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**A Profile of New York's Manufacturing Sector
by Jobs, Wages and Regional Impact**

The Business Council of New York State, Inc.
October 2019

This report is produced by
The Public Policy Institute of New York State, Inc.
President: Heather C. Briccetti, Esq.
Author: Ken Pokalsky
Research Assistant: Meghan Kayser
Production Editor: Rebekah Alexis
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The Public Policy Institute of New York State, Inc.
111 Washington Avenue, Suite 400, Albany, NY 12210
518-465-7511 or 800-358-1202
www.ppiny.org

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Introduction

This report illustrates the role of manufacturing in the New York State and U.S. economies by focusing on jobs and payroll data.

Manufacturing employment has been on a steady decline in the U.S. for decades, due to increased efficiency and automation within industrial firms and significant competition from foreign competitors, among other factors.

New York's manufacturing sector has experienced the same pressures, but the sector's decline in New York has outpaced the national job loss. For example, from 2001 to 2018, U.S. manufacturing employment fell by 22.8 percent, while falling by 36.8 percent in New York, more than a 50 percent greater decline here.

More recently, national manufacturing employment has increased each year since reaching a low point in 2010 following the national recession, and at the end of 2018 total U.S. manufacturing employment was at 95 percent of its pre-recession level.

This national manufacturing job recovery was not spread evenly among the states. Eleven states, led by Michigan (+67,100) and Indiana (+20,700), actually had more manufacturing jobs at the end of 2018 than in 2008. The recovery in these states was led by, but not limited to, recovery and growth in the auto industry.

Unfortunately, New York (-88,800) is second only to California (-101,300) in its loss of manufacturing jobs when comparing 2018 to pre-recession levels. Other major industrial states, including Pennsylvania, Illinois, Texas and Ohio, also have among the largest net losses in manufacturing employment over this period. Proportionately, however, New York's loss was the greatest among the nation's ten largest industrial states.

Even with New York's recent manufacturing job loss, the manufacturing sector continues to provide significant economic value to New York, and its regional economies.

In 2018, manufacturing directly accounted for 25 percent or more of all private sector jobs in seven New York counties, at least 20 percent of private sector jobs in twelve counties, and at least 10 percent in thirty-five counties. These tend to be more rural, upstate counties that have seen relatively little job growth since the national recession. In comparison, manufacturing represents just 5.7 percent of private sector jobs statewide in New York, and 10.5 percent of jobs in the United States.

At a time when economic development discussions often focus on high quality, high paying jobs, data shows significant wage benefits from the state's manufacturing sector as well.

Average wages for manufacturing jobs exceed average wages for private sector, non-manufacturing jobs in every county in New York State except one — New York (Manhattan). This manufacturing wage "bonus" is \$30,000 or more in twelve counties, \$25,000 or more in eighteen counties, and at least \$20,000 in thirty-two counties.

Moreover, the manufacturing sector provides more than 30 percent of all private sector wages in nine New York counties, and more than 20 percent of all private sector wages in twenty-four counties.

From an economic policy perspective, New York State has a mixed record regarding its manufacturing sector. It celebrates, and often incentivizes, significant capital investments in manufacturing facilities, including reinvestment in longstanding New York manufacturers as well as in manufacturers newly located in New York, and for those in certain emerging and fast-growing sectors.

Likewise, over the past decade, the state has adopted several legislative programs that are directly, if not exclusively, aimed at supporting the state's manufacturing sector, including "RechargeNY" (a NYPA economic development power program); "single sales factor apportionment," a method of calculating business taxes that favors businesses with in-state employment and capital; a zero percent net income-based tax rate for manufacturers subject to the state's corporate franchise tax; a refundable real property tax credits for smaller manufacturers; and others.

At the same time, several of the state's most significant policy initiatives that add costs and compliance burdens to business have an outsized impact on manufacturers. These include imposition of more than \$1 billion in energy assessments; a high cost workers' compensation program; real property taxes that range among the highest in the nation; and others.

The adoption of the "Climate Leadership and Community Protection Act" (CLCPA) in the 2019 session will impose additional economic challenges for New York, especially for energy intensive businesses including manufacturing. In testimony given to an Assembly committee hearing, The Business Council of New York State, Inc. cautioned that the CLCPA's impact on Energy Intensive Trade Exposed (EITE) facilities (including but not limited to glass, steel, cement,

auto, metal casting, food, pulp and paper, aluminum, plastics, ceramics and chemicals) could put at risk up to 40,000 high paying jobs at New York's EITE facilities.

These policy actions suggest that while New York at times recognizes the value of individual manufacturers when they are making investments, adding positions, and announcing innovative new products, the state — and its Executive and legislative decision-makers — do not have a complete appreciation of the role that manufacturing, and manufacturing jobs, have on the overall state or the state's regional economies, and the impact that policy decisions have on this economically valuable sector.

This report provides updated data for use by state decision-makers with a more detailed profile of New York's manufacturing sector based on employment and wages, with regional and industrial category details as well. It also illustrates how New York's manufacturing sector compares and contrasts with other states based on current job levels and recent trends.

TABLE 1.

Manufacturing Jobs By County

Not surprising, in terms of absolute number of manufacturing jobs, the highest-ranking counties are among the state's highest population counties as well. Of the ten highest population counties (by 2010 Census data, in **bold**), eight are also among the top ten counties in terms of total manufacturing jobs as well (only Bronx and Richmond counties are out of the top ten).

COUNTY	2018 MANUFACTURING JOBS	MANUFACTURING AS % OF ALL PRIVATE JOBS	POPULATION RANK
Suffolk	52,697	9.5%	4
Erie	42,724	10.7%	8
Monroe	38,755	11.4%	9
New York	23,700	1.1%	3
Kings	19,839	3.1%	1
Onondaga	19,671	9.6%	11
Queens	19,498	3.4%	2
Nassau	17,762	3.2%	6
Westchester	12,976	3.5%	7
Niagara	8,946	15.1%	18
Chautauqua	8,792	22.3%	23
Orange	8,733	7.3%	12
Oneida	8,646	10.8%	17
Saratoga	8,308	10.8%	16
Broome	7,763	11.3%	19
Dutchess	7,659	8.2%	15
Albany	7,571	4.4%	14
Richmond	7,381	7.4%	10
Rockland	7,381	6.8%	13
Ontario	6,925	15.3%	26
Bronx	5,588	2.3%	5
Schenectady	5,402	10.3%	22
Wayne	5,219	25.0%	31
Steuben	5,191	17.6%	30
Rensselaer	5,058	12.0%	21
Chemung	5,040	17.2%	32
Chenango	4,808	36.8%	50

Tioga	3,594	33.2%	48
Clinton	3,472	13.1%	33
Ulster	3,327	6.9%	20
Delaware	3,265	31.4%	53
Warren	3,233	9.6%	38
Montgomery	3,231	19.1%	47
Genesee	3,223	17.8%	44
Cayuga	3,195	16.2%	34
Oswego	3,165	12.6%	24
Cattaraugus	3,137	16.2%	35
Tompkins	3,110	7.0%	28
Madison	2,781	16.3%	37
Washington	2,638	25.3%	41
Herkimer	2,611	21.1%	40
Saint Lawrence	2,306	9.1%	27
Orleans	2,175	25.6%	54
Seneca	2,120	21.9%	57
Jefferson	2,075	7.0%	25
Cortland	2,036	14.9%	49
Livingston	1,998	13.7%	39
Allegany	1,841	20.1%	52
Fulton	1,808	13.6%	45
Wyoming	1,746	18.5%	55
Putnam	1,500	7.0%	29
Columbia	1,491	8.6%	42
Sullivan	1,472	6.5%	36
Yates	1,275	21.6%	60
Otsego	1,173	6.1%	43
Lewis	1,098	26.5%	59
Greene	933	9.0%	51
Essex	908	8.7%	56
Schuyler	659	16.9%	61
Franklin	388	3.7%	46
Schoharie	321	5.0%	58
Hamilton	8	0.8%	62

TABLE 2.

Manufacturing Share of Private Sector Jobs By County

Looking at manufacturing's share of county-level employment provides a different perspective on the relative importance of the industrial sector in different parts of New York State. While New York metro area counties have among the highest industrial job count, manufacturing is a relatively small share of total county employment. On the other hand, in 2018, manufacturing directly accounted for 25 percent or more of all private sector jobs in seven New York counties, at least 20 percent of private sector jobs in twelve counties, and at least 10 percent in thirty-five counties. These counties include rural, upstate counties that have seen relatively little job activity in other sectors. In comparison, manufacturing represents just 5.7 percent of private sector jobs statewide in New York, and 10.5 percent of jobs in the United States.

COUNTY	2018 MANUFACTURING JOBS	MANUFACTURING AS % OF ALL PRIVATE JOBS
Chenango	4,808	36.8%
Tioga	3,594	33.2%
Delaware	3,265	31.4%
Lewis	1,098	26.5%
Orleans	2,175	25.6%
Washington	2,638	25.3%
Wayne	5,219	25.0%
Chautauqua	8,792	22.3%
Seneca	2,120	21.9%
Yates	1,275	21.6%
Herkimer	2,611	21.1%
Allegany	1,841	20.1%
Montgomery	3,231	19.1%
Wyoming	1,746	18.5%
Genesee	3,223	17.8%
Steuben	5,191	17.6%
Chemung	5,040	17.2%
Schuyler	659	16.9%
Madison	2,781	16.3%
Cattaraugus	3,137	16.2%
Cayuga	3,195	16.2%
Ontario	6,925	15.3%
Niagara	8,946	15.1%
Cortland	2,036	14.9%
Livingston	1,998	13.7%
Fulton	1,808	13.6%
Clinton	3,472	13.1%
Oswego	3,165	12.6%
Rensselaer	5,058	12.0%

Monroe	38,755	11.4%
Broome	7,763	11.3%
Saratoga	8,308	10.8%
Oneida	8,646	10.8%
Erie	42,724	10.7%
Schenectady	5,402	10.3%
Warren	3,233	9.6%
Onondaga	19,671	9.6%
Suffolk	52,697	9.5%
Saint Lawrence	2,306	9.1%
Greene	933	9.0%
Essex	908	8.7%
Columbia	1,491	8.6%
Dutchess	7,659	8.2%
Richmond	7,381	7.4%
Orange	8,733	7.3%
Jefferson	2,075	7.0%
Tompkins	3,110	7.0%
Putnam	1,500	7.0%
Ulster	3,327	6.9%
Rockland	7,381	6.8%
Sullivan	1,472	6.5%
Otsego	1,173	6.1%
Schoharie	321	5.0%
Albany	7,571	4.4%
Franklin	388	3.7%
Westchester	12,976	3.5%
Queens	19,498	3.4%
Nassau	17,762	3.2%
Kings	19,839	3.1%
Bronx	5,588	2.3%
New York	23,700	1.1%
Hamilton	8	0.8%

TABLE 3.

