

DRAFT REPORT

5-COUNTY REGION ECONOMIC RESILIENCY ANALYSIS

Submitted to:

LAKE CHAMPLAIN LAKE GEORGE REGIONAL
PLANNING BOARD

MAY 2021



ABOUT CAMOIN 310

Camoin 310 has provided economic development consulting services to municipalities, economic development agencies, and private enterprises since 1999. Through the services offered, Camoin 310 has served EDOs and local and state governments from Maine to California; corporations and organizations that include Amazon, Lowes Home Improvement, FedEx, Volvo (Nova Bus) and the New York Islanders; as well as private developers proposing projects in excess of \$6 billion. Our reputation for detailed, place-specific, and accurate analysis has led to over 1,000 projects in 40 states and garnered attention from national media outlets including Marketplace (NPR), Crain's New York Business, Forbes magazine, The New York Times, and The Wall Street Journal. Additionally, our marketing strategies have helped our clients gain both national and local media coverage for their projects in order to build public support and leverage additional funding. We are based in Saratoga Springs, NY, with regional offices in Richmond, VA; Portland, ME; Boston, MA; and Brattleboro, VT. To learn more about our experience and projects in all of our service lines, please visit our website at www.camoinassociates.com. You can also find us on Twitter [@camoinassociate](https://twitter.com/camoinassociate) and on Facebook and LinkedIn.

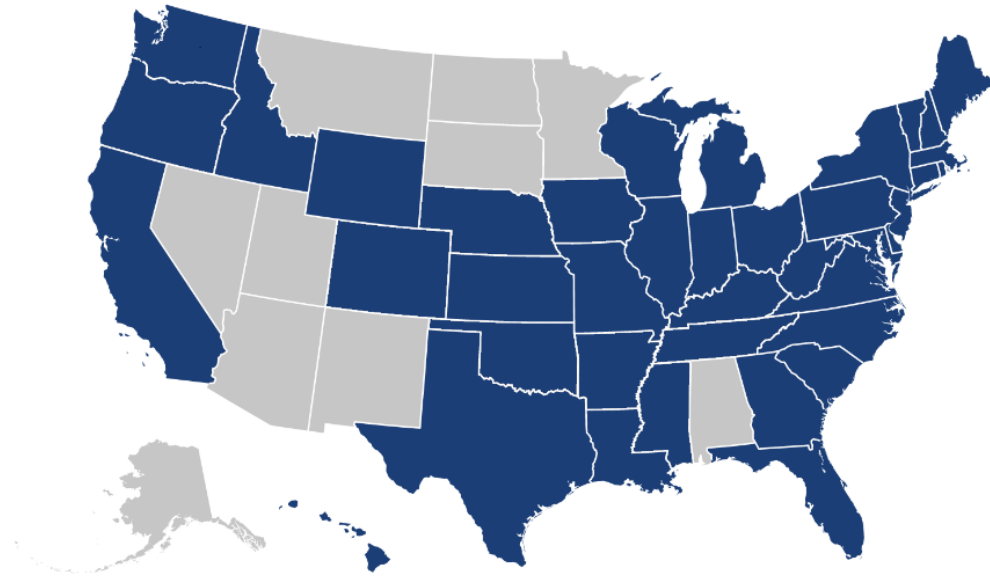
THE PROJECT TEAM

Christa O. Franzl
Principal

Alex Tranmer
Project Manager

Tom Dworetzky
Lead Analyst

Aaron Metheny
Analyst



CONTENTS

Resiliency and Economic Disruption.....	1
<i>Upstream Supply Chain Trade Exposure</i>	3
<i>Key Industries by Workers Age 55 and Over</i>	5
<i>Key Industries by Diversity of Labor Force</i>	7
<i>Top Occupations in Key Industries: Automation Risk</i>	9
Attachment A: Data Sources.....	11

This page intentionally left blank.

