1. Industry Definitions

For the purposes of this study, the following North American Industry Classification System (NAICS) industry codes are used to define the higher education and hospital sectors, respectively:

- Hospitals are defined using NAICS code 622.
- Higher education is defined using NAICS codes 6112 and 6113.

The industry codes selected are consistent with the numerous government data sources that are used throughout this study. It is worth noting that specific industries related to higher education and hospitals are not considered as part of this study, including those industries within the broader health-care and social assistance sector (NAICS 62):

- Ambulatory health-care services (NAICS 621)
  - Offices of physicians
  - Offices of dentists
  - Offices of other health practitioners
- Nursing and residential care facilities (NAICS 623)
- Social assistance (NAICS 624)

As well as those industries within the broader educational services sector (NAICS 61):

- Elementary and secondary schools (NAICS 6111)
- Business schools and computer and management training (NAICS 6114)
- Technical and trade schools (NAICS 6115)
- Other schools and instruction (NAICS 6116)
- Educational support services (NAICS 6117)

2. Data Inputs

2.1 Data Requirements

The primary data inputs include government data sets available through sources such as the Bureau of Labor Statistics (BLS), the Bureau of Economic Analysis (BEA), and the Department of Education (DOE). However, these do not provide the full level of detail needed for this study and are insufficient to fully capture some of the economic activity generated in the U.S., such as visitor spending. Therefore, it is necessary to bridge together multiple data sources in order to produce best estimates of higher education and hospital employment and operational expenditures by geographic location while also imputing values for use in the input-output model. The following list comprises the primary data inputs used in the input-output modeling:

1. BLS Quarterly Census of Employment and Wages (QCEW): The QCEW is a comprehensive data set that reports employment and wages broken out by detailed NAICS code down to the county level. Fundamentally, the data set provides administrative records of employment and wages paid to employees, as well as the number of establishments located in each county across the U.S. for all NAICS codes. The employment and wage data are collected through the unemployment insurance (UI) system and reported to the BLS at the establishment level (as opposed to the firm level). Therefore, the respective data inputs from this source account for cases in which a business operates multiple establishments in more than one location.

2. DOE Integrated Postsecondary Education Data System (IPEDS): The IPEDS database compiles detailed education institution data for every postsecondary institution that participates in any federal financial assistance program authorized by Title IV of the Higher Education Act. This data set provides a detailed indication of the establishment location of postsecondary institutions, financial, and faculty/staff salaries — which has been overlaid with the QCEW as needed. IPEDS also reports student enrollment, which enables an estimate of student spending (i.e., ancillary spending) in a given geography.

3. BEA National and Regional accounts: The BEA produces a range of vital statistics that Oxford Economics used for this project, including industry investment, input-output tables, and regional multipliers. OE compiled the necessary data for each respective industry, identified by their NAICS codes mentioned previously. The BEA's benchmark I-O tables serve as the source of production functions in IMPLAN's software, which is described in section 3.3.

2.2 Data Considerations

In certain data sets, there are data limitations and disclosure issues that require the imputation or redistribution of certain data points. The BLS may not publish all employment and wage estimates in the QCEW program for a given industry in a given geography to protect the identifiable information of respondents. Similarly, some codes are unknown, either for industry assignment (NAICS) or geography (Federal Information Processing System, or FIPS). To address these issues, we rely on IMPLAN's imputation methods, which are detailed in the following section:

2.2.1 Nondisclosures

As BLS has noted on its website:

In accordance with the BLS's confidentiality policy, data reported under a promise of confidentiality are published in a way so as to protect the identifiable information of respondents. As such, the BLS withholds the publication of UI-covered employment and wage data for any industry level when necessary to protect the identity of employers. Totals at the industry level for the states and the nation include the nondisclosed data suppressed within the detailed tables without revealing those data. QCEW confidentiality concepts and practices are largely based on the Statistical Policy Working Paper 22 developed by the Federal Committee on Statistical Methods.

The main value IMPLAN adds to the raw CEW data is to provide estimates for all nondisclosed records. It provides these estimates using a prioritized hierarchy of data and techniques. IMPLAN's full imputation methodology can be explored in greater detail at support.implan.com/hc/en-us/articles/4414459352475-Estimating-Non-Disclosed-CEW-Values.

2.2.2 Unknown Codes

Where employment is reported in a given industry but a county FIPS code is not assigned (i.e., 999), IMPLAN does not include it in its CEW data. Similarly, where an unknown industry (i.e., 999999) is assigned to a known region, IMPLAN does not include it in its CEW data.

2.2.3 Supplanting CEW with IPEDS

In some cases, significant gaps in the CEW annual estimates were identified as being less than reported employment levels from IPEDS. While these gaps can occur for a variety of reasons, such as centralized human resources reporting systems to state UI programs, misallocation of state employees into state noneducation, and the location of faculty/staff who work remotely, ultimately the following six regions used IPEDS state higher education estimates in place of CEW state higher education estimates.

FIGURE 1 Regions with IPEDS Inputs

Region	Ever Lost Work
State College, PA	Penn State University
Corvallis, OR	Oregon State University
Lawrence, KS	University of Kansas
Champaign-Urbana, IL	University of Illinois
Blacksburg-Christiansburg-Radford, VA	Virginia Tech (State University)
Harrisonburg, VA	James Madison University

3. The Input-Output set as Model and Specification

3.1 Economic Impact Versus Contribution Analysis

Economic impact analysis considers the operational expenditures and the capital expenditures of an industry or organization by calculating the economic contribution an industry or organization makes locally, nationally, or globally. Economic impact analysis is an effective way of measuring the economic contribution of an industry to a region or a country in the event of a policy change, for example.

From a technical standpoint, a contribution analysis measures the impacts of existing industries and business, while impact analysis measures the potential addition of new business operations. Therefore, **we use the contribution approach to modeling.**

According to Watson, et al.:[1]

Economic Contribution is defined as the gross change in economic activity associated with an industry, event, or policy in an existing regional economy.