Manufacturing Wages as Percentage of Total Private Sector Wages, By County, 2018

Manufacturing is often seen as representing a larger share of the local economy in upstate New York, and that perception is illustrated by looking at county-level wage data. Manufacturing provides more than one-third of all private sector wages in eight counties, and more than 20 percent of private sector wages in twenty-four counties, all located outside the MTA service territory. The five counties that comprise New York City are among the counties where manufacturing represents the smallest share of county-level wages.

COUNTY	MANUFACTURING AS % OF PRIVATE SECTOR WAGES
Tioga	57.4%
Chenango	50.2%
Delaware	46.6%
Seneca	38.6%
Washington	36.9%
Lewis	36.1%
Orleans	36.0%
Chautauqua	33.7%
Wayne	32.2%
Allegany	29.7%
Herkimer	27.6%
Yates	26.5%
Genesee	25.6%
Cattaraugus	25.4%
Wyoming	25.0%
Niagara	24.4%
Chemung	23.8%
Cortland	22.9%
Cayuga	22.7%
Montgomery	22.6%
Schuyler	21.7%
Madison	20.8%
Ontario	20.5%
Steuben	20.3%
Saratoga	19.2%
Rensselaer	19.2%
Oswego	19.1%
Livingston	18.0%
Broome	17.3%
Schenectady	17.0%
Clinton	16.7%
Dutchess	16.6%
Fulton	16.0%
Essex	15.5%
Monroe	15.4%
Saint Lawrence	14.8%
Erie	14.8%
Oneida	14.5%
Greene	14.2%
Warren	14.1%
Richmond	13.3%
Onondaga	13.3%
Rockland	11.5%
Suffolk	11.2%
Columbia	11.1%
Putnam	9.7%
Jefferson	9.4%
Orange	9.4%
Tompkins	8.9%
Ulster	8.8%
Otsego	7.2%
Sullivan	7.1%
Albany	5.7%
New York	5.3%
Schoharie	5.2%
Westchester	5.2%
Franklin	4.2%
Nassau	3.7%
Queens	3.6%
Kings	3.2%
Bronx	2.3%
Hamilton	1.8%
New York	0.7%

FIGURE 1.

Manufacturing Share of Private Sector Jobs and Wages

Manufacturing is a more significant share of New York's economy in regions outside the New York City metropolitan area. As show below, manufacturing has a relatively small share of private sector jobs and wages in New York City, Long Island and the seven-county Mid-Hudson REDC region west, well under 10 percent in each case. In contrast, manufacturing is at least 10 percent of private sector jobs in each of the five REDC region west of the Capital Region, and at least 15 percent of private sector wages in these five regions as well. Moreover, manufacturing provides a disproportionate share of private sector wages in each REDC region other than New York City, relative to its share of regional jobs.

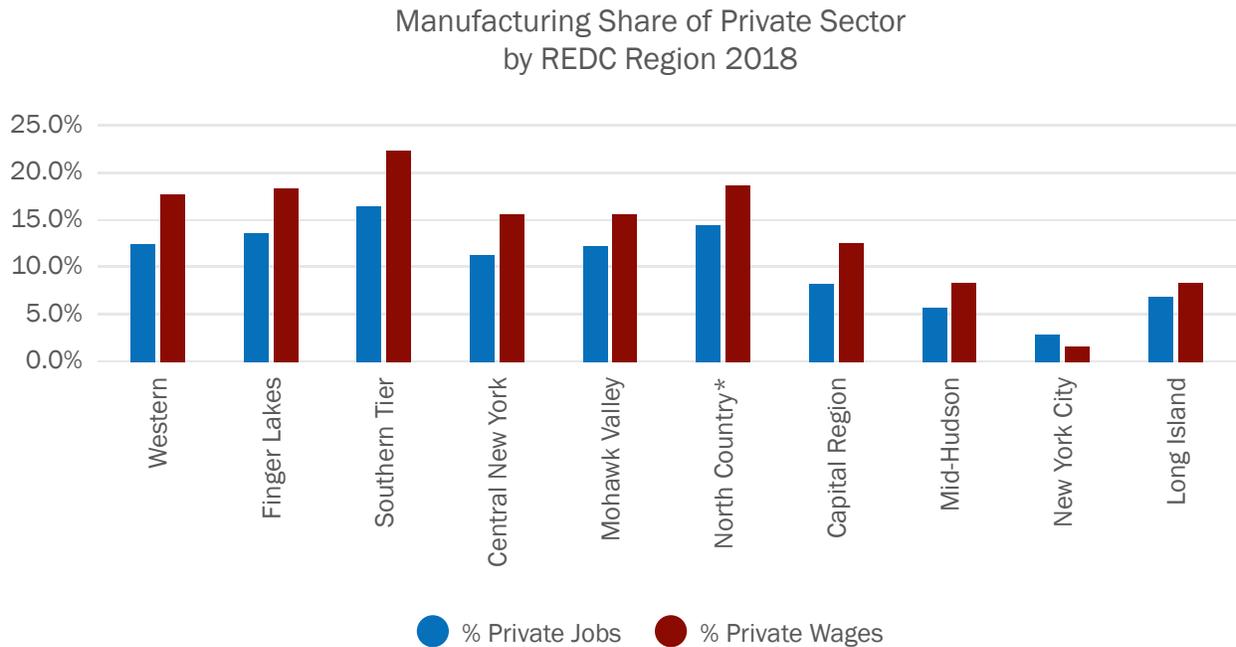


TABLE 4.

Manufacturing Jobs in Rural Counties

Data shows that manufacturing represents a significant share of private sector jobs in many of the state's most rural counties. This table compares each county's share of rural population to the county's share of private jobs in manufacturing. The state's ten counties with the largest share of manufacturing jobs are shown in bold, and they are mostly among the state's most rural counties as well. (Note: New York's population is 88 percent urban versus 12 percent rural. Manufacturing is 5.9 percent of the state's private sector jobs.)

COUNTY	% RURAL POPULATION	MANUFACTURING AS % OF PRIVATE SECTOR JOBS
Hamilton	100.0%	0.7%
Lewis	86.8%	26.6%
Chenango	83.4%	35.1%
Schoharie	82.8%	5.1%
Schuyler	81.2%	16.2%
Allegany	78.7%	23.3%
Delaware	78.4%	30.0%
Essex	74.9%	8.9%
Sullivan	74.2%	7.6%
Columbia	73.3%	8.7%
Greene	73.1%	8.8%
Yates	71.2%	18.3%
Otsego	70.6%	5.8%
Washington	67.9%	26.6%
Tioga	65.7%	34.0%
Clinton	64.2%	13.1%
Wyoming	64.1%	18.8%
Franklin	62.7%	3.8%
Saint Lawrence	62.0%	9.7%
Cattaraugus	61.8%	18.2%
Oswego	61.8%	12.9%
Orleans	60.9%	25.1%
Wayne	60.7%	26.9%
Steuben	60.4%	17.9%
Genesee	59.9%	17.6%
Madison	58.9%	16.3%
Seneca	58.7%	26.0%
Cayuga	55.8%	17.4%
Livingston	54.7%	14.8%
Herkimer	51.8%	21.6%
Fulton	50.4%	13.3%
Jefferson	48.0%	8.1%
Ontario	47.5%	15.0%
Ulster	46.0%	7.2%
Cortland	44.3%	16.7%
Chautauqua	43.9%	22.6%
Tompkins	43.3%	7.7%
Montgomery	40.9%	20.3%
Warren	33.9%	9.4%
Oneida	33.0%	11.0%
Rensselaer	30.5%	9.4%
Saratoga	30.0%	11.0%
Broome	26.1%	11.7%
Dutchess	25.4%	9.8%
Chemung	24.2%	17.5%
Niagara	22.4%	15.3%
Orange	22.3%	7.2%
Putnam	20.5%	7.1%
Onondaga	12.6%	9.1%
Albany	9.7%	4.5%
Erie	9.4%	10.9%
Schenectady	8.2%	11.2%
Monroe	6.4%	12.3%
Westchester	3.3%	3.8%
Suffolk	2.6%	9.8%
Rockland	0.7%	7.8%
Nassau	0.2%	3.3%
Queens	0.0%	4.0%
Kings	0.0%	3.8%
Bronx	0.0%	2.7%
New York	0.0%	1.3%
Richmond	0.0%	1.3%

SOURCES: 2. U.S. Bureau of Census County Rurality Level 2010

FIGURE 2.

Manufacturing in Rural Counties

This scatter chart illustrates the relationship between rural populations and manufacturing jobs shown in Table 4.