RESILIENCY AND ECONOMIC DISRUPTION

Economic disruption has the potential to create economic opportunity. But that can only be true when the right systems are in place to ensure a strong response that enables transformation in times of upheaval. Economic crisis, climate change, social unrest, and natural and manmade disasters will continue to impact regional economies, but doing the work to understand, prepare, and address these situations will increase the ability to respond quickly and strategically and minimize major disruptions. Developing the tools and partnerships that enable resiliency through this process will support communities in the LCLG region and produce an economy that can withstand and bounce forward from disruption. Resiliency is not simply the act of responding to a crisis, but the ability to anticipate, withstand, and bounce back from an unanticipated event.¹

The U.S. Commerce Department’s Economic Development Administration, along with the International Economic Development Council and The National Governor’s Association, have developed programs to help guide the economic development profession and communities. These programs helped define the research in this report.

DEFINING KEY INDUSTRIES

Before analyzing regional indicators, a set of criteria was established to determine the industries that have the greatest economic impact in the five-county region. The industries that are profiled below reflect the subsectors that meet at least one of the following

thresholds. Throughout the report, these are known as “key industries.”

- Have 1,000 or more jobs based on 2020 employment
- Gained 100+ jobs in last five years
- Have a location quotient greater than 2.00
- Grew by more than 10 establishments in last five years
- Fall in the top 20 contributors to 2020 Gross Regional Product

ECONOMIC DISRUPTION INDICATORS

Disruption in the economy can lead to both positive and negative impacts, where the region could grow a particular market due to disruption or be subjected to severe economic implications. The following indicators were chosen to reflect changes that could subject the regional economy to disruption. More information on each indicator’s application to the region and the labor market can be found within each section. Indicators include:

- Upstream Supply Chain Trade Exposure
- Key Industries Workforce 55+
- Industry Diversity
- Occupations in key industries with greatest risk for automation

The summary table below shows which key industries are at the top of each indicator (Note that only indicators as they relate to industries/NAICS are included in this table, not occupations/SOCs).

¹ National Association of Development Organizations, *CEDS Central*, May 3, 2021.

LCLG Region: Key Industries Disruptibility Indicator Summary, 4-Digit NAICS

NAICS	Description	2020 Jobs	LCLG Region Age 55+	Total Diversity	Supply Chain Exposure
1120	Animal Production	1,148	419	181	
1133	Logging	229	96	<10	
2123	Nonmetallic Mineral Mining and Quarrying	343	88	22	
2211	Electric Power Generation, Transmission and Distribution	352	92	18	
2361	Residential Building Construction	1,094	286	166	
2382	Building Equipment Contractors	1,417	325	97	
3211	Sawmills and Wood Preservation	208	51	<10	28.4%
3212	Veneer, Plywood, and Engineered Wood Product Manufacturing	185	26	<10	15.6%
3221	Pulp, Paper, and Paperboard Mills	1,705	495	74	26.5%
3261	Plastics Product Manufacturing	956	216	96	36.7%
3271	Clay Product and Refractory Manufacturing	244	82	56	13.6%
3279	Other Nonmetallic Mineral Product Manufacturing	195	65	<10	
3365	Railroad Rolling Stock Manufacturing	199	41	18	20.1%
3366	Ship and Boat Building	210	46	56	21.6%
3391	Medical Equipment and Supplies Manufacturing	1,634	480	118	31.2%
4411	Automobile Dealers	1,341	366	53	
4412	Other Motor Vehicle Dealers	244	69	<10	
4441	Building Material and Supplies Dealers	1,628	520	85	
4442	Lawn and Garden Equipment and Supplies Stores	297	104	14	10.9%
4451	Grocery Stores	2,246	504	202	
4471	Gasoline Stations	1,378	242	127	
4523	General Merchandise Stores, including Warehouse Clubs and Supercenters	1,614	358	215	16.4%
5617	Services to Buildings and Dwellings	1,537	388	337	
6211	Offices of Physicians	2,086	619	93	
6221	General Medical and Surgical Hospitals	4,408	1,186	238	
6231	Nursing Care Facilities (Skilled Nursing Facilities)	1,815	467	143	
6232	Residential Intellectual and Developmental Disability, Mental Health, and Substance Abuse Facilities	1,196	261	71	
7121	Museums, Historical Sites, and Similar Institutions	275	85	<10	
7131	Amusement Parks and Arcades	478	36	65	
7139	Other Amusement and Recreation Industries	1,304	322	81	
7211	Traveler Accommodation	3,425	598	458	
7212	RV (Recreational Vehicle) Parks and Recreational Camps	619	144	49	
7225	Restaurants and Other Eating Places	7,070	730	851	
Total		43,080	9,825	4,012	

Source: Emsi

UPSTREAM SUPPLY CHAIN TRADE EXPOSURE

Imports as a percent of domestic demand for upstream products is a measure of international trade exposure for a particular sector. For instance, a value of 26.5% for domestic Paper Mills (NAICS 322121) indicates that over a quarter of domestic demand for goods produced by industries that sell to paper mills is fulfilled by international imports, which is considered a high exposure level. 33.6% and above is considered "very high", above 26.1% is "high", above 18.7% is "medium", and 18.7% and below is "low."

