

# Redefinition of the BEA Economic Areas

By Kenneth P. Johnson

**T**HIS ARTICLE presents the new regional economic areas defined by the Bureau of Economic Analysis (BEA) and discusses the procedures used to arrive at this disaggregation of the Nation on an economic basis.<sup>1</sup> The new disaggregation has 172 economic areas, and it replaces the 183-area disaggregation that BEA first defined in 1977 and then revised slightly in 1983 (table 1 and charts 1 and 2). The redefinition was undertaken in 1993 largely to incorporate newly available information on commuting patterns.<sup>2</sup>

To facilitate regional economic analysis, BEA provides geographically detailed economic data by economic area, as well as by State and by local area. BEA assembles economic area data on earnings by industry, employment by industry, total personal income, population, and per capita personal income. These data may be used to analyze local area economic activity, local interindustry economic relationships, and interarea population movements. In addition, the areas are used as major units for BEA's local area economic projections.<sup>3</sup> Historical and projected economic area data are used by government agencies for planning public-sector projects and programs, by businesses for determining plant locations and sales territories, and by university and other research groups for doing regional economic studies.

Each economic area consists of one or more economic nodes—metropolitan areas or similar areas that serve as centers of economic activity—and the surrounding counties that are economically related to the nodes. The main factor used in determining the economic relationships among counties is commuting patterns, so each economic area includes, as far as possible, the place of work and the place of residence of its

labor force. The decision to redefine the areas reflects substantial changes in the commuting patterns, as indicated by data from the 1990 Census of Population, and changes in the definitions of metropolitan areas.<sup>4</sup>

In general, the redefinition procedure has three major elements. The first element is the identification of nodes. The second element is the assignment of counties to relatively small economic units known as "component economic areas" (CEA's); each CEA consists of a single economic node and the surrounding counties that are economically related to the node.<sup>5</sup> The third element is the aggregation of the CEA's to the larger economic areas. For a diagrammatic representation of the redefinition procedure, see chart 3.

## Identification of nodes

Economic nodes are metropolitan areas or similar areas that serve as centers of economic activity. Of the 3,141 counties in the Nation, 836 are metropolitan counties that make up the 310 metropolitan areas; each of these areas was identified as the node of a CEA.<sup>6</sup> In addition, in parts of the Nation remote from metropolitan areas, 38 nonmetropolitan counties were each identified as a node.

Identification of most of the nonmetropolitan nodes was a four-part process. First, analysis of commuting data for the Nation's 2,305 nonmetropolitan counties showed that 1,112 of these counties are not closely related to a metropolitan area. Second, of these 1,112 counties, 130

1. See "Proposed Redefinition of the BEA Economic Areas," *Federal Register* 59 (November 7, 1994): 55,416–20; and "Final Redefinition of the BEA Economic Areas," *Federal Register* 60 (March 10, 1995): 13,114–18.

2. See "Intent to Revise the Boundaries of the BEA Economic Areas," *Federal Register* 58 (March 9, 1993): 13,049–50. See also Kenneth P. Johnson and Lyle Spatz, "BEA Economic Areas: A Progress Report on Redefinition," *SURVEY OF CURRENT BUSINESS* 73 (November 1993): 77–79.

3. See Regional Economic Analysis Division, "BEA Economic Area Projections of Income, Employment, and Population to the Year 2000," *SURVEY* 70 (November 1990): 39–43.

