

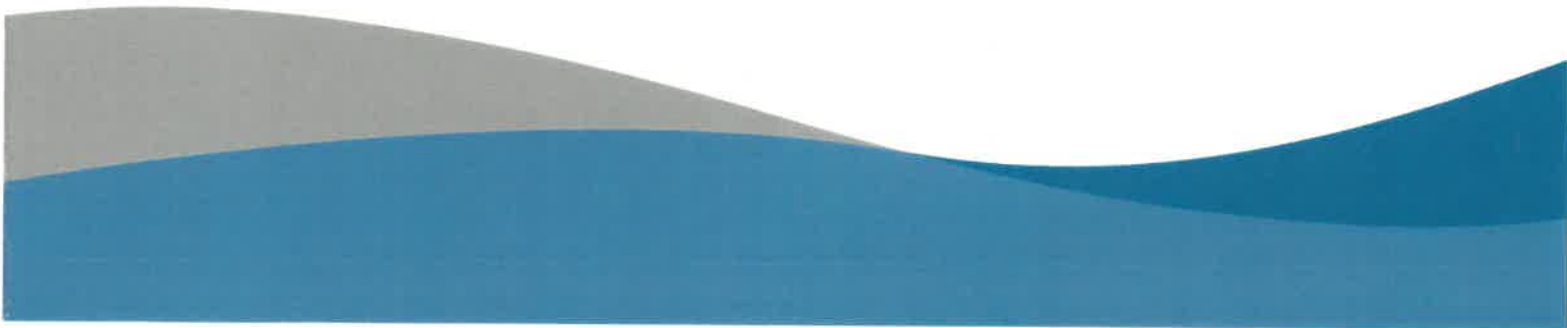


# Manufacturing

## Region 2000/Central VA (WDA 7)



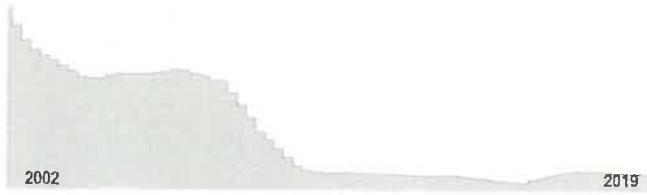
Industry Spotlight



Industry Snapshot.....	4
Staffing Pattern.....	5
Geographic Distribution.....	6
Drivers of Employment Growth.....	7
Employment Distribution by Type.....	8
Establishments.....	9
GDP & Productivity.....	10
Supply Chain: Top Suppliers.....	11
Sector Strategy Pathways.....	12
Postsecondary Programs Linked to Manufacturing.....	13
Region Definition.....	14
Data Notes.....	15
FAQ.....	15

Manufacturing  
Region 2000/Central VA (WDA 7) – 2019Q2

EMPLOYMENT



**14,884**

Regional employment / 13,066,266 in the nation

WAGES



**\$62,918**

Avg Wages per Worker / \$68,823 in the nation

**-0.7%** ↓

Avg Ann % Change Last 10 Years / +0.1% in the US



**13.7%**

% of Total Employment / 8.3% in the US

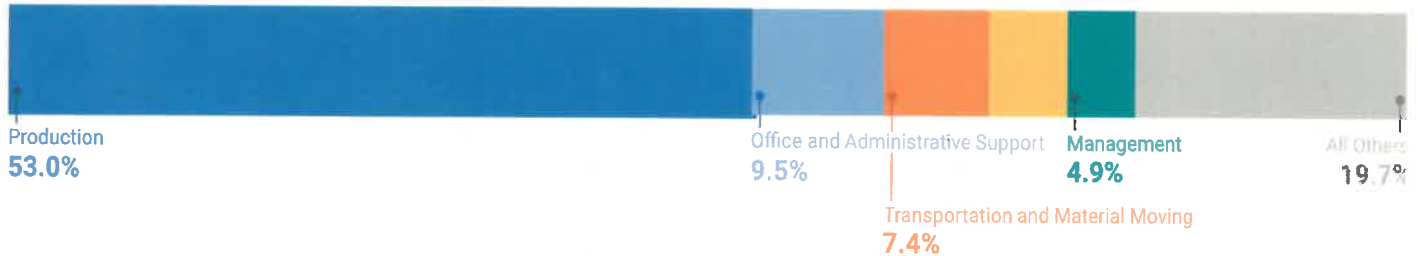


**2.5%** ↑

Avg Ann % Change Last 10 Years / +2.5% in the US

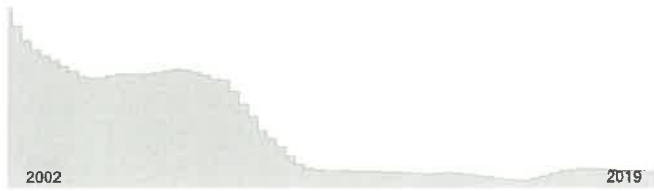


TOP OCCUPATION GROUPS



# Industry Snapshot

## EMPLOYMENT



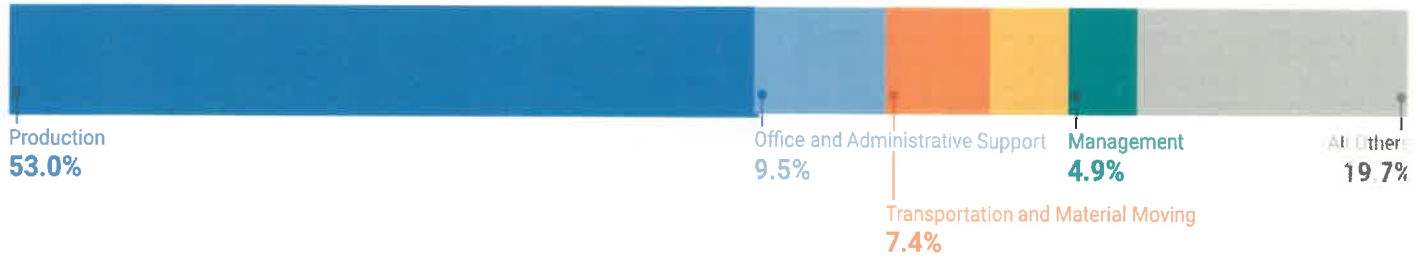
## WAGES




2-Digit Industry	Empl	Avg Ann Wages	LQ	5yr History	Annual Demand	Forecast Ann Growth
<b>Manufacturing</b>	<b>14,884</b>	<b>\$62,918</b>	<b>1.66</b>		<b>1,360</b>	<b>-1.3%</b>

- Employment is one of the broadest and most timely measures of a region's economy. Fluctuations in the number of jobs shed light on the health of an industry. A growing employment base creates more opportunities for regional residents and helps a region grow its population.
- Since wages and salaries generally compose the majority of a household's income, the annual average wages of a region affect its average household income, housing market, quality of life, and other socioeconomic indicators.