In the instance of COVID-19, individual countries had, and continue to have varying levels of outbreak, leading to different policies and restrictions around what categories of businesses can and cannot operate. Even while the public health environment stabilizes in the U.S., lingering outbreaks across the globe will continue to have impacts on companies who manufacture in the U.S. and rely on imports in their supply chains. Outside of COVID-19, there are many other reasons that a company's international supply chain could be disrupted, including but not limited to social or political unrest, environmental disaster, or fluctuating tariffs between countries.

Key industries in the LCLG region with the most upstream supply chain international trade exposure are:

- **Manufacturing** including plastics, medical instrument and supplies, and transport manufacturing - Medical Instrument & Supply Manufacturing's supply chain exposure is considered high. This industry accounts for just over 1,500 jobs in the region and 2.2% of the LCLG Region's Gross Regional Product (GRP).
- **Paper mill-related sectors** – Paper mills account for just over 1,700 jobs in the region and contributes to 4.1% of the region's Gross Regional Product.

Looking at the proportion of an industry's supply chain that are imports reveals just a piece of how critical cross-border activity is to the LCLG Region. As of May 2021, the U.S.-Canadian border remains closed to leisure travel. And while this ensures that freight can cross the border, the border closing continues to have implications for company executives who would typically travel freely between the U.S. and Canada to meet stakeholders, visit a new site, or check-in on manufacturing operations.

Imports as Share of Domestic Demand for Upstream Supply Chain

NAICS	Description	Imports/ Domestic Demand (%)	2020 Jobs in LCLG Region	% of Total Regional Jobs	2020 GRP	% of Total GRP
326160	Plastic Bottle Manufacturing in the US	36.7%	43	<0.1%	\$6,895,874	0.1%
339920	Athletic & Sporting Goods Manufacturing in the US	31.4%	<10	<0.1%	\$129,480	<0.1%
339112	Medical Instrument & Supply Manufacturing in the US	31.2%	1,539	1.4%	\$251,117,798	2.2%
321113	Sawmills & Wood Production in the US	28.4%	199	0.2%	\$17,797,688	0.2%
326140	Polystyrene Foam Manufacturing in the US	27.0%	32	<0.1%	\$3,710,816	<0.1%
322121	Paper Mills in the US	26.5%	1,705	1.5%	\$461,979,159	4.1%
336611	Ship Building in the US	21.6%	87	0.1%	\$11,923,503	0.1%
336510	Train, Subway & Transit Car Manufacturing in the US	20.1%	199	0.2%	\$28,729,667	0.3%
326121	Plastic Pipe & Parts Manufacturing in the US	18.4%	25	<0.1%	\$2,793,781	<0.1%
336612	Boat Building in the US	18.2%	123	0.1%	\$12,586,616	0.1%
326150	Urethane Foam Manufacturing in the US	18.0%	<10	<0.1%	\$1,292,636	<0.1%
454390	Direct Selling Companies in the US	16.4%	80	0.1%	\$24,624,792	0.2%
339950	Billboard & Sign Manufacturing in the US	15.7%	43	<0.1%	\$2,655,348	<0.1%
321211	Wood Paneling Manufacturing in the US	15.6%	105	0.1%	\$7,033,954	0.1%
339910	Jewelry Manufacturing in the US	14.1%	28	<0.1%	\$2,564,414	<0.1%
327910	Abrasive & Sandpaper Manufacturing in the US	13.6%	31	<0.1%	\$13,073,694	0.1%
444210	Lawn & Outdoor Equipment Stores in the US	10.9%	108	0.1%	\$12,526,038	0.1%
327991	Mineral Product Manufacturing in the US	10.0%	164	0.1%	\$11,844,830	0.1%

Source: IBISWorld US Trade Exposure Tool

*33.6% and above is considered "very high", above 26.1% is "high", above 18.7% is "medium", and 18.7% and below is "low."

