

## Appendix A.—AREA CLASSIFICATIONS

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### USUAL PLACE OF RESIDENCE

In accordance with census practice dating back to 1790, each person enumerated in the 1970 census was counted as an inhabitant of his usual place of residence, which is generally construed to mean the place where he lives and sleeps most of the time. This place is not necessarily the same as his legal residence, voting residence, or domicile. In the vast majority of cases, however, the use of these different bases of classification would produce substantially the same statistics, although there may be appreciable differences for a few areas. (The Volume I reports contain a more complete discussion of the residence rules for certain categories of persons whose usual place of residence is not immediately clear.)

### URBAN AND RURAL RESIDENCE

The urban population comprises all persons living in urbanized areas and in places of 2,500 inhabitants or more outside urbanized areas. More specifically, the urban population consists of

all persons living in (a) places of 2,500 inhabitants or more incorporated as cities, villages, boroughs (except Alaska), and towns (except in the New England States, New York, and Wisconsin), but excluding those persons living in the rural portions of extended cities,<sup>1</sup> (b) unincorporated places of 2,500 inhabitants or more; and (c) other territory included in urbanized areas. The population not classified as urban constitutes the rural population. In table 4 the rural population by race may be obtained by subtraction. Characteristics of the rural population are shown in tables 12 and 13.

### REGIONS AND DIVISIONS

For statistical presentation, the United States is sometimes divided into regions and geographic divisions. Generally, four regions are designated—Northeast, North Central, South, and West—but the first two are sometimes combined into one region, the North. The divisions are groups of States forming subdivisions of the regions.

### COUNTIES

The primary divisions of the States are, in general, termed counties, but in Louisiana these divisions are known as parishes. There are no counties in Alaska. In this State, statistical areas called census divisions were developed for general statistical purposes through the cooperation of the State and the Census Bureau and are treated as

<sup>1</sup> Extended cities are so designated because they have one or more large portions (normally at the boundary of the city) with relatively low population density. These portions are classified as rural, and the residents are not included in the urban population.

county equivalents. In four States (Maryland, Missouri, Nevada, and Virginia), there are one or more cities which are independent of any county organization and thus constitute primary divisions of their States.

### URBANIZED AREAS

An urbanized area, generally, consists of at least one city of 50,000 inhabitants or more in 1970 and the surrounding closely settled area that meets certain criteria of population density or land use. An urbanized area may be subdivided into the central city or cities, and the remainder of the area or "urban fringe." The central city portion, generally, consists of the population of the cities named in the title of the urbanized area.

### STANDARD METROPOLITAN STATISTICAL AREAS

The Bureau of the Census recognizes 243 standard metropolitan statistical areas (SMSA's) in the United States and 4 in Puerto Rico, making a total of 247 in the 1970 census. These include the 231 SMSA's as defined and named in the Bureau of the Budget publication, *Standard Metropolitan Statistical Areas: 1967*, U.S. Government Printing Office, Washington, D.C. 20402. Since 1967 the Office of Management and Budget (formerly Bureau of the Budget) has added 16 SMSA's, of which two were defined in January 1968 and an additional 14 were defined in February 1971 on the basis of the results of the 1970 census. Changes in SMSA boundaries or titles made after February 1971 are not recognized in this report.

Except in the New England States, a standard metropolitan statistical area is a county or group of contiguous

counties which contains at least one city of 50,000 inhabitants or more, or "twin cities" with a combined population of at least 50,000. In addition to the county, or counties, containing such a city or cities, contiguous counties are included in an SMSA if, according to certain criteria, they are socially and economically integrated with the central city. In a few SMSA's where portions of counties outside the SMSA as defined in 1967 were annexed to the central city, the population living in those counties is not considered part of the SMSA. In the New England States, SMSA's consist of towns and cities instead of counties. Each SMSA must include at least one central city, and the complete title of an SMSA identifies the central city or cities. For a detailed description of the criteria used in defining SMSA's, see the Bureau of the Budget publication cited above.

The population living in SMSA's is designated as the metropolitan population. The population living outside SMSA's constitutes the nonmetropolitan population. The metropolitan population may be subdivided into those living in the central city or cities and those living in the balance of the SMSA.

#### STATE ECONOMIC AREAS AND ECONOMIC SUBREGIONS

**Definition.**—State economic areas are relatively homogeneous subdivisions of States. They consist of single counties or groups of counties which have similar economic and social characteristics (see map, page VI). The boundaries of these areas have been drawn in such a way that each State is subdivided into relatively few parts, with each part having certain significant characteristics which distinguish it from ad-

joining areas. A list of counties in each State economic area appears at the end of this appendix.

In the establishment of SEA's, factors in addition to industrial and commercial activities were taken into account. Demographic, climatic, physiographic, and cultural factors, as well as factors pertaining more directly to the production and exchange of agricultural and nonagricultural goods, were considered. The net result, then, is a set of areas intermediate in size between States, on the one hand, and counties, on the other, which are relatively homogeneous with respect to a large number of characteristics. Areas of this type are well adapted for use in a wide variety of studies in which State data are neither sufficiently refined nor homogeneous and in which the manipulation of county data presents real difficulty. Moreover, a standard set of areas, such as these, makes possible studies in widely different fields on a comparable area basis.

The State economic areas were originally delineated for the 1950 censuses. The grouping of the 3,103 counties or county equivalents in 1950 into State economic areas was the product of a special study sponsored by the Bureau of the Census in cooperation with the Bureau of Agricultural Economics and several State and private agencies. The delineation procedure was devised by Dr. Donald J. Bogue, then of the Scripps Foundation for Research in Population Problems, on loan to the Bureau of the Census.<sup>2</sup>

Originally 501 areas were delineated, but in the publications of the 1950 Census of Population, combina-

<sup>2</sup>For further discussion and materials on State economic areas and their uses, see U.S. Bureau of the Census, *State Economic Areas*, U.S. Government Printing Office, Washington, D.C., 1951.

tions of sparsely populated adjacent areas in the interests of increasing the stability of the sample one-year migration data reduced the number of areas to 453. In 1960, although no attempt was made to re-examine the original principles or to apply them to more recent data relating to homogeneity, the initial set of 501 areas was modified to recognize changes in the composition of certain SMSA's and to include for the first time State economic areas in Alaska and Hawaii. These modifications increased the number to 509. In 1970, the only change was the designation of Brown County, Wisconsin, as a metropolitan SEA, bringing the total to 510.

**Relation to standard metropolitan statistical areas.**—The combination of counties into State economic areas had been made for the entire country, and in this process the larger standard metropolitan statistical areas (those in 1960 with a central city of 50,000 or more and a total population of 100,000 or more) were recognized as metropolitan State economic areas.<sup>3</sup> When a standard metropolitan statistical area was located in two or more States or economic subregions, each State part and each part in an economic subregion became a separate metropolitan State economic area. In New England this correspondence of metropolitan State economic areas and standard metropolitan statistical areas did not exist because State economic areas are composed of whole counties, whereas standard metropolitan statistical areas are built up from towns. Here a county with more than half its population in one or more standard

<sup>3</sup>In 1950 those standard metropolitan areas with a total population of 100,000 or more in 1940 were recognized as metropolitan State economic areas.

metropolitan statistical areas was classified as a metropolitan State economic area if the county or a combination of counties containing the standard metropolitan statistical area or areas had 100,000 inhabitants or more.

**Economic subregions.**—These areas represent combinations of State economic areas. The 510 State economic areas are consolidated into a set of 121 areas which cut across State lines but which, as intended, preserve to a great extent the homogeneous character of the State economic areas.

No statistics are presented in this report for the economic subregions. Figures on the population of the economic subregions by urban-rural residence appear in table 43 of the report **1970 Census of Population, Volume 1, Characteristics of the Population, Part A or Part 1.** The SEA's comprising the economic subregions are also shown in this table. Virtually all the statistics shown in this report may be obtained for the economic subregions through the consolidation of the statistics for SEA's.

APPENDIX A—Continued

List of Counties in Each State Economic Area

<p><b>MAINE</b></p> <p>AREA 1 Aroostook</p> <p>AREA 2 Franklin Oxford Penobscot Piscataquis Somerset</p> <p>AREA 3 Hancock Knox Lincoln Waldo Washington</p> <p>AREA 4 Androscoggin Kennebec Sagadahoc York</p> <p>AREA A Cumberland</p>	<p><b>VERMONT—Con.</b></p> <p>AREA 2—Con. Rutland Washington Windham Windsor</p> <p><b>MASSACHUSETTS</b></p> <p>AREA 1 Franklin</p> <p>AREA 2 Barnstable Dukes Nantucket</p> <p>AREA A Hampden Hampshire</p> <p>AREA B Worcester</p> <p>AREA C Essex Middlesex Norfolk Suffolk</p> <p>AREA D Plymouth</p> <p>AREA E Bristol</p> <p>AREA F Berkshire</p>	<p><b>CONNECTICUT—Con.</b></p> <p>AREA A Fairfield</p> <p>AREA B New Haven</p> <p>AREA C Hartford</p> <p><b>NEW YORK</b></p> <p>AREA 1 Orleans Wayne</p> <p>AREA 2 Genesee Livingston Ontario Seneca Wyoming Yates</p> <p>AREA 3 Allegany Cattaraugus Chautauqua Chemung Schuyler Steuben Tioga Tompkins</p> <p>AREA 4 Cayuga Cortland</p> <p>AREA 5 Fulton Hamilton Montgomery</p> <p>AREA 6 Chenango Delaware Otsego Schoharie</p> <p>AREA 7 Clinton Essex Franklin Jefferson Lewis St. Lawrence</p> <p>AREA 8 Warren Washington</p>	<p><b>NEW YORK—Con.</b></p> <p>AREA 9 Columbia Dutchess Greene Orange Putnam Sullivan Ulster</p> <p>AREA A Erie Niagara</p> <p>AREA B Monroe</p> <p>AREA C Madison Onondaga Oswego</p> <p>AREA D Herkimer Oneida</p> <p>AREA E Broome</p> <p>AREA F Albany Rensselaer Saratoga Schenectady</p> <p>AREA G Bronx Kings Nassau New York Queens Richmond Rockland Suffolk Westchester</p>	<p><b>NEW JERSEY—Con.</b></p> <p>AREA B Essex Morris Union</p> <p>AREA C Mercer</p> <p>AREA D Burlington Camden Gloucester</p> <p>AREA E Atlantic</p> <p>AREA F Salem</p> <p>AREA G Bergen Passaic</p> <p>AREA H Hudson</p>
<p><b>NEW HAMPSHIRE</b></p> <p>AREA 1 Belknap Carroll Coos Grafton Sullivan</p> <p>AREA 2 Cheshire Merrimack Rockingham Strafford</p> <p>AREA A Hillsborough</p>	<p><b>RHODE ISLAND</b></p> <p>AREA 1 Newport Washington</p> <p>AREA A Bristol Kent Providence</p>			<p><b>PENNSYLVANIA</b></p> <p>AREA 1 Armstrong Butler Crawford Lawrence McKean Mercer Venango Warren</p> <p>AREA 2 Bradford Potter Susquehanna Tioga Wayne Wyoming</p>
<p><b>VERMONT</b></p> <p>AREA 1 Addison Chittenden Franklin Grand Isle Orleans</p> <p>AREA 2 Bennington Caledonia Essex Lamoille Orange</p>	<p><b>CONNECTICUT</b></p> <p>AREA 1 Litchfield</p> <p>AREA 2 Middlesex New London Tolland Windham</p>		<p><b>NEW JERSEY</b></p> <p>AREA 1 Hunterdon Middlesex Monmouth Somerset Sussex</p> <p>AREA 2 Cape May Cumberland Ocean</p> <p>AREA A Warren</p>	<p>AREA 3 Cameron Clinton Elk Forest Lycoming Sullivan</p> <p>AREA 4 Clarion Clearfield Fayette Greene Indiana Jefferson</p>

APPENDIX A—Continued

List of Counties in Each State Economic Area—Con.

PENNSYLVANIA—Con.	PENNSYLVANIA—Con.	OHIO—Con.	OHIO—Con.	INDIANA—Con.
AREA 5 Bedford Centre Fulton Huntingdon Juniata Mifflin Perry Snyder Union	AREA L Berks AREA M Lehigh Northampton  OHIO AREA 1 Defiance Fulton Henry Ottawa Paulding Putnam Sandusky Van Wert Williams Wood	AREA 5—Con. Geauga Portage AREA 6 Carroll Coshocton Fairfield Guernsey Harrison Jefferson Knox Licking Morrow Muskingum Perry Tuscarawas AREA 7 Adams Brown Clermont Highland Ross	AREA H Mahoning Trumbull AREA J Belmont AREA K Hamilton AREA L Lawrence AREA M Lorain AREA N Clarke AREA O Allen  INDIANA AREA 1 Elkhart La Porte AREA 2 Fulton Jasper Kosciusko Marshall Newton Pulaski Starke AREA 3 Adams Blackford De Kalb Huntington Jay Lagrange Noble Steuben Wells Whitley AREA 4 Fayette Grant Henry Howard Madison Randolph Union Wayne AREA 5 Bartholomew Boone	AREA 5—Con. Decatur Hamilton Hancock Hendricks Johnson Putnam Rush Shelby Tipton AREA 6 Clay Davies Gibson Greene Knox Morgan Owen Pike Posey Spencer Sullivan Warrick AREA 7 Brown Crawford Dubois Harrison Lawrence Martin Monroe Orange Perry Washington AREA 8 Dearborn Franklin Jackson Jefferson Jennings Ohio Ripley Scott Switzerland AREA 9 Benton Carroll Cass Clinton Fountain Miami Montgomery Parke Tippecanoe
AREA 6 Carbon Columbia Monroe Montour Northumberland Pike Schuylkill	AREA 2 Auglaize Crawford Hancock Hardin Logan Marion Mercer Seneca Union Wyandot AREA 3 Champaign Clinton Darke Delaware Fayette Madison Pickaway Preble Shelby Warren AREA 4 Ashland Erie Holmes Huron Medina Richland Wayne AREA 5 Ashtabula Columbiana	AREA 8 Athens Gallia Hocking Jackson Meigs Monroe Morgan Noble Pike Scioto Vinton Washington AREA A Lucas AREA B Franklin AREA C Greene Miami Montgomery AREA D Butler AREA E Cuyahoga Lake AREA F Summit AREA G Stark		
AREA 7 Adams Franklin Lebanon				
AREA A Erie				
AREA B Bucks Chester Delaware Montgomery Philadelphia				
AREA C Lackawanna				
AREA D Allegheny Beaver Washington Westmoreland				
AREA E Cambria Somerset				
AREA F Blair				
AREA G Luzerne				
AREA H Cumberland Dauphin				
AREA J York				
AREA K Lancaster				

APPENDIX A—Continued

List of Counties in Each State Economic Area—Con.

<p><b>INDIANA—Con.</b></p> <p>AREA 9—Con. Vermillion Wabash Warren White</p> <p>AREA A Lake Porter</p> <p>AREA B St. Joseph</p> <p>AREA C Allen</p> <p>AREA D Marion</p> <p>AREA E Vanderburgh</p> <p>AREA F Clark Floyd</p> <p>AREA G Vigo</p> <p>AREA H Delaware</p>	<p><b>ILLINOIS—Con.</b></p> <p>AREA 4—Con. Calhoun Greene Jersey Macoupin Montgomery Morgan Pike Schuyler Scott</p> <p>AREA 5 Grundy Kankakee Kendall La Salle</p> <p>AREA 6 Cass Champaign Christian Coles De Witt Douglas Edgar Ford Iroquois Livingston Logan McLean Mason Menard Moultrie Piatt Shelby Vermillion Woodford</p> <p>AREA 7 Bond Clinton Effingham Fayette Monroe Randolph Washington</p> <p>AREA 8 Clay Cumberland Hamilton Jasper Marion Richland Wayne</p> <p>AREA 9 Clark Crawford</p>	<p><b>ILLINOIS—Con.</b></p> <p>AREA 9—Con. Edwards Gallatin Lawrence Wabash White</p> <p>AREA 10 Franklin Jefferson Perry Saline Williamson</p> <p>AREA 11 Alexander Hardin Jackson Johnson Massac Pope Pulaski Union</p> <p>AREA A Rock Island</p> <p>AREA B Winnebago</p> <p>AREA C Cook Du Page Kane Lake McHenry Will</p> <p>AREA D Peoria Tazewell</p> <p>AREA E Sangamon</p> <p>AREA F Madison St. Clair</p> <p>AREA G Macon</p>	<p><b>MICHIGAN—Con.</b></p> <p>AREA 1—Con. Marquette Ontonagon</p> <p>AREA 2 Alger Chippewa Delta Luce Mackinac Menominee Schoolcraft</p> <p>AREA 3 Benzie Grand Traverse Leelanau Manistee Mason Oceana</p> <p>AREA 4 Alcona Alpena Antrim Arenac Charlevoix Cheboygan Clare Crawford Emmet Gladwin Iosco Kalkaska Lake Mecosta Missaukee Montmorency Newaygo Ogemaw Osceola Oscoda Otsego Presque Isle Roscommon Wexford</p> <p>AREA 5 Gratiot Huron Isabella Midland Montcalm Sanilac Tuscola</p> <p>AREA 6 Allegan Berrien</p>	<p><b>MICHIGAN—Con.</b></p> <p>AREA 6—Con. Muskegon Ottawa Van Buren</p> <p>AREA 7 Ionia Lapeer Livingston Shiawassee</p> <p>AREA 8 Monroe St. Clair</p> <p>AREA 9 Barry Branch Calhoun Cass Hillsdale Lenawee St. Joseph</p> <p>AREA A Saginaw</p> <p>AREA B Kent</p> <p>AREA C Bay</p> <p>AREA D Genesee</p> <p>AREA E Clinton Eaton Ingham</p> <p>AREA F Macomb Oakland Wayne</p> <p>AREA G Kalamazoo</p> <p>AREA H Jackson</p> <p>AREA J Washtenaw</p>
<p><b>ILLINOIS</b></p> <p>AREA 1 Carroll De Kalb Jo Daviess Lee Ogle Stephenson Whiteside</p>	<p>AREA 9 Adams Brown</p>	<p><b>MICHIGAN</b></p> <p>AREA 1 Baraga Dickinson Gogebic Houghton Iron Keweenaw</p>	<p>AREA 5 Gratiot Huron Isabella Midland Montcalm Sanilac Tuscola</p> <p>AREA 6 Allegan Berrien</p>	<p><b>WISCONSIN</b></p> <p>AREA 1 Ashland Bayfield Burnett Florence Forest</p>

APPENDIX A—Continued

List of Counties in Each State Economic Area—Con.

<p><b>WISCONSIN—Con.</b></p> <p><b>AREA 1—Con.</b>            Iron            Langlade            Lincoln            Oneida            Price            Rusk            Sawyer            Vilas            Washburn</p> <p><b>AREA 2</b>            Barron            Buffalo            Dunn            La Crosse            Monroe            Pepin            Pierce            Polk            Richland            St. Croix            Sauk            Trempealeau            Vernon</p> <p><b>AREA 3</b>            Crawford            Grant            Green            Iowa            Lafayette</p> <p><b>AREA 4</b>            Chippewa            Clark            Eau Claire            Marathon            Taylor            Wood</p> <p><b>AREA 5</b>            Adams            Jackson            Juneau            Marquette            Portage            Waushara</p> <p><b>AREA 6</b>            Door            Kewaunee            Marinette            Menominee            Oconto            Shawano            Waupaca</p>	<p><b>WISCONSIN—Con.</b></p> <p><b>AREA 7</b>            Calumet            Fond du Lac            Manitowoc            Outagamie            Sheboygan            Winnebago</p> <p><b>AREA 8</b>            Columbia            Dodge            Green Lake            Jefferson            Ozaukee            Rock            Walworth            Washington</p> <p><b>AREA A</b>            Douglas</p> <p><b>AREA B</b>            Dane</p> <p><b>AREA C</b>            Milwaukee</p> <p><b>AREA D</b>            Racine</p> <p><b>AREA E</b>            Waukesha</p> <p><b>AREA F</b>            Kenosha</p> <p><b>AREA G</b>            Brown</p> <p><b>MINNESOTA</b></p> <p><b>AREA 1</b>            Clay            Kittson            Marshall            Norman            Pennington            Polk            Red Lake            Roseau            Wilkin</p> <p><b>AREA 2</b>            Aitkin            Beltrami            Carlton            Cass            Clearwater            Cook            Crow Wing            Hubbard</p>	<p><b>MINNESOTA—Con.</b></p> <p><b>AREA 2—Con.</b>            Itasca            Koochiching            Lake            Lake of the Woods</p> <p><b>AREA 3</b>            Becker            Douglas            Mahnommen            Otter Tail            Todd            Wadena</p> <p><b>AREA 4</b>            Benton            Chisago            Isanti            Kanabec            Mille Lacs            Morrison            Pine            Sherburne</p> <p><b>AREA 5</b>            Big Stone            Chippewa            Grant            Kandiyohi            Lac qui Parle            Pope            Redwood            Renville            Stevens            Swift            Traverse            Yellow Medicine</p> <p><b>AREA 6</b>            Carver            Dodge            Goodhue            McLeod            Meeker            Olmsted            Rice            Scott            Stearns            Steele            Wabasha            Winona            Wright</p> <p><b>AREA 7</b>            Blue Earth            Brown            Fillmore            Freeborn            Houston</p>	<p><b>MINNESOTA—Con.</b></p> <p><b>AREA 7—Con.</b>            Le Sueur            Mower            Nicollet            Sibley            Waseca</p> <p><b>AREA 8</b>            Cottonwood            Faribault            Jackson            Lincoln            Lyon            Martin            Murray            Nobles            Pipestone            Rock            Watonwan</p> <p><b>AREA A</b>            St. Louis</p> <p><b>AREA B</b>            Anoka            Dakota            Hennepin            Ramsey            Washington</p> <p><b>IOWA</b></p> <p><b>AREA 1</b>            Audubon            Buena Vista            Carroll            Cass            Cherokee            Crawford            Fremont            Harrison            Ida            Lyon            Mills            Monona            Montgomery            O'Brien            Page            Plymouth            Sac            Shelby            Sioux</p> <p><b>AREA 2</b>            Boone            Calhoun            Clay            Dallas</p>	<p><b>IOWA—Con.</b></p> <p><b>AREA 2—Con.</b>            Dickinson            Emmet            Franklin            Greene            Hamilton            Hancock            Hardin            Humboldt            Kossuth            Osceola            Palo Alto            Pocahontas            Story            Webster            Wright</p> <p><b>AREA 3</b>            Adair            Adams            Appanoose            Clarke            Davis            Decatur            Guthrie            Jefferson            Lucas            Madison            Marion            Monroe            Ringgold            Taylor            Union            Van Buren            Wapello            Warren            Wayne</p> <p><b>AREA 4</b>            Allamakee            Bremer            Buchanan            Butler            Cerro Gordo            Chickasaw            Clayton            Delaware            Fayette            Floyd            Howard            Mitchell            Winnebago            Winneshiek            Worth</p> <p><b>AREA 5</b>            Benton            Grundy</p>
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APPENDIX A—Continued

List of Counties in Each State Economic Area—Con.