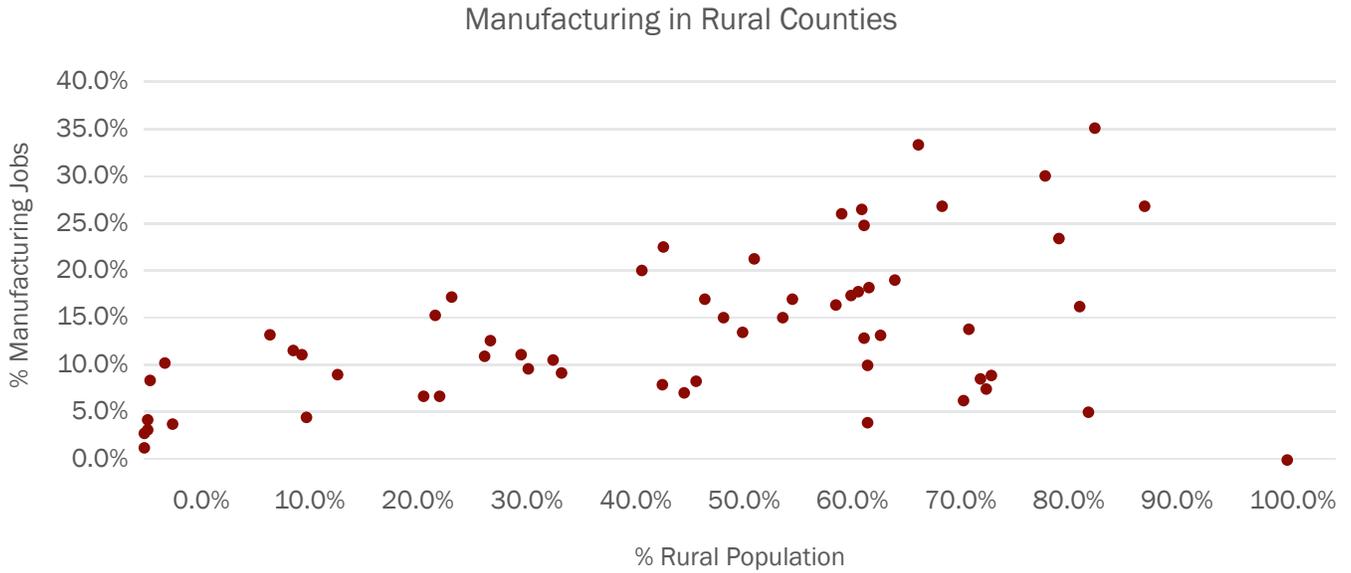


TABLE 5.

County Rankings

This table consolidates data shown in several other tables, including county-level population and population rank, as well as each county's share of total private sector jobs and wages provided by the manufacturing sector, and their respective rankings for those factors.

COUNTY	2018 POPULATION	POPULATION RANK	MANUFACTURING AS % OF ALL PRIVATE JOBS	% JOBS RANK	MANUFACTURING AS % OF ALL PRIVATE WAGES	% WAGES RANK
Albany	307,117	14	4.4%	54%	5.7%	53%
Allegany	46,430	52	20.1%	12%	29.7%	10%
Bronx	1,432,132	5	2.3%	60%	2.3%	60%
Broome	191,659	19	11.3%	31%	17.3%	29%
Cattaraugus	76,840	35	16.2%	20%	25.4%	14%
Cayuga	77,145	34	16.2%	21%	22.7%	19%
Chautauqua	127,939	23	22.3%	8%	33.7%	8%
Chemung	84,254	32	17.2%	17%	23.8%	17%
Chenango	47,536	50	36.8%	1%	50.2%	2%
Clinton	80,695	33	13.1%	27%	16.7%	31%
Columbia	59,916	42	8.6%	42%	11.1%	45%
Cortland	47,823	49	14.9%	24%	22.9%	18%
Delaware	44,527	53	31.4%	3%	46.6%	3%
Dutchess	293,718	15	8.2%	43%	16.6%	32%
Erie	919,719	8	10.7%	34%	14.8%	37%
Essex	37,300	56	8.7%	41%	15.4%	34%
Franklin	50,293	46	3.7%	55%	4.2%	56%
Fulton	53,591	45	13.6%	26%	16.0%	33%
Genesee	57,511	44	17.8%	15%	25.5%	13%
Greene	47,491	51	9.0%	40%	14.2%	39%
Hamilton	4,434	62	0.8%	62%	1.8%	61%
Herkimer	61,833	40	21.1%	11%	27.6%	11%
Jefferson	111,755	25	7.0%	46%	9.4%	47%
Kings	2,582,830	1	3.1%	59%	3.2%	59%
Lewis	26,447	59	26.5%	4%	36.1%	6%
Livingston	63,227	39	13.7%	25%	18.0%	28%
Madison	70,795	37	16.3%	19%	20.8%	22%
Monroe	742,474	9	11.4%	30%	15.4%	35%

Montgomery	49,455	47	19.1%	13%	22.6%	20%
Nassau	1,358,343	6	3.2%	58%	3.7%	57%
New York	1,628,701	3	1.1%	61%	0.7%	62%
Niagara	210,433	18	15.1%	23%	24.4%	16%
Oneida	229,577	17	10.8%	33%	14.5%	38%
Onondaga	461,809	11	9.6%	37%	13.3%	42%
Ontario	109,864	26	15.3%	22%	20.5%	23%
Orange	381,951	12	7.3%	45%	9.4%	48%
Orleans	40,612	54	25.6%	5%	36.0%	7%
Oswego	117,898	24	12.6%	28%	19.1%	27%
Otsego	59,749	43	6.1%	52%	7.2%	51%
Putnam	98,892	29	7.0%	48%	9.7%	46%
Queens	2,278,906	2	3.4%	57%	3.6%	58%
Rensselaer	159,442	21	12.0%	29%	19.2%	26%
Richmond	476,179	10	7.4%	44%	13.3%	41%
Rockland	325,695	13	6.8%	50%	11.5%	43%
St. Lawrence	108,047	27	9.1%	39%	14.8%	36%
Saratoga	230,163	16	10.8%	32%	19.2%	25%
Schenectady	155,350	22	10.3%	35%	17.0%	30%
Schoharie	31,097	58	5.0%	53%	5.2%	54%
Schuyler	17,912	61	16.9%	18%	21.6%	21%
Seneca	34,300	57	21.9%	9%	38.6%	4%
Steuben	95,796	30	17.6%	16%	20.3%	24%
Suffolk	1,481,093	4	9.5%	38%	11.2%	44%
Sullivan	75,498	36	6.5%	51%	7.1%	52%
Tioga	48,560	48	33.2%	2%	57.4%	1%
Tompkins	102,793	28	7.0%	47%	8.9%	49%
Ulster	178,599	20	6.9%	49%	8.8%	50%
Warren	64,265	38	9.6%	36%	14.1%	40%
Washington	61,197	41	25.3%	6%	36.9%	5%
Wayne	90,064	31	25.0%	7%	32.2%	9%
Westchester	967,612	7	3.5%	56%	5.2%	55%
Wyoming	40,085	55	18.5%	14%	25.0%	15%
Yates	24,841	60	21.6%	10%	26.5%	12%

TABLE 6.

Average Manufacturing Wages Compared to Average Non-Manufacturing Private Sector Wages

Policy makers often speak of “quality jobs” or “high paying jobs.” On average, jobs in the manufacturing sector exceed other private sector jobs by a considerable margin in virtually all counties of New York State. Wages for manufacturing jobs exceed average wages for private sector, non-manufacturing jobs, by at least \$30,000 or more in twelve counties, \$25,000 or more in nineteen counties, and at least \$20,000 in thirty-two counties. The only county where manufacturing wages do not exceed average non-manufacturing wages is New York county, where Wall Street and other major sectors significantly outpace the city’s industrial sector.

COUNTY	AVERAGE MANUFACTURING WAGES V. AVERAGE NON-MANUFACTURING PRIVATE SECTOR WAGES
Dutchess	\$57,746
Tioga	\$57,271
Saratoga	\$44,877
Schenectady	\$41,088
Seneca	\$40,544
Richmond	\$40,542
Rockland	\$37,521
Westchester	\$35,618
Rensselaer	\$34,984
Essex	\$32,368
Delaware	\$32,070
Hamilton	\$31,422
Saint Lawrence	\$29,373
Niagara	\$28,566
Oswego	\$27,391
Chenango	\$26,975
Cattaraugus	\$26,055
Washington	\$25,559
Broome	\$25,460
Cortland	\$24,897
Chautauqua	\$24,581
Greene	\$23,680
Warren	\$22,501
Allegany	\$22,256
Onondaga	\$21,743
Orleans	\$20,714
Monroe	\$20,701
Putnam	\$20,662
Chemung	\$20,603
Erie	\$20,560
Cayuga	\$20,486
Genesee	\$20,482
Ontario	\$18,767
Lewis	\$18,309
Albany	\$17,548
Wyoming	\$16,292
Wayne	\$15,944
Tompkins	\$15,886
Oneida	\$15,545
Herkimer	\$14,707
Jefferson	\$14,056
Livingston	\$13,611
Orange	\$13,537
Madison	\$13,449
Clinton	\$13,016
Schuyler	\$12,982
Columbia	\$12,487
Suffolk	\$11,938
Ulster	\$11,395
Steuben	\$11,378
Yates	\$9,911
Nassau	\$8,869
Montgomery	\$8,815
Otsego	\$8,425
Fulton	\$7,737
Franklin	\$5,766
Sullivan	\$3,844
Queens	\$3,579
Schoharie	\$1,530
Kings	\$1,160
Bronx	\$247
New York	-\$42,460

TABLE 7.

Manufacturing Subsectors with New York State Job Growth, 2010–2018

Despite overall negative manufacturing job trends in the state, several manufacturing subsectors have seen post-recession job growth in New York State, led by NAICS, or North American Industrial Classification System, 311 “Food Manufacturing,” with 8,102 additional jobs statewide (about half of this job growth was in New York City). By percentage, the largest growth in New York was within the “Beverage and Tobacco Product Manufacturing” sector, at 63 percent growth, an increase of 4,039 jobs, with the largest share of this job growth coming in the beverage component of this sector. These two subsectors grew faster in New York than the nation overall since 2010.

NAICS	SECTOR	INCREASE IN NEW YORK JOBS	% GROWTH IN NEW YORK	% GROWTH IN UNITED STATES
311	Food	8,102	16.3%	11.6%
312	Beverage/Tobacco	4,039	63.0%	50.6%
321	Wood products	1,156	17.3%	19.4%
326	Plastic/Rubber	870	4.3%	17.1%
331	Primary Metal	740	7.5%	5.0%
332	Fabricated Metal	412	1.0%	14.6%
335	Electrical Equipment	323	1.8%	11.5%

TABLE 8.