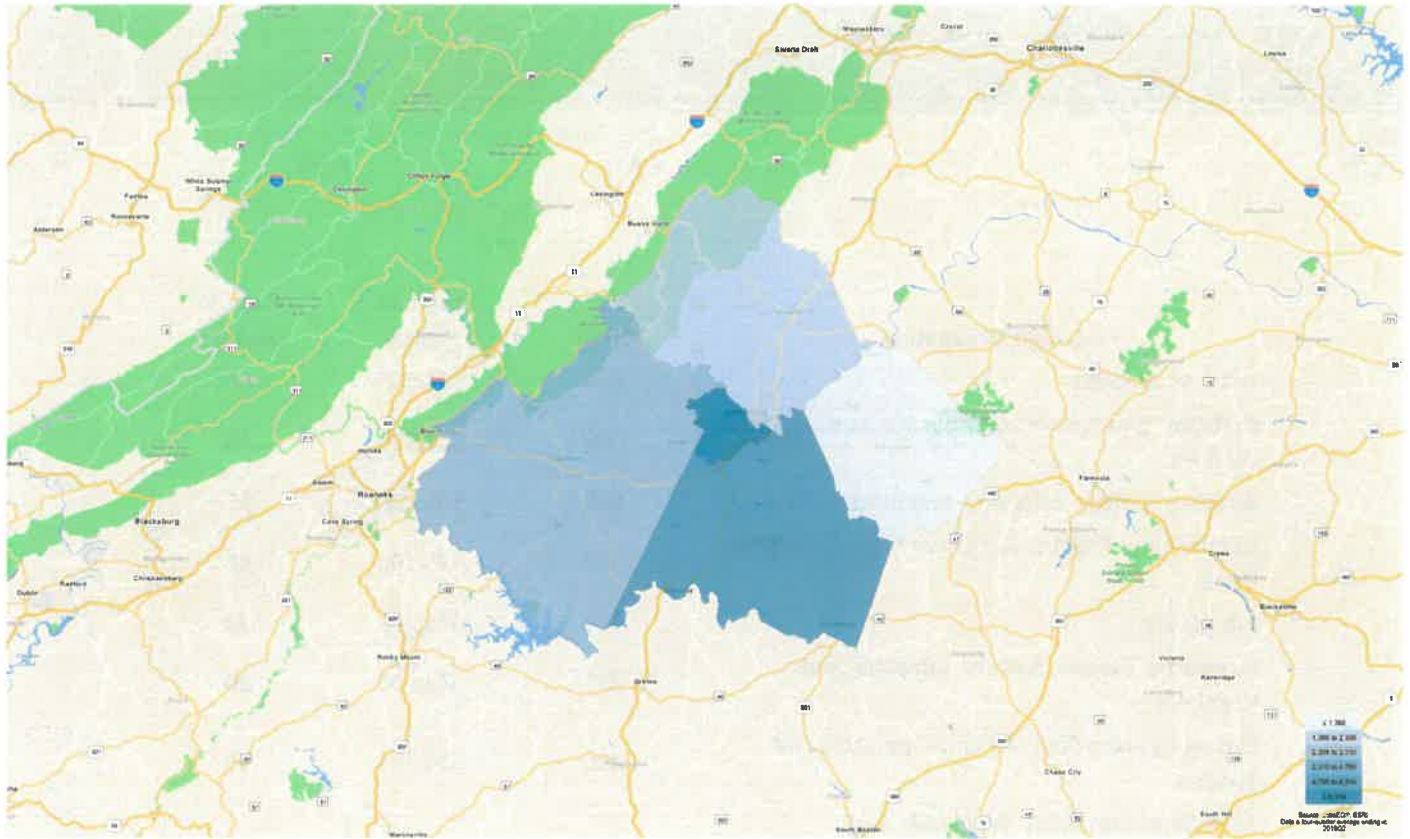
# Staffing Pattern



6-digit Occupation	Empl	Avg Ann Wages	Annual Demand
Team Assemblers	845	\$34,600	66
First-Line Supervisors of Production and Operating Workers	566	\$57,900	48
Welders, Cutters, Solderers, and Brazers	545	\$38,900	55
Laborers and Freight, Stock, and Material Movers, Hand	390	\$28,100	48
Machinists	373	\$51,400	34
Inspectors, Testers, Sorters, Samplers, and Weighers	357	\$38,900	30
Packaging and Filling Machine Operators and Tenders	336	\$30,100	35
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	328	\$57,500	29
Industrial Machinery Mechanics	314	\$47,800	25
Shipping, Receiving, and Traffic Clerks	277	\$35,300	22
Remaining Component Occupations	10,527	\$53,500	904
<b>Total</b>	<b>14,884</b>		

 The mix of occupations points to the ability of a region to support an industry and its flexibility to adapt to future demand. Industry wages are a component of the cost of labor for regional employers.

# Geographic Distribution



Region	Empl	Region	Empl
Lynchburg City, Virginia	6,314	Amherst County, Virginia	1,366
Campbell County, Virginia	4,796	Appomattox County, Virginia	99
Bedford County, Virginia	2,309		

Source: JobsEQ®

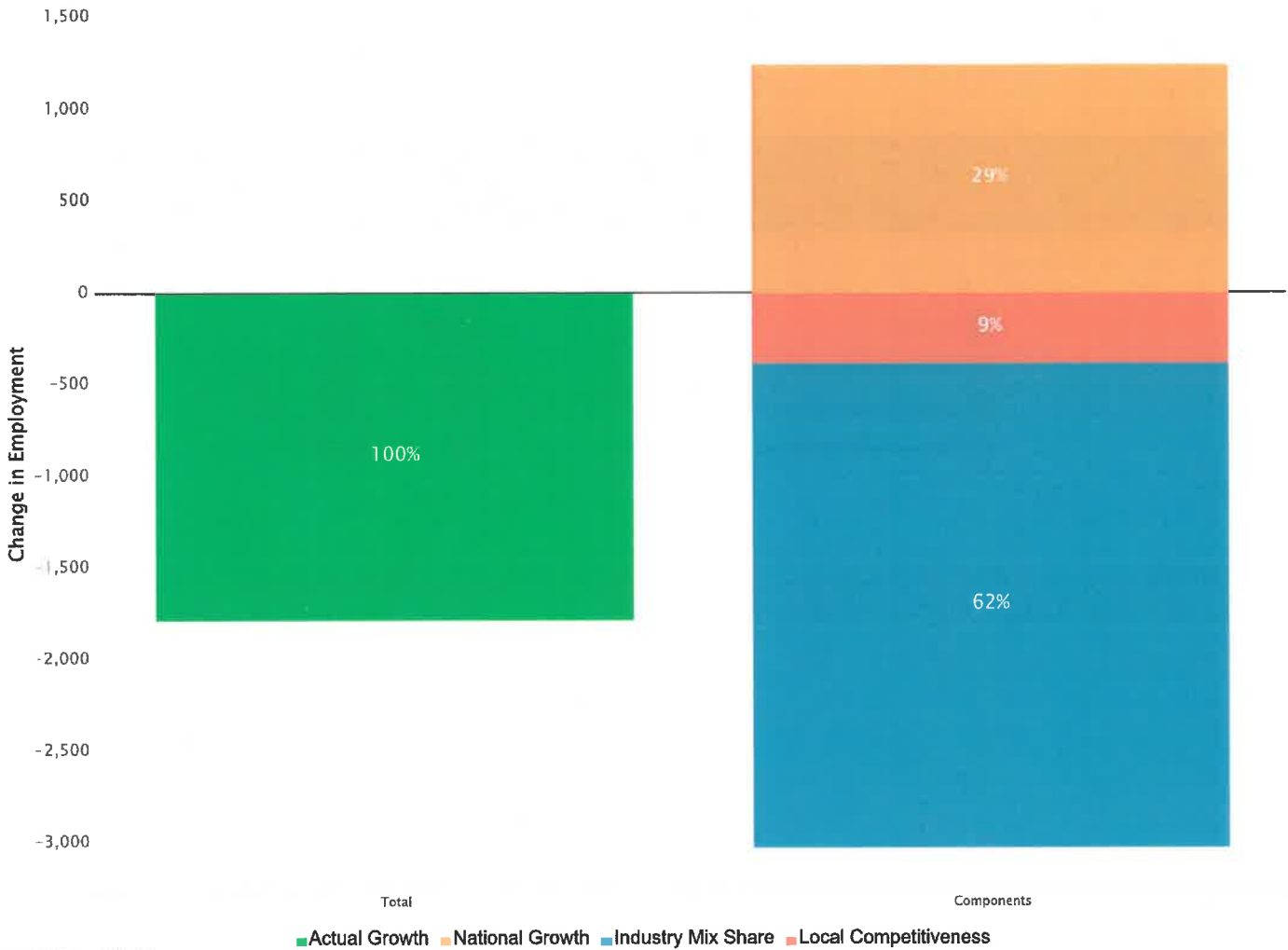


A geographic concentration of firms in related fields of business may reduce production costs, attract more suppliers and customers, and increase supply and demand for specialized labor, but may also increase competitive pressure and drive down prices.



# Drivers of Employment Growth

Over the ten years ending 2018, employment in Manufacturing for the Region 2000/Central VA (WDA 7) shed 1,777 jobs. After adjusting for national growth during this period and industry mix share, the part of this employment change due to local competitiveness was a loss of 381 jobs—meaning this industry was less competitive than its national counterpart during this period.

Drivers of Employment Growth for Region 2000/Central VA (WDA 7)



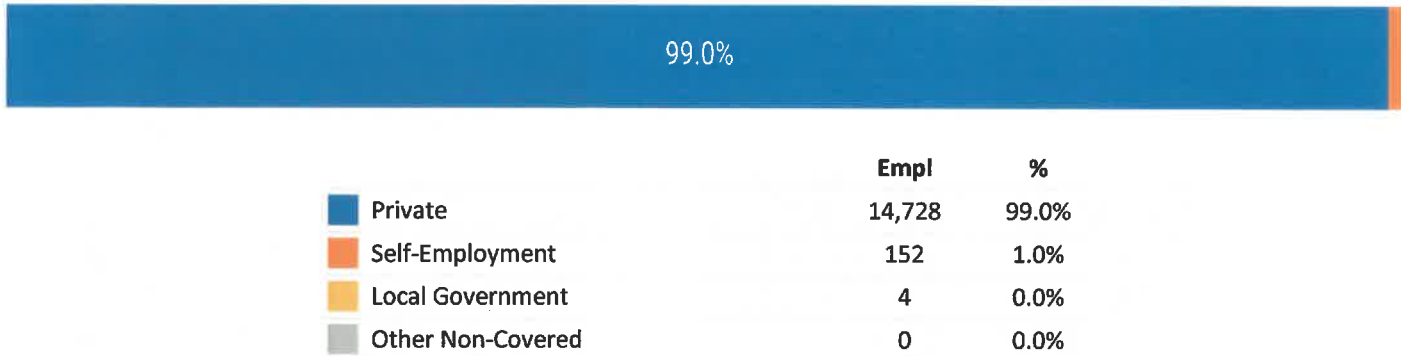
Source: BLS, BEA Data as of 12/31/2018

- 
 Shift-share analysis sheds light on the factors that drive regional employment growth in an industry. A positive change in local competitiveness indicates advantages that may be due to factors such as superior technology, management, and labor pool, etc.
- 
 National growth is due to the overall growth or contraction in the national economy. Industry mix share is the growth attributable to the specific industries examined (based on national industry growth patterns and the industry mix of the region).


# Employment Distribution by Type

The table below shows the employment mix by ownership type for Manufacturing for the Region 2000/Central VA (WDA 7). Four of these ownership types — federal, state, and local government and the private sector — together constitute “Covered Employment” (employment covered by the Unemployment Insurance programs of the United States and reported via the Quarterly Census of Employment and Wages).

“Self-Employment” refers to unincorporated self-employment and represents workers whose primary job is self-employment (that is, these data do not include workers whose primary job is a wage-and-salary position that is supplemented with self-employment).