Economic Impact is defined as the net changes in new economic activity associated with an industry, event, or policy in an existing regional economy.

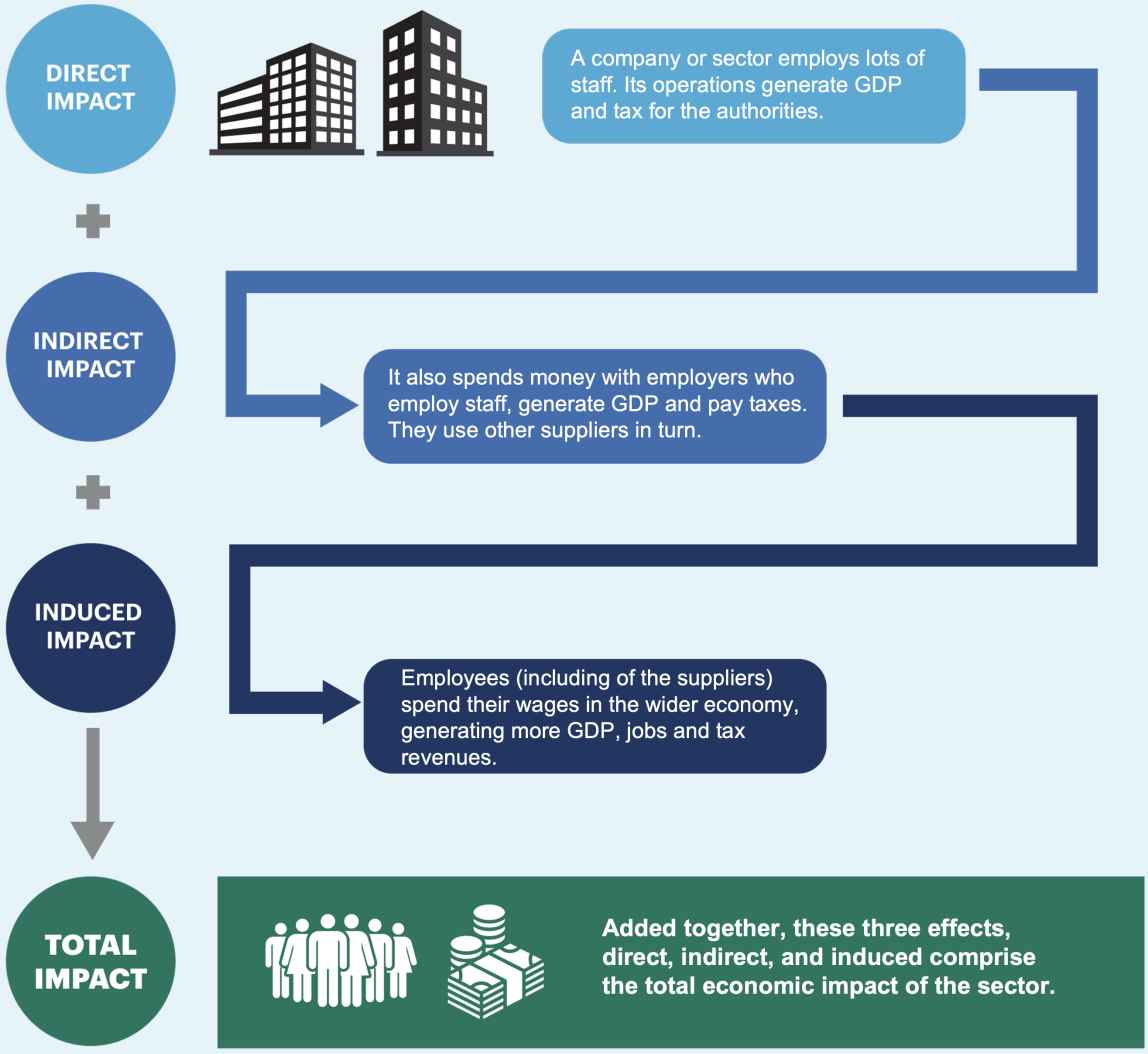
[1] See Philip Watson, Joshua Wilson, Dawn Thilmany, and Susan Winter, "Determining Economic Contributions and Impacts: What Is the Difference and Why Do We Care?" *Journal of Regional Analysis & Policy* 37:2 (2007), pp. 140–6, available at www.ntc.blm.gov/krc/uploads/74/Watson,%20et%20al%20Impacts%20vs%20Contribution%2037-2-6.pdf.

As such, this study sought to measure the economic activity associated with an industry in an existing regional economy. From a technical standpoint, the purpose of using a contribution analysis approach is to avoid double counting the value of higher education and hospitals in a regional economy. For example, when assessing the contribution of an entire sector in a given region (e.g., we assessed the entirety of the higher education and hospital sectors in each respective region), workers in the supply chains as well as workers employed by the sectors will surely use medical and higher education services. We exclude this feedback from indirect and induced effects so as not to add to the existing employment, income, and output impacts of the respective higher education and hospital sectors.

3.2 Input-Output Model

Input-output (I-O) modeling characterizes and follows the flow of spending through an economy, thereby capturing and quantifying effects on supply chains, consumer spending, economic leakages, and even government revenues. The following figure depicts the overarching structure of the model.

FIGURE 2 Summary of the Channels of Economic Impact



Source: Oxford Economics

A standard economic impact assessment identifies three channels of impact that stem from an activity. The first channel of impact is the direct effect, the second channel is the indirect effect, and the third channel captures the impact of workers spending their wages on locally produced goods and services. These impacts are described in more detail in the following section.

Additional assessments are further derived from these channels, such as tax effects. These impacts are described in more detail in section 3.2.5. The three channels of impact are further categorized across jobs, GDP, and income, which can be further decomposed across industry sectors.