Ten Largest Manufacturing Subsectors, New York v. United States

The subcomponents of New York State's manufacturing sector generally reflect that of the nation, in terms of percentage of jobs by three-digit NAICS codes, with several notable exceptions.

First, the transportation equipment sector's share of national manufacturing jobs is more than double that in New York, the largest discrepancy among any subsectors.

Second, the computer/electronics sector has a more than 40 percent larger share of New York State's total manufacturing jobs than industrial jobs in the U.S. In 2018, computers and electronic manufacturing remained the state's largest industrial sector by job count, with 57,282 jobs, or 13.0 percent of all industrial jobs in New York. In comparison, computer/electronics manufacturing accounts for 8.4 percent of U.S. manufacturing jobs. And while this sector has been contracting in the U.S. for a number of years, New York has held on to a greater share of its computer/electronics jobs than has the U.S.

The only New York top-ten subsector that is not also in the U.S. top ten is apparel, with 3.2 percent of New York's manufacturing jobs, but just 0.9 percent on the national level.

RANK	NEW YORK	TOTAL JOBS	% OF MNFG. JOBS	UNITED STATES	TOTAL JOBS	% OF MNFG. JOBS
1	Computer/Electronics	57,282	13.0%	Transportation Equipment	1,698,487	13.4%
2	Food	57,118	12.9%	Food	1,608,764	12.7%
3	Fabricated Metals	49,176	11.1%	Fabricated Metals	1,463,149	11.6%
4	Chemicals	38,212	8.7%	Machinery	1,110,669	8.8%
5	Machinery	37,750	8.6%	Computer/Electronics	1,057,451	8.4%
6	Miscellaneous	30,292	6.9%	Chemicals	830,425	6.6%
7	Plastics	21,199	4.8%	Plastics	729,632	5.8%
8	Transportation Equipment	21,046	4.8%	Miscellaneous	607,221	4.8%
9	Printing	20,212	4.6%	Printing	429,864	3.4%
10	Apparel	14,040	3.2%	Wood Products	405,430	3.2%

TABLE 9.

Trends in Manufacturing Jobs, New York v. United States

The United States saw growth in manufacturing jobs each year from 2010 to 2018, with an aggregate increase of 1.159 million jobs nationwide. This largely represents a recovery in cyclical manufacturing sectors that were hard hit by the 2008-09 recession, especially the transportation equipment sector (i.e., auto manufacturing).

The data in this table, and in Figure 3, illustrates a long-term trend of New York underperforming the nation in terms of manufacturing jobs. Going back to 2001, New York has lagged behind the national job performance in every year but one, 2009, the height of the national recession.

YEAR	MANUFACTURING JOBS		% CHANGE NEW YORK	% CHANGE UNITED STATES
	NEW YORK	UNITED STATES		
2001	699,492	16,386,001		
2002	649,208	15,209,192	-7.2%	-7.2%
2003	610,506	14,459,712	-6.0%	-4.9%
2004	593,567	14,257,380	-2.8%	-1.4%
2005	579,094	14,190,394	-2.4%	-0.5%
2006	564,564	14,110,663	-2.5%	-0.6%
2007	551,868	13,833,022	-2.3%	-2.0%
2008	532,100	13,382,697	-3.6%	-3.3%
2009	474,712	11,810,371	-10.8%	-11.8%
2010	455,689	11,487,496	-4.0%	-2.7%
2011	456,701	11,701,497	0.2%	1.9%
2012	456,734	11,904,945	0.0%	1.7%
2013	454,027	11,994,922	-0.6%	0.8%
2014	450,222	12,156,537	-0.8%	1.4%
2015	452,550	12,291,676	0.5%	1.1%
2016	447,492	12,296,697	-1.1%	0.0%
2017	444,182	12,406,401	-0.8%	0.9%
2018	441,482	12,646,288	-0.6%	1.9%
Since 2001	-258,010	-3,739,713	-36.9%	-22.8%
Since 2008	-90,618	-736,409	-17.0%	-5.5%
Since 2010	-14,207	1,158,792	-3.1%	10.1%

FIGURE 3.

Trends in Manufacturing Jobs, New York v. United States

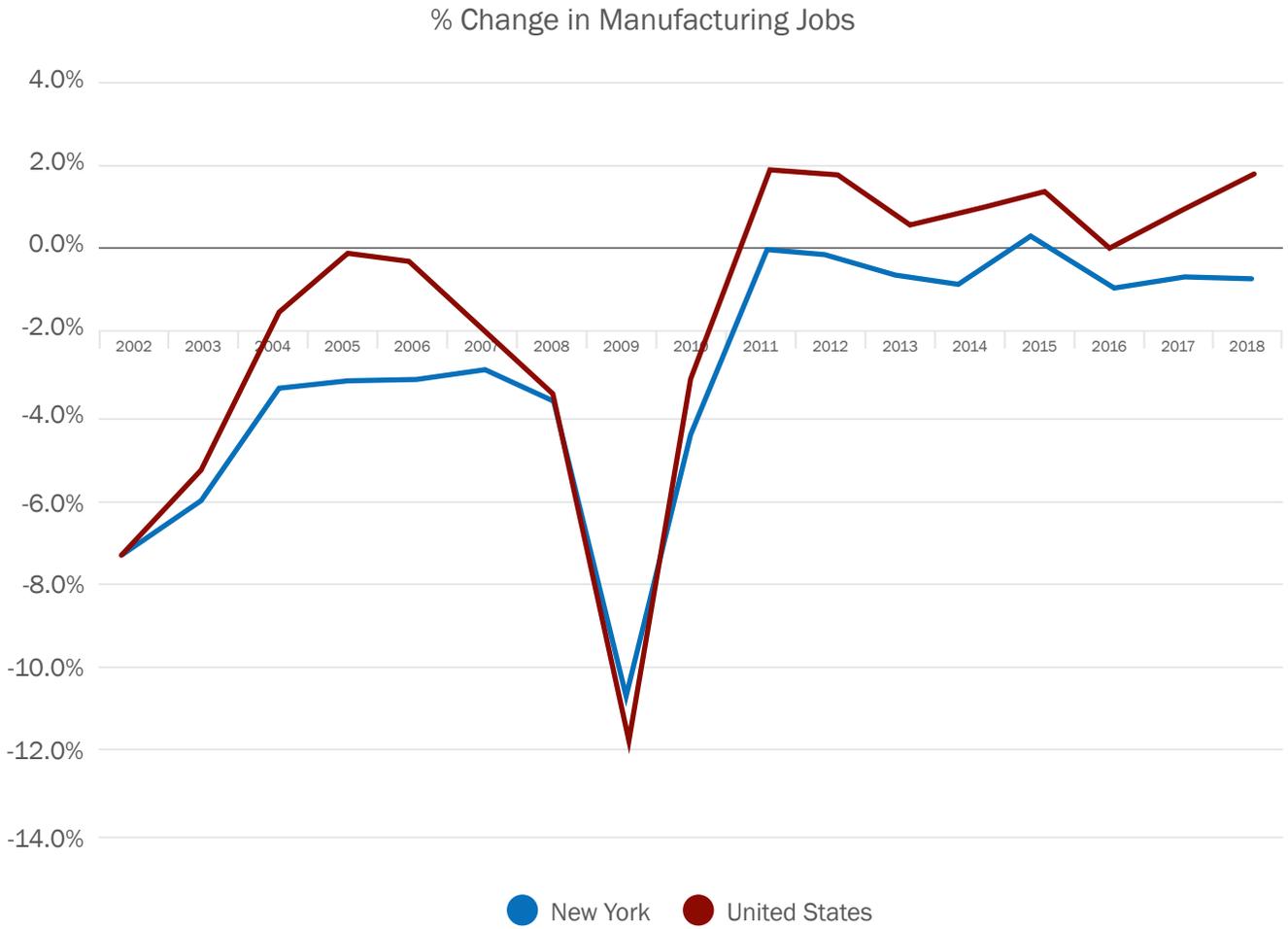


TABLE 10.

State By State Change in Manufacturing Jobs 2008–2018

Only two states — Michigan and Indiana — had a significantly greater number of manufacturing jobs in 2018 compared to pre-recession job levels in 2008, with increases of 67,100 and 20,700 jobs, respectively. Nine other states showed an increase in total manufacturing jobs compared to pre-recession levels, and each of these other states had relatively modest growth, both in absolute and relative terms — with the exception of Nevada, whose 7,300 increase in manufacturing job was a 15 percent increase above pre-recession levels. On the other end of the spectrum, New York had the second largest job loss in absolute terms over this period, and its share of pre-recession manufacturing jobs lost and not recovered by 2018 was higher than all but one other state — New Mexico. California had the largest total job loss, but as a share of its pre-recession industrial jobs, its losses were less than half as great as New York's.