<p><b>IOWA—Con.</b></p> <p><b>AREA 5—Con.</b> Henry Iowa Jasper Keokuk Mahaska Marshall Poweshiek Tama Washington</p> <p><b>AREA 6</b> Cedar Clinton Des Moines Dubuque Jackson Johnson Jones Lee Louisa Muscatine</p> <p><b>AREA A</b> Woodbury</p> <p><b>AREA B</b> Pottawattamie</p> <p><b>AREA C</b> Polk</p> <p><b>AREA D</b> Scott</p> <p><b>AREA E</b> Black Hawk</p> <p><b>AREA F</b> Linn</p> <p><b>MISSOURI</b></p> <p><b>AREA 1</b> Andrew Atchison Buchanan Carroll Clinton Holt Lafayette Nodaway Platte Ray Saline</p> <p><b>AREA 2</b> Adair Audrain Boone</p>	<p><b>MISSOURI—Con.</b></p> <p><b>AREA 2—Con.</b> Caldwell Callaway Chariton Clark Davies De Kalb Gentry Grundy Harrison Howard Knox Lewis Lincoln Linn Livingston Macon Marion Mercer Monroe Montgomery Pike Putnam Ralls Randolph Schuyler Scotland Shelby Sullivan Worth</p> <p><b>AREA 3</b> Barton Bates Cass Cedar Cooper Dade Henry Johnson Pettis St. Clair Vernon</p> <p><b>AREA 4</b> Barry Jasper Lawrence McDonald Newton</p> <p><b>AREA 5</b> Benton Camden Crawford Hickory Laclede Maries</p>	<p><b>MISSOURI—Con.</b></p> <p><b>AREA 5—Con.</b> Miller Morgan Phelps Pulaski Washington</p> <p><b>AREA 6</b> Bollinger Cape Girardeau Cole Franklin Gasconade Moniteau Osage Perry Ste. Genevieve Warren</p> <p><b>AREA 7</b> Christian Dallas Douglas Howell Ozark Polk Stone Taney Texas Webster Wright</p> <p><b>AREA 8</b> Carter Dent Iron Madison Oregon Reynolds Ripley St. Francois Shannon Wayne</p> <p><b>AREA 9</b> Butler Dunklin Mississippi New Madrid Pemiscot Scott Stoddard</p> <p><b>AREA A</b> Clay Jackson</p> <p><b>AREA B</b> Jefferson St. Charles</p>	<p><b>MISSOURI—Con.</b></p> <p><b>AREA B—Con.</b> St. Louis St. Louis city</p> <p><b>AREA C</b> Greene</p> <p><b>NORTH DAKOTA</b></p> <p><b>AREA 1</b> Adams Billings Bowman Dunn Golden Valley Grant Hettinger McKenzie Mercer Morton Oliver Sioux Slope Stark</p> <p><b>AREA 2</b> Burke Burleigh Divide Emmons Kidder Logan McIntosh McLean Mountrail Sheridan Williams</p> <p><b>AREA 3</b> Barnes Benson Bottineau Cavalier Eddy Foster Griggs La Moure McHenry Nelson Pierce Ramsey Renville Rolette Steele Stutsman Towner Ward Wells</p>	<p><b>NORTH DAKOTA—Con.</b></p> <p><b>AREA 4</b> Cass Grand Forks Pembina Traill Walsh</p> <p><b>AREA 5</b> Dickey Ransom Richland Sargent</p> <p><b>SOUTH DAKOTA</b></p> <p><b>AREA 1</b> Bennett Butte Corson Custer Dewey Fall River Haakon Harding Jackson Jones Lawrence Lyman Meade Mellette Pennington Perkins Shannon Stanley Todd Washabaugh Ziebach</p> <p><b>AREA 2</b> Beadle Brown Campbell Clark Day Edmunds Faulk Hand Hughes Hyde McPherson Marshall Potter Spink Sully Walworth</p>
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APPENDIX A—Continued

List of Counties in Each State Economic Area—Con.

<b>SOUTH DAKOTA—Con.</b>	<b>NEBRASKA—Con.</b>	<b>NEBRASKA—Con.</b>	<b>KANSAS—Con.</b>	<b>KANSAS—Con.</b>
<b>AREA 3</b>	<b>AREA 1—Con.</b>	<b>AREA 5—Con.</b>	<b>AREA 1—Con.</b>	<b>AREA 5</b>
Aurora	Thomas	Hamilton	Wallace	Butler
Bon Homme	Wheeler	Jefferson	Wichita	Chase
Brule	<b>AREA 2</b>	Polk	<b>AREA 2</b>	Chautauqua
Buffalo	Banner	Saline	Barton	Cowley
Charles Mix	Box Butte	Seward	Cheyenne	Elk
Davidson	Chase	Thayer	Decatur	Geary
Douglas	Cheyenne	York	Edwards	Greenwood
Gregory	Deuel	<b>AREA 6</b>	Ellis	Lyon
Hanson	Keith	Burt	Ellsworth	Morris
Hutchinson	Kimball	Cedar	Finney	Pottawatomie
Jerauld	Morrill	Cuming	Gove	Riley
McCook	Perkins	Dakota	Graham	Wabaunsee
Miner	Scotts Bluff	Dixon	Hodgeman	<b>AREA 6</b>
Sanborn	<b>AREA 3</b>	Dodge	Kiowa	Atchison
Tripp	Antelope	Thurston	Lane	Brown
<b>AREA 4</b>	Boone	Washington	Lincoln	Doniphan
Brookings	Boyd	Wayne	Mitchell	Douglas
Codington	Buffalo	<b>AREA 7</b>	Ness	Jackson
Deuel	Colfax	Cass	Osborne	Jefferson
Grant	Custer	Gage	Pawnee	Leavenworth
Hamlin	Dawson	Johnson	Pratt	Nemaha
Kingsbury	Greeley	Nemaha	Rawlins	<b>AREA 7</b>
Roberts	Hall	Otoe	Rooks	Allen
<b>AREA 5</b>	Howard	Pawnee	Rush	Anderson
Clay	Knox	Richardson	Russell	Bourbon
Lake	Lincoln	Saunders	Sheridan	Coffey
Lincoln	Madison	<b>AREA A</b>	Sherman	Franklin
Minnehaha	Merrick	Lancaster	Stafford	Linn
Moody	Nance	<b>AREA B</b>	Thomas	Miami
Turner	Pierce	Douglas	Trego	Osage
Union	Platte	Sarpy	<b>AREA 3</b>	Woodson
Yankton	Sherman	<b>KANSAS</b>	Clay	<b>AREA 8</b>
<b>NEBRASKA</b>	Stanton	<b>AREA 1</b>	Cloud	Cherokee
<b>AREA 1</b>	Valley	Barber	Dickinson	Crawford
Arthur	<b>AREA 4</b>	Clark	Harper	Labette
Blaine	Dundy	Comanche	Harvey	Montgomery
Brown	Franklin	Ford	Kingman	Neosho
Cherry	Frontier	Grant	McPherson	Wilson
Dawes	Furnas	Gray	Marion	<b>AREA A</b>
Garden	Gosper	Greeley	Ottawa	Sedgwick
Garfield	Harlan	Hamilton	Reno	<b>AREA B</b>
Grant	Hayes	Haskell	Rice	Johnson
Holt	Hitchcock	Kearny	Saline	Wyandotte
Hooker	Kearney	Logan	Sumner	<b>AREA C</b>
Keya Paha	Nuckolls	Meade	<b>AREA 4</b>	Shawnee
Logan	Phelps	Morton	Jewell	<b>DELAWARE</b>
Loup	Red Willow	Scott	Marshall	<b>AREA 1</b>
McPherson	Webster	Seward	Norton	Kent
Rock	<b>AREA 5</b>	Stanton	Phillips	Sussex
Sheridan	Adams	Stevens	Republic	<b>AREA A</b>
Sioux	Butler	<b>KANSAS</b>	Smith	New Castle
	Clay	<b>AREA 1</b>	Washington	
	Fillmore	Barber		
		Clark		
		Comanche		
		Ford		
		Grant		
		Gray		
		Greeley		
		Hamilton		
		Haskell		
		Kearny		
		Logan		
		Meade		
		Morton		
		Scott		
		Seward		
		Stanton		
		Stevens		

APPENDIX A—Continued

List of Counties in Each State Economic Area—Con.

<p><b>MARYLAND</b></p> <p>AREA 1 Allegany Garrett</p> <p>AREA 2 Frederick Harford Washington</p> <p>AREA 3 Calvert Charles St. Marys</p> <p>AREA 4 Caroline Cecil Dorchester Kent Queen Annes Somerset Talbot Wicomico Worcester</p> <p>AREA A Anne Arundel Baltimore city Baltimore</p> <p>AREA B Montgomery Prince Georges</p> <p>AREA C Carroll Howard</p> <p><b>DISTRICT OF COLUMBIA</b></p> <p>AREA A Washington city</p>	<p><b>VIRGINIA—Con.</b></p> <p>AREA 2—Con. Smyth Washington Wythe Bristol city Galax city</p> <p>AREA 3 Alleghany Bath Botetourt Craig Floyd Giles Highland Montgomery Pulaski Rockbridge Buena Vista city Clifton Forge city Covington city Lexington city Radford city</p> <p>AREA 4 Augusta Clarke Frederick Page Rockingham Shenandoah Warren Harrisonburg city Staunton city Waynesboro city Winchester city</p> <p>AREA 5 Albemarle Culpeper Fauquier Greene Loudoun Madison Orange Prince William Rappahannock Spotsylvania Stafford Charlottesville city Fredericksburg city</p> <p>AREA 6 Amelia Appomattox Bedford Buckingham Cumberland</p>	<p><b>VIRGINIA—Con.</b></p> <p>AREA 6—Con. Dinwiddie Fluvanna Goochland Louisa Nelson Nottoway Powhatan Prince Edward Bedford city Colonial Heights city Petersburg city</p> <p>AREA 7 Brunswick Charlotte Franklin Halifax Henry Lunenburg Mecklenburg Patrick Pittsylvania Danville city Martinsville city South Boston city</p> <p>AREA 8 Caroline Charles City Essex Gloucester Hanover James City King and Queen King George King William Lancaster Mathews Middlesex New Kent Northumberland Richmond Westmoreland Williamsburg city</p> <p>AREA 9 Accomack Northampton</p> <p>AREA 10 Greensville Isle of Wight Nansemond Prince George Southampton Surry Sussex</p>	<p><b>VIRGINIA—Con.</b></p> <p>AREA 10—Con. Emporia city Franklin city Hopewell city Suffolk city</p> <p>AREA A Roanoke Roanoke city Salem city</p> <p>AREA B Arlington Fairfax Alexandria city Fairfax city Falls Church city</p> <p>AREA C Chesterfield Henrico Richmond city</p> <p>AREA D Chesapeake city Norfolk city Portsmouth city Virginia Beach city</p> <p>AREA E York Hampton city Newport News city</p> <p>AREA F Amherst Campbell Lynchburg city</p> <p><b>WEST VIRGINIA</b></p> <p>AREA 1 Brooke Hancock Pleasants Tyler Wetzel Wood</p> <p>AREA 2 Braxton Calhoun Clay Doddridge Gilmer Jackson Lewis Lincoln Mason Nicholas</p>	<p><b>WEST VIRGINIA—Con.</b></p> <p>AREA 2—Con. Putnam Ritchie Roane Upshur Webster Wirt</p> <p>AREA 3 Barbour Harrison Marion Monongalia Preston Taylor</p> <p>AREA 4 Boone Fayette Logan McDowell Mercer Mingo Raleigh Wyoming</p> <p>AREA 5 Grant Greenbrier Hampshire Hardy Mineral Monroe Pendleton Pocahontas Randolph Summers Tucker</p> <p>AREA 6 Berkeley Jefferson Morgan</p> <p>AREA A Marshall Ohio</p> <p>AREA B Cabell Wayne</p> <p>AREA C Kanawha</p> <p><b>NORTH CAROLINA</b></p> <p>AREA 1 Alleghany Ashe</p>
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APPENDIX A—Continued

List of Counties in Each State Economic Area—Con.

NORTH CAROLINA—Con.	NORTH CAROLINA—Con.	NORTH CAROLINA—Con.	SOUTH CAROLINA—Con.	GEORGIA—Con.
AREA 1—Con.	AREA 6—Con.	AREA B	AREA 7—Con.	AREA 3—Con.
Avery Cherokee Clay Graham Haywood Henderson Jackson Macon Madison Mitchell Swain Transylvania Watauga Yancey	Johnston Lee Sampson Warren	Forsyth	Horry Marion Williamsburg	Haralson Heard Jackson Madison Paulding Stephens
AREA 2	AREA 7	AREA D	AREA 8	AREA 4
Alexander Burke Caldwell McDowell Wilkes	Bertie Chowan Gates Halifax Hertford Martin Northampton Perquimans Washington	Mecklenburg	Beaufort Berkeley Colleton Dorchester Georgetown Jasper	Baldwin Butts Clarke Columbia Coweta Elbert Fayette Greene Hancock
AREA 3	AREA 8	SOUTH CAROLINA	AREA A	Harris Hart Henry Jasper Jones Lamar Lincoln McDuffie
Alamance Caswell Granville Orange Person Rockingham Stokes Surry Vance Yadkin	Edgecombe Greene Lenoir Nash Pitt Wayne Wilson	AREA 1	Lexington Richland	Meriwether Monroe Morgan Newton Oconee Oglethorpe Pike Putnam Rockdale Spalding Talbot
AREA 4	AREA 9	AREA 2	AREA B	Troup Upson Walton Warren Wilkes
Cabarrus Catawba Chatham Davidson Davie Iredell Montgomery Randolph Rowan Stanly	Cumberland Hoke Moore Richmond Robeson Scotland	Anderson Greenwood Laurens Spartanburg	Aiken Charleston	AREA 5
AREA 5	AREA 10	AREA 3	AREA C	Crawford Glascock Marion Taylor Twiggs Washington Wilkinson
Anson Cleveland Gaston Lincoln Polk Rutherford Union	Beaufort Camden Currituck Dare Hyde Pasquotank Tyrrell	Cherokee Chester Lancaster Union York	Charleston	AREA 6
AREA 6	AREA 11	AREA 4	AREA D	Bleckley Burke Dodge Jefferson
Franklin Harnett	Bladen Brunswick Carteret Columbus Craven Duplin Jones New Hanover Onslow Pamlico Pender	Abbeville Edgefield Fairfield McCormick Newberry Saluda	GREENVILLE	
	AREA A	AREA 5	GEORGIA	
	Buncombe	AREA 6	AREA 1	
		Chesterfield	Bartow Catoosa Chattanooga Dade Floyd Gordon Murray Polk Whitfield	
		AREA 7	AREA 2	
		Allendale Bamberg Barnwell Calhoun Clarendon Darlington Hampton Lee Marlboro Orangeburg Sumter	Dawson Fannin Gilmer Habersham Lumpkin Pickens Rabun Towns Union White	
		Dillon Florence	Banks Barrow Carroll Cherokee Douglas Forsyth Franklin Hall	

APPENDIX A—Continued

List of Counties in Each State Economic Area—Con.

<p><b>GEORGIA—Con.</b></p> <p><b>AREA 6—Con.</b>            Jenkins            Johnson            Laurens            Screven            Telfair            Treutlen            Wheeler</p> <p><b>AREA 7</b>            Baker            Ben Hill            Calhoun            Clay            Crisp            Decatur            Dooly            Dougherty            Early            Grady            Irwin            Lee            Macon            Miller            Mitchell            Peach            Pulaski            Quitman            Randolph            Schley            Seminole            Stewart            Sumter            Terrell            Tift            Turner            Webster            Wilcox            Worth</p> <p><b>AREA 8</b>            Appling            Atkinson            Bacon            Berrien            Brooks            Bulloch            Candler            Coffee            Colquitt            Cook            Emanuel            Evans            Jeff Davis            Lanier            Lowndes            Montgomery</p>	<p><b>GEORGIA—Con.</b></p> <p><b>AREA 8—Con.</b>            Tattnall            Thomas            Toombs</p> <p><b>AREA 9</b>            Brantley            Bryan            Camden            Charlton            Clinch            Echols            Effingham            Glynn            Liberty            Long            McIntosh            Pierce            Ware            Wayne</p> <p><b>AREA A</b>            Walker</p> <p><b>AREA B</b>            Clayton            Cobb            De Kalb            Fulton            Gwinnett</p> <p><b>AREA C</b>            Chattahoochee            Muscogee</p> <p><b>AREA D</b>            Richmond</p> <p><b>AREA E</b>            Chatham</p> <p><b>AREA F</b>            Bibb</p> <p><b>AREA G</b>            Houston</p> <p><b>FLORIDA</b></p> <p><b>AREA 1</b>            Bay            Calhoun            Franklin            Gulf            Liberty            Okaloosa            Wakulla            Walton            Washington</p>	<p><b>FLORIDA—Con.</b></p> <p><b>AREA 2</b>            Bradford            Clay            Dixie            Levy            Nassau            Putnam            St. Johns            Taylor</p> <p><b>AREA 3</b>            Alachua            Baker            Columbia            Gadsden            Gilchrist            Hamilton            Holmes            Jackson            Jefferson            Lafayette            Leon            Madison            Suwannee            Union</p> <p><b>AREA 4</b>            Brevard            Flagler            Indian River            St. Lucie            Volusia</p> <p><b>AREA 5</b>            Citrus            De Soto            Hardee            Hernando            Highlands            Lake            Marion            Osceola            Pasco            Polk            Sumter</p> <p><b>AREA 6</b>            Charlotte            Collier            Glades            Hendry            Lee            Manatee            Martin            Monroe            Okeechobee            Sarasota</p>	<p><b>FLORIDA—Con.</b></p> <p><b>AREA A</b>            Duval</p> <p><b>AREA B</b>            Hillsborough            Pinellas</p> <p><b>AREA C</b>            Dade</p> <p><b>AREA D</b>            Escambia            Santa Rosa</p> <p><b>AREA E</b>            Orange            Seminole</p> <p><b>AREA F</b>            Palm Beach</p> <p><b>AREA G</b>            Broward</p> <p><b>KENTUCKY</b></p> <p><b>AREA 1</b>            Ballard            Calloway            Carlisle            Fulton            Graves            Hickman            McCracken            Marshall</p> <p><b>AREA 2</b>            Daviess            McLean            Union            Webster</p> <p><b>AREA 3</b>            Breckinridge            Bullitt            Butler            Caldwell            Crittenden            Edmonson            Grayson            Green            Hancock            Hardin            Hart            Hopkins            Larue            Livingston            Lyon            Meade            Muhlenberg</p>	<p><b>KENTUCKY—Con.</b></p> <p><b>AREA 3—Con.</b>            Ohio            Taylor</p> <p><b>AREA 4</b>            Barren            Christian            Logan            Simpson            Todd            Trigg            Warren</p> <p><b>AREA 5</b>            Adair            Allen            Casey            Clinton            Cumberland            Lincoln            Metcalfe            Monroe            Pulaski            Rockcastle            Russell            Wayne</p> <p><b>AREA 6</b>            Anderson            Bath            Boone            Boyle            Bracken            Carroll            Fleming            Franklin            Gallatin            Garrard            Grant            Henry            Madison            Marion            Mason            Montgomery            Nelson            Nicholas            Oldham            Owen            Pendleton            Robertson            Shelby            Spencer            Trimble            Washington</p> <p><b>AREA 7</b>            Bourbon            Clark</p>
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APPENDIX A—Continued

List of Counties in Each State Economic Area—Con.