KEY INDUSTRIES BY WORKERS AGE 55 AND OVER

COVID-19 poses a particularly high risk for individuals over 55-years-old, which led to workers making decisions to either leave or limit their participation in the workforce during the worst of the pandemic. While these may have been temporary decisions at the time, the personal choices of workers will have lasting impacts on the nation's labor force participation rate even as fears specific to COVID-19 wane. Oxford Economics reported in February 2021 that younger workers had returned to the workforce to nearly match pre-pandemic levels, however older workers did not show the same propensity to enter back into the labor market.² The pandemic accelerated people's decision to take early retirement, leaving lasting impacts on labor force participation. Even as the economy opens back up, ushering in positive economic indicators like a dropping unemployment rate and the positive news about Gross Domestic Product growing at a rate of 6.4% in Quarter 1 2021³, the labor force participation rate has "only regained just over a third of its drop [since the pandemic], with 4.3 million more people out of the workforce than in February of last year." For older workers that do make the decisions to get back into the labor force, it may not be as simple as searching for their former position. ⁴ They may face age discrimination getting back into the labor market, face different competition due to technology changes or find their position eliminated.

MORE THAN 2 MILLION WORKERS HAVE LEFT THE LABOR FORCE TO RETIRE SINCE THE START OF THE PANDEMIC. THIS IS MORE THAN DOUBLE THE NUMBER OF PEOPLE WHO DROPPED OUT OF THE LABOR FORCE TO RETIRE IN 2019.

Oxford Economics, February 2021.

The ten industries in the LCLG Region with the greatest number of workers that are over 55 are shown listed below. The number in parentheses represents what proportion these workers account for in the total industry. For all key industries in the region, the average percent of workers over 55 is 23.8%. Higher than average proportions, which are bolded, are seen in the medical field, manufacturing and building.

- 1) General Medical and Surgical Hospitals **(26.7%)**
- 2) Restaurants (11.5%)
- 3) Offices of Physicians and **(30.3%)**
- 4) Traveler Accommodation (20.4%)
- 5) Building Materials and Supplies Dealers **(31.2%)**
- 6) Grocery Stores (22.6%)
- 7) Pulp, Paper and Paperboard Mills **(29.0%)**
- 8) Medical Equipment and Manufacturing **(29.0%)**
- 9) Nursing Care Facilities **(25.6%)**
- 10) Animal Production **(35.3%)**

Workers over the age of 55 in the industries above account for 5% of the total employment in all jobs in the region.

² Oxford Economics, February 2021. Research Briefing | US, Lasting Covid imprint on labor force participation

³ Bureau of Economic Analysis, Released April 29, 2021. Gross Domestic Product, First Quarter 2021 (Advanced Estimate)

⁴ <https://www.nytimes.com/2021/03/15/business/economy/labor-force-dropouts.html>

