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Business & Industry Data

Industries located in Avery, Buncombe, Madison, McDowell, Mitchell, Watauga, and Yancey counties (and commutable areas)

- Industry Snapshot
- Staffing Pattern
- Geographic Distribution
- Drivers of Employment Growth
- Employment Distribution by Type
- Establishments
- GDP & Productivity
- Supply Chain
- Sector Strategy Pathways
- Postsecondary Programs Linked to Each Industry

For additional data information or questions, please contact

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Agriculture, Forestry, Fishing and Hunting

Tri-County Business Advisory Council



Industry Spotlight

Avery, Buncombe, Madison, McDowell, Mitchell,
Watauga, and Yancey

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Agriculture, Forestry, Fishing and Hunting
Tri-County Business Advisory Council – 2018Q4

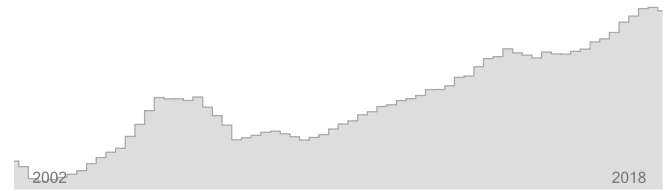
EMPLOYMENT



2,133

Regional employment / 2,153,911 in the nation

WAGES



\$18,925

Avg Wages per Worker / \$36,605 in the nation

-0.5% ↓

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



1.0%

% of Total Employment / 1.4% in the US



3.5% ↑

Avg Ann % Change Last 10 Years / +2.4% in the US



TOP OCCUPATION GROUPS

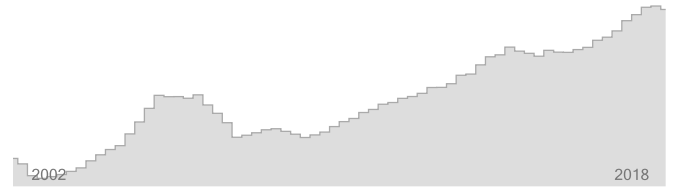


Industry Snapshot

EMPLOYMENT



WAGES



2-Digit Industry	Empl	Avg Ann Wages	LQ	5yr History	Annual Demand	Forecast Ann Growth
Agriculture, Forestry, Fishing and Hunting	2,133	\$18,925	0.74		239	0.4%


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.

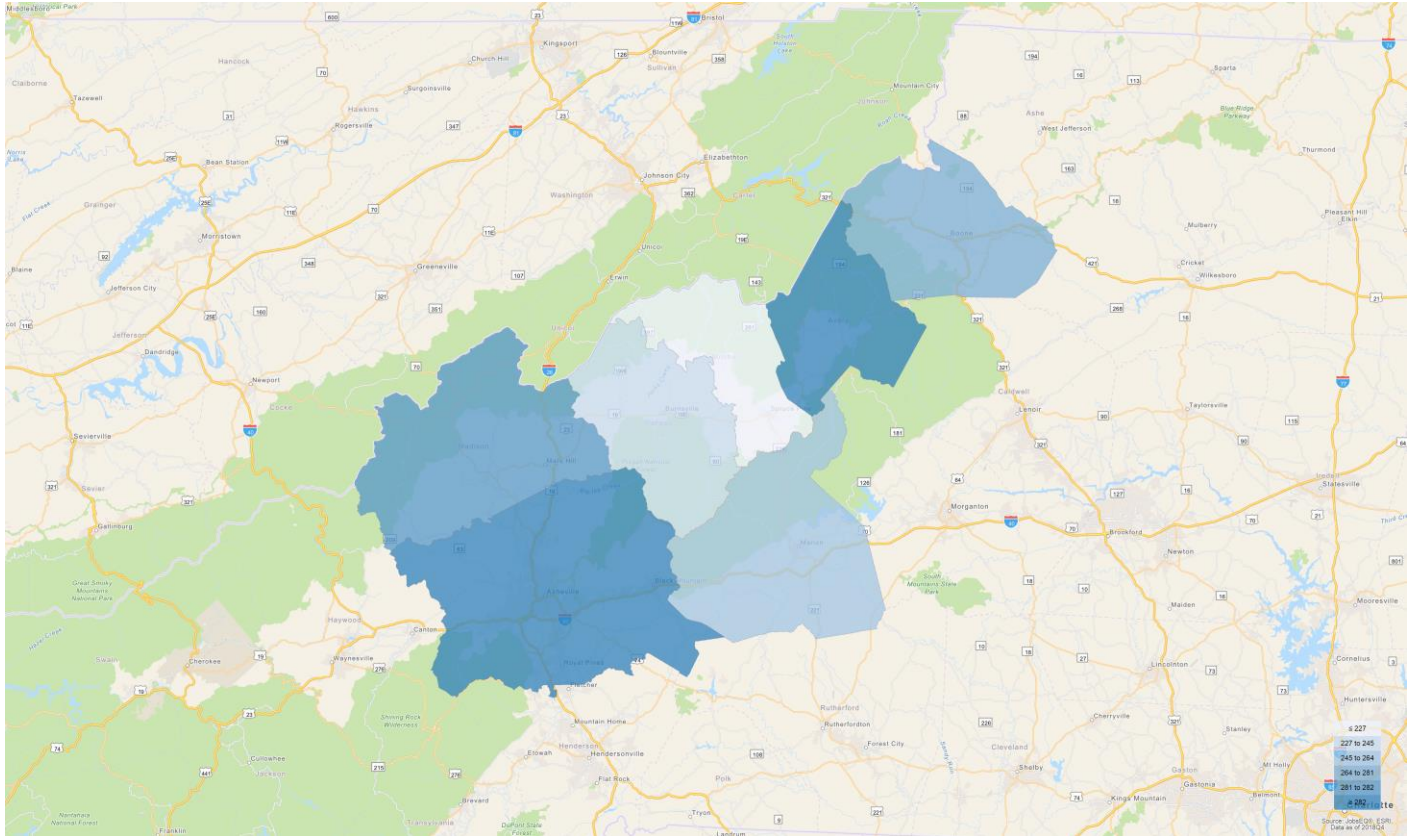
Staffing Pattern



6-digit Occupation	Empl	Avg Ann Wages	Annual Demand
Farmers, Ranchers, and Other Agricultural Managers	1,193	\$82,600	95
Farmworkers and Laborers, Crop, Nursery, and Greenhouse	204	\$25,600	31
Chief Executives	122	\$197,600	9
First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	87	\$55,300	9
Logging Equipment Operators	83	\$36,700	10
Landscaping and Groundskeeping Workers	62	\$27,500	8
Tree Trimmers and Pruners	33	\$44,700	4
First-Line Supervisors of Farming, Fishing, and Forestry Workers	26	\$49,400	3
Farmworkers, Farm, Ranch, and Aquacultural Animals	26	\$28,100	4
Managers, All Other	21	\$84,500	2
Remaining Component Occupations	260	\$42,000	31
Total	2,133		

 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



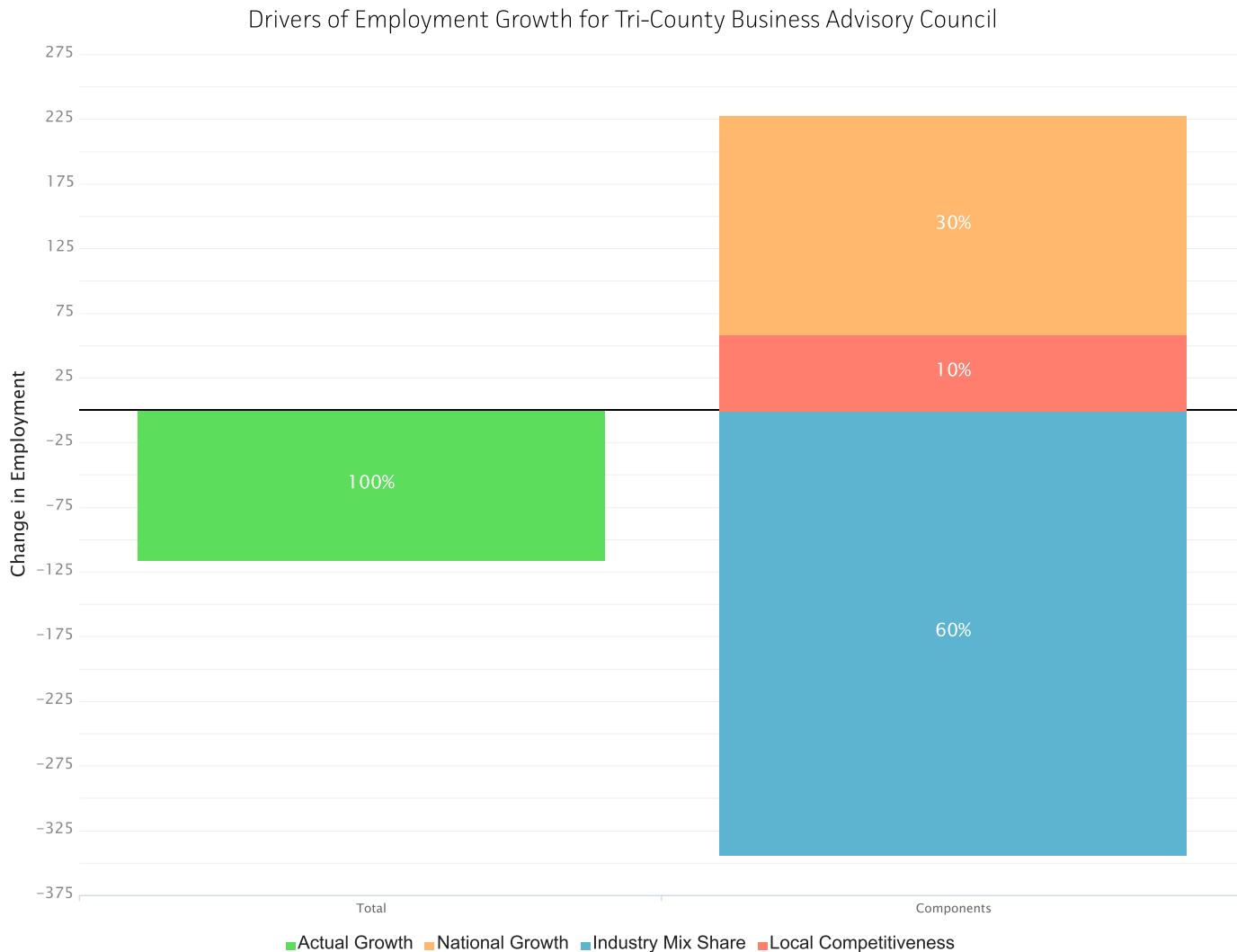
Region	Empl	Region	Empl
Buncombe County, North Carolina	707	McDowell County, North Carolina	245
Avery County, North Carolina	283	Yancey County, North Carolina	228
Madison County, North Carolina	282	Mitchell County, North Carolina	125
Watauga County, North Carolina	265		



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 Agriculture, Forestry, Fishing and Hunting for the Tri-County Business Advisory Council shed 115 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 gain of 58 jobs—meaning this industry was more competitive than its national counterpart during this period.



-  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 Agriculture, Forestry, Fishing and Hunting for the Tri-County Business Advisory Council. 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).



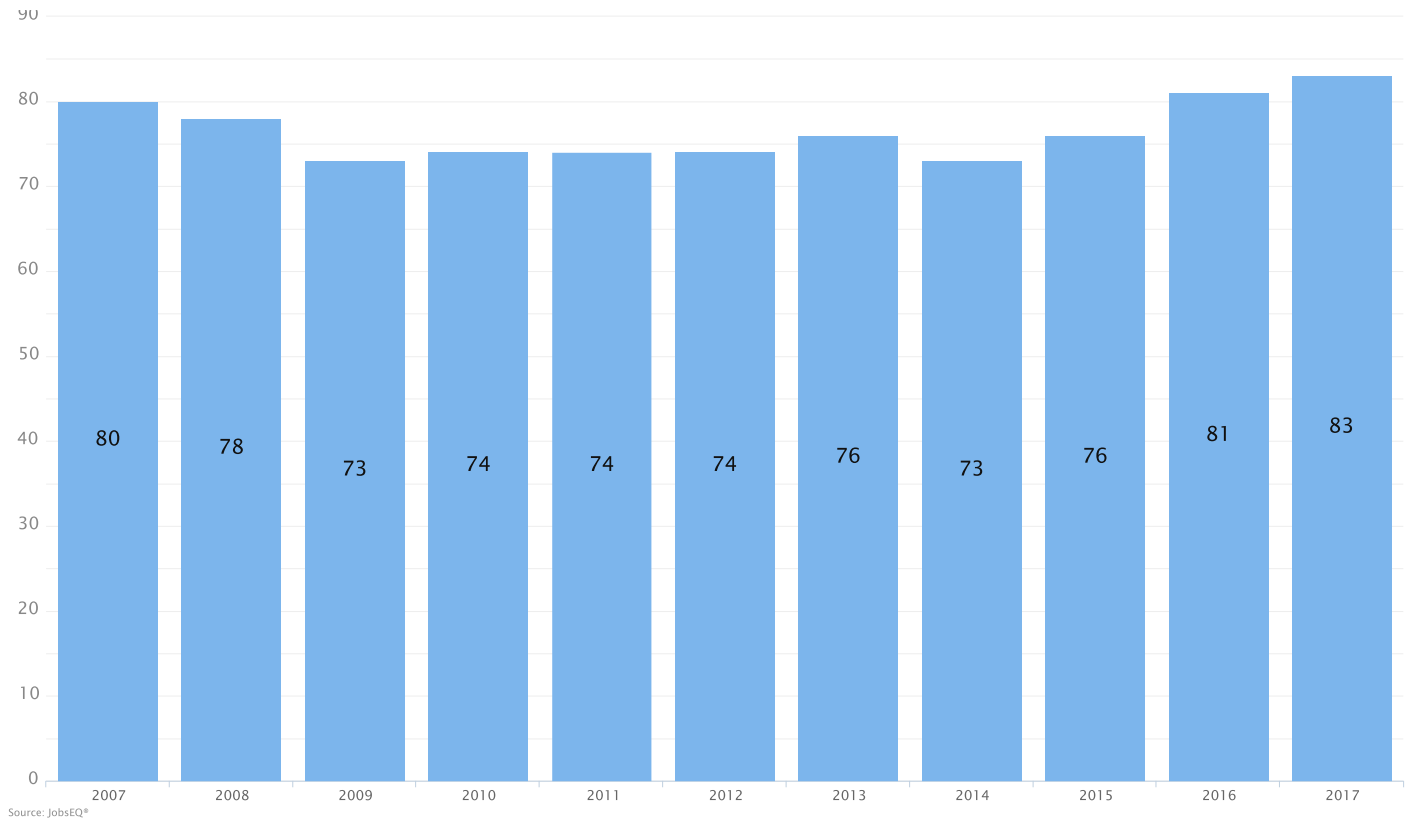
	Empl	%
Private	539	25.3%
Self-Employment	1,594	74.7%
State Government	0	0.0%


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 2017, there were 83 Agriculture, Forestry, Fishing and Hunting establishments in the Tri-County Business Advisory Council (per covered employment establishment counts), an increase from 80 establishments ten years earlier in 2007.



 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 2017, Agriculture, Forestry, Fishing and Hunting produced \$84.1 million in GDP for the Tri-County Business Advisory Council.

GDP: Indexed 2007 = 100



0.4 %

Industry Share of Total GDP /
0.9 % in the nation



4.9 % ↑

Avg Ann % Change Last 10 Yrs /
2.2 % in the nation



\$100k

Output per Worker /
\$132k 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.

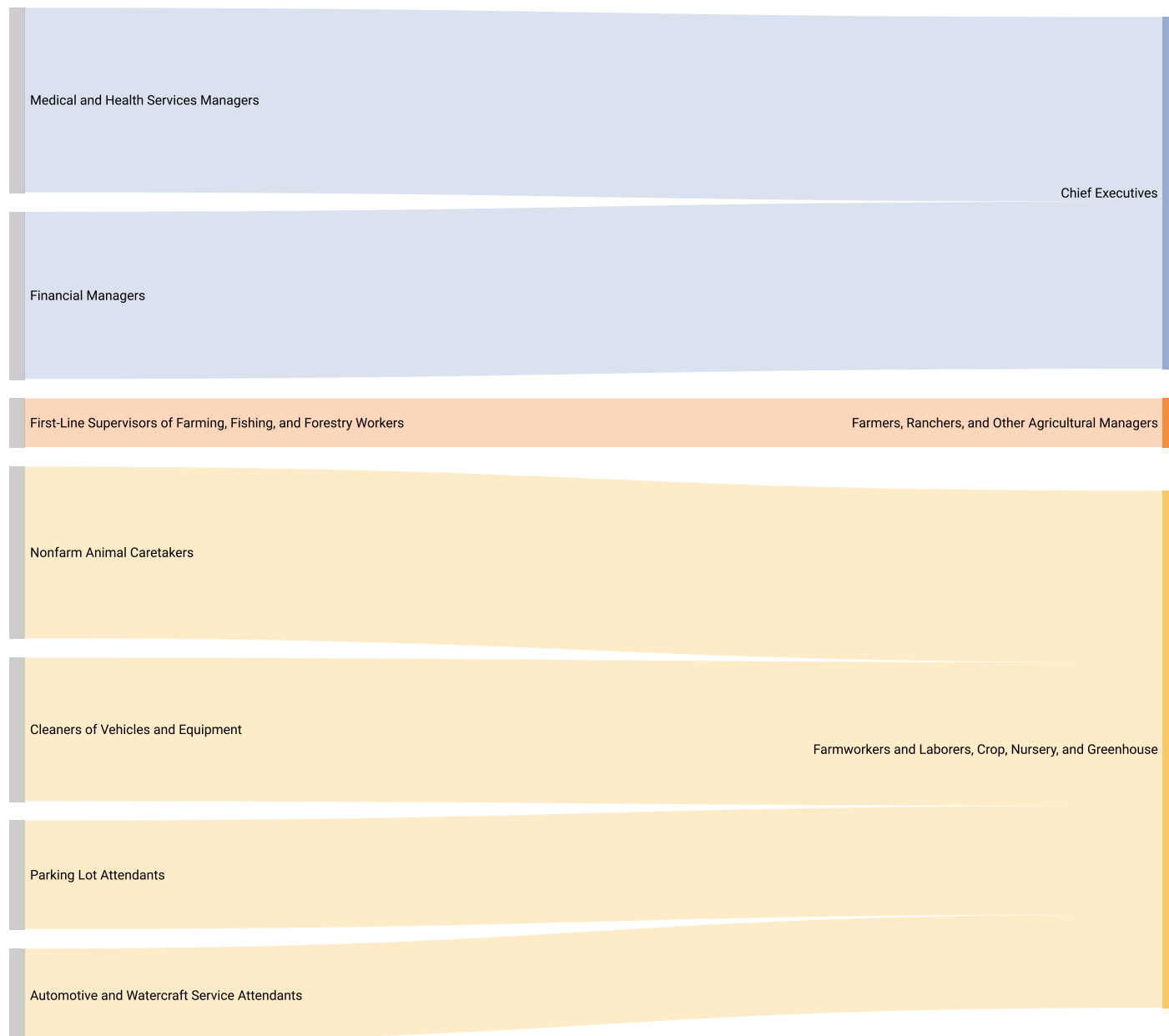
Supply Chain: Top Suppliers


As of 2018Q4, Agriculture, Forestry, Fishing and Hunting in the Tri-County Business Advisory Council are estimated to make \$133.8 million in annual purchases from suppliers in the United States with about 18% or \$23.6 million of these purchases being made from businesses located in the Tri-County Business Advisory Council.

2-digit Supplier Industries	Purchases from In-Region (\$M)	Purchases from Out-of-Region (\$M)
Manufacturing	\$2.3	\$38.2
Agriculture, Forestry, Fishing and Hunting	\$9.6	\$18.4
Wholesale Trade	\$2.8	\$14.7
Finance and Insurance	\$1.5	\$9.2
Transportation and Warehousing	\$2.5	\$7.7
Remaining Supplier Industries	\$4.9	\$21.9
Total	\$23.6	\$110.2

 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 Agriculture, Forestry, Fishing and Hunting

Program	Awards
Appalachian State University	
Business Administration and Management, General	250
Finance, General	114
International Business/Trade/Commerce	34
Kinesiology and Exercise Science	238
Political Science and Government, General	78
Public Administration	45
Asheville-Buncombe Technical Community College	
Agricultural and Food Products Processing	16
Mayland Community College	
Applied Horticulture/Horticulture Operations, General	30
Montreat College	
Business Administration and Management, General	50
University of North Carolina at Asheville	
Business Administration and Management, General	56

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 Tri-County Business Advisory Council, the sampling above identifies those most linked to occupations relevant to Agriculture, Forestry, Fishing and Hunting.

Region Definition

Tri-County Business Advisory Council is defined as the following counties:

Avery County, North Carolina

Buncombe County, North Carolina

McDowell County, North Carolina

Madison County, North Carolina

Mitchell County, North Carolina

Watauga County, North Carolina

Yancey County, North Carolina

Data Notes

- Industry employment and wages (including total regional employment and wages) are as of 2018Q4 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 2018Q4 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 2017.
- 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 2016-2017 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.



Mining, Quarrying, and Oil and Gas Extraction

Tri-County Business Advisory Council



Industry Spotlight

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Mining, Quarrying, and Oil and Gas Extraction Tri-County Business Advisory Council – 2018Q4

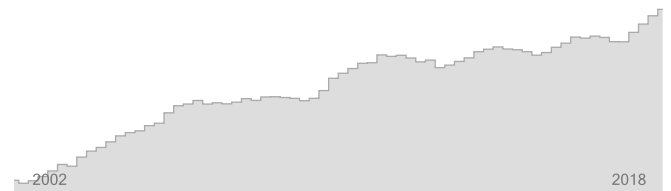
EMPLOYMENT



585

Regional employment / **690,118** in the nation

WAGES



\$65,006

Avg Wages per Worker / **\$101,874** in the nation

-1.9% ↓

Avg Ann % Change Last 10 Years / **-0.6%** in the US



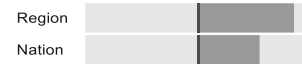
0.3%

% of Total Employment / **0.4%** in the US

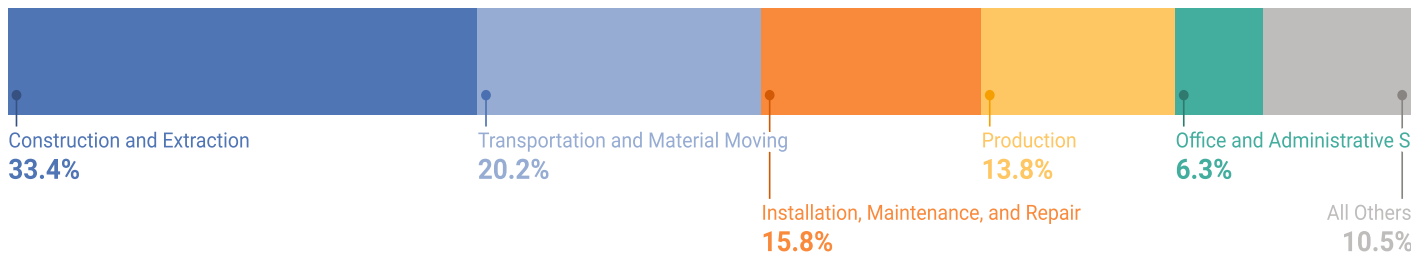


2.5% ↑

Avg Ann % Change Last 10 Years / **+1.6%** in the US



TOP OCCUPATION GROUPS

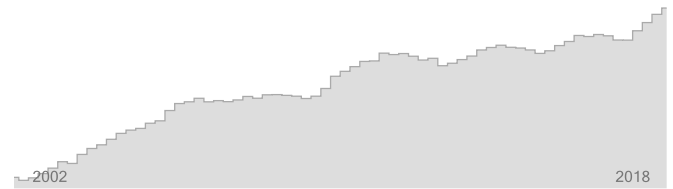


Industry Snapshot


EMPLOYMENT



WAGES

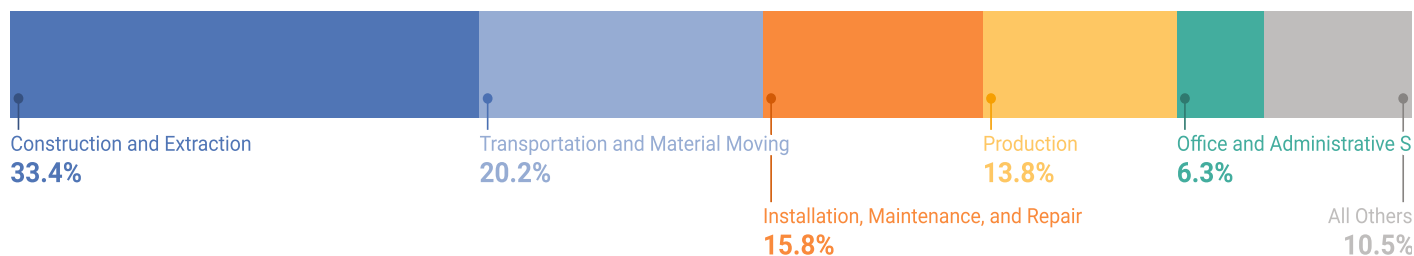


2-Digit Industry	Empl	Avg Ann Wages	LQ	5yr History	Annual Demand	Forecast Ann Growth
Mining, Quarrying, and Oil and Gas Extraction	585	\$65,006	0.63		52	-1.3%

 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.

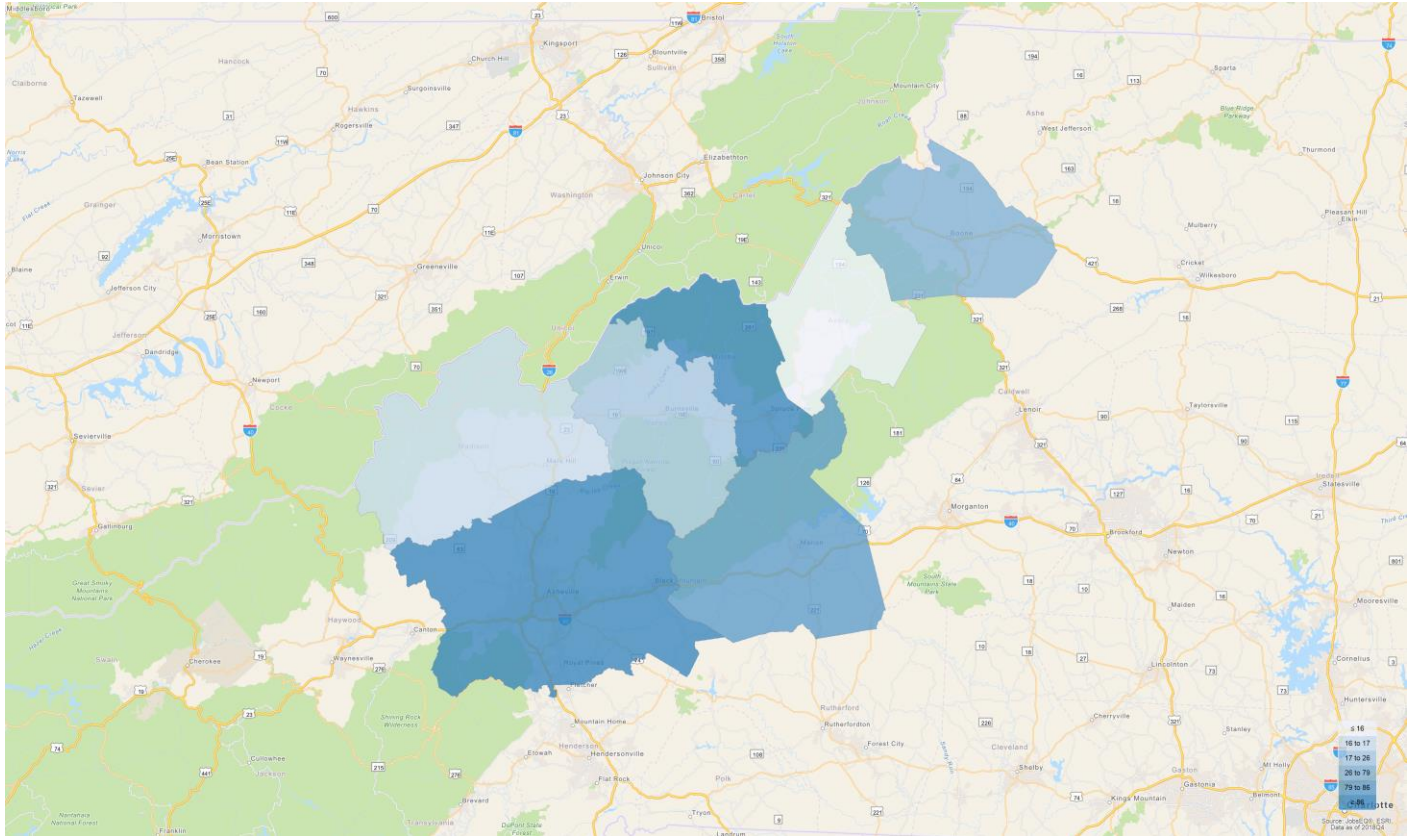
Staffing Pattern



6-digit Occupation	Empl	Avg Ann Wages	Annual Demand
Operating Engineers and Other Construction Equipment Operators	58	\$37,500	5
Heavy and Tractor-Trailer Truck Drivers	54	\$41,600	5
Continuous Mining Machine Operators	39	\$44,900	4
Excavating and Loading Machine and Dragline Operators	26	\$38,000	3
Mobile Heavy Equipment Mechanics, Except Engines	24	\$42,200	2
Industrial Machinery Mechanics	20	\$49,900	1
First-line Supervisors of Construction Trades and Extraction Workers	18	\$54,400	1
Mine Cutting and Channeling Machine Operators	18	\$40,100	2
Crushing, Grinding, and Polishing Machine Setters, Operators, and Tenders	16	\$32,400	1
Maintenance and Repair Workers, General	15	\$38,100	1
Remaining Component Occupations	277	\$50,800	24
Total	585		

 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
Mitchell County, North Carolina	352	Yancey County, North Carolina	17
Buncombe County, North Carolina	87	Madison County, North Carolina	17
McDowell County, North Carolina	79	Avery County, North Carolina	6
Watauga County, North Carolina	26		

Source: JobsEQ®

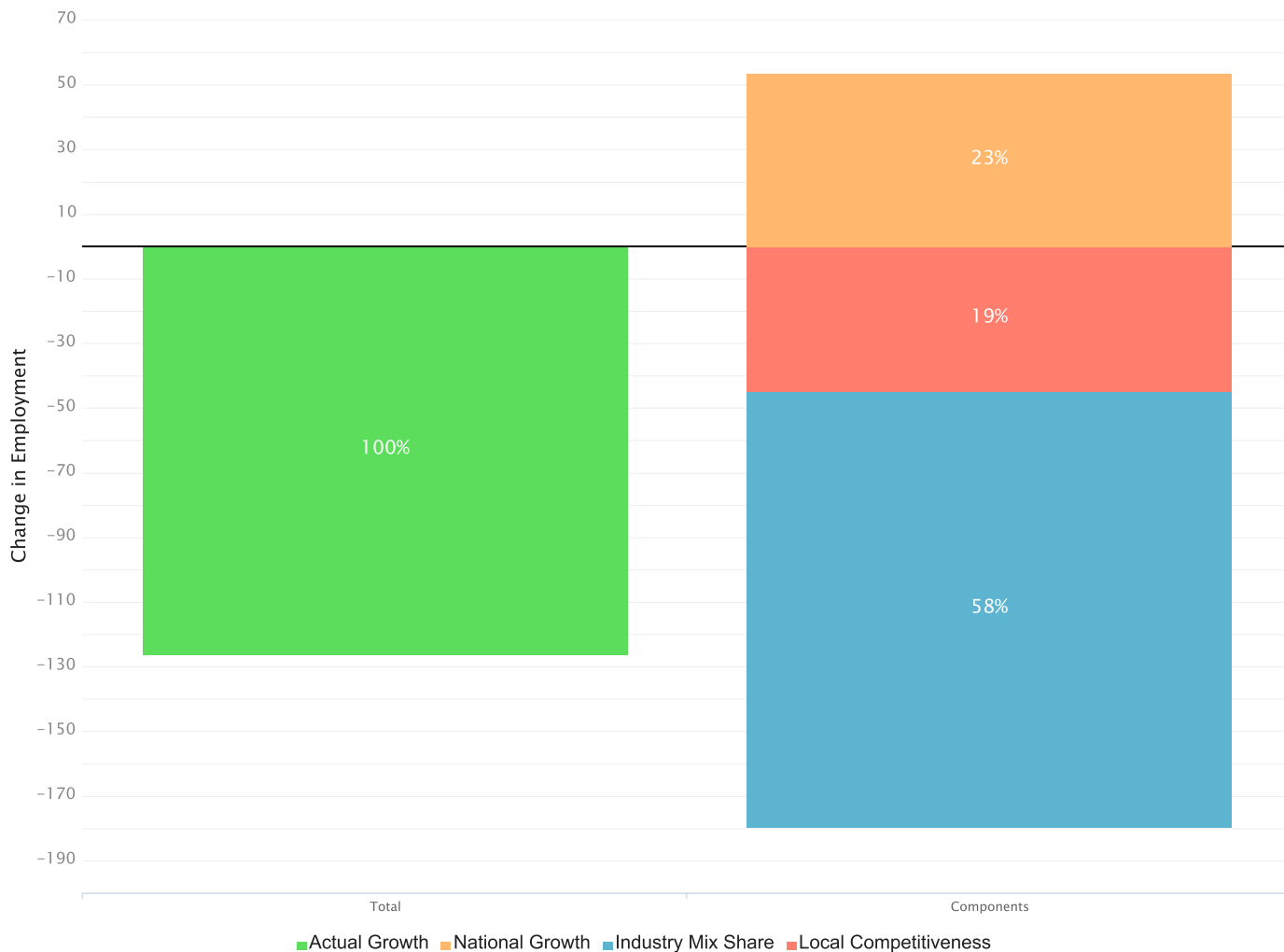


A geographic concentration of firms in related fields of business may reduce production costs, attract more suppliers and customers, and increase supply and demand for specialized labor, but may also increase competitive pressure and drive down prices.



Drivers of Employment Growth

Over the ten years ending 2018, employment in Mining, Quarrying, and Oil and Gas Extraction for the Tri-County Business Advisory Council shed 126 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 45 jobs—meaning this industry was less competitive than its national counterpart during this period.

Drivers of Employment Growth for Tri-County Business Advisory Council



Source: JobsEQ®, Data as of 2018Q4

-  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 Mining, Quarrying, and Oil and Gas Extraction for the Tri-County Business Advisory Council. 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).

99.4%

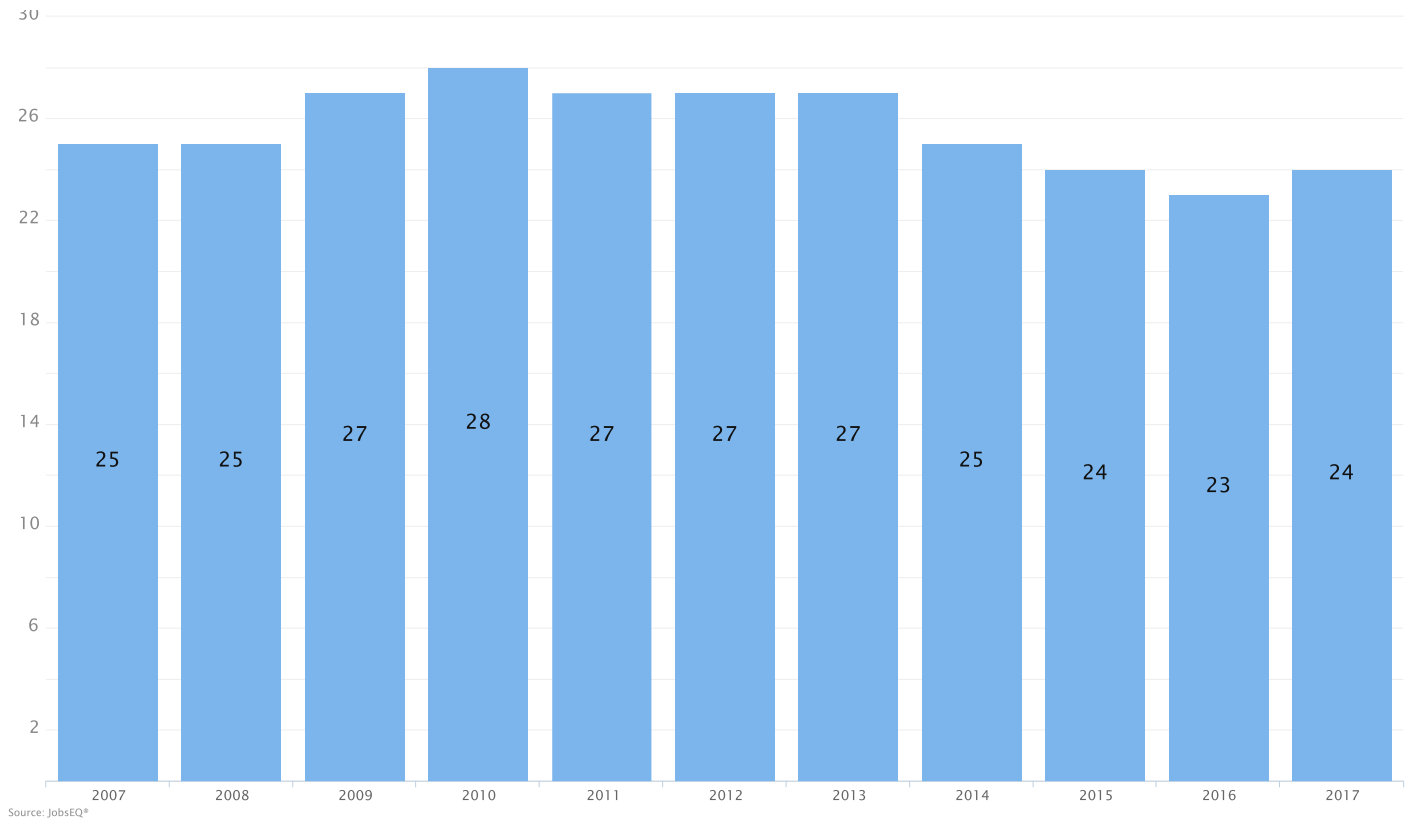
	Empl	%
Private	581	99.4%
Self-Employment	3	0.6%
Other Non-Covered	0	0.0%


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 2017, there were 24 Mining, Quarrying, and Oil and Gas Extraction establishments in the Tri-County Business Advisory Council (per covered employment establishment counts), a decrease from 25 establishments ten years earlier in 2007.

