402 Bakers
403 Blacksmiths
404 Boilermakers
405 Bookbinders
410 Brickmasons and stonemasons
411 Brickmasons and stonemasons, apprentices
412 Bulldozer operators
413 Cabinetmakers

415 Carpenters
416 Carpenter apprentices
420 Carpet installers
421 Cement and concrete finishers
422 Compositors and typesetters
423 Printing trades apprentices, exc. pressmen
424 Cranemen, derrickmen, and hoistmen
425 Decorators and window dressers
426 Dental laboratory technicians
430 Electricians
431 Electrician apprentices
433 Electric power linemen and cablemen
434 Electrotypers and stereotypers
435 Engravers, exc. photoengravers
436 Excavating, grading, and road machine operators; exc. bulldozer
440 Floor layers, exc. tile setters
441 Foremen, n.e.c.
442 Forgemen and hammermen
443 Furniture and wood finishers
444 Furriers
445 Glaziers
446 Heat treaters, annealers, and temperers
450 Inspectors, scalers, and graders; log and lumber
452 Inspectors, n.e.c.
453 Jewelers and watchmakers
454 Job and die setters, metal
455 Locomotive engineers
456 Locomotive firemen
461 Machinists
462 Machinists apprentices
Mechanics and repairmen
470 Air conditioning, heating, and refrigeration
471 Aircraft
472 Automobile body repairmen
473 Automobile mechanics
474 Automobile mechanic apprentices
475 Data processing machine repairmen
480 Farm implement
481 Heavy equipment mechanics, incl. diesel
482 Household appliance and accessory installers and mechanics
483 Loom fixers
484 Office machine
485 Radio and television
486 Railroad and car shop
491 Mechanic, exc. auto, apprentices
492 Miscellaneous mechanics and repairmen
495 Not specified mechanics and repairmen
501 Millers; grain, flour, and feed
502 Millwrights
503 Molders, metal
504 Molder apprentices

505 Motion picture projectionists
506 Opticians and lens grinders and polishers
510 Painters, construction and maintenance
511 Painter apprentices
512 Paperhangers
514 Pattern and model makers, exc. paper
515 Photoengravers and lithographers
516 Piano and organ tuners and repairmen
520 Plasters
521 Plasterer apprentices
522 Plumbers and pipe fitters
523 Plumber and pipe fitter apprentices
525 Power station operators
530 Pressmen and plate printers, printing
531 Pressman apprentices
533 Rollers and finishers, metal
534 Roofers and slaters
535 Sheetmetal workers and tinsmiths
536 Sheetmetal apprentices
540 Shipfitters
542 Shoe repairmen
543 Sign painters and letterers
545 Stationary engineers
546 Stone cutters and stone carvers
550 Structural metal craftsmen
551 Tailors
552 Telephone installers and repairmen
554 Telephone linemen and splicers
560 Tile setters
561 Tool and die makers
562 Tool and die maker apprentices
563 Upholsterers
571 Specified craft apprentices, n.e.c.
572 Not specified apprentices
575 Craftsmen and kindred workers, n.e.c.
580 Former members of the Armed Forces

## OPERATIVE, EXCEPT TRANSPORT

601 Asbestos and insulation workers
602 Assemblers
603 Blasters and powdermen
604 Bottling and canning operatives
605 Chainmen, rodmen, and axmen, surveying

610 Checkers, examiners, and inspectors, manufacturing
611 Clothing ironers and pressers
612 Cutting operatives, n.e.c.
613 Dressmakers and seamstresses, except factory
614 Drillers, earth
615 Dry wall installers and lathers
620 Dyers

621 Filers, polishers, sanders, and buffers
622 Furnacemen, smeltermen, and pourers
623 Garage workers and gas station attendants
624 Graders and sorters, manufacturing
625 Produce graders and packers, exc. factory and farm
626 Heaters, metal
630 Laundry and dry cleaning operatives, n.e.c.
631 Meat cutters and butchers, exc. manufacturing
633 Meat cutters and butchers, manufacturing
634 Meat wrappers, retail trade
635 Metal platers
636 Millliners
640 Mine operatives, n.e.c.
641 Mixing operative
642 Oilers and greasers, exc. auto
643 Packers and wrappers, exc. meat and produce
644 Painters, manufactured articles
645 Photographic process workers
Precision machine operatives
650 Drill press operatives
651 Grinding machine operatives
652 Lathe and milling machine operatives
653 Precision machine operatives, n.e.c.
656 Punch and stamping press operatives
660 Riveters and fasteners
661 Sailors and deckhands
662 Sawyers
663 Sewers and stitchers
664 Shoemaking machine operatives
665 Solderers
666 Stationary firemen
Textile operatives
670 Carding, lapping, and combing operatives
671 Knitters, loopers, and toppers
672 Spinners, twisters, and winders
673 Weavers
674 Textile operatives, n.e.c.
680 Welders and flame-cutters
681 Winding operatives, n.e.c.
690 Machine operatives, miscellaneous specified
692 Machine operatives, not specified
694 Miscellaneous operatives
695 Not specified operatives

## TRANSPORT EQUIPMENT OPERATIVES

701 Boatmen and canalmen
703 Busdrivers
704 Conductors and motormen, urban rail transit
705 Deliverymen and routemen
706 Fork lift and tow motor operatives
710 Motormen; mine, factory, logging camp, etc.