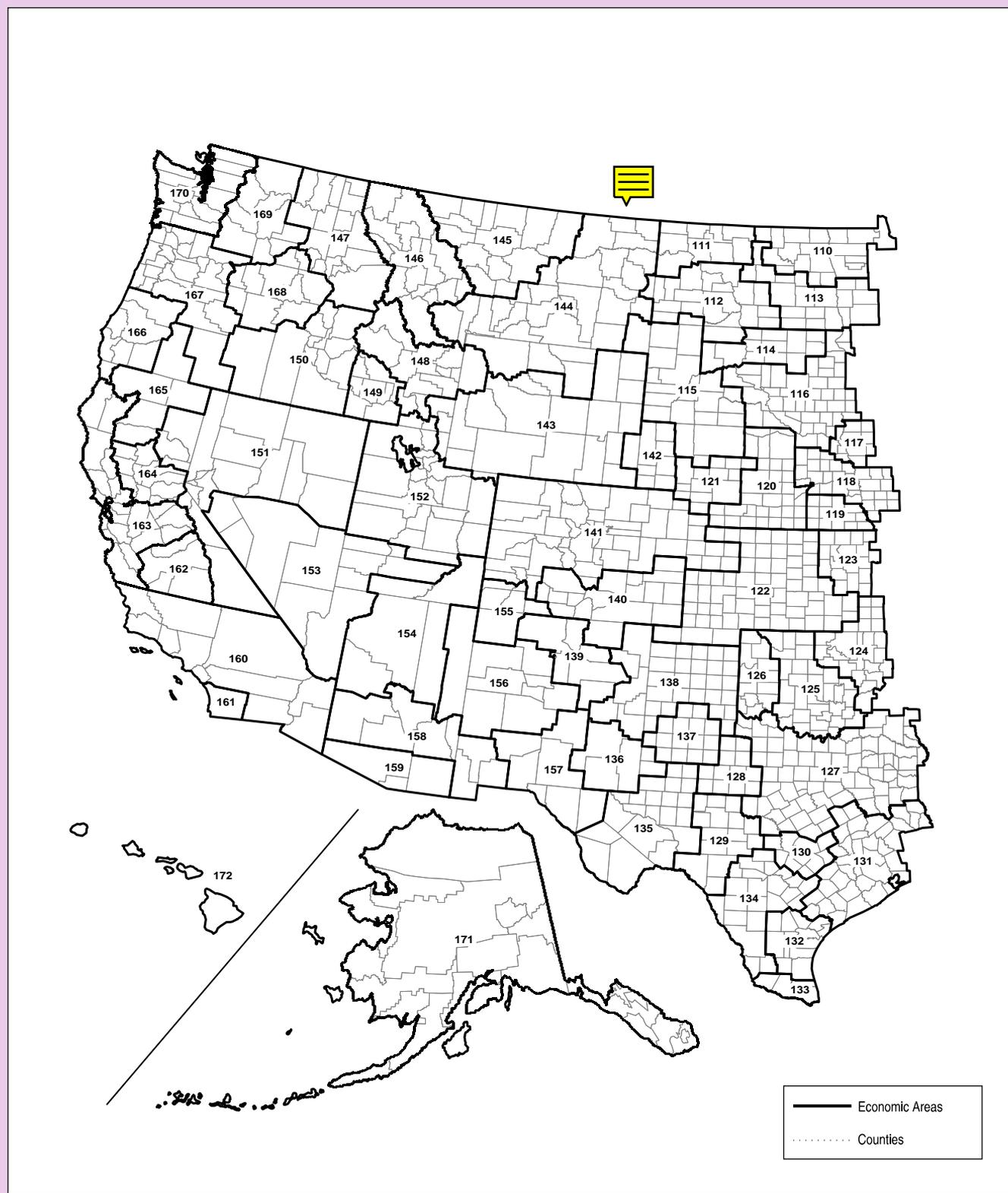
4. The redefinition reflects the changes in the metropolitan-area definitions issued in June 1993 by the Office of Management and Budget for statistical purposes; the definitions of metropolitan areas used by BEA are the county-based definitions. The 310 metropolitan areas consist of 240 metropolitan statistical areas, 59 primary metropolitan statistical areas (PMSA's), and 11 New England county metropolitan areas (NECMA's). (BEA treats the New Haven-Bridgeport-Stamford-Danbury-Waterbury, CT NECMA as a PMSA.)

5. Data for the CEA's can be used by government agencies for administering regulatory programs for small areas and by businesses for developing marketing programs for small areas.

6. The 3,141 counties are those defined as of January 1, 1990; they consist of counties and of areas classified as county equivalents for the 1990 census.

CHART 1

BEA Economic Areas, 110-172



NOTE.—The 172 BEA Economic Areas are defined as of February 1995. For economic-area codes and names, see table 1.