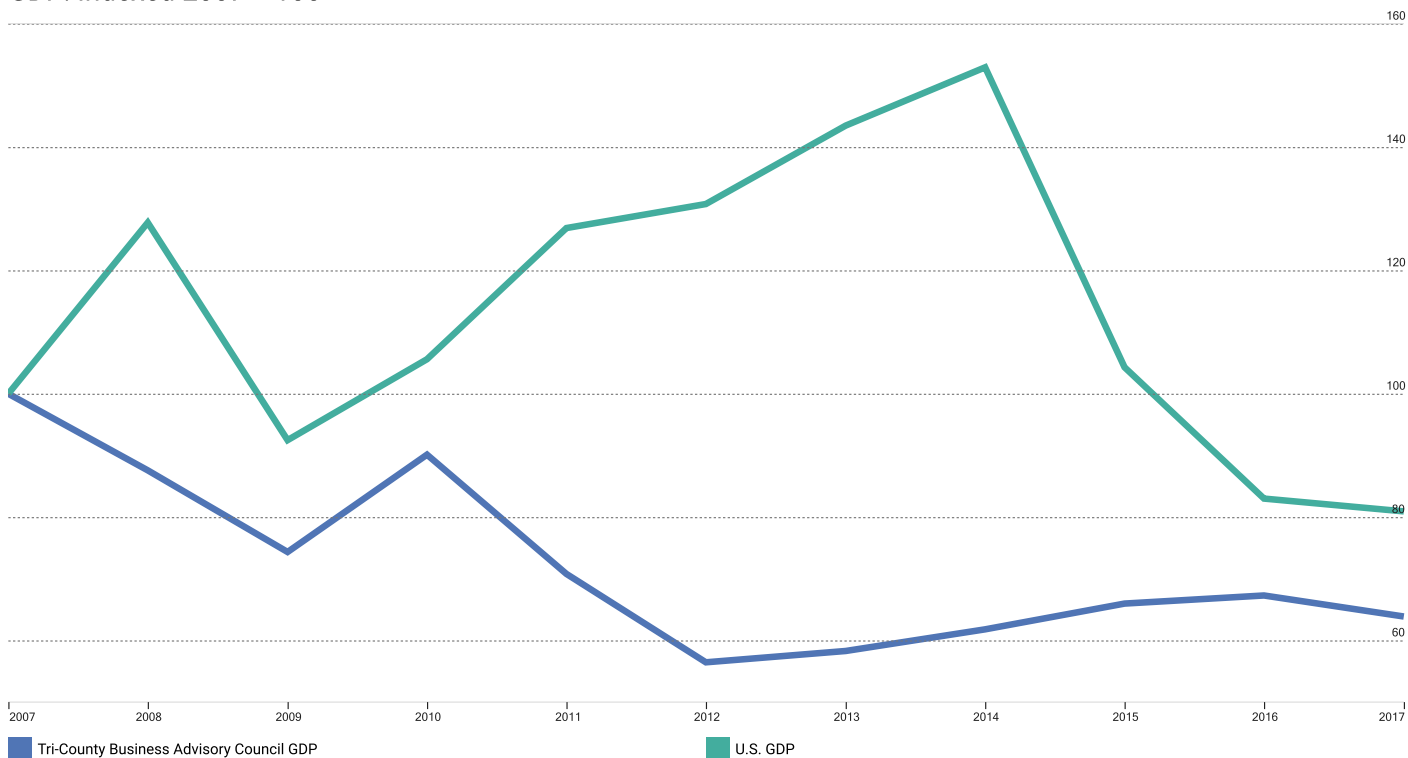


 New business formations are an important source of job creation in a regional economy, spurring innovation and competition, and driving productivity growth. Establishment data can provide an indicator of growth in businesses by counting each single location (such as a factory or a store) where business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

GDP & Productivity

In 2017, Mining, Quarrying, and Oil and Gas Extraction produced \$0.1 billion in GDP for the Tri-County Business Advisory Council.

GDP: Indexed 2007 = 100



0.6 %

Industry Share of Total GDP /
1.3 % in the nation



-4.4 % ↓

Avg Ann % Change Last 10 Yrs /
-2.1 % in the nation



\$404k

Output per Worker /
\$804k 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 2018Q4, Mining, Quarrying, and Oil and Gas Extraction in the Tri-County Business Advisory Council are estimated to make \$102.1 million in annual purchases from suppliers in the United States with about 10% or \$10.2 million of these purchases being made from businesses located in the Tri-County Business Advisory Council.

2-digit Supplier Industries	Purchases from In-Region (\$M)	Purchases from Out-of-Region (\$M)
Manufacturing	\$1.1	\$30.8
Professional, Scientific, and Technical Services	\$1.7	\$11.2
Wholesale Trade	\$0.9	\$8.1
Mining, Quarrying, and Oil and Gas Extraction	\$1.0	\$7.9
Finance and Insurance	\$0.7	\$8.1
Remaining Supplier Industries	\$4.9	\$25.8
Total	\$10.2	\$91.8

 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 Mining, Quarrying, and Oil and Gas Extraction

Program	Awards
Appalachian State University	
Business Administration and Management, General	250
Environmental Engineering Technology/Environmental Technology	61
Environmental Studies	80
Geology/Earth Science, General	24
Asheville-Buncombe Technical Community College	
Building/Property Maintenance	18
Computer Engineering Technology/Technician	12
Medium/Heavy Vehicle and Truck Technology/Technician	33
Welding Technology/Welder	26
Mayland Community College	
Computer Engineering Technology/Technician	10
Welding Technology/Welder	43

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 Tri-County Business Advisory Council, the sampling above identifies those most linked to occupations relevant to Mining, Quarrying, and Oil and Gas Extraction.

Region Definition

Tri-County Business Advisory Council is defined as the following counties:

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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.



Utilities

Tri-County Business Advisory Council



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Utilities

Tri-County Business Advisory Council – 2018Q4

EMPLOYMENT



706

Regional employment / **821,131** in the nation

WAGES



\$75,442

Avg Wages per Worker / **\$97,790** in the nation

-0.1% ↓

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



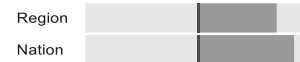
0.3%

% of Total Employment / **0.5%** in the US

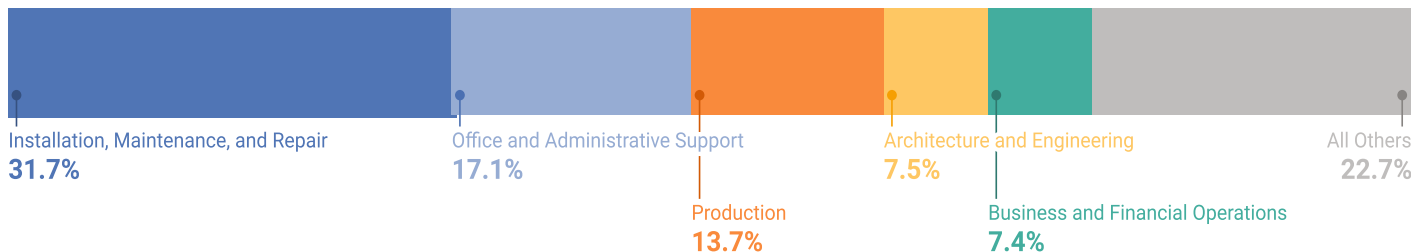


2.1% ↑

Avg Ann % Change Last 10 Years / **+2.6%** in the US



TOP OCCUPATION GROUPS

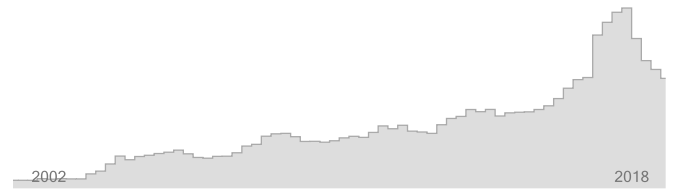


Industry Snapshot


EMPLOYMENT



WAGES

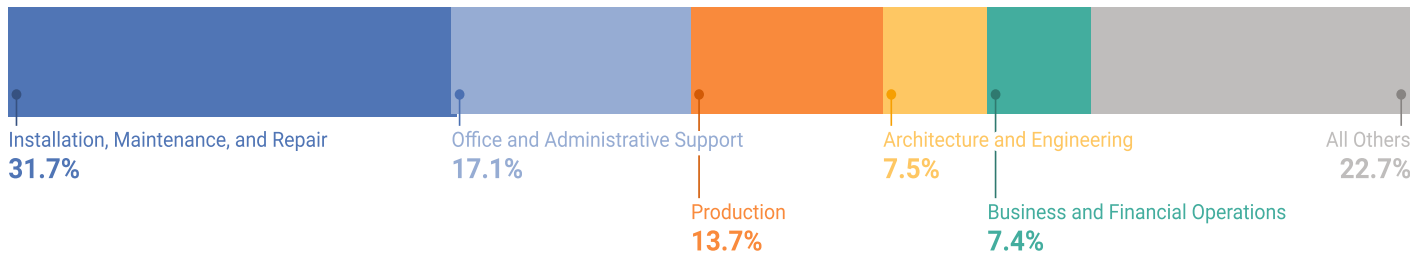


	2-Digit Industry	Empl	Avg Ann Wages	LQ	5yr History	Annual Demand	Forecast Ann Growth
Utilities		706	\$75,442	0.64		80	2.3%


 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.

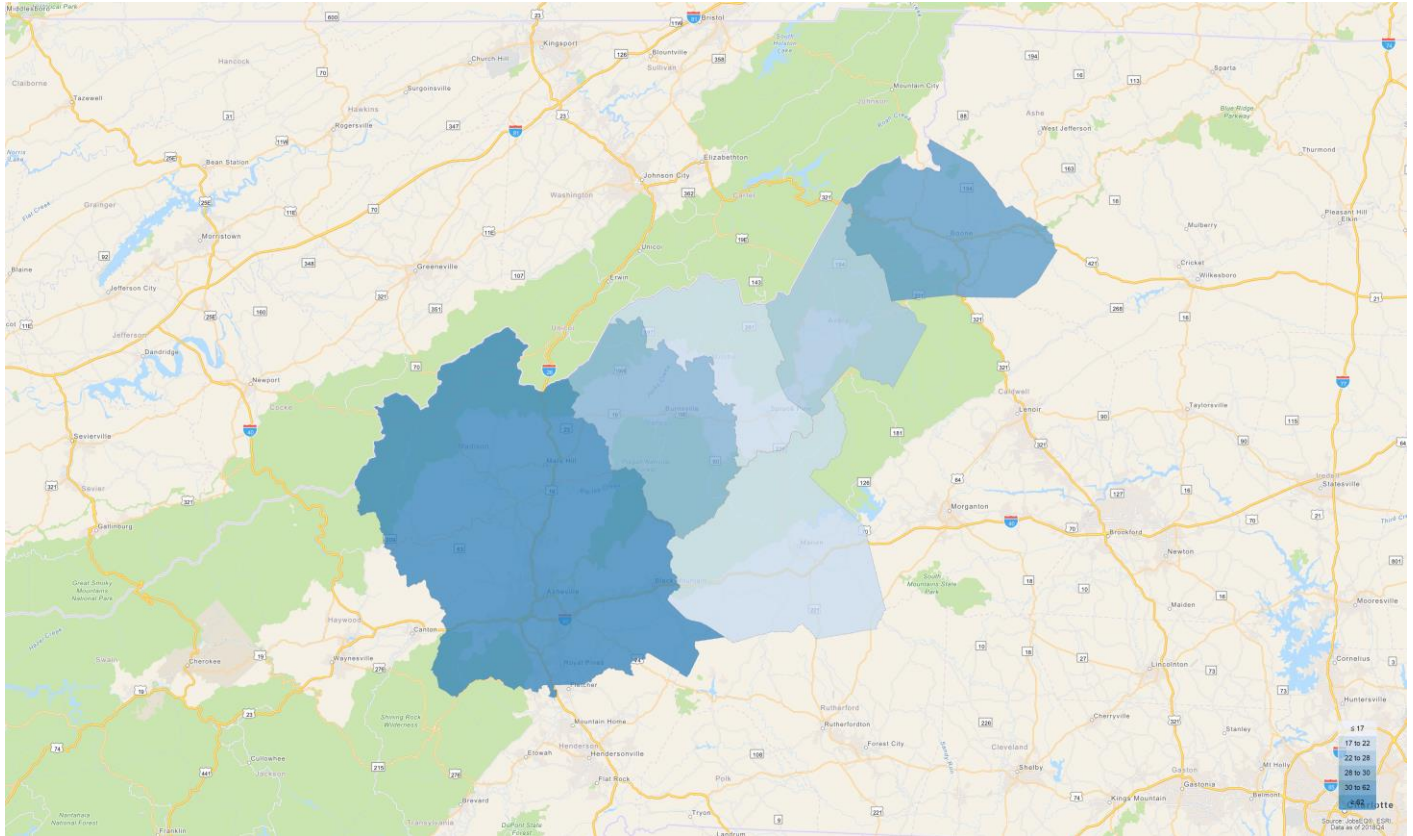
Staffing Pattern



6-digit Occupation	Empl	Avg Ann Wages	Annual Demand
Electrical Power-Line Installers and Repairers	85	\$61,600	7
Electrical and Electronics Repairers, Powerhouse, Substation, and Relay	43	\$77,400	5
Customer Service Representatives	36	\$30,100	4
Power Plant Operators	30	\$82,400	2
Water and Wastewater Treatment Plant and System Operators	27	\$41,500	2
Electrical Engineers	24	\$78,900	2
First-Line Supervisors of Mechanics, Installers, and Repairers	22	\$62,500	2
Control and Valve Installers and Repairers, Except Mechanical Door	20	\$44,800	2
General and Operations Managers	17	\$117,500	2
Maintenance and Repair Workers, General	16	\$38,100	3
Remaining Component Occupations	361	\$61,100	44
Total	706		

 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
Buncombe County, North Carolina	528	Avery County, North Carolina	22
Madison County, North Carolina	62	Mitchell County, North Carolina	17
Watauga County, North Carolina	31	McDowell County, North Carolina	17
Yancey County, North Carolina	29		

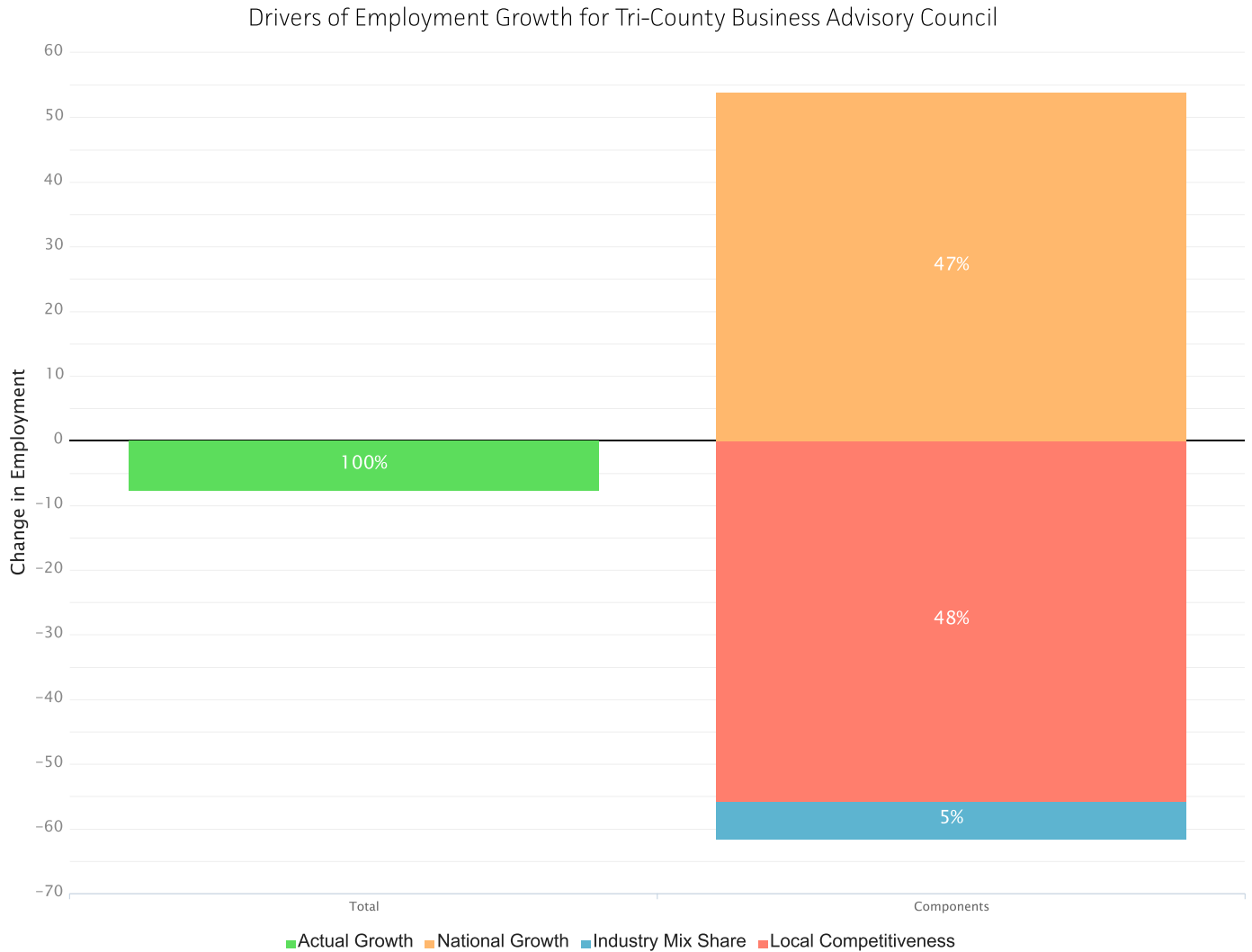
Source: JobsEQ®



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 Utilities for the Tri-County Business Advisory Council shed 8 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 56 jobs—meaning this industry was less competitive than its national counterpart during this period.



- 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 Utilities for the Tri-County Business Advisory Council. 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).



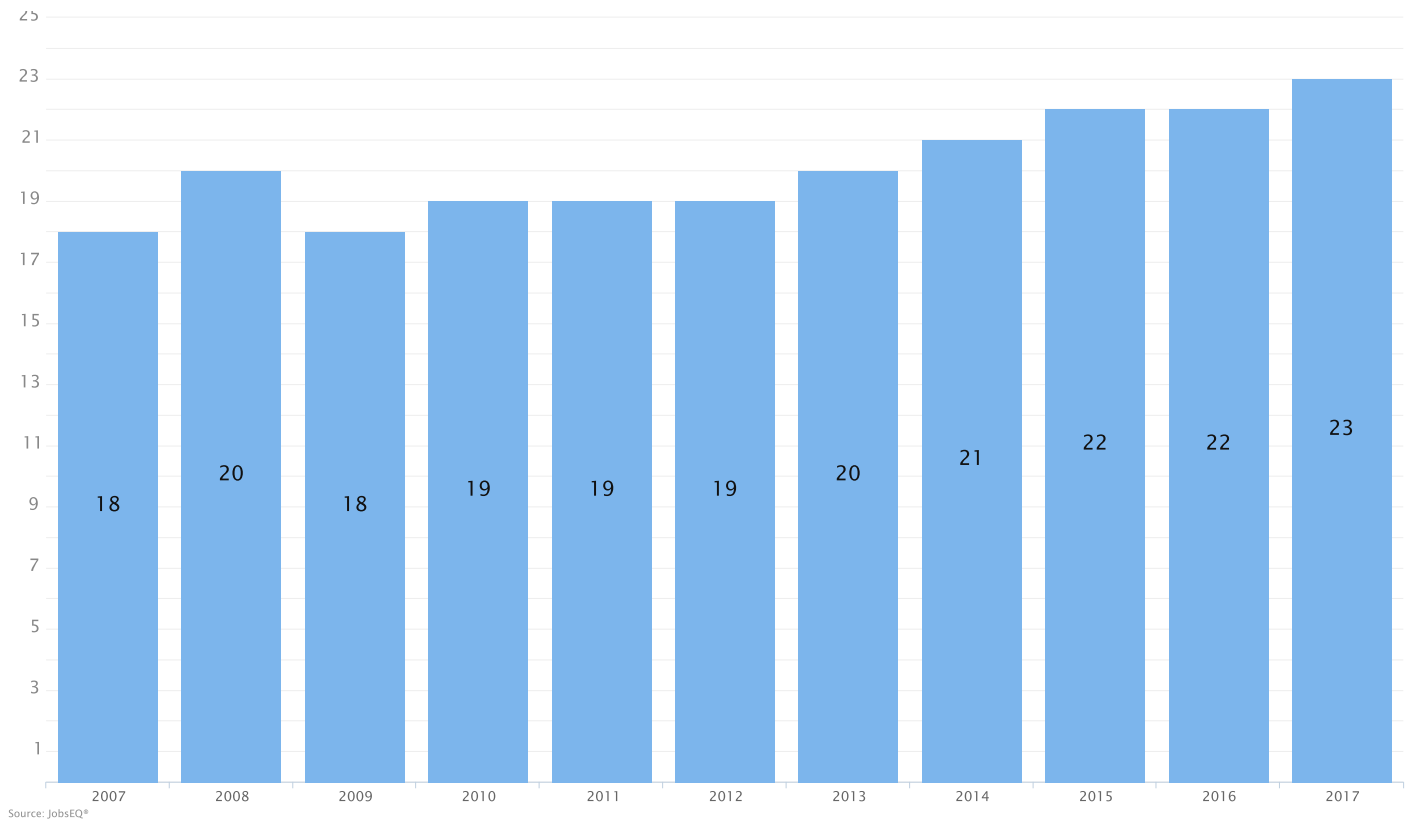
	Empl	%
Private	607	86.0%
Self-Employment	13	1.8%
Local Government	86	12.2%


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 2017, there were 23 Utilities establishments in the Tri-County Business Advisory Council (per covered employment establishment counts), an increase from 18 establishments ten years earlier in 2007.



 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 2017, Utilities produced \$0.3 billion in GDP for the Tri-County Business Advisory Council.

GDP: Indexed 2007 = 100



1.6 %

Industry Share of Total GDP /
1.7 % in the nation



3.3 % ↑

Avg Ann % Change Last 10 Yrs /
2.5 % in the nation



\$528k

Output per Worker /
\$689k 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.

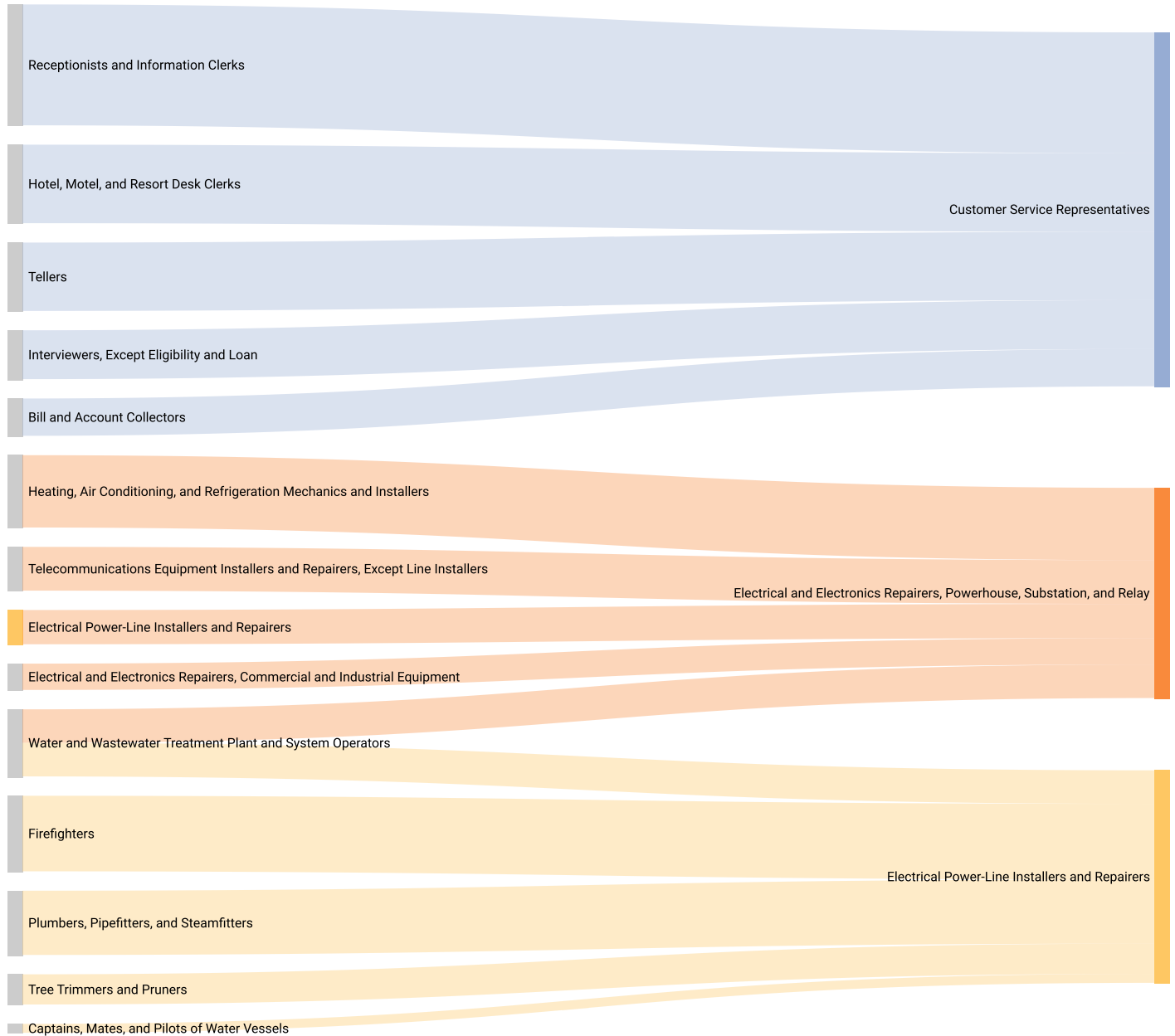
Supply Chain: Top Suppliers


As of 2018Q4, Utilities in the Tri-County Business Advisory Council are estimated to make \$86.2 million in annual purchases from suppliers in the United States with about 24% or \$20.8 million of these purchases being made from businesses located in the Tri-County Business Advisory Council.

2-digit Supplier Industries	Purchases from In-Region (\$M)	Purchases from Out-of-Region (\$M)
Manufacturing	\$0.8	\$18.0
Mining, Quarrying, and Oil and Gas Extraction	\$1.3	\$12.0
Transportation and Warehousing	\$2.5	\$8.0
Professional, Scientific, and Technical Services	\$4.0	\$5.8
Finance and Insurance	\$2.7	\$4.3
Remaining Supplier Industries	\$9.5	\$17.3
Total	\$20.8	\$65.4

 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 Utilities

Program	Awards
Appalachian State University	
Accounting	158
Business Administration and Management, General	250
Environmental Studies	80
Marketing/Marketing Management, General	100
Asheville-Buncombe Technical Community College	
Computer Engineering Technology/Technician	12
Electrical, Electronic and Communications Engineering Technology/Technician	9
Surveying Technology/Surveying	22
Mayland Community College	
Computer Engineering Technology/Technician	10
Engineering Technology, General	40
University of North Carolina at Asheville	
Environmental Studies	59

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 Tri-County Business Advisory Council, the sampling above identifies those most linked to occupations relevant to Utilities.

Region Definition

Tri-County Business Advisory Council is defined as the following counties:

Avery County, North Carolina

Buncombe County, North Carolina

McDowell County, North Carolina

Madison County, North Carolina

Mitchell County, North Carolina

Watauga County, North Carolina

Yancey County, North Carolina

Data Notes

- Industry employment and wages (including total regional employment and wages) are as of 2018Q4 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 2018Q4 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 2017.
- 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 2016-2017 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.



Construction

Tri-County Business Advisory Council



Industry Spotlight

Avery, Buncombe, Madison, McDowell, Mitchell,
Watauga, and Yancey

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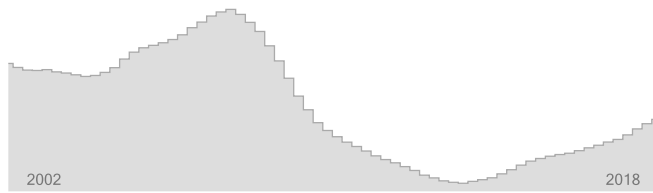
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Construction
Tri-County Business Advisory Council – 2018Q4

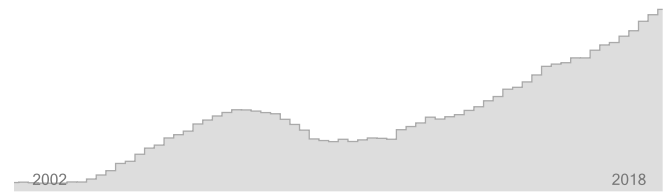
EMPLOYMENT



12,537

Regional employment / **8,917,441** in the nation

WAGES



\$43,075

Avg Wages per Worker / **\$57,863** in the nation

-2.1% ↓

Avg Ann % Change Last 10 Years / **-0.2%** in the US



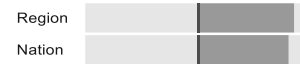
5.9%

% of Total Employment / **5.7%** in the US



2.5% ↑

Avg Ann % Change Last 10 Years / **+2.3%** in the US

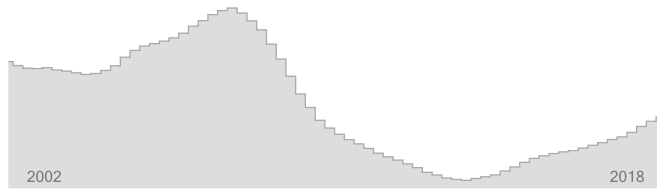


TOP OCCUPATION GROUPS

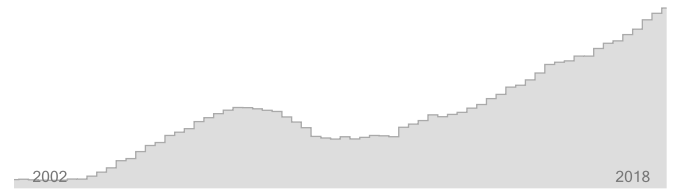


Industry Snapshot

EMPLOYMENT



WAGES



2-Digit Industry	Empl	Avg Ann Wages	LQ	5yr History	Annual Demand	Forecast Ann Growth
Construction	12,537	\$43,075	1.04		1,382	1.2%

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.

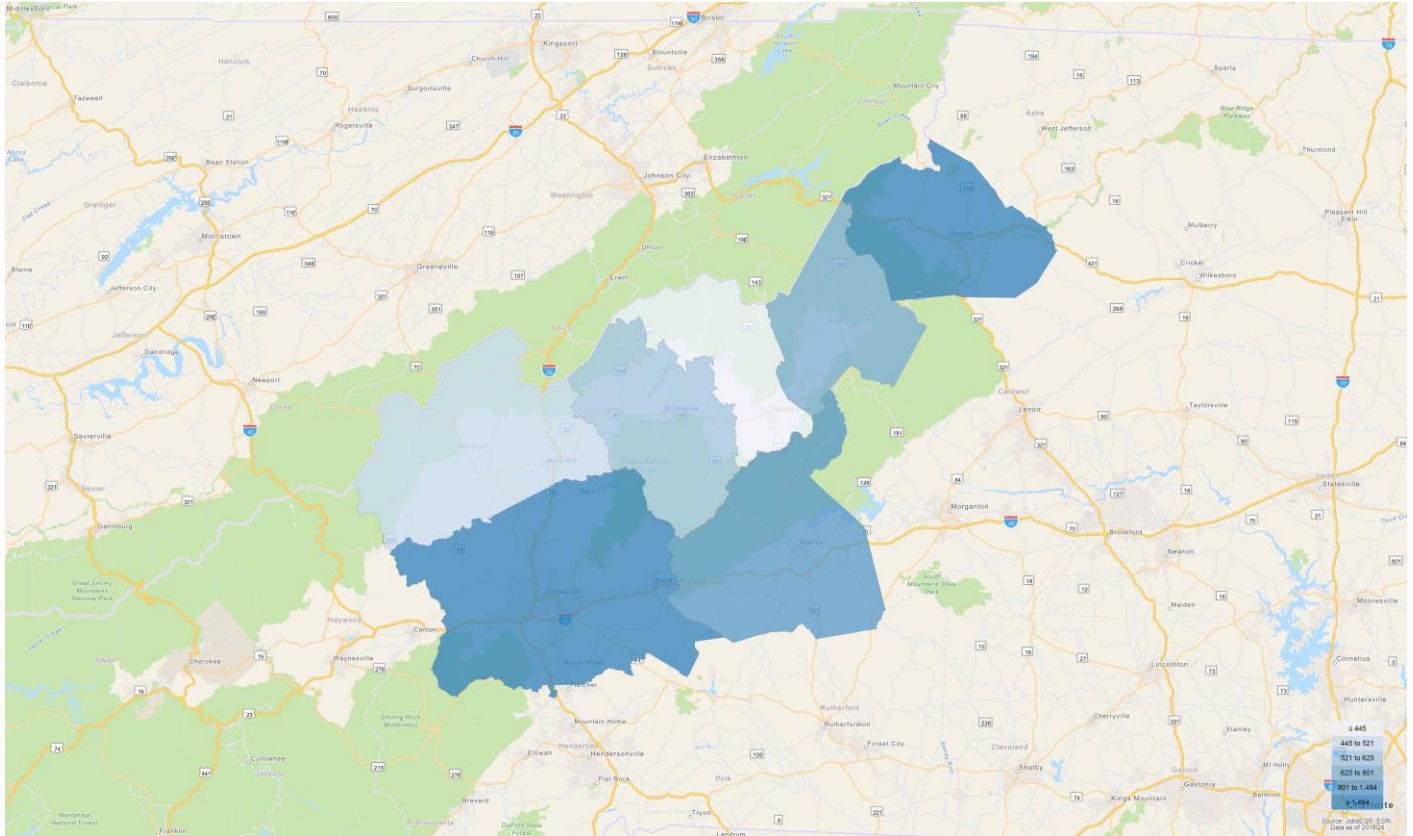
Staffing Pattern



6-digit Occupation	Empl	Avg Ann Wages	Annual Demand
Carpenters	1,816	\$36,900	184
Construction Laborers	1,485	\$28,700	173
First-line Supervisors of Construction Trades and Extraction Workers	813	\$54,400	92
Electricians	802	\$40,900	100
Construction Managers	668	\$114,700	54
Painters, Construction and Maintenance	600	\$30,700	56
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	490	\$40,300	59
Plumbers, Pipefitters, and Steamfitters	432	\$39,900	55
Operating Engineers and Other Construction Equipment Operators	379	\$37,500	49
Office Clerks, General	321	\$28,900	39
Remaining Component Occupations	4,702	\$48,200	560
Total	12,537		

💡 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
Buncombe County, North Carolina	8,316	Yancey County, North Carolina	521
Watauga County, North Carolina	1,495	Madison County, North Carolina	446
McDowell County, North Carolina	801	Mitchell County, North Carolina	332
Avery County, North Carolina	625		

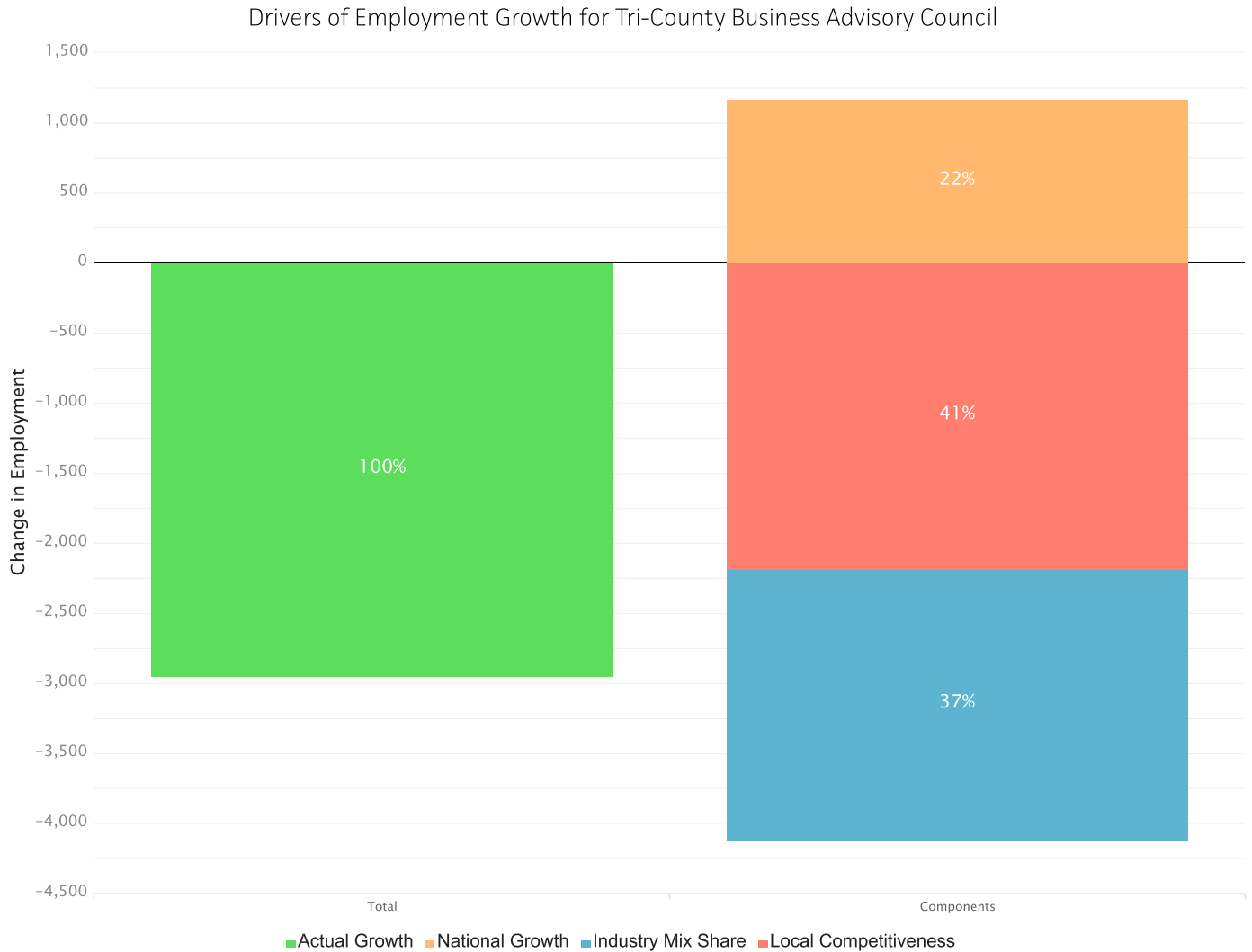
Source: JobsEQ®





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 Construction for the Tri-County Business Advisory Council shed 2,942 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 2,179 jobs—meaning this industry was less competitive than its national counterpart during this period.