3.2.1 The Channels of Impact

Direct effects: The first group of impacts to be assessed is the economic activity associated with the U.S. operations of higher education and hospitals. This is defined as the activity supported by the direct employment and sales of the industries. The assumptions for levels of operational expenses will be based on the employment and wage inputs from QCEW and estimated using IMPLAN assumptions. The assumptions for operational expenses and scaling are provided directly by IMPLAN.

Indirect (supply chain) effects: This type of impact identifies linkages between higher education and hospitals and the sectors' respective supply chains. As a result of purchasing goods and services from suppliers, economic value is created beyond the direct operations of the sectors. This includes, for example, jobs supported in a wide variety of activity in publishing, medical equipment manufacturing, and business services sectors (IT, accounting, auditing, etc.). Of critical importance when estimating multipliers is to consider leakage. This concept captures the fact that some purchases will be made outside the region (or even country) and does not add to regional output or employment.

Induced (workers' spending) effects: The induced impact captures economic activity supported by those directly or indirectly employed by higher education and hospitals who spend their disposable income on goods and services in the regional economy. This helps support jobs in the industries that supply goods and services to consumers, including jobs in retail outlets, restaurants, and a range of other service industries. This is also estimated in terms of regional gross value added (GVA) and employment.

3.2.2 How the Channels of Impact Are Measured

The channels of impact (direct, indirect, and induced) are quantified across three primary measures that include employment, income, and GVA. Each category is defined below, and the impacts are calculated across each of the aforementioned channels for each of the 546 IMPLAN industries. The results of the contribution analysis are presented as the summed total of all 546 industries.

Employment: An industry-specific mix of full-time, part-time, and seasonal employment. An annual average that accounts for seasonality and follows the same definition used by the BLS and the BEA. IMPLAN Employment is not equal to full-time equivalents.

Income (labor income): All forms of employment income, including employee compensation (wages and benefits) and proprietor income

GVA: A measure of output less intermediate consumption that represents an industry's contribution to GDP. It is the measure of the value of goods and services produced in a specified region.

3.2.3 Capital Expenditure Impacts

Capital investment expenditures (capex) in a given local geography can vary widely year on year — depending on the existing capital stock and planned investment stages for higher education and hospitals within the area. Additionally, data may be missing altogether. The capital investments of an industry for a single year are estimated in the BEA's fixed asset tables and are broken out by structures, equipment, and intellectual property. However, regional estimates for this series are not published. Therefore, the national capex series are allocated geographically using the following indicators:

For hospitals, allocate using:

1. Ownership type (e.g., private, federal, state, local) — data from the QCEW
2. Employment levels from IMPLAN/QCEW

For higher education, allocate using:

1. Ownership type (e.g., private, public) — data available from the QCEW
2. Employment levels from IMPLAN/QCEW

*Universities or colleges that have a significant online program are included in the study; however, the allocation of capex values should be assumed to reflect the location of their employees and not of their students (i.e., notably in areas of real estate, building construction, and operations of a physical campus).

3.2.4 Ancillary Impacts

To the extent possible, we estimate the ancillary spending that occurs at higher education and hospital facilities as a result of conferences and events that draw visitors who are not typically associated with the facilities' operations on a day-to-day basis. In addition, we account for some student spending (excluding spending directly to the university/college on such things as tuition, fees, meal plans, etc.). We segment the visitors at each type of institution, which is described in more detail below:

Hospitals: The ancillary spending (e.g., conferences and events, visitor spending) seeks to measure additional economic value. Note that when evaluating consumer spending by visitors, it would be necessary to exclude those visitors who reside in the immediate geography, as their spending in the regional economy cannot be attributable to a hospital visit necessarily. Therefore, visitor spending is estimated by developing a data estimation framework for nonresident visitors. For hospitals, the consumer spending profile is calculated by:

1. Estimating the ratio of visitors to AHA patient surgeries for visitor headcount and associated consumer retail spending pattern attributable to the local economy (i.e., food, personal care, etc.). We assume approximately 25 percent of surgeries attract four visitors who spend one day or less. This was then multiplied by the average daily spend of "Total all consumers" from the BLS's 2019 Consumer Expenditure Survey on items in personal care and entertainment.
2. Taking the number of health-care practitioners and technical staff from the BLS's Occupational Employment and Wage Statistics (OEWS) per region for conferences. We use medical staff as a proxy for conference activity in place of total employment because of the correlation between research, publishing, and conference activity and the number of doctors, nurses, other researchers, etc. at a given hospital. We assume approximately 25 percent of staff attend conferences in a given year and spend two days at a conference. This is then multiplied by the average daily spend of "Highest education: master's/doctoral" from the BLS's 2019 Consumer Expenditure Survey on items in personal care and entertainment.

Higher education: The ancillary spending for higher education seeks to measure additional value from a range of activities but is estimated here primarily through conferences. For higher education, the consumer spending profile is calculated by:

Taking the number of professors and research staff from IPEDS for conference visitor spending in each region. We assume approximately 25 percent of staff attend conferences in a given year and spend two days at a conference. This was then multiplied by the average daily spend of "Highest education: master's/doctoral" from BLS's 2019 Consumer Expenditure Survey on items in personal care and entertainment.

3.3 IMPLAN Software

This analysis uses IMPLAN economic impact software. IMPLAN is an input-output modeling system used to build models at various levels of geography, including the nation, state, county, and congressional district levels. It allows for adjustable assumptions of supply chain connections and leakages from input data and improves the accuracy of assumptions for missing data. All data are presented in 2019 values.

IMPLAN data contain 546 sectors representing all private industries in the United States (e.g., from grain farming to surgical appliance manufacturing to book publishing) as defined by the North American Industry Classification System (NAICS) codes. The crosswalk from NAICS to IMPLAN industries can be found here.

Employment, employee compensation, industry expenditures, commodity demands, relationships between industries, and more are collected to form IMPLAN's database.

