

Business Case

Emsi Q2 2017 Data Set

May 2017

Joint Development Authority of Jeff Davis County, Hazlehurst & Denton, Georgia
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Parameters

Industries

163 items selected. See Appendix A for details.

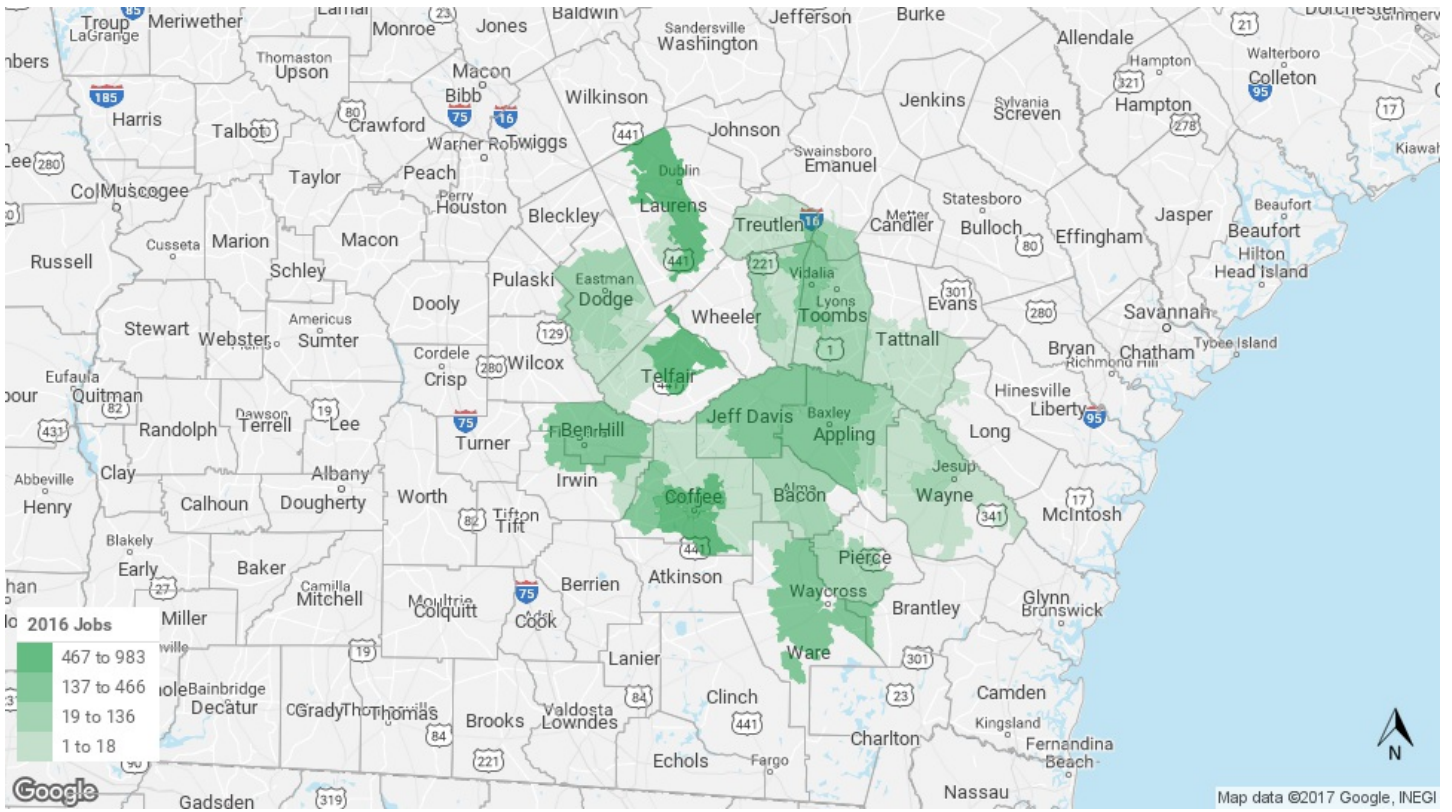
Regions

48 items selected. See Appendix B for details.