-  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 Construction for the Tri-County Business Advisory Council. 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).



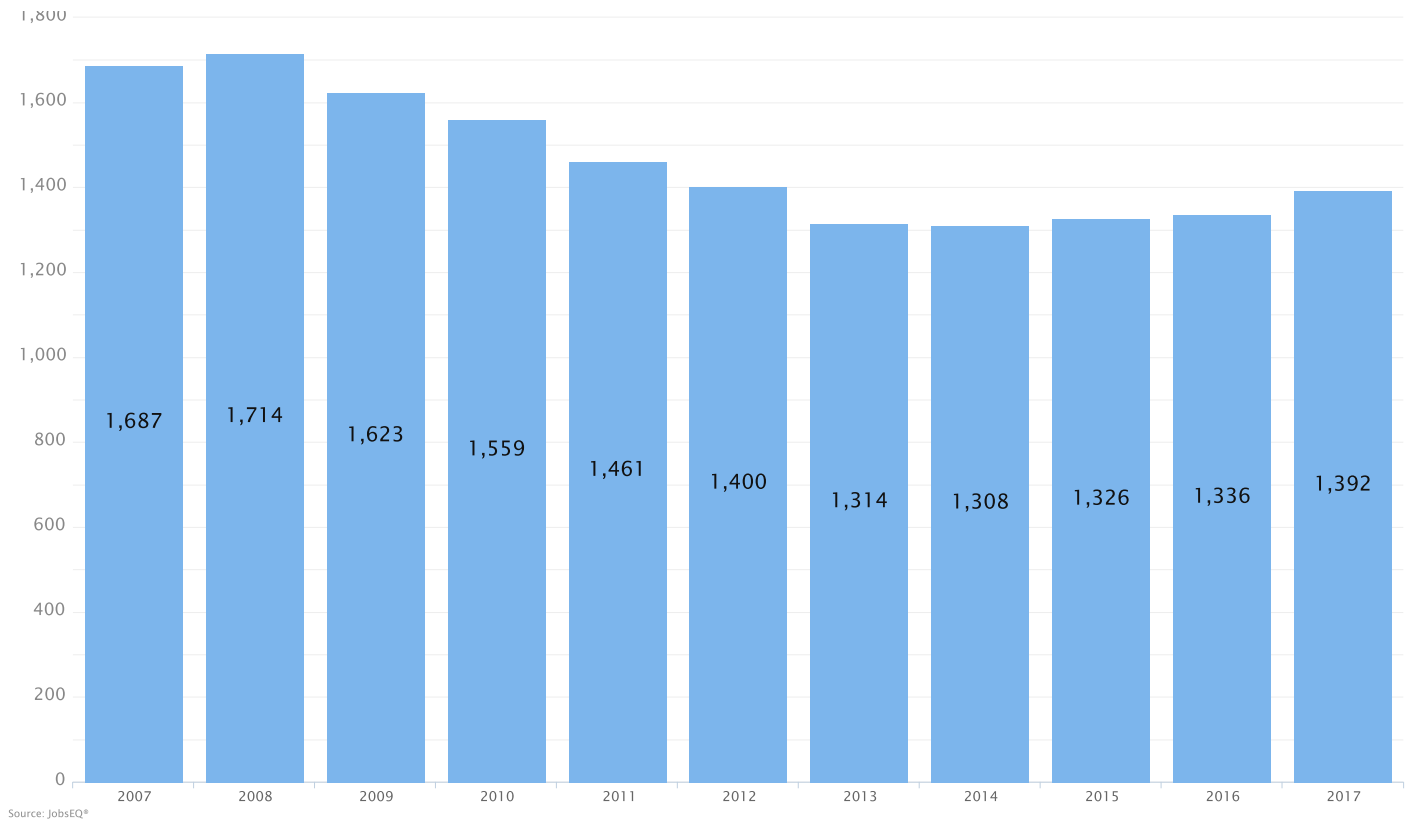
	Empl	%
Private	8,967	71.5%
Self-Employment	3,570	28.5%


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 2017, there were 1,392 Construction establishments in the Tri-County Business Advisory Council (per covered employment establishment counts), a decrease from 1,687 establishments ten years earlier in 2007.

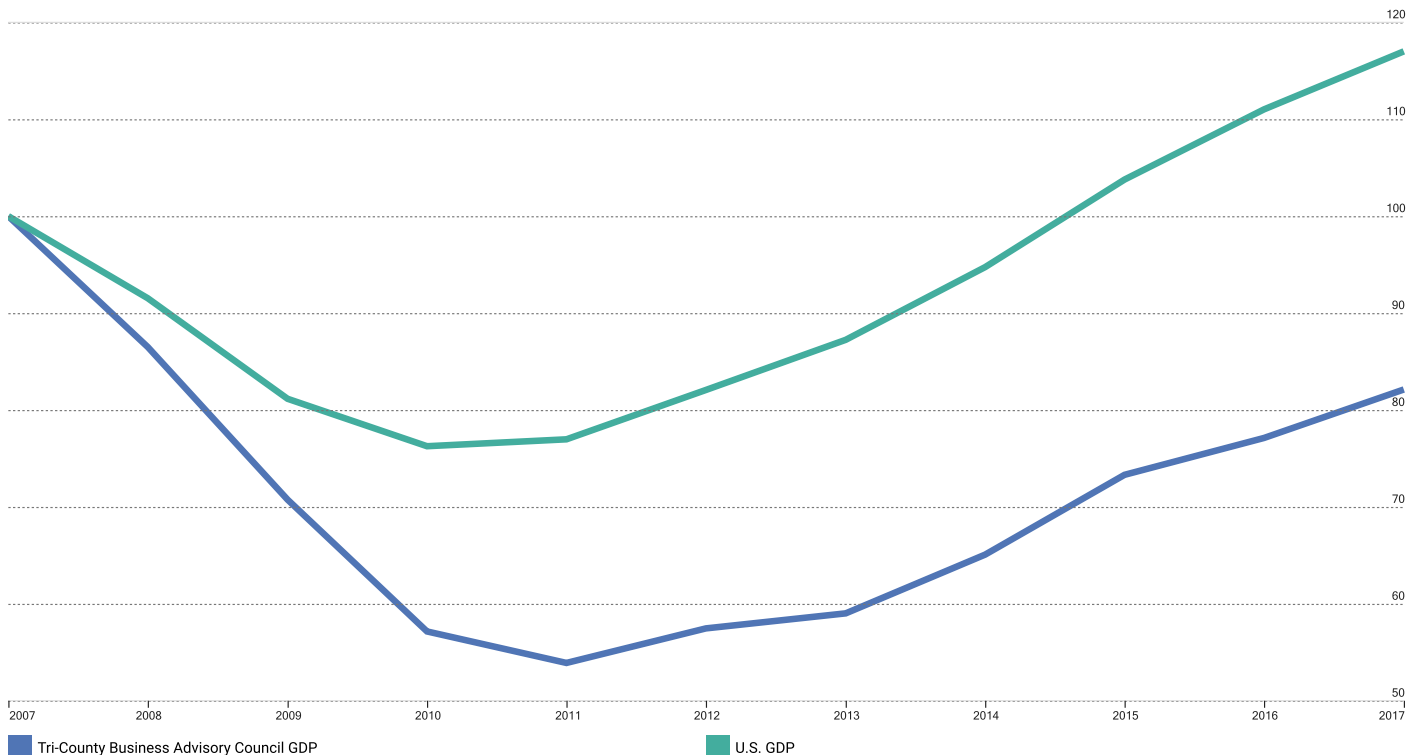


 New business formations are an important source of job creation in a regional economy, spurring innovation and competition, and driving productivity growth. Establishment data can provide an indicator of growth in businesses by counting each single location (such as a factory or a store) where business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

GDP & Productivity

In 2017, Construction produced \$0.8 billion in GDP for the Tri-County Business Advisory Council.

GDP: Indexed 2007 = 100



4.3 %

Industry Share of Total GDP /
4.4 % in the nation



-2.0 % ↓

Avg Ann % Change Last 10 Yrs /
1.6 % in the nation



\$159k

Output per Worker /
\$209k 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.

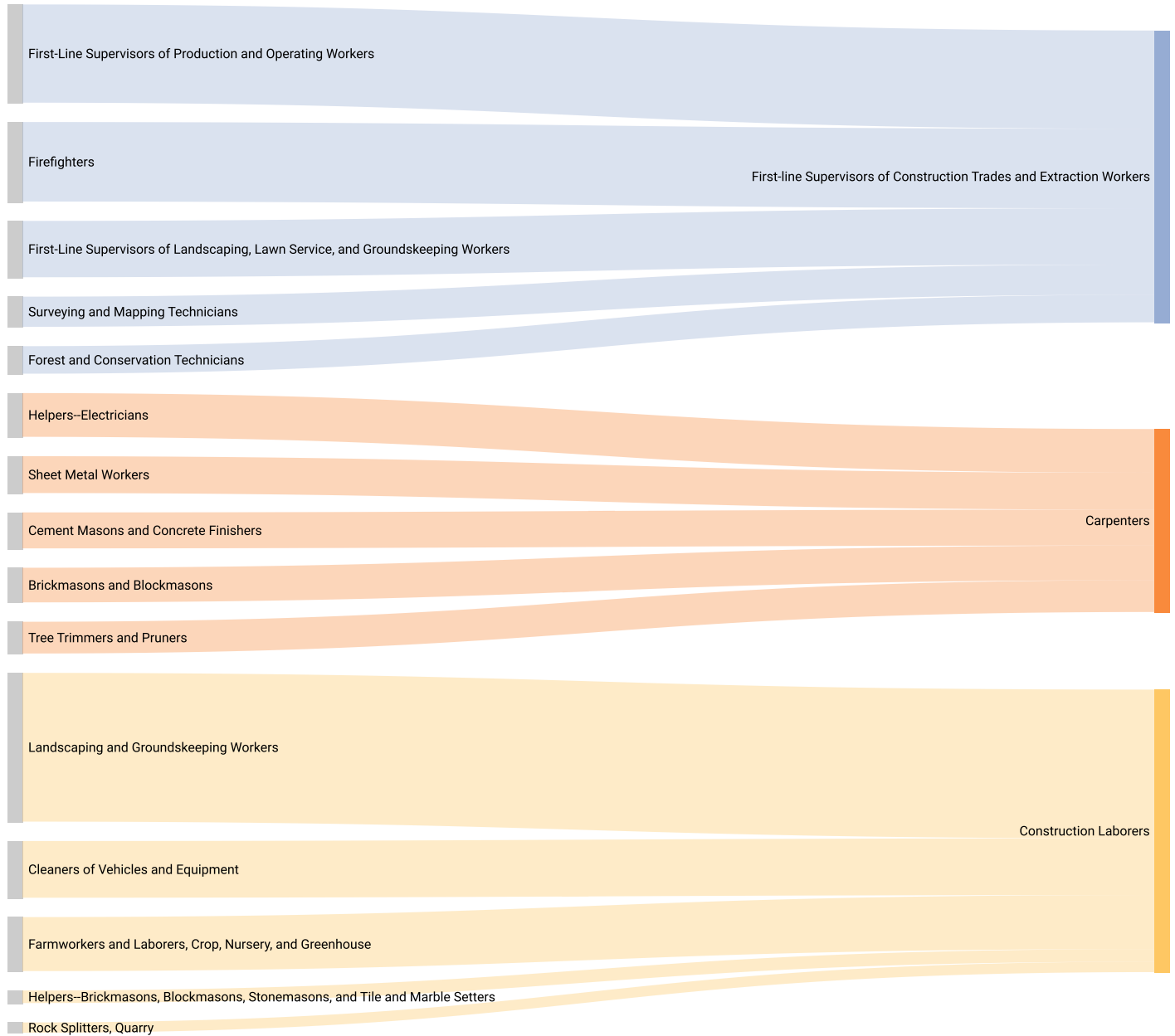
Supply Chain: Top Suppliers


As of 2018Q4, Construction in the Tri-County Business Advisory Council are estimated to make \$1.0 billion in annual purchases from suppliers in the United States with about 33% or \$0.3 billion of these purchases being made from businesses located in the Tri-County Business Advisory Council.

2-digit Supplier Industries	Purchases from In-Region (\$M)	Purchases from Out-of-Region (\$M)
Manufacturing	\$105.1	\$267.9
Retail Trade	\$99.0	\$51.5
Wholesale Trade	\$22.7	\$73.8
Professional, Scientific, and Technical Services	\$30.7	\$62.2
Real Estate and Rental and Leasing	\$25.2	\$40.6
Remaining Supplier Industries	\$59.1	\$195.1
Total	\$341.8	\$691.2

 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 Construction

Program	Awards
Appalachian State University	
Business Administration and Management, General	250
Construction Management	63
Environmental Engineering Technology/Environmental Technology	61
Asheville-Buncombe Technical Community College	
Building/Property Maintenance	18
Electrician	6
Heating, Air Conditioning, Ventilation and Refrigeration Maintenance Technology/Technician	15
Welding Technology/Welder	26
Mayland Community College	
Welding Technology/Welder	43
Montreat College	
Business Administration and Management, General	50
University of North Carolina at Asheville	
Business Administration and Management, General	56

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 Tri-County Business Advisory Council, the sampling above identifies those most linked to occupations relevant to Construction.

Region Definition

Tri-County Business Advisory Council is defined as the following counties:

Avery County, North Carolina

Buncombe County, North Carolina

McDowell County, North Carolina

Madison County, North Carolina

Mitchell County, North Carolina

Watauga County, North Carolina

Yancey County, North Carolina

Data Notes

- Industry employment and wages (including total regional employment and wages) are as of 2018Q4 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 2018Q4 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 2017.
- 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 2016-2017 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.



Manufacturing

Tri-County Business Advisory Council



Industry Spotlight

Avery, Buncombe, Madison, McDowell, Mitchell,
Watauga, and Yancey

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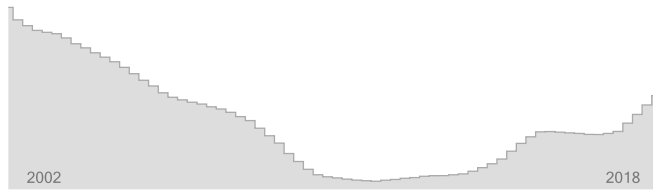
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Manufacturing
Tri-County Business Advisory Council – 2018Q4

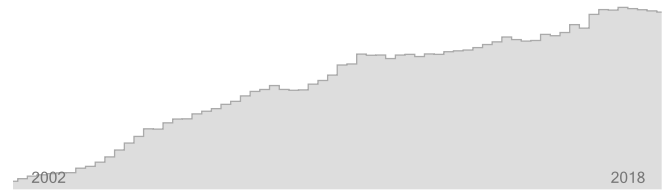
EMPLOYMENT



22,926

Regional employment / **12,992,758** in the nation

WAGES



\$47,380

Avg Wages per Worker / **\$67,802** in the nation

1.1% ↑

Avg Ann % Change Last 10 Years / **-0.5%** in the US



10.8%

% of Total Employment / **8.3%** in the US

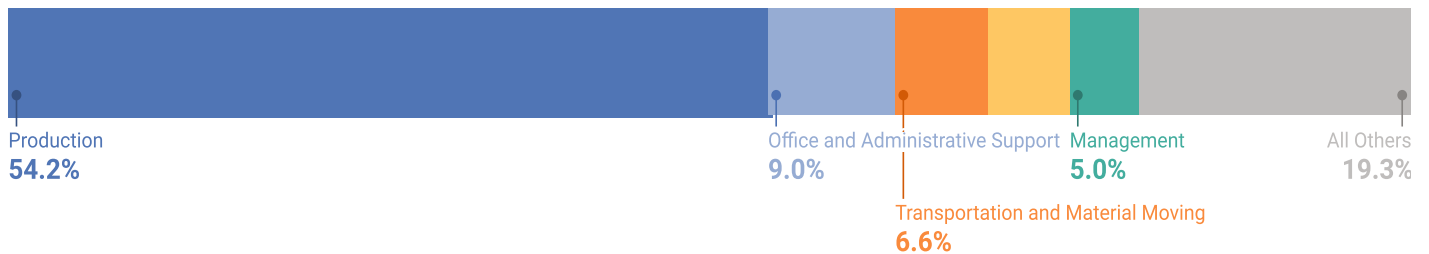


1.7% ↑

Avg Ann % Change Last 10 Years / **+2.3%** in the US

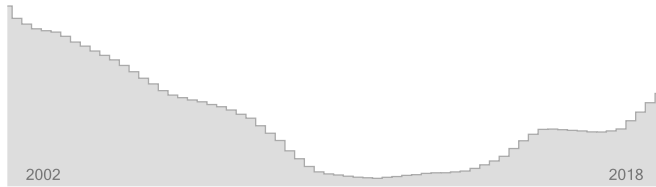


TOP OCCUPATION GROUPS

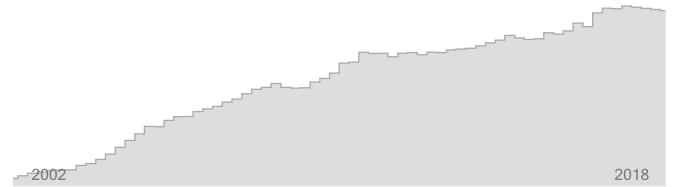


Industry Snapshot


EMPLOYMENT



WAGES

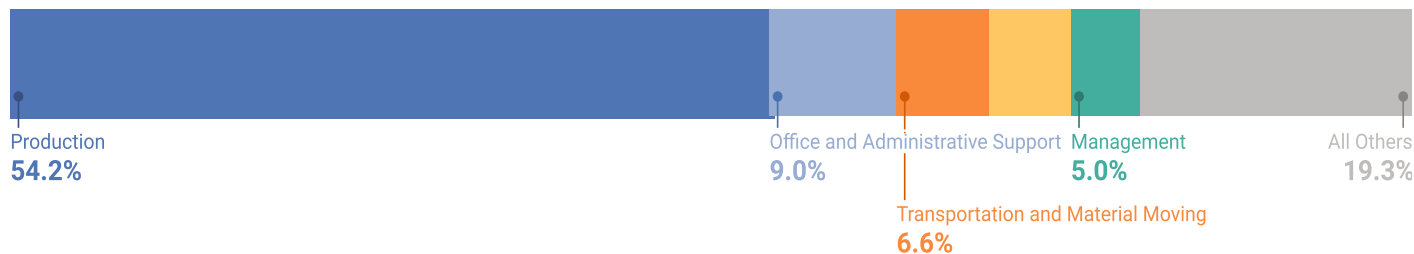


2-Digit Industry	Empl	Avg Ann Wages	LQ	5yr History	Annual Demand	Forecast Ann Growth
Manufacturing	22,926	\$47,380	1.31		2,272	-0.5%

 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.

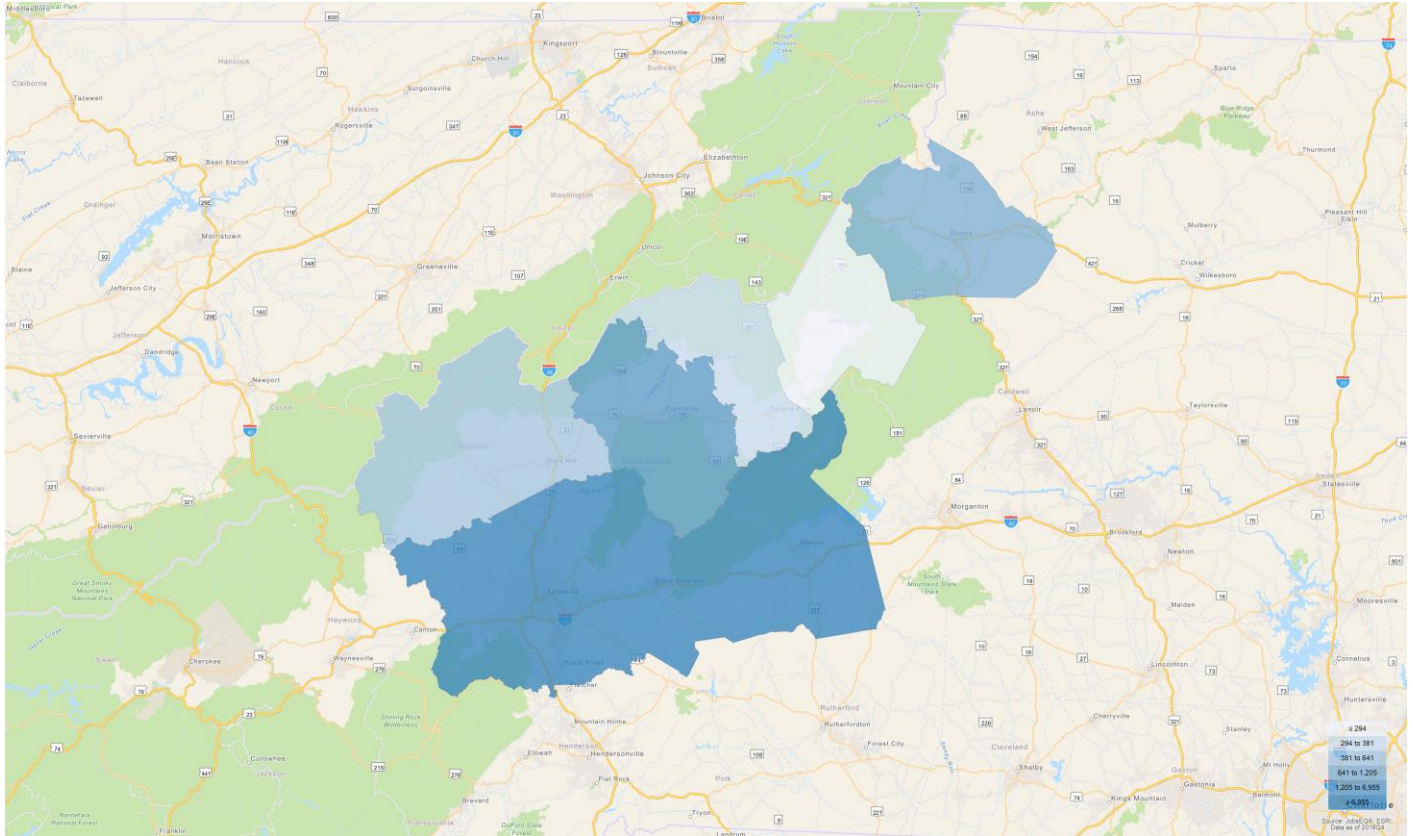
Staffing Pattern



6-digit Occupation	Empl	Avg Ann Wages	Annual Demand
Team Assemblers	1,258	\$29,200	112
Packaging and Filling Machine Operators and Tenders	976	\$31,100	107
First-Line Supervisors of Production and Operating Workers	806	\$58,500	75
Inspectors, Testers, Sorters, Samplers, and Weighers	736	\$36,500	73
Machinists	701	\$38,800	73
Electrical and Electronic Equipment Assemblers	571	\$33,400	51
Laborers and Freight, Stock, and Material Movers, Hand	570	\$28,600	75
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	474	\$56,900	46
Maintenance and Repair Workers, General	375	\$38,100	35
Computer-Controlled Machine Tool Operators, Metal and Plastic	368	\$38,200	38
Remaining Component Occupations	16,069	\$49,200	1,590
Total	22,926		

 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
Buncombe County, North Carolina	13,352	Madison County, North Carolina	381
McDowell County, North Carolina	6,955	Mitchell County, North Carolina	295
Yancey County, North Carolina	1,205	Avery County, North Carolina	97
Watauga County, North Carolina	641		

Source: JobsEQ®

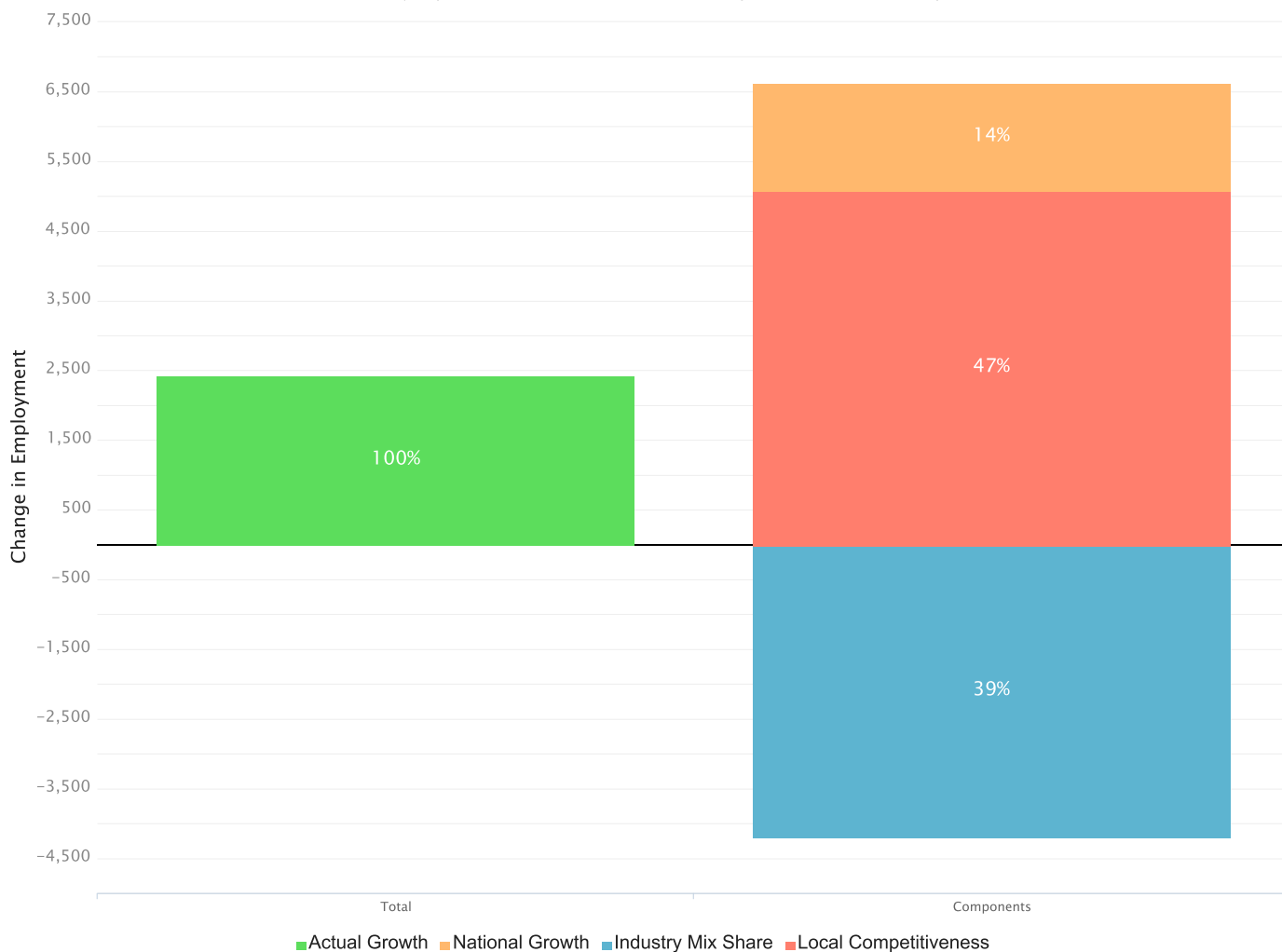


A geographic concentration of firms in related fields of business may reduce production costs, attract more suppliers and customers, and increase supply and demand for specialized labor, but may also increase competitive pressure and drive down prices.



Drivers of Employment Growth

Over the ten years ending 2018, employment in Manufacturing for the Tri-County Business Advisory Council added 2,421 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 gain of 5,068 jobs—meaning this industry was more competitive than its national counterpart during this period.

Drivers of Employment Growth for Tri-County Business Advisory Council



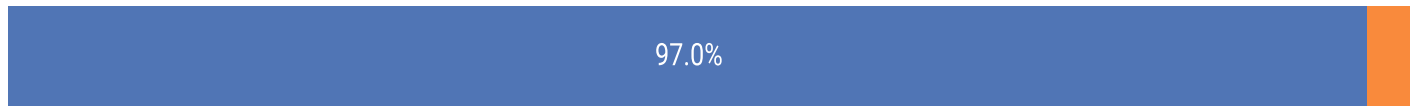
Source: JobsEQ®, Data as of 2018Q4


-  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 Tri-County Business Advisory Council. 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).



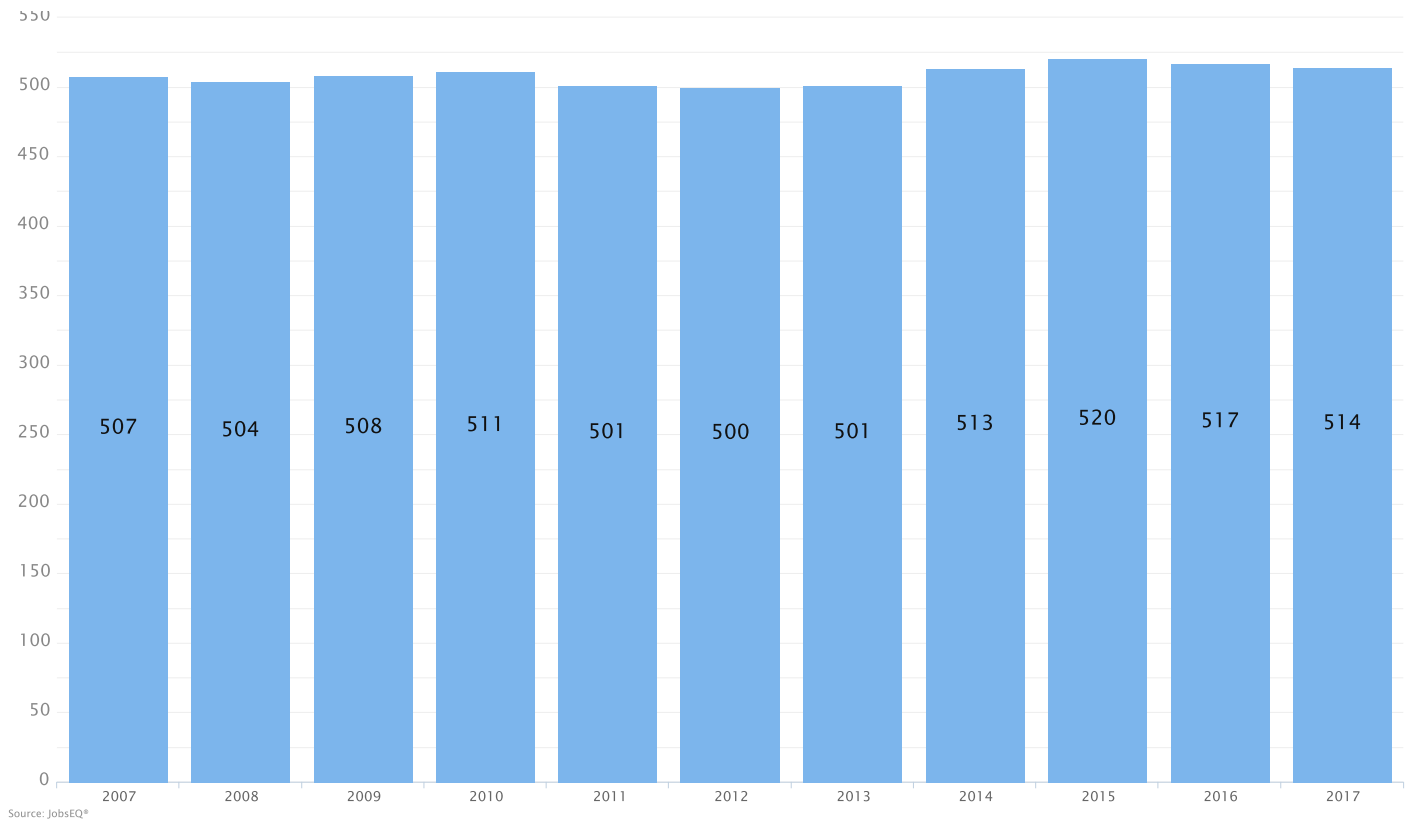
	Empl	%
 Private	22,238	97.0%
 Self-Employment	688	3.0%


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 2017, there were 514 Manufacturing establishments in the Tri-County Business Advisory Council (per covered employment establishment counts), an increase from 507 establishments ten years earlier in 2007.