KENTUCKY—Con.	TENNESSEE	TENNESSEE—Con.	TENNESSEE—Con.	ALABAMA—Con.
<p>AREA 7—Con.</p> <p>Harrison Jessamine Mercer Scott Woodford</p> <p>AREA 8</p> <p>Carter Clay Elliott Estill Greenup Jackson Laurel Lawrence Lee Lewis Magoffin Menifee Morgan Owsley Powell Rowan Wolfe</p> <p>AREA 9</p> <p>Bell Breathitt Floyd Harlan Johnson Knott Knox Leslie Letcher McCreary Martin Perry Pike Whitley</p> <p>AREA A</p> <p>Jefferson</p> <p>AREA B</p> <p>Campbell Kenton</p> <p>AREA C</p> <p>Boyd</p> <p>AREA D</p> <p>Henderson</p> <p>AREA E</p> <p>Fayette</p>	<p>AREA 1</p> <p>Crockett Dyer Fayette Gibson Hardeman Haywood Lake Lauderdale Madison Obion Tipton</p> <p>AREA 2</p> <p>Benton Carroll Chester Decatur Hardin Henderson Henry McNairy Weakley</p> <p>AREA 3</p> <p>Dickson Hickman Houston Humphreys Lawrence Lewis Perry Stewart Wayne</p> <p>AREA 4</p> <p>Cheatham Montgomery Robertson Sumner</p> <p>AREA 5</p> <p>Bedford Giles Lincoln Marshall Maury Moore Rutherford Smith Trousdale Williamson Wilson</p> <p>AREA 6</p> <p>Cannon Clay Coffee</p>	<p>AREA 6—Con.</p> <p>De Kalb Franklin Jackson Macon Overton Pickett Putnam Warren White</p> <p>AREA 7</p> <p>Bledsoe Cumberland Fentress Grundy Marion Morgan Scott Sequatchie Van Buren</p> <p>AREA 8</p> <p>Bradley Campbell Carter Claiborne Cocke Grainger Greene Hamblen Hancock Hawkins Jefferson Johnson Loudon McMinn Meigs Monroe Polk Rhea Roane Sevier Sullivan Unicoi Union Washington</p> <p>AREA A</p> <p>Shelby</p> <p>AREA B</p> <p>Davidson</p> <p>AREA C</p> <p>Hamilton</p>	<p>AREA D</p> <p>Anderson Blount Knox</p> <p>ALABAMA</p> <p>AREA 1</p> <p>Colbert Lauderdale Lawrence Limestone Morgan</p> <p>AREA 2</p> <p>Blount Cullman De Kalb Jackson Marshall</p> <p>AREA 3</p> <p>Calhoun Cherokee Etowah St. Clair Shelby Talladega Walker</p> <p>AREA 4</p> <p>Chambers Clay Cleburne Coosa Lee Randolph Tallapoosa</p> <p>AREA 5</p> <p>Autauga Bibb Chilton Elmore Fayette Franklin Lamar Macon Marion Pickens Winston</p> <p>AREA 6</p> <p>Bullock Dallas Greene Hale Lowndes Marengo</p>	<p>AREA 6—Con.</p> <p>Perry Sumter Wilcox</p> <p>AREA 7</p> <p>Choctaw Clarke Washington</p> <p>AREA 8</p> <p>Baldwin Escambia</p> <p>AREA 9</p> <p>Barbour Butler Coffee Conacuh Covington Crenshaw Dale Geneva Henry Houston Monroe Pike</p> <p>AREA A</p> <p>Jefferson</p> <p>AREA B</p> <p>Russell</p> <p>AREA C</p> <p>Montgomery</p> <p>AREA D</p> <p>Mobile</p> <p>AREA E</p> <p>Tuscaloosa</p> <p>AREA F</p> <p>Madison</p> <p>MISSISSIPPI</p> <p>AREA 1</p> <p>Bolivar Coahoma Humphreys Issaquena Leflore Quitman Sharkey Sunflower Tallahatchie Tunica Washington</p>

APPENDIX A—Continued

List of Counties in Each State Economic Area—Con.

<p><b>MISSISSIPPI—Con.</b></p> <p><b>AREA 2</b> Benton Carroll De Soto Grenada Holmes Madison Marshall Panola Tate Yalobusha Yazoo</p> <p><b>AREA 3</b> Adams Amite Claiborne Copiah Franklin Jefferson Lincoln Pike Warren Wilkinson</p> <p><b>AREA 4</b> Alcorn Calhoun Itawamba Lafayette Pontotoc Prentiss Tippah Tishomingo Union</p> <p><b>AREA 5</b> Chickasaw Clay Lee Lowndes Monroe Noxubee Oktibbeha</p> <p><b>AREA 6</b> Attala Choctaw Clarke Covington Jasper Jefferson Davis Jones Kemper Lauderdale Lawrence Leake Marion</p>	<p><b>MISSISSIPPI—Con.</b></p> <p><b>AREA 6—Con.</b> Montgomery Neshoba Newton Rankin Scott Simpson Smith Walthall Wayne Webster Winston</p> <p><b>AREA 7</b> Forrest George Greene Lamar Pearl River Perry Stone</p> <p><b>AREA 8</b> Hancock Harrison Jackson</p> <p><b>AREA A</b> Hinds</p> <p><b>ARKANSAS</b></p> <p><b>AREA 1</b> Benton Washington</p> <p><b>AREA 2</b> Crawford Franklin Johnson Logan Pope Sebastian Yell</p> <p><b>AREA 3</b> Conway Faulkner Independence Randolph Sharp White</p> <p><b>AREA 4</b> Garland Hot Springs Montgomery Perry Pike</p>	<p><b>ARKANSAS—Con.</b></p> <p><b>AREA 4—Con.</b> Polk Saline Scott Sevier</p> <p><b>AREA 5</b> Columbia Hempstead Howard Lafayette Little River Miller Nevada</p> <p><b>AREA 6</b> Ashley Bradley Calhoun Clark Cleveland Dallas Drew Grant Ouachita Union</p> <p><b>AREA 7</b> Arkansas Clay Craighead Cross Greene Jackson Lawrence Lonoke Monroe Poinsett Prairie Woodruff</p> <p><b>AREA 8</b> Chicot Crittenden Desha Jefferson Lee Lincoln Mississippi Phillips St. Francis</p> <p><b>AREA 9</b> Baxter Boone Carroll Cleburne Fulton Izard</p>	<p><b>ARKANSAS—Con.</b></p> <p><b>AREA 9—Con.</b> Madison Marion Newton Searcy Stone Van Buren</p> <p><b>AREA A</b> Pulaski</p> <p><b>LOUISIANA</b></p> <p><b>AREA 1</b> Natchitoches Rapides Red River</p> <p><b>AREA 2</b> Catahoula Concordia East Carroll Franklin Madison Morehouse Richland Tensas West Carroll</p> <p><b>AREA 3</b> Avoyelles Evangeline Lafayette Pointe Coupee St. Landry</p> <p><b>AREA 4</b> Bienville Caldwell Clairborne Grant Jackson La Salle Lincoln Union Webster Winn</p> <p><b>AREA 5</b> East Feliciana Livingston Plaquemines St. Charles St. Helena St. Tammany Tangipahoa Washington West Feliciana</p>	<p><b>LOUISIANA—Con.</b></p> <p><b>AREA 6</b> Ascension Assumption Iberia Iberville Lafourche St. James St. John the Baptist St. Martin St. Mary Terrebonne West Baton Rouge</p> <p><b>AREA 7</b> Acadia Allen Cameron Jefferson Davis Vermilion</p> <p><b>AREA 8</b> Beauregard De Soto Sabine Vernon</p> <p><b>AREA A</b> Bossier Caddo</p> <p><b>AREA B</b> Jefferson Orleans St. Bernard</p> <p><b>AREA C</b> East Baton Rouge</p> <p><b>AREA D</b> Calcasieu</p> <p><b>AREA E</b> Ouachita</p> <p><b>OKLAHOMA</b></p> <p><b>AREA 1</b> Beaver Cimarron Custer Dewey Ellis Harper Roger Mills Texas Woods Woodward</p>
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APPENDIX A--Continued

List of Counties in Each State Economic Area--Con.

OKLAHOMA--Con.	OKLAHOMA--Con.	TEXAS--Con.	TEXAS--Con.	TEXAS--Con.
<p>AREA 2</p> <p>Alfalfa Blaine Garfield Grant Kay Kingfisher Major Noble</p> <p>AREA 3</p> <p>Craig Mayes Nowata Ottawa Rogers Washington</p> <p>AREA 4</p> <p>Beckham Caddo Comanche Cotton Grady Greer Harmon Jackson Kiowa Tillman Washita</p> <p>AREA 5</p> <p>Garvin Lincoln Logan McClain Pawnee Payne Pottawatomie</p> <p>AREA 6</p> <p>Coal Hughes Okfuskee Pontotoc Seminole</p> <p>AREA 7</p> <p>Bryan Carter Choctaw Jefferson Johnston Love Marshall Murray Stephens</p>	<p>AREA 8</p> <p>Haskell McIntosh Muskogee Okmulgee Sequoyah Wagoner</p> <p>AREA 9</p> <p>Atoka Latimer Le Flore McCurtain Pittsburg Pushmataha</p> <p>AREA 10</p> <p>Adair Cherokee Delaware</p> <p>AREA A</p> <p>Tulsa Osage</p> <p>AREA B</p> <p>Cleveland Oklahoma</p> <p>AREA C</p> <p>Creek</p> <p>AREA D</p> <p>Canadian</p> <p>TEXAS</p> <p>AREA 1</p> <p>Brewster Culberson Hudspeth Jeff Davis Loving Pecos Presidio Reeves Ward</p> <p>AREA 2</p> <p>Bandera Blanco Coke Comal Concho Gillespie Hays Kendall Kerr Llano McCulloch</p>	<p>AREA 2--Con.</p> <p>Mason Medina San Saba Tom Green</p> <p>AREA 3</p> <p>Brooks Dimmit Duval Jim Hogg Kenedy Kleberg La Salle McMullen Maverick Starr Webb Zapata Zavala</p> <p>AREA 4</p> <p>Armstrong Briscoe Carson Castro Dallam Deaf Smith Floyd Gray Hale Hansford Hartley Hemphill Hutchinson Lipscomb Moore Ochiltree Oldham Parmer Roberts Sherman Swisher</p> <p>AREA 5</p> <p>Andrews Bailey Cochran Crane Crosby Dawson Ector Gaines Hockley Howard Lamb Lynn</p>	<p>AREA 5--Con.</p> <p>Martin Midland Terry Winkler Yoakum</p> <p>AREA 6</p> <p>Baylor Borden Brown Callehan Childress Clay Coleman Collingsworth Cottle Dickens Donley Fisher Foard Garza Hall Hardeman Haskell Kent King Knox Mitchell Motley Nolan Runnels Scurry Shackelford Stephens Stonewall Throckmorton Wheeler Wilbarger Young</p> <p>AREA 7</p> <p>Bosque Burnet Comanche Cooke Coryell Eastland Erath Hamilton Hood Jack Lampasas Mills Montague Palo Pinto Parker</p>	<p>AREA 7--Con.</p> <p>Somervell Wise</p> <p>AREA 8</p> <p>Bell Delta Falls Fannin Grayson Hill Hunt Kaufman Lamar Limestone Milan Navarro Rockwall Williamson</p> <p>AREA 9</p> <p>Bastrop Brazos Burleson Freestone Grimes Lee Leon Madison Robertson</p> <p>AREA 10</p> <p>Caldwell Fayette Gonzales Guadalupe Lavaca Washington</p> <p>AREA 11</p> <p>Aransas Atascosa Bee De Witt Frio Goliad Jim Wells Karnes Live Oak Refugio San Patricio Wilson</p> <p>AREA 12</p> <p>Anderson Bowie Camp Cass</p>

APPENDIX A—Continued

List of Counties in Each State Economic Area—Con.

<p><b>TEXAS—Con.</b></p> <p><b>AREA 12—Con.</b>            Cherokee            Franklin            Gregg            Harrison            Henderson            Hopkins            Houston            Marion            Morris            Nacogdoches            Panola            Rains            Red River            Rusk            Shelby            Smith            Titus            Upshur            Van Zandt            Wood</p> <p><b>AREA 13</b>            Angelina            Hardin            Jasper            Montgomery            Newton            Polk            Sabine            San Augustine            San Jacinto            Trinity            Tyler            Walker</p> <p><b>AREA 14</b>            Austin            Brazoria            Calhoun            Chambers            Colorado            Fort Bend            Jackson            Liberty            Matagorda            Victoria            Waller            Wharton</p> <p><b>AREA 15</b>            Cameron            Hidalgo            Willacy</p> <p><b>AREA 16</b>            Crockett            Edwards</p>	<p><b>TEXAS—Con.</b></p> <p><b>AREA 16—Con.</b>            Glasscock            Irion            Kimble            Kinney            Menard            Reagan            Real            Schleicher            Sterling            Sutton            Terrell            Upton            Uvalde            Val Verde</p> <p><b>AREA A</b>            El Paso</p> <p><b>AREA B</b>            Johnson            Tarrant</p> <p><b>AREA C</b>            Collin            Dallas            Ellis</p> <p><b>AREA D</b>            McLennan</p> <p><b>AREA E</b>            Travis</p> <p><b>AREA F</b>            Bexar</p> <p><b>AREA G</b>            Harris</p> <p><b>AREA H</b>            Jefferson            Orange</p> <p><b>AREA J</b>            Potter            Randall</p> <p><b>AREA K</b>            Archer            Wichita</p> <p><b>AREA L</b>            Lubbock</p> <p><b>AREA M</b>            Galveston</p> <p><b>AREA N</b>            Nueces</p> <p><b>AREA O</b>            Denton</p>	<p><b>TEXAS—Con.</b></p> <p><b>AREA P</b>            Jones            Taylor</p> <p><b>MONTANA</b></p> <p><b>AREA 1</b>            Beaverhead            Broadwater            Deer Lodge            Flathead            Gallatin            Granite            Jefferson            Lake            Lewis and Clark            Lincoln            Madison            Meagher            Mineral            Missoula            Part            Powell            Ravalli            Sanders            Silver Bow            Yellowstone National            Park (part)</p> <p><b>AREA 2</b>            Blaine            Cascade            Chouteau            Daniels            Dawson            Fallon            Fergus            Glacier            Hill            Judith Basin            Liberty            McCone            Phillips            Pondera            Prairie            Richland            Roosevelt            Sheridan            Teton            Toole            Valley            Wibaux</p> <p><b>AREA 3</b>            Big Horn            Carbon</p>	<p><b>MONTANA—Con.</b></p> <p><b>AREA 3—Con.</b>            Stillwater            Yellowstone</p> <p><b>AREA 4</b>            Carter            Custer            Garfield            Golden Valley            Musselshell            Petroleum            Powder River            Rosebud            Sweet Grass            Treasure            Wheatland</p> <p><b>IDAHO</b></p> <p><b>AREA 1</b>            Adams            Blaine            Boise            Bonner            Boundary            Butte            Camas            Clark            Clearwater            Custer            Elmore            Idaho            Lemhi            Shoshone            Valley</p> <p><b>AREA 2</b>            Benewah            Kootenai            Latah            Lewis            Nez Perce</p> <p><b>AREA 3</b>            Ada            Canyon            Cassia            Gem            Gooding            Jerome            Lincoln            Minidoka            Owyhee            Payette            Twin Falls            Washington</p>	<p><b>IDAHO—Con.</b></p> <p><b>AREA 4</b>            Bannock            Bear Lake            Bingham            Bonneville            Caribou            Franklin            Fremont            Jefferson            Madison            Oneida            Power            Teton</p> <p><b>WYOMING</b></p> <p><b>AREA 1</b>            Albany            Carbon            Lincoln            Natrona            Sublette            Sweetwater            Teton            Uinta</p> <p><b>AREA 2</b>            Big Horn            Campbell            Converse            Crook            Fremont            Goshen            Hot Springs            Johnson            Laramie            Niobrara            Park            Platte            Sheridan            Washakie            Weston</p> <p><b>COLORADO</b></p> <p><b>AREA 1</b>            Chaffee            Clear Creek            Eagle            Garfield            Gilpin            Grand            Gunnison            Hinsdale            Jackson            Lake</p>
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APPENDIX A—Continued

List of Counties in Each State Economic Area—Con.

<b>COLORADO—Con.</b>	<b>COLORADO—Con.</b>	<b>ARIZONA</b>	<b>UTAH—Con.</b>	<b>WASHINGTON—Con.</b>
<b>AREA 1—Con.</b>	<b>AREA A</b>	<b>AREA 1</b>	<b>AREA B</b>	<b>AREA 6—Con.</b>
Mineral	Adams	Apache	Weber	Klickitat
Moffat	Arapahoe	Coconino		Yakima
Ouray	Denver	Gila	<b>NEVADA</b>	<b>AREA 7</b>
Park	Jefferson	Mohave		Adams
Pitkin	<b>AREA B</b>	Navajo	<b>AREA 1</b>	Asotin
Rio Blanco	El Paso	Yavapai	Churchill	Columbia
Routt	<b>AREA C</b>	<b>AREA 2</b>	Douglas	Douglas
San Juan	Pueblo	Cochise	Elko	Franklin
Summit	<b>AREA D</b>	Graham	Esmeralda	Garfield
Teller	Boulder	Greenlee	Eureka	Grant
<b>AREA 2</b>	<b>NEW MEXICO</b>	Pinal	Humboldt	Lincoln
Alamosa	<b>AREA 1</b>	Santa Cruz	Lander	Walla Walla
Archuleta	Catron	Yuma	Lincoln	Whitman
Conejos	Los Alamos	<b>AREA A</b>	Lyon	<b>AREA 8</b>
Costilla	McKinley	Maricopa	Mineral	Ferry
Delta	Rio Arriba	<b>AREA B</b>	Nye	Pend Oreille
Dolores	Sandoval	Pima	Pershing	Stevens
La Plata	San Juan	<b>UTAH</b>	Storey	<b>AREA A</b>
Mesa	Santa Fe	<b>AREA 1</b>	Washoe	King
Montezuma	Taos	Box Elder	White Pine	<b>AREA B</b>
Montrose	Valencia	Cache	Carson City city	Pierce
Rio Grande	<b>AREA 2</b>	Morgan	<b>AREA A</b>	<b>AREA C</b>
Saguache	Colfax	Rich	Clark	Clark
San Miguel	Curry	Sanpete	<b>WASHINGTON</b>	<b>AREA D</b>
<b>AREA 3</b>	De Baca	Sevier	<b>AREA 1</b>	Spokane
Larimer	Guadalupe	Summit	Clallam	<b>AREA E</b>
Logan	Harding	Wasatch	Grays Harbor	Snohomish
Morgan	Mora	<b>AREA 2</b>	Jefferson	<b>OREGON</b>
Sedgwick	Quay	Davis	Mason	<b>AREA 1</b>
Weld	Roosevelt	Utah	Pacific	Clatsop
<b>AREA 4</b>	San Miguel	<b>AREA 3</b>	Wahkiakum	Columbia
Cheyenne	Torrance	Beaver	<b>AREA 2</b>	Coos
Douglas	Union	Carbon	Island	Curry
Elbert	<b>AREA 3</b>	Daggett	San Juan	Douglas
Kiowa	Chaves	Duchesne	Skagit	Jackson
Kit Carson	Dona Ana	Emery	Whatcom	Josephine
Lincoln	Eddy	Garfield	<b>AREA 3</b>	Lincoln
Phillips	Grant	Grand	Kitsap	Tillamook
Washington	Hidalgo	Iron	<b>AREA 4</b>	<b>AREA 2</b>
Yuma	Lea	Juab	Cowlitz	Benton
<b>AREA 5</b>	Lincoln	Kane	Lewis	Hood River
Baca	Luna	Millard	Skamania	Linn
Bent	Otero	Piute	Thurston	Marion
Crowley	Sierra	San Juan	<b>AREA 5</b>	Polk
Custer	Socorro	Tooele	Chelan	Yamhill
Fremont	<b>AREA A</b>	Uintah	Okanogan	<b>AREA 3</b>
Huerfano	Bernalillo	Washington	<b>AREA 6</b>	Gilliam
Las Animas		Wayne	Benton	Morrow
Otero		<b>AREA A</b>	Kittitas	Sherman
Prowers		Salt Lake		

APPENDIX A—Continued

List of Counties in Each State Economic Area—Con.

