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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.

### STATE ECONOMIC AREAS

**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. 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 adjoining areas. The SEA's, as delineated, are shown on the map of the United States on pages VIII and IX. The counties comprising each SEA are listed at the end of this appendix.

State economic areas were originally delineated for the 1950 census. The 1960 set of State economic areas represented a limited revision of the 1950 areas in order to take into account changes in the definitions of standard metropolitan statistical areas and to create areas for Alaska and Hawaii. The 1970 set of State economic areas is the same as in 1960, except for the designation of Brown County, Wisconsin, as a separate SEA. Thus, there are 510 SEA's in 1970 instead of the 509 in 1960.

**Metropolitan and nonmetropolitan SEA's.**—The combination of counties into State economic areas has 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) have been recognized as metropolitan State economic areas. When a standard metropolitan statistical area is located in two or more States, each State part becomes a separate metropolitan State economic area. In New England this correspondence of metropolitan State economic areas and standard metropolitan statistical areas does 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 metropolitan statistical areas is classified as a metropolitan State economic area if the county or a combination of counties containing the standard metropolitan statistical area or areas has 100,000 inhabitants or more.

State economic areas are identified by the name of the State in which they are located followed by a letter (A, B, C, etc.) or a number (1, 2, 3,

etc.). Metropolitan SEA's are identified by the letter suffix and the nonmetropolitan SEA's by the number suffix.

### 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 2 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.

APPENDIX A—Continued

List of Counties in Each State Economic Area

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

APPENDIX A—Continued

List of Counties in Each State Economic Area—Con.

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

List of Counties in Each State Economic Area—Con.

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

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.

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

APPENDIX A—Continued

List of Counties in Each State Economic Area—Con.

SOUTH DAKOTA—Con.	NEBRASKA—Con.	NEBRASKA—Con.	KANSAS—Con.	KANSAS—Con.
<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	Gearly
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—Con.</b>	Washington	
	Fillmore	Wallace		
		Wichita		

APPENDIX A—Continued

List of Counties in Each State Economic Area—Con.

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

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

APPENDIX A—Continued

List of Counties in Each State Economic Area—Con.

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

APPENDIX A—Continued

List of Counties in Each State Economic Area—Con.