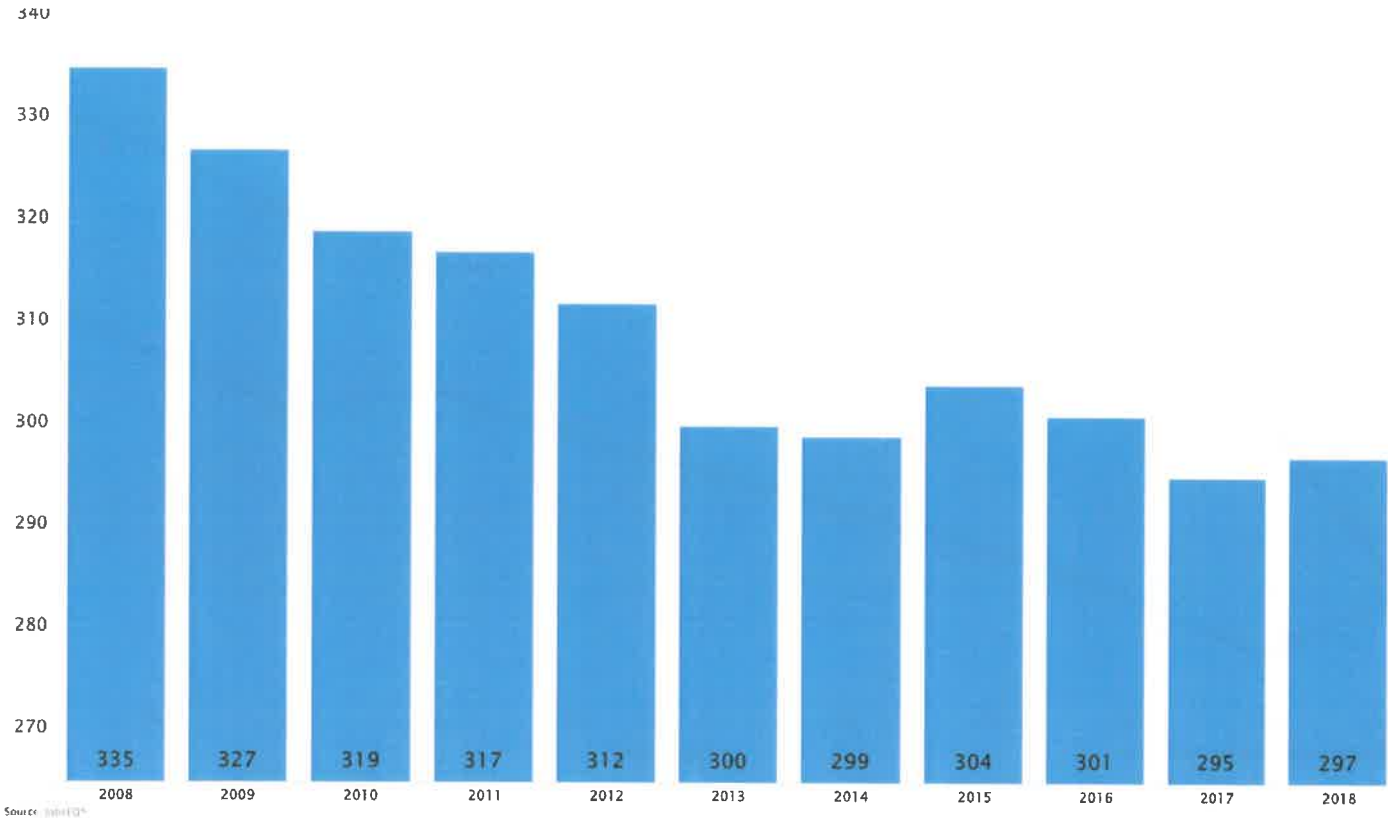
Source: JobsEQ®


 Strong entrepreneurial activity is indicative of growing industries. Using self-employment as a proxy for entrepreneurs, a higher share of self-employed individuals within a regional industry points to future growth.



# Establishments

In 2018, there were 297 Manufacturing establishments in the Region 2000/Central VA (WDA 7) (per covered employment establishment counts), a decrease from 335 establishments ten years earlier in 2008.

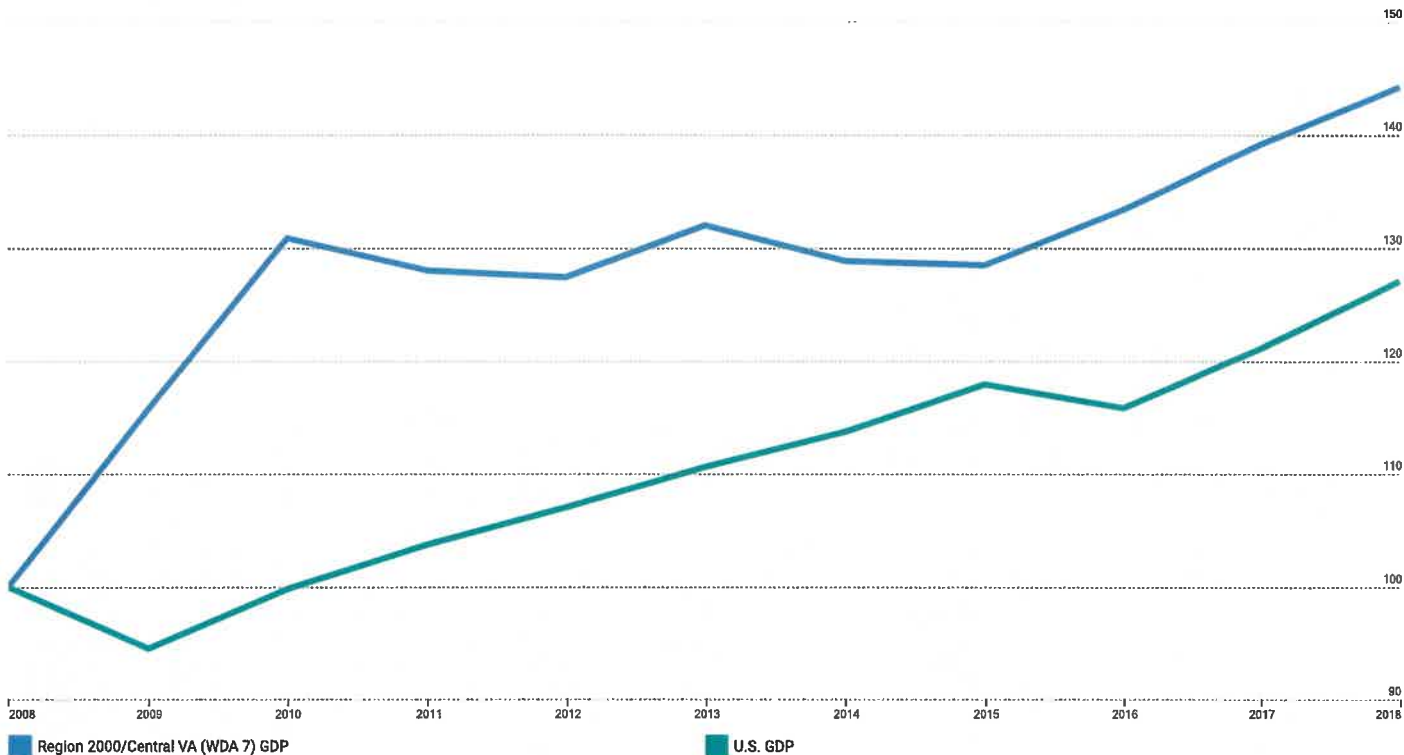


 New business formations are an important source of job creation in a regional economy, spurring innovation and competition, and driving productivity growth. Establishment data can provide an indicator of growth in businesses by counting each single location (such as a factory or a store) where business activity takes place, and with at least one employee.

# GDP & Productivity

In 2018, Manufacturing produced \$2.8 billion in GDP for the Region 2000/Central VA (WDA 7).

GDP: Indexed 2008 = 100



## 27.3 %

Industry Share of Total GDP /  
11.3 % in the nation



## 3.7 % ↑

Avg Ann % Change Last 10 Yrs /  
2.4 % in the nation



## \$389k

Output per Worker /  
\$531k in the nation




💡 Gross domestic product (GDP) is the most comprehensive measure of regional economic activity, and an industry's contribution to GDP is an important indicator of regional industry strength. It is a measure of total value-added to a regional economy in the form of labor income, proprietor's income, and business profits, among others.

💡 Growth in productivity (output per worker) leads to increases in wealth and higher average standards of living in a region.