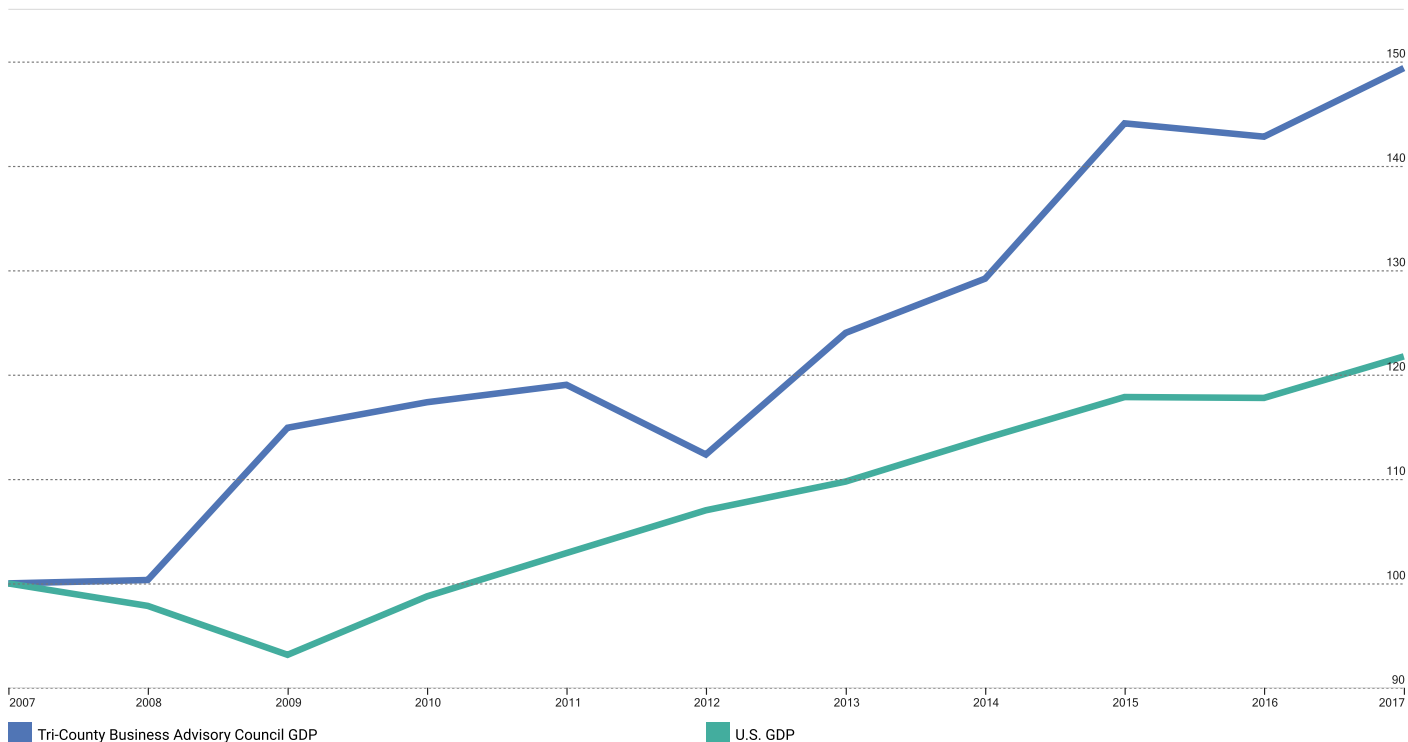


 New business formations are an important source of job creation in a regional economy, spurring innovation and competition, and driving productivity growth. Establishment data can provide an indicator of growth in businesses by counting each single location (such as a factory or a store) where business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

GDP & Productivity

In 2017, Manufacturing produced \$3.8 billion in GDP for the Tri-County Business Advisory Council.

GDP: Indexed 2007 = 100



20.2 %

Industry Share of Total GDP /
11.8 % in the nation



4.1 % ↑

Avg Ann % Change Last 10 Yrs /
2.0 % in the nation



\$308k

Output per Worker /
\$516k 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.

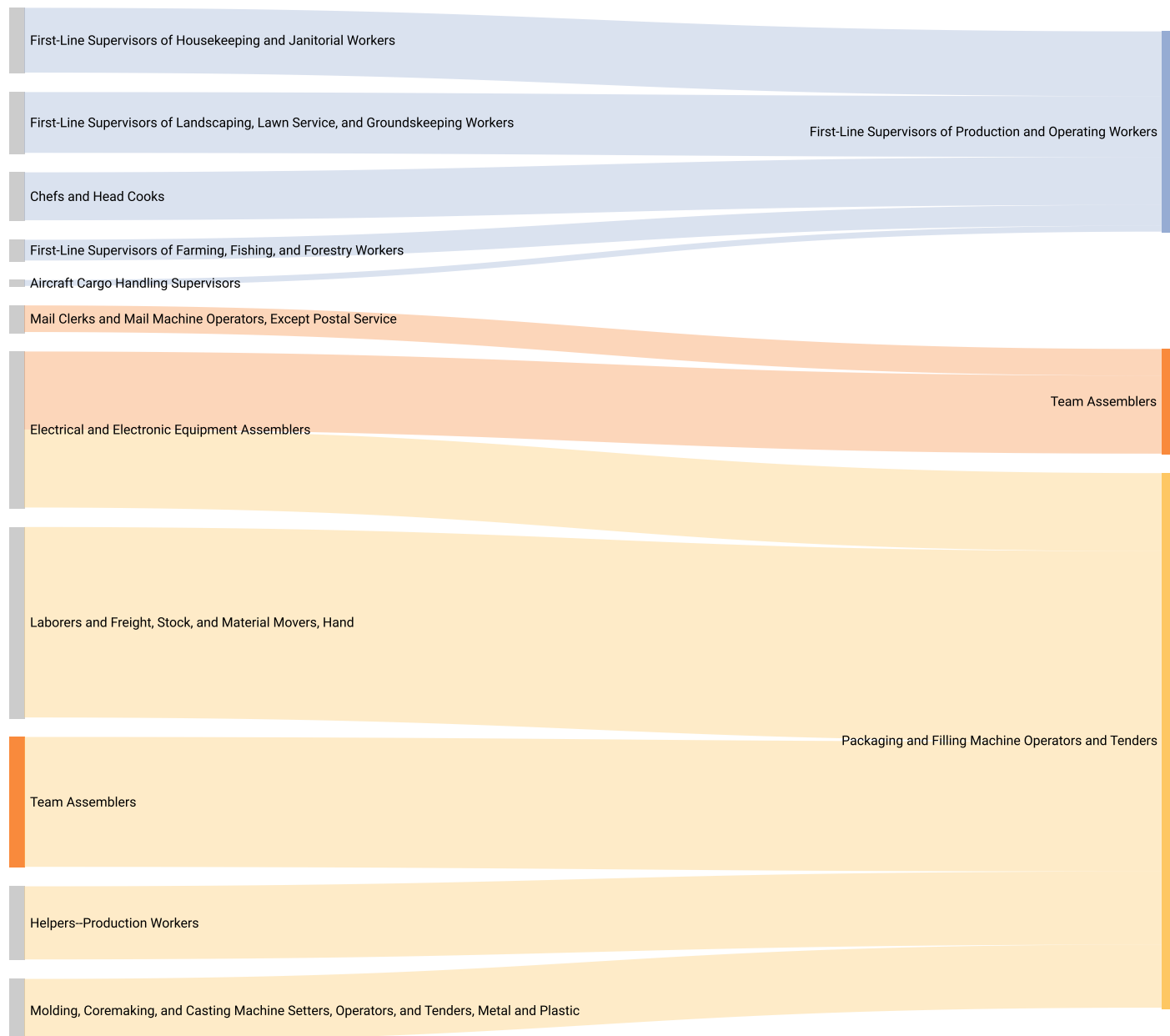
Supply Chain: Top Suppliers


As of 2018Q4, Manufacturing in the Tri-County Business Advisory Council are estimated to make \$4.4 billion in annual purchases from suppliers in the United States with about 20% or \$0.9 billion of these purchases being made from businesses located in the Tri-County Business Advisory Council.

2-digit Supplier Industries	Purchases from In-Region (\$M)	Purchases from Out-of-Region (\$M)
Manufacturing	\$541.0	\$1,470.4
Wholesale Trade	\$75.7	\$459.8
Professional, Scientific, and Technical Services	\$39.2	\$238.3
Management of Companies and Enterprises	\$43.2	\$222.0
Transportation and Warehousing	\$43.4	\$208.0
Remaining Supplier Industries	\$144.6	\$867.6
Total	\$887.2	\$3,466.2

 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
Appalachian State University	
Chemistry, General	68
Environmental Engineering Technology/Environmental Technology	61
Industrial Technology/Technician	16
Asheville-Buncombe Technical Community College	
Computer Engineering Technology/Technician	12
Mechanical Engineering/Mechanical Technology/Technician	14
Welding Technology/Welder	26
Mayland Community College	
Computer Engineering Technology/Technician	10
Engineering Technology, General	40
Welding Technology/Welder	43
McDowell Technical Community College	
Electromechanical and Instrumentation and Maintenance Technologies/Technicians, Other	8

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 Tri-County Business Advisory Council, the sampling above identifies those most linked to occupations relevant to Manufacturing.

Region Definition

Tri-County Business Advisory Council is defined as the following counties:

Avery County, North Carolina

Buncombe County, North Carolina

McDowell County, North Carolina

Madison County, North Carolina

Mitchell County, North Carolina

Watauga County, North Carolina

Yancey County, North Carolina

Data Notes

- Industry employment and wages (including total regional employment and wages) are as of 2018Q4 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 2018Q4 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 2017.
- 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 2016-2017 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.



Wholesale Trade

Tri-County Business Advisory Council



Industry Spotlight

Avery, Buncombe, Madison, McDowell, Mitchell,
Watauga, and Yancey

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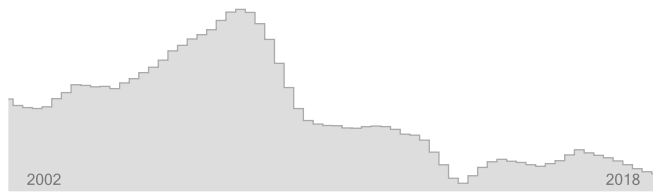
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Wholesale Trade
Tri-County Business Advisory Council – 2018Q4

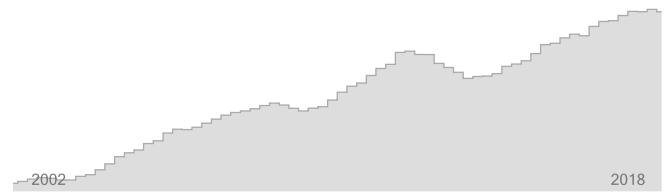
EMPLOYMENT



4,560

Regional employment / 6,001,937 in the nation

WAGES



\$51,901

Avg Wages per Worker / \$76,749 in the nation

-1.8% ↓

Avg Ann % Change Last 10 Years / -0.2% in the US



2.1%

% of Total Employment / 3.8% in the US

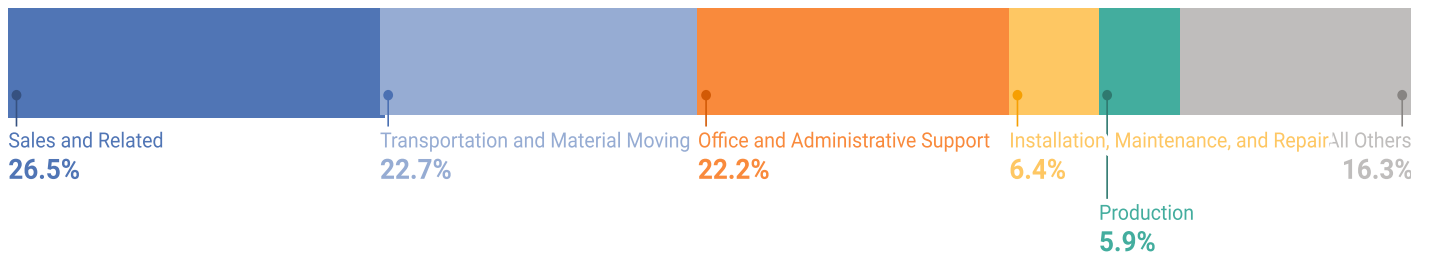


2.3% ↑

Avg Ann % Change Last 10 Years / +2.2% in the US

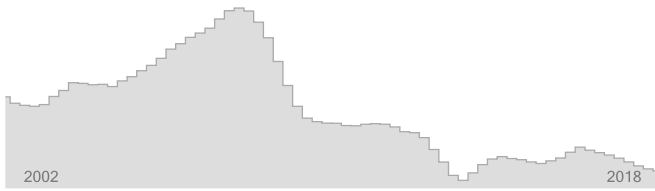


TOP OCCUPATION GROUPS

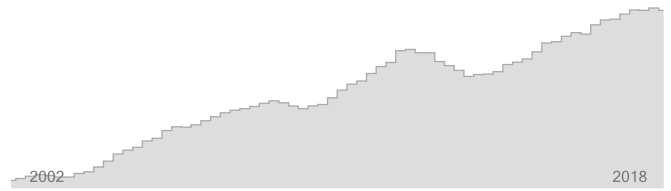


Industry Snapshot

EMPLOYMENT



WAGES

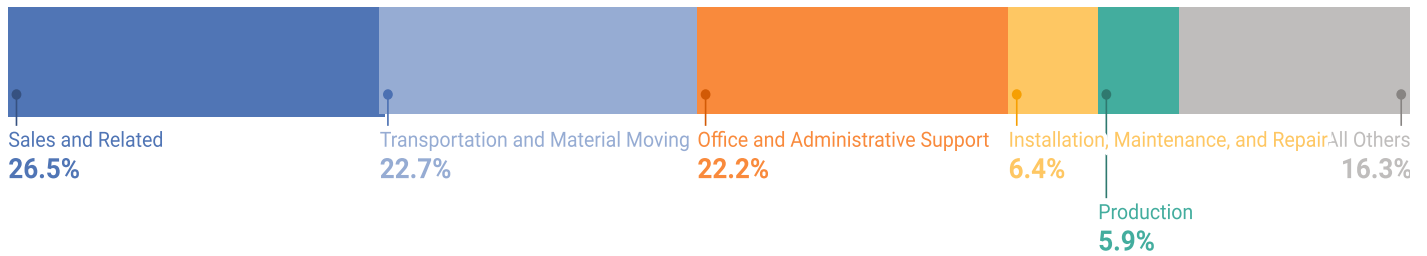


2-Digit Industry	Empl	Avg Ann Wages	LQ	5yr History	Annual Demand	Forecast Ann Growth
Wholesale Trade	4,560	\$51,901	0.56		499	0.4%

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.

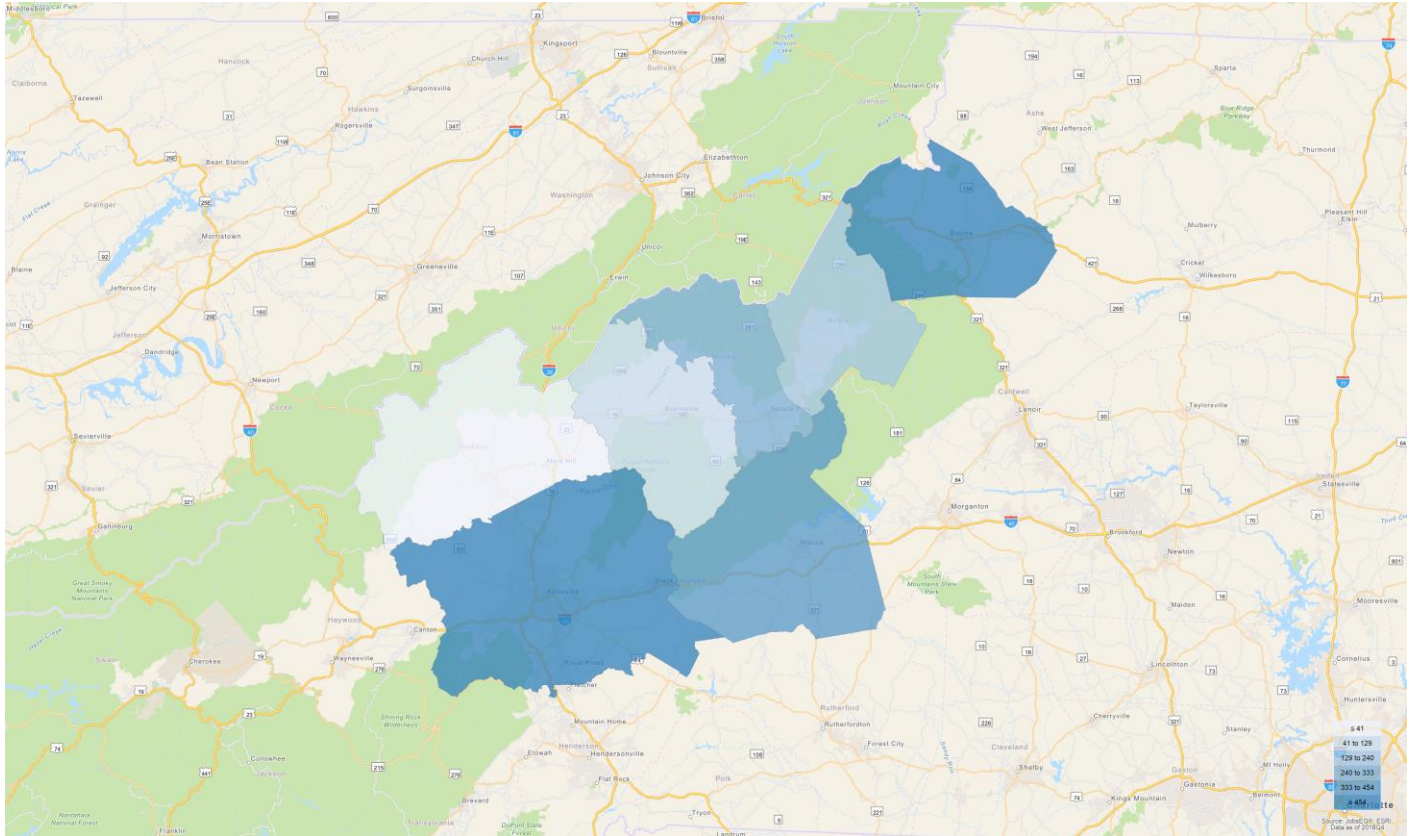
Staffing Pattern



6-digit Occupation	Empl	Avg Ann Wages	Annual Demand
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	772	\$56,900	84
Laborers and Freight, Stock, and Material Movers, Hand	376	\$28,600	54
Heavy and Tractor-Trailer Truck Drivers	199	\$41,600	22
Stock Clerks and Order Fillers	182	\$26,800	24
Customer Service Representatives	171	\$30,100	21
Light Truck or Delivery Services Drivers	159	\$35,800	18
Office Clerks, General	136	\$28,900	15
First-Line Supervisors of Non-Retail Sales Workers	135	\$84,000	13
General and Operations Managers	123	\$117,500	11
Shipping, Receiving, and Traffic Clerks	118	\$32,000	12
Remaining Component Occupations	2,155	\$49,500	232
Total	4,560		

 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
Buncombe County, North Carolina	3,325	Avery County, North Carolina	130
Watauga County, North Carolina	454	Yancey County, North Carolina	41
McDowell County, North Carolina	334	Madison County, North Carolina	35
Mitchell County, North Carolina	241		

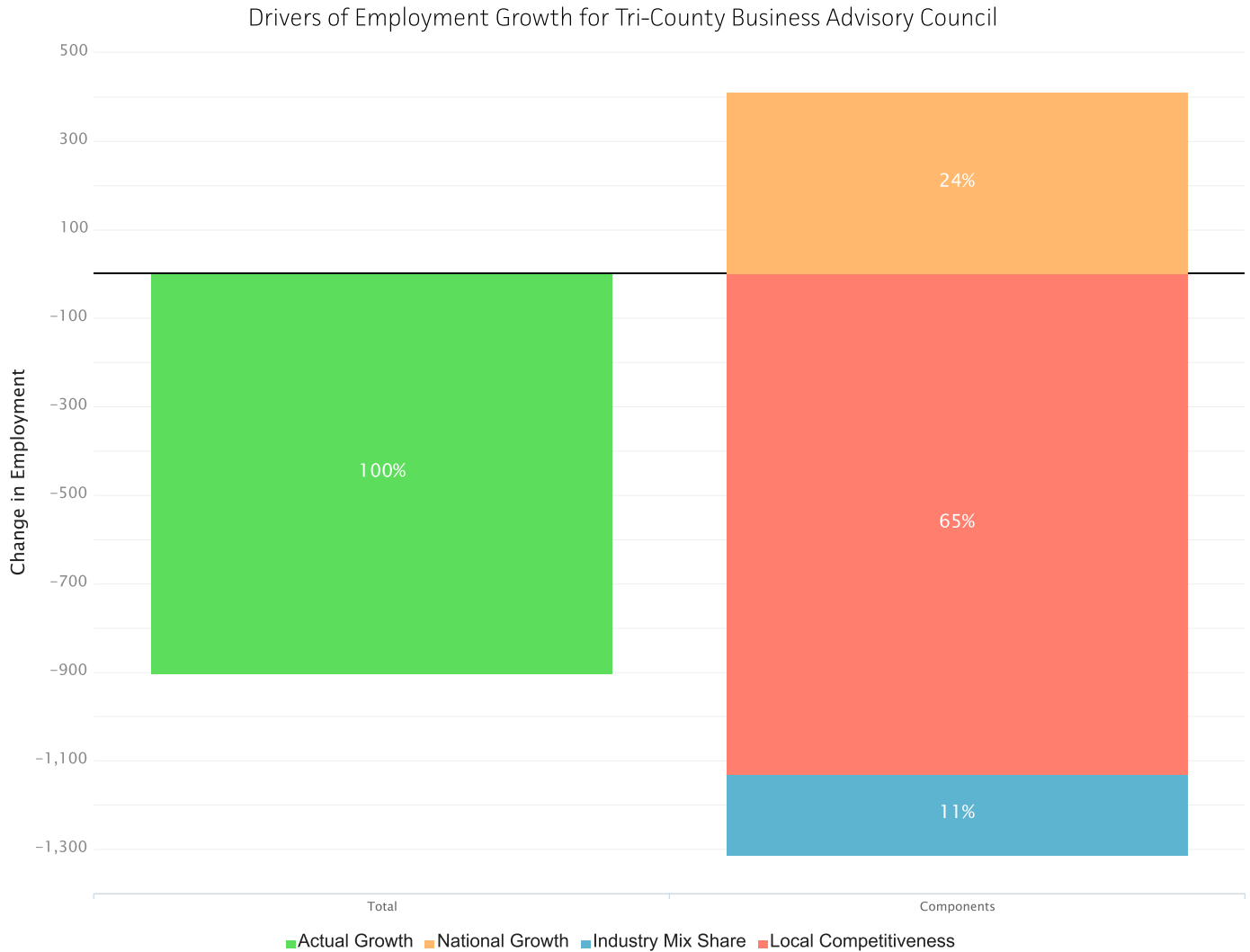
Source: JobsEQ®



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 Wholesale Trade for the Tri-County Business Advisory Council shed 901 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 1,129 jobs—meaning this industry was less competitive than its national counterpart during this period.

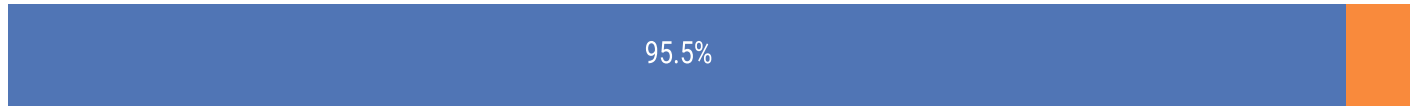


- Shift-share analysis sheds light on the factors that drive regional employment growth in an industry. A positive change in local competitiveness indicates advantages that may be due to factors such as superior technology, management, and labor pool, etc.
- National growth is due to the overall growth 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 Wholesale Trade for the Tri-County Business Advisory Council. 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).



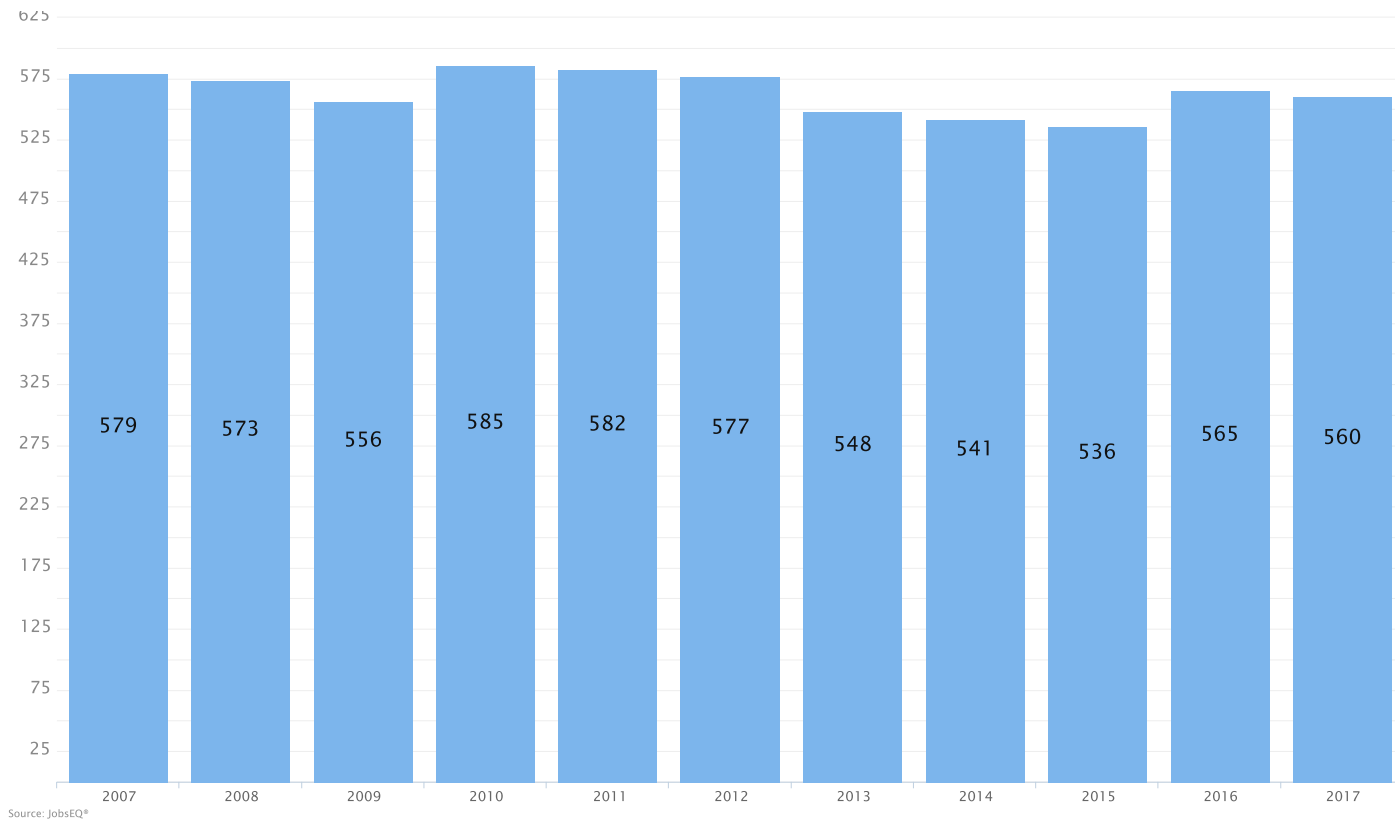
	Empl	%
Private	4,353	95.5%
Self-Employment	207	4.5%
Other Non-Covered	0	0.0%


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 2017, there were 560 Wholesale Trade establishments in the Tri-County Business Advisory Council (per covered employment establishment counts), a decrease from 579 establishments ten years earlier in 2007.

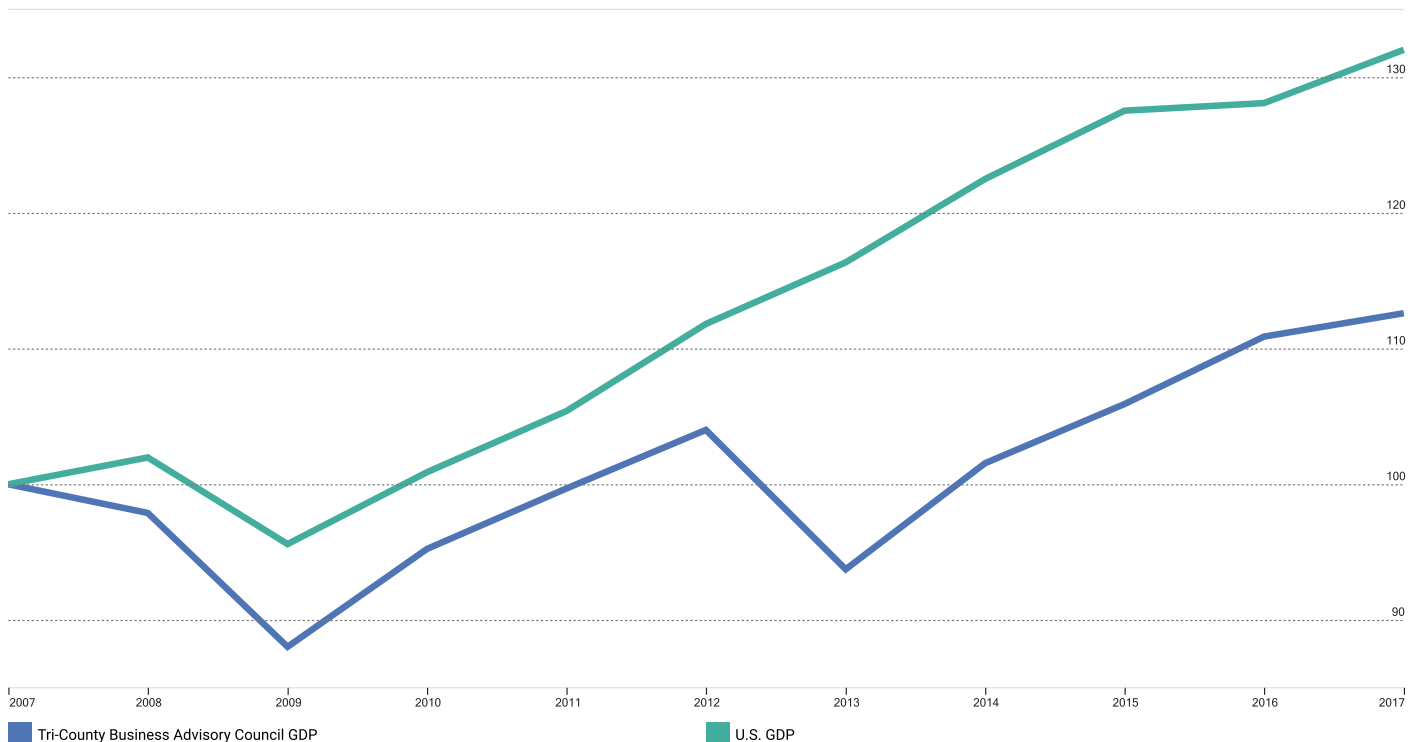


 New business formations are an important source of job creation in a regional economy, spurring innovation and competition, and driving productivity growth. Establishment data can provide an indicator of growth in businesses by counting each single location (such as a factory or a store) where business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

GDP & Productivity

In 2017, Wholesale Trade produced \$0.6 billion in GDP for the Tri-County Business Advisory Council.

GDP: Indexed 2007 = 100



3.0 %

Industry Share of Total GDP /
5.9 % in the nation



1.2 % ↑

Avg Ann % Change Last 10 Yrs /
2.8 % in the nation



\$203k

Output per Worker /
\$278k 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.

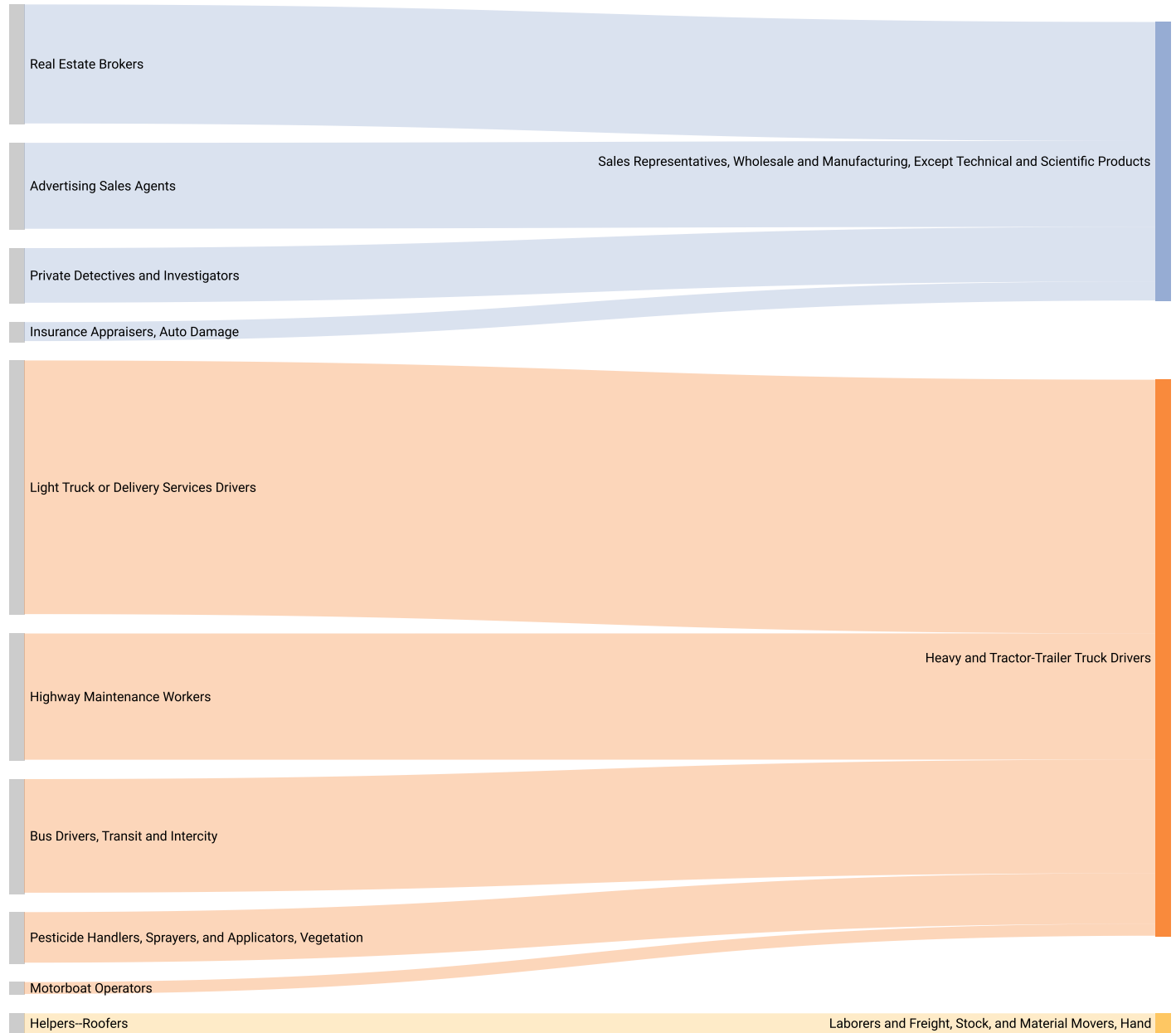
Supply Chain: Top Suppliers


As of 2018Q4, Wholesale Trade in the Tri-County Business Advisory Council are estimated to make \$293.0 million in annual purchases from suppliers in the United States with about 42% or \$122.0 million of these purchases being made from businesses located in the Tri-County Business Advisory Council.

2-digit Supplier Industries	Purchases from In-Region (\$M)	Purchases from Out-of-Region (\$M)
Real Estate and Rental and Leasing	\$23.3	\$19.9
Professional, Scientific, and Technical Services	\$16.9	\$21.5
Transportation and Warehousing	\$15.7	\$17.7
Manufacturing	\$8.9	\$24.4
Finance and Insurance	\$6.0	\$25.0
Remaining Supplier Industries	\$51.3	\$62.5
Total	\$122.0	\$171.0

 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 Wholesale Trade

Program	Awards
Appalachian State University	
Accounting	158
Business Administration and Management, General	250
Finance, General	114
Logistics, Materials, and Supply Chain Management	25
Marketing/Marketing Management, General	100
Asheville-Buncombe Technical Community College	
Medical Office Management/Administration	55
Medium/Heavy Vehicle and Truck Technology/Technician	33
Mars Hill University	
Fashion Merchandising	4
Mayland Community College	
Welding Technology/Welder	43
McDowell Technical Community College	
Electromechanical and Instrumentation and Maintenance Technologies/Technicians, Other	8

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 Tri-County Business Advisory Council, the sampling above identifies those most linked to occupations relevant to Wholesale Trade.

Region Definition

Tri-County Business Advisory Council is defined as the following counties:

Avery County, North Carolina

Buncombe County, North Carolina

McDowell County, North Carolina

Madison County, North Carolina

Mitchell County, North Carolina

Watauga County, North Carolina

Yancey County, North Carolina

Data Notes

- Industry employment and wages (including total regional employment and wages) are as of 2018Q4 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.
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- 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 2016-2017 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.