KENTUCKY—Con.	TENNESSEE	TENNESSEE—Con.	TENNESSEE—Con.	ALABAMA—Con.
AREA 7—Con. Harrison Jessamine Mercer Scott Woodford	AREA 1 Crockett Dyer Fayette Gibson Hardeman Haywood Lake Lauderdale Madison Obion Tipton	AREA 6—Con. De Kalb Franklin Jackson Macon Overton Pickett Putnam Warren White	AREA D Anderson Blount Knox	AREA 6—Con. Perry Sumter Wilcox
AREA 8 Carter Clay Elliott Estill Greenup Jackson Laurel Lawrence Lee Lewis Magoffin Menifee Morgan Owsley Powell Rowan Wolfe	AREA 2 Benton Carroll Chester Decatur Hardin Henderson Henry McNairy Weakley	AREA 7 Bledsoe Cumberland Fentress Grundy Marion Morgan Scott Sequatchie Van Buren	ALABAMA AREA 1 Colbert Lauderdale Lawrence Limestone Morgan	AREA 7 Choctaw Clarke Washington
AREA 9 Bell Breathitt Floyd Harlan Johnson Knott Knox Leslie Letcher McCreary Martin Perry Pike Whitley	AREA 3 Dickson Hickman Houston Humphreys Lawrence Lewis Perry Stewart Wayne	AREA 8 Bradley Campbell Carter Claiborne Cocke Grainger Greene Hamblen Hancock Hawkins Jefferson Johnson Loudon McMinn Meigs Monroe Polk Rhea Roane Sevier Sullivan Unicoi Union Washington	AREA 2 Blount Cullman De Kalb Jackson Marshall	AREA 8 Baldwin Escambia
AREA A Jefferson	AREA 4 Cheatham Montgomery Robertson Sumner	AREA 8 Bradley Campbell Carter Claiborne Cocke Grainger Greene Hamblen Hancock Hawkins Jefferson Johnson Loudon McMinn Meigs Monroe Polk Rhea Roane Sevier Sullivan Unicoi Union Washington	AREA 3 Calhoun Cherokee Etowah St. Clair Shelby Talladega Walker	AREA 9 Barbour Butler Coffee Conecuh Covington Crenshaw Dale Geneva Henry Houston Monroe Pike
AREA B Campbell Kenton	AREA 5 Bedford Giles Lincoln Marshall Maury Moore Rutherford Smith Trousdale Williamson Wilson	AREA 8 Bradley Campbell Carter Claiborne Cocke Grainger Greene Hamblen Hancock Hawkins Jefferson Johnson Loudon McMinn Meigs Monroe Polk Rhea Roane Sevier Sullivan Unicoi Union Washington	AREA 4 Chambers Clay Cleburne Coosa Lee Randolph Tallapoosa	AREA A Jefferson
AREA C Boyd	AREA 6 Cannon Clay Coffee	AREA 8 Bradley Campbell Carter Claiborne Cocke Grainger Greene Hamblen Hancock Hawkins Jefferson Johnson Loudon McMinn Meigs Monroe Polk Rhea Roane Sevier Sullivan Unicoi Union Washington	AREA 5 Autauga Bibb Chilton Elmore Fayette Franklin Lamar Macon Marion Pickens Winston	AREA B Russell
AREA D Henderson		AREA 8 Bradley Campbell Carter Claiborne Cocke Grainger Greene Hamblen Hancock Hawkins Jefferson Johnson Loudon McMinn Meigs Monroe Polk Rhea Roane Sevier Sullivan Unicoi Union Washington	AREA 6 Blount Cullman De Kalb Jackson Marshall	AREA C Montgomery
AREA E Fayette		AREA 8 Bradley Campbell Carter Claiborne Cocke Grainger Greene Hamblen Hancock Hawkins Jefferson Johnson Loudon McMinn Meigs Monroe Polk Rhea Roane Sevier Sullivan Unicoi Union Washington	AREA 7 Blount Cullman De Kalb Jackson Marshall	AREA D Mobile
		AREA 8 Bradley Campbell Carter Claiborne Cocke Grainger Greene Hamblen Hancock Hawkins Jefferson Johnson Loudon McMinn Meigs Monroe Polk Rhea Roane Sevier Sullivan Unicoi Union Washington	AREA 8 Blount Cullman De Kalb Jackson Marshall	AREA E Tuscaloosa
		AREA 8 Bradley Campbell Carter Claiborne Cocke Grainger Greene Hamblen Hancock Hawkins Jefferson Johnson Loudon McMinn Meigs Monroe Polk Rhea Roane Sevier Sullivan Unicoi Union Washington	AREA 9 Calhoun Cherokee Etowah St. Clair Shelby Talladega Walker	AREA F Madison
		AREA 8 Bradley Campbell Carter Claiborne Cocke Grainger Greene Hamblen Hancock Hawkins Jefferson Johnson Loudon McMinn Meigs Monroe Polk Rhea Roane Sevier Sullivan Unicoi Union Washington	AREA 10 Blount Cullman De Kalb Jackson Marshall	MISSISSIPPI
		AREA 8 Bradley Campbell Carter Claiborne Cocke Grainger Greene Hamblen Hancock Hawkins Jefferson Johnson Loudon McMinn Meigs Monroe Polk Rhea Roane Sevier Sullivan Unicoi Union Washington	AREA 11 Blount Cullman De Kalb Jackson Marshall	AREA 1 Bolivar Coahoma Humphreys Issaquena Leflore Quitman Sharkey Sunflower Tallahatchie Tunica Washington

APPENDIX A—Continued

List of Counties in Each State Economic Area—Con.

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

APPENDIX A—Continued

List of Counties in Each State Economic Area—Con.

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

APPENDIX A—Continued

List of Counties in Each State Economic Area—Con.

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

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

INDEX A—Continued

Counties in Each State Economic Area—Con.

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

## Appendix B.—DEFINITIONS AND EXPLANATIONS OF SUBJECT CHARACTERISTICS

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Inmigrants and outmigrants .....	App-19
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### GENERAL

As stated in the introductory text, the 1970 census was conducted primarily through self-enumeration. The principal determinant for the responses was, therefore, the questionnaire and its accompanying instruction sheet. Furthermore, census takers were instructed, in their telephone and personal-visit interviews, to read the questions directly from the questionnaire. The definitions and explanations given below for each subject are largely drawn from various technical and procedural materials used in the collection of the data. This material helped the enumerative personnel to understand more fully the intent of each question and thus to resolve problem or unusual cases consistent with this intent. Also included is certain explanatory information to assist the user in the proper utilization of the statistics.