STATE	2018 MANUFACTURING JOBS <i>(in thousands)</i>	CHANGE IN MANUFACTURING JOBS 2008-2018 <i>(in thousands)</i>	% CHANGE IN MANUFACTURING JOBS 2008-2018
Michigan	629.8	67.1	11.9%
Indiana	542.0	20.7	4.0%
Nevada	55.5	7.3	15.1%
Utah	133.1	7.2	5.7%
Kentucky	252.1	7.0	2.9%
South Carolina	247.8	6.4	2.7%
Colorado	147.6	5.3	3.7%
Idaho	68.2	5.2	8.3%
South Dakota	44.4	1.7	4.0%
Florida	372.0	0.9	0.2%
Montana	20.5	0.5	2.5%
Oregon	194.9	-0.2	-0.1%
Wyoming	9.8	-0.2	-2.0%
North Dakota	25.9	-0.5	-1.9%
Alaska	12.5	-0.5	-3.8%
Hawaii	14.2	-0.7	-4.7%
Georgia	408.0	-0.9	-0.2%
Nebraska	99.7	-1.7	-1.7%
Arizona	170.1	-2.9	-1.7%
Washington	287.9	-3.3	-1.1%
Iowa	223.0	-4.4	-1.9%
Delaware	27.1	-4.6	-14.5%
Vermont	29.8	-5.3	-15.1%

New Hampshire	70.5	-5.4	-7.1%
Maine	52.0	-6.8	-11.6%
Rhode Island	40.3	-7.6	-15.9%
New Mexico	27.0	-8.1	-23.1%
West Virginia	47.1	-9.4	-16.6%
Tennessee	350.7	-10.3	-2.9%
Oklahoma	137.7	-12.2	-8.1%
Minnesota	321.4	-14.2	-4.2%
Mississippi	144.9	-14.8	-9.3%
Alabama	267.1	-17.2	-6.0%
Wisconsin	475.5	-17.4	-3.5%
Louisiana	134.9	-17.9	-11.7%
Missouri	272.8	-19.6	-6.7%
Maryland	108.3	-19.8	-15.5%
Kansas	165.1	-20.2	-10.9%
Arkansas	160.5	-23.2	-12.6%
Virginia	240.1	-24.7	-9.3%
Connecticut	160.3	-26.4	-14.1%
Ohio	698.9	-40.1	-5.4%
North Carolina	474.2	-41.8	-8.1%
Massachusetts	244.1	-42.3	-14.8%
New Jersey	247.4	-48.0	-16.2%
Texas	881.1	-48.0	-5.2%
Illinois	588.3	-69.1	-10.5%
Pennsylvania	569.4	-74.4	-11.6%
New York	443.1	-88.8	-16.7%
California	1325.4	-101.3	-7.1%

TABLE 11.

Post-Recession Manufacturing Job Growth By State

Thirty-nine states have experienced growth in manufacturing jobs over the period 2010 to 2018, as the cyclical manufacturing sector recovered from the national recession.

New York was among the eleven states with net manufacturing job loss over this period. The other job-loss states were concentrated in the northeast U.S. — Rhode Island, Vermont, Connecticut, Massachusetts, New Jersey, and Maryland, along with Louisiana, West Virginia, Alaska and New Mexico. Of these eleven states with manufacturing job losses over this period, New York has by far the largest remaining manufacturing job base, with 451,300 manufacturing jobs statewide.

STATE	2018 MANUFACTURING JOBS <i>(in thousands)</i>	CHANGE IN MANUFACTURING JOBS 2010-2018 <i>(in thousands)</i>	% CHANGE IN MANUFACTURING JOBS 2010-2018
Michigan	629.8	163.8	35.1%
Indiana	542.0	94.7	21.1%
California	1325.4	81.4	6.5%
Ohio	698.9	78.4	12.6%
Texas	881.1	64.1	7.8%
Georgia	408.0	63.2	18.3%
Florida	372.0	62.9	20.3%
Tennessee	350.7	51.8	17.3%
Wisconsin	475.5	45.0	10.4%
Kentucky	252.1	43.1	20.6%
North Carolina	474.2	42.0	9.7%
South Carolina	247.8	40.8	19.7%
Oregon	194.9	31.1	18.9%
Alabama	267.1	30.8	13.0%
Washington	287.9	29.7	11.5%
Minnesota	321.4	28.7	9.8%
Illinois	588.3	27.3	4.8%
Missouri	272.8	26.7	10.8%
Colorado	147.6	23.4	18.8%
Iowa	223.0	22.5	11.2%
Utah	133.1	22.0	19.8%
Arizona	170.1	21.8	14.7%
Nevada	55.5	17.6	46.4%
Idaho	68.2	15.0	28.2%

Oklahoma	137.7	14.3	11.5%
Virginia	240.1	9.6	4.1%
Pennsylvania	569.4	9.4	1.6%
Mississippi	144.9	8.9	6.5%
Nebraska	99.7	8.0	8.7%
South Dakota	44.4	7.5	20.3%
Kansas	165.1	7.2	4.5%
New Hampshire	70.5	4.7	7.1%
Montana	20.5	4.0	24.2%
North Dakota	25.9	3.3	14.6%
Delaware	27.1	1.2	4.6%
Maine	52.0	1.2	2.3%
Hawaii	14.2	1.2	9.2%
Wyoming	9.8	1.1	12.6%
Arkansas	160.5	0.2	0.1%
Rhode Island	40.3	-0.1	-0.2%
Alaska	12.5	-0.2	-1.5%
Vermont	29.8	-0.8	-2.6%
West Virginia	47.1	-2.0	-4.0%
New Mexico	27.0	-2.1	-7.2%
Louisiana	134.9	-3.0	-2.1%
Connecticut	160.3	-4.5	-2.7%
New Jersey	247.4	-4.7	-1.8%
Maryland	108.3	-6.0	-5.2%
Massachusetts	244.1	-8.9	-3.5%
New York	443.1	-14.0	-3.0%

FIGURE 4.

Change in Manufacturing Jobs By State 2008–2018

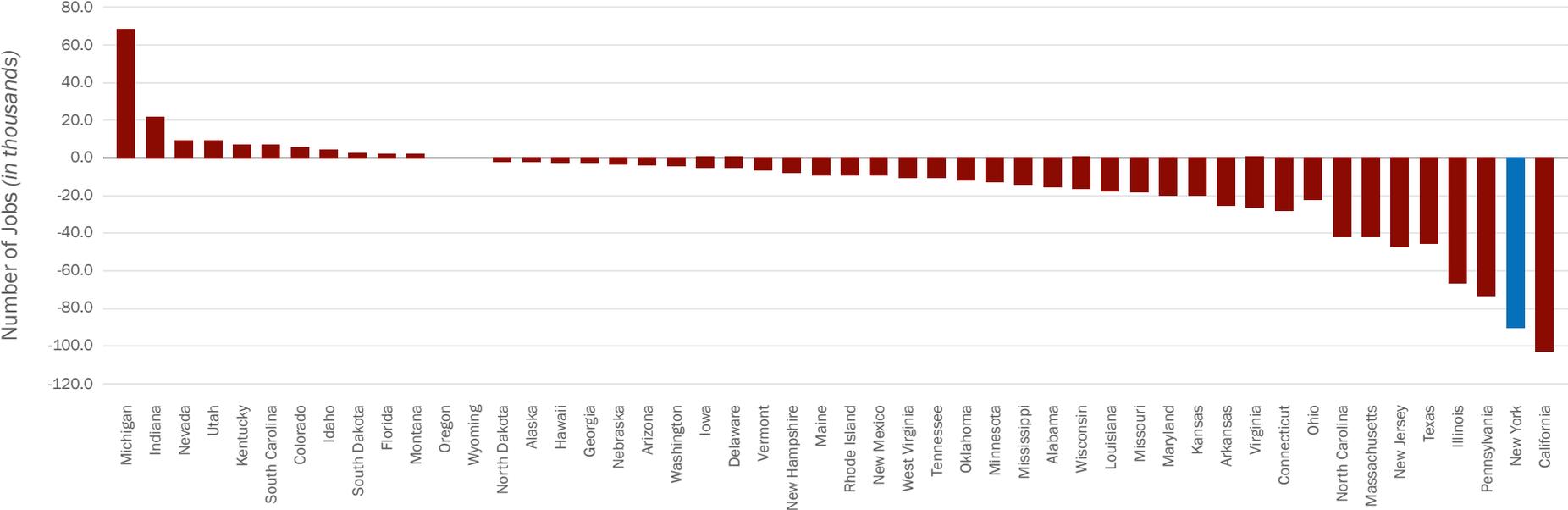


FIGURE 5.

Post-Recession Manufacturing Job Growth By State

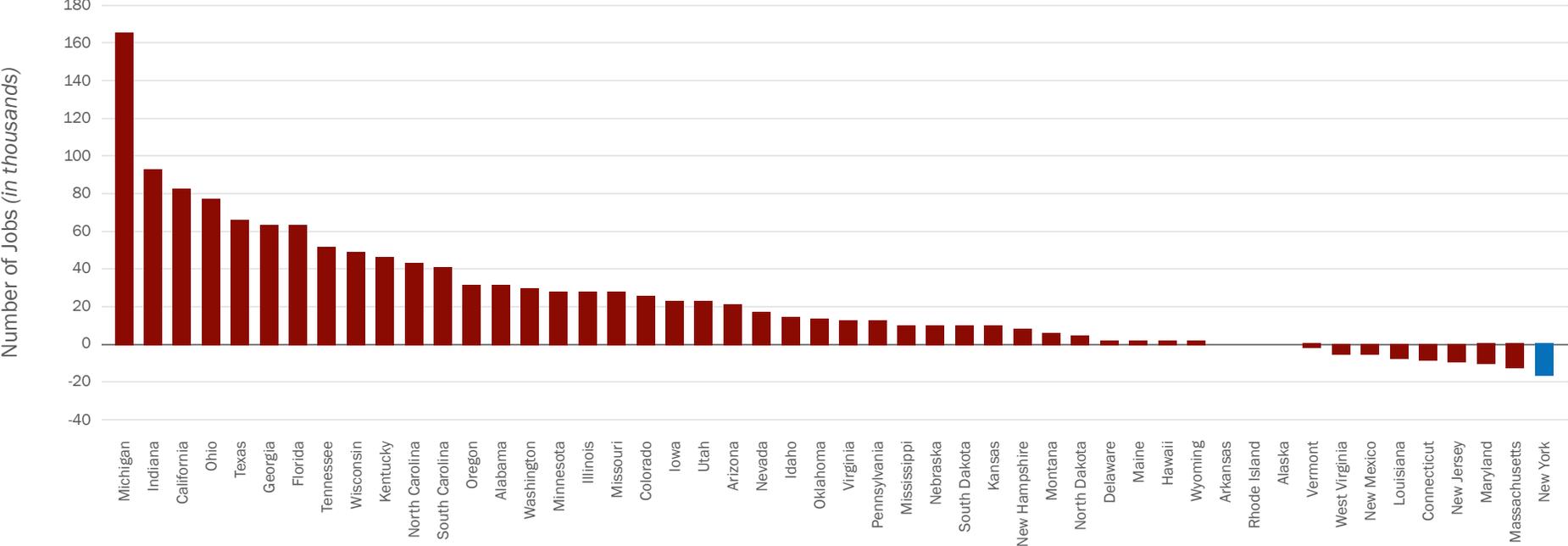


TABLE 12.