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2017.2 – QCEW Employees, Non-QCEW Employees, and Self-Employed

Purdue: Manufacturing Supercluster for 48 Georgia ZIPs vs. Nation

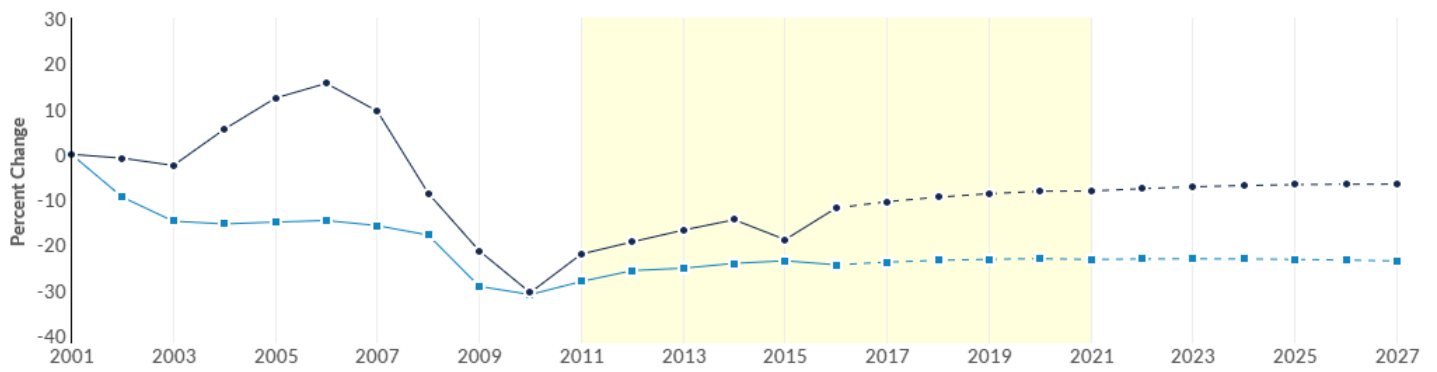


Executive Summary

| | | |
|--|---|--|
| <p style="text-align: center;">5,739 Jobs</p> <p>Jobs increased by 663 over the last 5 years. Projected to increase by 243 over the next 5 years.</p> | <p style="text-align: center;">1.39 Concentration</p> <p>Regional job concentration is 1.39 times the national job concentration.</p> | <p style="text-align: center;">\$49.4K Earnings Per Job</p> <p>Regional earnings per job are \$41.2K below the national earnings per job of \$90.6K.</p> |
|--|---|--|

- Jobs for Purdue: Manufacturing Supercluster increased by 663 jobs (13.1%) from 2011-2016, outpacing the national growth rate of 5.1%. The industries are projected to increase by 243 jobs (4.2%) from 2016-2021, outpacing the national growth rate of 1.6%.
- Regional job concentration for Purdue: Manufacturing Supercluster is 1.39 times the national job concentration. In other words, there are 39% more jobs at Purdue: Manufacturing Supercluster in this region than we would expect to find in the average region.
- Cost of labor in the region is below average. The regional earnings per job for Purdue: Manufacturing Supercluster is \$49.4K, which is \$41.2K below the national average of \$90.6K.