### RESIDENCE IN 1965

The data on residence in 1965 were derived from answers to questions 19a and b, which were asked of all persons in a 15-percent sample of the population. (See facsimile of questionnaire item in figure 1. Facsimiles of all other census questions and instructions to respondents are included in the Volume I reports.)

FIGURE 1. Facsimile of Census Question on Residence in 1965

<p>19a. Did he live in this house on April 1, 1965? <i>If in college or Armed Forces in April 1965, report place of residence there.</i></p> <p> <input type="radio"/> Born April 1965 or later  <input type="radio"/> Yes, this house ..... } <i>Skip to 20</i>  <input type="radio"/> No, different house                 </p>	
<p>b. Where did he live on April 1, 1965?</p> <p>(1) State, foreign country, U.S. possession, etc. _____</p>	
<p>(2) County _____</p>	
<p>(3) Inside the limits of a city, town, village, etc.?</p> <p><input type="radio"/> Yes    <input type="radio"/> No</p>	
<p>(4) <i>If "Yes,"</i> name of city, town, village, etc. _____</p>	

Respondents were instructed to report their usual place of residence on April 1, 1965. In accordance with the census concept of usual residence, instructions on the questionnaire specified that persons in college or in the Armed Forces in 1965 were to report as their 1965 residence the place where they were attending college or where they were stationed. As in all censuses, however, there were some failures to execute the instructions correctly, partly because not every respondent could be given the full range of instructions in reporting usual residence in 1965.

**Mobility status.**—Residence in 1965 was used in conjunction with residence in 1970 to determine the extent of residential mobility of the population. The category "same house" includes all persons 5 years old and over who did not move during the 5 years as well as those who had moved but by 1970 had returned to their 1965 residence.

Persons who had changed residence from 1965 to 1970 were classified into groups according to type of move. The category "different house in United

States" includes persons who, on April 1, 1965, lived in the United States in a different house from the one they occupied on April 1, 1970, and for whom sufficient information concerning the 1965 residence was collected. These persons were subdivided into groups according to their 1965 residence: "different house, same county"; "different county, same State economic area"; "different State economic area, same State"; and "different State." The category "abroad" includes those with residence in a foreign country or an outlying area of the United States in 1965, including Armed Forces stationed overseas.

Persons 5 years old and over who indicated they had moved into their present residence after April 1, 1965, but for whom sufficiently complete and consistent information regarding residence on April 1, 1965, was not collected, are included in the group "moved, place of residence in 1965 not reported." When no information was reported for the person himself, information for the other members of the family was used, if available. The category also includes

persons who gave no information on residence on April 1, 1965, but were classified as having moved into their present house since that date on the basis of the final edited information reported for question 18, "When did this person move into this house (or apartment)?" (All nonresponses on the latter question were allocated.)

The number of persons who were living in a different house in 1965 is somewhat less than the total number of moves during the 5 years. Some persons in the same house at the two dates had moved during the 5-year period but by the time of enumeration had returned to their 1965 residence. Other persons who were living in a different house had made two or more intermediate moves.

**Inmigrants and outmigrants.**—The terms "inmigrants" and "outmigrants" refer to migrants into or out of particu-

lar areas. Inmigrants to an area are migrants who moved into that area from elsewhere in the United States between 1965 and 1970 and were still living there in 1970. Outmigrants from an area are migrants who were living in the area in 1965 and moved out to some other area in the United States where they were in 1970. Inmigrants and outmigrants for any area exclude migrants within that area. Inmigrants and outmigrants, for example, for a particular State do not include migrants between its SEA's. Thus, the sum of the inmigrants to all SEA's in any State will be greater than the number of inmigrants to that State.

#### AGE

The age classification is based on the age of the person in completed years as of April 1, 1970, and was deter-

mined from the reply to questions on age and on month and year of birth.

#### RACE

In the 1970 census, information on race was obtained primarily through self-enumeration. The data, therefore, 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.

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.

## Appendix C.—ACCURACY OF THE DATA

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### 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. 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.

### 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.

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.

Because of the limitations of computer capacity and other resources, a number of complicated editing steps were not introduced when the effect on the final data was considered to be small. Thus, there may be a small number of cases having unlikely combinations of characteristics.