The main data sources for IMPLAN include:

- The U.S. Bureau of Economic Analysis (BEA)
  - National Income and Product Accounts (NIPAs) – serve as governing controls for the majority of data elements (e.g., total U.S. employment, GDP, capital investment, personal consumption expenditure (PCE) spending)
  - Benchmark I-O tables – source of production functions
  - Regional Economic Accounts (REA) – source of employee compensation (EC) and proprietor employment and income
  - GDP-by-State Series – source of output for farming, manufacturing, and other sectors
  - Other data from the BEA: past-year deflators, state-level tax data, county-level personal income, net commuting rates
- The U.S. Department of Agriculture (USDA)
  - Census of Agriculture – source of county-level farm-sector output
  - National Agricultural Statistics Service (NASS) – source of state-level value of production for farm sectors
  - Economic Research Service (ERS) – source of state-level sales for farm sectors
- The U.S. Bureau of Labor Statistics (BLS)
  - Quarterly Covered Employment and Wages (QCEW) Data – source of county-level wage and salary employment and income
  - Consumer Expenditure Survey (CES) – allows breaking out of the NIPA PCE data among IMPLAN's nine household income categories

- The U.S. Census Bureau
  - County Business Patterns (CBP) – source of establishment counts by employment size classes to the zip code level
  - Annual Survey of Manufacturers (ASM) – source of output and inventory for manufacturing sectors
  - U.S.-level construction sector output
  - U.S.-level foreign exports and imports
  - Census of Government Finances – source of revenue and spending by state, county, and city governments

4. Geographic Breakouts

Subnational data are of critical importance, especially when analyzing the differences between rural and urban areas. In order to provide detailed geographic coverage without compromising the data quality, we selected the following areas for geography and modeling from the metro/nonmetro regions defined by the BLS:*

- 393 metro areas
- 131 nonmetro areas

*Owing to data reporting at the county level across several government programs, the regions in New England were adjusted to conform to county-level borders (i.e., subcounty NECTAS were not used in defining the regions). This resulted in the elimination or combination of the following regions:

- Connecticut nonmetropolitan area was merged fully into Torrington, CT (Litchfield County).
- Hopkinton town and Westerly town were removed from Norwich-New London-Westerly, CT-RI and merged into Providence-Warwick, RI-MA.
- The Central, West Central, and Northern nonmetropolitan areas in New Hampshire were merged to create a single nonmetropolitan New Hampshire region.

All other subcounty regions were assigned to their respective counties and ultimately to the regions used in this modeling. A summary table of all geographic areas used in the modeling follows.

U.S. Regions Reported in the Anchor Economy Dashboard

Data and the reliance index in the Anchor Economy Dashboard are at the metro/nonmetro regional level as defined by the BLS. A definition of regions can be found here.

Count	MSA name	Region type
1	Anniston-Oxford-Jacksonville, AL	Metro
2	Auburn-Opelika, AL	Metro
3	Birmingham-Hoover, AL	Metro
4	Columbus, GA-AL	Metro
5	Daphne-Fairhope-Foley, AL	Metro
6	Decatur, AL	Metro
7	Dothan, AL	Metro
8	Florence-Muscle Shoals, AL	Metro
9	Gadsden, AL	Metro
10	Huntsville, AL	Metro
11	Mobile, AL	Metro
12	Montgomery, AL	Metro
13	Tuscaloosa, AL	Metro
14	Northeast Alabama nonmetropolitan area	Nonmetro
15	Northwest Alabama nonmetropolitan area	Nonmetro
16	Southeast Alabama nonmetropolitan area	Nonmetro
17	Southwest Alabama nonmetropolitan area	Nonmetro
18	Anchorage, AK	Metro
19	Fairbanks, AK	Metro
20	Alaska nonmetropolitan area	Nonmetro
21	Flagstaff, AZ	Metro
22	Lake Havasu City-Kingman, AZ	Metro
23	Phoenix-Mesa-Scottsdale, AZ	Metro
24	Prescott, AZ	Metro
25	Sierra Vista-Douglas, AZ	Metro
26	Tucson, AZ	Metro
27	Yuma, AZ	Metro
28	Arizona nonmetropolitan area	Nonmetro
29	Fayetteville-Springdale-Rogers, AR-MO	Metro
30	Fort Smith, AR-OK	Metro
31	Hot Springs, AR	Metro
32	Jonesboro, AR	Metro
33	Little Rock-North Little Rock-Conway, AR	Metro
34	Memphis, TN-MS-AR	Metro
35	Pine Bluff, AR	Metro

Count	MSA name	Region type
36	Texarkana, TX-AR	Metro
37	East Arkansas nonmetropolitan area	Nonmetro
38	North Arkansas nonmetropolitan area	Nonmetro
39	South Arkansas nonmetropolitan area	Nonmetro
40	West Arkansas nonmetropolitan area	Nonmetro
41	Bakersfield, CA	Metro
42	Chico, CA	Metro
43	El Centro, CA	Metro
44	Fresno, CA	Metro
45	Hanford-Corcoran, CA	Metro
46	Los Angeles-Long Beach-Anaheim, CA	Metro
47	Madera, CA	Metro
48	Merced, CA	Metro
49	Modesto, CA	Metro
50	Napa, CA	Metro
51	Oxnard-Thousand Oaks-Ventura, CA	Metro
52	Redding, CA	Metro
53	Riverside-San Bernardino-Ontario, CA	Metro
54	Sacramento–Roseville–Arden-Arcade, CA	Metro
55	Salinas, CA	Metro
56	San Diego-Carlsbad, CA	Metro
57	San Francisco-Oakland-Hayward, CA	Metro
58	San Jose-Sunnyvale-Santa Clara, CA	Metro
59	San Luis Obispo-Paso Robles-Arroyo Grande, CA	Metro
60	Santa Cruz-Watsonville, CA	Metro
61	Santa Maria-Santa Barbara, CA	Metro
62	Santa Rosa, CA	Metro
63	Stockton-Lodi, CA	Metro
64	Vallejo-Fairfield, CA	Metro
65	Visalia-Porterville, CA	Metro
66	Yuba City, CA	Metro
67	Eastern Sierra-Mother Lode Region of California nonmetropolitan area	Nonmetro
68	North Coast Region of California nonmetropolitan area	Nonmetro
69	North Valley-Northern Mountains Region of California nonmetropolitan area	Nonmetro
70	Boulder, CO	Metro
71	Colorado Springs, CO	Metro
72	Denver-Aurora-Lakewood, CO	Metro
73	Fort Collins, CO	Metro
74	Grand Junction, CO	Metro
75	Greeley, CO	Metro
76	Pueblo, CO	Metro
77	Eastern and Southern Colorado nonmetropolitan area	Nonmetro