CHART 2

BEA Economic Areas, 1-109

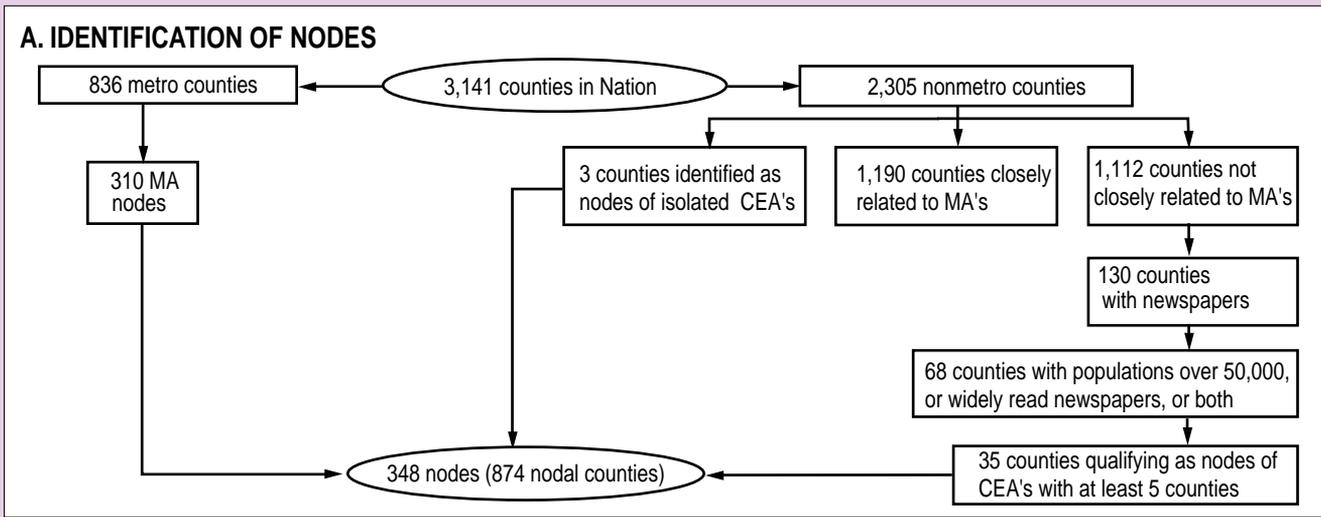


NOTE.—The 172 BEA Economic Areas are defined as of February 1995. For economic-area codes and names, see table 1.