<p><b>OREGON—Con.</b></p> <p>AREA 3—Con. Umatilla Wasco</p> <p>AREA 4 Baker Crook Deschutes Grant Harney Jefferson Klamath Lake Malheur Union Wallowa Wheeler</p> <p>AREA A Clackamas Multnomah Washington</p> <p>AREA B Lane</p>	<p><b>CALIFORNIA</b></p> <p>AREA 1 Del Norte Humboldt Lake Mendocino</p> <p>AREA 2 Napa Sonoma</p> <p>AREA 3 Monterey San Benito San Luis Obispo Santa Cruz</p> <p>AREA 4 Butte Colusa Glenn Sutter Tehama Yolo Yuba</p> <p>AREA 5 Merced Stanislaus</p>	<p><b>CALIFORNIA—Con.</b></p> <p>AREA 6 Kings Madera Tulare</p> <p>AREA 7 Ventura</p> <p>AREA 8 Imperial</p> <p>AREA 9 Alpine Amador Calaveras El Dorado Inyo Lassen Mariposa Modoc Mono Nevada Placer Plumas Shasta Sierra</p>	<p><b>CALIFORNIA—Con.</b></p> <p>AREA 9—Con. Siskiyou Trinity Tuolumne</p> <p>AREA A Alameda Contra Costa Marin San Francisco San Mateo Solano</p> <p>AREA B Santa Clara</p> <p>AREA C Sacramento</p> <p>AREA D San Joaquin</p> <p>AREA E Fresno</p> <p>AREA F Los Angeles Orange</p>	<p><b>CALIFORNIA—Con.</b></p> <p>AREA G San Diego</p> <p>AREA H Riverside San Bernardino</p> <p>AREA J Kern</p> <p>AREA K Santa Barbara</p> <p><b>ALASKA</b></p> <p>AREA 1 All census divisions</p> <p><b>HAWAII</b></p> <p>AREA 1 Hawaii Kauai Maui</p> <p>AREA A Honolulu</p>
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## Appendix B.—DEFINITIONS AND EXPLANATIONS OF SUBJECT CHARACTERISTICS

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### SOCIAL CHARACTERISTICS

#### AGE

The data on age were derived from answers to questions 5, 6, and 7, which were asked of all persons (see facsimiles of questionnaire items and instructions on page App-33). Only the information in items 6 and 7 was read into the computer. Answers in item 5, which was not FOSDIC readable, were used during field review to fill any blanks in items 6 and 7. The age classification is based on the age of the person in completed years as of April 1, 1970. The data on age represent the difference, as calculated in the computer, between date of birth and April 1, 1970.

**Median age.**—The median age is that age which divides the distribution into two equal parts, one half being older than the median age and one half younger. When the median falls in the terminal category of an age distribution, the method of presentation is to show the initial age of the terminal category followed by a plus sign; thus, if the median falls in the category "75 years and over," it is shown as "75+."

#### RACE

The data on race were derived from answers to question 4, which was asked of all persons (see facsimile of questionnaire item on page App-33). The concept of race as used by the Bureau of the Census does not denote clear-cut scientific definitions of biological stock. Rather it reflects self-identification by respondents. Since the 1970 census obtained information on race primarily through self-enumeration, the data represent essentially self-classification by people according to the race with which they identify themselves.

For persons of mixed parentage who were in doubt as to their classification, the race of the person's father was used. In 1960, persons who reported mixed parentage of white and any other race were classified according to the other race; mixtures of races other than white were classified according to the race of the father.

The category "white" includes persons who indicated their race as white, as well as persons who did not classify themselves in one of the specific race categories on the questionnaire but entered Mexican, Puerto Rican, or a response suggesting Indo-European stock.

The category "Negro" includes persons who indicated their race as Negro

or Black, as well as persons who did not classify themselves in one of the specific race categories on the questionnaire but who had such entries as Jamaican, Trinidadian, West Indian, Haitian, and Ethiopian.

If the race entry was missing on the questionnaire for a member of a household, an answer was assigned in the computer according to the race of other household members, using specific rules of precedence of relationship. If race was not entered for anyone in the household, the race of the head of the preceding household was assigned. This procedure is a variation of the general allocation process described in the section on "Accuracy of the Data."

#### NATIVITY, PLACE OF BIRTH, AND PARENTAGE

The data on nativity, place of birth, and parentage were derived from answers to questions 13, 14, and 15 (see facsimiles of questionnaire items and instructions on pages App-34 and 37).

The category "native" comprises persons born in the United States, the Commonwealth of Puerto Rico or an outlying area of the United States, or at sea. Also included in this category is the small number of persons who, although they were born in a foreign country, have at least one native American parent. The category "foreign born" includes all persons not classified as native. The category "native of native parentage" comprises native persons both of whose parents are also natives of the United States. "Native of foreign or mixed parentage" comprises native persons one or both of whose parents are foreign born.

The native population is further

classified into the following four groups: persons born in the State in which they were residing at the time of the census; persons born in a different State; persons born abroad of American parents, or at sea or in an outlying area of the United States; and persons whose State of birth was not reported. Respondents were instructed to report place of birth in terms of the mother's usual State of residence at the time of the birth rather than in terms of the location of the hospital if the birth occurred in a hospital. More detailed classifications of the native population of each State, by area of birth, are presented in the Detailed Characteristics reports (PC(1)-D).

#### MOTHER TONGUE

The data on mother tongue were derived from answers to question 17 (see facsimiles of questionnaire item and instructions, pages App-34 and 37). The question related to the language spoken in the person's home when he was a child and was asked of all persons in the 15-percent sample. Information on mother tongue is used to assist in the identification of the various ethnic groups in the population. In particular, the Spanish language population is defined primarily on this basis. Statistics on mother tongue are also employed to identify geographic areas of the United States which have a high proportion of children living in households where English is not the major language. The data on mother tongue may not reflect a person's current language skills since the vast majority of persons reporting a mother tongue other than English have learned to speak English during or after their childhood.

#### SPANISH HERITAGE

In this report, social and economic characteristics are presented for the population of Spanish heritage, which is identified in various ways, using information derived from the 15-percent sample. In 42 States and the District of Columbia, this population is identified as "Persons of Spanish language;" in five Southwestern States, as "Persons of Spanish language or Spanish surname;" and in the three Middle Atlantic States, as "Persons of Puerto Rican birth or parentage." The specific definitions involved in identifying these population groups are given below.

**Spanish language.**—Persons of Spanish language comprise persons of Spanish mother tongue and all other persons in families in which the head or wife reported Spanish as his or her mother tongue.

**Spanish surname.**—In five Southwestern States (Arizona, California, Colorado, New Mexico, and Texas) persons with Spanish surnames were identified by means of a list of over 8,000 Spanish surnames originally compiled by the Immigration and Naturalization Service<sup>1</sup> (and later updated by the Bureau of the Census). In the five Southwestern States social and economic characteristics are presented for persons of Spanish language combined with all other persons of Spanish surname. The number of these additional persons is shown in the category "Other persons of Spanish surname."

<sup>1</sup>U.S. Immigration and Naturalization Service, *Supplement to Manual of Immigration, Spanish-Spanish Personal Names*, selected by Inspector George Lockwood, New York, 1936.

**Puerto Rican birth or parentage.**—The population of Puerto Rican birth or parentage includes persons born in Puerto Rico and persons born in the United States or an outlying area with one or both parents born in Puerto Rico. Social and economic characteristics are shown for this group in the SEA's for New York, New Jersey, and Pennsylvania.

#### SPANISH ORIGIN OR DESCENT

The data on Spanish origin or descent were derived from answers to question 13b, which appeared on the 5-percent sample questionnaire (see facsimile of questionnaire item, page App-34). A person was classified as being of Spanish origin or descent if his or her entry for this question was any of the following: Mexican, Puerto Rican, Cuban, Central or South American, or "Other Spanish."

For certain areas, the number of persons of Spanish origin or descent is overstated because some respondents apparently misunderstood the question and interpreted "Central or South American" to mean central or southern United States. Available evidence suggests that this misinterpretation resulted in an overstatement which was substantial in some southern States and may have occurred, to a lesser degree, in States in the central area of the country.

#### SCHOOL ENROLLMENT AND YEAR OF SCHOOL IN WHICH ENROLLED

The data on school enrollment were derived from answers to question 20 (see facsimiles of questionnaire item and instructions, pages App-34 and 37).

This question was asked of all persons in the 15-percent sample and tabulated for persons 3 years old and over. The data on year of school in which enrolled were obtained from responses, for those who were enrolled, to the question on highest grade attended, question 21 (see facsimiles of questionnaire item and instructions, pages App-34 and 37).

**Schooling included.**—Persons were included as enrolled in school if they reported attending a "regular" school or college at any time between February 1, 1970, and the time of enumeration. According to the census definition, "regular" schooling refers to formal education obtained in public and private (denominational or non-denominational) nursery schools, kindergartens, elementary and secondary schools, colleges, universities, or professional schools, whether day or night school, and whether attendance was full time or part time. That is, "regular" schooling is that which may advance a person toward an elementary school certificate or high school diploma, or a college, university, or professional degree. Schooling that was not obtained in a regular school and schooling from a tutor or through correspondence courses were counted only if the credits obtained were regarded as transferable to a school in the regular school system. Persons were included as enrolled in nursery school only if the school included instruction as an important and integral phase of its program. Persons who had been enrolled in a regular school since February 1, 1970, but who had not actually attended, for example because of illness, were counted as enrolled in school.

In general, a "public" school is de-

finied as any school which is controlled and supported primarily by a local, State, or Federal government agency.

**Schooling excluded.**—Persons were excluded from the enrollment figures if the only schools they had been attending at any time since February 1, 1970, were *not* "regular" (unless courses taken at such schools could have been counted for credit at a regular school). Schooling which is generally regarded as *not* "regular" includes that given in nursery schools which simply provide custodial day care, in specialized vocational, trade, or business schools, in on-the-job training, and through correspondence courses.

**Level and year of school in which enrolled.**—Persons who were enrolled in school were classified according to the level and year of school in which they were enrolled. The levels which are separately identified in this report are nursery school, kindergarten, elementary school, high school, and college. Elementary school, as defined here, includes grades 1 to 8 and high school includes grades 9 to 12. If a person was attending a junior high school, the equivalent in terms of 8 years of elementary school and 4 years of high school was obtained. (See the section on "Years of school completed" for a discussion of variations in school organization.) The term "college" includes junior or community colleges, regular 4-year colleges, and graduate or professional schools.

**Enumeration of college students.**—College students were enumerated in the 1950, 1960, and 1970 censuses where they lived while attending college whereas in most earlier cen-

suses they were enumerated at their parental home.

#### YEARS OF SCHOOL COMPLETED

The data on years of school completed were derived from answers to questions 21 and 22 (see facsimiles of questionnaire items and instructions, pages App-34 and 37).

These questions on educational attainment applied only to progress in "regular" schools, as defined above. Both questions were tabulated for all persons 3 years of age and over in the 20-percent sample.

**Highest grade of school attended.**—The first question called for the highest grade attended, regardless of "skipped" or "repeated" grades. In some areas in the United States, the school system formerly had 11 years of school (7 years of elementary school and 4 years of high school) rather than the more conventional 12 years (8 years of elementary school and 4 years of high school, or equivalent years in the elementary-junior high-senior high school system). Persons who had progressed beyond the 7th grade in this type of school system were treated as though they had progressed beyond the 8th grade of elementary school.

Persons whose highest grade of attendance was in a foreign school system, or in an ungraded school whose highest level of schooling was measured by "readers," or whose training was received through a tutor were instructed to report the approximate equivalent grade in the regular United States school system.

**Completion of grade.**—The second question on educational attainment

asked whether or not the highest grade attended had been finished. It was to be answered "Yes" if the person had successfully completed the entire grade or year indicated in response to the previous question. If the person had completed only a half grade or semester, or had dropped out or failed to pass the last grade attended, the question was to be answered "No." If the person was still attending school in that grade, he answered "Now attending."

#### MARITAL STATUS

The data on marital status were derived from question 8 (see facsimiles of questionnaire item and instructions on page App-33).

This question was asked of all persons. The marital status classification refers to the status at the time of enumeration. Persons classified as "married" consist of those who have been married only once and those who remarried after having been widowed or divorced. Persons reported as separated (either legally separated or otherwise absent from their spouse because of marital discord) are classified as a subcategory of married persons. Persons in common-law marriages are classified as married, and persons whose only marriage had been annulled are classified as never married.

A woman is classified as "married, husband present" if her husband is living in the same household, even though he may have been temporarily absent on business, on vacation, or in a hospital at the time of enumeration. Women "ever married" are those in the categories married (including separated), widowed, and divorced.

#### HOUSEHOLD, GROUP QUARTERS, AND RELATIONSHIP TO HOUSEHOLD HEAD

The data on household relationship and group quarters were derived from answers to question 2 and from information on type of living quarters (see facsimiles of questionnaire item and instructions, page App-33).

The question on household relationship was asked of all persons. The item on type of unit was filled in the census office for each household.

**Household.**—A household includes all the persons who occupy a group of rooms or a single room which constitutes a housing unit. A group of rooms or single room is regarded as a housing unit when it is occupied as separate living quarters, that is, when the occupants do not live and eat with any other persons in the structure, and when there is either (1) direct access from the outside of the building or through a common hall or (2) complete kitchen facilities for the exclusive use of the occupants of the household.

**Relationship to head of household.**—Four categories of relationship to head of household are recognized in this report.

1. *Head of household.*—One person in each household is designated as the "head," that is, the person who is regarded as the head by the members of the household. However, if a married woman living with her husband was reported as the head, her husband was considered the head for the purpose of simplifying the tabulations.

Two types of household head are distinguished—the head of a family and a primary individual. A family head is a household head living with one or more persons related to him by blood, marriage, or adoption. A primary individual is a household head living alone or with nonrelatives only.

2. *Wife of head.*—A woman married to and living with a household head, including women in common-law marriages as well as women in formal marriages. The number of women in this category may not always be the same as the number of "husband-wife households" and the number of "husband-wife families," because of minor differences in the weighting of the data.

3. *Other relative of head.*—All persons related to the head of the household by blood, marriage, or adoption except "wife of head."

4. *Not related to head.*—All persons in the household not related to the head by blood, marriage, or adoption. Roomers, boarders, lodgers, partners, resident employees, wards, and foster children are included in this category.

**Group quarters.**—All living arrangements other than households are classified by the Bureau of the Census as group quarters. Persons living in group quarters are shown in this report as either "inmate of institution" or "other group quarters" defined as follows:

*Inmate.*—Persons under care or custody at the time of enumeration

in homes, schools, hospitals or wards for juveniles, the physically handicapped, or the mentally handicapped; homes or hospitals for mental, tuberculosis, or other chronic disease patients; homes for unwed mothers; nursing, convalescent, and rest homes; homes for the aged and dependent; and correctional institutions are enumerated as "patient or inmate" of an institution—regardless of their length of stay in that place and regardless of the number of people in the particular place. These persons are all shown in the tabulations as "inmate of institution."

*Other group quarters.*—A separate living quarters is called a group quarters if there are five or more persons unrelated to the head or, if there is no designated head, six or more unrelated persons in the unit. Places that fall into this category are rooming and boarding houses, communes, workers' dormitories, and convents or monasteries.

Persons residing in certain other types of living arrangements are classified as living in group quarters, regardless of the number or relationship of people in the unit. These include persons residing in military barracks, on ships, in college dormitories, or in sorority and fraternity houses; patients in short-term medical and surgical wards of hospitals who have no usual residence elsewhere; staff members in institutional quarters; and persons enumerated in missions, flophouses, Salvation Army shelters, railroad stations, etc. These people are shown in the tabulations as "in other group quarters."

## MARRIED COUPLE, FAMILY, AND UNRELATED INDIVIDUAL

### Married Couple

In the 1970 census, a married couple is defined as a husband and his wife enumerated as members of the same household. Statistics on married couples were compiled in 1970 only for persons in sample housing units. The number of married couples, as shown in this report, is identical to the number of married men with wife present. By definition, the number of married couples in any area should also be identical to the number of married women with husband present; however, the two figures may not be exactly the same in this report, because the methods used to inflate the sample sometimes gave different weights for husbands than for their wives.

### Family and Subfamily

According to 1970 census definitions, a family consists of a household head and one or more other persons living in the same household who are related to the head by blood, marriage, or adoption; all persons in a household who are related to the head are regarded as members of his (her) family. A "husband-wife family" is a family in which the head and his wife are enumerated as members of the same household. Not all households contain families, because a household may be composed of a group of unrelated persons or one person living alone.

A subfamily is a married couple with or without children, or one parent with one or more single children under 18 years old, living in a household and related to, but not including, the head of the household

or his wife. The most common example of a subfamily is a young married couple sharing the home of the husband's or wife's parents. Members of a subfamily are also included among the members of a family. The number of subfamilies, therefore, is not included in the number of families.

### Own Child and Related Child

Statistics on the presence of "own" children are shown in this report for married couples, families, subfamilies, and women 16 years and over. In the 1970 census, as in 1960, a child under 18 years old is defined as an "own" child if he or she is a single (never married) son, daughter, stepchild, or adopted child of a married couple or of a family or subfamily head. In the 1970 census, the term "sons/daughters under 25" is used with the same meaning as "own children under 25" in the 1960 census; these and other similar terms that include persons 18 years old and over relate to all children of the head regardless of marital status. The number of "children living with both parents" includes stepchildren and adopted children as well as sons and daughters born to the couple. "Related" children in a family include all persons under 18 years old related to the head except wife of head.

### Unrelated Individual

An unrelated individual, as defined in this report, may be any of the following: a household head living alone or with nonrelatives only, a household member not related to the head, or a person living in group quarters who is not an inmate of an institution. In the tables on income statistics, unrelated individuals are limited to those 14 years of age or older.

**CHILDREN EVER BORN**

The data on children ever born were derived from answers to question 25 (see facsimiles of questionnaire item and instructions, pages App-34 and 37).

In this report the statistics presented on this subject are for women ever married who were in the 20-percent sample. Similar information collected from single women was not included because of anticipated weaknesses in the data and because more complete comparability with previous censuses was achieved thereby.

In the 1970 census, a terminal category of "12 or more" was used for recording the number of children ever born. For purposes of computing the total number of children ever born, the terminal category was given a mean value of 13.

**ECONOMIC CHARACTERISTICS**

**EMPLOYMENT STATUS**

The data on employment status were derived from answers to questions 29a, 29b, 30, and 31 (see facsimiles of questionnaire items and instructions, pages App-35 and 37).

The series of questions on employment status were asked of all persons 14 years old and over in the 20-percent sample and were designed to identify, in this sequence: (a) persons who worked at any time during the reference week; (b) persons who did not work during the reference week but who had jobs or businesses from which they were temporarily absent (excluding layoff); (c) persons on layoff; and (d) persons who did not work during the reference week, but who were looking for work during the past

four weeks and were available for work during the reference week.

Most of the employment status data shown in this and other 1970 census reports relate to persons 16 years old and over. In 1940, 1950, and 1960, employment status data were presented for persons 14 years old and over. The change in the universe for 1970 was made to achieve conformity with the official measurement of the labor force as revised in January 1967. Selected employment status data, however, are shown for persons 14 and 15 years old.

**Reference week.**—Data on employment status refer to the calendar week prior to the date on which respondents completed their questionnaires or were interviewed by enumerators. Since the week of enumeration was not the same for all persons, the reference week for employment data is not entirely uniform. For many persons, the reference week for answering the 1970 census employment status questions was the last week in March. Good Friday occurred during this week and time off from work was taken by some workers for this occasion. The effect of this holiday on the 1970 census employment status data varies from area to area depending on the leave practices and time of census enumeration in the area. It is not likely that there was much effect on the overall measurement of employment since employment is based on the work activity during the entire week. The effect of the holiday on the hours worked data should, however, be considered in any interpretation or other use of the data.

**Employed.**—Employed persons comprise all civilians 16 years old and over who were either (a) "at work"—those who did any work at all as paid

employees or in their own business or profession, or on their own farm, or who worked 15 hours or more as unpaid workers on a family farm or in a family business; or (b) were "with a job but not at work"—those who did not work during the reference week but had jobs or businesses from which they were temporarily absent due to illness, bad weather, industrial dispute, vacation, or other personal reasons. Excluded from the employed are persons whose only activity consisted of work around the house or volunteer work for religious, charitable, and similar organizations.

**Unemployed.**—Persons are classified as unemployed if they were civilians 16 years old and over and: (a) were neither "at work" nor "with a job, but not at work" during the reference week, (b) were looking for work during the past 4 weeks, and (c) were available to accept a job. Examples of job seeking activities are: (1) registering at a public or private employment office, (2) meeting with prospective employers, (3) checking with friends or relatives, (4) placing or answering advertisements, (5) writing letters of application, and (6) being on a union or professional register.