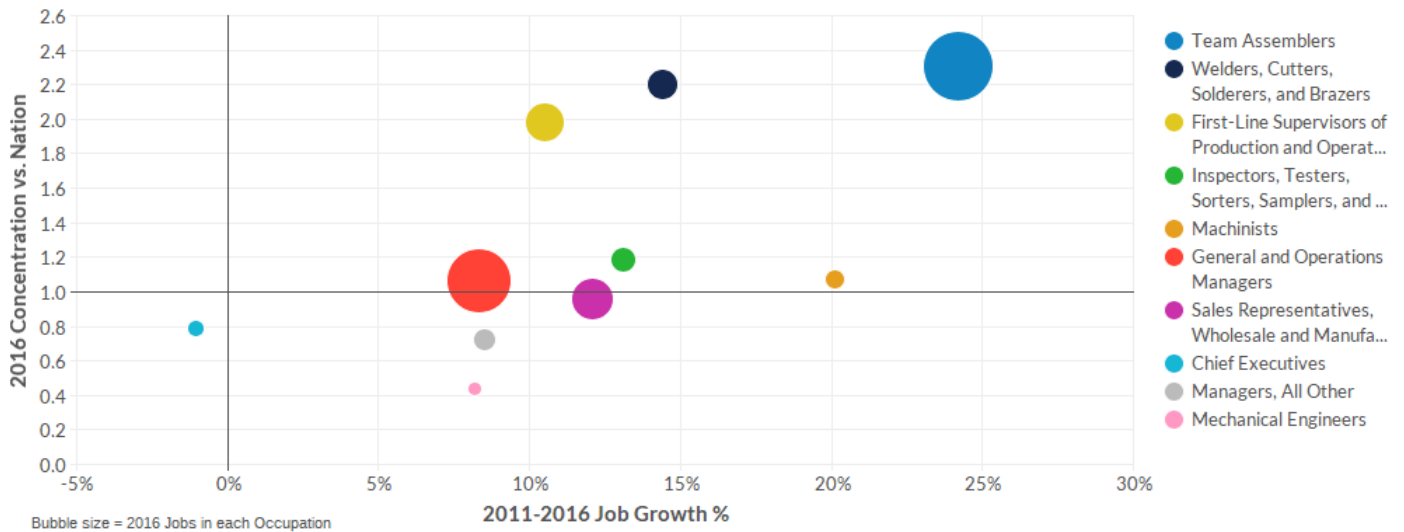
Regional Trends



| Region | 2011 Jobs | 2016 Jobs | 2021 Jobs | Change | 2011-2016 Growth % | 2016-2021 Growth % |
|-------------------|-----------|-----------|-----------|---------|--------------------|--------------------|
| ● 48 Georgia ZIPs | 5,077 | 5,739 | 5,982 | 905 | 13.0% | 4.2% |
| ■ Nation | 5,642,573 | 5,932,077 | 6,025,299 | 382,726 | 5.1% | 1.6% |

Workforce Availability

Key occupations for Purdue: Manufacturing Supercluster have an overall concentration of 1.36, indicating above average workforce availability. These occupations experienced overall job growth of 13.7% from 2011-2016, indicating that the regional talent pool is increasing.



| SOC | Key Occupation | Concentration | 2011 Jobs | 2016 Jobs | 2021 Jobs | Median Hourly Earnings | Average Hourly Earnings |
|---------|--|---------------|-----------|-----------|-----------|------------------------|-------------------------|
| 51-2092 | Team Assemblers | 2.30 | 1,464 | 1,818 | 1,916 | \$12.25/hr | \$12.70/hr |
| 51-4121 | Welders, Cutters, Solderers, and Brazers | 2.20 | 539 | 617 | 651 | \$13.45/hr | \$14.27/hr |
| 51-1011 | First-Line Supervisors of Production and Operating Workers | 1.98 | 766 | 846 | 876 | \$23.35/hr | \$26.24/hr |
| 51-9061 | Inspectors, Testers, Sorters, Samplers, and Weighers | 1.19 | 380 | 430 | 460 | \$13.22/hr | \$14.03/hr |
| 51-4041 | Machinists | 1.08 | 249 | 299 | 345 | \$16.10/hr | \$17.18/hr |
| 11-1021 | General and Operations Managers | 1.06 | 1,522 | 1,648 | 1,770 | \$31.03/hr | \$37.24/hr |
| 41-4012 | Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products | 0.96 | 885 | 992 | 1,113 | \$18.72/hr | \$21.96/hr |
| 11-1011 | Chief Executives | 0.78 | 169 | 168 | 172 | \$47.29/hr | \$53.33/hr |
| 11-9199 | Managers, All Other | 0.72 | 364 | 395 | 416 | \$25.35/hr | \$26.82/hr |
| 17-2141 | Mechanical Engineers | 0.44 | 81 | 87 | 96 | \$34.84/hr | \$35.84/hr |
| | Total | 1.36 | 6,418 | 7,300 | 7,815 | \$20.76/hr | \$23.44/hr |

Supply Chain Requirements

23%

Satisfied In-Region

23% of the goods and services that 163 Manufacturing requires to operate are provided within the region.

| NAICS | Industry | Total Requirements | % Satisfied In-Region |
|--------|---|--------------------|-----------------------|
| 551114 | Corporate, Subsidiary, and Regional Managing Offices | \$51,479,428 | 15.2% |
| 331420 | Copper Rolling, Drawing, Extruding, and Alloying* | \$44,745,822 | 94.1% |
| 331110 | Iron and Steel Mills and Ferroalloy Manufacturing * | \$41,837,476 | 0.3% |
| 331410 | Nonferrous Metal (except Aluminum) Smelting and Refining * | \$32,472,611 | 0.0% |
| 336412 | Aircraft Engine and Engine Parts Manufacturing * | \$31,790,830 | 92.7% |
| 336310 | Motor Vehicle Gasoline Engine and Engine Parts Manufacturing* | \$25,138,622 | 1.8% |
| 333618 | Other Engine Equipment Manufacturing * | \$19,586,280 | 0.0% |
| 425120 | Wholesale Trade Agents and Brokers | \$16,251,351 | 1.7% |
| 332710 | Machine Shops* | \$14,211,065 | 40.6% |
| 336390 | Other Motor Vehicle Parts Manufacturing* | \$12,622,780 | 0.0% |

*Businesses in your selected industries purchase goods and/or services from other businesses in the industries.