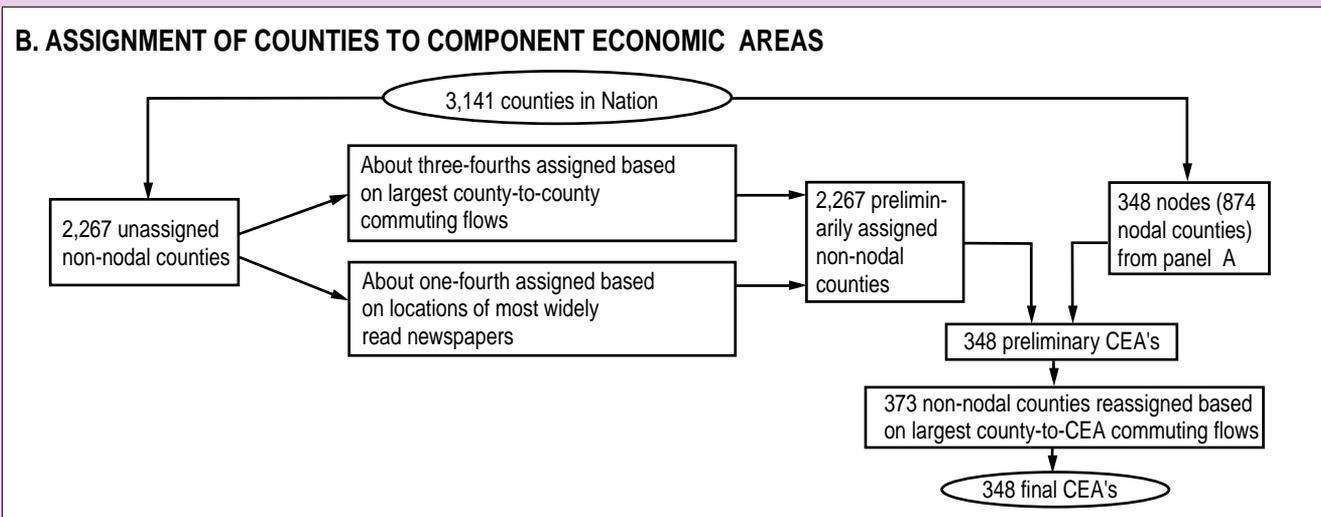
**CHART 3**

**Redefinition Procedure**

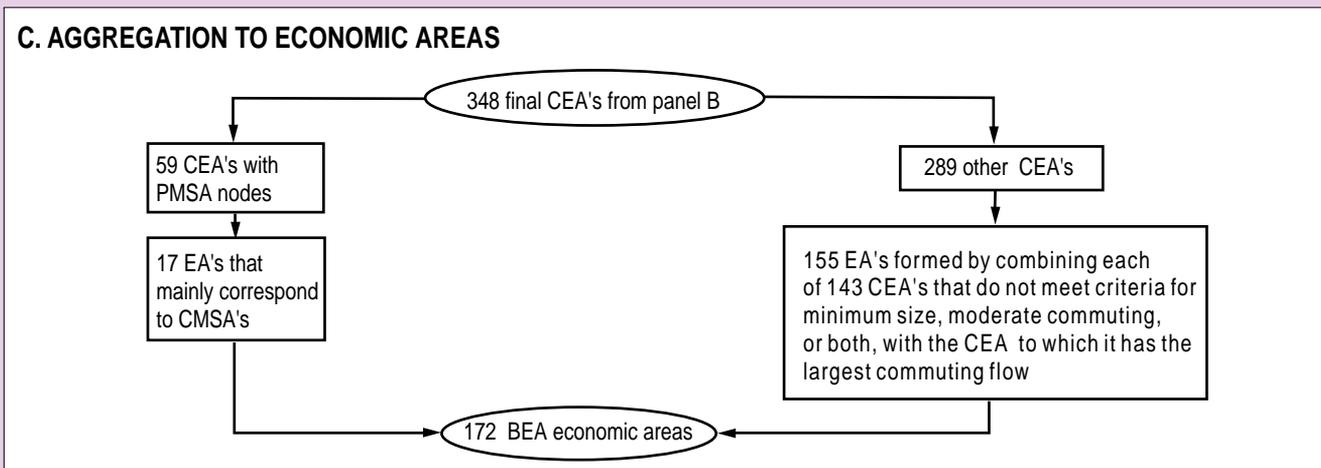
**A. IDENTIFICATION OF NODES**



**B. ASSIGNMENT OF COUNTIES TO COMPONENT ECONOMIC AREAS**



**C. AGGREGATION TO ECONOMIC AREAS**



CEA Component economic area  
 CMSA Consolidated metropolitan statistical area  
 EA Economic area  
 MA Metropolitan area  
 Metro Metropolitan  
 Nonmetro Nonmetropolitan  
 PMSA Primary metropolitan statistical area

are locations of newspapers.<sup>7</sup> Third, of these 130 counties, 68 have populations of more than 50,000, or their newspapers are widely read in at least five counties, or both. Fourth, only 35 of the 68 counties qualified as nodes of CEA's that could contain at least five counties. The CEA of each of these 35 nodal counties was named for the city in which the county's major newspaper is published.<sup>8</sup>

In addition, three nonmetropolitan counties were identified as nodes of CEA's because the county contained the largest city in the CEA. These CEA's, which are characterized by their relative economic isolation, are the Alaska panhandle, western Oklahoma, and northern Michigan.

### *Assignment of counties to component economic areas*

Of the 3,141 counties in the Nation, 836 counties constitute the 310 metropolitan area nodes, and 38 counties are identified as nonmetropolitan nodes; together, these 874 counties constitute 348 nodes. Each of the remaining 2,267 non-nodal counties was analyzed to determine the node to which it is most closely related. About three-fourths of these counties were preliminarily assigned to nodes on the basis of their largest county-to-county commuting flows, according to journey-to-work data from the 1990 census. In many instances, the assignment reflected commuting flows to non-nodal counties already assigned to nodes rather than commuting flows to nodal counties. Most of the other counties were preliminarily assigned to nodes on the basis of the locations of the regional newspapers that are most widely read in those counties, according to newspaper circulation data.<sup>9</sup> For all preliminary assignments, the non-nodal counties had to be contiguous to either the nodes or to non-nodal counties already assigned to the nodes.