Manufacturing Subsector Volatility

It has been observed that, over the decades prior to the great recession, New York’s manufacturing sector had mostly lost jobs in cyclical industries – especially automobile manufacturing – and as a result, the disparity between New York and other state’s post-recession manufacturing job recovery was simply due to the recovery of jobs in cyclical subsectors and not “real growth.”

Using this simple illustration, New York’s manufacturing base is less cyclical than the nation’s, with just 52 percent of its manufacturing jobs in “higher than average” volatility subsectors, compared to 61 percent nationwide. Nationwide, transportation equipment manufacturing employment fell by nearly 16 percent from 2008 to 2009, the subsector with the largest net and percentage job loss in the U.S. (Of the five subsectors with larger percentage job loss than transportation equipment, only one – wood products at 10th – is in the top 10 manufacturing subsectors by total jobs.)

NAICS	SECTOR	% NEW YORK MANUFACTURING JOBS	% UNITED STATES MANUFACTURING JOBS	% UNITED STATES JOB LOSS 2008-2009
321	Wood Products	1.8%	3.2%	-21.1%
337	Furniture	2.9%	3.1%	-20.1%
313	Textile Mills	0.8%	0.9%	-18.8%
331	Primary Metal	2.4%	3%	-18.1%
327	Non-metallic Metals	3.5%	3.3%	-15.9%
336	Transportation Equipment	4.8%	13.4%	-15.9%
315	Apparel	3.2%	0.8%	-15.6%
332	Fabricated Metal Products	11.1%	11.6%	-14.9%
314	Textile Mill Products	0.8%	0.9%	-14.5%
326	Rubber & Plastics	4.9%	5.8%	-13.7%
333	Machinery	8.6%	8.8%	-13.5%
323	Printing & Related	4.6%	3.4%	-11.9%
335	Electrical Equipment	3%	3.1%	-11.9%
31-33	All Manufacturing	100%	100%	-11.7%
316	Leather & Allied	0.4%	0.2%	-10.7%
334	Computer & Electronics	13%	8.4%	-9.1%
322	Paper	3.3%	2.9%	-8.1%
338	Miscellaneous	6.9%	4.8%	-7.6%
325	Chemicals	8.7%	6.6%	-5.5%
312	Beverage/Tobacco	2.4%	2.2%	-4.5%
311	Food	12.9%	12.7%	-1.7%
324	Petroleum and Coal	0.4%	0.9%	-1.5%
	% higher than average	52.2%	61.3%	
	% lower than average	47.8	38.7	

TABLE 13.

New York Manufacturing Subsectors, Net Change in Jobs 2010–2018

This table shows the actual and percentage change in jobs from 2010 to 2018 in New York for each of the manufacturing sector's twenty-one subsectors.

The food manufacturing sector has been one of New York's most dynamic, with 16.5 percent growth from 2010 to 2018, a growth rate about 50 percent higher than the national average for this sector. As result, food manufacturing is New York's second largest manufacturing sector, with about 13 percent of all manufacturing jobs, just behind computers.

Other manufacturing sectors with in-state job growth over this eight-year period include beverage/tobacco, plastic/rubber, non-metal mineral production, primary metals, fabricated metal products, electrical equipment and furniture.

The most dramatic job losses were within the state's transportation equipment sector, which saw jobs fall by 12.2 percent from 2010 to 2018, at a time when the national recovery was producing 24 percent job growth in this sector.

NAICS	NEW YORK	# CHANGE	% CHANGE
311	Food	8,102	16.5%
312	Beverage/Tobacco	4,039	62.4%
321	Wood Products	1,156	17.3%
326	Plastics and Rubber	870	4.3%
327	Nonmetallic Minerals	638	4.3%
332	Fabricated Metals	412	1.0%
331	Primary Metals	740	7.5%
335	Electrical Equipment	232	1.8%
324	Petroleum and Coal	-23	-1.3%
337	Furniture and Related	-275	-2.1%
316	Leather and Allied Products	-372	-21.4%
314	Textile Products	-475	-11.8%
313	Textile Mills	-620	-15.6%
322	Paper	-1,739	-10.6%
336	Transportation Equipment	-2,107	-9.1%
338	Miscellaneous	-3,108	-9.3%
323	Printing and Related	-3,192	-13.6%
325	Chemical	-3,534	-8.5%
333	Machinery	-4,567	-10.8%
334	Computer and Electronics	-4,673	-7.5%
315	Apparel	-5,786	-29.1%

FIGURE 6.

New York Manufacturing Subsectors, Net Change in Jobs 2010–2018

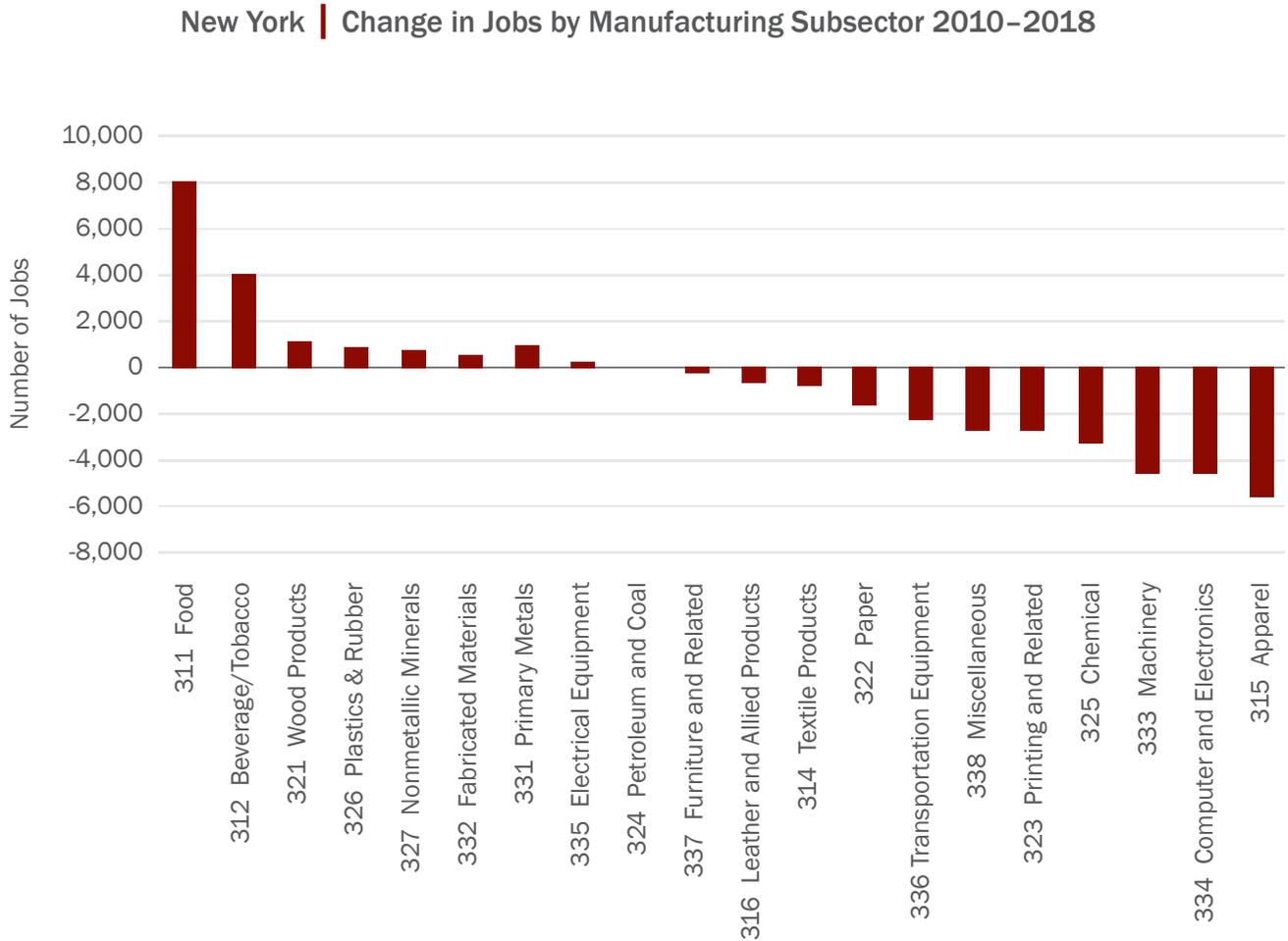


TABLE 14.

Details of NAICS 312, Beverage and Tobacco Manufacturing in New York

The dramatic 62 percent increase in this manufacturing subsector deserves a more detailed review. While entitled “Beverage and Tobacco Product Manufacturing,” this manufacturing subsector (NAICS 312) in New York is predominantly beverage production. Since 2010, employment in “breweries” and “distilleries” more than doubled, while there was significant growth in wine and bottled water production as well. This same time period saw a 91 percent increase in jobs in tobacco product production, that subsector represented only 5 percent of all New York jobs in NAICS 312 by 2018.

NAICS	312 BEVERAGE & TOBACCO	31212 BREWERIES	31213 WINERIES	31214	312112 BOTTLED WATER	312111 SOFT DRINKS	3122 TOBACCO	312113 ICE
2010	6,412	1,362	2,004	329	298	1,826	289	304
2011	6,328	1,421	2,102	302	355	1,572	298	278
2012	6,792	1,615	2,215	283	363	1,632	378	306
2013	7,127	1,816	2,311	328	361	1,652	364	296
2014	8,144	1,925	2,435	1,044	365	1,690	428	257
2015	8,315	2,315	2,625	547	380	1,728	480	240
2016	8,945	2,819	2,794	618	379	1,657	476	203
2017	9,800	3,380	3,010	682	418	1,539	546	226
2018	10,458	3,730	3,258	751	405	1,558	551	206
Change	4,046	2,368	1,254	422	107	-268	262	-98
% Change		173.9%	62.6%	128.3%	35.9%	-14.7%	90.7%	-32.2%
% of 312 Subsector Increase		58.5%	30.9%	10.4%	2.6%	-6.6%	6.4%	-2.4%

TABLE 15.