Appendix A - Industries

| Code | Description |
|--------|---|
| 331110 | Iron and Steel Mills and Ferroalloy Manufacturing |
| 331210 | Iron and Steel Pipe and Tube Manufacturing from Purchased Steel |
| 331221 | Rolled Steel Shape Manufacturing |
| 331222 | Steel Wire Drawing |
| 331313 | Alumina Refining and Primary Aluminum Production |
| 331314 | Secondary Smelting and Alloying of Aluminum |
| 331315 | Aluminum Sheet, Plate, and Foil Manufacturing |
| 331318 | Other Aluminum Rolling, Drawing, and Extruding |
| 331410 | Nonferrous Metal (except Aluminum) Smelting and Refining |
| 331420 | Copper Rolling, Drawing, Extruding, and Alloying |
| 331491 | Nonferrous Metal (except Copper and Aluminum) Rolling, Drawing, and Extruding |
| 331492 | Secondary Smelting, Refining, and Alloying of Nonferrous Metal (except Copper and Aluminum) |
| 331511 | Iron Foundries |
| 331512 | Steel Investment Foundries |
| 331513 | Steel Foundries (except Investment) |
| 331523 | Nonferrous Metal Die-Casting Foundries |
| 331524 | Aluminum Foundries (except Die-Casting) |
| 331529 | Other Nonferrous Metal Foundries (except Die-Casting) |
| 332111 | Iron and Steel Forging |
| 332112 | Nonferrous Forging |
| 332114 | Custom Roll Forming |
| 332117 | Powder Metallurgy Part Manufacturing |
| 332119 | Metal Crown, Closure, and Other Metal Stamping (except Automotive) |
| 332215 | Metal Kitchen Cookware, Utensil, Cutlery, and Flatware (except Precious) Manufacturing |
| 332216 | Saw Blade and Handtool Manufacturing |
| 332311 | Prefabricated Metal Building and Component Manufacturing |
| 332312 | Fabricated Structural Metal Manufacturing |
| 332313 | Plate Work Manufacturing |
| 332321 | Metal Window and Door Manufacturing |

| Code | Description |
|--------|--|
| 332322 | Sheet Metal Work Manufacturing |
| 332323 | Ornamental and Architectural Metal Work Manufacturing |
| 332410 | Power Boiler and Heat Exchanger Manufacturing |
| 332420 | Metal Tank (Heavy Gauge) Manufacturing |
| 332431 | Metal Can Manufacturing |
| 332439 | Other Metal Container Manufacturing |
| 332510 | Hardware Manufacturing |
| 332613 | Spring Manufacturing |
| 332618 | Other Fabricated Wire Product Manufacturing |
| 332710 | Machine Shops |
| 332721 | Precision Turned Product Manufacturing |
| 332722 | Bolt, Nut, Screw, Rivet, and Washer Manufacturing |
| 332811 | Metal Heat Treating |
| 332812 | Metal Coating, Engraving (except Jewelry and Silverware), and Allied Services to Manufacturers |
| 332813 | Electroplating, Plating, Polishing, Anodizing, and Coloring |
| 332911 | Industrial Valve Manufacturing |
| 332912 | Fluid Power Valve and Hose Fitting Manufacturing |
| 332913 | Plumbing Fixture Fitting and Trim Manufacturing |
| 332919 | Other Metal Valve and Pipe Fitting Manufacturing |
| 332991 | Ball and Roller Bearing Manufacturing |
| 332996 | Fabricated Pipe and Pipe Fitting Manufacturing |
| 332999 | All Other Miscellaneous Fabricated Metal Product Manufacturing |
| 333111 | Farm Machinery and Equipment Manufacturing |
| 333112 | Lawn and Garden Tractor and Home Lawn and Garden Equipment Manufacturing |
| 333120 | Construction Machinery Manufacturing |
| 333131 | Mining Machinery and Equipment Manufacturing |
| 333132 | Oil and Gas Field Machinery and Equipment Manufacturing |
| 333241 | Food Product Machinery Manufacturing |
| 333242 | Semiconductor Machinery Manufacturing |
| 333243 | Sawmill, Woodworking, and Paper Machinery Manufacturing |