LCLG Region: Key Industries by Age 55+, 4-Digit NAICS

NAICS	Description	2020 Jobs	LCLG Region Age 55+	LCLG Age 55+ % of Industry	US Age 55+ % of Industry	% Difference LCLG and US
6221	General Medical and Surgical Hospitals	4,447	1,186	26.7%	24.1%	2.6%
7225	Restaurants and Other Eating Places	6,359	730	11.5%	12.0%	-0.5%
6211	Offices of Physicians	2,043	619	30.3%	24.5%	5.8%
7211	Traveler Accommodation	2,938	598	20.4%	24.1%	-3.7%
4441	Building Material and Supplies Dealers	1,664	520	31.2%	30.1%	1.1%
4451	Grocery Stores	2,226	504	22.6%	22.7%	0.0%
3221	Pulp, Paper, and Paperboard Mills	1,707	495	29.0%	31.9%	-2.9%
3391	Medical Equipment and Supplies Manufacturing	1,654	480	29.0%	27.8%	1.3%
6231	Nursing Care Facilities (Skilled Nursing Facilities)	1,822	467	25.6%	25.3%	0.3%
1120	Animal Production	1,186	419	35.3%	33.0%	2.3%
5617	Services to Buildings and Dwellings	1,510	388	25.7%	26.1%	-0.4%
4411	Automobile Dealers	1,283	366	28.5%	25.2%	3.4%
4523	General Merchandise Stores, including Warehouse Clubs and Supercenters	1,641	358	21.8%	22.6%	-0.8%
2382	Building Equipment Contractors	1,340	325	24.3%	21.1%	3.1%
7139	Other Amusement and Recreation Industries	1,195	322	26.9%	19.0%	8.0%
2361	Residential Building Construction	1,056	286	27.1%	27.1%	0.0%
6232	Residential Intellectual and Developmental Disability, Mental Health, and Substance Abuse Facilities	1,162	261	22.4%	23.3%	-0.9%
4471	Gasoline Stations	1,350	242	17.9%	19.5%	-1.6%
3261	Plastics Product Manufacturing	922	216	23.4%	26.3%	-2.9%
7212	RV (Recreational Vehicle) Parks and Recreational Camps	597	144	24.2%	32.5%	-8.3%
4442	Lawn and Garden Equipment and Supplies Stores	290	104	35.7%	31.7%	4.1%
1133	Logging	237	96	40.7%	34.2%	6.5%
2211	Electric Power Generation, Transmission and Distribution	343	92	27.0%	27.8%	-0.8%
2123	Nonmetallic Mineral Mining and Quarrying	340	88	25.8%	30.0%	-4.1%
7121	Museums, Historical Sites, and Similar Institutions	245	85	34.7%	26.4%	8.3%
3271	Clay Product and Refractory Manufacturing	242	82	33.8%	32.1%	1.7%
4412	Other Motor Vehicle Dealers	229	69	30.0%	26.5%	3.5%
3279	Other Nonmetallic Mineral Product Manufacturing	171	65	37.9%	25.3%	12.6%
3211	Sawmills and Wood Preservation	197	51	25.9%	27.7%	-1.8%
3366	Ship and Boat Building	202	46	22.7%	26.5%	-3.8%
3365	Railroad Rolling Stock Manufacturing	184	41	22.3%	25.6%	-3.3%
7131	Amusement Parks and Arcades	372	36	9.5%	15.9%	-6.3%
3212	Veneer, Plywood, and Engineered Wood Product Manufacturing	162	26	16.2%	24.5%	-8.2%
Total		41,315	9,825	23.8%	21.4%	2.4%

Source: Emsi

KEY INDUSTRIES BY DIVERSITY OF LABOR FORCE

For several compounding reasons, including education and wealth gaps, substandard housing, concentration in high-risk occupations, and healthcare access, COVID-19 has unequally affected racial and ethnic minority groups. People of color are at a higher risk of contracting COVID-19, and they are more likely to cite acute economic challenges because of the pandemic.^{5 6}

This trend is not unique to the COVID-19 pandemic. It is well documented that disasters and the subsequent economic disruptions that follow exacerbate pre-existing vulnerabilities and inequities within minority populations.⁷

DIVERSE EMPLOYEES MAKE UP A SIGNIFICANT PORTION OF THE LCLG LABOR FORCE, HOLDING NEARLY 9,000 JOBS OR 15% OF THE TOTAL EMPLOYMENT IN ALL JOBS.

Industry sectors in the LCLG Region with the greatest diversity by number of minority-held jobs are generally service sectors, healthcare, agriculture, and construction.⁸

The ten industries in the LCLG Region with the greatest number of diverse jobs are listed below. The number in parentheses represents what proportion diverse jobs account for in the total industry.

- 1) Restaurants and Other Eating Places (12%)
- 2) Traveler Accommodation (13%)
- 3) Services to Buildings and Dwellings (22%)
- 4) General Medial and Surgical Hospitals (5%)
- 5) General Merchandise Stores (13%)
- 6) Grocery Stores (9%)
- 7) Animal Production (16%)
- 8) Residential Building Construction (14%)
- 9) Nursing Care Facilities (8%)
- 10) Gasoline Stations (9%)

Businesses need support from the economic development community to create expanded and innovative HR policies with targeted resources to help diverse employees cope with the wide range of challenges created by the pandemic. This helps to address the current crisis and build more diverse and inclusive workplaces into the future.