The preliminary assignment of non-nodal counties to nodes—based on data at the county level—resulted in a preliminary set of CEA's. Data

7. Data by county on newspaper publication and circulation are from the Audit Bureau of Circulations, an organization whose membership accounts for about 98 percent of U.S. newspaper circulation.

8. The cities are Flagstaff, AZ; Jonesboro, AR; Idaho Falls, ID; Twin Falls, ID; Quincy, IL; Manhattan, KS; Paducah, KY; Bowling Green, KY; Salisbury, MD; Traverse City, MI; Marquette, MI; Mankato, MN; Worthington, MN; Hattiesburg, MS; Meridian, MS; Tupelo, MS; Greenville, MS; Missoula, MT; Butte, MT; Grand Island, NE; North Platte, NE; Norfolk, NE; Scottsbluff, NE; Lebanon, NH; Hobbs, NM; Farmington, NM; Minot, ND; Pendleton, OR; Aberdeen, SD; Watertown, SD; Cookeville, TN; Lufkin, TX; Staunton, VA; Clarksburg, WV; and Bluefield, WV. Hattiesburg, MS was defined as a metropolitan statistical area by the Office of Management and Budget in mid-1994, after the redefinition was under way (see footnote 4).

9. The preliminary assignment of a small number of counties with special features, such as unusually small populations, was based on other procedures.

### **Availability of Additional Information**

The codes, names, and numbers of the counties in each economic area and CEA and of the CEA's in each economic area are available electronically on the Economic Bulletin Board (EBB) from the Commerce Department's STAT-USA. To access the EBB, use a personal computer and modem, dial (202) 482-3870, and follow the instructions. To access the EBB through Internet, use Telnet address "ebb.stat-usa.gov" for remote login, and download the file named "eacodes.exe." For prices and other information about these services, call (202) 482-1986.

The economic area information is also available on a 3½-inch, high-density diskette for \$20. When ordering, please specify the BEA Accession Number 61-95-40-101. Send your order, along with a check or money order payable to "Bureau of Economic Analysis," to Public Information Office, Order Desk, BE-53, Bureau of Economic Analysis, U.S. Department of Commerce, Washington, DC 20230. For further information or to order using MasterCard or VISA, call (202) 606-3700.

at both the county and CEA levels were then analyzed to ensure that, to the extent possible, each county was assigned to the CEA to which it has the largest commuting flow. This analysis resulted in the reassignment of 373 counties and in the definition of the final set of 348 CEA's.

### *Aggregation to economic areas*

The 348 CEA's were used as "building blocks" for the new 172 economic areas. The CEA's were aggregated to economic areas so that (1) each economic area includes, as far as possible, the place of work and the place of residence of its labor force and (2) each economic area is economically large enough to be part of BEA's local area economic projections program.<sup>10</sup> In general, the aggregation had two parts. First, the 59 CEA's with primary metropolitan statistical areas (PMSA's) as nodes were combined into 17 economic areas, which mainly correspond to the 17 consolidated metropolitan statistical areas (CMSA's) that comprise the PMSA's.<sup>11</sup> Second, each of the 143 CEA's that do not meet criteria for minimum size, for moderate commuting across CEA boundaries, or for both, was combined with the CEA to which it has the largest commuting flow.<sup>12</sup>

10. In its forthcoming set of regional projections, BEA plans to publish projections for States in the summer of 1995 and projections for the new economic areas and for metropolitan areas in early 1996.

11. A CMSA has more than 1 million residents and comprises two or more PMSA's.

12. The criteria for minimum size were developed from a combination of data on land area, on number of employed residents, and on number of

By definition, the labor force of an economic area should work and reside in that area, so commuting across boundaries should be limited. An evaluation of journey-to-work data from the 1990 census indicated that net numbers of commuters across the new economic area boundaries are indeed relatively low.<sup>13</sup> About 80 percent of the 172 areas have net commuting rates of 1 percent or less.<sup>14</sup> In contrast, again according to the 1990

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counties, and the commuting criteria were developed from journey-to-work data from the 1990 census.