Also included as unemployed are persons who did not work at all during the reference week and were waiting to be called back to a job from which they had been laid off.

**Civilian labor force.**—The civilian labor force consists of persons classified as employed or unemployed in accordance with the criteria described above.

**Labor force.**—The labor force includes all persons classified in the civilian labor force plus members of the

Armed Forces (persons on active duty with the United States Army, Air Force, Navy, Marine Corps, or Coast Guard).

**Not in labor force.**—All persons who are not classified as members of the labor force are defined as "not in labor force." This category consists mainly of students, housewives, retired workers, seasonal workers enumerated in an "off" season who were not looking for work, inmates of institutions, disabled persons, and persons doing only incidental unpaid family work (less than 15 hours during the reference week). Of these groups, students and inmates are shown separately in selected tables.

#### WEEKS WORKED IN 1969

The data on weeks worked in 1969 were derived from answers to question 39 (see facsimiles of questionnaire item and instructions, pages App-36 and 38).

The question was asked of all persons 14 years old and over in the 20-percent sample. In the tables, data are shown for persons 16 years old and over to conform with the universe for employment status data.

The data pertain to the number of weeks during 1969 in which a person did any work for pay or profit (including paid vacation and sick leave) or worked without pay on a family farm or in a family business. Weeks of active service in the Armed Forces are also included. It is probable that the number of persons who worked in 1969 and the number of weeks they worked are understated since there is some tendency for respondents to forget intermittent or short periods of employment or not to report weeks worked without pay.

#### OCCUPATION, INDUSTRY, AND CLASS OF WORKER

The data on occupation, industry, and class of worker were derived from answers to questions 33, 34, and 35 (see facsimiles of questionnaire items and instructions, pages App-36 and 37).

This series of questions was used to obtain industry, occupation, and class of worker information for the employed. For an employed person, the information referred to the job held during the reference week. If he was employed at two or more jobs, the job at which he worked the greatest number of hours during the reference week was reported.

The written occupation and industry descriptions from the questionnaire were converted to identifying codes by relating these descriptions to an entry in the **1970 Census of Population Alphabetical Index of Industries and Occupations**, U.S. Government Printing Office, Washington, D.C., 1971. For the industrial code, however, the first coding attempt was by reference to the **Company Name List**. This list, prepared from the master address list of the 1968 Censuses of Business, Construction, Manufactures, and Minerals, contains the name of the establishment and its Standard Industrial Code converted to its population census equivalent. This listing facilitates coding and helps maintain industrial classification comparability.

The classification systems used to prepare the **Alphabetical Index of Industries and Occupations** for the 1970 census were developed in consultation with many individuals, private organizations, and government agencies. For occupation, the primary consultant was the Interagency Occupational Classification Committee

under the auspices of the United States Office of Management and Budget.

A factor to be considered in the interpretation of these data is that occasionally respondents returned occupation, industry, or class of worker designations which were not sufficiently specific for precise classification. Many of such cases were corrected through the field editing process and during the coding and tabulation operations.

#### Occupation Classification System

The system developed for the 1970 census consists of 441 specific occupation categories arranged into 12 major occupation groups. In this report, selected groupings of the 441 categories are presented. Shown below are the component categories of the 24 occupation groups presented in the report. Additional information on the composition of the detailed categories is given in the publication, **1970 Census of Population Classified Index of Industries and Occupations**, U.S. Government Printing Office, Washington, D.C., 1971.

#### *Professional, technical, and kindred workers*

*Engineers.*—Includes aeronautical and astronautical, chemical, civil, electrical and electronic, industrial, mechanical, metallurgical and materials, mining, petroleum, and sales engineers.

*Physicians, dentists, and related practitioners.*—Includes chiropractors, dentists, optometrists, pharmacists, medical and osteopathic physicians, podiatrists, and veterinarians.

*Health workers, except practitioners.*—Includes dietitians, registered

nurses, therapists, clinical laboratory technologists and technicians, dental hygienists, health record technologists and technicians, radiologic technologists and technicians, and therapy assistants.

*Teachers, elementary and secondary schools.*—Includes prekindergarten, kindergarten, elementary, and secondary school teachers, but excludes principals and supervisors.

*Technicians, except health.*—Includes agricultural, biological, chemical, electrical and electronic, and industrial engineering; mathematical, and mechanical engineering technicians; draftsmen; surveyors; airplane pilots; air traffic controllers; embalmers; flight engineers; radio operators; and tool programmers, numerical control.

*Other professional workers.*—Includes accountants, architects, computer programmers, computer systems analysts, farm management advisors, foresters and conservationists, home management advisors, judges, lawyers, librarians, archivists and curators, actuaries, mathematicians, statisticians, agricultural scientists, atmospheric and space scientists, biological scientists, chemists, geologists, marine scientists, physicists and astronomers, operations and systems researchers and analysts, personnel and labor relations workers, clergymen and other religious workers, economists, political scientists, psychologists, sociologists, urban and regional planners, social workers, recreation workers, teachers except elementary and secondary, vocational and educational counselors, actors, athletes, authors, dancers, designers, editors and reporters, musicians and composers, painters and sculptors,

photographers, public relations men and publicity writers, radio and television announcers, and research workers not specifying subject.

*Managers and administrators, except farm*

Includes assessors, controllers and treasurers in local public administration; bank officers and financial managers; buyers and shippers of farm products; wholesale and retail trade buyers; credit men; funeral directors; health administrators; inspectors in public administration; building managers and superintendents; ship officers, pilots, and pursers; officials of lodges, societies, and unions; postmasters and mail superintendents; railroad conductors; restaurant, cafeteria, and bar managers; sales managers and retail trade department heads; and school administrators.

*Sales workers*

Includes advertising agents and salesmen; auctioneers; demonstrators; hucksters and peddlers; insurance agents, brokers, and underwriters; newsboys; real estate agents and brokers; stock and bond salesmen; sales representatives; sales clerks; and salesmen.

*Clerical and kindred workers*

*Bookkeepers.*

*Secretaries, stenographers, and typists.*

*Other clerical workers.*—Includes bank tellers; billing clerks; cashiers; clerical assistants, social welfare; bill and account collectors; counter clerks, except food; vehicle dispatchers and starters; enumerators and interviewers; clerical estimators and investigators;

expeditors and production controllers; file clerks; insurance adjusters, examiners and investigators; library attendants; mail carriers and mail handlers; messenger and office boys; utility meter readers; operators of: book-keeping and billing machines, computer and peripheral equipment, key punch, tabulating machines, and other office machines; payroll and time-keeping clerks; postal clerks; proof-readers; real estate appraisers; receptionists; shipping and receiving clerks; statistical clerks; stock clerks and storekeepers; teacher aides; telegraph messengers; telegraph operators; telephone operators; ticket, station, and express agents; and weighers.

*Craftsmen, foremen, and kindred workers<sup>2</sup>*

*Automobile mechanics, including body repairmen.*

*Mechanics and repairmen, except auto.*—Includes mechanics and repairmen of: air conditioning, heating and refrigeration; aircraft; data processing machines; farm implements; heavy equipment; household appliances; looms; office machines; radios and televisions; and railroad cars.

*Machinists.*

*Metal craftsmen, except mechanics and machinists.*—Includes blacksmiths; boilermakers; forgemen and hammermen; heat treaters, annealers, and temperers; job and die setters, metal; millwrights; metal molders; pattern and model makers; rollers and finishers, metal; sheet metal workers and tinsmiths; shipfitters; and tool and die makers.

<sup>2</sup>Craft apprentices are included with their craft.

*Carpenters.*

*Construction craftsmen, except carpenters.*—Includes brickmasons and stonemasons; cement and concrete finishers; electricians; excavating, grading, and road machine operators; floor layers; painters, construction and maintenance; paperhangers; plasterers; plumbers and pipe fitters; roofers and slaters; structural metal craftsmen; and tile setters.

*Other craftsmen.*—Includes automobile accessories installers; bakers; bookbinders; cabinetmakers; carpet installers; compositors and typesetters; cranemen, derrickmen, and hoistmen; decorators and window dressers; dental laboratory technicians; electric power linemen and cablemen; electrotypers and stereotypers; engravers; photoengravers and lithographers; printing pressmen and plate printers; foremen;<sup>3</sup> furniture and wood finishers; furriers; glaziers; log and lumber inspectors, scalers, and graders; inspectors, n.e.c.; jewelers and watchmakers; locomotive engineers and firemen; grain, flour, and feed millers; motion picture projectionists; opticians and lens grinders and polishers; piano and organ tuners and repairmen; power station operators; shoe repairmen; sign painters and letterers; stationary engineers; stone cutters and stone carvers; tailors; telephone installers and repairmen, linemen and splicers; and upholsterers.

*Operatives, except transport*

Includes asbestos and insulation workers; assemblers; blasters and powdermen; bottling and canning opera-

<sup>3</sup>Foremen who also report a craft occupation are classified with their craft. This category includes foremen of operatives and those who did not report their craft.

tives; surveying chainmen, rodmen, and axmen; manufacturing checkers, examiners, and inspectors; clothing ironers and pressers; cutting operatives, n.e.c.; dressmakers and seamstresses, except factory; earth drillers; dry wall installers and lathers; dyers; filers, polishers, sanders, and buffers; furnacemen, smeltermen, and pourers; garage workers and gas station attendants; graders and sorters, manufacturing; produce graders and packers, except factory and farm; metal heaters; laundry and dry cleaning operatives, n.e.c.; meat cutters and butchers; meat wrappers, retail trade; metal platers; milliners; mine operatives, n.e.c.; mixing operatives; oilers and greasers, except auto; packers and wrappers, n.e.c.; painters, manufactured articles; photographic process workers; drill press operatives; grinding machine operatives; lathe and milling machine operatives; punch and stamping press operatives; riveters and fasteners; sailors and deckhands; sawyers; sewers and stitchers; shoemaking machine operatives; solderers; stationary firemen; carding, lapping, and combing operatives; knitters, loopers, and toppers; spinners, twisters, and winders; weavers; welders and flame-cutters; winding operatives, n.e.c.; and miscellaneous and not specified operatives.

*Transport equipment operatives*

*Truck drivers.*

*Other transport equipment operatives.*—Includes boatmen and canalmen, bus drivers, urban rail transit conductors and motormen, deliverymen and routemen, fork lift and tow motor operatives, motormen, parking attendants, railroad brakemen, railroad switchmen, taxicab drivers and chauffeurs.

*Laborers, except farm*

*Construction laborers.*—Includes laborers in the construction industry and all others who specified helping construction craftsmen.

*Freight, stock, and material handlers.*—Includes freight and material handlers, garbage collectors, longshoremen, stevedores, and stockhandlers.

*Other laborers except farm.*—Includes animal caretakers, except farm; fishermen and oystermen; gardeners and groundskeepers, except farm; lumbermen, raftsmen, and woodchoppers; teamsters; vehicle washers and equipment cleaners; warehousemen, n.e.c.; and miscellaneous and not specified laborers.

*Farmers and farm managers*

*Farm laborers and farm foremen*

Includes farm foremen; farm laborers, wage workers; farm laborers, unpaid family workers; and self-employed farm service laborers.

*Service workers, except private household*

*Cleaning service workers.*—Includes chambermaids and maids, cleaners and charwomen, janitors and sextons.

*Food service workers.*—Includes bartenders, busboys, cooks, dishwashers, food counter and fountain workers, and waiters.

*Health service workers.*—Includes nursing and other health aides, health trainees, orderlies and attendants, practical nurses, dental assistants, and lay midwives.

*Personal service workers.*—Includes airline stewardesses, recreation and amusement attendants, baggage porters, bellhops, barbers, boardinghouse and lodginghouse keepers, bootblacks, child care workers, elevator operators, hairdressers and cosmetologists, housekeepers, school monitors, recreation and amusement ushers, and welfare service aides.

*Protective service workers.*—Includes firemen (fire protection), guards and watchmen, policemen and detectives, crossing guards and bridge tenders, marshals and constables, sheriffs and bailiffs.

*Private household workers*

Includes child care workers, cooks, housekeepers, laundresses, and maids and servants.

*Farm workers.*—The occupation category "farm workers" includes farmers, farm managers, farm laborers, and farm foremen.

**Relation to DOT classification.**—The population census occupational classification system is generally comparable with the system used in the Dictionary of Occupational Titles (DOT) with the exception of the blue collar workers.<sup>4</sup> The DOT structure for these occupations is quite different from that used by the Bureau of the Census. An important reason for this is that the two systems are designed to meet different needs and to be used under different circumstances. The DOT system is basically a job defining scheme and is more detailed than the system used by the Bureau of the Census, which is data collection

<sup>4</sup>See U.S. Department of Labor, Bureau of Employment Security, *Dictionary of Occupational Titles*, third edition, Vols. I and II, Washington, 1965.

oriented. Thus, job classification by DOT requires more detailed information than is often found on the census questionnaires.

**Industry Classification System**

The industry classification system developed for the 1970 Census of Population consists of 227 categories classified into 12 major industry groups. Shown below are the component categories of the industry groups defined in Standard Industrial Classification (SIC) terms,<sup>5</sup> i.e., the numbers in parentheses after each of the group titles. In addition, for readers without access to the SIC, descriptive terms of the content of the categories are included as required. Major industry group titles are in italics. Additional information on the industry classification system is presented in the publication, **1970 Census of Population Classified Index of Industries and Occupations**, U.S. Government Printing Office, Washington, D.C., 1971.

*Agriculture, forestry, and fisheries* (01, 07 (except 0713), 08, 09).

*Mining* (10-14). Includes quarrying and petroleum and gas extraction as well as mining.

*Construction* (15-17).

*Manufacturing* (0713, 19-39).

Furniture, lumber, and wood products (24, 25). Includes logging, sawmills, and furniture manufacturing.

Primary metal industries (33). Includes primary iron, steel, and aluminum furnaces, and rolling and finishing mills.

<sup>5</sup>See Executive Office of the President, Bureau of the Budget, **Standard Industrial Classification Manual**, 1967.

Fabricated metal industries (including not specified metal) (19, 34).

Machinery, except electrical (35). Includes engines, farm machinery, and office and electronic computing equipment.

Electrical machinery, equipment, and supplies (36).

Motor vehicles and other transportation equipment (37).

Other durable goods (32, 38, 39). Includes stone, clay, glass, and concrete products and professional, photographic, and time keeping equipment.

Food and kindred products (20, 0713). Includes meat, dairy, and grain products; beverage products; and canning and preserving.

Textile mill and other fabricated textile products (22, 23). Includes textiles, carpets, and apparel.

Printing, publishing, and allied industries (27).

Chemical and allied products (28). Includes synthetic fibers, drugs, medicines, and paints.

Other nondurable goods (including not specified manufacturing industries (21, 26, 29, 30, 31). Includes tobacco, paper, petroleum refining, rubber, plastics, and leather products.

*Transportation, communications, and other public utilities* (40-49).

Railroads and railway express service (40).

Trucking service and warehousing (42).

Other transportation (41, 44, 45, 46, 47). Includes urban transit, bus, water, and air transportation, pipelines and transportation services.

Communications (48). Includes radio, television, telephone, and telegraph communication services.

Utilities and sanitary services (49). Includes electric, gas, water, and sanitary services.

*Wholesale and retail trade* (50-59).

Wholesale trade (50).

Food, bakery, and dairy stores (54).

Eating and drinking places (58).

General merchandise retailing (53). Includes department stores, variety stores, mail order houses, vending machines, and door to door sales.

Motor vehicle retailing and service stations (55).

Other retail trade (52, 56, 57, 59).

*Finance, insurance, and real estate* (60-67).

Banking and credit agencies (60, 61).

Insurance, real estate, and other finance (62, 63, 64, 65, 66, 67).

*Business and repair services* (73-76).

Business services (73). Includes advertising, research labs, employment agencies, consulting services, and computer programming services.

Repair services (75, 76). In addition to repair shops, includes automobile rental, parking and washing services.

*Personal services* (70, 72, 88).

Private households (88).

Other personal services (70, 72). Includes hotels, garment services, beauty, barber, dressmaking, and shoe repair shops.

*Entertainment and recreation services* (78, 79). Includes theaters, motion

pictures, bowling alleys, and billiard parlors.

*Professional and related services* (80-89).

Hospitals (806).

Health services, except hospitals (80 except 806).

Elementary and secondary schools and colleges (821, 822).

Other education and kindred services (823-829, 84). Includes all other schools (correspondence, etc.), libraries, museums, art galleries, and zoos.

Welfare, religious, and nonprofit membership organizations (86 except part 867).

Legal, engineering, and miscellaneous professional services (81, part 867, 89).

*Public administration* (9190, 9290, 9390, 9490). Includes postal service and Federal, State, and local public administration.

**Relation to Standard Industrial Classification (SIC).**—One of the major purposes of the Standard Industrial Classification (SIC) is to promote uniformity and comparability in the presentation of statistical data collected by various agencies. To achieve this goal, the census industry categories are defined in SIC terms. The figures shown in this report differ from those obtained from establishment surveys. One reason for this is that replies from household respondents may differ in detail and nature from those obtained from establishments. Other differences are caused by the geographic differences between residence and place of work, different dates of reference between surveys, and dual job holders that may be counted in the reports of two estab-

lishments but counted in the census for only their major job. Readers should also understand the distinction between the census "Public administration" and the SIC "Government". The public administration category covers only regular government functions (SIC code 9X90) whereas the SIC government category includes all government workers with the industrial activity designated in the third and fourth digit of the SIC code. The census covers all government workers in its "class of worker" item.

**Relation to certain occupation groups.**—Some occupation groups are closely related to certain industries. Transport equipment operatives, the two groups of farm occupations, and private household workers are concentrated in the transportation, agriculture, and private household industries, respectively. The industry categories, however, are broader and include occupations other than those concentrated in that industry. For example, persons employed in agriculture include truck drivers, bookkeepers, and others; persons employed in the transportation industry include mechanics and secretaries; and persons employed in the private household industry include occupations such as chauffeur, gardener, and secretary.

#### Class of Worker

As noted earlier, each person is classified in three distinct dimensions—occupation, industrial attachment, and class of worker. Thus, placement of a person in a particular class-of-worker category is in most cases independent of the occupation or industry in which he worked. The class-of-worker item on the questionnaire consists of seven categories which are defined as follows:

1. *Private wage and salary workers.*—Persons who worked for a private employer for wages, salary, commission, tips, pay-in-kind, or at piece rates.

2. *Government workers.*—Persons who worked for any governmental unit, regardless of the activity of the particular agency. This category is subdivided by the level of government: (a) Federal, (b) State, and (c) local (county and its political subdivisions such as cities, villages, and townships).

3. *Self-employed workers.*—  
 a. *Own business not incorporated.*—Persons who worked for profit or fees in their own unincorporated business, profession, or trade, or who operated a farm. Included here are the owner-operators of large stores and manufacturing establishments as well as small merchants, independent craftsmen and professional men, farmers, peddlers, and other persons who conducted enterprises on their own.  
 b. *Own business incorporated.*—Persons who consider themselves self-employed but work for corporations. (In most cases the respondents will own or be part of a group that owns controlling interest in the corporation.) Since all workers of a corporation are defined as wage and salary workers, this category is tabulated with "private wage and salary workers," and shown as a subcategory of that group.

4. *Unpaid family workers.*—Persons who worked without pay on a farm or in a business operated by a person to whom they are related by blood

or marriage. These are usually the children or the wife of the owner of a business or farm. About one half of the unpaid family workers are farm laborers.

### INCOME

The data on income were derived from answers to questions 40 and 41 (see facsimiles of questionnaire items and instructions, pages App-36 and 38).

Information on money income received in the calendar year 1969 was requested from all persons 14 years old and over in the 20-percent sample. "Total income" is the algebraic sum of the amounts reported in item 40a (Wage or salary income), item 40b (Nonfarm net self-employment income), item 40c (Farm net self-employment income), item 41a (Social Security or railroad retirement income), item 41b (Public assistance or welfare income), and item 41c (All other income). "Earnings" is the algebraic sum of the amounts reported as wage or salary income and nonfarm and farm net self-employment income. The figures represent the amount of income regularly received before deductions for personal income taxes, Social Security, bond purchases, union dues, medicare deductions, etc.

Receipts from the following sources were not included as income: money received from the sale of property, (unless the recipient was engaged in the business of selling such property); the value of income "in kind" such as food produced and consumed in the home or free living quarters; withdrawal of bank deposits; money borrowed; tax refunds; exchange of money between relatives living in the same household; gifts and lump-sum inheritances, insurance payments, and other types of lump-sum receipts.

### Type of Income

**Wage or salary income.**—This is defined as the total money earnings received for work performed as an employee at any time during the calendar year 1969. It includes wages, salary, pay from Armed Forces, commissions, tips, piece rate payments, and cash bonuses earned.

**Nonfarm net self-employment income.**—This is defined as net money income (gross receipts minus business expenses) received from a business, professional enterprise, or partnership in which the person was engaged on his own account. Gross receipts include the value of all goods sold and services rendered. Business expenses include cost of goods purchased, rent, heat, light, power, depreciation charges, wages and salaries paid, business taxes (not personal income taxes), etc.