Retail Trade

Tri-County Business Advisory Council



Industry Spotlight

Avery, Buncombe, Madison, McDowell, Mitchell,
Watauga, and Yancey

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Retail Trade
Tri-County Business Advisory Council – 2018Q4

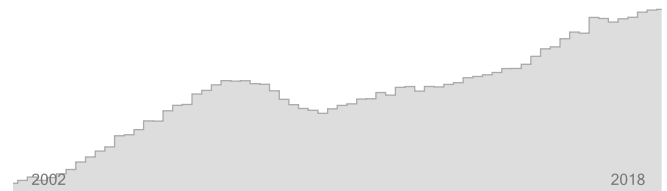
EMPLOYMENT



26,936

Regional employment / **16,599,715** in the nation

WAGES

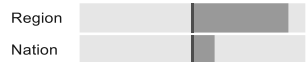


\$26,327

Avg Wages per Worker / **\$32,324** in the nation

1.2% ↑

Avg Ann % Change Last 10 Years / **+0.3%** in the US



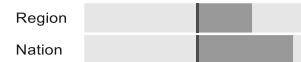
12.7%

% of Total Employment / **10.5%** in the US



1.1% ↑

Avg Ann % Change Last 10 Years / **+2.0%** in the US

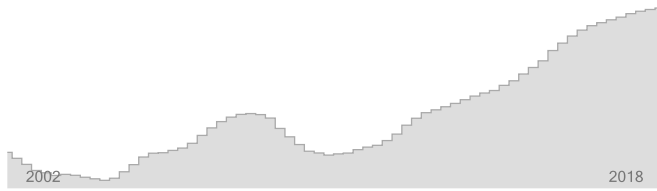


TOP OCCUPATION GROUPS

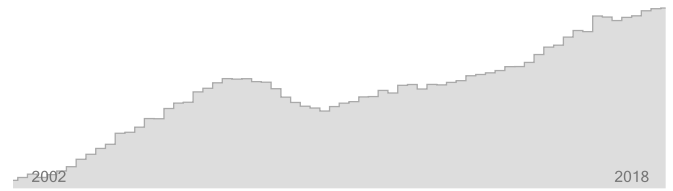


Industry Snapshot

EMPLOYMENT



WAGES

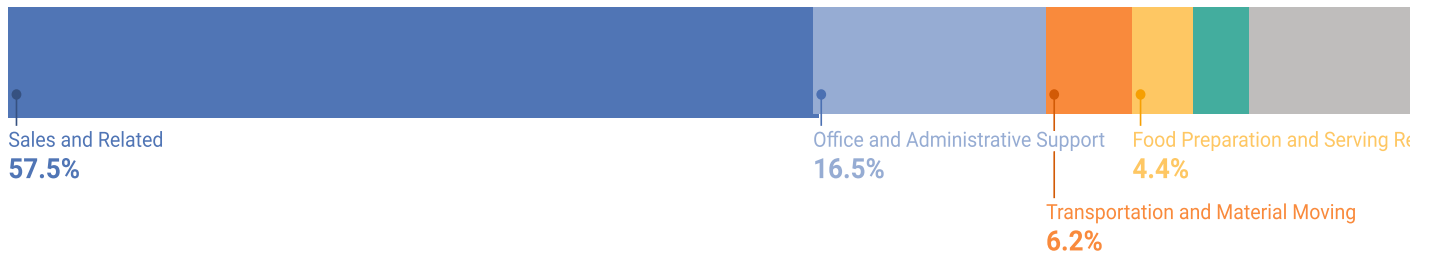


2-Digit Industry	Empl	Avg Ann Wages	LQ	5yr History	Annual Demand	Forecast Ann Growth
Retail Trade	26,936	\$26,327	1.20		3,704	0.4%


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.

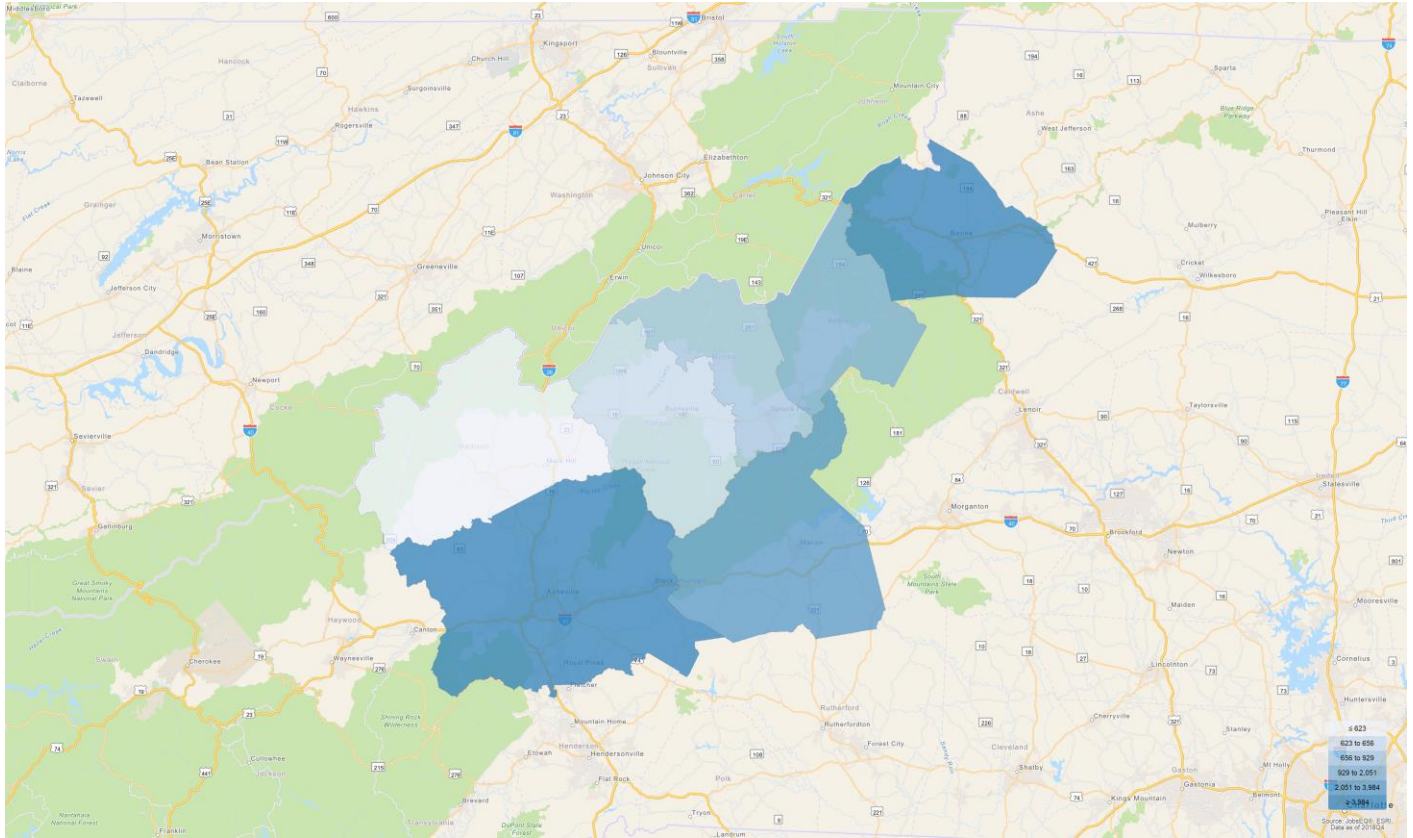
Staffing Pattern



6-digit Occupation	Empl	Avg Ann Wages	Annual Demand
Retail Salespersons	7,048	\$26,900	1,036
Cashiers	5,153	\$24,100	951
First-Line Supervisors of Retail Sales Workers	2,411	\$42,400	267
Stock Clerks and Order Fillers	2,217	\$26,800	297
Customer Service Representatives	696	\$30,100	94
Laborers and Freight, Stock, and Material Movers, Hand	511	\$28,600	74
Combined Food Preparation and Serving Workers, Including Fast Food	441	\$24,100	86
Pharmacy Technicians	440	\$31,300	40
Food Preparation Workers	422	\$24,100	78
Automotive Service Technicians and Mechanics	381	\$38,500	39
Remaining Component Occupations	7,192	\$45,700	825
Total	26,936		

 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
Buncombe County, North Carolina	18,180	Mitchell County, North Carolina	656
Watauga County, North Carolina	3,985	Yancey County, North Carolina	624
McDowell County, North Carolina	2,052	Madison County, North Carolina	511
Avery County, North Carolina	930		

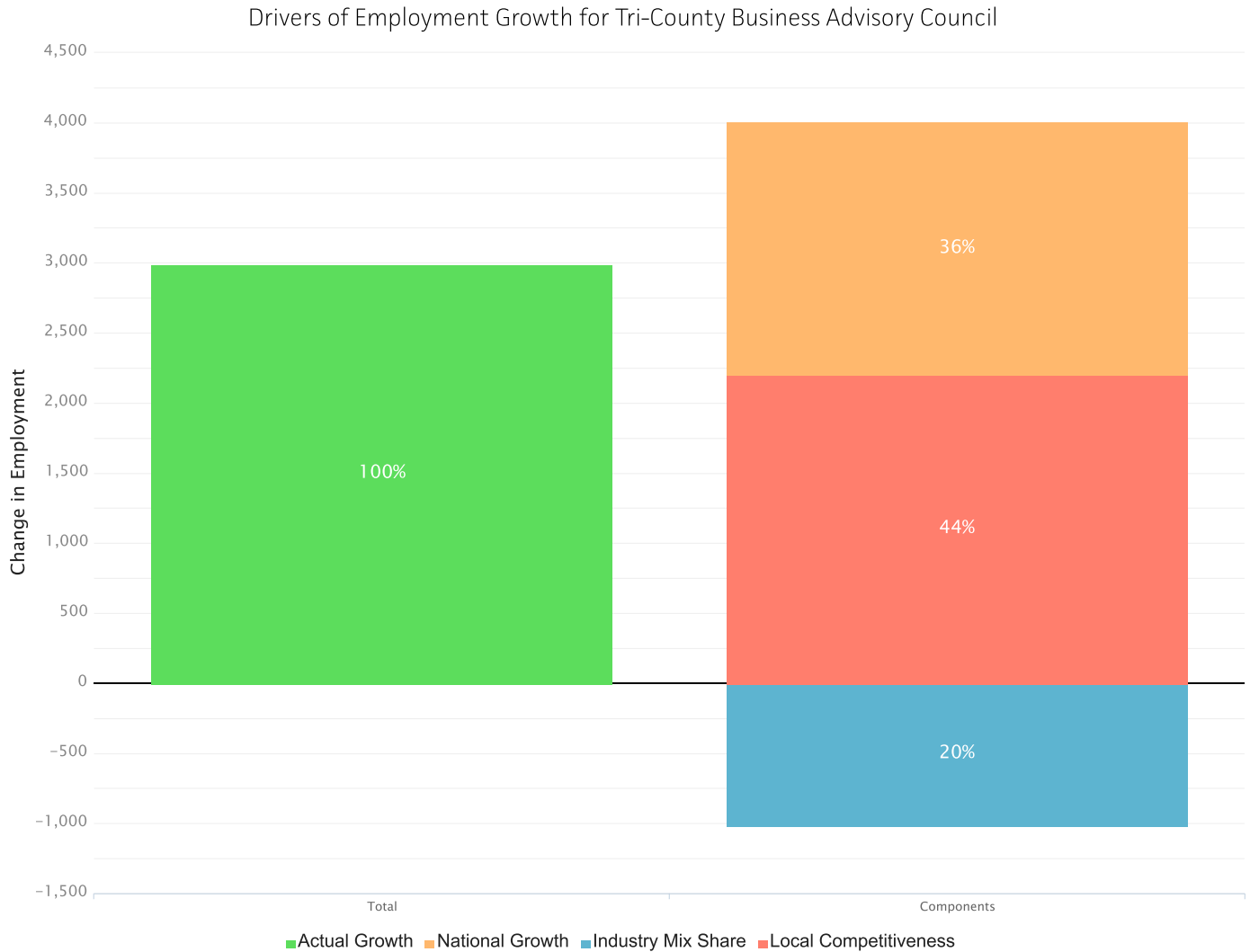
Source: JobsEQ®





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 Retail Trade for the Tri-County Business Advisory Council added 2,988 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 gain of 2,194 jobs—meaning this industry was more competitive than its national counterpart during this period.

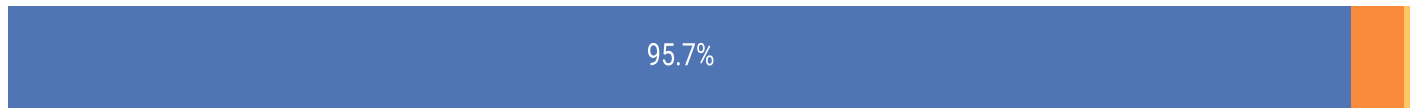


-  Shift-share analysis sheds light on the factors that drive regional employment growth in an industry. A positive change in local competitiveness indicates advantages that may be due to factors such as superior technology, management, and labor pool, etc.
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Employment Distribution by Type

The table below shows the employment mix by ownership type for Retail Trade for the Tri-County Business Advisory Council. 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).

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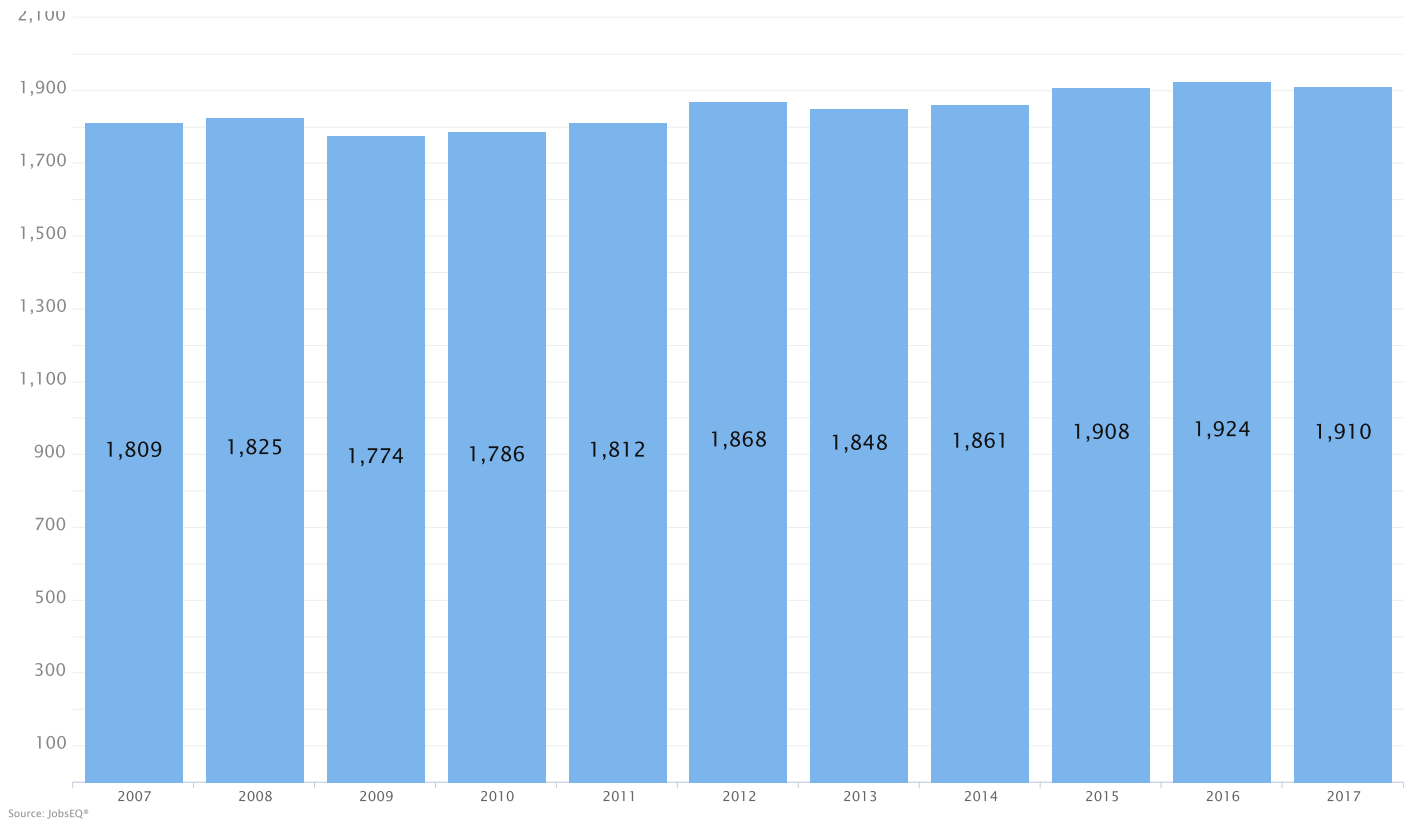
	Empl	%
Private	25,789	95.7%
Self-Employment	1,030	3.8%
Local Government	118	0.4%


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 2017, there were 1,910 Retail Trade establishments in the Tri-County Business Advisory Council (per covered employment establishment counts), an increase from 1,809 establishments ten years earlier in 2007.

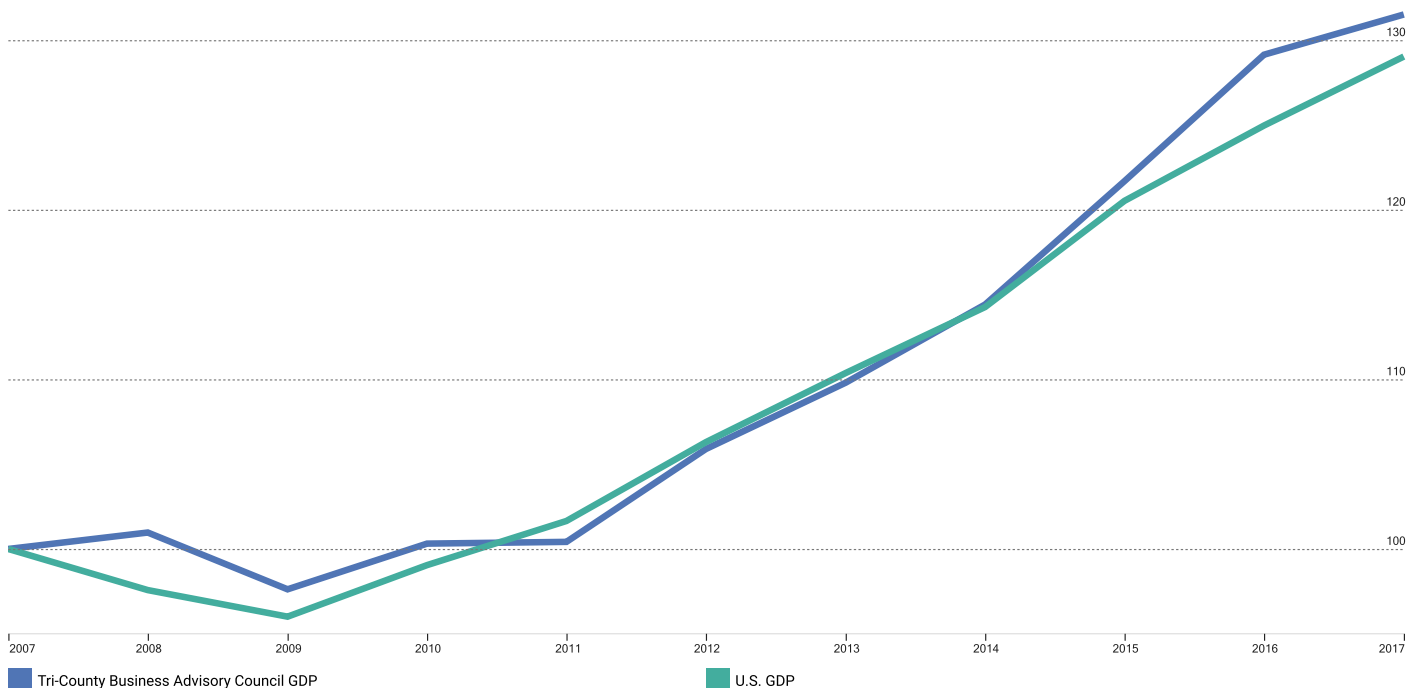


 New business formations are an important source of job creation in a regional economy, spurring innovation and competition, and driving productivity growth. Establishment data can provide an indicator of growth in businesses by counting each single location (such as a factory or a store) where business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

GDP & Productivity

In 2017, Retail Trade produced \$1.4 billion in GDP for the Tri-County Business Advisory Council.

GDP: Indexed 2007 = 100



7.3 %

Industry Share of Total GDP /
5.9 % in the nation



2.8 % ↑

Avg Ann % Change Last 10 Yrs /
2.6 % in the nation



\$98k

Output per Worker /
\$112k 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.

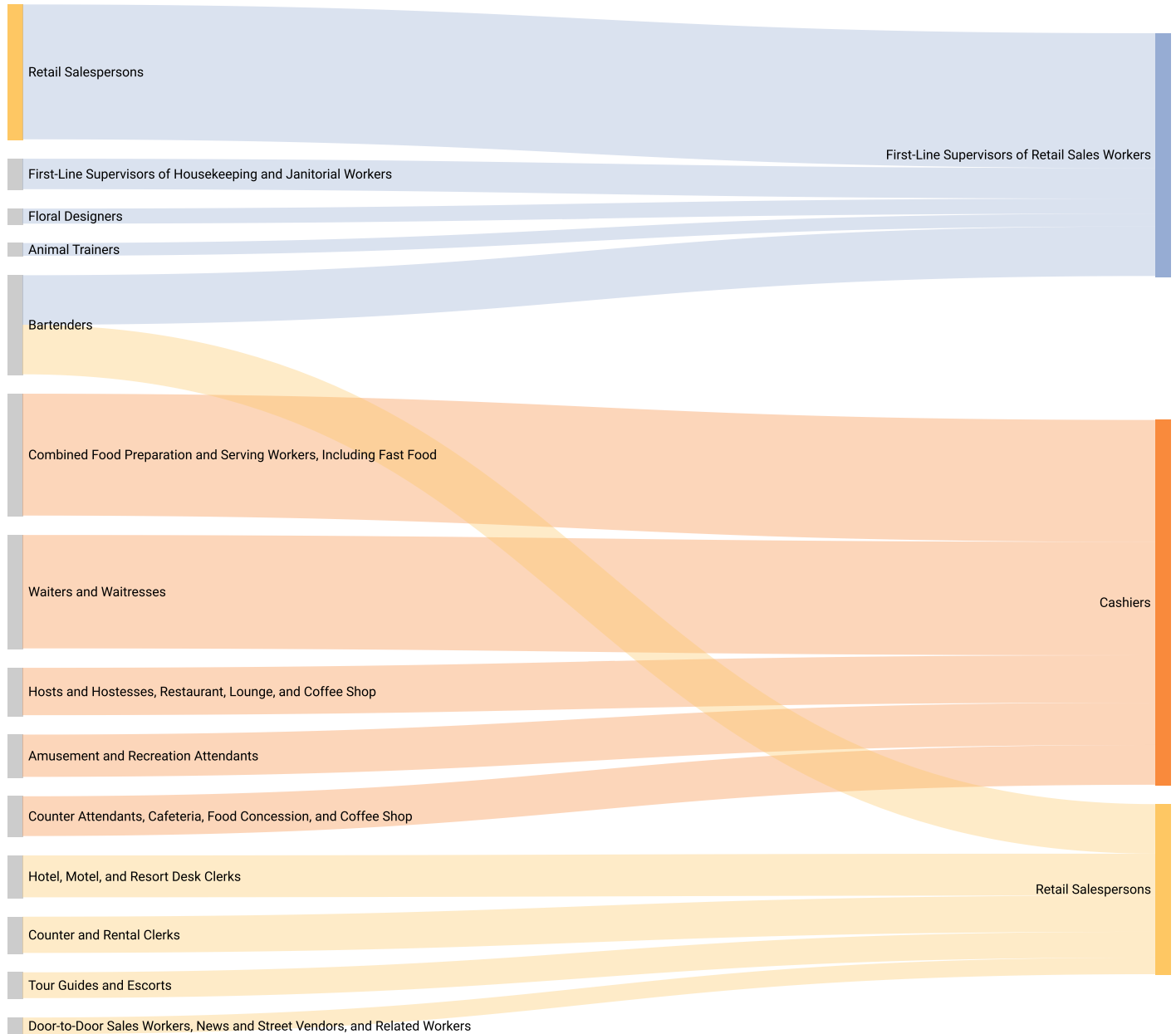
Supply Chain: Top Suppliers


As of 2018Q4, Retail Trade in the Tri-County Business Advisory Council are estimated to make \$1.1 billion in annual purchases from suppliers in the United States with about 37% or \$0.4 billion of these purchases being made from businesses located in the Tri-County Business Advisory Council.

2-digit Supplier Industries	Purchases from In-Region (\$M)	Purchases from Out-of-Region (\$M)
Real Estate and Rental and Leasing	\$120.1	\$118.8
Manufacturing	\$30.9	\$94.1
Transportation and Warehousing	\$56.6	\$60.9
Professional, Scientific, and Technical Services	\$35.3	\$79.5
Finance and Insurance	\$16.0	\$79.4
Remaining Supplier Industries	\$135.5	\$249.5
Total	\$394.4	\$682.3

 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 Retail Trade

Program	Awards
Appalachian State University	
Business Administration and Management, General	250
Finance, General	114
Interior Design	20
Marketing/Marketing Management, General	100
Asheville-Buncombe Technical Community College	
Automobile/Automotive Mechanics Technology/Technician	37
Baking and Pastry Arts/Baker/Pastry Chef	18
Heating, Air Conditioning, Ventilation and Refrigeration Maintenance Technology/Technician	15
Medical Office Management/Administration	55
Medium/Heavy Vehicle and Truck Technology/Technician	33
Pharmacy Technician/Assistant	14

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 Tri-County Business Advisory Council, the sampling above identifies those most linked to occupations relevant to Retail Trade.

Region Definition

Tri-County Business Advisory Council is defined as the following counties:

Avery County, North Carolina

Buncombe County, North Carolina

McDowell County, North Carolina

Madison County, North Carolina

Mitchell County, North Carolina

Watauga County, North Carolina

Yancey County, North Carolina

Data Notes

- Industry employment and wages (including total regional employment and wages) are as of 2018Q4 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 2018Q4 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 2017.
- 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 2016-2017 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.



Transportation and Warehousing

Tri-County Business Advisory Council



Industry Spotlight

Avery, Buncombe, Madison, McDowell, Mitchell,
Watauga, and Yancey

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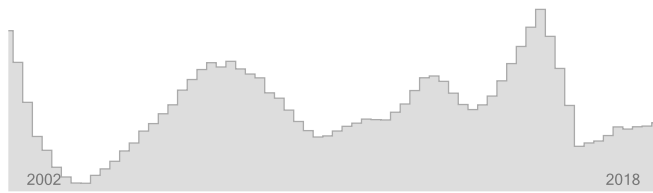
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Transportation and Warehousing
Tri-County Business Advisory Council – 2018Q4

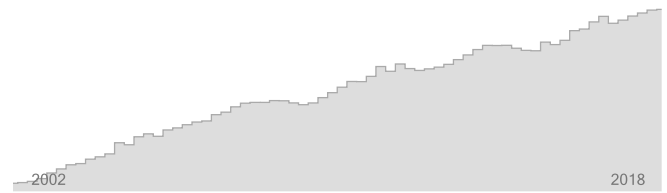
EMPLOYMENT



5,496

Regional employment / 6,966,453 in the nation

WAGES



\$44,245

Avg Wages per Worker / \$52,845 in the nation

-0.4% ↓

Avg Ann % Change Last 10 Years / +1.5% in the US



2.6%

% of Total Employment / 4.4% in the US



1.7% ↑

Avg Ann % Change Last 10 Years / +1.5% in the US

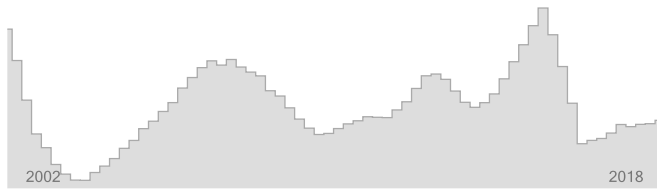


TOP OCCUPATION GROUPS

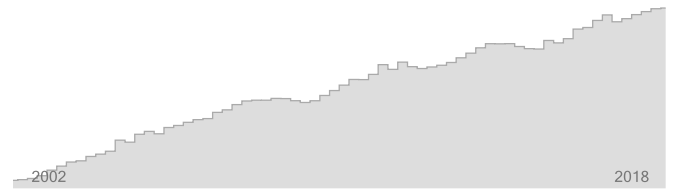


Industry Snapshot

EMPLOYMENT



WAGES



2-Digit Industry	Empl	Avg Ann Wages	LQ	5yr History	Annual Demand	Forecast Ann Growth
Transportation and Warehousing	5,496	\$44,245	0.59		631	0.9%

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.

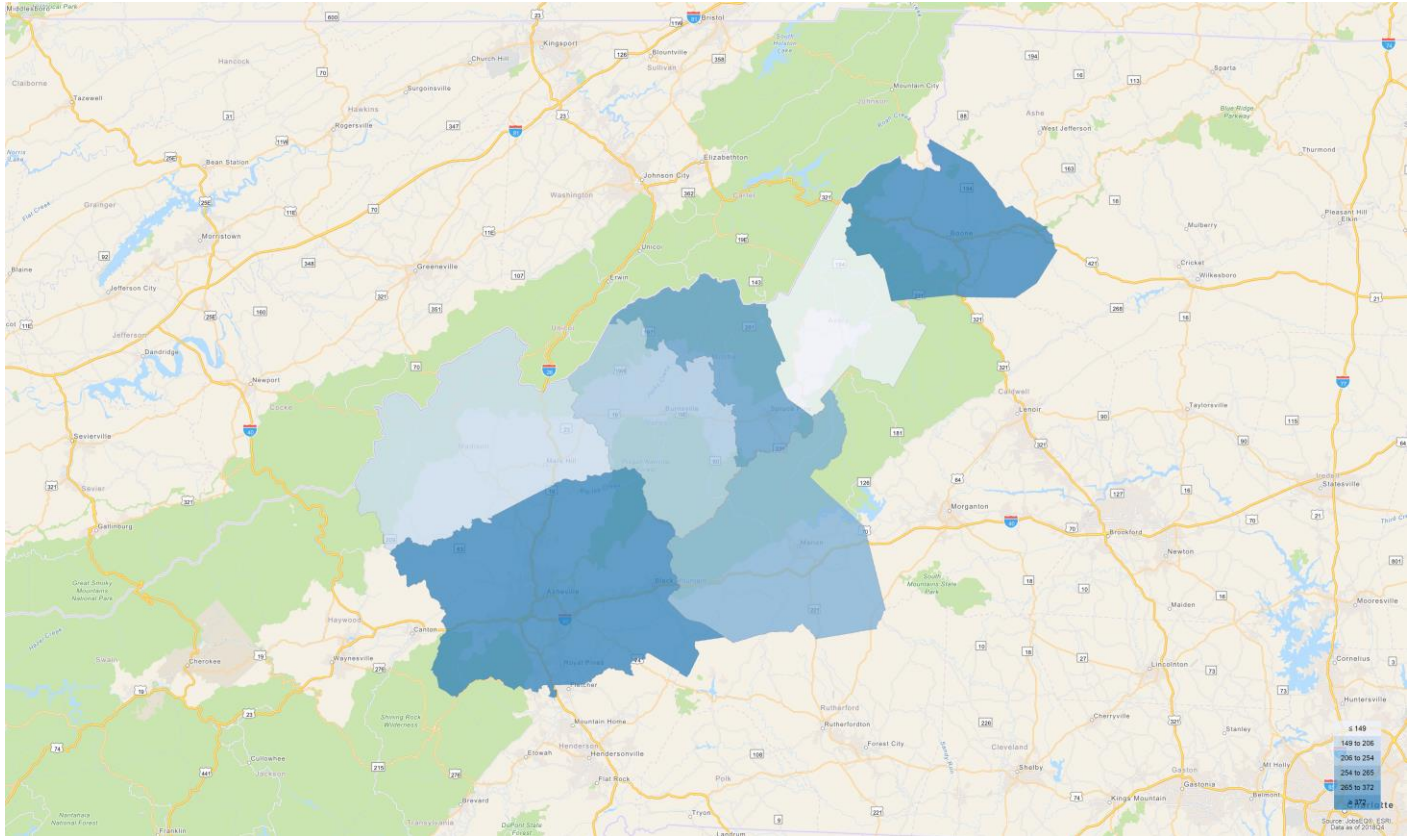
Staffing Pattern



6-digit Occupation	Empl	Avg Ann Wages	Annual Demand
Heavy and Tractor-Trailer Truck Drivers	1,234	\$41,600	140
Laborers and Freight, Stock, and Material Movers, Hand	736	\$28,600	122
Postal Service Mail Carriers	473	\$50,100	25
Industrial Truck and Tractor Operators	245	\$34,400	32
Light Truck or Delivery Services Drivers	233	\$35,800	29
Bus Drivers, School or Special Client	166	\$26,900	22
Postal Service Clerks	135	\$52,100	8
Stock Clerks and Order Fillers	133	\$26,800	20
Bus Drivers, Transit and Intercity	128	\$28,000	17
Packers and Packagers, Hand	120	\$24,200	23
Remaining Component Occupations	1,862	\$50,900	207
Total	5,496		

 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
Buncombe County, North Carolina	4,109	Yancey County, North Carolina	207
Watauga County, North Carolina	372	Madison County, North Carolina	150
Mitchell County, North Carolina	266	Avery County, North Carolina	138
McDowell County, North Carolina	254		

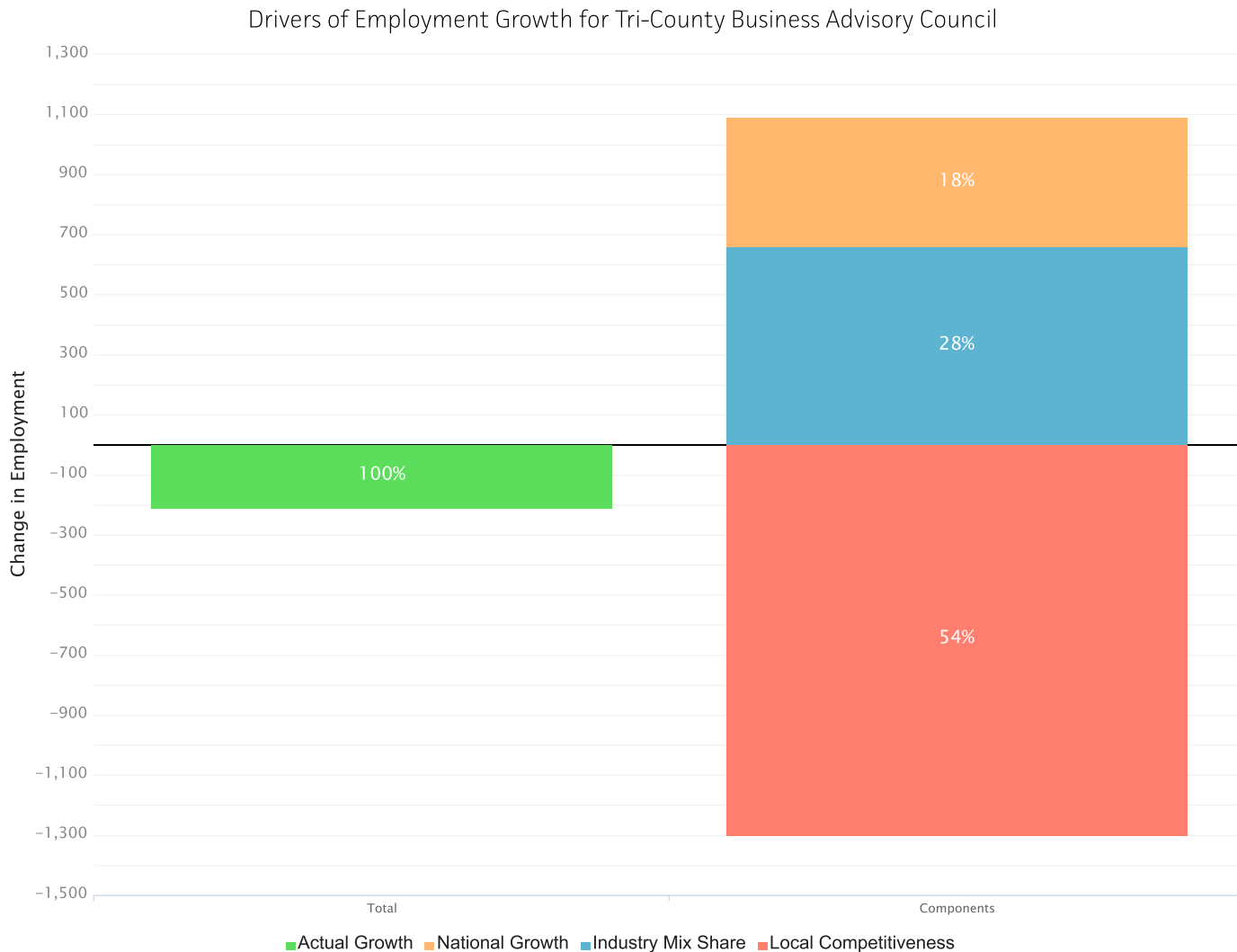
Source: JobsEQ®





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 Transportation and Warehousing for the Tri-County Business Advisory Council shed 208 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 1,297 jobs—meaning this industry was less competitive than its national counterpart during this period.



-  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 Transportation and Warehousing for the Tri-County Business Advisory Council. 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).