Count	MSA name	Region type
78	Northwest Colorado nonmetropolitan area	Nonmetro
79	Southwest Colorado nonmetropolitan area	Nonmetro
80	Bridgeport-Stamford-Norwalk, CT	Metro
81	Hartford-East Hartford-Middletown, CT	Metro
82	New Haven-Milford, CT	Metro
83	Norwich-New London, CT	Metro
84	Torrington, CT	Metro
85	Worcester, MA-CT	Metro
86	Dover, DE	Metro
87	Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	Metro
88	Salisbury, MD-DE	Metro
89	Washington-Arlington-Alexandria, DC-VA-MD-WV	Metro
90	Cape Coral-Fort Myers, FL	Metro
91	Crestview-Fort Walton Beach-Destin, FL	Metro
92	Deltona-Daytona Beach-Ormond Beach, FL	Metro
93	Gainesville, FL	Metro
94	Homosassa Springs, FL	Metro
95	Jacksonville, FL	Metro
96	Lakeland-Winter Haven, FL	Metro
97	Miami-Fort Lauderdale-West Palm Beach, FL	Metro
98	Naples-Immokalee-Marco Island, FL	Metro
99	North Port-Sarasota-Bradenton, FL	Metro
100	Ocala, FL	Metro
101	Orlando-Kissimmee-Sanford, FL	Metro
102	Palm Bay-Melbourne-Titusville, FL	Metro
103	Panama City, FL	Metro
104	Pensacola-Ferry Pass-Brent, FL	Metro
105	Port St. Lucie, FL	Metro
106	Punta Gorda, FL	Metro
107	Sebastian-Vero Beach, FL	Metro
108	Sebring, FL	Metro
109	Tallahassee, FL	Metro
110	Tampa-St. Petersburg-Clearwater, FL	Metro
111	The Villages, FL	Metro
112	North Florida nonmetropolitan area	Nonmetro
113	South Florida nonmetropolitan area	Nonmetro
114	Albany, GA	Metro
115	Athens-Clarke County, GA	Metro
116	Atlanta-Sandy Springs-Roswell, GA	Metro
117	Augusta-Richmond County, GA-SC	Metro
118	Brunswick, GA	Metro
119	Chattanooga, TN-GA	Metro

Count	MSA name	Region type
120	Dalton, GA	Metro
121	Gainesville, GA	Metro
122	Hinesville, GA	Metro
123	Macon, GA	Metro
124	Rome, GA	Metro
125	Savannah, GA	Metro
126	Valdosta, GA	Metro
127	Warner Robins, GA	Metro
128	East Georgia nonmetropolitan area	Nonmetro
129	Middle Georgia nonmetropolitan area	Nonmetro
130	North Georgia nonmetropolitan area	Nonmetro
131	South Georgia nonmetropolitan area	Nonmetro
132	Kahului-Wailuku-Lahaina, HI	Metro
133	Urban Honolulu, HI	Metro
134	Hawaii / Kauai nonmetropolitan area	Nonmetro
135	Boise City, ID	Metro
136	Coeur d'Alene, ID	Metro
137	Idaho Falls, ID	Metro
138	Lewiston, ID-WA	Metro
139	Logan, UT-ID	Metro
140	Pocatello, ID	Metro
141	Twin Falls, ID	Metro
142	Northwestern Idaho nonmetropolitan area	Nonmetro
143	Southeast-Central Idaho nonmetropolitan area	Nonmetro
144	Bloomington, IL	Metro
145	Cape Girardeau, MO-IL	Metro
146	Carbondale-Marion, IL	Metro
147	Champaign-Urbana, IL	Metro
148	Chicago-Naperville-Elgin, IL-IN-WI	Metro
149	Danville, IL	Metro
150	Davenport-Moline-Rock Island, IA-IL	Metro
151	Decatur, IL	Metro
152	Kankakee, IL	Metro
153	Peoria, IL	Metro
154	Rockford, IL	Metro
155	Springfield, IL	Metro
156	St. Louis, MO-IL	Metro
157	East Central Illinois nonmetropolitan area	Nonmetro
158	Northwest Illinois nonmetropolitan area	Nonmetro
159	South Illinois nonmetropolitan area	Nonmetro
160	West Central Illinois nonmetropolitan area	Nonmetro
161	Bloomington, IN	Metro