United States Manufacturing Sectors, Net Change in Jobs, 2010–2018

This table shows the same data as in Table 13 for the United States, including the actual and percentage change in jobs from 2010 to 2018 in for each of the manufacturing sector’s twenty-one subsector, as well as each subsector’s share of net manufacturing job growth during this period.

As mentioned above, national post-recession manufacturing job growth was led by the transportation equipment sector (which includes automobile production), and closely related sectors.

Like New York, the national “beverage and tobacco” sector saw a significant percentage increase in jobs.

NAICS	UNITED STATES	# CHANGE	% CHANGE	% OF NET GROWTH
336	Transportation Equipment	371,318	27.9%	33.33%
311	Food	166,652	11.2%	14.96%
332	Fabricated Metals	141,828	14.6%	12.73%
333	Machinery	119,630	12.1%	10.74%
326	Plastic and Rubber	106,373	17.1%	9.55%
312	Beverage/Tobacco	92,739	50.5%	8.32%
321	Wood Products	65,888	19.4%	5.91%
327	Nonmetallic Minerals	47,338	12.9%	4.25%
325	Chemical	45,142	5.7%	4.05%
335	Electrical Equipment	41,059	11.5%	3.69%
338	Miscellaneous	40,742	7.1%	3.66%
337	Furniture and Related	36,426	10.2%	3.27%
331	Primary Metals	18,220	5%	1.64%
324	Petroleum and Coal	1,613	1.5%	0.14%
316	Leather and Allied Products	-229	-0.8%	
314	Textile Products	-3,832	-6.9%	
313	Textile Mills	-8,295	-3.2%	
322	Paper	-28,519	-7.3%	
315	Apparel	-44,626	-2.8%	
323	Printing and Related	-55,659	-11.5%	
334	Computer and Electronics	-39,765	-3.6%	

TABLE 16.

Manufacturing Subsector Job Growth 2010–2018

This table illustrates the similarities and difference between manufacturing subsector growth in New York versus the nation. The subsectors growing in New York were also growing at the national level, although at a lower rate in most cases.

The most notable difference is the significant growth in transportation equipment, including automobiles, at the national level, while the subsector continued to show job loss in New York. Other subsectors showing national growth, but New York decline, include petroleum/coal, chemicals, machinery, furniture, and miscellaneous manufacturing.

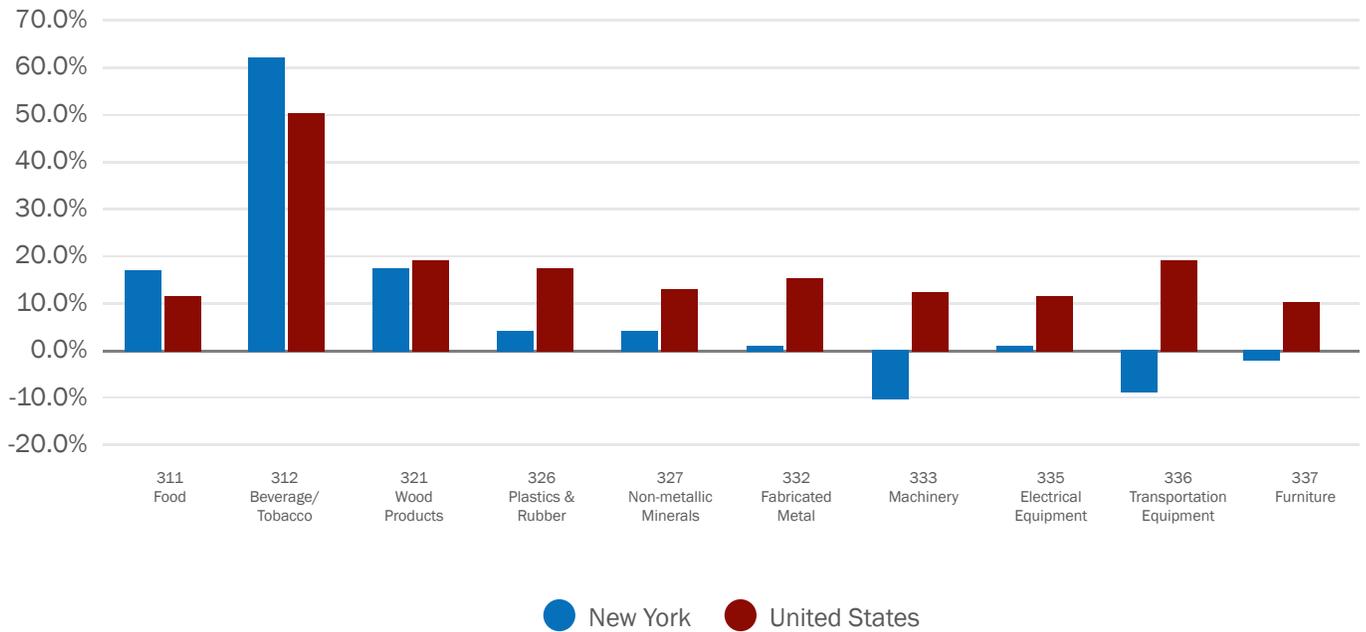
NAICS	SECTOR	% MANUFACTURING JOB GROWTH IN NEW YORK	& MANUFACTURING JOB GROWTH IN UNITED STATES
311	Food	16.5%	11.2
312	Beverage/Tobacco	62.4%	50.5
313	Textile Mills	-15.6%	-3.2
314	Textile Products	-11.8%	-6.9
315	Apparel	-29.1%	-2.8
316	Leather and Allied Products	-21.4%	-0.8
321	Wood Products	17.3%	19.4
322	Paper	-10.6%	-7.3
323	Printing and Related	-13.6%	-11.5
324	Petroleum and Coal	-1.3%	1.5
325	Chemical	-8.5%	5.8
326	Plastics and Rubber	4.3%	17.1
327	Nonmetallic Minerals	4.3%	12.9
331	Primary Metals	7.5%	5.0
332	Fabricated Metals	1.0%	14.6
333	Machinery	-10.8%	12.1
334	Computer and Electronics	-7.5%	-3.6
335	Electrical Equipment	1.8%	11.5
336	Transportation Equipment	-9.1%	27.9
337	Furniture and Related	-2.1%	10.2
338	Miscellaneous	-9.3%	7.1

FIGURE 7.

New York v. United States Job Growth By Subsector

This figure illustrates the data provided in Table 16, showing the relative change in New York and United States job numbers in the nations' ten fastest growing manufacturing subsectors.

% Change in Jobs 2010-2018 10 Fastest Growing Sectors in US

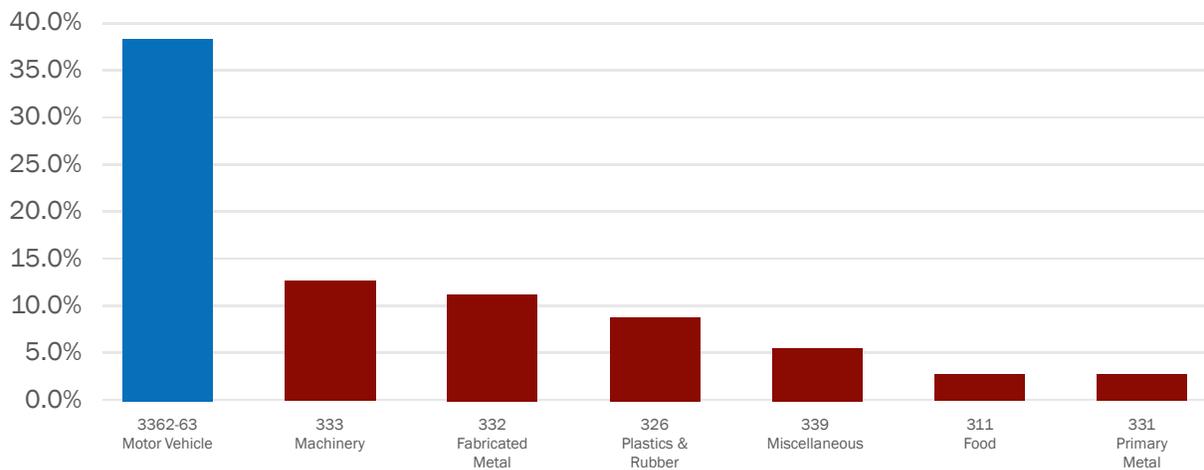


Profiles of Fast Growing Manufacturing States

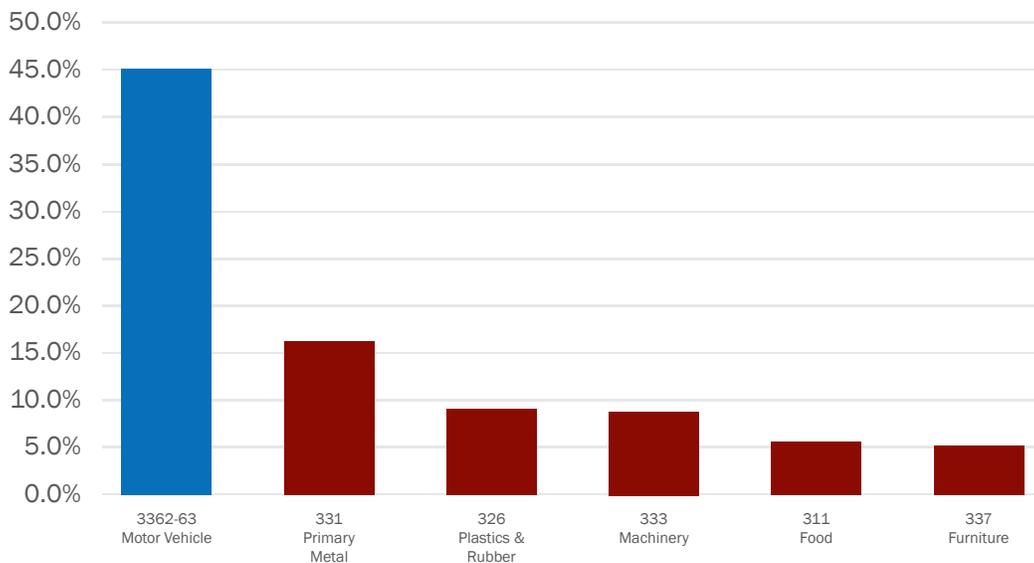
Recovery in the auto and related sectors drove post-recession job growth in most of the nation’s fastest growing manufacturing states. As shown in the figures below, of the nine states with the largest increase in manufacturing jobs from 2010 to 2018, auto manufacturing was the major growth sector in six – Michigan, Indiana, California, Ohio, Georgia and Tennessee – and second largest growth subsector in one other, Texas. However, that is not the only pattern of state-level manufacturing job recover. In Florida and Wisconsin, vehicle manufacturing accounted for less than five percent of manufacturing job growth, with the fabricated metal sector leading growth in both of these states.