⁵ *Health Equity Considerations and Racial and Ethnic Minority Groups*, Center for Disease Control and Prevention (CDC), (2021). <https://www.cdc.gov/coronavirus/2019-ncov/community/health-equity/race-ethnicity.html>

⁶ *Diverse employees are struggling the most during COVID-19—here's how companies can respond*, McKinsey & Company, (2020) <https://www.mckinsey.com/featured-insights/diversity-and-inclusion/diverse-employees-are-struggling-the-most-during-covid-19-heres-how-companies-can-respond>,

⁷ Davidson, T.M., Price, M., McCauley, J.L. and Ruggiero, K.J. (2013), *Disaster Impact Across Cultural Groups: Comparison of Whites, African Americans, and Latinos*. *American Journal of Community Psychology*, 52: 97-105. <https://doi.org/10.1007/s10464-013-9579-1>

⁸ Total Diversity includes Hispanic or Latino, Black or African American, American Indian or Alaska Native, Asians, Native Hawaiians or Other Pacific Islander, and Two or more races.

LCLG Region Key Industries by Diversity

NAICS	Description	2020 Jobs	Total Diversity	Total Diversity % of Industry	Hispanic or Latino % of Industry	Black or African American % of Industry	American Indian or Alaska Native % of Industry	Asian % of Industry	Native Hawaiian or Other Pacific Islander % of Industry	Two or More Races % of Industry	White % of Industry
7225	Restaurants and Other Eating Places	7,070	851	12%	4%	3%	0%	3%	Insf. Data	2%	88%
7211	Traveler Accommodation	3,425	458	13%	4%	4%	Insf. Data	3%	Insf. Data	2%	87%
5617	Services to Buildings and Dwellings	1,537	337	22%	15%	4%	Insf. Data	1%	0%	1%	78%
6221	General Medical and Surgical Hospitals	4,408	238	5%	2%	1%	Insf. Data	1%	0%	1%	95%
4523	General Merchandise Stores, including Warehouse Clubs ar	1,614	215	13%	5%	5%	Insf. Data	2%	Insf. Data	2%	87%
4451	Grocery Stores	2,246	202	9%	3%	3%	Insf. Data	1%	Insf. Data	2%	91%
1120	Animal Production	1,148	181	16%	8%	4%	Insf. Data	2%	0%	Insf. Data	84%
2361	Residential Building Construction	1,094	166	15%	9%	3%	Insf. Data	2%	Insf. Data	1%	85%
6231	Nursing Care Facilities (Skilled Nursing Facilities)	1,815	143	8%	2%	4%	Insf. Data	Insf. Data	Insf. Data	1%	92%
4471	Gasoline Stations	1,378	127	9%	3%	2%	Insf. Data	2%	0%	1%	91%
3391	Medical Equipment and Supplies Manufacturing	1,634	118	7%	2%	2%	Insf. Data	2%	Insf. Data	Insf. Data	93%
2382	Building Equipment Contractors	1,417	97	7%	4%	2%	Insf. Data	Insf. Data	0%	Insf. Data	93%
3261	Plastics Product Manufacturing	956	96	10%	3%	3%	1%	2%	Insf. Data	1%	90%
6211	Offices of Physicians	2,086	93	4%	1%	1%	0%	2%	0%	1%	96%
4441	Building Material and Supplies Dealers	1,628	85	5%	2%	2%	Insf. Data	Insf. Data	0%	1%	95%
7139	Other Amusement and Recreation Industries	1,304	81	6%	4%	1%	Insf. Data	Insf. Data	0%	Insf. Data	94%
3221	Pulp, Paper, and Paperboard Mills	1,705	74	4%	2%	1%	Insf. Data	1%	0%	Insf. Data	96%
6232	Residential Intellectual and Developmental Disability, Menta	1,196	71	6%	2%	2%	0%	Insf. Data	Insf. Data	1%	94%
7131	Amusement Parks and Arcades	478	65	14%	6%	4%	Insf. Data	Insf. Data	0%	2%	86%
3271	Clay Product and Refractory Manufacturing	244	56	23%	7%	14%	0%	Insf. Data	0%	Insf. Data	77%
3366	Ship and Boat Building	210	56	27%	13%	9%	0%	Insf. Data	0%	Insf. Data	73%
4411	Automobile Dealers	1,341	53	4%	1%	Insf. Data	Insf. Data	1%	0%	1%	96%
7212	RV (Recreational Vehicle) Parks and Recreational Camps	619	49	8%	4%	2%	0%	Insf. Data	0%	Insf. Data	92%
2123	Nonmetallic Mineral Mining and Quarrying	343	22	6%	4%	Insf. Data	0%	Insf. Data	0%	Insf. Data	94%
3365	Railroad Rolling Stock Manufacturing	199	18	9%	Insf. Data	Insf. Data	Insf. Data	Insf. Data	0%	Insf. Data	91%
2211	Electric Power Generation, Transmission and Distribution	352	18	5%	Insf. Data	Insf. Data	0%	Insf. Data	0%	Insf. Data	95%
4442	Lawn and Garden Equipment and Supplies Stores	297	14	5%	Insf. Data	Insf. Data	0%	Insf. Data	0%	Insf. Data	95%
1133	Logging	229	<10	Insf. Data	Insf. Data	Insf. Data	0%	0%	0%	0%	99%
3211	Sawmills and Wood Preservation	208	<10	Insf. Data	Insf. Data	Insf. Data	Insf. Data	0%	0%	Insf. Data	96%
3212	Veneer, Plywood, and Engineered Wood Product Manufact	185	<10	Insf. Data	Insf. Data	Insf. Data	0%	0%	0%	Insf. Data	98%
3279	Other Nonmetallic Mineral Product Manufacturing	195	<10	Insf. Data	Insf. Data	Insf. Data	0%	0%	0%	0%	98%
4412	Other Motor Vehicle Dealers	244	<10	Insf. Data	Insf. Data	0%	0%	0%	0%	0%	99%
7121	Museums, Historical Sites, and Similar Institutions	275	<10	Insf. Data	Insf. Data	Insf. Data	0%	Insf. Data	0%	0%	97%
Total		43,080	4,012	9%	4%	3%	0%	2%	0%	1%	91%