| Code | Description |
|--------|---|
| 333244 | Printing Machinery and Equipment Manufacturing |
| 333249 | Other Industrial Machinery Manufacturing |
| 333314 | Optical Instrument and Lens Manufacturing |
| 333316 | Photographic and Photocopying Equipment Manufacturing |
| 333318 | Other Commercial and Service Industry Machinery Manufacturing |
| 333413 | Industrial and Commercial Fan and Blower and Air Purification Equipment Manufacturing |
| 333414 | Heating Equipment (except Warm Air Furnaces) Manufacturing |
| 333415 | Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment Manufacturing |
| 333511 | Industrial Mold Manufacturing |
| 333514 | Special Die and Tool, Die Set, Jig, and Fixture Manufacturing |
| 333515 | Cutting Tool and Machine Tool Accessory Manufacturing |
| 333517 | Machine Tool Manufacturing |
| 333519 | Rolling Mill and Other Metalworking Machinery Manufacturing |
| 333611 | Turbine and Turbine Generator Set Units Manufacturing |
| 333612 | Speed Changer, Industrial High-Speed Drive, and Gear Manufacturing |
| 333613 | Mechanical Power Transmission Equipment Manufacturing |
| 333618 | Other Engine Equipment Manufacturing |
| 333911 | Pump and Pumping Equipment Manufacturing |
| 333912 | Air and Gas Compressor Manufacturing |
| 333913 | Measuring and Dispensing Pump Manufacturing |
| 333921 | Elevator and Moving Stairway Manufacturing |
| 333922 | Conveyor and Conveying Equipment Manufacturing |
| 333923 | Overhead Traveling Crane, Hoist, and Monorail System Manufacturing |
| 333924 | Industrial Truck, Tractor, Trailer, and Stacker Machinery Manufacturing |
| 333991 | Power-Driven Handtool Manufacturing |
| 333992 | Welding and Soldering Equipment Manufacturing |
| 333993 | Packaging Machinery Manufacturing |
| 333994 | Industrial Process Furnace and Oven Manufacturing |
| 333995 | Fluid Power Cylinder and Actuator Manufacturing |
| 333996 | Fluid Power Pump and Motor Manufacturing |

| Code | Description |
|--------|--|
| 333997 | Scale and Balance Manufacturing |
| 333999 | All Other Miscellaneous General Purpose Machinery Manufacturing |
| 334111 | Electronic Computer Manufacturing |
| 334112 | Computer Storage Device Manufacturing |
| 334118 | Computer Terminal and Other Computer Peripheral Equipment Manufacturing |
| 334210 | Telephone Apparatus Manufacturing |
| 334220 | Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing |
| 334290 | Other Communications Equipment Manufacturing |
| 334310 | Audio and Video Equipment Manufacturing |
| 334412 | Bare Printed Circuit Board Manufacturing |
| 334413 | Semiconductor and Related Device Manufacturing |
| 334416 | Capacitor, Resistor, Coil, Transformer, and Other Inductor Manufacturing |
| 334417 | Electronic Connector Manufacturing |
| 334418 | Printed Circuit Assembly (Electronic Assembly) Manufacturing |
| 334419 | Other Electronic Component Manufacturing |
| 334510 | Electromedical and Electrotherapeutic Apparatus Manufacturing |
| 334511 | Search, Detection, Navigation, Guidance, Aeronautical, and Nautical System and Instrument Manufacturing |
| 334512 | Automatic Environmental Control Manufacturing for Residential, Commercial, and Appliance Use |
| 334513 | Instruments and Related Products Manufacturing for Measuring, Displaying, and Controlling Industrial Process Variables |
| 334514 | Totalizing Fluid Meter and Counting Device Manufacturing |
| 334515 | Instrument Manufacturing for Measuring and Testing Electricity and Electrical Signals |
| 334516 | Analytical Laboratory Instrument Manufacturing |
| 334517 | Irradiation Apparatus Manufacturing |
| 334519 | Other Measuring and Controlling Device Manufacturing |
| 334613 | Blank Magnetic and Optical Recording Media Manufacturing |
| 334614 | Software and Other Prerecorded Compact Disc, Tape, and Record Reproducing |
| 335110 | Electric Lamp Bulb and Part Manufacturing |
| 335121 | Residential Electric Lighting Fixture Manufacturing |
| 335122 | Commercial, Industrial, and Institutional Electric Lighting Fixture Manufacturing |
| 335129 | Other Lighting Equipment Manufacturing |