**Farm net self-employment income.**—This is defined as net money income (gross receipts minus operating expenses) received from the operation of a farm by a person on his own account, as an owner, renter, or sharecropper. Gross receipts include the value of all products sold, governmental subsidies, money received from the rental of farm equipment to others, and incidental receipts from the sale of wood, sand, and gravel, etc. Operating expenses include the cost of fuel, fertilizer, seed, and other farming supplies, cash wages paid to farmhands, depreciation charges, cash rent, interest on farm mortgages, farm building repairs, farm taxes (not Federal, State, and local income taxes), etc. The value of fuel, food, and other farm products used for

family living are not included as part of net income.

**Social Security or railroad retirement income.**—This includes cash receipts of Social Security pensions, survivors' benefits, permanent disability insurance payments, and special benefit payments made by the Social Security Administration (under the National old-age, survivors, disability, and health insurance programs) before deductions of health insurance premiums. "Medicare" reimbursements are not included. Cash receipts of retirement, disability, and survivors' benefit payments made by the U.S. Government under the Railroad Retirement Act are also included.

**Public assistance income.**—This includes cash receipts of payments made under the following public assistance programs: aid to families with dependent children, old age assistance, general assistance, aid to the blind, and aid to the permanently and totally disabled. Separate payments received for hospital or other medical care are excluded from this item.

**Income from all other sources.**—This includes money income received from sources such as interest; dividends; net income (or loss) from property rentals; net receipts from roomers or boarders; veteran's payments; public or private pensions; periodic receipts from insurance policies or annuities; unemployment insurance benefits; workmen's compensation cash benefits; net royalties; periodic payments from estates and trust funds; alimony or child support from persons who are not members of the household; net gambling gains; nonservice scholarships and fellowships; and money received for transportation and/or subsistence

by persons participating in special governmental training programs, e.g., under the Manpower Development and Training Act.

**Income of families and unrelated individuals.**—This report includes information on income of families, unrelated individuals 14 years old and over, and persons 14 years old and over.

In compiling statistics on family income, the incomes of all members 14 years old and over in each family are summed and treated as a single amount. However, in compiling the income data for unrelated individuals and persons 14 years old and over, the total amount of their own income is used. Although the income statistics cover the calendar year 1969, the characteristics of persons and the composition of families refer to the time of enumeration (April 1970). Thus, the income of the family does not include amounts received by persons who were members of the family during all or part of the calendar year 1969 if these persons no longer resided with the family at the time of enumeration. On the other hand, family income amounts reported by related persons who did not reside with the family during 1969 but who were members of the family at the time of enumeration were included. For most families, however, the income reported was received by persons who were members of the family throughout 1969.

#### Median, Mean, and Per Capita Income

The median income is the amount which divides the distribution into two equal groups, one having incomes above the median and the other having incomes below the median. When the median income falls in the terminal

category of a distribution, the method of presentation is to show the initial value of the terminal category followed by a plus sign; thus, for example, if the median income falls in the terminal category "\$25,000 or more," it is shown as "\$25,000+."

The mean income is the amount obtained by dividing the total income of a particular statistical universe by the number of units in that universe. Thus, mean family income is obtained by dividing total family income by the total number of families. The mean income of each family member is the amount obtained by dividing total family income by the total number of family members. Mean income for persons is obtained by dividing the total income of persons (including patients or inmates in institutional quarters) by the number of persons with income. Per capita income is the mean income computed for every man, woman, and child in a particular group. It is derived by dividing the total income of a particular group by the total population (including patients or inmates in institutional quarters) in that group. For the six income types the means are based on families or unrelated individuals having those types of income. It should be noted that the maximum income amount that can be aggregated for each family or unrelated individual is 1.3 million dollars for total income and \$995,000 for any one type of income. Thus, it is conceivable that the sum of the aggregates of all income types may exceed the aggregate of the total.

Care should be exercised in using and interpreting mean income values in the statistics for small areas or small subgroups of the population. Since the mean is strongly influenced by extreme values in the distribution, it is

especially susceptible to the effects of sampling variability, misreporting, and processing errors. The median, which is not affected by extreme values, is, therefore, a better measure than the mean when the population base is small.

**POVERTY STATUS**

The data on poverty status were derived from answers to the same questions as the income data (see income definitions, above). Poverty statistics have not been published in previous decennial census reports. They have, however, been published for the years 1959 to 1969 from data collected in the annual March Current Population Survey (CPS) by the Bureau of the Census. The population covered in the poverty statistics presented in this report excludes inmates of institutions, members of the Armed Forces living in barracks, college students living in dormitories, and unrelated individuals under 14 years old.

**The Poverty Definition**

The poverty statistics presented in this report are based on a definition origi-

nated by the Social Security Administration in 1964 and subsequently modified by a Federal Interagency Committee.<sup>6</sup> The index provides a range of poverty income cutoffs adjusted by such factors as family size, sex of the family head, number of children under 18 years old, and farm and nonfarm residence. At the core of this definition of poverty is a nutritionally adequate food plan ("economy" plan) designed by the Department of Agriculture for "emergency or temporary use when funds are low." The index allows for differences in the cost of living between farm and nonfarm families by setting the poverty thresholds for farm families at 85 percent of the corresponding levels for nonfarm families. The poverty income cutoffs are revised annually to allow for changes in the cost of living as reflected in the Consumer Price Index.

In 1969, the poverty thresholds ranged from \$1,487 for a female unre-

<sup>6</sup>For a detailed explanation of the poverty definition, see U.S. Bureau of the Census, Current Population Reports, Series P-23, No.28, *Revision in Poverty Statistics, 1959 to 1968*.

lated individual 65 years old and over living on a farm to \$6,116 for a non-farm family with a male head and with seven or more persons. The average poverty threshold for a nonfarm family of four headed by a male was \$3,745.

**Income deficit.**—The income deficit is the difference between the total income of families and unrelated individuals below the poverty level and their respective poverty thresholds. In computing the income deficit, families reporting a net income loss are assigned zero dollars and for such cases the income deficit is equal to the poverty threshold. The aggregate income deficit provides an estimate of the amount of money which would be required to raise the incomes of all poor families and unrelated individuals to their respective thresholds at the poverty levels.

**Mean income deficit.**—The mean income deficit is the amount obtained by dividing the aggregate income deficit of a group below the poverty level by the number of families or unrelated individuals (as appropriate) in that group.

APPENDIX B—Continued

FACSIMILES OF THE POPULATION QUESTIONS ON THE 1970 CENSUS QUESTIONNAIRES  
(Questions on this page appeared on both the 15-percent and 5-percent sample questionnaires)

Line No.	<p><b>1. WHAT IS THE NAME OF EACH PERSON</b> who was living here on Wednesday, April 1, 1970 or who was staying or visiting here and had no other home?</p> <p><i>Print names in this order</i></p> <ul style="list-style-type: none"> <li>Head of the household</li> <li>Wife of head</li> <li>Unmarried children, oldest first</li> <li>Married children and their families</li> <li>Other relatives of the head</li> <li>Persons not related to the head</li> </ul>	<p><b>2. HOW IS EACH PERSON RELATED TO THE HEAD OF THIS HOUSEHOLD?</b></p> <p><i>Fill one circle.</i></p> <p>If "Other relative of head," <u>also</u> give exact relationship, for example, mother-in-law, brother, niece, grandson, etc.</p> <p>If "Other not related to head," <u>also</u> give exact relationship, for example, partner, maid, etc.</p>
<p>① Last name</p> <p>First name</p> <p>Middle initial</p>	<p> <input type="radio"/> Head of household      <input type="radio"/> Roomer, boarder, lodger  <input type="radio"/> Wife of head              <input type="radio"/> Patient or inmate  <input type="radio"/> Son or daughter of head    <input type="radio"/> Other not related to head—<i>Print exact relationship</i>  <input type="radio"/> Other relative of head—<i>Print exact relationship</i> </p>	

3. SEX	4. COLOR OR RACE	DATE OF BIRTH				8. WHAT IS EACH PERSON'S MARITAL STATUS?
		5. Month and year of birth and age last birthday	6. Month of birth	7. Year of birth		
<input type="radio"/> Male  <input type="radio"/> Female	<p><i>Fill one circle.</i></p> <p>If "Indian (American)," <u>also</u> give tribe.</p> <p>If "Other," <u>also</u> give race.</p>	<p><i>Print</i></p>	<p><i>Fill one circle</i></p>	<p><i>Fill one circle for first three numbers</i></p>	<p><i>Fill one circle for last number</i></p>	<p><i>Fill one circle</i></p>
	<input type="radio"/> White <input type="radio"/> Japanese <input type="radio"/> Hawaiian <input type="radio"/> Negro or Black <input type="radio"/> Chinese <input type="radio"/> Korean <input type="radio"/> Indian (Amer.) <input type="radio"/> Filipino <input type="radio"/> Other— <i>Print race</i> <i>Print tribe</i>	Month _____ Year _____ Age _____	<input type="radio"/> Jan.-Mar. <input type="radio"/> Apr.-June <input type="radio"/> July-Sept. <input type="radio"/> Oct.-Dec.	<input type="radio"/> 186- <input type="radio"/> 192- <input type="radio"/> 187- <input type="radio"/> 193- <input type="radio"/> 188- <input type="radio"/> 194- <input type="radio"/> 189- <input type="radio"/> 195- <input type="radio"/> 190- <input type="radio"/> 196- <input type="radio"/> 191- <input type="radio"/> 197-	<input type="radio"/> 0 <input type="radio"/> 5 <input type="radio"/> 1 <input type="radio"/> 6 <input type="radio"/> 2 <input type="radio"/> 7 <input type="radio"/> 3 <input type="radio"/> 8 <input type="radio"/> 4 <input type="radio"/> 9	<input type="radio"/> Now married <input type="radio"/> Widowed <input type="radio"/> Divorced <input type="radio"/> Separated <input type="radio"/> Never married

Note: On the questionnaires used in Alaska, the categories "Aleut" and "Eskimo" were substituted for "Hawaiian" and "Korean" in question 4.

FACSIMILE OF THE RESPONDENT INSTRUCTIONS FOR POPULATION QUESTIONS 1 TO 8

- |   |  |
|---|--|
| <p>1. If you are not sure about whether to list a person, see the rules on the flap of the census form.</p> <p>2. If two or more unrelated people live together and share the rent, mark the first one you list <b>Head of household</b>. Mark the rest <b>Other not related to head</b> and print "partner" in the space.</p> <p>A stepchild or legally adopted child of the head should be marked <b>Son or daughter</b>.</p> | <p>5. If the month or year of birth, or the age, is not known, give your best estimate.</p> <p>6, 7. If you are not sure how to fill these circles, look at the examples shown above.</p> <p>8. If the person's only marriage was annulled, mark <b>Never married</b>.</p> |
|---|--|



FACSIMILES OF THE POPULATION QUESTIONS ON THE 1970 CENSUS QUESTIONNAIRES  
(Percent indicates sample size)

5 percent	<p><b>27a. Has this person ever completed a vocational training program?</b> <i>For example, in high school; as apprentice; in school of business, nursing, or trades; technical institute; or Armed Forces schools.</i></p> <p><input checked="" type="radio"/> Yes                      <input type="radio"/> No— Skip to 28</p> <hr/> <p><b>b. What was his main field of vocational training? Fill one circle.</b></p> <p><input type="radio"/> Business, office work  <input type="radio"/> Nursing, other health fields  <input type="radio"/> Trades and crafts (<i>mechanic, electrician, beautician, etc.</i>)  <input type="radio"/> Engineering or science technician; draftsman  <input type="radio"/> Agriculture or home economics  <input checked="" type="radio"/> Other field— <i>Specify</i> →</p>	<p><b>c. Where did he work last week?</b> <i>If he worked in more than one place, print where he worked most last week.</i> <i>If he travels about in his work or if the place does not have a numbered address, see instruction sheet.</i></p> <p>(1) Address (<i>Number and street name</i>) _____</p> <p>(2) Name of city, town, village, etc. _____</p> <p>(3) Inside the limits of this city, town, village, etc.?  <input type="radio"/> Yes  <input type="radio"/> No</p> <p>(4) County _____</p> <p>(5) State _____                      (6) ZIP Code _____</p>	15 percent									
	<p><b>28a. Does this person have a health or physical condition which limits the kind or amount of work he can do at a job?</b> <i>If 65 years old or over, skip to question 29.</i></p> <p><input type="radio"/> Yes  <input type="radio"/> No</p> <hr/> <p><b>b. Does his health or physical condition keep him from holding any job at all?</b></p> <p><input type="radio"/> Yes  <input checked="" type="radio"/> No</p> <hr/> <p><b>c. If "Yes" in a or b— How long has he been limited in his ability to work?</b></p> <p><input type="radio"/> Less than 6 months                      <input type="radio"/> 3 to 4 years  <input type="radio"/> 6 to 11 months                              <input type="radio"/> 5 to 9 years  <input type="radio"/> 1 to 2 years                                      <input type="radio"/> 10 years or more</p>	<p><b>d. How did he get to work last week? Fill one circle for chief means used on the last day he worked at the address given in 29c.</b></p> <table border="0"> <tr> <td><input type="radio"/> Driver, private auto</td> <td><input type="radio"/> Taxicab</td> </tr> <tr> <td><input type="radio"/> Passenger, private auto</td> <td><input type="radio"/> Walked only</td> </tr> <tr> <td><input type="radio"/> Bus or streetcar</td> <td><input type="radio"/> Worked at home</td> </tr> <tr> <td><input type="radio"/> Subway or elevated</td> <td><input type="radio"/> Other means— <i>Specify</i> →</td> </tr> <tr> <td><input type="radio"/> Railroad</td> <td></td> </tr> </table> <p style="text-align: center;">After completing question 29d, skip to question 33.</p>		<input type="radio"/> Driver, private auto	<input type="radio"/> Taxicab	<input type="radio"/> Passenger, private auto	<input type="radio"/> Walked only	<input type="radio"/> Bus or streetcar	<input type="radio"/> Worked at home	<input type="radio"/> Subway or elevated	<input type="radio"/> Other means— <i>Specify</i> →	<input type="radio"/> Railroad
<input type="radio"/> Driver, private auto	<input type="radio"/> Taxicab											
<input type="radio"/> Passenger, private auto	<input type="radio"/> Walked only											
<input type="radio"/> Bus or streetcar	<input type="radio"/> Worked at home											
<input type="radio"/> Subway or elevated	<input type="radio"/> Other means— <i>Specify</i> →											
<input type="radio"/> Railroad												
15 and 5 percent	<p><b>QUESTIONS 29 THROUGH 41 ARE FOR ALL PERSONS BORN BEFORE APRIL 1956 INCLUDING HOUSEWIVES, STUDENTS, OR DISABLED PERSONS AS WELL AS PART-TIME OR FULL-TIME WORKERS</b></p>		15 and 5 percent									
	<p><b>29a. Did this person work at any time last week?</b></p> <table border="0"> <tr> <td style="vertical-align: top;"> <p><input type="radio"/> Yes— <i>Fill this circle if this person did full- or part-time work.</i> <i>(Count part-time work such as a Saturday job, delivering papers, or helping without pay in a family business or farm; and active duty in the Armed Forces)</i></p> </td> <td style="vertical-align: top;"> <p><input type="radio"/> No— <i>Fill this circle if this person did not work, or did only own housework, school work, or volunteer work.</i></p> </td> </tr> </table> <p style="text-align: center;">Skip to 30</p> <hr/> <p><b>b. How many hours did he work last week (at all jobs)?</b> <i>Subtract any time off and add overtime or extra hours worked.</i></p> <p><input type="radio"/> 1 to 14 hours                      <input checked="" type="radio"/> 40 hours  <input type="radio"/> 15 to 29 hours                      <input type="radio"/> 41 to 48 hours  <input type="radio"/> 30 to 34 hours                      <input type="radio"/> 49 to 59 hours  <input type="radio"/> 35 to 39 hours                      <input type="radio"/> 60 hours or more</p>	<p><input type="radio"/> Yes— <i>Fill this circle if this person did full- or part-time work.</i> <i>(Count part-time work such as a Saturday job, delivering papers, or helping without pay in a family business or farm; and active duty in the Armed Forces)</i></p>		<p><input type="radio"/> No— <i>Fill this circle if this person did not work, or did only own housework, school work, or volunteer work.</i></p>	<p><b>30. Does this person have a job or business from which he was temporarily absent or on layoff last week?</b></p> <p><input type="radio"/> Yes, on layoff  <input type="radio"/> Yes, on vacation, temporary illness, labor dispute, etc.  <input type="radio"/> No</p> <hr/> <p><b>31a. Has he been looking for work during the past 4 weeks?</b></p> <p><input checked="" type="radio"/> Yes                      <input type="radio"/> No— Skip to 32</p> <hr/> <p><b>b. Was there any reason why he could not take a job last week?</b></p> <p><input type="radio"/> Yes, already has a job  <input type="radio"/> Yes, because of this person's temporary illness  <input type="radio"/> Yes, for other reasons (in school, etc.)  <input type="radio"/> No, could have taken a job</p> <hr/> <p><b>32. When did he last work at all, even for a few days?</b></p> <table border="0"> <tr> <td><input type="radio"/> In 1970</td> <td><input type="radio"/> 1964 to 1967</td> <td><input type="radio"/> 1959 or earlier   Skip</td> </tr> <tr> <td><input type="radio"/> In 1969</td> <td><input type="radio"/> 1960 to 1963</td> <td><input type="radio"/> Never worked   to 36</td> </tr> <tr> <td><input type="radio"/> In 1968</td> <td></td> <td></td> </tr> </table>	<input type="radio"/> In 1970	<input type="radio"/> 1964 to 1967	<input type="radio"/> 1959 or earlier   Skip	<input type="radio"/> In 1969	<input type="radio"/> 1960 to 1963	<input type="radio"/> Never worked   to 36	<input type="radio"/> In 1968
<p><input type="radio"/> Yes— <i>Fill this circle if this person did full- or part-time work.</i> <i>(Count part-time work such as a Saturday job, delivering papers, or helping without pay in a family business or farm; and active duty in the Armed Forces)</i></p>	<p><input type="radio"/> No— <i>Fill this circle if this person did not work, or did only own housework, school work, or volunteer work.</i></p>											
<input type="radio"/> In 1970	<input type="radio"/> 1964 to 1967	<input type="radio"/> 1959 or earlier   Skip										
<input type="radio"/> In 1969	<input type="radio"/> 1960 to 1963	<input type="radio"/> Never worked   to 36										
<input type="radio"/> In 1968												

FACSIMILES OF THE POPULATION QUESTIONS ON THE 1970 CENSUS QUESTIONNAIRES  
(Percent indicates sample size)

**33-35. Current or most recent job activity**  
Describe clearly this person's chief job activity or business last week, if any. If he had more than one job, describe the one at which he worked the most hours.  
If this person had no job or business last week, give information for last job or business since 1960.

**33. Industry**  
**a. For whom did he work?** If now on active duty in the Armed Forces, print "AF" and skip to question 36.  
  
\_\_\_\_\_  
(Name of company, business, organization, or other employer)  
**b. What kind of business or industry was this?**  
Describe activity at location where employed.  
  
\_\_\_\_\_  
(For example: junior high school, retail supermarket, dairy farm, TV and radio service, auto assembly plant, road construction)  
**c. Is this mainly—** (Fill one circle)  
 Manufacturing       Retail trade  
 Wholesale trade       Other (agriculture, construction, service, government, etc.)

**34. Occupation**  
**a. What kind of work was he doing?**  
  
\_\_\_\_\_  
(For example: TV repairman, sewing machine operator, spray painter, civil engineer, farm operator, farm hand, junior high English teacher)  
**b. What were his most important activities or duties?**  
  
\_\_\_\_\_  
(For example: Types, keeps account books, files, sells cars, operates printing press, cleans buildings, finishes concrete)  
**c. What was his job title?**  
\_\_\_\_\_

**35. Was this person—** (Fill one circle)  
Employee of private company, business, or individual, for wages, salary, or commissions...   
Federal government employee .....   
State government employee.....   
Local government employee (city, county, etc.)...   
Self-employed in own business, professional practice, or farm—   
    Own business not incorporated .....   
    Own business incorporated .....   
Working without pay in family business or farm

**36. In April 1965, what State did this person live in?**  
 This State  
OR  
\_\_\_\_\_  
(Name of State or foreign country, or Puerto Rico, etc.)

**37. In April 1965, was this person—** (Fill three circles)  
**a. Working at a job or business** (full or part-time)?  
 Yes    No  
**b. In the Armed Forces?**  
 Yes    No  
**c. Attending college?**   
 Yes    No

**38. If "Yes" for "Working at a job or business" in question 37—**  
Describe this person's chief activity or business in April 1965.  
**a. What kind of business or industry was this?**  
\_\_\_\_\_  
**b. What kind of work was he doing (occupation)?**  
\_\_\_\_\_  
**c. Was he—**  
An employee of a private company or government agency...   
Self-employed or an unpaid family worker.....