711 Parking attendants
712 Railroad brakemen
713 Railroad switchmen
714 Taxicab drivers and chauffeurs
715 Truck drivers

LABORERS, EXCEPT FARM

740 Animal caretakers, exc. farm
750 Carpenters' helpers
751 Construction laborers, exc. carpenters' helpers
752 Fishermen and oystermen
753 Freight and material handlers
754 Garbage collectors
755 Gardeners and groundskeepers, exc. farm
760 Longshoremen and stevedores
761 Lumbermen, raftsmen, and woodchoppers
762 Stockhandlers
763 Teamsters
764 Vehicle washers and equipment cleaners
770 Warehousemen, n.e.c.
780 Miscellaneous laborers
785 Not specified laborers

FARMERS AND FARM MANAGERS

801 Farmers (owners and tenants)
802 Farm managers

FARM LABORERS AND FARM FOREMEN

821 Farm foremen
822 Farm laborers, wage workers
823 Farm laborers, unpaid family workers
824 Farm service laborers, self-employed

SERVICE WORKERS, EXC. PRIVATE HOUSEHOLD

Cleaning service workers
901 Chambermaids and maids, exc. private households
902 Cleaners and charwomen
903 Janitors and sextons
Food service workers
910 Bartenders
911 Busboys
912 Cooks, exc. private household
913 Dishwashers
914 Food counter and fountain workers
915 Waiters

916 Food service workers, n.e.c., exc. private household

Health service workers

921 Dental assistants
922 Health aides, exc. nursing
923 Health trainees
924 Lay midwives
925 Nursing aides, orderlies, and attendants
926 Practical nurses

Personal service workers

931 Airline stewardesses
932 Attendants, recreation and amusement
933 Attendants, personal service, n.e.c.
934 Baggage porters and bellhops
935 Barbers
940 Boarding and lodginghouse keepers
941 Bootblacks
942 Child care workers, exc. private household
943 Elevator operators
944 Hairdressers and cosmetologists
945 Personal service apprentices
950 Housekeepers, exc. private household
952 School monitors
953 Ushers, recreation and amusement
954 Welfare service aides

Protective service workers

960 Crossing guards and bridge tenders
961 Firemen, fire protection
962 Guards and watchmen
963 Marshals and constables
964 Policemen and detectives
965 Sheriffs and bailiffs

PRIVATE HOUSEHOLD WORKERS

980 Child care workers, private household
981 Cooks, private household
982 Housekeepers, private household
983 Laundresses, private household
984 Maids and servants, private household

# APPENDIX B

## INDUSTRY CLASSIFICATION
(Numbers in parentheses are the SIC code equivalents)

Census Code

### AGRICULTURE, FORESTRY, AND FISHERIES

017 Agricultural production (01)
018 Agricultural services, exc. horticultural (07 except 0713 and 073)
019 Horticultural services (073)
027 Forestry (08)
028 Fisheries (09)

### MINING

047 Metal mining (10)
048 Coal mining (11, 12)
049 Crude petroleum and natural gas extractions (13)
057 Nonmetallic mining and quarrying, exc. fuel (14)

### CONSTRUCTION

067 General building contractors (15)
068 General contractors, exc. building (16)
069 Special trade contractors (17)
077 Not specified construction

### MANUFACTURING

#### Durable goods

Lumber and wood products, exc. furniture
107 Logging (241)
108 Sawmills, planing mills, and mill work (242, 243)
109 Miscellaneous wood products (244, 249)
118 Furniture and fixtures (25)
Stone, clay, and glass products
119 Glass and glass products (321-323)
127 Cement, concrete, gypsum, and plaster products (324, 327)
128 Structural clay products (325)
137 Pottery and related products (326)
138 Miscellaneous nonmetallic mineral and stone

products (328, 329)