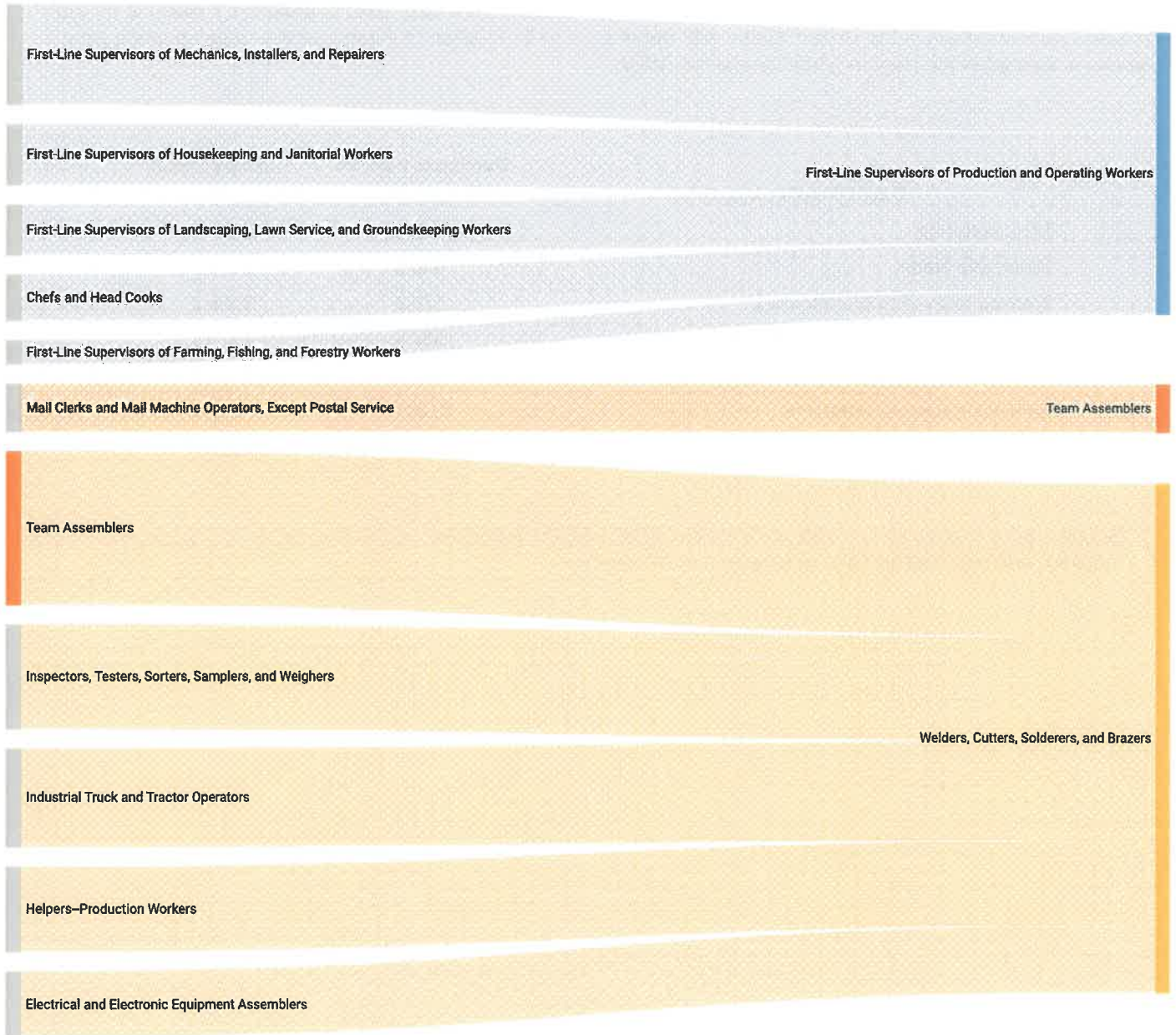
# Supply Chain: Top Suppliers


As of 2019Q2, Manufacturing in the Region 2000/Central VA (WDA 7) are estimated to make \$4.1 billion in annual purchases from suppliers in the United States with about 25% or \$1.0 billion of these purchases being made from businesses located in the Region 2000/Central VA (WDA 7).

<b>2-digit Supplier Industries</b>	<b>Purchases from In-Region (\$M)</b>	<b>Purchases from Out-of-Region (\$M)</b>
Manufacturing	\$545.2	\$1,273.3
Wholesale Trade	\$86.2	\$409.8
Transportation and Warehousing	\$76.3	\$205.2
Professional, Scientific, and Technical Services	\$52.5	\$215.4
Agriculture, Forestry, Fishing and Hunting	\$69.3	\$112.5
Remaining Supplier Industries	\$184.4	\$900.1
<b>Total</b>	<b>\$1,013.9</b>	<b>\$3,116.3</b>

 Supplier-buyer networks can indicate local linkages between industries, regional capacity to support growth in an industry, and potential leakage of sales out of the region.

# Sector Strategy Pathways





 The graphics on this page illustrate relationships and potential movement (from left to right) between occupations that share similar skill sets. Developing career pathways as a strategy promotes industry employment growth and workforce engagement.

# Postsecondary Programs Linked to Manufacturing

Program	Awards
<b>Central Virginia Community College</b>	
Industrial Electronics Technology/Technician	21
Manufacturing Engineering Technology/Technician	8
Precision Metal Working, Other	53
Welding Technology/Welder	31
<b>Liberty University</b>	
Accounting	478
Biomedical Sciences, General	120
Business Administration and Management, General	2,899
Design and Visual Communications, General	83
Industrial Engineering	16
Management Information Systems, General	127

Source: JobsEQ®

-  The number of graduates from postsecondary programs in the region identifies the pipeline of future workers as well as the training capacity to support industry demand.
-  Among postsecondary programs at schools located in the the Region 2000/Central VA (WDA 7), the sampling above identifies those most linked to occupations relevant to Manufacturing.

# Region Definition

**Region 2000/Central VA (WDA 7) is defined as the following counties:**

Amherst County, Virginia

Appomattox County, Virginia

Bedford County, Virginia

Campbell County, Virginia

Bedford City, Virginia

Lynchburg City, Virginia

# Data Notes

- Industry employment and wages (including total regional employment and wages) are as of 2019Q2 and are based upon BLS QCEW data, imputed by Chmura where necessary, and supplemented by additional sources including Census ZBP data. Employment forecasts are modeled by Chmura and are consistent with BLS national-level 10-year forecasts.
- Occupation employment is as of 2019Q2 and is based on industry employment and local staffing patterns calculated by Chmura and utilizing BLS OES data. Occupation wages are per the BLS OES data and are as of 2018.
- GDP is derived from BEA data and imputations by Chmura. Productivity (output per worker) is calculated by Chmura using industry employment and wages as well as GDP and BLS output data. Supply chain modeling including purchases by industry are developed by Chmura.
- Postsecondary awards are per the NCES and are for the 2017-2018 academic year.
- Establishment counts are per the BLS QCEW data.
- Figures may not sum due to rounding.

## FAQ

### What is (LQ) location quotient?

Location quotient is a measurement of concentration in comparison to the nation. An LQ of 1.00 indicates a region has the same concentration of an industry (or occupation) as the nation. An LQ of 2.00 would mean the region has twice the expected employment compared to the nation and an LQ of 0.50 would mean the region has half the expected employment in comparison to the nation.

### What is annual demand?

Annual demand is a of the sum of the annual projected growth demand and separation demand. Separation demand is the number of jobs required due to separations—labor force exits (including retirements) and turnover resulting from workers moving from one occupation into another. Note that separation demand does not include all turnover—it does not include when workers stay in the same occupation but switch employers. Growth demand is the increase or decrease of jobs expected due to expansion or contraction of the overall number of jobs.

### What is the difference between industry wages and occupation wages?

Industry wages and occupation wages are estimated via separate data sets, often the time periods being reported do not align, and wages are defined slightly differently in the two systems (for example, certain bonuses are included in the industry wages but not the occupation wages). It is therefore common that estimates of the average industry wages and average occupation wages in a region do not match exactly.





# Economic Overview

## Region 2000/Central VA (WDA 7)



JOBS **eQ**

December 3, 2019

DEMOGRAPHIC PROFILE.....	3
EMPLOYMENT TRENDS.....	5
UNEMPLOYMENT RATE.....	5
WAGE TRENDS.....	6
COST OF LIVING INDEX.....	7
INDUSTRY SNAPSHOT.....	8
OCCUPATION SNAPSHOT.....	10
INDUSTRY CLUSTERS.....	12
EDUCATION LEVELS.....	13
GROSS DOMESTIC PRODUCT.....	14
REGION DEFINITION.....	15
FAQ.....	16

# Demographic Profile

The population in the Region 2000/Central VA (WDA 7) was 258,995 per American Community Survey data for 2013-2017.

The region has a civilian labor force of 126,742 with a participation rate of 59.5%. Of individuals 25 to 64 in the Region 2000/Central VA (WDA 7), 28.6% have a bachelor's degree or higher which compares with 32.3% in the nation.

The median household income in the Region 2000/Central VA (WDA 7) is \$50,635 and the median house value is \$169,348.

## Summary<sup>1</sup>

	Percent			Value		
	Region 2000/Central VA (WDA 7)	Virginia	USA	Region 2000/Central VA (WDA 7)	Virginia	USA
<b>Demographics</b>						
Population (ACS)	—	—	—	258,995	8,365,952	321,004,407
Male	48.2%	49.2%	49.2%	124,761	4,113,988	158,018,753
Female	51.8%	50.8%	50.8%	134,234	4,251,964	162,985,654
Median Age <sup>2</sup>	—	—	—	39.5	38.0	37.8
Under 18 Years	20.1%	22.3%	22.9%	52,187	1,866,274	73,601,279
18 to 24 Years	13.3%	9.8%	9.7%	34,507	818,913	31,131,484
25 to 34 Years	11.4%	13.9%	13.7%	29,555	1,162,784	44,044,173
35 to 44 Years	10.6%	13.1%	12.7%	27,493	1,096,763	40,656,419
45 to 54 Years	13.2%	14.0%	13.4%	34,132	1,171,473	43,091,143
55 to 64 Years	13.6%	12.7%	12.7%	35,257	1,061,878	40,747,520
65 to 74 Years	10.1%	8.4%	8.6%	26,232	706,482	27,503,389
75 Years, and Over	7.6%	5.8%	6.3%	19,632	481,385	20,229,000
Race: White	78.1%	68.4%	73.0%	202,363	5,720,209	234,370,202
Race: Black or African American	17.1%	19.2%	12.7%	44,377	1,605,447	40,610,815
Race: American Indian and Alaska Native	0.2%	0.3%	0.8%	503	22,499	2,632,102
Race: Asian	1.5%	6.2%	5.4%	3,902	520,119	17,186,320
Race: Native Hawaiian and Other Pacific Islander	0.0%	0.1%	0.2%	94	5,469	570,116
Race: Some Other Race	0.6%	2.4%	4.8%	1,662	200,265	15,553,808
Race: Two or More Races	2.4%	3.5%	3.1%	6,094	291,944	10,081,044
Hispanic or Latino (of any race)	2.5%	9.0%	17.6%	6,582	749,458	56,510,571
<b>Population Growth</b>						
Population (Pop Estimates) <sup>4</sup>	—	—	—	263,353	8,517,685	327,167,434
Population Annual Average Growth <sup>4</sup>	0.5%	0.8%	0.7%	1,405	68,419	2,307,347
<b>Economic</b>						
Labor Force Participation Rate and Size (civilian population 16 years and over)	59.5%	65.5%	63.3%	126,742	4,320,683	161,159,470
Prime-Age Labor Force Participation Rate and Size (civilian population 25-54)	81.6%	83.2%	81.6%	74,314	2,794,854	103,761,701
Armed Forces Labor Force	0.1%	1.7%	0.4%	182	110,817	1,024,855
Veterans, Age 18-64	6.0%	8.3%	4.9%	9,610	433,158	9,667,749
Veterans Labor Force Participation Rate and Size, Age 18-64	78.2%	82.6%	75.8%	7,511	357,879	7,326,514
Median Household Income <sup>2</sup>	—	—	—	\$50,635	\$68,766	\$57,652