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 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 Population Census Volume I reports. 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 Volume I 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 com-

mercial 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. Since data on residence five years ago was collected only on the 15-percent form, this entire report is based on the 15-percent sample.

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.

**RATIO ESTIMATION**

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

APPENDIX C—Continued

	<i>Female head</i>
13-18	1-person to 6-or-more-person households
19	<i>Group quarters persons</i>
	STAGE II
20	<i>Head of household</i>
21	<i>Not head of household</i> <i>(including persons in group quarters)</i>
	STAGE III
	<i>Male Negro</i>
22	Age under 5 years
23	5-13
24	14-24
25	25-44
26	45-64
27	65 and older
	<i>Male, not Negro</i>
28-33	Same age groups as for Male Negro
	<i>Female Negro</i>
34-39	Same age groups as for Male Negro
	<i>Female, not Negro</i>
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 15-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 7.2, one-fifth of the persons in the group (selected at random) were assigned a weight of 8 and the remaining four-fifths a weight of 7.

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 15-percent sample results by a uniform factor of 6.67). 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 15-percent sample tabulations are subject to sampling variability. The standard errors of these estimates can be approximated by using the data in table A. 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 table A. The table reflects 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 A shows approximate standard errors of estimated numbers related to mobility based on the 15-percent sample. In determining the figures for this table, some aspects of

APPENDIX C—Continued

the sample design, the estimation process, and the population of the area over which the data have been compiled are ignored.

Linear interpolation in table A will provide approximate results that are satisfactory for most purposes.

The standard errors estimated from this table are not directly applicable to differences between two sample estimates. In order to estimate the standard error of a difference, the table is 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 table A. 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 A by 0.7.

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

The standard errors in table A apply to all statistics on mobility status given in tables 1, 4, and 5 and to the column "Population, 5 years old and over" in tables 2 and 3.

Standard errors for estimates of migrants by age and sex given in the remaining columns of tables 2 and 3 are approximated by applying a factor of 0.6 to the standard errors given in table A. Standard errors of estimated persons in an SEA by age and sex (without regard to mobility status) will be overstated somewhat by this approximation; for these data a more appropriate factor is 0.5. More reliable estimates of the population of SEA's by age and sex can be found in PC(2)-10B, where they are based on a 20-percent sample.

TABLE A. Approximate Standard Error of Estimated Number Based on 15-Percent Sample  
(Range of 2 chances out of 3)

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 .....	30	30	30	30	30	30	30	30
100 .....	40	40	40	40	40	40	40	40
250 .....	60	60	60	60	60	60	60	60
500 .....	90	90	90	90	90	90	90	90
1,000 .....	120	125	125	125	125	125	125	125
2,500 .....	175	195	195	200	200	200	200	200
5,000 .....	200	270	275	280	280	280	280	280
10,000 .....	...	360	380	390	400	400	400	400
15,000 .....	...	410	450	475	485	490	490	490
25,000 .....	...	445	550	600	625	630	630	630
50,000 .....	...	...	630	800	870	885	890	890
75,000 .....	...	...	550	895	1,050	1,080	1,085	1,090
100,000 .....	...	...	...	980	1,200	1,245	1,250	1,250

<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 United States, State, or State economic area. The Negro population of a State economic area does not represent a complete area.

## 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, Social and Economic Statistics Administration, 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. Some reports, data for States or SMSAs, may also be shown. Among the subjects to be covered are housing characteristics, household composition, housing of minority groups and senior citizens, and housing 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 IN  
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.

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

Count—contains approximately 800 cells of population and housing data for ZIP code areas in SMSA's and ZIP code areas outside SMSA's; ZIP code data are available only on a county basis.

Count—source of the PC(1)-D and PHC(1) reports; contains about 260,000 cells of data covering the subjects in these reports and tabulated for States, counties, and large cities.

Count—reports generally organized on a State basis. To use the First Count and Third Count, it is necessary to purchase the enumeration district and block files.

Count—cells" used herein to indicate the subject content of the several reports to each figure or statistic in the report for a specific geographic area. For example, in the Third Count, there are 13,000 cells of a cross-classification of race by categories of race (white, Negro, American Indian, Alaska Native, and Hawaiian Native) by two categories of sex (male, female).

Count—In addition to the above-mentioned counts, the Census Bureau makes available for purchase certain sample tape files.

**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.

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.

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