Michigan | Distribution of Manufacturing Growth 2010–2018

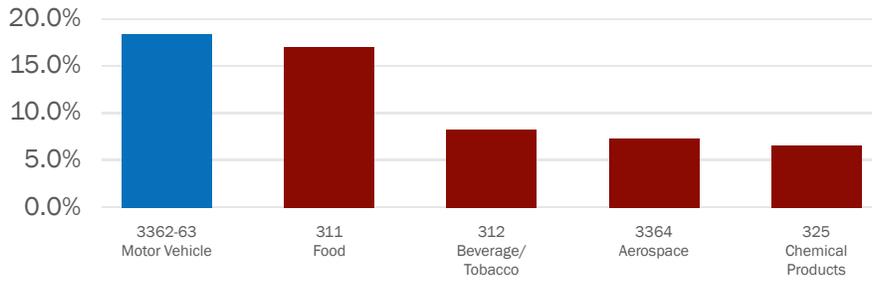


Indiana | Distribution of Manufacturing Growth 2010–2018

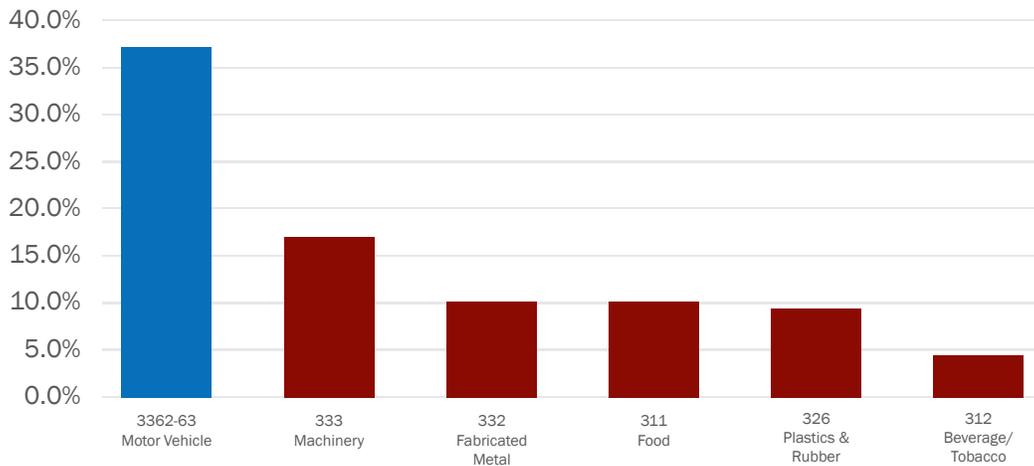




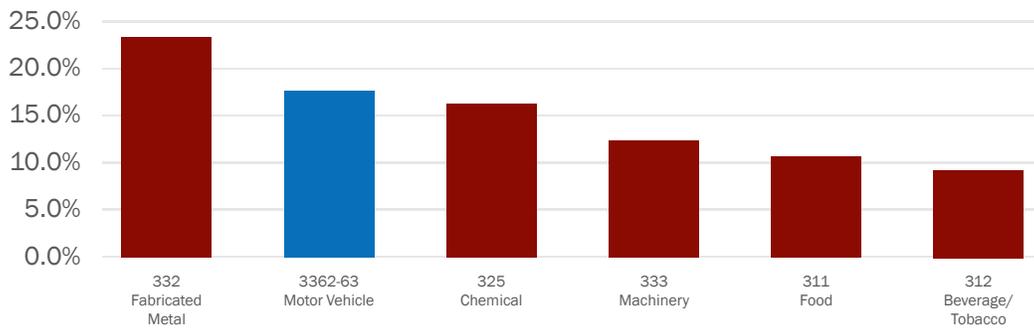
California | Distribution of Manufacturing Growth 2010-2018



Ohio | Distribution of Manufacturing Growth 2010-2018

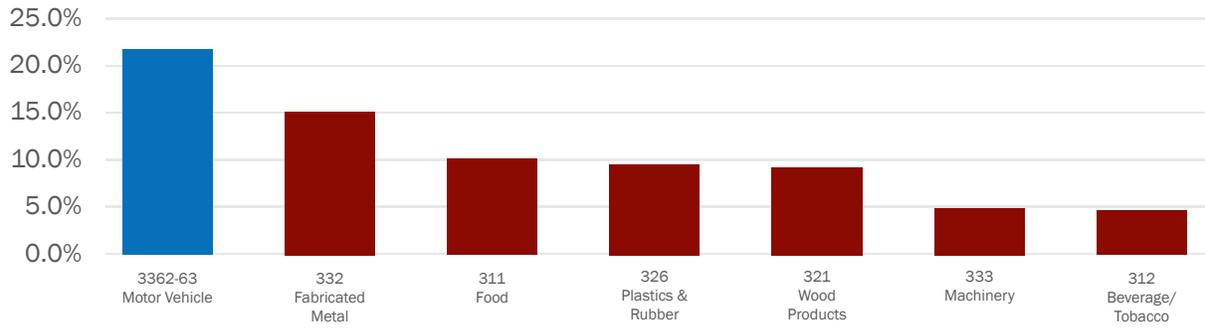


Texas | Distribution of Manufacturing Growth 2010-2018

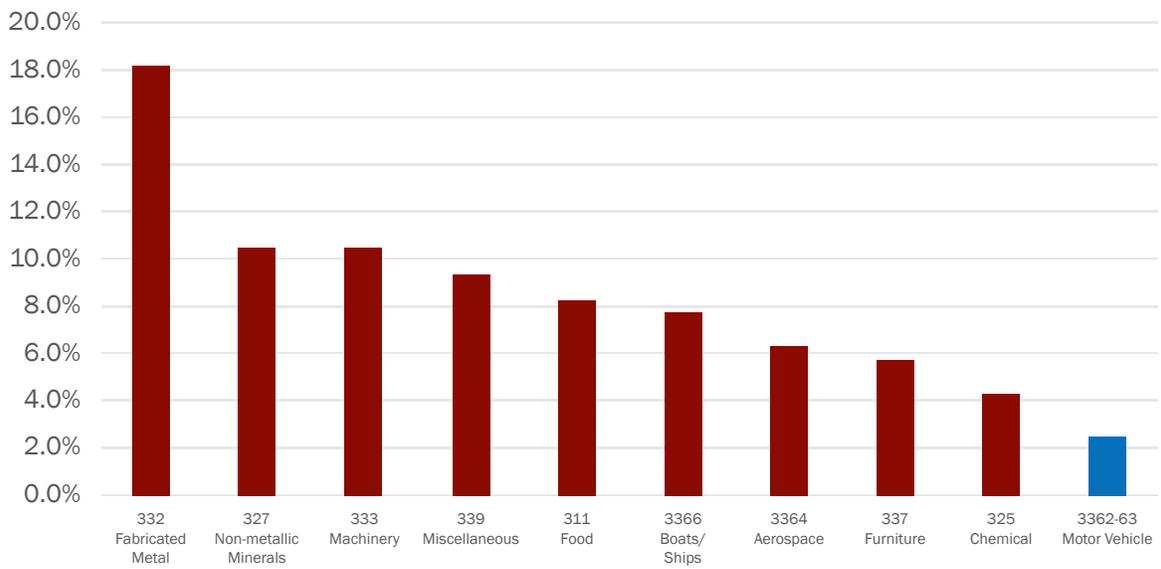




Georgia | Distribution of Manufacturing Growth 2010-2018

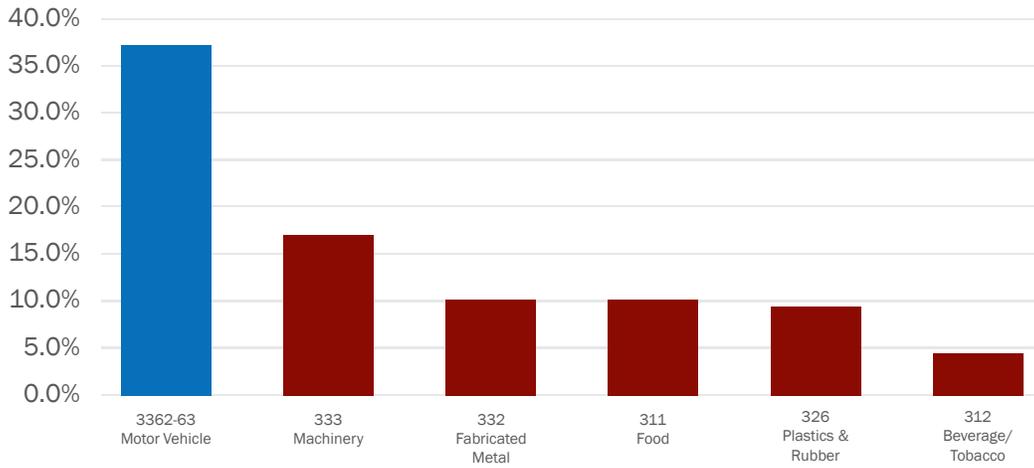


Florida | Distribution of Manufacturing Growth 2010-2018





Tennessee | Distribution of Manufacturing Job Growth 2010–2018



Wisconsin | Distribution of Manufacturing Job Growth 2010–2018