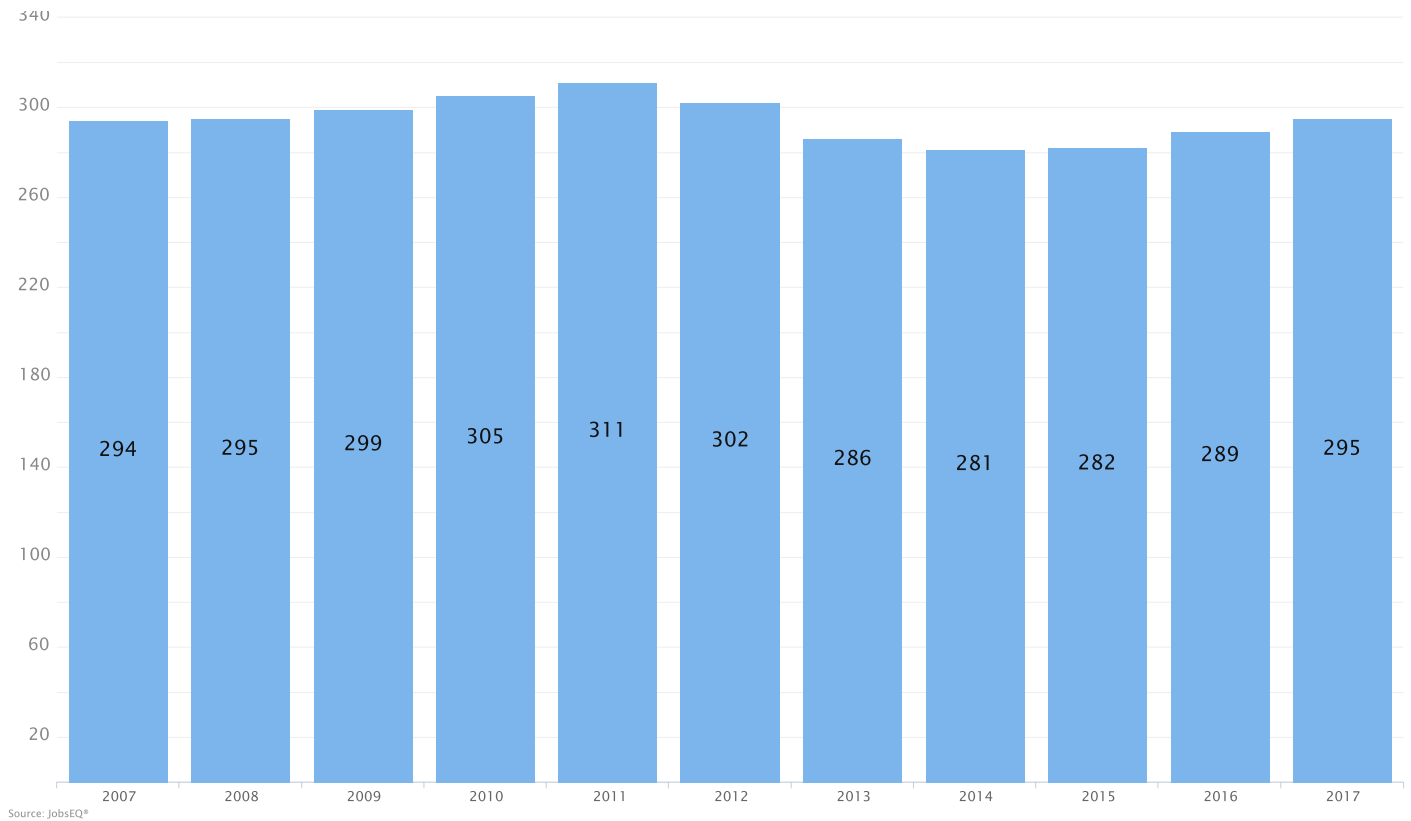
	Empl	%
Private	3,855	70.1%
Self-Employment	544	9.9%
Local Government	207	3.8%
Federal Government	739	13.4%
Other Non-Covered	151	2.7%


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 2017, there were 295 Transportation and Warehousing establishments in the Tri-County Business Advisory Council (per covered employment establishment counts), an increase from 294 establishments ten years earlier in 2007.

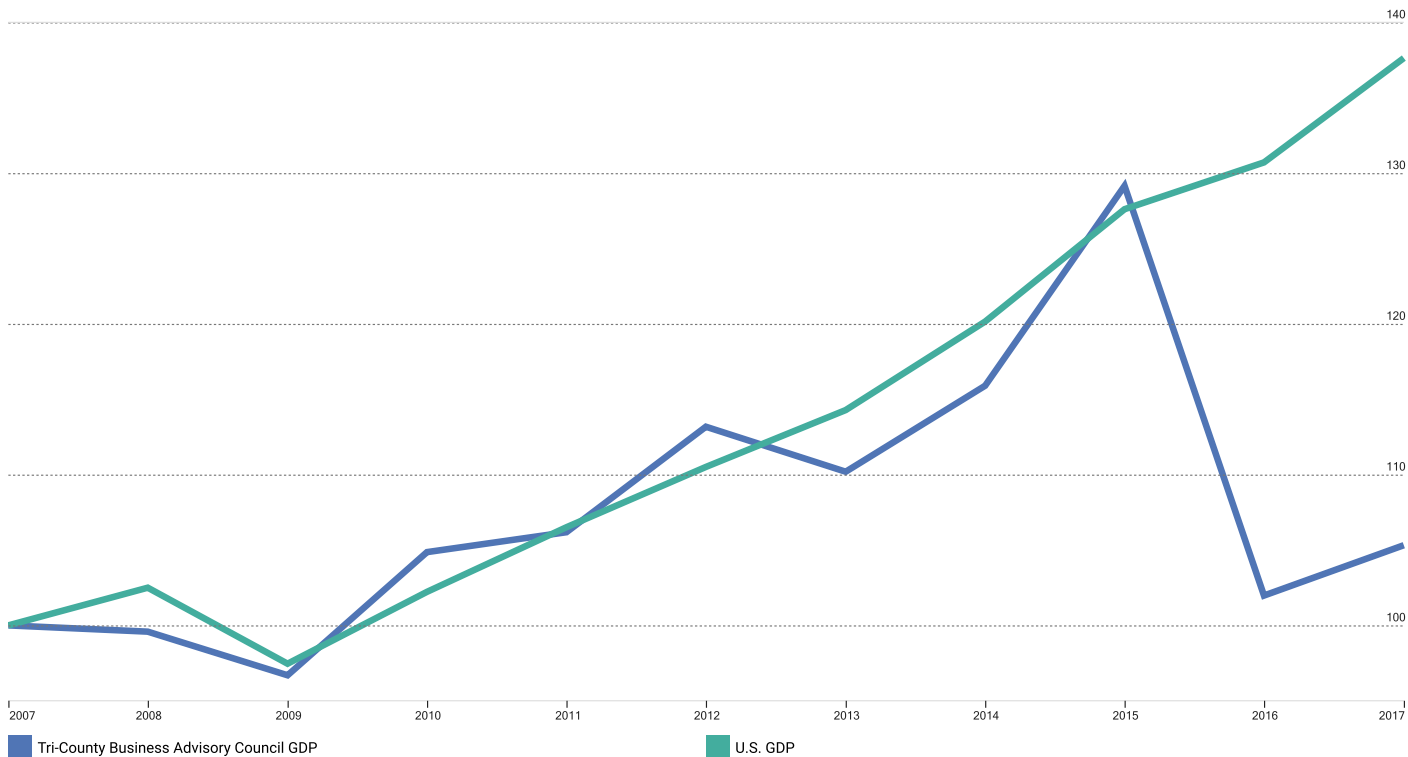


 New business formations are an important source of job creation in a regional economy, spurring innovation and competition, and driving productivity growth. Establishment data can provide an indicator of growth in businesses by counting each single location (such as a factory or a store) where business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

GDP & Productivity

In 2017, Transportation and Warehousing produced \$0.4 billion in GDP for the Tri-County Business Advisory Council.

GDP: Indexed 2007 = 100



2.2 %

Industry Share of Total GDP /
3.7 % in the nation



0.5 % ↑

Avg Ann % Change Last 10 Yrs /
3.2 % in the nation



\$143k

Output per Worker /
\$191k 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.

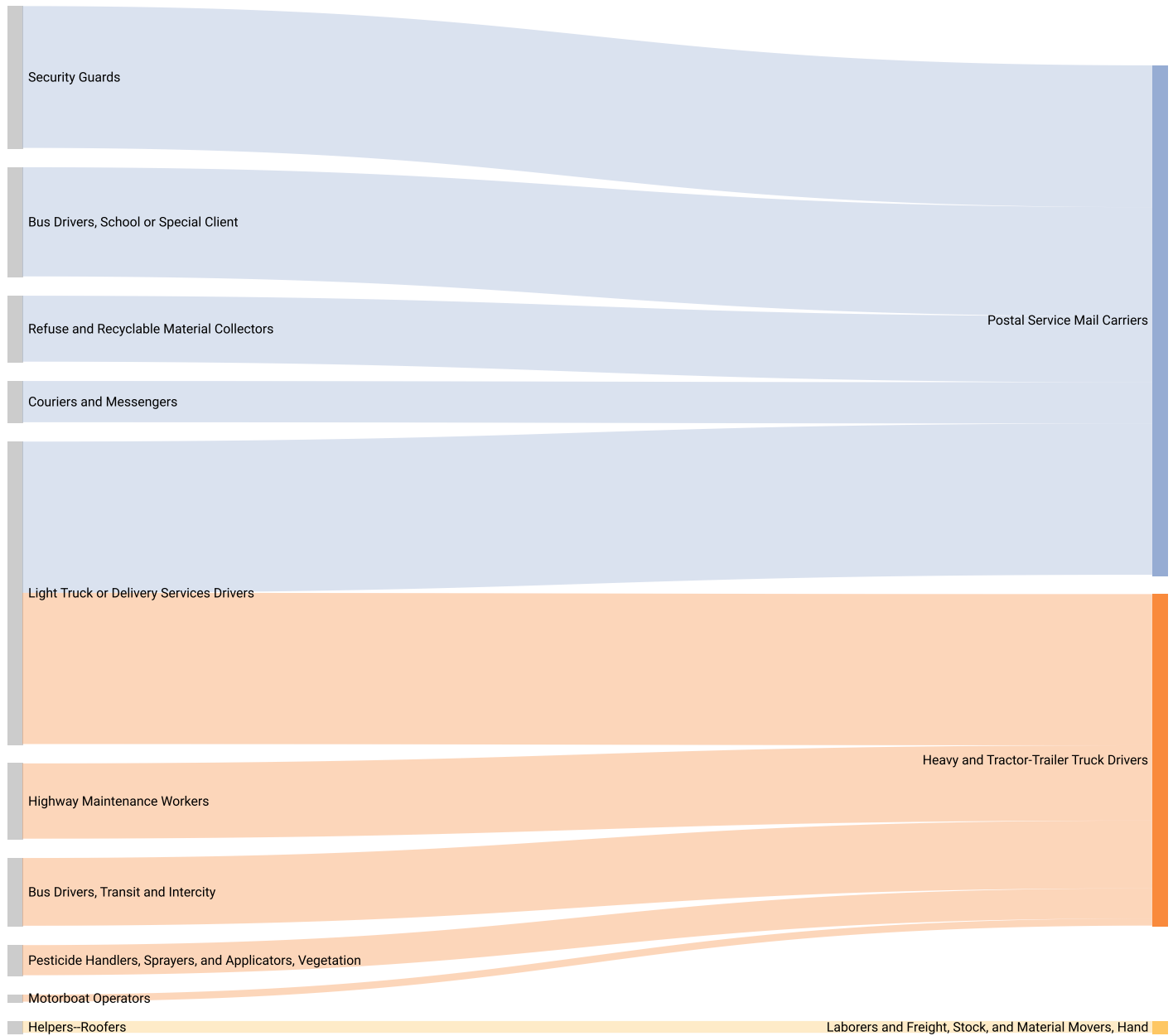
Supply Chain: Top Suppliers


As of 2018Q4, Transportation and Warehousing in the Tri-County Business Advisory Council are estimated to make \$419.7 million in annual purchases from suppliers in the United States with about 31% or \$129.2 million of these purchases being made from businesses located in the Tri-County Business Advisory Council.

2-digit Supplier Industries	Purchases from In-Region (\$M)	Purchases from Out-of-Region (\$M)
Manufacturing	\$11.9	\$95.4
Transportation and Warehousing	\$37.7	\$43.5
Real Estate and Rental and Leasing	\$23.0	\$24.5
Finance and Insurance	\$6.7	\$29.4
Wholesale Trade	\$9.7	\$22.1
Remaining Supplier Industries	\$40.2	\$75.6
Total	\$129.2	\$290.5

 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





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Postsecondary Programs Linked to Transportation and Warehousing

Program	Awards
Appalachian State University	
Business Administration and Management, General	250
Child Development	22
Logistics, Materials, and Supply Chain Management	25
Political Science and Government, General	78
Public Administration	45
Sociology	54
Asheville-Buncombe Technical Community College	
Airline/Commercial/Professional Pilot and Flight Crew	11
Automobile/Automotive Mechanics Technology/Technician	37
Medical Office Management/Administration	55
Medium/Heavy Vehicle and Truck Technology/Technician	33

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 Tri-County Business Advisory Council, the sampling above identifies those most linked to occupations relevant to Transportation and Warehousing.

Region Definition

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Madison County, North Carolina

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Information

Tri-County Business Advisory Council



Industry Spotlight

Avery, Buncombe, Madison, McDowell, Mitchell,
Watauga, and Yancey

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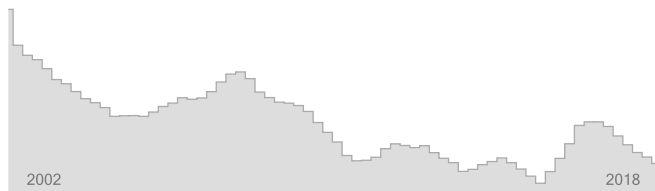
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Information

Tri-County Business Advisory Council – 2018Q4

EMPLOYMENT



2,053

Regional employment / 3,090,211 in the nation

WAGES



\$47,318

Avg Wages per Worker / \$106,533 in the nation

-1.2% ↓

Avg Ann % Change Last 10 Years / -0.6% in the US



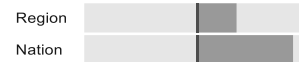
1.0%

% of Total Employment / 2.0% in the US

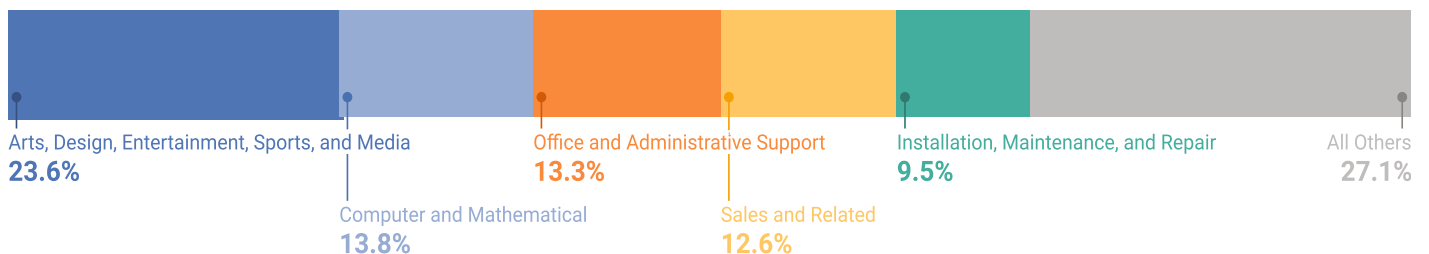


1.9% ↑

Avg Ann % Change Last 10 Years / +4.7% in the US

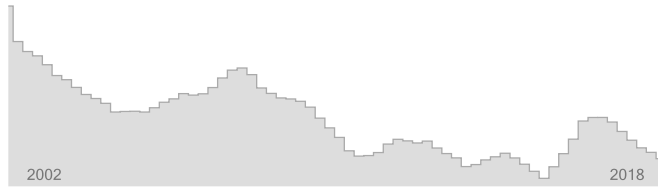


TOP OCCUPATION GROUPS

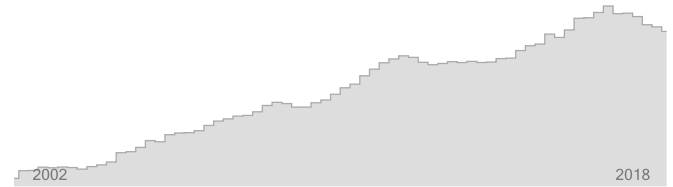


Industry Snapshot

EMPLOYMENT



WAGES

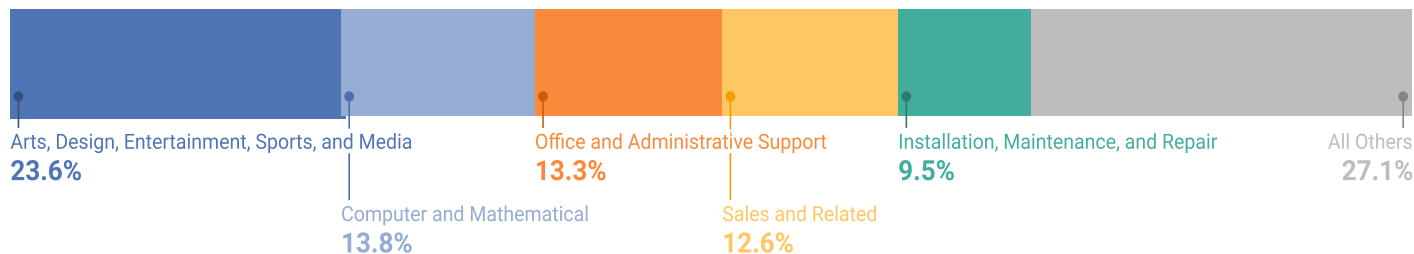


2-Digit Industry	Empl	Avg Ann Wages	LQ	5yr History	Annual Demand	Forecast Ann Growth
Information	2,053	\$47,318	0.49		199	0.0%

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.

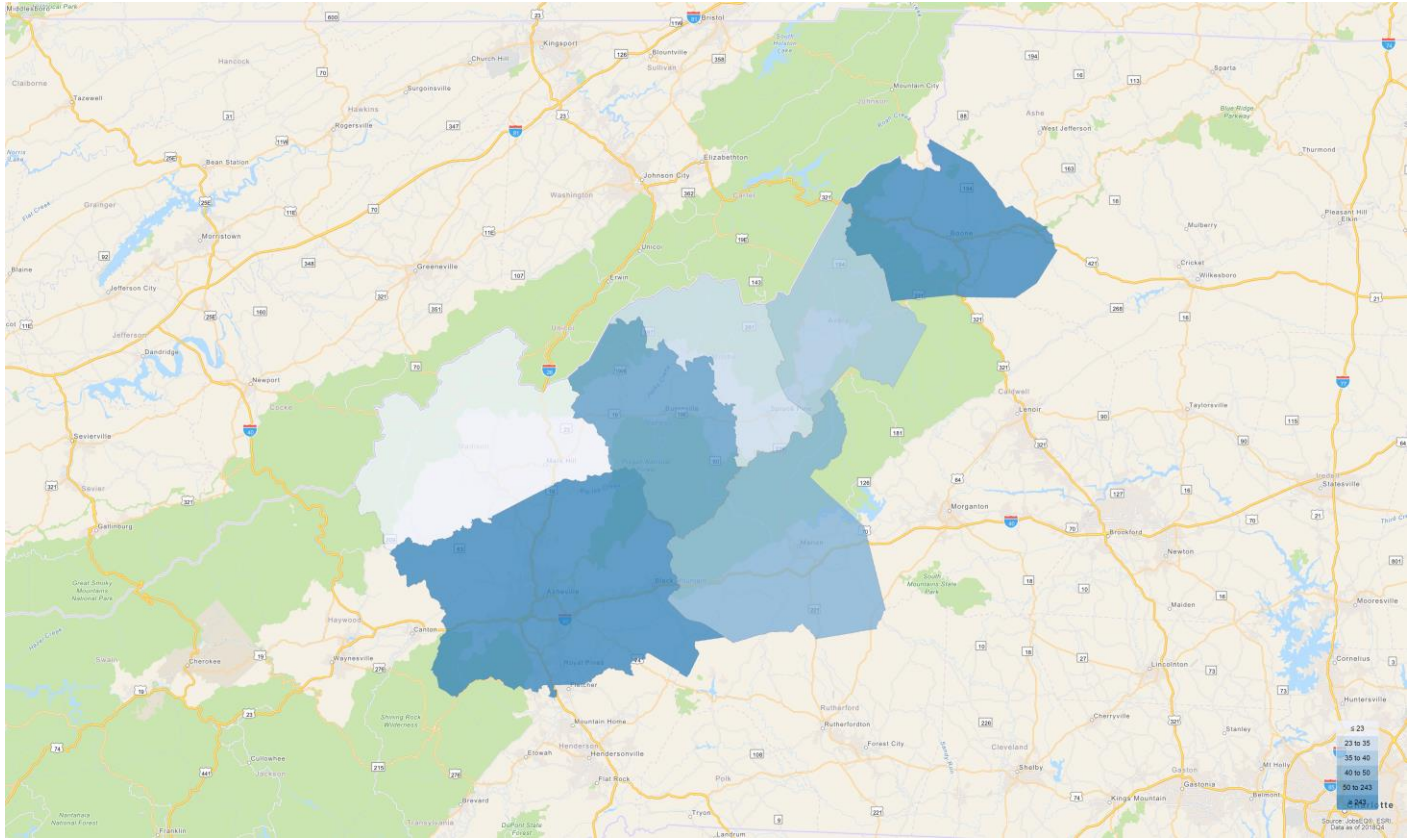
Staffing Pattern



6-digit Occupation	Empl	Avg Ann Wages	Annual Demand
Editors	139	\$53,800	12
Telecommunications Equipment Installers and Repairers, Except Line Installers	133	\$51,500	12
Customer Service Representatives	100	\$30,100	11
Ushers, Lobby Attendants, and Ticket Takers	84	\$24,100	21
Sales Representatives, Services, All Other	79	\$60,200	10
Software Developers, Applications	72	\$100,600	7
Advertising Sales Agents	71	\$50,800	7
Producers and Directors	67	\$44,900	6
Counter Attendants, Cafeteria, Food Concession, and Coffee Shop	59	\$24,100	13
Reporters and Correspondents	56	\$32,500	4
Remaining Component Occupations	1,172	\$52,800	111
Total	2,053		

 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
Buncombe County, North Carolina	1,640	Avery County, North Carolina	36
Watauga County, North Carolina	243	Mitchell County, North Carolina	24
Yancey County, North Carolina	50	Madison County, North Carolina	20
McDowell County, North Carolina	40		

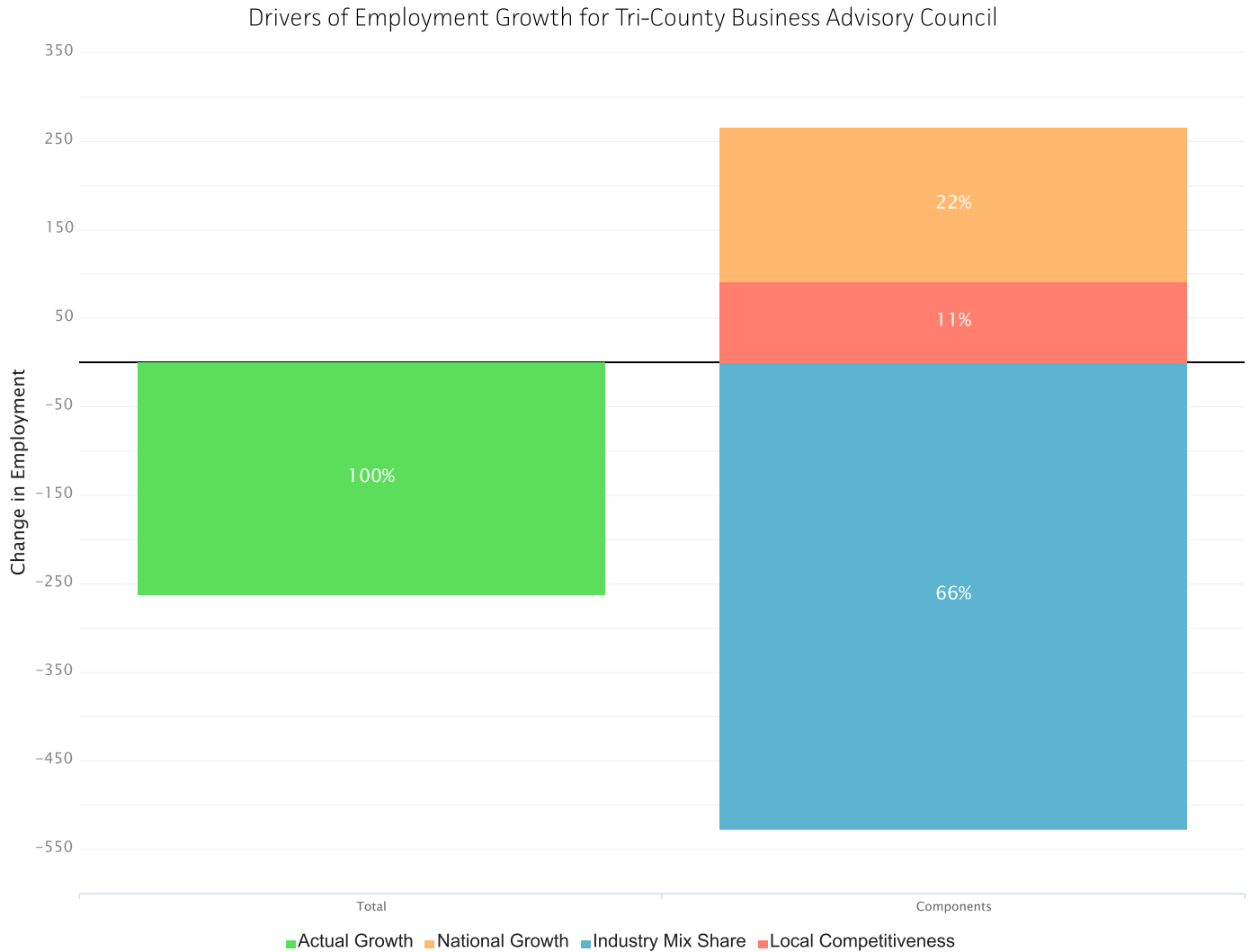
Source: JobsEQ®



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 Information for the Tri-County Business Advisory Council shed 261 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 gain of 91 jobs—meaning this industry was more competitive than its national counterpart during this period.



- 💡 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 Information for the Tri-County Business Advisory Council. 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).

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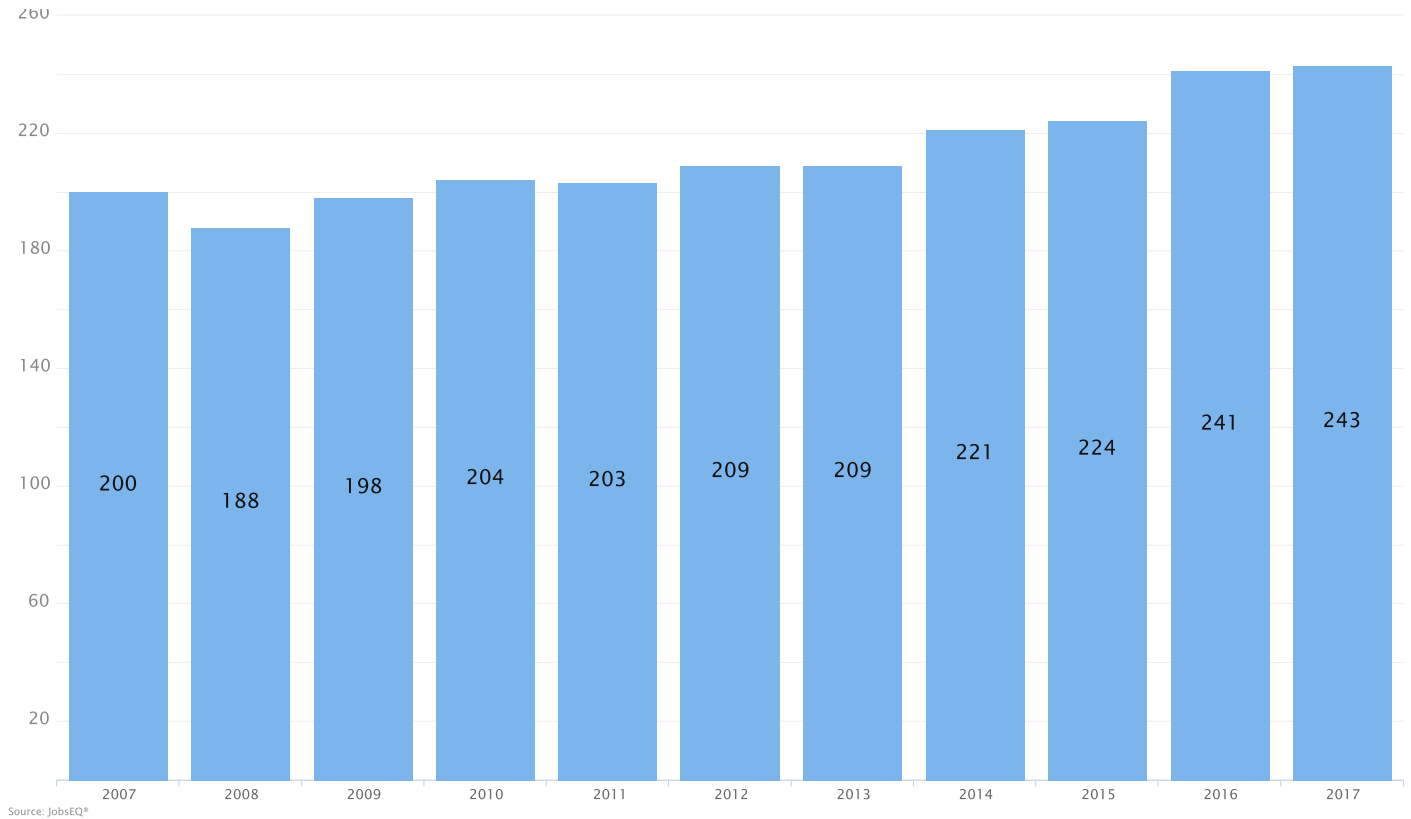
	Empl	%
Private	1,788	87.1%
Self-Employment	223	10.9%
Local Government	43	2.1%
Other Non-Covered	0	0.0%


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 2017, there were 243 Information establishments in the Tri-County Business Advisory Council (per covered employment establishment counts), an increase from 200 establishments ten years earlier in 2007.

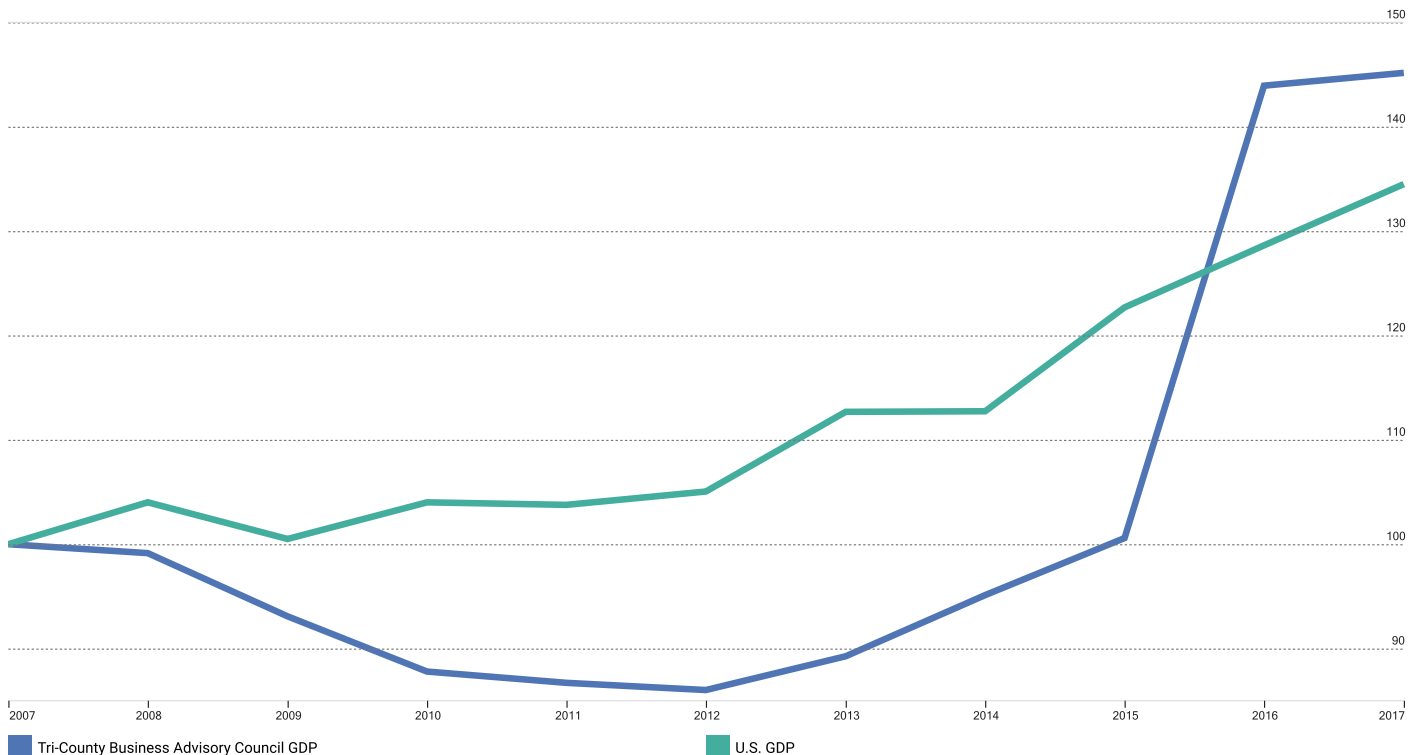


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GDP & Productivity

In 2017, Information produced \$0.4 billion in GDP for the Tri-County Business Advisory Council.

GDP: Indexed 2007 = 100



2.3 %

Industry Share of Total GDP /
5.0 % in the nation



3.8 % ↑

Avg Ann % Change Last 10 Yrs /
3.0 % in the nation



\$410k

Output per Worker /
\$626k 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.

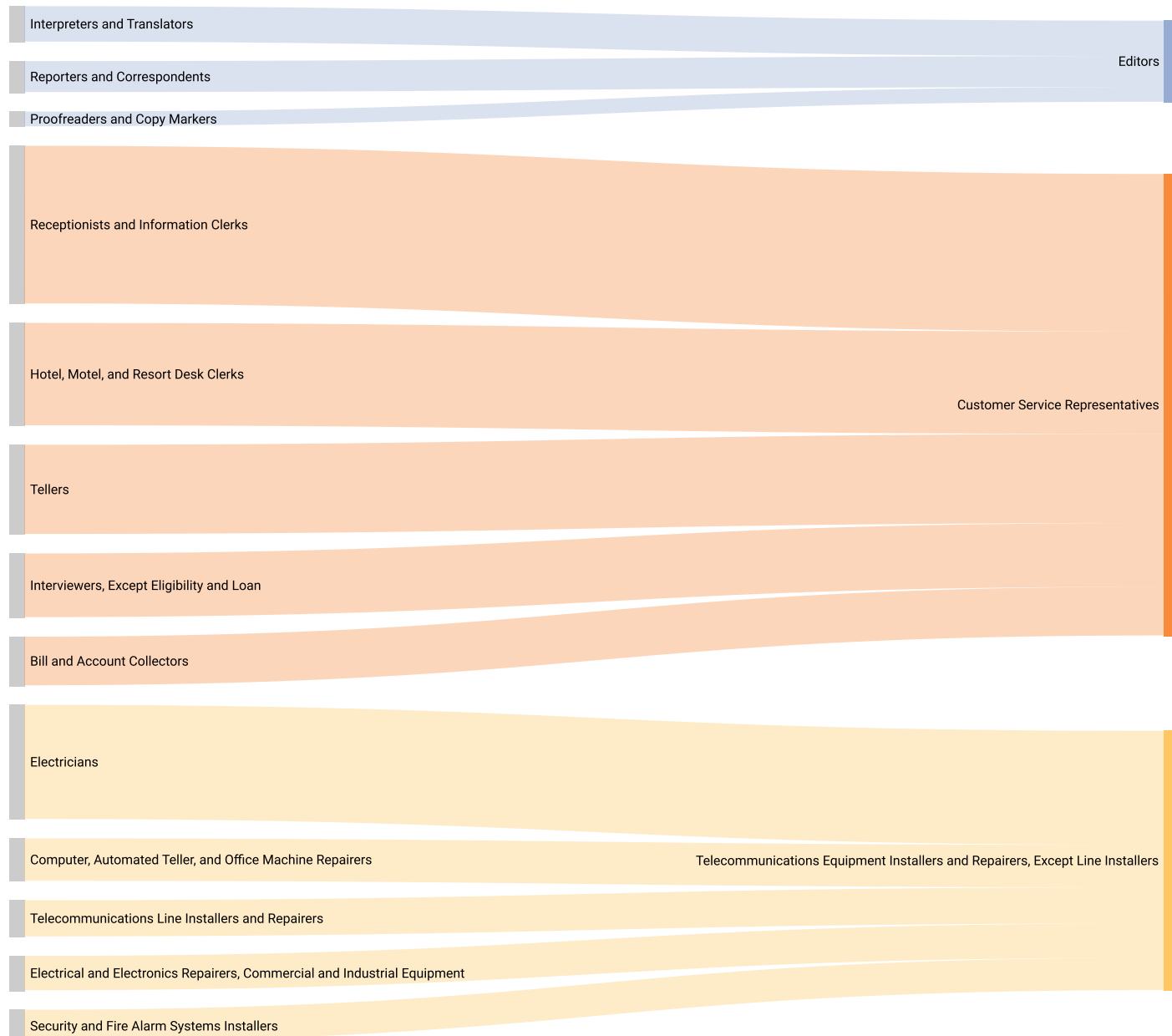
Supply Chain: Top Suppliers


As of 2018Q4, Information in the Tri-County Business Advisory Council are estimated to make \$446.1 million in annual purchases from suppliers in the United States with about 49% or \$219.4 million of these purchases being made from businesses located in the Tri-County Business Advisory Council.