Count	MSA name	Region type
162	Cincinnati, OH-KY-IN	Metro
163	Columbus, IN	Metro
164	Elkhart-Goshen, IN	Metro
165	Evansville, IN-KY	Metro
166	Fort Wayne, IN	Metro
167	Indianapolis-Carmel-Anderson, IN	Metro
168	Kokomo, IN	Metro
169	Lafayette-West Lafayette, IN	Metro
170	Louisville/Jefferson County, KY-IN	Metro
171	Michigan City-La Porte, IN	Metro
172	Muncie, IN	Metro
173	South Bend-Mishawaka, IN-MI	Metro
174	Terre Haute, IN	Metro
175	Central Indiana nonmetropolitan area	Nonmetro
176	Northern Indiana nonmetropolitan area	Nonmetro
177	Southern Indiana nonmetropolitan area	Nonmetro
178	Ames, IA	Metro
179	Cedar Rapids, IA	Metro
180	Des Moines-West Des Moines, IA	Metro
181	Dubuque, IA	Metro
182	Iowa City, IA	Metro
183	Omaha-Council Bluffs, NE-IA	Metro
184	Sioux City, IA-NE-SD	Metro
185	Waterloo-Cedar Falls, IA	Metro
186	Northeast Iowa nonmetropolitan area	Nonmetro
187	Northwest Iowa nonmetropolitan area	Nonmetro
188	Southeast Iowa nonmetropolitan area	Nonmetro
189	Southwest Iowa nonmetropolitan area	Nonmetro
190	Kansas City, MO-KS	Metro
191	Lawrence, KS	Metro
192	Manhattan, KS	Metro
193	St. Joseph, MO-KS	Metro
194	Topeka, KS	Metro
195	Wichita, KS	Metro
196	Kansas nonmetropolitan area	Nonmetro
197	Bowling Green, KY	Metro
198	Clarksville, TN-KY	Metro
199	Elizabethtown-Fort Knox, KY	Metro
200	Huntington-Ashland, WV-KY-OH	Metro
201	Lexington-Fayette, KY	Metro
202	Owensboro, KY	Metro
203	Central Kentucky nonmetropolitan area	Nonmetro

Count	MSA name	Region type
204	East Kentucky nonmetropolitan area	Nonmetro
205	South Central Kentucky nonmetropolitan area	Nonmetro
206	West Kentucky nonmetropolitan area	Nonmetro
207	Alexandria, LA	Metro
208	Baton Rouge, LA	Metro
209	Hammond, LA	Metro
210	Houma-Thibodaux, LA	Metro
211	Lafayette, LA	Metro
212	Lake Charles, LA	Metro
213	Monroe, LA	Metro
214	New Orleans-Metairie, LA	Metro
215	Shreveport-Bossier City, LA	Metro
216	Central Louisiana nonmetropolitan area	Nonmetro
217	Northeast Louisiana nonmetropolitan area	Nonmetro
218	Southwest Louisiana nonmetropolitan area	Nonmetro
219	Augusta-Waterville, ME	Metro
220	Bangor, ME	Metro
221	Lewiston-Auburn, ME	Metro
222	Portland-South Portland, ME	Metro
223	Northeast Maine nonmetropolitan area	Nonmetro
224	Southwest Maine nonmetropolitan area	Nonmetro
225	Baltimore-Columbia-Towson, MD	Metro
226	California-Lexington Park, MD	Metro
227	Cumberland, MD-WV	Metro
228	Hagerstown-Martinsburg, MD-WV	Metro
229	Maryland nonmetropolitan area	Nonmetro
230	Barnstable Town, MA	Metro
231	Boston-Cambridge-Newton, MA-NH	Metro
232	Pittsfield, MA	Metro
233	Providence-Warwick, RI-MA	Metro
234	Springfield, MA	Metro
235	Massachusetts nonmetropolitan area	Nonmetro
236	Vineyard Haven, MA	Nonmetro
237	Ann Arbor, MI	Metro
238	Battle Creek, MI	Metro
239	Bay City, MI	Metro
240	Detroit-Warren-Dearborn, MI	Metro
241	Flint, MI	Metro
242	Grand Rapids-Wyoming, MI	Metro
243	Jackson, MI	Metro
244	Kalamazoo-Portage, MI	Metro
245	Lansing-East Lansing, MI	Metro

Count	MSA name	Region type
246	Midland, MI	Metro
247	Monroe, MI	Metro
248	Muskegon, MI	Metro
249	Niles-Benton Harbor, MI	Metro
250	Saginaw, MI	Metro
251	Balance of Lower Peninsula of Michigan nonmetropolitan area	Nonmetro
252	Northeast Lower Peninsula of Michigan nonmetropolitan area	Nonmetro
253	Northwest Lower Peninsula of Michigan nonmetropolitan area	Nonmetro
254	Upper Peninsula of Michigan nonmetropolitan area	Nonmetro
255	Duluth, MN-WI	Metro
256	Fargo, ND-MN	Metro
257	Grand Forks, ND-MN	Metro
258	La Crosse-Onalaska, WI-MN	Metro
259	Mankato-North Mankato, MN	Metro
260	Minneapolis-St. Paul-Bloomington, MN-WI	Metro
261	Rochester, MN	Metro
262	St. Cloud, MN	Metro
263	Northeast Minnesota nonmetropolitan area	Nonmetro
264	Northwest Minnesota nonmetropolitan area	Nonmetro
265	Southeast Minnesota nonmetropolitan area	Nonmetro
266	Southwest Minnesota nonmetropolitan area	Nonmetro
267	Gulfport-Biloxi-Pascagoula, MS	Metro
268	Hattiesburg, MS	Metro
269	Jackson, MS	Metro
270	Northeast Mississippi nonmetropolitan area	Nonmetro
271	Northwest Mississippi nonmetropolitan area	Nonmetro
272	Southeast Mississippi nonmetropolitan area	Nonmetro
273	Southwest Mississippi nonmetropolitan area	Nonmetro
274	Columbia, MO	Metro
275	Jefferson City, MO	Metro
276	Joplin, MO	Metro
277	Springfield, MO	Metro
278	Central Missouri nonmetropolitan area	Nonmetro
279	North Missouri nonmetropolitan area	Nonmetro
280	Southeast Missouri nonmetropolitan area	Nonmetro
281	Southwest Missouri nonmetropolitan area	Nonmetro
282	Billings, MT	Metro
283	Great Falls, MT	Metro
284	Missoula, MT	Metro
285	East-Central Montana nonmetropolitan area	Nonmetro
286	Southwest Montana nonmetropolitan area	Nonmetro
287	West Montana nonmetropolitan area	Nonmetro