Source: Emsi

TOP OCCUPATIONS IN KEY INDUSTRIES: AUTOMATION RISK

There are multiple perspectives on the matter of automation and technology uptake across industries. From an employee's perspective, their work may be reduced due to technology, or their role could require additional training to work in tandem with technology. This has the potential to displace workers who do not want to or who are not able to acquire these new skills. Even if an employee desires additional training to excel in their position, the ability to seek or find training and education to upskill is not evenly equitable, further exacerbating the wealth-gap.

While technology has the potential to displace workers, technology and digital tools can be greatly beneficial to today's employers, especially in today's labor market where labor is scarce. Automation of processes can help a business run more efficiently and maintain operations with a smaller staff. With shifting labor force trends and difficulty attracting people back to the workplace for varied reasons, companies could make further investment in technology to secure their ability to produce their service or product with less reliance on the whims of the labor market.

The industries that show high risk, highlighted in blue in the table below, account for 26,498 jobs, or nearly a quarter, of all jobs in the region. Of the top occupations within the LCLG region's key industries, the following show the greatest risk for automation.

- Food and beverage serving workers,
- Grounds maintenance workers,
- Other food preparation/serving workers, and
- Construction trades workers

Identifying which occupations show the greatest risk for automation can help economic development service providers prepare for the workers from these fields seeking other employment and develop a plan that capitalizes on the skills and assets these individuals could bring to other positions. Alternatively, among economic development, workforce, and educational institutions, trainings or certificates that support workers who do want to take on technology can benefit employees and employers.