13. The net number of commuters is the difference between the number of in-commuters (nonresidents who commute to work in an economic area) and the number of out-commuters (residents who commute to work out of an economic area).

14. The net commuting rate is the difference between the in-commuting rate and the out-commuting rate; the rate of in-commuting (or out-

journey-to-work data, only about 60 percent of the 183 areas defined in 1977 have net commuting rates of 1 percent or less.<sup>15</sup>

*Table 1 follows.* 

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commuting) is the number of in-commuters (or out-commuters) as a percentage of the number of employed residents, regardless of their place of work.

15. In the early 1980's, when definitions of the 183 areas were confirmed on the basis of commuting data from the 1980 census, about 80 percent of the 183 areas then had net commuting rates of 1 percent or less.

Table 1.—Codes and Names for BEA Economic Areas

Code	Name	Code	Name
001	Bangor, ME	088	Shreveport-Bossier City, LA-AR
002	Portland, ME	089	Monroe, LA
003	Boston-Worcester-Lawrence-Lowell-Brockton, MA-NH-RI-VT	090	Little Rock-North Little Rock, AR
004	Burlington, VT-NY	091	Fort Smith, AR-OK
005	Albany-Schenectady-Troy, NY	092	Fayetteville-Springdale-Rogers, AR-MO-OK
006	Syracuse, NY-PA	093	Joplin, MO-KS-OK
007	Rochester, NY-PA	094	Springfield, MO
008	Buffalo-Niagara Falls, NY-PA	095	Jonesboro, AR-MO
009	State College, PA	096	St. Louis, MO-IL
010	New York-No. New Jersey-Long Island, NY-NJ-CT-PA-MA-VT	097	Springfield, IL-MO
011	Harrisburg-Lebanon-Carlisle, PA	098	Columbia, MO
012	Philadelphia-Wilmington-Atlantic City, PA-NJ-DE-MD	099	Kansas City, MO-KS
013	Washington-Baltimore, DC-MD-VA-WV-PA	100	Des Moines, IA-IL-MO
014	Salisbury, MD-DE-VA	101	Peoria-Pekin, IL
015	Richmond-Petersburg, VA	102	Davenport-Moline-Rock Island, IA-IL
016	Staunton, VA-WV	103	Cedar Rapids, IA
017	Roanoke, VA-NC-WV	104	Madison, WI-IL-IA
018	Greensboro-Winston-Salem-High Point, NC-VA	105	La Crosse, WI-MN
019	Raleigh-Durham-Chapel Hill, NC	106	Rochester, MN-IA-WI
020	Norfolk-Virginia Beach-Newport News, VA-NC	107	Minneapolis-St. Paul, MN-WI-IA
021	Greenville, NC	108	Wausau, WI
022	Fayetteville, NC	109	Duluth-Superior, MN-WI
023	Charlotte-Gastonia-Rock Hill, NC-SC	110	Grand Forks, ND-MN
024	Columbia, SC	111	Minot, ND
025	Wilmington, NC-SC	112	Bismarck, ND-MT-SD
026	Charleston-North Charleston, SC	113	Fargo-Moorhead, ND-MN
027	Augusta-Aiken, GA-SC	114	Aberdeen, SD
028	Savannah, GA-SC	115	Rapid City, SD-MT-NE-ND
029	Jacksonville, FL-GA	116	Sioux Falls, SD-IA-MN-NE
030	Orlando, FL	117	Sioux City, IA-NE-SD
031	Miami-Fort Lauderdale, FL	118	Omaha, NE-IA-MO
032	Fort Myers-Cape Coral, FL	119	Lincoln, NE
033	Sarasota-Bradenton, FL	120	Grand Island, NE
034	Tampa-St. Petersburg-Clearwater, FL	121	North Platte, NE-CO
035	Tallahassee, FL-GA	122	Wichita, KS-OK
036	Dothan, AL-FL-GA	123	Topeka, KS
037	Albany, GA	124	Tulsa, OK-KS