## Summary<sup>1</sup>

	Percent			Value		
	Region			Region		
	2000/Central VA (WDA 7)	Virginia	USA	2000/Central VA (WDA 7)	Virginia	USA
Per Capita Income	—	—	—	\$26,194	\$36,268	\$31,177
Poverty Level (of all people)	14.2%	11.2%	14.6%	34,889	906,838	45,650,345
Households Receiving Food Stamps/SNAP	11.1%	9.1%	12.6%	11,094	282,296	15,029,498
Mean Commute Time (minutes)	—	—	—	23.7	28.2	26.4
Commute via Public Transportation	1.1%	4.4%	5.1%	1,351	182,233	7,607,907
<b>Educational Attainment, Age 25-64</b>						
No High School Diploma	9.4%	9.2%	11.4%	11,878	411,815	19,230,541
High School Graduate	29.6%	23.2%	26.0%	37,406	1,041,545	43,784,920
Some College, No Degree	23.1%	20.1%	21.2%	29,204	901,518	35,803,629
Associate's Degree	9.3%	8.1%	9.0%	11,759	362,283	15,199,517
Bachelor's Degree	18.2%	23.1%	20.5%	23,013	1,037,257	34,602,913
Postgraduate Degree	10.4%	16.4%	11.8%	13,177	738,480	19,917,735
<b>Housing</b>						
Total Housing Units	—	—	—	115,531	3,466,921	135,393,564
Median House Value (of owner-occupied units) <sup>2</sup>	—	—	—	\$169,348	\$255,800	\$193,500
Homeowner Vacancy	1.4%	1.6%	1.7%	978	33,377	1,346,331
Rental Vacancy	4.8%	5.8%	6.1%	1,534	65,735	2,838,344
Renter-Occupied Housing Units (% of Occupied Units)	29.6%	33.8%	36.2%	29,521	1,050,563	42,992,786
Occupied Housing Units with No Vehicle Available (% of Occupied Units)	7.0%	6.3%	8.8%	6,954	195,311	10,468,418
<b>Social</b>						
Enrolled in Grade 12 (% of total population)	1.2%	1.3%	1.4%	3,155	110,440	4,437,324
Disconnected Youth <sup>3</sup>	1.9%	1.9%	2.7%	325	8,220	456,548
Children in Single Parent Families (% of all children)	34.8%	31.1%	34.5%	17,119	552,474	24,106,567
With a Disability, Age 18-64	11.5%	9.4%	10.3%	18,400	480,446	20,276,199
With a Disability, Age 18-64, Labor Force Participation Rate and Size	36.7%	44.0%	41.4%	6,760	211,217	8,395,884
Foreign Born	3.3%	12.1%	13.4%	8,661	1,014,966	43,028,127
Speak English Less Than Very Well (population 5 yrs and over)	1.5%	5.8%	8.5%	3,673	455,009	25,654,421

Source: [JobsEQ®](#)

1. American Community Survey 2013-2017, unless noted otherwise

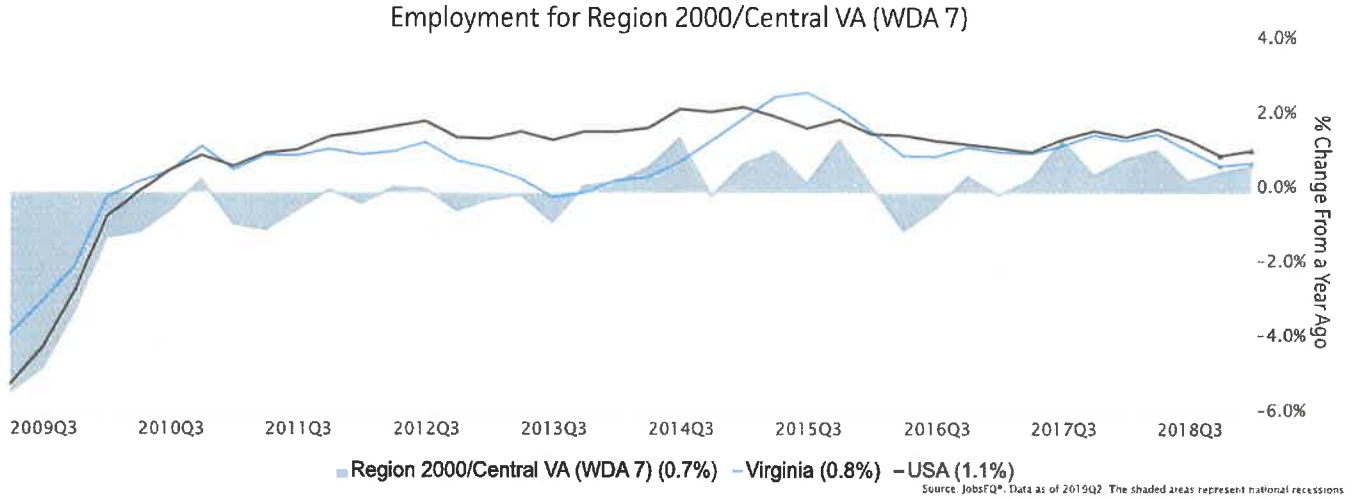
2. Median values for certain aggregate regions (such as MSAs) may be estimated as the weighted averages of the median values from the composing counties.

3. Disconnected Youth are 16-19 year olds who are (1) not in school, (2) not high school graduates, and (3) either unemployed or not in the labor force.

4. Census 2018, annual average growth rate since 2008

# Employment Trends

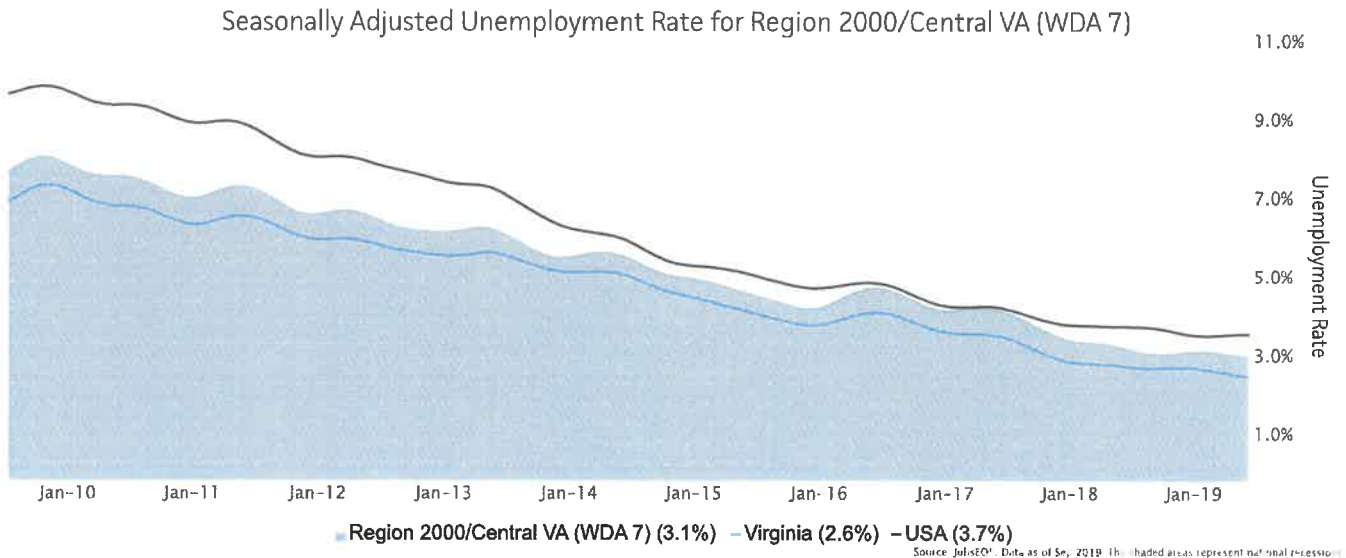
As of 2019Q2, total employment for the Region 2000/Central VA (WDA 7) was 108,397 (based on a four-quarter moving average). Over the year ending 2019Q2, employment increased 0.7% in the region.



Employment data are derived from the Quarterly Census of Employment and Wages, provided by the Bureau of Labor Statistics and imputed where necessary. Data are updated through 2018Q4 with preliminary estimates updated to 2019Q2.