**39a. Last year (1969), did this person work at all, even for a few days?**  
 Yes    No— Skip to 41  
**b. How many weeks did he work in 1969, either full-time or part-time?**  
Count paid vacation, paid sick leave, and military service.  
 13 weeks or less    40 to 47 weeks  
 14 to 26 weeks      48 to 49 weeks  
 27 to 39 weeks      50 to 52 weeks

**40. Earnings in 1969—** Fill parts a, b, and c for everyone who worked any time in 1969 even if he had no income.  
(If exact amount is not known, give best estimate.)  
**a. How much did this person earn in 1969 in wages, salary, commissions, bonuses, or tips from all jobs?**  
(Before deductions for taxes, bonds, dues, or other items.)  
\$ \_\_\_\_\_ .00  
(Dollars only)  
OR  None

**b. How much did he earn in 1969 from his own nonfarm business, professional practice, or partnership?**  
(Net after business expenses. If business lost money, write "Loss" above amount.)   
\$ \_\_\_\_\_ .00  
(Dollars only)  
OR  None

**c. How much did he earn in 1969 from his own farm?**  
(Net after operating expenses. Include earnings as a tenant farmer or sharecropper. If farm lost money, write "Loss" above amount.)  
\$ \_\_\_\_\_ .00  
(Dollars only)  
OR  None

**41. Income other than earnings in 1969—** Fill parts a, b, and c.  
(If exact amount is not known, give best estimate.)  
**a. How much did this person receive in 1969 from Social Security or Railroad Retirement?**  
\$ \_\_\_\_\_ .00  
(Dollars only)  
OR  None

**b. How much did he receive in 1969 from public assistance or welfare payments?**  
Include aid for dependent children, old age assistance, general assistance, aid to the blind or totally disabled.  
Exclude separate payments for hospital or other medical care.   
\$ \_\_\_\_\_ .00  
(Dollars only)  
OR  None

**c. How much did he receive in 1969 from all other sources?**  
Include interest, dividends, veterans' payments, pensions, and other regular payments.  
(See instruction sheet.)  
\$ \_\_\_\_\_ .00  
(Dollars only)  
OR  None

15 and 5 percent

5 percent

15 and 5 percent

15 and 5 percent

5 percent

APPENDIX B—Continued

FACSIMILES OF THE RESPONDENT INSTRUCTIONS FOR POPULATION QUESTIONS IN THE 1970 CENSUS

13. Mark the circle for **This State** if he now lives in the same State as he was born in. If born in a **different State**, print name of State.  
If born outside U.S., print name of country, U.S. possession, etc. Use international boundaries as now recognized by the U.S.
16. Mark one circle in part a and one circle in part b for persons born outside the 50 States, District of Columbia, Puerto Rico, Canal Zone, Guam, or Virgin Islands of U.S.
17. If more than one language other than English was spoken, mark principal language.
18. Mark the date for the last time he moved into this particular house or apartment.
- 19a. Mark **Yes** if he lived in this same house or apartment on April 1, 1965, even if he moved away and came back between then and now. Mark **No** if he lived in the same building but in a different apartment on April 1, 1965.
- b. If he lived somewhere else on April 1, 1965, give the address of his usual residence at that time.  
Part (2) For addresses in Louisiana, print the parish name.  
For addresses in Alaska, print the borough name.  
For addresses in independent cities, print the name of the city and word "city," for example, "Baltimore city."  
Part (3) Mark **Yes** if you know that the address is now inside the limits of a city, town, village, or other incorporated place, even if it was not inside the limits on April 1, 1965.
20. Do not count trade or business school, company training, or tutoring unless you think he could get credit for it at a regular school or college.
21. Mark the highest grade he attended even if he did not finish it. If he is still in school, mark the grade he is in now.  
If he skipped or repeated grades, mark the highest grade ever attended, regardless of how long it took to get there.  
If he finished high school, but did not go to college, mark 12.  
For college, mark the highest academic year attended.
22. Mark **Finished this grade (or year)** only if he finished the entire grade or year shown in question 21.
- 24b. If exact dates of marriage are unknown, estimate as closely as possible.
25. Count all the children the girl or woman has ever had, even if some of them have died or no longer live with her.
26. Mark **Yes** if he was ever on active duty in the Army, Navy, Air Force, Marine Corps, or Coast Guard, no matter how short a time he served. Count only active duty in National Guard or Reserves.  
Mark **No** if he had only civilian duty in the Armed Forces or merchant marine. Mark **No** if he was in the National Guard or Reserves, but was not called to active duty. Mark **No** if his only military service was in the Armed Forces of another country.
- 27a. Count only programs that he finished. Do not count courses which are not part of an organized program of study. Do not count training he got on-the-job, in company schools, in college after the second year, or by correspondence.
- 28a. **Health condition.** This is a serious illness, or a serious handicap (impairment) affecting some part of the body or mind, which interferes with his ability to work at a job. Answer **No** for pregnancy, common colds, etc.

- 29a. Mark **Yes** if he worked on any day Sunday through Saturday of last week.
- |   |   |
|---|---|
| <b>Count as work</b>  | <b>Do not count as work</b>               |
| Work for someone else for wages, salary, piece rate, commission, tips, or payment "in kind" | Housework or yard work at own home        |
| Work in own business, professional practice, or farm  | Unpaid volunteer work.                    |
| Any work in a family business or farm, paid or not  | Work done as an inmate of an institution. |
| Any part-time work  |   |
| Active duty in the Armed Forces   |   |
- b. Give the **actual** number of hours he worked at all jobs last week, even if that was more or fewer hours than he usually works.
- c. For a person who travels about in his work or who works in more than one place--If he usually checks in or out at the same place every day, give the address of that place.  
If he does not check in or out at the same place, give the address of the place where he worked the most hours last week.  
Give the **exact address** of the location or branch where he works if his employer operates in more than one location (such as a grocery store chain or public school system).  
When you cannot give the number or street name, print the name of the building, if any, or the name of the company for which he works.
- d. Mark **Worked at home** for a person who worked on a farm where he lives or in an office or shop in his home.
30. Mark **No** if he works only during certain seasons or is "on call" to work when needed.
- 31a. Mark **Yes** if he tried to get a job or to start a business or profession at any time in the past four weeks; for example, if he registered at an employment office, went for a job interview, or did anything toward starting a business. Mark **Yes** if he was waiting to hear from places he had applied to or registered with within the past four weeks.
- b. Mark **Yes, already has a job** if he was on layoff or was expecting to report to a job within 30 days.  
Mark **Yes, because of this person's temporary illness** if he expects to be able to work within 30 days.  
Mark **Yes, for other reasons** for reasons such as going to school or taking care of children.
32. Look at the instruction for 29a to see what **work** means. Mark **Never worked** if he: (1) never worked at any kind of job or business, either full or part-time, (2) never did any unpaid work in a family business or farm, and (3) never served in the Armed Forces.
- 33a. If he worked for a company, business, or government agency, print the name of the company, not the name of his supervisor. If he worked for a person or a small business that has no company name, print the name of the person he worked for.
- b. Write two or more words to tell what the business, industry, or person named in 33a does. Write what it makes or what it sells or what service it gives. Some examples of acceptable answers are shown on the Census form and here.
- |                               |                     |
|-------------------------------|---------------------|
| <b>Acceptable</b>             | <b>Unacceptable</b> |
| Cattle ranch                  | Ranch               |
| Wholesale grocery store       | Grocery store       |
| Retail gas station            | Oil company         |
| Metal furniture manufacturing | Furniture company   |
- If a company does more than one thing (like make household electrical appliances and electric generators) describe only the major activity at the place where he works. If, however, he works at a warehouse, repair shop, etc., that is part of and used only by a larger organization, give the major activity of the larger organization; for example, department store warehouse -- report department store.

FACSIMILES OF THE RESPONDENT INSTRUCTIONS FOR POPULATION QUESTIONS IN THE 1970 CENSUS—cont.

33c. Mark **Manufacturing** if the factory, plant, mill, etc. makes things, even if it also sells them.

Mark **Wholesale trade** if a business does not make things but buys them to sell to stores or other companies.

Mark **Retail trade** if the business mostly sells things (not services) to individuals.

Mark **Other** if the main purpose of the employer is **not** making or selling things. Some examples of "Other" are services, such as those given by hotels, dry cleaners, repair shops, schools, and banks. Farming and building houses, bridges, roads, are also examples of "Other" kinds of businesses.

34a. Write two or more words to tell the kind of work he does. If he is a trainee, apprentice, or helper, write that down too. See examples of acceptable answers on the Census form and here.

Acceptable	Unacceptable
Sales clerk	Clerk
Carpenter's helper	Helper
Practical nurse	Nurse

b. Write the most important things that he does on the job. Some examples are shown on the Census form.

c. Print his job title (what his employer calls his job). If he has no job title, print **None**.

35. If he was an employee of a **private** non-profit organization, mark the first circle.

Mark **Local government employee** for a teacher in a local public school.

36. Mark **This State** if he now lives in the same State as he did in April 1965.

37. If he had two or more activities during the same period, mark **Yes** for each of these activities.

39. Look at the instruction for question 29a to see what **work** means. Count every week in which he did any work at all, even for a few hours.

40. Enter the amount or fill the **None** circle in a, b, and c. **Part 40a includes** "sick leave" pay. **Part 40a excludes** military bonuses, reimbursement for business expenses, and pay "in kind." The owner of an **unincorporated** nonfarm business should include his net earnings in part 40b. If the business or farm is **incorporated**, his earnings should be included in part 40a.

41. Enter the amount or fill the **None** circle in a, b, and c.

a. **Social Security or Railroad Retirement**—include U.S. Government payments to retired persons, to dependents of deceased insured workers, or to disabled workers. Include "Medicare" premiums; exclude receipts.

b. **Public assistance or public welfare payments**—include amounts received from Federal, State, or local public programs. Exclude private welfare payments.

c. **Interest, dividends**—include amounts received or credited to your account.

**Veterans' payments**—include money paid for service-connected disabilities, to survivors of deceased veterans, for education and on-the-job training subsistence allowances, and for "refunds" on "GI" insurance premiums.

**Retirement pensions**—include amounts paid by former private employers and by unions, and amounts paid by Federal, State, county, or other governmental agencies.

**Other regular payments**—include such periodic income as net rental income, unemployment insurance benefits, workmen's compensation, private welfare payments, alimony or child support, Armed Forces allotments, and regular contributions from persons who are not members of your household.

**Exclude** receipts from the sale of personal property, capital gains, lump-sum insurance or inheritance payments, or pay "in kind."

## Appendix C.—ACCURACY OF THE DATA

SOURCES OF ERROR . . . . .	App-39
EDITING OF UNACCEPTABLE DATA . . . . .	App-39
ALLOCATION TABLES . . . . .	App-40
SAMPLE DESIGN . . . . .	App-40
RATIO ESTIMATION . . . . .	App-41
SAMPLING VARIABILITY . . . . .	App-42

### SOURCES OF ERROR

Human and mechanical errors occur in any mass statistical operation such as a decennial census. Errors during the data collection phase can include failure to obtain required information from respondents, obtaining incorrect or inconsistent information, and recording information in the wrong place or incorrectly. Errors can also occur during the field review of the enumerator's work, the clerical handling of the questionnaires, and the various stages of the electronic processing of the material. Careful efforts are made in every census to keep the errors in each step at an acceptably low level. Quality control and check measures are utilized throughout the census operation.

In the manual editing and coding operation, a sample of the work of each coder was verified, and a coder who showed consistently high error rates was retrained. A coder who still did not produce work of acceptable quality after retraining was removed from the coding operation. In addition, provision was made for correction of any work units for which the error rate exceeded an acceptable level. Information on error rates will be given in later publications.

As was done for the 1950 and 1960 censuses, evaluative material on many aspects of the 1970 census will be published as soon as the appropriate

data are accumulated and analyzed. A major concern in the evaluation work is to ascertain, insofar as possible, the degree of completeness of the count of both population and housing units.

### EDITING OF UNACCEPTABLE DATA

The objective of the processing operation is to produce a set of statistics that describes the population as accurately and clearly as possible. To meet this objective, certain unacceptable entries were edited.

In the field, questionnaires were reviewed for completeness by a census clerk or enumerator, and a followup was made for missing information. The major review occurred in the central processing office, where the editing and coding operation provided an opportunity to correct obvious errors in the respondents' entries for those items which required manual processing. In coding relationship to household head, for example, the clerk made use of written entries, which the computer is not able to read, in determining the correct entry where the machine readable item was blank or contained conflicting information. For a few of the items, the respondents' entries were reviewed for reasonableness or consistency on the basis of other information on the questionnaire. As a rule, however, editing was performed by hand only when it could not be done effectively by machine.

As one of the first steps in mechanical editing, the configuration of marks on the questionnaire was scanned electronically to determine whether it contained information for a person or merely spurious marks. If the questionnaire contained entries for at least two of the basic characteristics (relationship, sex, race, age, marital status), or for at least two relevant sample

characteristics, the inference was made that the marks represented a person. Names were not used as a criterion of the presence of a person because the electronic scanning was unable to distinguish between a name and any other entry in the name space.

If any characteristics for a person were missing, they were, in most cases, supplied by allocation. Allocations, or assignments of acceptable codes in place of unacceptable entries, were needed most often where an entry for a given item was lacking or where the information reported for a person on that item was inconsistent with other information for the person. As in earlier censuses, the general procedure for changing unacceptable entries was to assign an entry that was consistent with entries for other persons with similar characteristics. Thus, a person who was reported as a 20-year-old son of the household head, but for whom marital status was not reported, was assigned the same marital status as that of the last son processed in the same age group. The assignment of acceptable codes in place of blanks or unacceptable entries, it is believed, enhances the usefulness of the data. The allocation technique may be illustrated by the procedure used in the assignment of wage or salary income. The allocation of this item was carried out in the following steps:

1. The computer stored reported wage or salary income entries, by sex, age, relationship to household head, race, major occupation group, class of worker, and number of weeks worked in 1969, for persons 14 years old and over who worked in 1969.
2. Each stored wage or salary entry was retained in the computer only until a succeeding person having the same characteristics and having

wage or salary income reported was processed through the computer during the mechanical edit operation. Then the reported wage or salary income entry of the succeeding person was stored in place of the one previously stored.

3. When the wage or salary income of a person 14 years old or over who worked in 1969 was not reported or the entry was unacceptable, the wage or salary income assigned to this person was that stored for the last person who otherwise had the same characteristics.

This process insured that the distribution of wage or salary income assigned by the computer for persons of a given set of characteristics would correspond closely to the reported wage or salary income distribution of such persons in the current census.

The editing process also includes another type of correction; namely, the assignment of a full set of characteristics for a person. When there was indication that a housing unit was occupied but the questionnaire contained no information for any person, a previously processed household was selected as a substitute and the full set of characteristics for each substitute person was duplicated.

Specific tolerances were established for the number of computer allocations and substitutions that would be permitted. If the number of corrections was beyond tolerance, the questionnaires in which the errors occurred were clerically reviewed. If it was found that the errors resulted from damaged questionnaires, from improper microfilming, from faulty reading by FOSDIC of undamaged questionnaires, or from other types of machine failure, the questionnaires were reprocessed.

#### ALLOCATION TABLES

The extent of the various editing and allocation procedures and their effect on each of the subjects are shown in a series of allocation tables (C-1 to C-4) included in the PC(1)-C report for each State. The information shown in these tables includes (1) the percent of the total population enumerated in the sample, (2) the allocation rate for each subject, and (3) the distributions for each subject before allocation. For a given subject the distribution before allocation may be compared with the corresponding statistics shown in the detailed tables to measure the net effect of allocation. Further explanation of the allocation tables is included in Appendix C of the PC(1)-C reports.

#### SAMPLE DESIGN

For persons living in housing units at the time of the 1970 census, the housing unit, including all its occupants, was the sampling unit; for persons in group quarters identified in advance of the census, it was the person. In nonmail areas, the enumerator canvassed his assigned area and listed all housing units in an address register sequentially in the order in which he first visited the units whether or not he completed the interview. Every fifth line of the address register was designated as a sample line, and the housing units listed on these lines were included in the sample. Each enumerator was given a random line on which he was to start listing and the order of canvassing was indicated in advance, although the instructions allowed some latitude in the order of visiting addresses. In mail areas, the list of housing units was prepared prior to Census Day either by employing commercial mailing lists corrected through the cooperation of the post office or

by listing the units in a process similar to that used in nonmail areas. As in other areas, every fifth housing unit of these lists was designated to be in the sample. In group quarters, all persons were listed and every fifth person was selected for the sample.

This 20-percent sample was subdivided into a 15-percent and a 5-percent sample by designating every fourth 20-percent sample unit as a member of the 5-percent sample. The remaining sample units became the 15-percent sample. Two types of sample questionnaires were used, one for the 5-percent and one for the 15-percent sample units. Some questions were included on both the 5-percent and 15-percent sample forms and therefore appear for a sample of 20 percent of the units in the census. Other items appeared on either the 15-percent or the 5-percent questionnaires. The sample rates for the various items appearing in this report are shown in table A.

Although the sampling procedure did not automatically insure an exact 20-percent sample of persons or housing units in each locality, the sample design was unbiased if carried through according to instructions; generally for larger areas the deviation from 20 percent was found to be quite small. Biases may have arisen, however, when the enumerator failed to follow his listing and sampling instructions exactly. Quality control procedures were used throughout the census process, however, and where there was clear evidence that the sampling procedures were not properly followed, some enumerators' assignments were returned to the field for resampling. Estimates for the United States as a whole indicate that 19.6 percent of the total population was enumerated on sample questionnaires. The com-

APPENDIX C—Continued

putation of this proportion excluded several classes of the population for which no attempt at sampling was made. These were the relatively small numbers of persons and housing units (in most State, less than one percent) added to the enumeration from the post-census post office check, the various supplemental forms, and the special check of vacant units. However, the ratio estimation procedure described below adjusts the sample data to reflect these classes of population and housing units.

**RATIO ESTIMATION**

The statistics based on 1970 census sample data are estimates made through the use of ratio estimation procedures, which were applied sepa-

rately for the 5-, 15-, and 20-percent samples. The first step in carrying through the ratio estimates was to establish the areas within which separate ratios were to be prepared. These are referred to as "weighting areas." For the 15- and 20-percent samples, the weighting areas contained a minimum population size of 2,500. The weighting areas used for the 5-percent ratio estimate were larger areas, having a minimum population size of 25,000 and comprising combinations of the weighting areas used for the 15- and 20-percent samples. Weighting areas were established by a mechanical operation on the computer and were defined to conform, as nearly as possible, to areas for which tabulations are produced. Where these areas do not agree (primarily for smaller areas),

there may be some differences between complete counts and sample estimates.

The ratio estimation process operated in three stages. The first stage employed 19 household-type groups (the first of which was empty by definition). The second stage used two groups, head of household and not head of household, and the third stage used 24 age-sex-race groups.

*Group*

STAGE I

*Male head with own children under 18*

- 1 1-person household
- 2 2-person household
- 3 3-person household
- ·
- ·
- 6 6-or-more-person household

*Male head without own children under 18*

- 7-12 1-person to 6-or-more-person households

*Female head*

- 13-18 1-person to 6-or-more-person households

- 19 *Group quarters persons*

STAGE II

- 20 *Head of household*
- 21 *Not head of household (including persons in group quarters)*

STAGE III

*Male Negro*

- 22 Age under 5 years
- 23 5-13
- 24 14-24
- 25 25-44
- 26 45-64
- 27 65 and older

TABLE A. Sample Rates for Subjects Included in this Report

Subject	Sample rate (percent)	Subject	Sample rate (percent)
Sex .....	20	Mother tongue .....	15
Race .....	20	Spanish heritage <sup>1</sup> .....	15
Age .....	20	School enrollment .....	15
Household relationship ....	20	Years of school completed .....	20
Family composition .....	20	Employment status .....	20
Families and subfamilies ...	20	Labor force participation ..	20
Type of group quarters ....	20	Weeks worked in 1969 ....	20
Marital status .....	20	Occupation .....	20
Children ever born .....	20	Industry .....	20
State of birth .....	20	Class of worker .....	20
Country of origin .....	15	Income .....	20
Spanish origin or descent ..	5	Poverty status .....	20
Nativity and parentage ....	15		

<sup>1</sup>The identification of Spanish surname was performed for both the 15-percent and 5-percent samples, but, for this report, the data were tabulated from the 15-percent sample only.

*Male, not Negro*28-33 Same age groups as for  
Male Negro*Female Negro*34-39 Same age groups as for  
Male Negro*Female, not Negro*40-45 Same age groups as for  
Male Negro

At each stage, for each of the groups, the ratio of the complete count to the weighted sample count of the population in the group was computed and applied to the weight of each sample person in the group. This operation was performed for each of the 19 groups in the first stage, then for the two groups in the second stage and finally for the 24 groups in the third stage. As a rule, the weighted sample counts within each of the 24 groups in the third stage should agree with the complete counts for the weighting areas. Close, although not exact, consistency can be expected for the two groups in the second stage and the 19 groups in the first stage.