LCLG Region Top Occupations in Key Industries by Automation Index, 3-Digit SOC

SOC	Description	Automation Index	2020 Jobs	% of Total Occupations	Median Annual Earnings
35-3000	Food and Beverage Serving Workers	129.2	5,422	5%	\$26,614
37-3000	Grounds Maintenance Workers	128.6	1,131	1%	\$31,061
35-9000	Other Food Preparation and Serving Related Workers	128.5	1,127	1%	\$25,708
47-2000	Construction Trades Workers	125.9	4,139	4%	\$45,115
35-2000	Cooks and Food Preparation Workers	125.5	2,367	2%	\$29,078
37-2000	Building Cleaning and Pest Control Workers	123.0	3,017	3%	\$27,674
51-4000	Metal Workers and Plastic Workers	118.2	1,201	1%	\$38,689
53-7000	Material Moving Workers	116.9	3,810	3%	\$28,932
51-9000	Other Production Occupations	115.6	2,676	2%	\$38,955
51-2000	Assemblers and Fabricators	113.6	1,608	1%	\$28,761
49-9000	Other Installation, Maintenance, and Repair Occupations	111.3	2,867	3%	\$41,966
45-2000	Agricultural Workers	110.8	1,015	1%	\$31,698
49-3000	Vehicle and Mobile Equipment Mechanics, Installers, and Repairers	109.6	1,638	1%	\$38,918
53-3000	Motor Vehicle Operators	106.4	2,677	2%	\$36,623
35-1000	Supervisors of Food Preparation and Serving Workers	105.3	679	1%	\$42,446
43-3000	Financial Clerks	102.0	2,174	2%	\$36,342
43-9000	Other Office and Administrative Support Workers	101.1	2,481	2%	\$32,412
41-2000	Retail Sales Workers	98.7	7,005	6%	\$25,470
31-9000	Other Healthcare Support Occupations	96.4	732	1%	\$35,231
43-4000	Information and Record Clerks	96.2	3,558	3%	\$32,590
31-1100	Home Health and Personal Care Aides; and Nursing Assistants, Orderlies, and Psychiatric Aides	94.7	5,571	5%	\$28,103
29-2000	Health Technologists and Technicians	92.3	2,591	2%	\$41,545
43-6000	Secretaries and Administrative Assistants	92.1	2,179	2%	\$38,956
43-1000	Supervisors of Office and Administrative Support Workers	91.8	937	1%	\$55,150
13-1000	Business Operations Specialists	88.3	2,285	2%	\$56,918
39-9000	Other Personal Care and Service Workers	88.1	1,662	1%	\$27,415
11-9000	Other Management Occupations	87.1	2,703	2%	\$71,721
29-1000	Healthcare Diagnosing or Treating Practitioners	86.3	4,327	4%	\$77,691
41-1000	Supervisors of Sales Workers	85.9	1,302	1%	\$41,764
11-1000	Top Executives	82.2	1,934	2%	\$91,520
Total			76,815		

ATTACHMENT A: DATA SOURCES

ECONOMIC MODELING SPECIALISTS INTERNATIONAL (EMSI)

To analyze the industrial makeup of a study area, industry data organized by the North American Industrial Classification System (NAICS) is assessed. Camoin Associates subscribes to Economic Modeling Specialists Intl. (EMSI), a proprietary data provider that aggregates economic data from approximately 90 sources. EMSI industry data, in our experience, is more complete than most or perhaps all local data sources (for more information on EMSI, please see www.economicmodeling.com). This is because local data sources typically miss significant employment counts by industry because data on sole proprietorships and contractual employment (i.e. 1099 contractor positions) is not included and because certain employment counts are suppressed from BLS/BEA figures for confidentiality reasons when too few establishments exist within a single NAICS code.

ESRI BUSINESS ANALYST ONLINE (BAO)

ESRI is the leading provider of location-driven market insights. It combines demographic, lifestyle, and spending data with map-based analytics to provide market intelligence for strategic decision-making. ESRI uses proprietary statistical models and data from the U.S. Census Bureau, the U.S. Postal Service, and various other sources to present current conditions and project future trends. Esri data are used by developers to maximize their portfolio, retailers to understand growth opportunities, and by economic developers to attract business that fit their community. For more information, visit www.esri.com.

IBISWORLD + US TRADE EXPOSURE TOOL

IBISWorld provides trusted industry research on thousands of industries worldwide. Their in-house analysts leverage economic, demographic and market data, then add analytical and forward-looking insight, to help organizations of all types make better business decisions. The US Trade Exposure Tool, in the form of an Excel workbook, uses IBISWorld's international trade metrics, supply chain mappings, and the latest monthly United States International Trade Commission trade data.



Leading action to grow your economy

Camoin 310
120 West Avenue, Suite 303
Saratoga Springs, NY 12866
518.899.2608
www.camoinassociates.com
@camoinassociate