2-digit Supplier Industries	Purchases from In-Region (\$M)	Purchases from Out-of-Region (\$M)
Information	\$62.2	\$68.6
Professional, Scientific, and Technical Services	\$40.5	\$27.3
Manufacturing	\$18.3	\$45.6
Real Estate and Rental and Leasing	\$37.0	\$17.2
Wholesale Trade	\$8.2	\$12.8
Remaining Supplier Industries	\$53.1	\$55.2
Total	\$219.4	\$226.7

 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 Information

Program	Awards
Appalachian State University	
Advertising	83
Computer Science	77
English Language and Literature, General	87
Journalism	23
Marketing/Marketing Management, General	100
Radio and Television	63
Speech Communication and Rhetoric	55
University of North Carolina at Asheville	
Mass Communication/Media Studies	46
Music Technology	17
Warren Wilson College	
Creative Writing	37

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 Tri-County Business Advisory Council, the sampling above identifies those most linked to occupations relevant to Information.

Region Definition

Tri-County Business Advisory Council is defined as the following counties:

Avery County, North Carolina

Buncombe County, North Carolina

McDowell County, North Carolina

Madison County, North Carolina

Mitchell County, North Carolina

Watauga County, North Carolina

Yancey County, North Carolina

Data Notes

- Industry employment and wages (including total regional employment and wages) are as of 2018Q4 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 2018Q4 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 2017.
- 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 2016-2017 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.



Finance and Insurance

Tri-County Business Advisory Council



Industry Spotlight

Avery, Buncombe, Madison, McDowell, Mitchell,
Watauga, and Yancey

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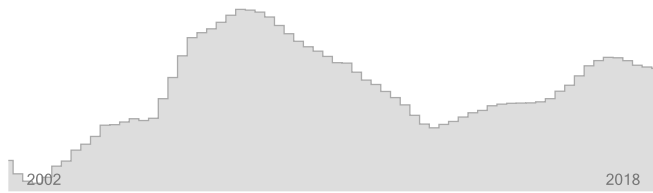
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Finance and Insurance
Tri-County Business Advisory Council – 2018Q4

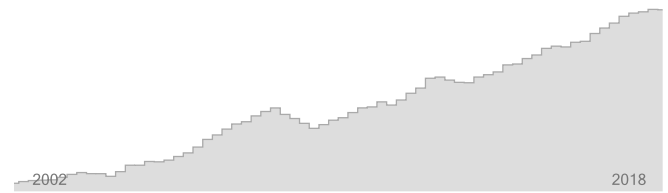
EMPLOYMENT



3,934

Regional employment / **6,214,444** in the nation

WAGES



\$68,858

Avg Wages per Worker / **\$108,514** in the nation

-0.6% ↓

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



1.9%

% of Total Employment / **3.9%** in the US

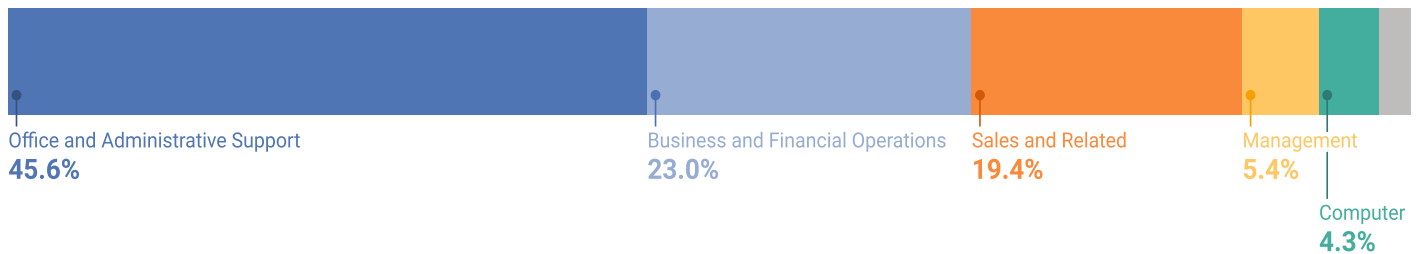


2.6% ↑

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

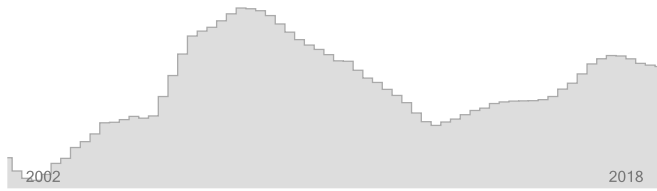


TOP OCCUPATION GROUPS

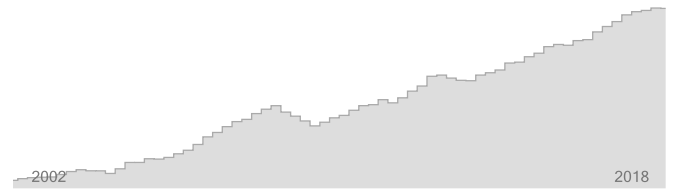


Industry Snapshot


EMPLOYMENT



WAGES

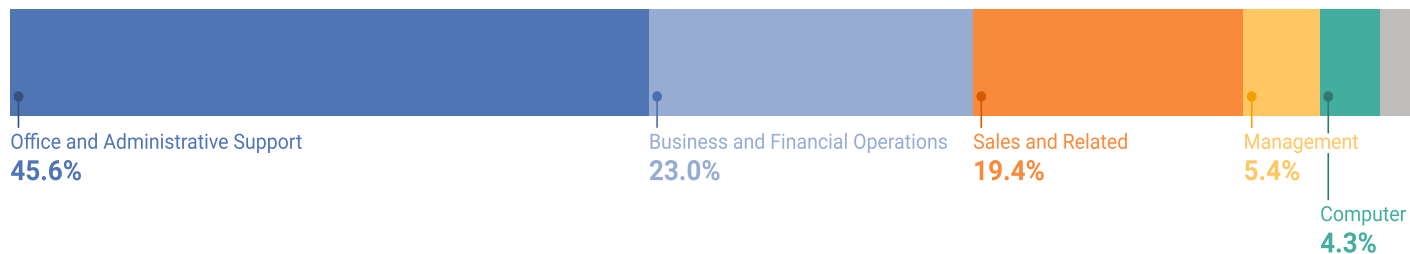


2-Digit Industry	Empl	Avg Ann Wages	LQ	5yr History	Annual Demand	Forecast Ann Growth
Finance and Insurance	3,934	\$68,858	0.47		401	0.7%

 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.

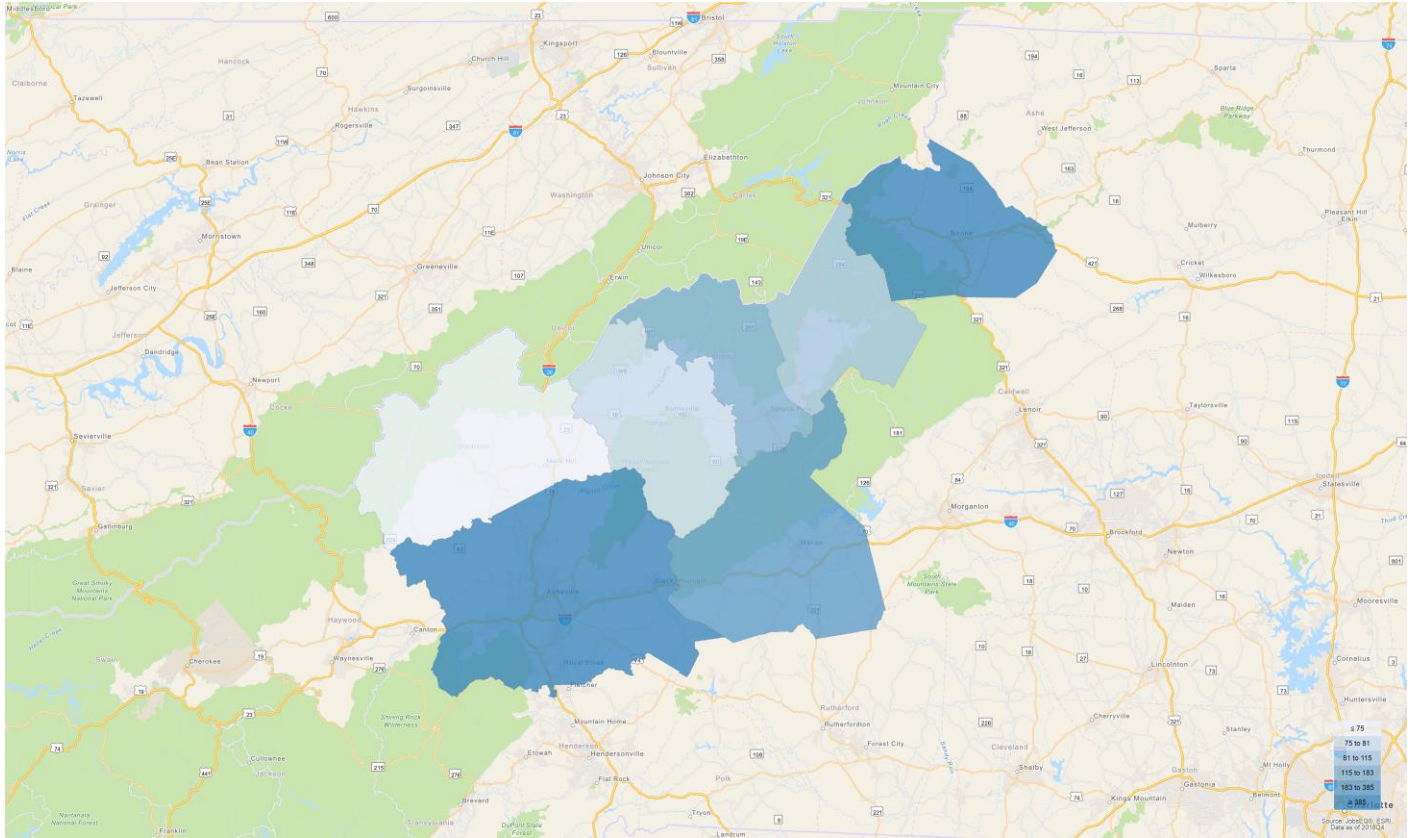
Staffing Pattern



6-digit Occupation	Empl	Avg Ann Wages	Annual Demand
Tellers	540	\$30,500	56
Customer Service Representatives	367	\$30,100	47
Insurance Sales Agents	365	\$61,300	41
Securities, Commodities, and Financial Services Sales Agents	309	\$65,500	33
Personal Financial Advisors	230	\$129,700	22
Loan Officers	206	\$68,600	19
First-Line Supervisors of Office and Administrative Support Workers	156	\$49,400	15
Loan Interviewers and Clerks	113	\$37,800	12
Insurance Claims and Policy Processing Clerks	99	\$41,500	12
Claims Adjusters, Examiners, and Investigators	95	\$59,700	9
Remaining Component Occupations	1,439	\$59,100	147
Total	3,934		

 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



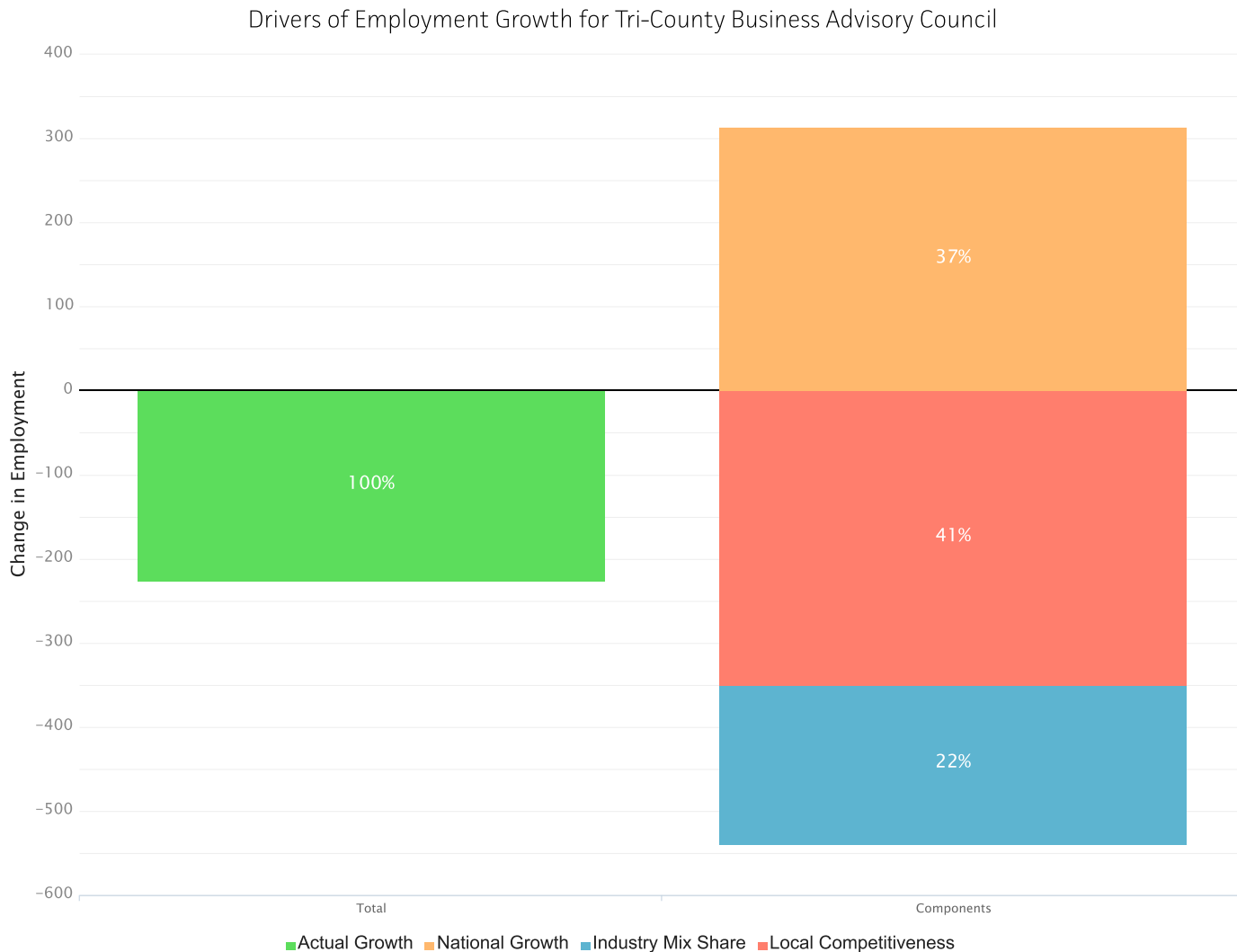
Region	Empl	Region	Empl
Buncombe County, North Carolina	3,026	Avery County, North Carolina	82
Watauga County, North Carolina	386	Yancey County, North Carolina	76
McDowell County, North Carolina	183	Madison County, North Carolina	65
Mitchell County, North Carolina	116		



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 Finance and Insurance for the Tri-County Business Advisory Council shed 225 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 349 jobs—meaning this industry was less competitive than its national counterpart during this period.

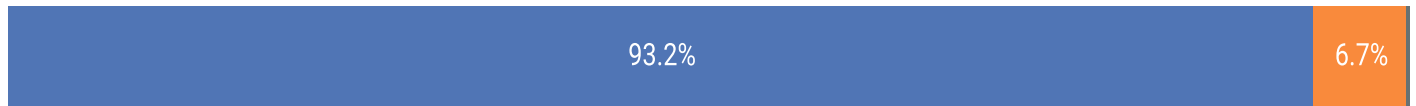


-  Shift-share analysis sheds light on the factors that drive regional employment growth in an industry. A positive change in local competitiveness indicates advantages that may be due to factors such as superior technology, management, and labor pool, etc.
-  National growth is due to the overall growth 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 Finance and Insurance for the Tri-County Business Advisory Council. 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).



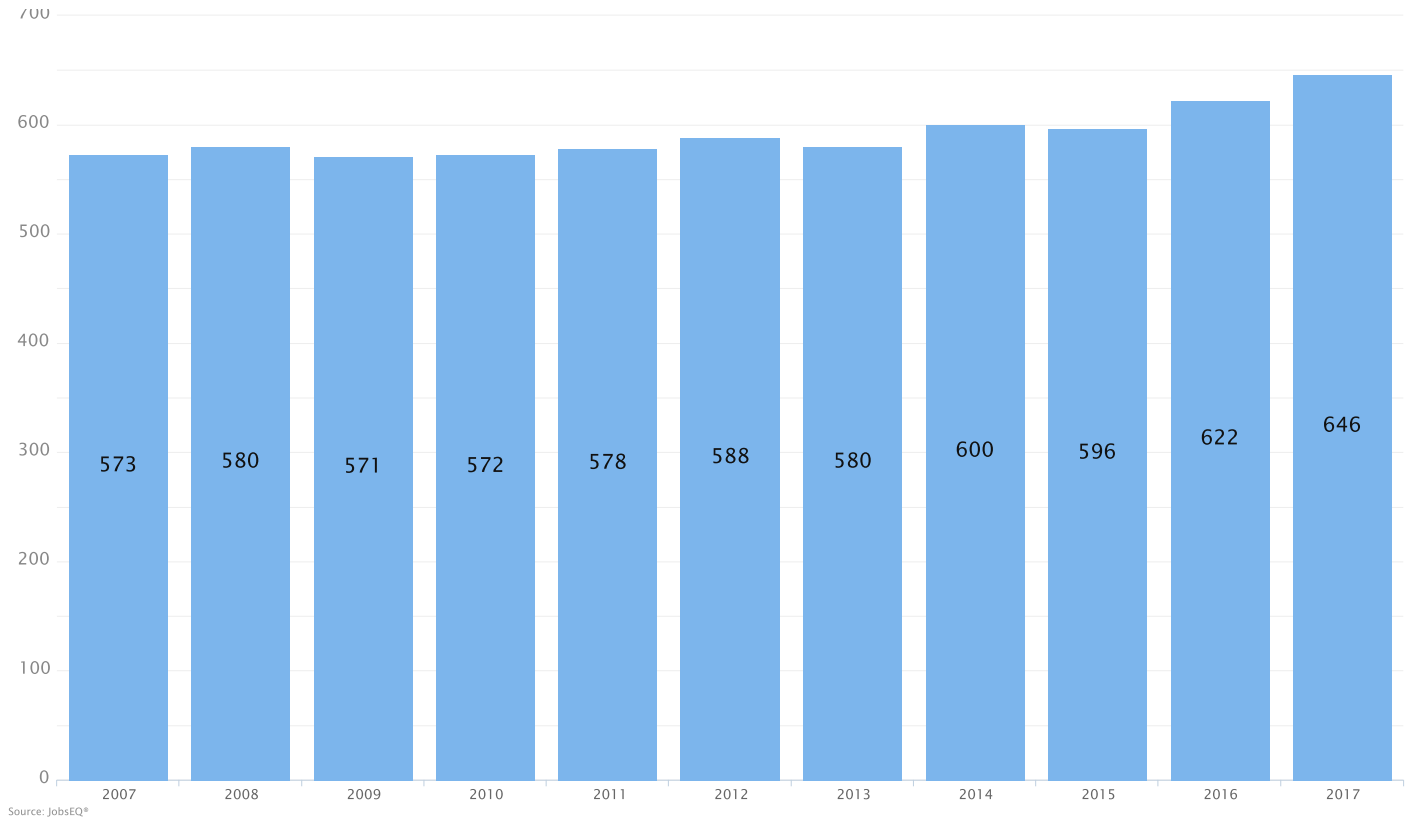
	Empl	%
Private	3,665	93.2%
Self-Employment	262	6.7%
Federal Government	7	0.2%


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 2017, there were 646 Finance and Insurance establishments in the Tri-County Business Advisory Council (per covered employment establishment counts), an increase from 573 establishments ten years earlier in 2007.

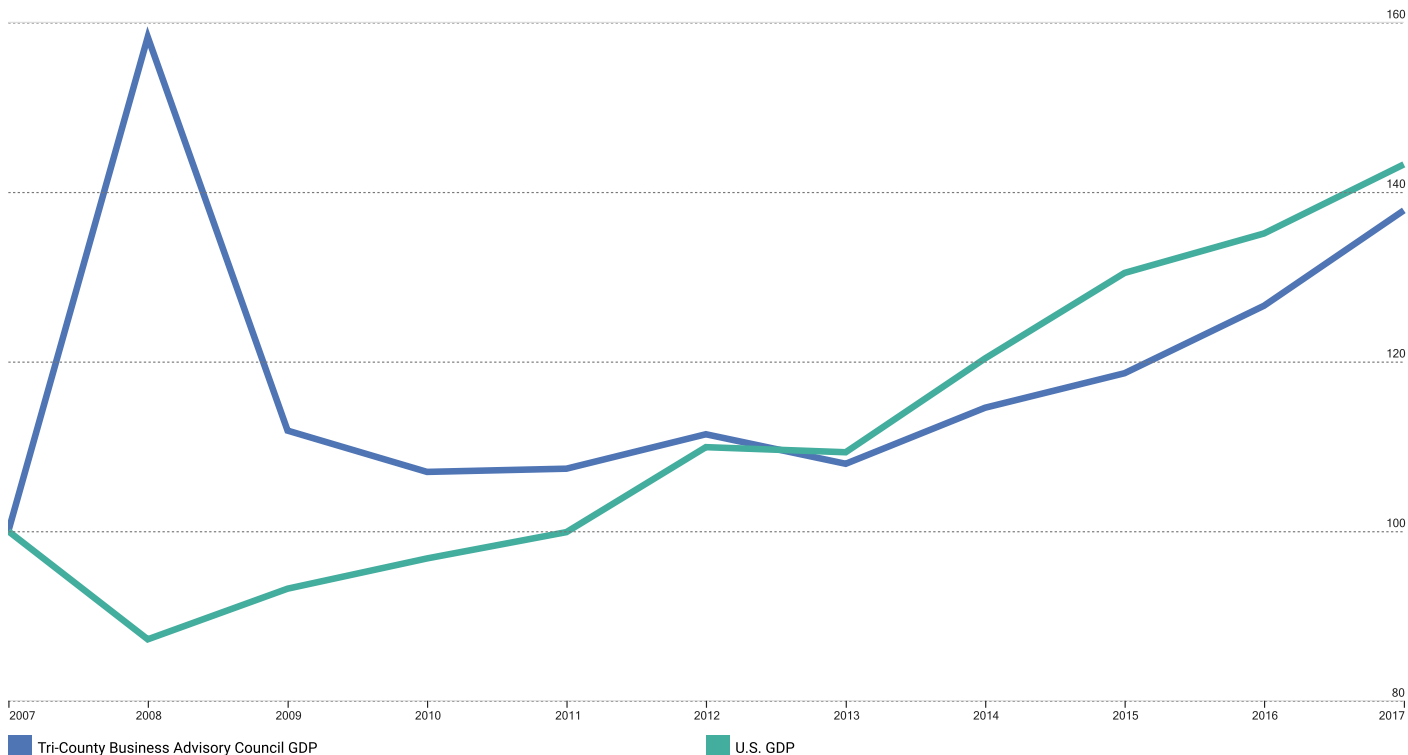


 New business formations are an important source of job creation in a regional economy, spurring innovation and competition, and driving productivity growth. Establishment data can provide an indicator of growth in businesses by counting each single location (such as a factory or a store) where business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

GDP & Productivity

In 2017, Finance and Insurance produced \$0.7 billion in GDP for the Tri-County Business Advisory Council.

GDP: Indexed 2007 = 100



3.8 %

Industry Share of Total GDP /
7.8 % in the nation



3.3 % ↑

Avg Ann % Change Last 10 Yrs /
3.7 % in the nation



\$220k

Output per Worker /
\$347k 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.

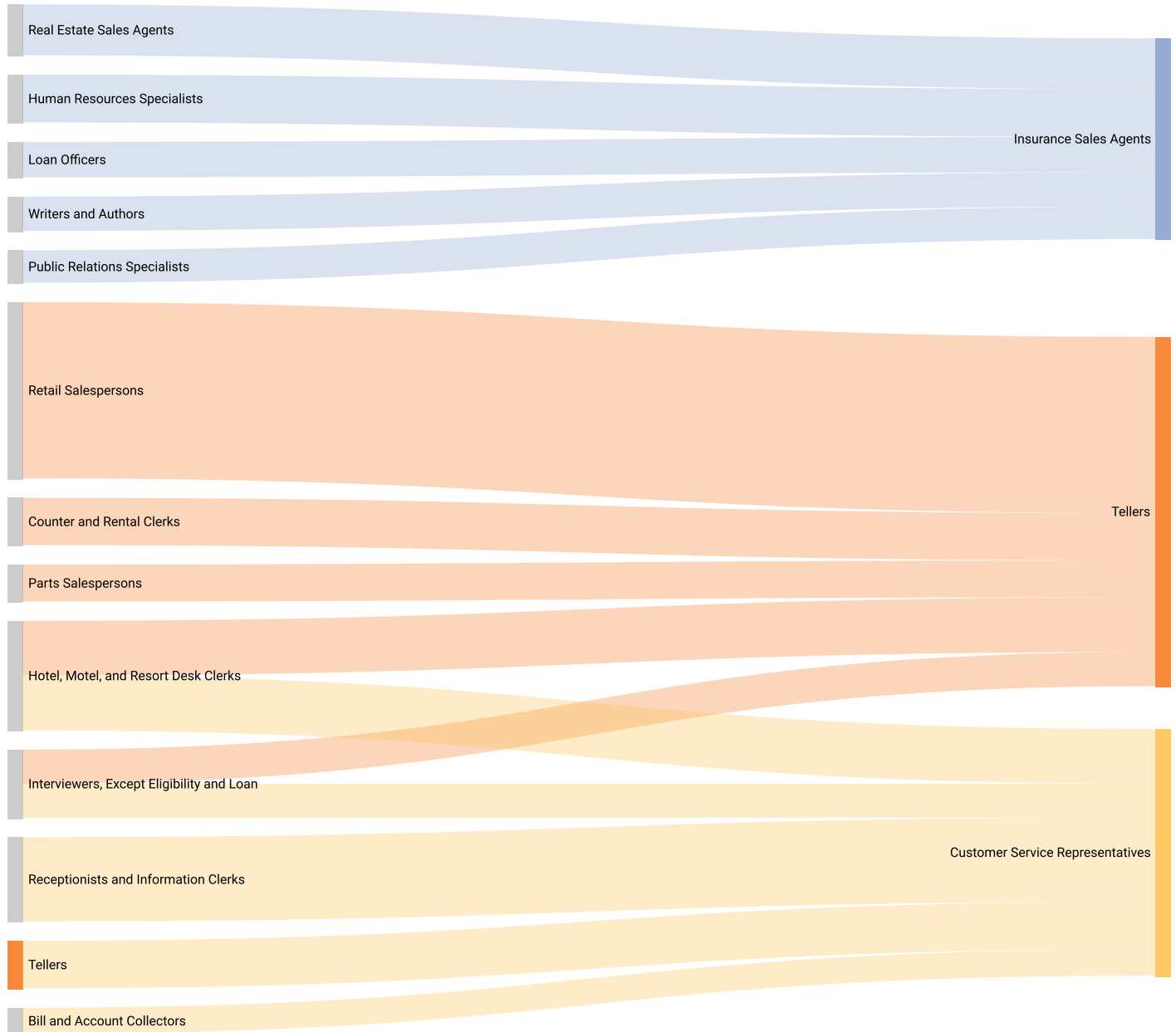
Supply Chain: Top Suppliers


As of 2018Q4, Finance and Insurance in the Tri-County Business Advisory Council are estimated to make \$346.4 million in annual purchases from suppliers in the United States with about 47% or \$163.1 million of these purchases being made from businesses located in the Tri-County Business Advisory Council.

2-digit Supplier Industries	Purchases from In-Region (\$M)	Purchases from Out-of-Region (\$M)
Finance and Insurance	\$73.9	\$97.3
Professional, Scientific, and Technical Services	\$18.8	\$16.2
Real Estate and Rental and Leasing	\$17.5	\$10.6
Information	\$10.3	\$14.5
Manufacturing	\$3.7	\$12.4
Remaining Supplier Industries	\$38.8	\$32.3
Total	\$163.1	\$183.3

 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 Finance and Insurance

Program	Awards
Appalachian State University	
Accounting	158
Business Administration and Management, General	250
Computer Science	77
Finance, General	114
Insurance	71
Management Information Systems, General	66
Marketing/Marketing Management, General	100
Asheville-Buncombe Technical Community College	
Information Technology	36
Medical Office Management/Administration	55
Montreat College	
Business Administration, Management and Operations, Other	16

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 Tri-County Business Advisory Council, the sampling above identifies those most linked to occupations relevant to Finance and Insurance.

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Tri-County Business Advisory Council is defined as the following counties:

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Real Estate and Rental and Leasing

Tri-County Business Advisory Council



Industry Spotlight

Avery, Buncombe, Madison, McDowell, Mitchell,
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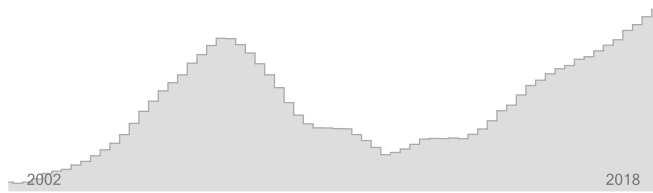
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Real Estate and Rental and Leasing
Tri-County Business Advisory Council – 2018Q4

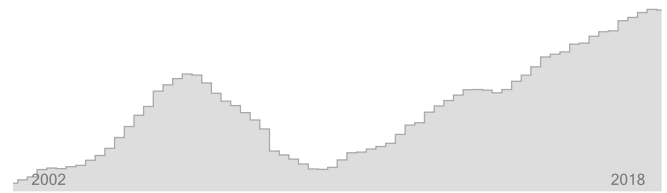
EMPLOYMENT



3,474

Regional employment / 2,713,081 in the nation

WAGES

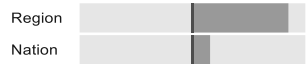


\$41,488

Avg Wages per Worker / \$59,330 in the nation

1.3% ↑

Avg Ann % Change Last 10 Years / +0.2% in the US



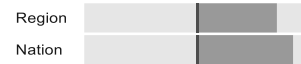
1.6%

% of Total Employment / 1.7% in the US

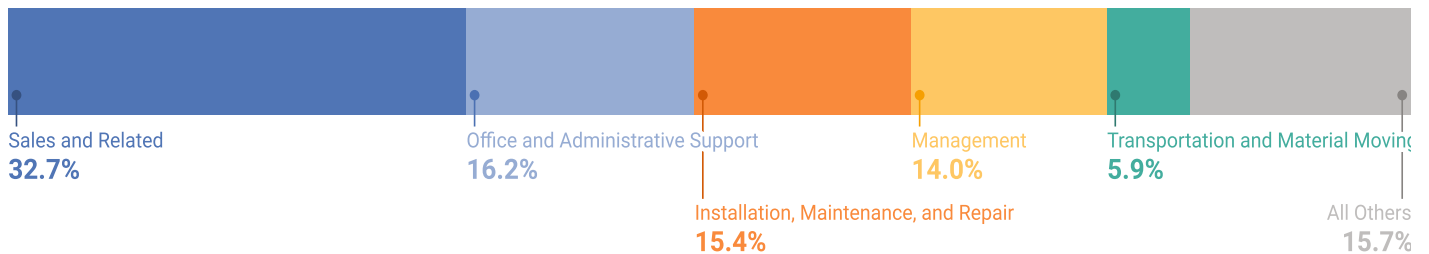


2.9% ↑

Avg Ann % Change Last 10 Years / +3.4% in the US

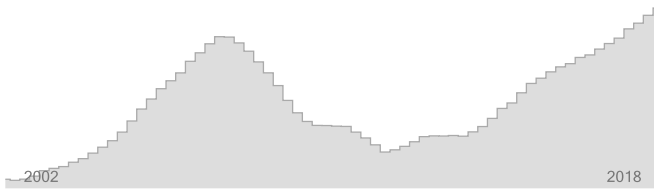


TOP OCCUPATION GROUPS

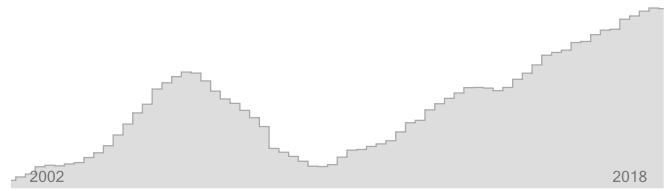


Industry Snapshot

EMPLOYMENT



WAGES

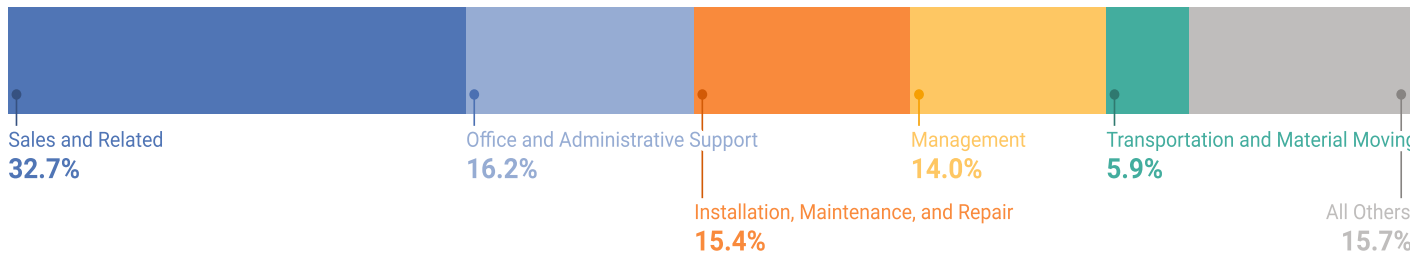


2-Digit Industry	Empl	Avg Ann Wages	LQ	5yr History	Annual Demand	Forecast Ann Growth
Real Estate and Rental and Leasing	3,474	\$41,488	0.95		375	0.6%

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.