| Code | Description |
|--------|--|
| 335210 | Small Electrical Appliance Manufacturing |
| 335221 | Household Cooking Appliance Manufacturing |
| 335222 | Household Refrigerator and Home Freezer Manufacturing |
| 335224 | Household Laundry Equipment Manufacturing |
| 335228 | Other Major Household Appliance Manufacturing |
| 335311 | Power, Distribution, and Specialty Transformer Manufacturing |
| 335312 | Motor and Generator Manufacturing |
| 335313 | Switchgear and Switchboard Apparatus Manufacturing |
| 335314 | Relay and Industrial Control Manufacturing |
| 335911 | Storage Battery Manufacturing |
| 335912 | Primary Battery Manufacturing |
| 335921 | Fiber Optic Cable Manufacturing |
| 335929 | Other Communication and Energy Wire Manufacturing |
| 335931 | Current-Carrying Wiring Device Manufacturing |
| 335932 | Noncurrent-Carrying Wiring Device Manufacturing |
| 335991 | Carbon and Graphite Product Manufacturing |
| 335999 | All Other Miscellaneous Electrical Equipment and Component Manufacturing |
| 336111 | Automobile Manufacturing |
| 336112 | Light Truck and Utility Vehicle Manufacturing |
| 336120 | Heavy Duty Truck Manufacturing |
| 336211 | Motor Vehicle Body Manufacturing |
| 336212 | Truck Trailer Manufacturing |
| 336213 | Motor Home Manufacturing |
| 336214 | Travel Trailer and Camper Manufacturing |
| 336310 | Motor Vehicle Gasoline Engine and Engine Parts Manufacturing |
| 336320 | Motor Vehicle Electrical and Electronic Equipment Manufacturing |
| 336330 | Motor Vehicle Steering and Suspension Components (except Spring) Manufacturing |
| 336340 | Motor Vehicle Brake System Manufacturing |
| 336350 | Motor Vehicle Transmission and Power Train Parts Manufacturing |
| 336360 | Motor Vehicle Seating and Interior Trim Manufacturing |

| Code | Description |
|--------|--|
| 336370 | Motor Vehicle Metal Stamping |
| 336390 | Other Motor Vehicle Parts Manufacturing |
| 336411 | Aircraft Manufacturing |
| 336412 | Aircraft Engine and Engine Parts Manufacturing |
| 336413 | Other Aircraft Parts and Auxiliary Equipment Manufacturing |
| 336414 | Guided Missile and Space Vehicle Manufacturing |
| 336415 | Guided Missile and Space Vehicle Propulsion Unit and Propulsion Unit Parts Manufacturing |
| 336419 | Other Guided Missile and Space Vehicle Parts and Auxiliary Equipment Manufacturing |
| 336510 | Railroad Rolling Stock Manufacturing |
| 336611 | Ship Building and Repairing |
| 336612 | Boat Building |
| 336991 | Motorcycle, Bicycle, and Parts Manufacturing |
| 336992 | Military Armored Vehicle, Tank, and Tank Component Manufacturing |
| 336999 | All Other Transportation Equipment Manufacturing |