Count	MSA name	Region type
288	Grand Island, NE	Metro
289	Lincoln, NE	Metro
290	Northeast Nebraska nonmetropolitan area	Nonmetro
291	Northwest Nebraska nonmetropolitan area	Nonmetro
292	South Nebraska nonmetropolitan area	Nonmetro
293	Carson City, NV	Metro
294	Las Vegas-Henderson-Paradise, NV	Metro
295	Reno, NV	Metro
296	Nevada nonmetropolitan area	Nonmetro
297	Berlin, NH	Metro
298	Concord, NH	Metro
299	Keene, NH	Metro
300	Laconia, NH	Metro
301	Lebanon, NH-VT	Metro
302	Manchester-Nashua, NH	Metro
303	New Hampshire nonmetropolitan area	Nonmetro
304	Allentown-Bethlehem-Easton, PA-NJ	Metro
305	Atlantic City-Hammonton, NJ	Metro
306	New York-Newark-Jersey City, NY-NJ-PA	Metro
307	Ocean City, NJ	Metro
308	Trenton, NJ	Metro
309	Vineland-Bridgeton, NJ	Metro
310	Albuquerque, NM	Metro
311	Farmington, NM	Metro
312	Las Cruces, NM	Metro
313	Santa Fe, NM	Metro
314	Eastern New Mexico nonmetropolitan area	Nonmetro
315	Northern New Mexico nonmetropolitan area	Nonmetro
316	Albany-Schenectady-Troy, NY	Metro
317	Binghamton, NY	Metro
318	Buffalo-Cheektowaga-Niagara Falls, NY	Metro
319	Elmira, NY	Metro
320	Glens Falls, NY	Metro
321	Ithaca, NY	Metro
322	Kingston, NY	Metro
323	Rochester, NY	Metro
324	Syracuse, NY	Metro
325	Utica-Rome, NY	Metro
326	Watertown-Fort Drum, NY	Metro
327	Capital/Northern New York nonmetropolitan area	Nonmetro
328	Central East New York nonmetropolitan area	Nonmetro
329	Southwest New York nonmetropolitan area	Nonmetro

Count	MSA name	Region type
330	Asheville, NC	Metro
331	Burlington, NC	Metro
332	Charlotte-Concord-Gastonia, NC-SC	Metro
333	Durham-Chapel Hill, NC	Metro
334	Fayetteville, NC	Metro
335	Goldsboro, NC	Metro
336	Greensboro-High Point, NC	Metro
337	Greenville, NC	Metro
338	Hickory-Lenoir-Morganton, NC	Metro
339	Jacksonville, NC	Metro
340	Myrtle Beach-Conway-North Myrtle Beach, SC-NC	Metro
341	New Bern, NC	Metro
342	Raleigh, NC	Metro
343	Rocky Mount, NC	Metro
344	Virginia Beach-Norfolk-Newport News, VA-NC	Metro
345	Wilmington, NC	Metro
346	Winston-Salem, NC	Metro
347	Mountain North Carolina nonmetropolitan area	Nonmetro
348	Northeast Coastal North Carolina nonmetropolitan area	Nonmetro
349	Piedmont North Carolina nonmetropolitan area	Nonmetro
350	Southeast Coastal North Carolina nonmetropolitan area	Nonmetro
351	Bismarck, ND	Metro
352	East North Dakota nonmetropolitan area	Nonmetro
353	West North Dakota nonmetropolitan area	Nonmetro
354	Akron, OH	Metro
355	Canton-Massillon, OH	Metro
356	Cleveland-Elyria, OH	Metro
357	Columbus, OH	Metro
358	Dayton, OH	Metro
359	Lima, OH	Metro
360	Mansfield, OH	Metro
361	Springfield, OH	Metro
362	Toledo, OH	Metro
363	Weirton-Steubenville, WV-OH	Metro
364	Wheeling, WV-OH	Metro
365	Youngstown-Warren-Boardman, OH-PA	Metro
366	Eastern Ohio nonmetropolitan area	Nonmetro
367	North Northeastern Ohio nonmetropolitan area (noncontiguous)	Nonmetro
368	Southern Ohio nonmetropolitan area	Nonmetro
369	West Northwestern Ohio nonmetropolitan area	Nonmetro
370	Enid, OK	Metro
371	Lawton, OK	Metro

Count	MSA name	Region type
372	Oklahoma City, OK	Metro
373	Tulsa, OK	Metro
374	Northeast Oklahoma nonmetropolitan area	Nonmetro
375	Northwest Oklahoma nonmetropolitan area	Nonmetro
376	Southeast Oklahoma nonmetropolitan area	Nonmetro
377	Southwest Oklahoma nonmetropolitan area	Nonmetro
378	Albany, OR	Metro
379	Bend-Redmond, OR	Metro
380	Corvallis, OR	Metro
381	Eugene, OR	Metro
382	Grants Pass, OR	Metro
383	Medford, OR	Metro
384	Portland-Vancouver-Hillsboro, OR-WA	Metro
385	Salem, OR	Metro
386	Central Oregon nonmetropolitan area	Nonmetro
387	Coast Oregon nonmetropolitan area	Nonmetro
388	Eastern Oregon nonmetropolitan area	Nonmetro
389	Altoona, PA	Metro
390	Bloomsburg-Berwick, PA	Metro
391	Chambersburg-Waynesboro, PA	Metro
392	East Stroudsburg, PA	Metro
393	Erie, PA	Metro
394	Gettysburg, PA	Metro
395	Harrisburg-Carlisle, PA	Metro
396	Johnstown, PA	Metro
397	Lancaster, PA	Metro
398	Lebanon, PA	Metro
399	Pittsburgh, PA	Metro
400	Reading, PA	Metro
401	Scranton–Wilkes-Barre–Hazleton, PA	Metro
402	State College, PA	Metro
403	Williamsport, PA	Metro
404	York-Hanover, PA	Metro
405	Northern Pennsylvania nonmetropolitan area	Nonmetro
406	Southern Pennsylvania nonmetropolitan area	Nonmetro
407	Western Pennsylvania nonmetropolitan area	Nonmetro
408	Charleston-North Charleston, SC	Metro
409	Columbia, SC	Metro
410	Florence, SC	Metro
411	Greenville-Anderson-Mauldin, SC	Metro
412	Hilton Head Island-Bluffton-Beaufort, SC	Metro
413	Spartanburg, SC	Metro