038	Macon, GA	125	Oklahoma City, OK
039	Columbus, GA-AL	126	Western Oklahoma, OK
040	Atlanta, GA-AL-NC	127	Dallas-Fort Worth, TX-AR-OK
041	Greenville-Spartanburg-Anderson, SC-NC	128	Abilene, TX
042	Asheville, NC	129	San Angelo, TX
043	Chattanooga, TN-GA	130	Austin-San Marcos, TX
044	Knoxville, TN	131	Houston-Galveston-Brazoria, TX
045	Johnson City-Kingsport-Bristol, TN-VA	132	Corpus Christi, TX
046	Hickory-Morganton, NC-TN	133	McAllen-Edinburg-Mission, TX
047	Lexington, KY-TN-VA-WV	134	San Antonio, TX
048	Charleston, WV-KY-OH	135	Odessa-Midland, TX
049	Cincinnati-Hamilton, OH-KY-IN	136	Hobbs, NM-TX
050	Dayton-Springfield, OH	137	Lubbock, TX
051	Columbus, OH	138	Amarillo, TX-NM
052	Wheeling, WV-OH	139	Santa Fe, NM
053	Pittsburgh, PA-WV	140	Pueblo, CO-NM
054	Erie, PA	141	Denver-Boulder-Greeley, CO-KS-NE
055	Cleveland-Akron, OH-PA	142	Scottsbluff, NE-WY
056	Toledo, OH	143	Casper, WY-ID-UT
057	Detroit-Ann Arbor-Flint, MI	144	Billings, MT-WY
058	Northern Michigan, MI	145	Great Falls, MT
059	Green Bay, WI-MI	146	Missoula, MT
060	Appleton-Oshkosh-Neenah, WI	147	Spokane, WA-ID
061	Traverse City, MI	148	Idaho Falls, ID-WY
062	Grand Rapids-Muskegon-Holland, MI	149	Twin Falls, ID
063	Milwaukee-Racine, WI	150	Boise City, ID-OR
064	Chicago-Gary-Kenosha, IL-IN-WI	151	Reno, NV-CA
065	Elkhart-Goshen, IN-MI	152	Salt Lake City-Ogden, UT-ID
066	Fort Wayne, IN	153	Las Vegas, NV-AZ-UT
067	Indianapolis, IN-IL	154	Flagstaff, AZ-UT
068	Champaign-Urbana, IL	155	Farmington, NM-CO
069	Evansville-Henderson, IN-KY-IL	156	Albuquerque, NM-AZ
070	Louisville, KY-IN	157	El Paso, TX-NM
071	Nashville, TN-KY	158	Phoenix-Mesa, AZ-NM
072	Paducah, KY-IL	159	Tucson, AZ
073	Memphis, TN-AR-MS-KY	160	Los Angeles-Riverside-Orange County, CA-AZ
074	Huntsville, AL-TN	161	San Diego, CA
075	Tupelo, MS-AL-TN	162	Fresno, CA
076	Greenville, MS	163	San Francisco-Oakland-San Jose, CA
077	Jackson, MS-AL-LA	164	Sacramento-Yolo, CA
078	Birmingham, AL	165	Redding, CA-OR
079	Montgomery, AL	166	Eugene-Springfield, OR-CA
080	Mobile, AL	167	Portland-Salem, OR-WA
081	Pensacola, FL	168	Pendleton, OR-WA
082	Biloxi-Gulfport-Pascagoula, MS	169	Richland-Kennewick-Pasco, WA
083	New Orleans, LA-MS	170	Seattle-Tacoma-Bremerton, WA
084	Baton Rouge, LA-MS	171	Anchorage, AK
085	Lafayette, LA	172	Honolulu, HI
086	Lake Charles, LA		
087	Beaumont-Port Arthur, TX		

NOTE.—Codes are assigned, beginning with 001 in northern Maine, continuing south to Florida, then north to the Great Lakes, and continuing in a serpentine pattern to the West Coast. Except for the Western Oklahoma economic area (126), the Northern Michigan economic area (058), and the 17 economic areas mainly corresponding to CMSA's, each economic area is named for the

metropolitan area or city that is the node of its largest CEA and that is usually, but not always, the largest metropolitan area or city in the economic area. The name of each economic area includes each State that contains counties in that economic area.