Appendix B - Regions

| Code | Description |
|-------|---|
| 30410 | Ailey, GA (in Montgomery county) |
| 30411 | Alamo, GA (in Wheeler county) |
| 30412 | Alston, GA (in Montgomery county) |
| 30427 | Glennville, GA (in Tattnall county) |
| 30428 | Glenwood, GA (in Wheeler county) |
| 30436 | Lyons, GA (in Toombs county) |
| 30445 | Mount Vernon, GA (in Montgomery county) |
| 30453 | Reidsville, GA (in Tattnall county) |
| 30457 | Soperton, GA (in Treutlen county) |
| 30470 | Tarrytown, GA (in Montgomery county) |
| 30473 | Uvalda, GA (in Montgomery county) |
| 30474 | Vidalia, GA (in Toombs county) |
| 30475 | Vidalia, GA (in Toombs county) |
| 31009 | Cadwell, GA (in Laurens county) |
| 31011 | Chauncey, GA (in Dodge county) |
| 31021 | Dublin, GA (in Laurens county) |
| 31023 | Eastman, GA (in Dodge county) |
| 31037 | Mc Rae Helena, GA (in Telfair county) |
| 31055 | Mc Rae Helena, GA (in Telfair county) |
| 31060 | Milan, GA (in Dodge county) |
| 31075 | Rentz, GA (in Laurens county) |
| 31077 | Rhine, GA (in Dodge county) |
| 31083 | Scotland, GA (in Telfair county) |
| 31503 | Waycross, GA (in Ware county) |
| 31510 | Alma, GA (in Bacon county) |
| 31512 | Ambrose, GA (in Coffee county) |
| 31513 | Baxley, GA (in Appling county) |
| 31515 | Baxley, GA (in Appling county) |
| 31516 | Blackshear, GA (in Pierce county) |

| Code | Description |
|-------|---------------------------------------|
| 31518 | Bristol, GA (in Pierce county) |
| 31519 | Broxton, GA (in Coffee county) |
| 31532 | Denton, GA (in Jeff Davis county) |
| 31533 | Douglas, GA (in Coffee county) |
| 31534 | Douglas, GA (in Coffee county) |
| 31535 | Douglas, GA (in Coffee county) |
| 31539 | Hazlehurst, GA (in Jeff Davis county) |
| 31544 | Jacksonville, GA (in Telfair county) |
| 31545 | Jesup, GA (in Wayne county) |
| 31546 | Jesup, GA (in Wayne county) |
| 31549 | Lumber City, GA (in Telfair county) |
| 31551 | Mershon, GA (in Pierce county) |
| 31554 | Nicholls, GA (in Coffee county) |
| 31555 | Odum, GA (in Wayne county) |
| 31560 | Screven, GA (in Wayne county) |
| 31563 | Surrency, GA (in Appling county) |
| 31567 | West Green, GA (in Coffee county) |
| 31750 | Fitzgerald, GA (in Ben Hill county) |
| 31798 | Wray, GA (in Irwin county) |

Appendix C - Data Sources and Calculations

Industry Data

Emsi industry data have various sources depending on the class of worker. (1) For QCEW Employees, Emsi primarily uses the QCEW (Quarterly Census of Employment and Wages), with supplemental estimates from County Business Patterns. (2) Non-QCEW employees data are based on a number of sources including QCEW, Current Employment Statistics, County Business Patterns, BEA State and Local Personal Income reports, the National Industry-Occupation Employment Matrix (NIOEM), the American Community Survey, and Railroad Retirement Board statistics. (3) Self-Employed and Extended Proprietor classes of worker data are primarily based on the American Community Survey, Nonemployer Statistics, and BEA State and Local Personal Income Reports. Projections for QCEW and Non-QCEW Employees are informed by NIOEM and long-term industry projections published by individual states.

Occupation Data

Emsi occupation employment data are based on final Emsi industry data and final Emsi staffing patterns. Wage estimates are based on Occupational Employment Statistics (QCEW and Non-QCEW Employees classes of worker) and the American Community Survey (Self-Employed and Extended Proprietors). Occupational wage estimates also affected by county-level Emsi earnings by industry.

Staffing Patterns Data

The staffing pattern data in this report are compiled from several sources using a specialized process. For QCEW and Non-QCEW Employees classes of worker, sources include Occupational Employment Statistics, the National Industry-Occupation Employment Matrix, and the American Community Survey. For the Self-Employed and Extended Proprietors classes of worker, the primary source is the American Community Survey, with a small amount of information from Occupational Employment Statistics.

Input-Output Data

The input-output model in this report is Emsi's gravitational flows multi-regional social account matrix model (MR-SAM). It is based on data from the Census Bureau's Current Population Survey and American Community Survey; as well as the Bureau of Economic Analysis' National Income and Product Accounts, Input-Output Make and Use Tables, and Gross State Product data. In addition, several Emsi in-house data sets are used, as well as data from Oak Ridge National Labs on the cost of transportation between counties.

State Data Sources

This report uses state data from the following agencies: Georgia Department of Labor, Workforce Information and Analysis, Occupational Information Services Unit