There are some exceptions to this general rule, however. As indicated above, there may be differences between the complete counts and sample estimates when the tabulation area is not made up of whole weighting areas. Furthermore, in order to increase the reliability, a separate ratio was not computed in a group whenever certain criteria pertaining to the complete count of persons and the magnitude of the weight were not met. For example, for the 20-percent sample the complete count of persons in a group had to exceed 85 persons and the ratio of the complete count to the unweighted sample count could not exceed 20. Where these criteria were not met, groups were combined in a specific order until the conditions were met.

Where this occurred, consistency between the weighted sample and the complete counts would apply as indicated above for the combined group but not necessarily for each of the groups in the combination.

Each sample person was assigned an integral weight to avoid the complications involved in rounding in the final tables. If, for example, the final weight for a group was 5.2, one-fifth of the persons in the group (selected at random) were assigned a weight of 6 and the remaining four-fifths a weight of 5.

The estimates realize some of the gains in sampling efficiency that would have resulted had the population been stratified into the groups before sampling. The net effect is a reduction in both the sampling error and possible bias of most statistics below what would be obtained by weighting the results of the sample by a uniform factor (e.g., by weighting the 20-percent sample results by a uniform factor of 5). The reduction in sampling error will be trivial for some items and substantial for others. A byproduct of this estimation procedure is that estimates for this sample are, in general, consistent with the complete count for the population groups used in the estimation procedure. A more complete discussion of the technical aspects of these ratio estimates will be presented in a separate report.

**SAMPLING VARIABILITY**

The estimates from the 20-, 15-, and 5-percent sample tabulations are subject to sampling variability. The standard errors of these estimates can be approximated by using the data in tables B through D. The chances are about 2 out of 3 that the difference (due to sampling variability) between the sample estimate and the figure that would have been obtained from a

complete count of the population is less than the standard error. The chances are about 19 out of 20 that the difference is less than twice the standard error and about 99 out of 100 that it is less than 2½ times the standard error. The amount by which the estimated standard error must be multiplied to obtain other odds deemed more appropriate can be found in most statistical textbooks. The sampling errors may be obtained by using the factors shown in table D in conjunction with table B for absolute numbers and in conjunction with table C for percentages. These tables reflect the effect of simple response variance, but not of bias arising in the collection, processing, and estimation steps nor of the correlated errors enumerators introduce; estimates of the magnitude of some of these factors in the total error are being evaluated and will be published at a later date.

Table B shows approximate standard errors of estimated numbers for most statistics based on the 20-percent sample. In determining the figures for this table, some aspects of the sample design, the estimation process, and the population of the area over which the data have been compiled are ignored. Table C shows standard errors of most percentages based on the 20-percent sample. Linear interpolation in tables B and C will provide approximate results that are satisfactory for most purposes. Table D provides a factor by which the standard errors shown in tables B or C should be multiplied to adjust for the combined effect of the sample size (i.e., whether a 20-percent, 15-percent, or 5-percent sample), the sample design, and the estimation procedure.

To estimate the standard error for a given characteristic based on the 15- or 5-percent sample, or for a more

precise estimate for the 20-percent sample, locate in table D the factor applying to the characteristic and sample size used to tabulate the data and multiply this factor by the standard error found in table B or C. If the estimate is not identified in table D, use the factor shown for "all other." Where data are shown as cross-classifications of two characteristics, locate and use the larger factor. Similarly, if an item, although collected on one sample basis, has been tabulated for a smaller sample, use the factor appropriate for the smaller sample.

The standard errors estimated from these tables are not directly applicable to differences between two sample estimates. In order to estimate the standard error of a difference, the tables are to be used somewhat differently in the three following situations:

1. For a difference between the sample figure and one based on a complete count (e.g., arising from comparisons between 1970 sample statistics and complete-count statistics for 1960 or 1950), the standard error is identical with the standard error of the 1970 estimate alone.
2. For a difference between two sample figures (that is, one from 1970 and the other from 1960, or both from the same census year), the standard error is approximately the square root of the sum of the squares of the standard errors of each estimate considered separately. This formula will represent the actual standard error quite accurately for the difference between estimates of the same characteristics in two different areas, or for the difference between separate and uncorrelated characteristics in the same area. If, however, there is a high positive correlation between

the two characteristics, the formula will overestimate the true standard error. The approximate standard error for the 1970 sample figure is derived directly from tables B through D. The standard error of a 25-percent 1960 sample figure may be obtained from the relevant 1960 census report or an approximate value may be obtained by multiplying the appropriate value in table B or C by 0.9.

3. For a difference between two sample estimates, one of which represents a subclass of the other, the tables can be used directly with the difference considered as the sample estimate.

The sampling variability of the medians presented in certain tables (median age, median years of school completed, and median income) depends on the size of the base and on the distribution on which the median is based. An approximate method for measuring the reliability of an estimated median is to determine an interval about the estimated median such that there is a stated degree of confidence the true median lies within the interval. As the first step in estimating the upper and lower limits of the interval (that is, the confidence limits) about the median, compute one-half the number on which the median is based (designated  $\frac{N}{2}$ ). From table B, following the method outlined in other parts of this section, compute the standard error of an estimated number equal to  $\frac{N}{2}$ . Subtract this standard error from  $\frac{N}{2}$ . Cumulate the frequencies (in the table on which the median is based) until the total first exceeds the difference between  $\frac{N}{2}$  and its standard error and by linear interpolation obtain a value corresponding

to this number. In a corresponding manner, add the standard error to  $\frac{N}{2}$ , cumulate the frequencies in the table, and obtain a value in the table on which the median is based corresponding to the sum of  $\frac{N}{2}$  and its standard error. The chances are about 2 out of 3 that the median would lie between these two values. The range for 19 chances out of 20 and for 99 in 100 can be computed in a similar manner by multiplying the standard error by the appropriate factors before subtracting from and adding to one-half the number reporting the characteristic. Interpolation to obtain the values corresponding to these numbers gives the confidence limits for the median.

The sampling variability of a mean, such as the number of children ever born per 1,000 women or mean income, presented in certain tables, depends on the variability of the distribution on which the mean is based, the size of the sample, the sample design (for example, the use of households as the sampling unit), and the use of ratio estimates.

An approximation to the variability of the mean may be obtained as follows: compute the standard deviation of the distribution on which the mean is based; divide this figure by the square root of one-fifth of the total units in the distribution; multiply this quotient by the factor from table D appropriate to the statistic and the actual sample rate on which the mean is based. If the distribution is not published in the detailed tables, calculate the standard deviation from a comparable distribution for a larger area or for a similar population group; divide by the square root of one-fifth of the units on which the mean of interest is based; multiply the quotient by the factor from table D.

APPENDIX C—Continued

TABLE B. Approximate Standard Error of Estimated Number Based on 20-Percent Sample

(Range of 2 chances out of 3; for factors to be applied see table D and text)

Estimated number <sup>1</sup>	Number of persons in area <sup>2</sup>							
	10,000	50,000	100,000	250,000	1,000,000	3,000,000	5,000,000	20,000,000
50 . . . . .	15	15	15	15	15	15	15	15
100 . . . . .	20	20	20	20	20	20	20	20
250 . . . . .	30	30	30	30	30	30	30	30
500 . . . . .	45	45	45	45	45	45	45	45
1,000 . . . . .	60	60	65	65	65	65	65	65
2,500 . . . . .	90	95	100	100	100	100	100	100
5,000 . . . . .	100	130	140	140	140	140	140	140
10,000 . . . . .	...	180	190	200	200	200	200	200
15,000 . . . . .	...	200	230	240	240	240	240	240
25,000 . . . . .	...	220	270	300	310	310	320	320
50,000 . . . . .	...	...	320	400	440	440	440	450
75,000 . . . . .	...	...	270	450	520	540	540	540
100,000 . . . . .	...	...	...	490	600	620	630	630

<sup>1</sup>For estimated numbers larger than 100,000, the relative errors are somewhat smaller than for 100,000.

<sup>2</sup>An area is the smallest complete geographic area to which the estimate under consideration pertains. Thus, the area may be the State, city, county, standard metropolitan statistical area, urbanized area, or the urban or rural portion of the State or county. The Negro population and persons of Spanish heritage do not represent complete areas.

TABLE C. Approximate Standard Error of Estimated Percentage Based on 20-Percent Sample

(Range of 2 chances out of 3; for factors to be applied see table D and text)

Estimated percentage	Base of percentage						
	500	1,000	2,500	10,000	25,000	100,000	250,000
2 or 98 . . . . .	1.3	0.9	0.6	0.3	0.2	0.1	0.1
5 or 95 . . . . .	2.0	1.4	0.9	0.4	0.3	0.1	0.1
10 or 90 . . . . .	2.7	1.9	1.2	0.6	0.4	0.2	0.1
25 or 75 . . . . .	3.9	2.7	1.7	0.9	0.5	0.3	0.2
50 . . . . .	4.5	3.2	2.0	1.0	0.6	0.3	0.2

APPENDIX C—Continued

TABLE D. Factor to be Applied to Standard Error

Characteristic	Factor <sup>1</sup>	Characteristic	Factor <sup>1</sup>
Negroes—Southern States .....	0.8	School enrollment .....	1.0
—Other .....	1.4	Years of school completed .....	1.0
Age .....	0.8	Labor force status .....	0.8
Household relationship .....	0.5	Unemployed .....	1.1
Families and subfamilies <sup>2</sup> .....	0.6	Weeks worked in 1969 .....	0.8
Unrelated individuals .....	1.3	Occupation .....	1.1
Type of group quarters .....	0.6	Industry .....	1.1
Marital status .....	0.6	Class of worker .....	1.1
State of birth .....	1.3	Income—Persons .....	1.0
Spanish origin or descent .....	2.9	—Families .....	1.0
Mother tongue .....	1.8	Poverty status—Persons .....	1.8
Nativity and parentage .....	1.7	—Families .....	1.1

<sup>1</sup>Tabulations of data for persons of Spanish heritage are based on the 15-percent sample. For characteristics shown in this table as based on the 20-percent sample, the factor for persons of Spanish heritage is obtained by multiplying the appropriate factor in this table by 1.2. For characteristics shown as based on the 15-percent sample, the factor in this table can be used directly.

<sup>2</sup>When using table B to determine the standard error for a count of families, use the column in table B appropriate to the total number of families (rather than the total population) in the area under consideration.

## Appendix D.—PUBLICATION AND COMPUTER SUMMARY TAPE PROGRAM

The results of the 1970 Census of Population and Housing are being issued in the form of printed reports, microfiche copies of the printed reports, computer summary tapes, computer printouts, and microfilm. Listed below are short descriptions of the final report series and computer tapes, as currently planned. More detailed information on this program can be obtained by writing to the Publications Distribution Section, Bureau of the Census, Washington, D.C. 20233.

### Population Census Reports

#### Volume I. CHARACTERISTICS OF THE POPULATION

This volume will consist of 58 "parts"—number 1 for the United States, numbers 2 through 52 for the 50 States and the District of Columbia in alphabetical order, and numbers 53 through 58 for Puerto Rico, Guam, Virgin Islands, American Samoa, Canal Zone, and Trust Territory of the Pacific Islands, respectively. Each part, which will be a separate clothbound book, will contain four chapters designated as A, B, C, and D. Each chapter (for each of the 58 areas) will first be issued as an individual paperbound report in four series designated as PC(1)-A, B, C, and D, respectively. The 58 PC(1)-A reports have been specially assembled and issued in a clothbound book, designated as Part A.

#### ■ Series PC(1)-A. NUMBER OF INHABITANTS

Final official population counts are presented for States, counties by urban and rural residence, standard metropolitan statistical areas (SMSA's), urbanized areas, county subdivisions, all incorporated places, and unincorporated places of 1,000 inhabitants or more.

#### ■ Series PC(1)-B. GENERAL POPULATION CHARACTERISTICS

Statistics on age, sex, race, marital status, and relationship to head of household are presented for States, counties by urban and rural residence, SMSA's, urbanized areas, county subdivisions, and places of 1,000 inhabitants or more.

#### ■ Series PC(1)-C. GENERAL SOCIAL AND ECONOMIC CHARACTERISTICS

Statistics are presented on nativity and parentage, State or country of birth, Spanish origin, mother tongue, residence 5 years ago, year moved into present house, school enrollment (public or private), years of school completed, vocational training, number of children ever born, family composition, disability, veteran status, employment status, place of work, means of transportation to work, occupation group, industry group, class of worker, and income (by type) in 1969 of families and individuals. Each subject is shown for some or all of the following areas: States, counties (by urban, rural-nonfarm, and rural-farm residence), SMSA's, urbanized areas, and places of 2,500 inhabitants or more.

#### ■ Series PC(1)-D. DETAILED CHARACTERISTICS

These reports cover most of the subjects shown in Series PC(1)-C, above, presenting the data in considerable detail and cross-classified by age, race, and other characteristics. Each subject is shown for some or all of the following areas: States (by urban, rural-nonfarm, and rural-farm residence), SMSA's, and large cities.

#### Volume II. SUBJECT REPORTS

Each report in this volume, also designated as Series PC(2), will concentrate on a particular subject. Detailed information and cross-relationships will generally be provided on a national and regional level; in some reports, data for States or SMSA's will also be shown. Among the characteristics to be covered are national origin and race, fertility, families, marital status, migration, education, unemployment, occupation, industry, and income.

### Housing Census Reports

#### Volume I. HOUSING CHARACTERISTICS FOR STATES, CITIES, AND COUNTIES

This volume consists of 58 "parts"—number 1 for the United States, numbers 2 through 52 for the 50 States and the District of Columbia in alphabetical order, and numbers 53 through 58 for Puerto Rico, Guam, Virgin Islands, American Samoa, Canal Zone, and Trust Territory of the Pacific Islands, respectively. Each part, which is a separate clothbound book, contains two chapters designated as A and B. Each chapter (for each of the 58 areas) is issued as an individual paperbound report in two series designated as HC(1)-A and B, respectively.

#### ■ Series HC(1)-A. GENERAL HOUSING CHARACTERISTICS

Statistics on tenure, kitchen facilities, plumbing facilities, number of rooms, persons per room, units in structure, mobile home, telephone, value, contract rent, and vacancy status are presented for some or all of the following areas: States (by urban and rural residence), SMSA's, urbanized areas, places of 1,000 inhabitants or more, and counties.

#### ■ Series HC(1)-B. DETAILED HOUSING CHARACTERISTICS

Statistics are presented on a more detailed basis for the subjects included in the Series

HC(1)-A reports, as well as on such additional subjects as year moved into unit, year structure built, basement, heating equipment, fuels, air conditioning, water and sewage, appliances, gross rent, and ownership of second home. Each subject is shown for some or all of the following areas: States (by urban, rural-nonfarm, and rural-farm residence), SMSA's, urbanized areas, places of 2,500 inhabitants or more, and counties (by rural and rural-farm residence).

#### Volume II. METROPOLITAN HOUSING CHARACTERISTICS

These reports, also designated as Series HC(2), cover most of the 1970 census housing subjects in considerable detail and cross-classification. There is one report for each SMSA, presenting data for the SMSA and its central cities and places of 50,000 inhabitants or more, as well as a national summary report.

#### Volume III. BLOCK STATISTICS

One report, under the designation Series HC(3), is issued for each urbanized area showing data for individual blocks on selected housing and population subjects. The series also includes reports for the communities outside urbanized areas which have contracted with the Census Bureau to provide block statistics from the 1970 census.

#### Volume IV. COMPONENTS OF INVENTORY CHANGE

This volume will contain data on the disposition of the 1960 inventory and the source of the 1970 inventory, such as new construction, conversions, mergers, demolitions, and other additions and losses. Cross-tabulations of 1970 and 1960 characteristics for units that have not changed and characteristics of the present and previous residence of recent movers will also be provided. Statistics will be shown for 15 selected SMSA's and for the United States and regions.

#### Volume V. RESIDENTIAL FINANCE

This volume will present data regarding the financing of privately owned nonfarm residential properties. Statistics will be shown on amount of outstanding mortgage debt, manner of acquisition of property, homeowner expenses, and other owner, property, and mortgage characteristics for the United States and regions.

**Volume VI.  
ESTIMATES OF "SUBSTANDARD"  
HOUSING**

This volume will present counts of "substandard" housing units for counties and cities, based on the number of units lacking plumbing facilities combined with estimates of units with all plumbing facilities but in "dilapidated" condition.

**Volume VII.  
SUBJECT REPORTS**

Each report in this volume will concentrate on a particular subject. Detailed information and cross-classifications will generally be provided on a national and regional level; in some reports, data for States or SMSA's may also be shown. Among the subjects to be covered are housing characteristics by household composition, housing of minority groups and senior citizens, and households in mobile homes.

**Joint Population-Housing Reports**

**Series PHC(1).  
CENSUS TRACT REPORTS**

This series contains one report for each SMSA, showing data for most of the population and housing subjects included in the 1970 census.

**Series PHC(2).  
GENERAL DEMOGRAPHIC TRENDS FOR  
METROPOLITAN AREAS, 1960 TO 1970**

This series consists of one report for each State and the District of Columbia, as well as a national summary report, presenting statistics for the State and for SMSA's and their central cities and constituent counties. Comparative 1960 and 1970 data are shown on population counts by age and race and on such housing subjects as tenure, plumbing facilities, value, and contract rent.

**Series PHC(3).  
EMPLOYMENT PROFILES OF SELECTED  
LOW-INCOME AREAS**

This series consists of 76 reports, each presenting statistics on the social and economic characteristics of the residents of a particular low-income area. The data relate to low-income neighborhoods in 51 cities and seven rural poverty areas. Each report provides statistics on employment and unemployment, education, vocational training, availability for work, job history, and income, as well as on value or rent and number of rooms in the housing unit.

**Additional Reports**

**Series PHC(E).  
EVALUATION REPORTS**

This open series will present the results of the extensive evaluation program conducted as an integral part of the 1970 census program, and relating to such matters as completeness of enumeration and quality of the data on characteristics.

**Series PHC(R).  
PROCEDURAL REPORTS**

This open series presents information on various administrative and methodological aspects of the 1970 census, and will include a comprehensive procedural history of the 1970 census. The first report issued focuses on the forms and procedures used in the data collection phase of the census.

**Computer Summary Tapes**

The major portion of the results of the 1970 census will be produced in a set of six tabulation counts. To help meet the needs of census users, these counts are being designed to provide data with much greater subject and geographic detail than it is feasible or desirable to publish in printed reports. The data so tabulated will generally be available—subject to suppression of certain detail where necessary to protect confidentiality—on magnetic computer tape, printouts, and microfilm, at the cost of preparing the copy.

**First Count**—source of the PC(1)-A reports; contains about 400 cells of data on the subjects covered in the PC(1)-B and HC(1)-A reports and tabulated for each of the approximately 250,000 enumeration districts in the United States.

**Second Count**—source of the PC(1)-B, HC(1)-A, and part of the PHC(1) reports; contains about 3,500 cells of data covering the subjects in these reports and tabulated for the approximately 35,000 tracts and 35,000 county subdivisions in the United States.

**Third Count**—source of the HC(3) reports; contains about 250 cells of data on the subjects covered in the PC(1)-B and HC(1)-A reports and tabulated for approximately 1,500,000 blocks in the United States.

**Fourth Count**—source of the PC(1)-C, HC(1)-B, and part of the PHC(1) reports; contains about 13,000 cells of data covering the subjects in these reports and tabulated for the approximately 35,000 tracts and 35,000 county subdivisions in the United States; also contains about 30,000 cells of data for each county.

**Fifth Count**—contains approximately 800 cells of population and housing data for 5-digit ZIP code areas in SMSA's and 3-digit ZIP code areas outside SMSA's; the ZIP code data are available only on tape.

**Sixth Count**—source of the PC(1)-D and HC(2) reports; contains about 260,000 cells of data covering the subjects in these reports and tabulated for States, SMSA's, and large cities.

The tapes are generally organized on a State basis. To use the *First Count* and *Third Count* tapes, it is necessary to purchase the appropriate enumeration district and block maps.

The term "cells" used herein to indicate the scope of subject content of the several counts refers to each figure or statistic in the tabulation for a specific geographic area. For example, in the *Third Count*, there are six cells for a cross-classification of race by sex: three categories of race (white, Negro, other race) by two categories of sex (male, female).

In addition to the above-mentioned summary tapes, the Census Bureau makes available for purchase certain sample tape files containing population and housing characteristics as shown on individual census records. These files contain no names or addresses, and the geographic identification is sufficiently broad to protect confidentiality. There are six files, each containing a 1-percent national sample of persons and housing units. Three of the files are drawn from the population covered by the census 15-percent sample and three from the population in the census 5-percent sample. Each of these three files provides a different type of geographic information: One identifies individual large SMSA's and, for the rest of the country, groups of counties; the second identifies individual States and, where they are sufficiently large, provides urban-rural and metropolitan-nonmetropolitan detail; and the third identifies State groups and size of place, with each individual record showing selected characteristics of the person's neighborhood.