Metal industries
- 139 Blast furnaces, steel works, rolling and finishing mills (3312, 3313)
- 147 Other primary iron and steel industries (3315-3317, 332, 3391, part 3399)
- 148 Primary aluminum industries (3334, part 334, 3352, 3361, part 3392, part 3399)
- 149 Other primary nonferrous industries (3331-333, 3339, part 334, 3351, 3356, 3357, 3362, 3369, part 3392, part 3399
- 157 Cutlery, hand tools, and other handware (342)
- 158 Fabricated structural metal products (344)
- 159 Screw machine products (345)
- 167 Metal stamping (346)
- 168 Miscellaneous fabricated metal products (341, 343, 347, 348, 349)
- 169 Not specified metal industries

Machinery, except electrical
- 177 Engines and turbines (351)
- 178 Farm machinery and equipment (352)
- 179 Construction and material handling machines (353)
- 187 Metalworking machinery (354)
- 188 Office and accounting machines (357 exc. 3573)
- 189 Electronic computing equipment (3573)
- 197 Machinery, exc. electrical, n.e.c. (355, 356, 358, 359)
- 198 Not specified machinery

Electrical machinery, equipment, and supplies
- 199 Household appliances (363)
- 207 Radio, T.V., and communication equipment (365, 366)
- 208 Electrical machine, equipment, and supplies, n.e.c. (361, 362, 364, 367, 369)
- 209 Not specified electrical machinery, equipment, and supplies

Transportation equipment
- 219 Motor vehicles and motor vehicle equipment (371)
- 227 Aircraft and parts (372)
- 228 Ship and boat building and repairing (373)
- 229 Railroad locomotives and equipment (374)
- 237 Mobile dwellings and campers (3791)
- 238 Cycles and miscellaneous transportation equipment (375, 3799)

Professional and photographic equipment, and watches
- 239 Scientific and controlling instruments (381, 382)
- 247 Optical and health services supplies (383, 384, 385)
- 248 Photographic equipment and supplies (386)
- 249 Watches, clocks, and clock-work-operated devices (387)
- 257 Not specified professional equipment
- 258 Ordnance (19)
- 259 Miscellaneous manufacturing industries (39)

Nondurable goods

Food and kindred products
268 Meat products (201)
269 Dairy products (202
276 Canning and preserving fruits, vegetables, and sea foods (203)
279 Grain-mill products (204, 0713)
287 Bakery products (205)
286 Confectionery and related products (207)
289 Beverage industries (208)
297 Miscellaneous food preparation and kindred products (206, 209)
298 Not specified food industries
299 Tobacco manufactures (21)
Textile mill products
307 Knitting mills (225)
308 Dyeing and finishing textiles, exc. wool and knit goods (226)
309 Floor coverings, exc. hard surface (227)
317 Yarn, thread, and fabric mills (221-224, 228)
318 Miscellaneous textile mill products (229)
Apparel and other fabricated textile products
319 Apparel and accessories (231-238)
327 Miscellaneous fabricated textile products (239)
Paper and allied products
328 Pulp, paper, and paperboard mills (261-263, 266)
329 Miscellaneous paper and pulp products (264)
337 Paperboard containers and boxes (265)
Printing, publishing, and allied industries
338 Newspaper publishing and printing (271)
339 Printing, publishing, and allied industries, except newspapers (272-279)
Chemicals and allied products
347 Industrial chemicals (281)
348 Plastics, synthetics and resins, exc. fibers (282, exc. 2823 and 2824)
349 Synthetic fibers (2823, 2824)
357 Drugs and medicines (283)
358 Soaps and cosmetics (284)
359 Paints, varnishes, and related products (285)
367 Agricultural chemicals (287)
368 Miscellaneous chemicals (286, 289)
369 Not specified chemicals and allied products
Petroleum and coal products
377 Petroleum refining (291)
378 Miscellaneous petroleum and coal products (295, 299)
Rubber and miscellaneous plastic products
379 Rubber products (301-303, 306)
387 Miscellaneous plastic products (307)
Leather and leather products
388 Tanned, curried, and finished leather (311)
389 Footwear, except rubber (313, 314)
397 Leather products, exc. footwear (312, 315-317, 319)
398 Not specified manufacturing industries

## TRANSPORTATION, COMMUNICATIONS, AND OTHER PUBLIC UTILITIES

### Transportation

407 Railroads and railway express service (40)
408 Street railways and bus lines (411, 413-415, 417)
409 Taxicab service (412)
417 Trucking service (421, 423)
418 Warehousing and storage (422)
419 Water transportation (44)
427 Air transportation (45)
428 Pipe lines, except natural gas (46)
429 Services incidental to transportation (47)

### Communications

447 Radio broadcasting and television (483)
448 Telephone (wire and radio) (481)
449 Telegraph and miscellaneous communication services (482, 489)

### Utilities and sanitary services

467 Electric light and power (491)
468 Electric-gas utilities (493)
469 Gas and steam supply systems (492, 496)
477 Water supply (494)
478 Sanitary services (495)
479 Other and not specified utilities (497)