Count	MSA name	Region type
414	Sumter, SC	Metro
415	Lower Savannah South Carolina nonmetropolitan area	Nonmetro
416	Northeast South Carolina nonmetropolitan area	Nonmetro
417	Upper Savannah South Carolina nonmetropolitan area	Nonmetro
418	Rapid City, SD	Metro
419	Sioux Falls, SD	Metro
420	East South Dakota nonmetropolitan area	Nonmetro
421	West South Dakota nonmetropolitan area	Nonmetro
422	Cleveland, TN	Metro
423	Jackson, TN	Metro
424	Johnson City, TN	Metro
425	Kingsport-Bristol-Bristol, TN-VA	Metro
426	Knoxville, TN	Metro
427	Morristown, TN	Metro
428	Nashville-Davidson–Murfreesboro–Franklin, TN	Metro
429	East Tennessee nonmetropolitan area	Nonmetro
430	North Central Tennessee nonmetropolitan area	Nonmetro
431	South Central Tennessee nonmetropolitan area	Nonmetro
432	West Tennessee nonmetropolitan area	Nonmetro
433	Abilene, TX	Metro
434	Amarillo, TX	Metro
435	Austin-Round Rock, TX	Metro
436	Beaumont-Port Arthur, TX	Metro
437	Brownsville-Harlingen, TX	Metro
438	College Station-Bryan, TX	Metro
439	Corpus Christi, TX	Metro
440	Dallas-Fort Worth-Arlington, TX	Metro
441	El Paso, TX	Metro
442	Houston-The Woodlands-Sugar Land, TX	Metro
443	Killeen-Temple, TX	Metro
444	Laredo, TX	Metro
445	Longview, TX	Metro
446	Lubbock, TX	Metro
447	McAllen-Edinburg-Mission, TX	Metro
448	Midland, TX	Metro
449	Odessa, TX	Metro
450	San Angelo, TX	Metro
451	San Antonio-New Braunfels, TX	Metro
452	Sherman-Denison, TX	Metro
453	Tyler, TX	Metro
454	Victoria, TX	Metro
455	Waco, TX	Metro

Count	MSA name	Region type
456	Wichita Falls, TX	Metro
457	Big Thicket Region of Texas nonmetropolitan area	Nonmetro
458	Border Region of Texas nonmetropolitan area	Nonmetro
459	Coastal Plains Region of Texas nonmetropolitan area	Nonmetro
460	Hill Country Region of Texas nonmetropolitan area	Nonmetro
461	North Texas Region of Texas nonmetropolitan area	Nonmetro
462	West Texas Region of Texas nonmetropolitan area	Nonmetro
463	Ogden-Clearfield, UT	Metro
464	Provo-Orem, UT	Metro
465	Salt Lake City, UT	Metro
466	St. George, UT	Metro
467	Central Utah nonmetropolitan area	Nonmetro
468	Eastern Utah nonmetropolitan area	Nonmetro
469	Barre, VT	Metro
470	Bennington, VT	Metro
471	Burlington-South Burlington, VT	Metro
472	Rutland, VT	Metro
473	Northern Vermont nonmetropolitan area	Nonmetro
474	Southern Vermont nonmetropolitan area	Nonmetro
475	Blacksburg-Christiansburg-Radford, VA	Metro
476	Charlottesville, VA	Metro
477	Harrisonburg, VA	Metro
478	Lynchburg, VA	Metro
479	Richmond, VA	Metro
480	Roanoke, VA	Metro
481	Staunton-Waynesboro, VA	Metro
482	Winchester, VA-WV	Metro
483	Northeast Virginia nonmetropolitan area	Nonmetro
484	Northwest Virginia nonmetropolitan area	Nonmetro
485	Southside Virginia nonmetropolitan area	Nonmetro
486	Southwest Virginia nonmetropolitan area	Nonmetro
487	Bellingham, WA	Metro
488	Bremerton-Silverdale, WA	Metro
489	Kennewick-Richland, WA	Metro
490	Longview, WA	Metro
491	Mount Vernon-Anacortes, WA	Metro
492	Olympia-Tumwater, WA	Metro
493	Seattle-Tacoma-Bellevue, WA	Metro
494	Spokane-Spokane Valley, WA	Metro
495	Walla Walla, WA	Metro
496	Wenatchee, WA	Metro
497	Yakima, WA	Metro

Count	MSA name	Region type
498	Eastern Washington nonmetropolitan area	Nonmetro
499	Western Washington nonmetropolitan area	Nonmetro
500	Beckley, WV	Metro
501	Charleston, WV	Metro
502	Morgantown, WV	Metro
503	Parkersburg-Vienna, WV	Metro
504	Northern West Virginia nonmetropolitan area	Nonmetro
505	Southern West Virginia nonmetropolitan area	Nonmetro
506	Appleton, WI	Metro
507	Eau Claire, WI	Metro
508	Fond du Lac, WI	Metro
509	Green Bay, WI	Metro
510	Janesville-Beloit, WI	Metro
511	Madison, WI	Metro
512	Milwaukee-Waukesha-West Allis, WI	Metro
513	Oshkosh-Neenah, WI	Metro
514	Racine, WI	Metro
515	Sheboygan, WI	Metro
516	Wausau, WI	Metro
517	Northeastern Wisconsin nonmetropolitan area	Nonmetro
518	Northwestern Wisconsin nonmetropolitan area	Nonmetro
519	South Central Wisconsin nonmetropolitan area	Nonmetro
520	Western Wisconsin nonmetropolitan area	Nonmetro
521	Casper, WY	Metro
522	Cheyenne, WY	Metro
523	Eastern Wyoming nonmetropolitan area	Nonmetro
524	Western Wyoming nonmetropolitan area	Nonmetro

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