# Unemployment Rate

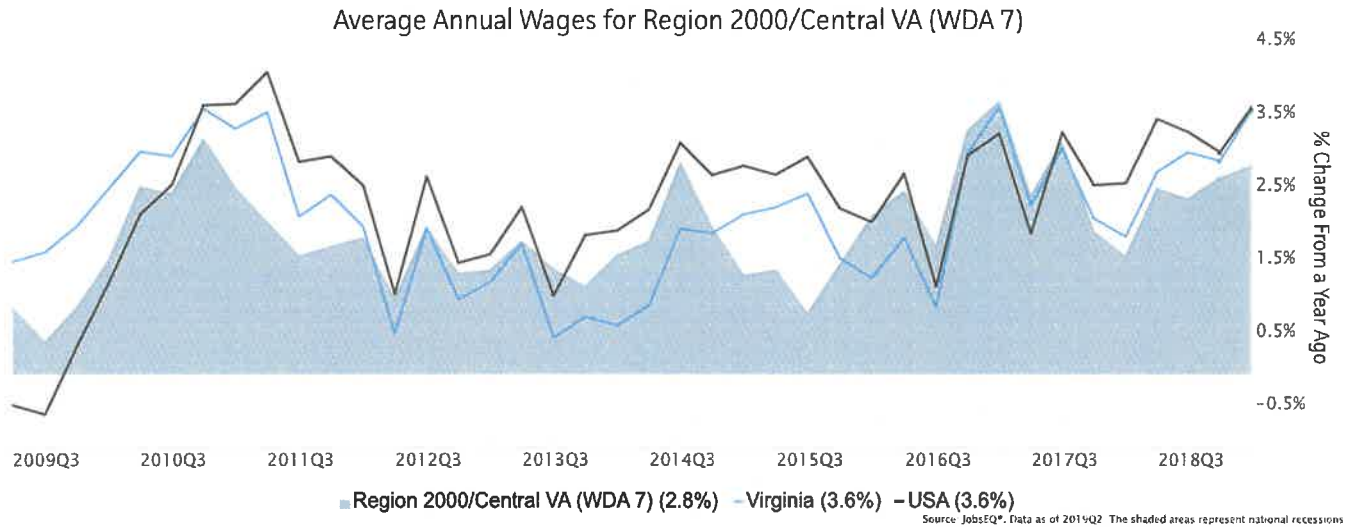
The seasonally adjusted unemployment rate for the Region 2000/Central VA (WDA 7) was 3.1% as of September 2019. The regional unemployment rate was lower than the national rate of 3.7%. One year earlier, in September 2018, the unemployment rate in the Region 2000/Central VA (WDA 7) was 3.4%.



Unemployment rate data are from the Local Area Unemployment Statistics, provided by the Bureau of Labor Statistics and updated through September 2019.

# Wage Trends

The average worker in the Region 2000/Central VA (WDA 7) earned annual wages of \$41,955 as of 2019Q2. Average annual wages per worker increased 2.8% in the region over the preceding four quarters. For comparison purposes, annual average wages were \$57,025 in the nation as of 2019Q2.



Annual average wages per worker data are derived from the Quarterly Census of Employment and Wages, provided by the Bureau of Labor Statistics and imputed where necessary. Data are updated through 2018Q4 with preliminary estimates updated to 2019Q2.

# Cost of Living Index

The Cost of Living Index estimates the relative price levels for consumer goods and services. When applied to wages and salaries, the result is a measure of relative purchasing power. The cost of living is 12.6% lower in Region 2000/Central VA (WDA 7) than the U.S. average.

## Cost of Living Information

	Annual Average Salary	Cost of Living Index	
		(Base US)	US Purchasing Power
Region 2000/Central VA (WDA 7)	\$41,955	87.4	\$48,003
Virginia	\$57,742	116.3	\$49,648
USA	\$57,025	100.0	\$57,025

Source: [JobsEQ®](#)

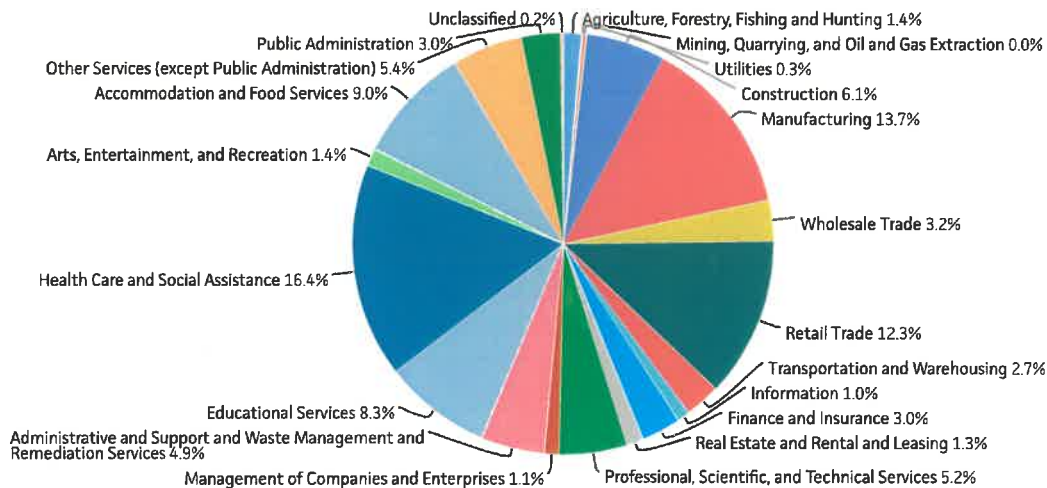
Data as of 2019Q2

Cost of Living per C2ER, data as of 2019q2, imputed by Chmura where necessary.

# Industry Snapshot

The largest sector in the Region 2000/Central VA (WDA 7) is Health Care and Social Assistance, employing 17,809 workers. The next-largest sectors in the region are Manufacturing (14,884 workers) and Retail Trade (13,286). High location quotients (LQs) indicate sectors in which a region has high concentrations of employment compared to the national average. The sectors with the largest LQs in the region are Manufacturing (LQ = 1.66), Other Services (except Public Administration) (1.23), and Retail Trade (1.18).

Total Workers for Region 2000/Central VA (WDA 7) by Industry



Source: JobsEQ®, Data as of 2018Q2

Employment data are derived from the Quarterly Census of Employment and Wages, provided by the Bureau of Labor Statistics and imputed where necessary. Data are updated through 2018Q4 with preliminary estimates updated to 2019Q2.

Sectors in the Region 2000/Central VA (WDA 7) with the highest average wages per worker are Professional, Scientific, and Technical Services (\$70,711), Management of Companies and Enterprises (\$64,160), and Wholesale Trade (\$63,398). Regional sectors with the best job growth (or most moderate job losses) over the last 5 years are Accommodation and Food Services (+1,438 jobs), Health Care and Social Assistance (+926), and Other Services (except Public Administration) (+561).

Over the next 1 year, employment in the Region 2000/Central VA (WDA 7) is projected to expand by 196 jobs. The fastest growing sector in the region is expected to be Health Care and Social Assistance with a +1.3% year-over-year rate of growth. The strongest forecast by number of jobs over this period is expected for Health Care and Social Assistance (+226 jobs), Construction (+49), and Educational Services (+46).



NAICS	Industry	Current			5-Year History		1-Year Forecast				
		Empl	Avg Ann Wages	LQ	Empl Change	Ann %	Total Demand	Exits	Transfers	Empl Growth	Ann % Growth
62	Health Care and Social Assistance	17,809	\$48,539	1.14	926	1.1%	1,907	826	855	226	1.3%
31	Manufacturing	14,884	\$62,918	1.66	125	0.2%	1,360	572	975	-187	-1.3%
44	Retail Trade	13,286	\$25,281	1.18	-103	-0.2%	1,766	783	989	-6	0.0%
72	Accommodation and Food Services	9,731	\$15,540	0.99	1,438	3.3%	1,601	697	878	26	0.3%
61	Educational Services	8,999	\$33,499	1.02	290	0.7%	879	402	432	46	0.5%
23	Construction	6,643	\$44,953	1.07	85	0.3%	703	235	419	49	0.7%
81	Other Services (except Public Administration)	5,809	\$23,678	1.23	561	2.1%	654	301	358	-5	-0.1%
54	Professional, Scientific, and Technical Services	5,626	\$70,711	0.77	-35	-0.1%	511	181	302	28	0.5%
56	Administrative and Support and Waste Management and Remediation Services	5,278	\$25,870	0.75	120	0.5%	635	259	350	26	0.5%
42	Wholesale Trade	3,415	\$63,398	0.83	-228	-1.3%	343	135	223	-15	-0.4%
52	Finance and Insurance	3,286	\$60,190	0.77	-96	-0.6%	320	119	192	10	0.3%
92	Public Administration	3,264	\$42,667	0.64	17	0.1%	291	127	172	-9	-0.3%
48	Transportation and Warehousing	2,975	\$50,733	0.61	143	1.0%	300	134	180	-14	-0.5%
11	Agriculture, Forestry, Fishing and Hunting	1,521	\$14,798	1.04	-89	-1.1%	162	71	93	-2	-0.2%
71	Arts, Entertainment, and Recreation	1,484	\$19,688	0.68	44	0.6%	214	93	115	6	0.4%
53	Real Estate and Rental and Leasing	1,422	\$36,631	0.76	72	1.0%	142	66	78	-3	-0.2%
55	Management of Companies and Enterprises	1,229	\$64,160	0.76	-620	-7.8%	111	41	70	0	0.0%
51	Information	1,101	\$44,790	0.52	-89	-1.5%	101	39	68	-6	-0.5%
22	Utilities	366	\$62,499	0.65	49	3.0%	33	12	21	0	-0.1%
99	Unclassified	231	\$33,794	1.98	230	n/a	27	11	15	1	0.2%
21	Mining, Quarrying, and Oil and Gas Extraction	40	\$48,396	0.08	-2	-0.9%	4	1	3	0	-1.0%
	<b>Total - All Industries</b>	<b>108,397</b>	<b>\$41,955</b>	<b>1.00</b>	<b>2,841</b>	<b>0.5%</b>	<b>12,035</b>	<b>5,075</b>	<b>6,764</b>	<b>196</b>	<b>0.2%</b>

Source: [JobsEQ®](#)

Employment data are derived from the Quarterly Census of Employment and Wages, provided by the Bureau of Labor Statistics and imputed where necessary. Data are updated through 2018Q4 with preliminary estimates updated to 2019Q2. Forecast employment growth uses national projections adapted for regional growth patterns.