## WHOLESALE AND RETAIL TRADE

### Wholesale trade

507 Motor vehicles and equipment (501)
508 Drugs, chemicals, and allied products (502)
509 Dry goods and apparel (503)
527 Food and related products (504)
528 Farm products --raw materials (505)
529 Electrical goods (506)
537 Hardware, plumbing, and heating supplies (507)
538 Not specified electrical and hardware products
539 Machinery equipment and supplies (508)
557 Metals and minerals, n.e.c. (5091)
558 Petroleum products (5092)
559 Scrap and waste materials (5093)
567 Alcoholic beverages (5095)

566 Paper and its products (5096)
569 Lumber and construction materials (5098)
567 Wholesalers, n.e.c. (5094, 5097, 5099)
568 Not specified wholesale trade

Retail trade

607 Lumber and building material retailing (521-524)
608 Hardware and farm equipment stores (525)
609 Department and mail order establishments (531, 532)
617 Limited price variety stores (533)
618 Vending machine operators (534)
619 Direct selling establishments (535)
627 Miscellaneous general merchandise stores (539)
628 Grocery stores (541)
629 Dairy products stores (545)
637 Retail bakeries (546)
638 Food stores, n.e.c. (542-544,549)
639 Motor vehicle dealers (551, 552)
647 Tire, battery, and accessory dealers (553)
648 Gasoline service stations (554)
649 Miscellaneous vehicle dealers (559)
657 Apparel and accessories stores, exc. shoe stores (56 exc. 566)
658 Shoe stores (566)
667 Furniture and home furnishings stores (571)
668 Household appliances, TV, and radio stores (572, 573)
669 Eating and drinking places (58)
677 Drug stores (591)
678 Liquor stores (592)
679 Farm and garden supply stores (596)
687 Jewelry stores (597)
688 Fuel and ice dealers (598)
689 Retail florists (5992)
697 Miscellaneous retail stores (593-595, 599 exc. 5992)
698 Not specified retail trade

FINANCE, INSURANCE, AND REAL ESTATE

707 Banking (60)
708 Credit agencies (61)
709 Security, commodity brokerage, and investment companies (62, 67)
717 Insurance (63, 64)
718 Real estate, incl. real estate-insurance-law offices (65, 66)

BUSINESS AND REPAIR SERVICES

727 Advertising (731)
728 Services to dwellings and other building (734)
729 Commercial research, development, and testing labs (7391, 7397)
737 Employment and temporary help agencies (736, 7398)
738 Business management and consulting services (part 7392)
739 Computer programing services (part 7393)
747 Detective and protective services (7393)
748 Business services, n.e.c. (732, 733, 735, 7394 7395, 7396, 7399)
749 Automobile services, exc. repair (751, 752, 754)
757 Automobile repair and related services (753)
758 Electrical repair shops (762, 7694)
759 Miscellaneous repair services (763, 764, 769, exc. 7694)

PERSONAL SERVICES

769 Private households (88)
777 Hotels and motels (701)
778 Lodging places, exc. hotels and motels (702,703,704)
779 Laundering, cleaning, and other garment services (721, 727)
787 Beauty shops (723)
788 Barber shops (724)
789 Shoe repair shops (725)
797 Dressmaking shops (part 729)
798 Miscellaneous personal services (722, 726, part 729)

ENTERTAINMENT AND RECREATION SERVICES

807 Theaters and motion pictures (78, 792)
808 Bowling alleys, billiard and pool parlors (793)
809 Miscellaneous entertainment and recreation services (791, 794)

PROFESSIONAL AND RELATED SERVICES

828 Offices of physicians (801, 803)
829 Offices of dentists (802)
837 Offices of chiropractors (804)
838 Hospitals (806)
839 Convalescent institutions (8092)
847 Offices of health practitioners, n.e.c. (part 8099)
848 Health services, n.e.c. (807, part 8099)
849 Legal services (81)
857 Elementary and secondary schools (821)
858 Colleges and universities (822)

859 Libraries (823)
867 Educational services, n.e.c. (824, 829)
868 Not specified educational services
869 Museums, art galleries, and zoos (84)
877 Religious organizations (866)
878 Welfare services (part 867)
879 Residential welfare facilities (part 867)
887 Nonprofit membership organizations (861-865, 869)
888 Engineering and architectural services (891)
889 Accounting, auditing, and bookkeeping services (893)
897 Miscellaneous professional and related services (892, 899)

PUBLIC ADMINISTRATION

907 Postal service (part 9190)
917 Federal public administration (part 9190, 9490)
927 State public administration (9290)
937 Local public administration (9390)