# Occupation Snapshot

The largest major occupation group in the Region 2000/Central VA (WDA 7) is Office and Administrative Support Occupations, employing 14,102 workers. The next-largest occupation groups in the region are Sales and Related Occupations (11,416 workers) and Food Preparation and Serving Related Occupations (9,704). High location quotients (LQs) indicate occupation groups in which a region has high concentrations of employment compared to the national average. The major groups with the largest LQs in the region are Production Occupations (LQ = 1.48), Community and Social Service Occupations (1.26), and Architecture and Engineering Occupations (1.15).

Occupation groups in the Region 2000/Central VA (WDA 7) with the highest average wages per worker are Management Occupations (\$108,000), Legal Occupations (\$92,600), and Computer and Mathematical Occupations (\$86,100). The unemployment rate in the region varied among the major groups from 1.3% among Healthcare Practitioners and Technical Occupations to 5.8% among Farming, Fishing, and Forestry Occupations.

Over the next 1 year, the fastest growing occupation group in the Region 2000/Central VA (WDA 7) is expected to be Healthcare Support Occupations with a +1.4% year-over-year rate of growth. The strongest forecast by number of jobs over this period is expected for Healthcare Practitioners and Technical Occupations (+67 jobs) and Personal Care and Service Occupations (+58). Over the same period, the highest separation demand (occupation demand due to retirements and workers moving from one occupation to another) is expected in Food Preparation and Serving Related Occupations (1,669 jobs) and Sales and Related Occupations (1,577).

Occupation Snapshot in Region 2000/Central VA (WDA 7), 2019q2<sup>1</sup>

SOC	Occupation	Current						5-Year History		1-Year Forecast				
		Empl	Avg Ann Wages <sup>2</sup>	LQ	Unempl	Unempl Rate	Online Job Ads <sup>3</sup>	Empl Change	Ann %	Total Demand	Exits	Transfers	Empl Growth	Ann % Growth
43-0000	Office and Administrative Support	14,102	\$33,500	0.91	517	3.1%	629	-426	-0.6%	1,511	719	842	-49	-0.3%
41-0000	Sales and Related	11,416	\$33,900	1.06	534	4.2%	926	35	0.1%	1,559	698	879	-18	-0.2%
35-0000	Food Preparation and Serving Related	9,704	\$21,800	1.04	574	5.4%	823	1,161	2.6%	1,707	749	920	38	0.4%
51-0000	Production	9,651	\$36,700	1.48	337	3.4%	203	-205	-0.4%	914	378	653	-118	-1.2%
29-0000	Healthcare Practitioners and Technical	6,923	\$75,200	1.11	98	1.3%	726	817	2.5%	440	189	184	67	1.0%
53-0000	Transportation and Material Moving	6,793	\$33,500	0.91	339	4.2%	418	78	0.2%	794	327	478	-11	-0.2%
25-0000	Education, Training, and Library	6,362	\$46,000	1.05	177	2.6%	172	145	0.5%	591	280	270	41	0.7%
11-0000	Management	5,870	\$108,000	0.88	93	1.5%	277	145	0.5%	472	181	270	20	0.3%
47-0000	Construction and Extraction	5,213	\$37,600	1.03	264	4.7%	89	38	0.1%	570	186	353	32	0.6%
13-0000	Business and Financial Operations	4,934	\$70,000	0.87	136	2.4%	217	269	1.1%	460	147	295	18	0.4%
39-0000	Personal Care and Service	4,507	\$22,100	0.95	198	3.8%	170	431	2.0%	734	353	322	58	1.3%
49-0000	Installation, Maintenance, and Repair	4,456	\$45,600	1.07	113	2.2%	257	113	0.5%	420	154	265	1	0.0%
37-0000	Building and Grounds Cleaning and Maintenance	3,774	\$25,600	1.01	192	4.6%	193	408	2.3%	486	232	241	13	0.3%
31-0000	Healthcare Support	3,211	\$29,200	1.08	102	2.8%	237	-33	-0.2%	422	190	187	46	1.4%
15-0000	Computer and Mathematical	2,263	\$86,100	0.71	53	1.9%	229	7	0.1%	160	39	109	11	0.5%
21-0000	Community and Social Service	2,260	\$42,900	1.26	47	2.0%	197	35	0.3%	277	94	156	27	1.2%
17-0000	Architecture and	2,122	\$76,600	1.15	44	2.0%	95	-121	-1.1%	157	54	99	4	0.2%

### Occupation Snapshot in Region 2000/Central VA (WDA 7), 2019q2<sup>1</sup>

SOC	Occupation	Current					5-Year History			1-Year Forecast				
		Empl	Avg Ann Wages <sup>2</sup>	LQ	Unempl	Unempl Rate	Online Job Ads <sup>3</sup>	Empl Change	Ann %	Total Demand	Exits	Transfers	Empl Growth	Ann % Growth
	Engineering													
27-0000	Arts, Design, Entertainment, Sports, and Media	1,718	\$47,400	0.90	52	2.7%	113	75	0.9%	163	70	93	0	0.0%
33-0000	Protective Service	1,613	\$39,400	0.69	52	2.4%	63	-79	-0.9%	161	78	86	-3	-0.2%
19-0000	Life, Physical, and Social Science	577	\$73,800	0.67	14	2.2%	35	26	0.9%	52	15	35	2	0.4%
23-0000	Legal	534	\$92,600	0.59	11	1.6%	18	-1	0.0%	35	14	20	2	0.4%
45-0000	Farming, Fishing, and Forestry	393	\$34,500	0.56	23	5.8%	2	-2	-0.1%	48	14	39	-4	-1.1%
	<b>Total - All Occupations</b>	<b>108,397</b>	<b>\$43,900</b>	<b>1.00</b>	<b>3,970</b>	<b>3.3%</b>	<b>6,089</b>	<b>2,916</b>	<b>0.5%</b>	<b>12,154</b>	<b>5,161</b>	<b>6,796</b>	<b>196</b>	<b>0.2%</b>

Source: [JobsEQ®](#)

Data as of 2019Q2 unless noted otherwise

Note: Figures may not sum due to rounding.

1. Data based on a four-quarter moving average unless noted otherwise.

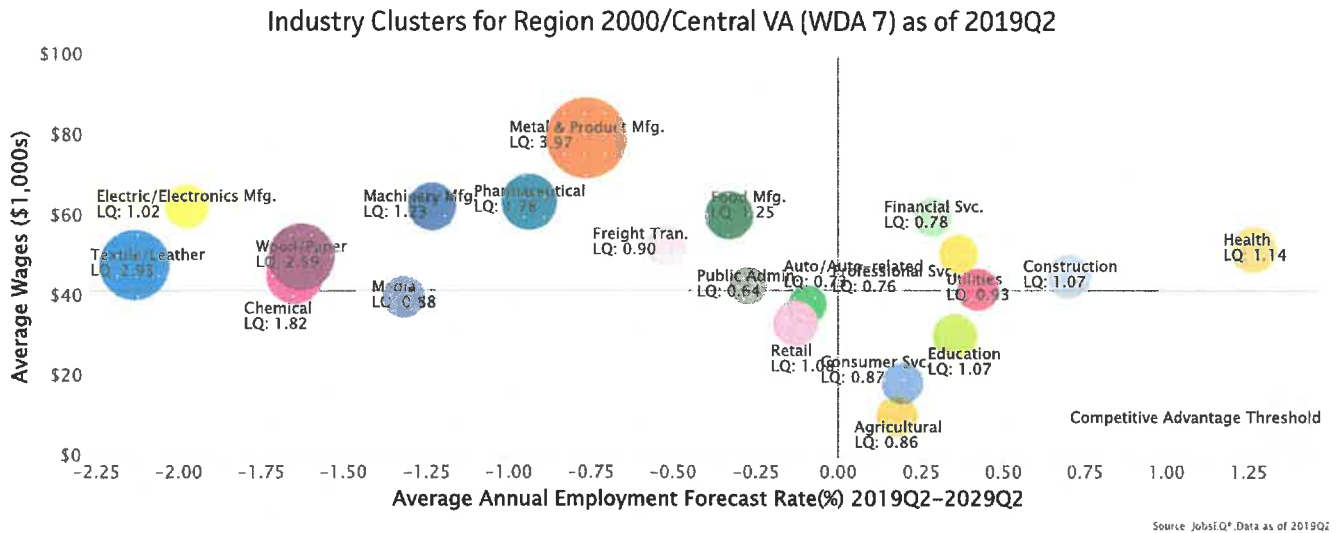
2. Wage data are as of 2018 and represent the average for all Covered Employment

3. Data represent found online ads active within the last thirty days in the selected region; data represents a sampling rather than the complete universe of postings. Ads lacking zip code information but designating a place (city, town, etc.) may be assigned to the zip code with greatest employment in that place for queries in this analytic. Due to alternative county-assignment algorithms, ad counts in this analytic may not match that shown in RTI (nor in the popup window ad list).

Occupation employment data are estimated via industry employment data and the estimated industry/occupation mix. Industry employment data are derived from the Quarterly Census of Employment and Wages, provided by the Bureau of Labor Statistics and currently updated through 2018Q4, imputed where necessary with preliminary estimates updated to 2019Q2. Wages by occupation are as of 2018 provided by the BLS and imputed where necessary. Forecast employment growth uses national projections from the Bureau of Labor Statistics adapted for regional growth patterns.

# Industry Clusters

A cluster is a geographic concentration of interrelated industries or occupations. The industry cluster in the Region 2000/Central VA (WDA 7) with the highest relative concentration is Metal & Product Mfg. with a location quotient of 3.97. This cluster employs 3,306 workers in the region with an average wage of \$79,974. Employment in the Metal & Product Mfg. cluster is projected to contract in the region about 0.8% per year over the next ten years.

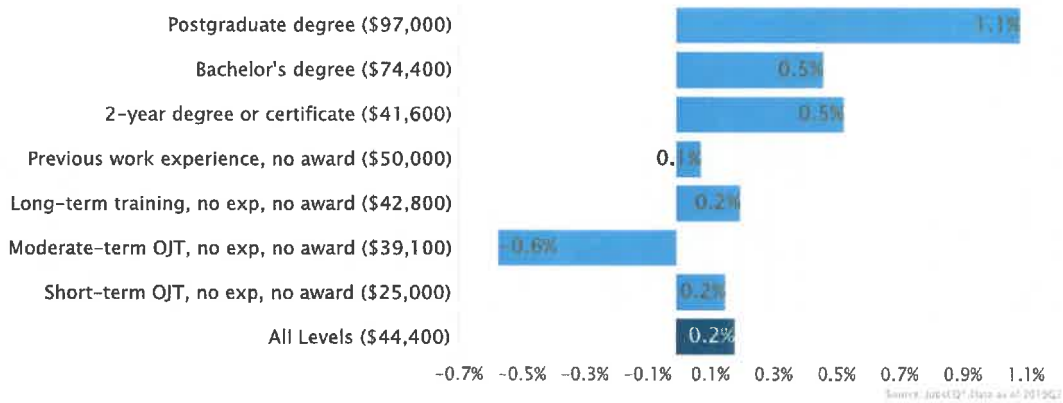


Location quotient and average wage data are derived from the Quarterly Census of Employment and Wages, provided by the Bureau of Labor Statistics, imputed where necessary, and updated through 2018Q4 with preliminary estimates updated to 2019Q2. Forecast employment growth uses national projections from the Bureau of Labor Statistics adapted for regional growth patterns.

# Education Levels

Expected growth rates for occupations vary by the education and training required. While all employment in the Region 2000/Central VA (WDA 7) is projected to grow 0.2% over the next ten years, occupations typically requiring a postgraduate degree are expected to grow 1.1% per year, those requiring a bachelor's degree are forecast to grow 0.5% per year, and occupations typically needing a 2-year degree or certificate are expected to grow 0.5% per year.

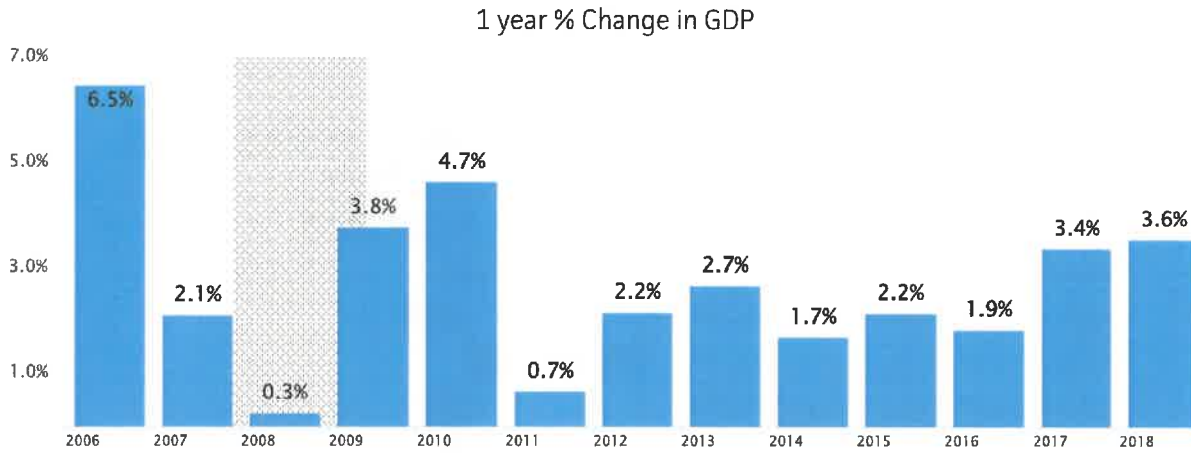
Annual Average Projected Job Growth by Training Required for Region 2000/Central VA (WDA 7)



Employment by occupation data are estimates as of 2019Q2. Education levels of occupations are based on BLS assignments. Forecast employment growth uses national projections from the Bureau of Labor Statistics adapted for regional growth patterns.

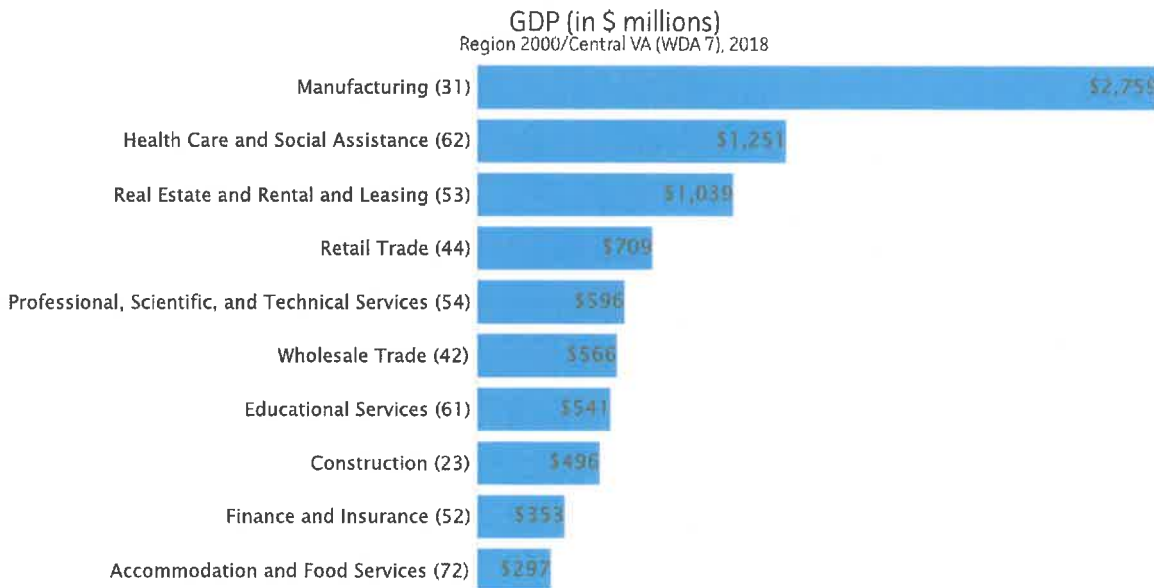
# Gross Domestic Product

Gross Domestic Product (GDP) is the total value of goods and services produced by a region. In 2018, nominal GDP in the Region 2000/Central VA (WDA 7) expanded 3.6%. This follows growth of 3.4% in 2017. As of 2018, total GDP in the Region 2000/Central VA (WDA 7) was \$10,121,132,000.



Gross Domestic Product data are provided by the Bureau of Economic Analysis, imputed by Chmura where necessary, updated through 2018.

Of the sectors in the Region 2000/Central VA (WDA 7), Manufacturing contributed the largest portion of GDP in 2018, \$2,759,457,000. The next-largest contributions came from Health Care and Social Assistance (\$1,250,944,000); Real Estate and Rental and Leasing (\$1,038,869,000); and Retail Trade (\$708,995,000).



Gross Domestic Product data are provided by the Bureau of Economic Analysis, imputed by Chmura where necessary, updated through 2018.

# Region Definition

**Region 2000/Central VA (WDA 7) is defined as the following counties:**

Amherst County, Virginia

Appomattox County, Virginia

Bedford County, Virginia

Campbell County, Virginia

Bedford City, Virginia

Lynchburg City, Virginia

# FAQ

## What is a location quotient?

A location quotient (LQ) is a measurement of concentration in comparison to the nation. An LQ of 1.00 indicates a region has the same concentration of an industry (or occupation) as the nation. An LQ of 2.00 would mean the region has twice the expected employment compared to the nation and an LQ of 0.50 would mean the region has half the expected employment in comparison to the nation.

## What is separation demand?

Separation demand is the number of jobs required due to separations—labor force exits (including retirements) and turnover resulting from workers moving from one occupation into another. Note that separation demand does not include all turnover—it does not include when workers stay in the same occupation but switch employers. The total projected demand for an occupation is the sum of the separation demand and the growth demand (which is the increase or decrease of jobs in an occupation expected due to expansion or contraction of the overall number of jobs in that occupation).

## What is a cluster?

A cluster is a geographic concentration of interrelated industries or occupations. If a regional cluster has a location quotient of 1.25 or greater, the region is considered to possess a *competitive advantage* in that cluster.

## What is the difference between industry wages and occupation wages?

Industry wages and occupation wages are estimated via separate data sets, often the time periods being reported do not align, and wages are defined slightly differently in the two systems (for example, certain bonuses are included in the industry wages but not the occupation wages). It is therefore common that estimates of the average industry wages and average occupation wages in a region do not match exactly.

## What is NAICS?

The North American Industry Classification System (NAICS) is used to classify business establishments according to the type of economic activity. The NAICS Code comprises six levels, from the “all industry” level to the 6-digit level. The first two digits define the top level category, known as the “sector,” which is the level examined in this report.

## What is SOC?

The Standard Occupational Classification system (SOC) is used to classify workers into occupational categories. All workers are classified into one of over 820 occupations according to their occupational definition. To facilitate classification, occupations are combined to form 23 major groups, 96 minor groups, and 449 occupation groups. Each occupation group includes detailed occupations requiring similar job duties, skills, education, or experience.

## About This Report

This report and all data herein were produced by JobsEQ®, a product of Chmura Economics & Analytics. The information contained herein was obtained from sources we believe to be reliable. However, we cannot guarantee its accuracy and completeness.