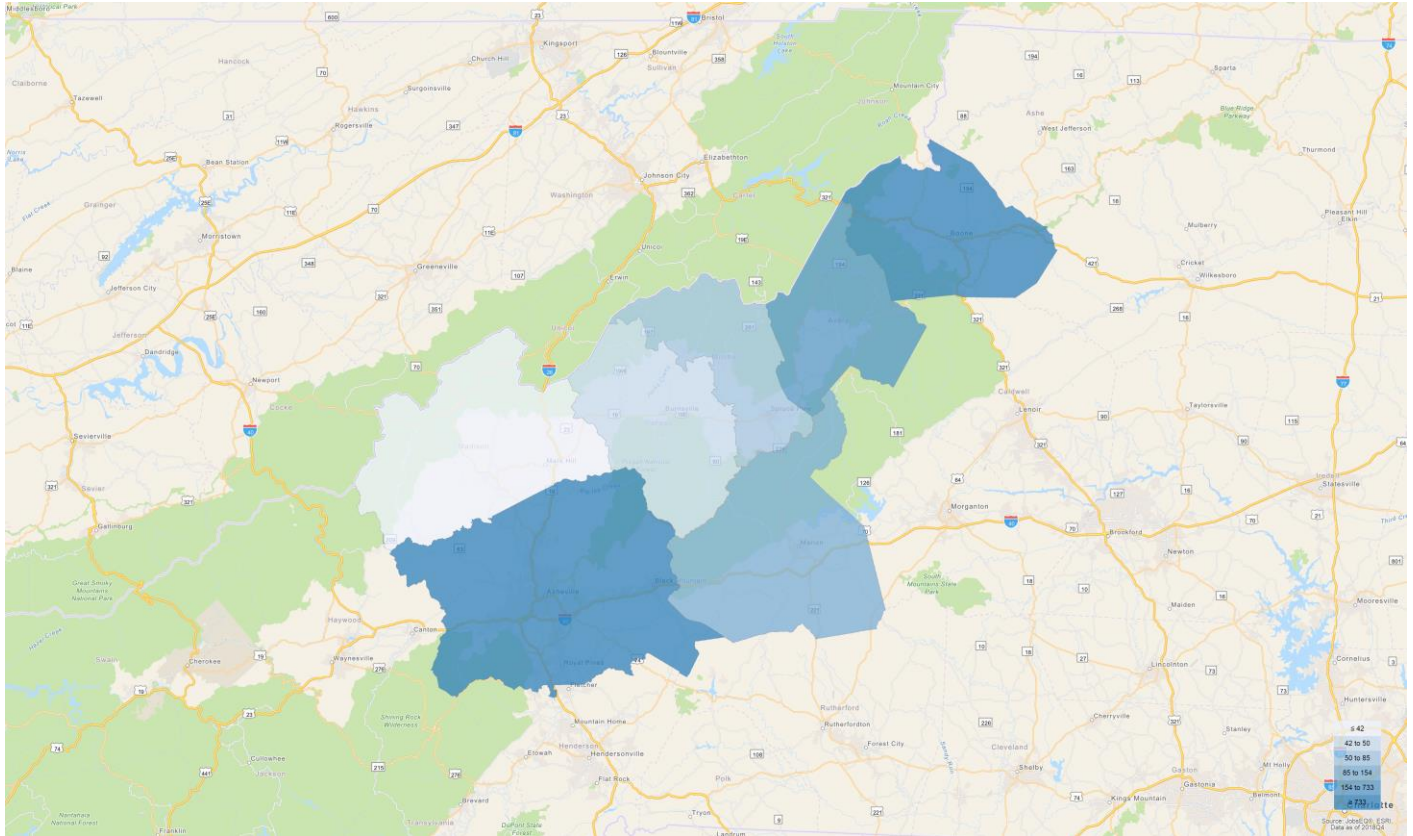
Staffing Pattern



6-digit Occupation	Empl	Avg Ann Wages	Annual Demand
Real Estate Sales Agents	491	\$54,200	50
Maintenance and Repair Workers, General	397	\$38,100	43
Property, Real Estate, and Community Association Managers	386	\$81,700	33
Counter and Rental Clerks	275	\$25,700	37
Real Estate Brokers	223	\$53,700	23
Office Clerks, General	134	\$28,900	15
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	132	\$34,100	13
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	86	\$24,300	12
Bookkeeping, Accounting, and Auditing Clerks	77	\$37,200	8
Landscaping and Groundskeeping Workers	67	\$27,500	9
Remaining Component Occupations	1,179	\$47,100	132
Total	3,474		

 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
Buncombe County, North Carolina	2,366	Mitchell County, North Carolina	51
Watauga County, North Carolina	734	Yancey County, North Carolina	43
Avery County, North Carolina	154	Madison County, North Carolina	41
McDowell County, North Carolina	86		

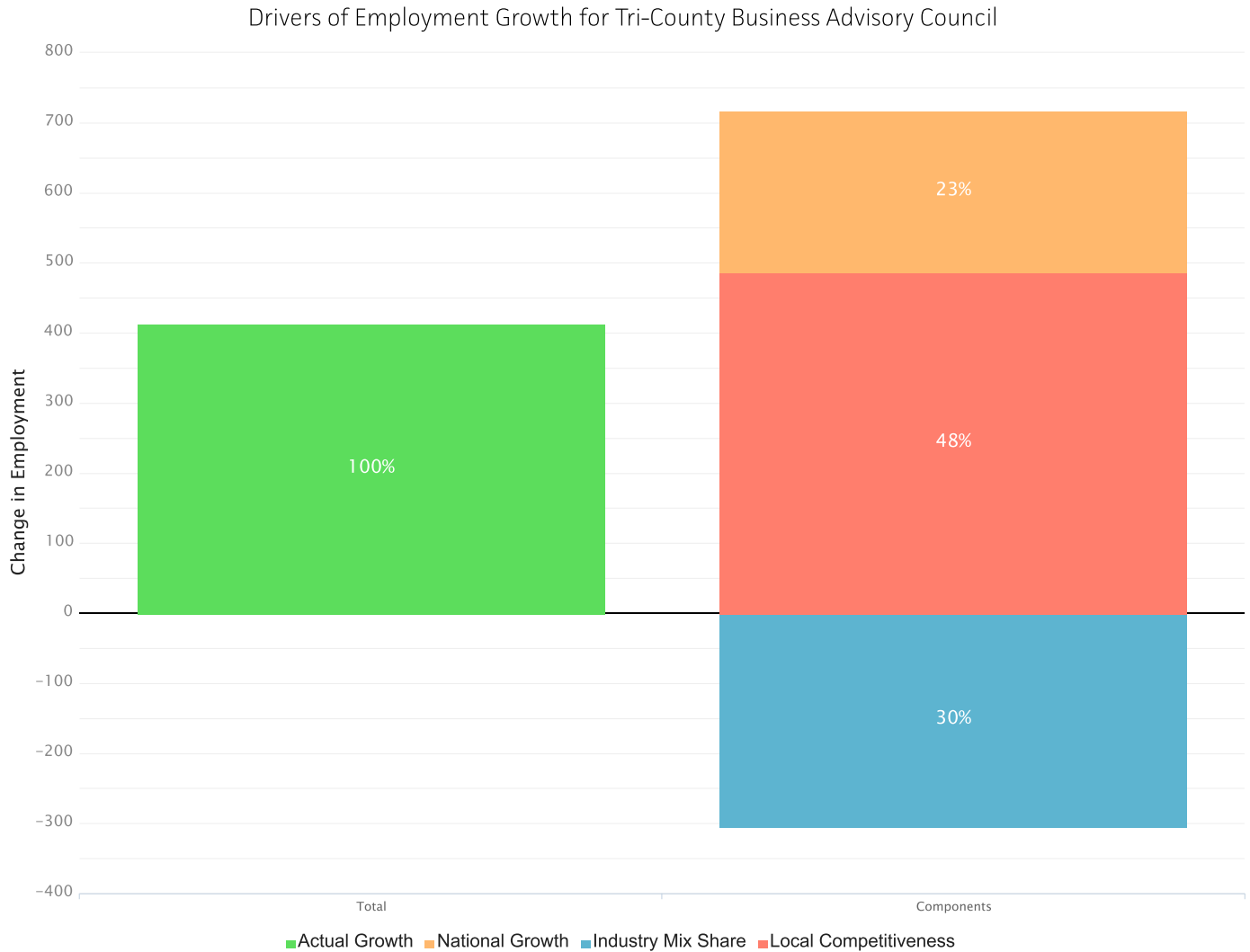
Source: JobsEQ®





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 Real Estate and Rental and Leasing for the Tri-County Business Advisory Council added 412 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 gain of 486 jobs—meaning this industry was more competitive than its national counterpart during this period.



Source: JobsEQ®, Data as of 2018Q4

- 
 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 Real Estate and Rental and Leasing for the Tri-County Business Advisory Council. 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).



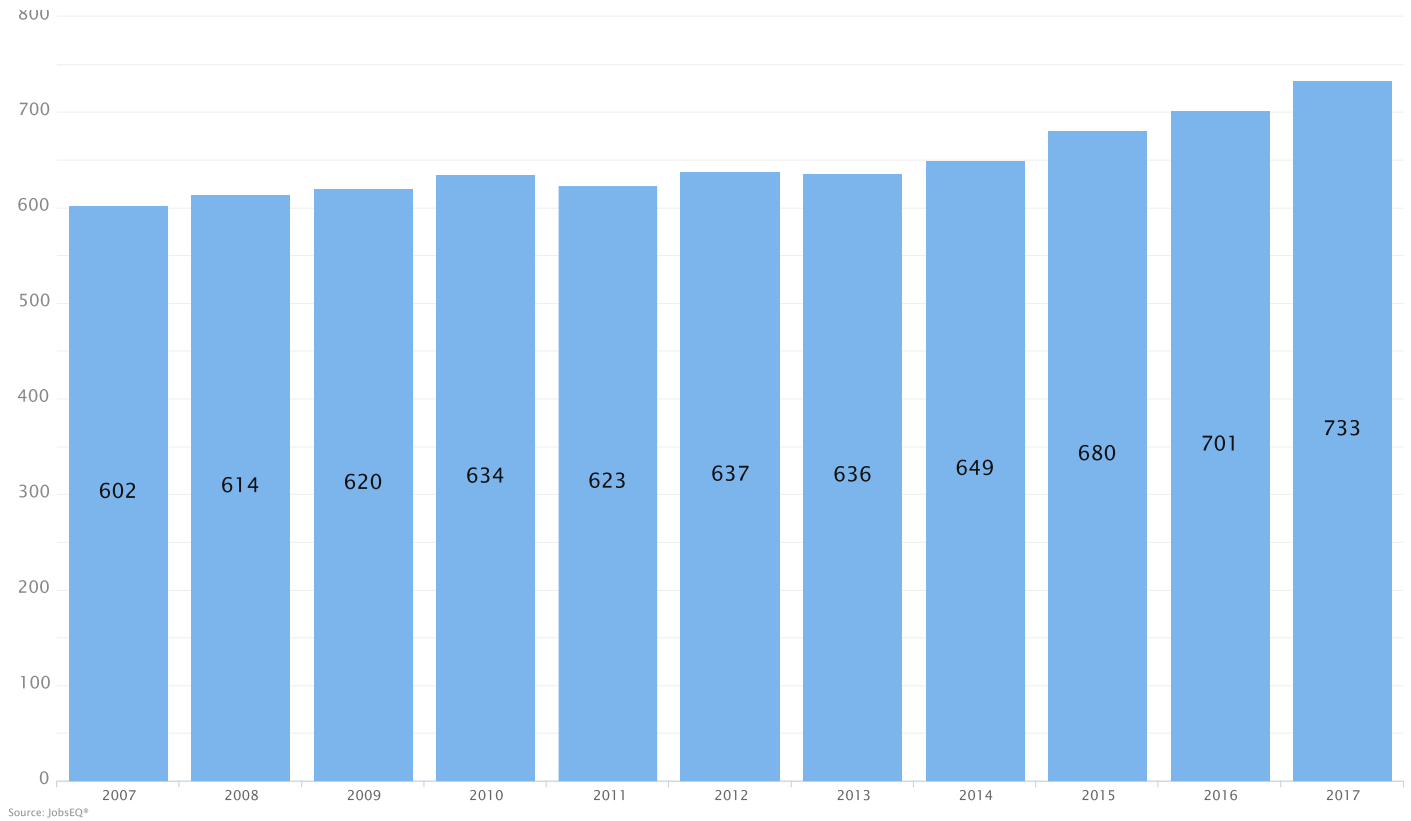
	Empl	%
Private	2,706	77.9%
Self-Employment	769	22.1%
Other Non-Covered	0	0.0%


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 2017, there were 733 Real Estate and Rental and Leasing establishments in the Tri-County Business Advisory Council (per covered employment establishment counts), an increase from 602 establishments ten years earlier in 2007.

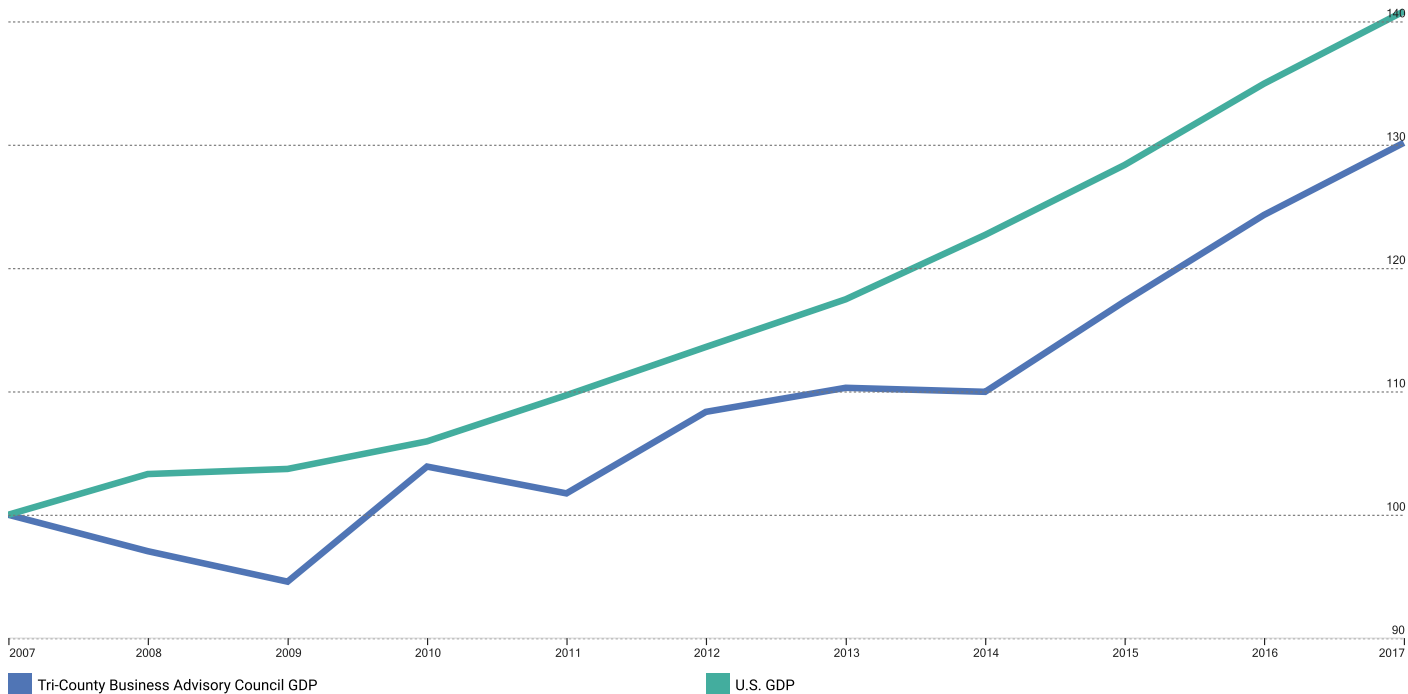


 New business formations are an important source of job creation in a regional economy, spurring innovation and competition, and driving productivity growth. Establishment data can provide an indicator of growth in businesses by counting each single location (such as a factory or a store) where business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

GDP & Productivity

In 2017, Real Estate and Rental and Leasing produced \$2.3 billion in GDP for the Tri-County Business Advisory Council.

GDP: Indexed 2007 = 100



12.0 %

Industry Share of Total GDP /
13.4 % in the nation



2.7 % ↑

Avg Ann % Change Last 10 Yrs /
3.5 % in the nation



\$756k

Output per Worker /
\$1,138k 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.

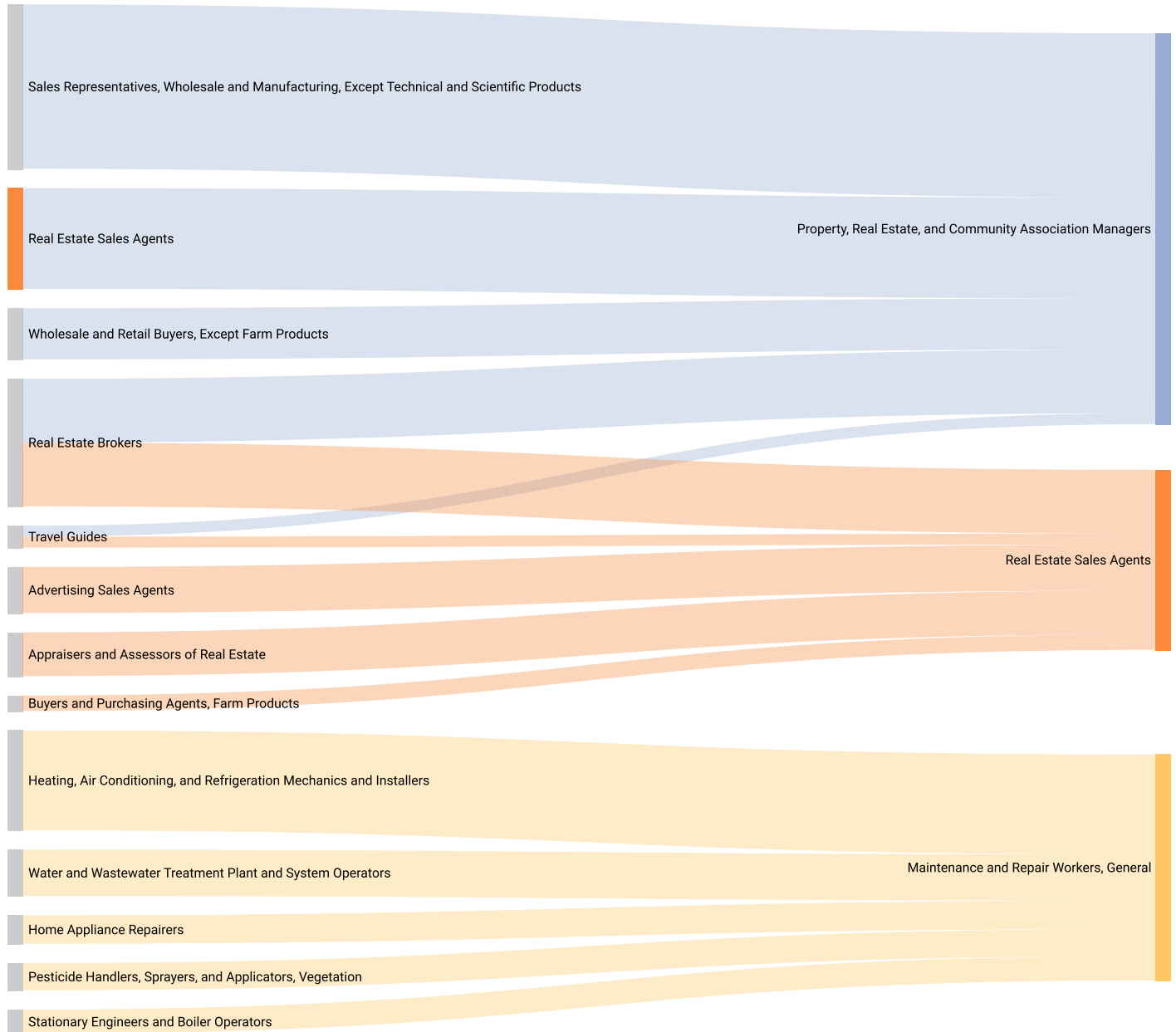
Supply Chain: Top Suppliers


As of 2018Q4, Real Estate and Rental and Leasing in the Tri-County Business Advisory Council are estimated to make \$1.6 billion in annual purchases from suppliers in the United States with about 47% or \$0.7 billion of these purchases being made from businesses located in the Tri-County Business Advisory Council.

2-digit Supplier Industries	Purchases from In-Region (\$M)	Purchases from Out-of-Region (\$M)
Real Estate and Rental and Leasing	\$201.1	\$93.8
Administrative and Support and Waste Management and Remediation Services	\$186.2	\$88.0
Utilities	\$57.4	\$105.7
Construction	\$70.7	\$75.1
Manufacturing	\$20.7	\$111.5
Remaining Supplier Industries	\$189.4	\$355.4
Total	\$725.4	\$829.6

 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 Real Estate and Rental and Leasing

Program	Awards
Appalachian State University	
Accounting	158
Business Administration and Management, General	250
Criminal Justice/Safety Studies	146
Finance, General	114
International Business/Trade/Commerce	34
Marketing/Marketing Management, General	100
Asheville-Buncombe Technical Community College	
Building/Property Maintenance	18
Criminal Justice/Safety Studies	124
Medical Office Management/Administration	55
Medium/Heavy Vehicle and Truck Technology/Technician	33

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 Tri-County Business Advisory Council, the sampling above identifies those most linked to occupations relevant to Real Estate and Rental and Leasing.

Region Definition

Tri-County Business Advisory Council is defined as the following counties:

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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.



Professional, Scientific, and Technical Services

Tri-County Business Advisory Council



Industry Spotlight

Avery, Buncombe, Madison, McDowell, Mitchell,
Watauga, and Yancey

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Staffing Pattern 5

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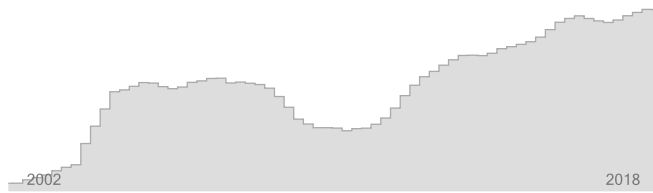
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Professional, Scientific, and Technical Services Tri-County Business Advisory Council – 2018Q4

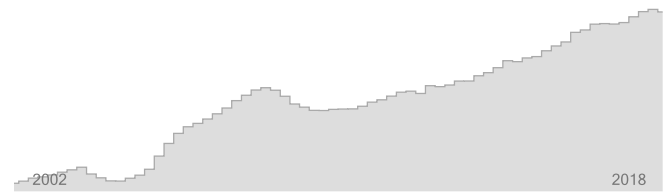
EMPLOYMENT



8,349

Regional employment / **10,510,583** in the nation

WAGES

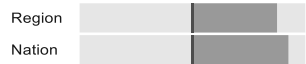


\$53,878

Avg Wages per Worker / **\$92,860** in the nation

1.3% ↑

Avg Ann % Change Last 10 Years / **+1.5%** in the US



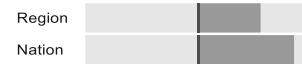
3.9%

% of Total Employment / **6.7%** in the US

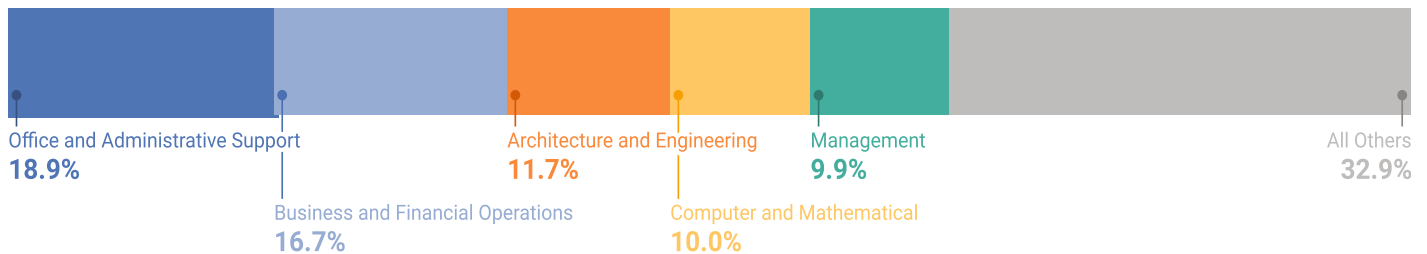


1.6% ↑

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

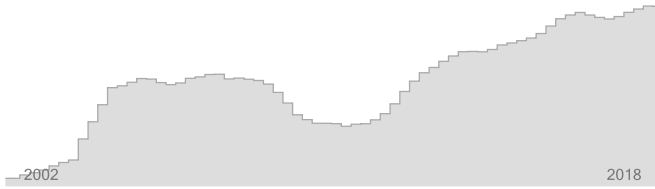


TOP OCCUPATION GROUPS

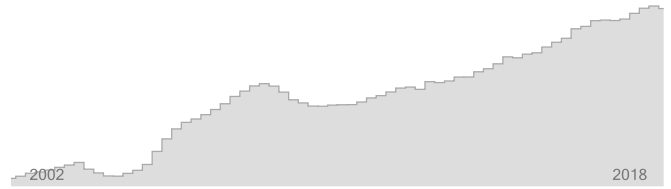


Industry Snapshot


EMPLOYMENT



WAGES

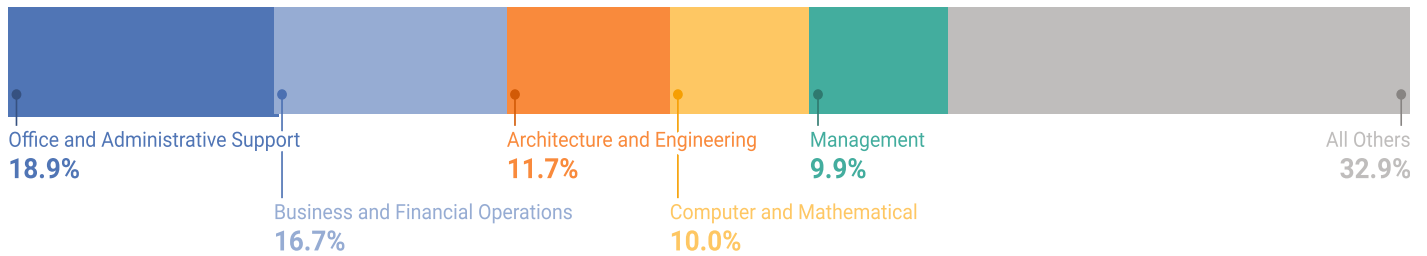


2-Digit Industry	Empl	Avg Ann Wages	LQ	5yr History	Annual Demand	Forecast Ann Growth
Professional, Scientific, and Technical Services	8,349	\$53,878	0.59		826	1.3%


 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.

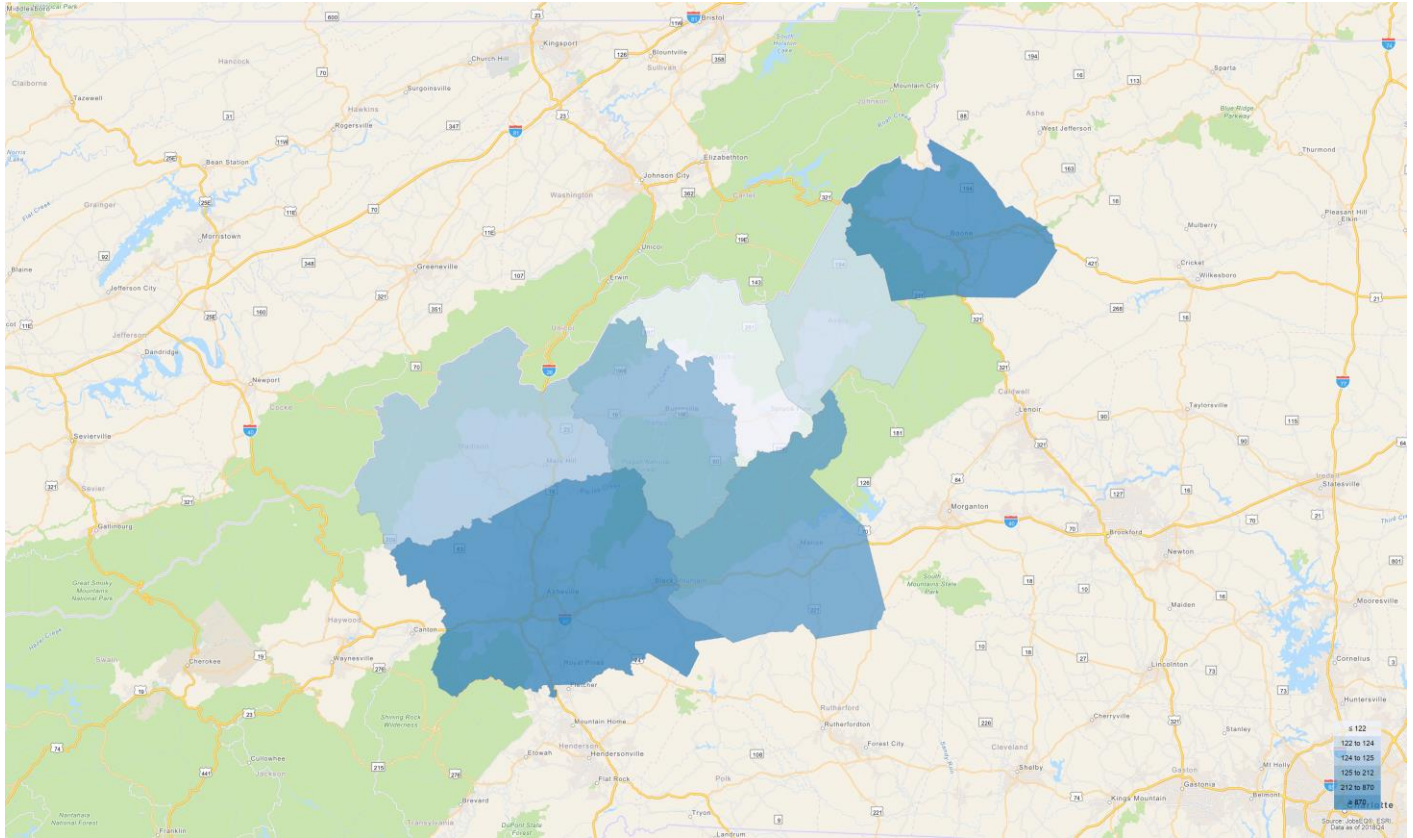
Staffing Pattern



6-digit Occupation	Empl	Avg Ann Wages	Annual Demand
Accountants and Auditors	497	\$70,500	52
Managers, All Other	400	\$84,500	32
Lawyers	387	\$87,200	20
Management Analysts	326	\$89,100	33
Paralegals and Legal Assistants	294	\$39,400	36
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	235	\$34,100	25
Office Clerks, General	232	\$28,900	28
Bookkeeping, Accounting, and Auditing Clerks	212	\$37,200	25
Veterinary Technologists and Technicians	212	\$32,500	22
Architects, Except Landscape and Naval	197	\$75,000	16
Remaining Component Occupations	5,314	\$55,700	574
Total	8,349		

 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
Buncombe County, North Carolina	6,779	Madison County, North Carolina	124
Watauga County, North Carolina	871	Avery County, North Carolina	122
McDowell County, North Carolina	212	Mitchell County, North Carolina	114
Yancey County, North Carolina	125		

Source: JobsEQ®

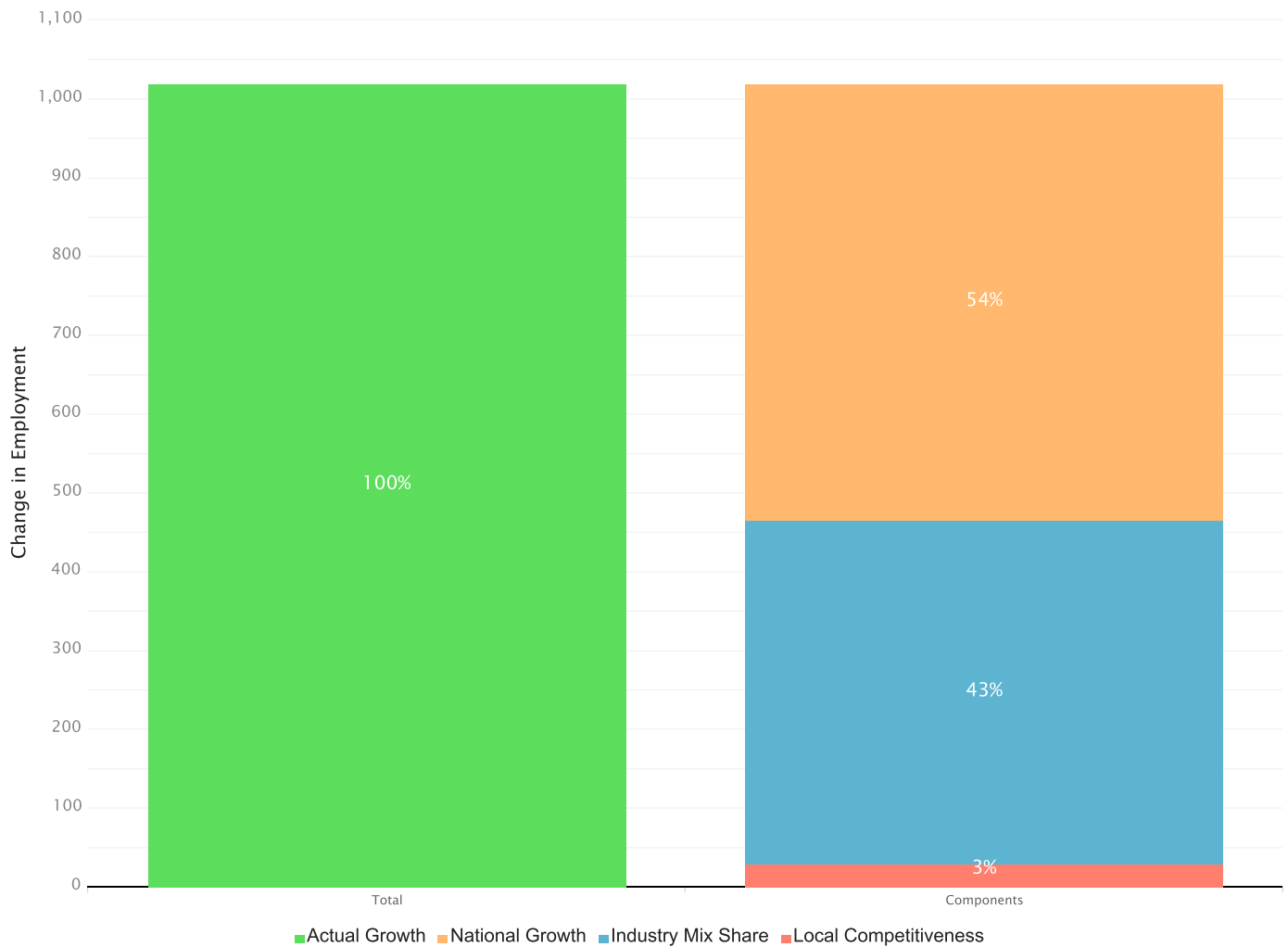


A geographic concentration of firms in related fields of business may reduce production costs, attract more suppliers and customers, and increase supply and demand for specialized labor, but may also increase competitive pressure and drive down prices.

Drivers of Employment Growth

Over the ten years ending 2018, employment in Professional, Scientific, and Technical Services for the Tri-County Business Advisory Council added 1,019 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 gain of 28 jobs—meaning this industry was more competitive than its national counterpart during this period.

Drivers of Employment Growth for Tri-County Business Advisory Council



Source: JobsEQ®, Data as of 2018Q4

- 💡 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 Professional, Scientific, and Technical Services for the Tri-County Business Advisory Council. 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).



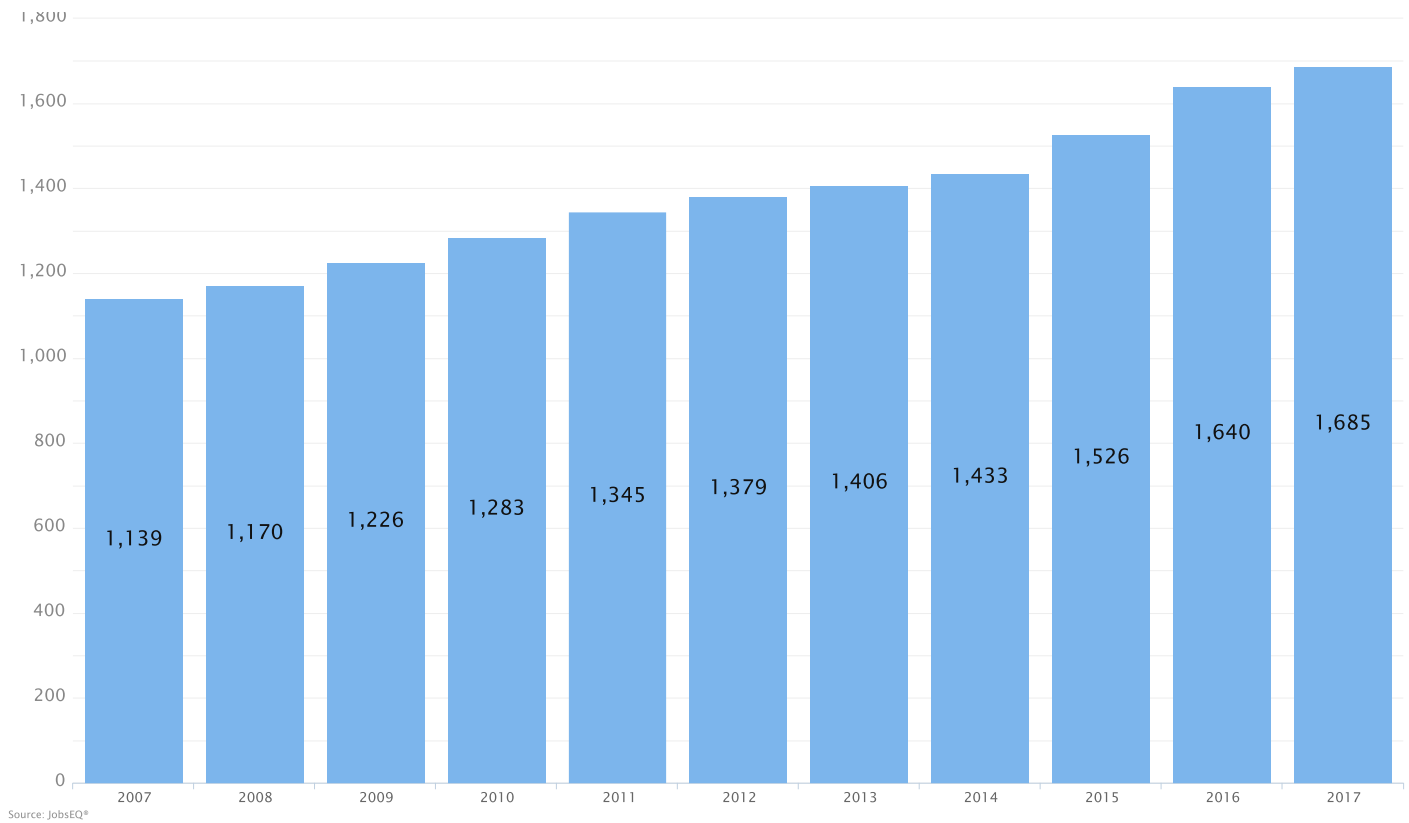
	Empl	%
Private	6,619	79.3%
Self-Employment	1,719	20.6%
Federal Government	10	0.1%


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 2017, there were 1,685 Professional, Scientific, and Technical Services establishments in the Tri-County Business Advisory Council (per covered employment establishment counts), an increase from 1,139 establishments ten years earlier in 2007.

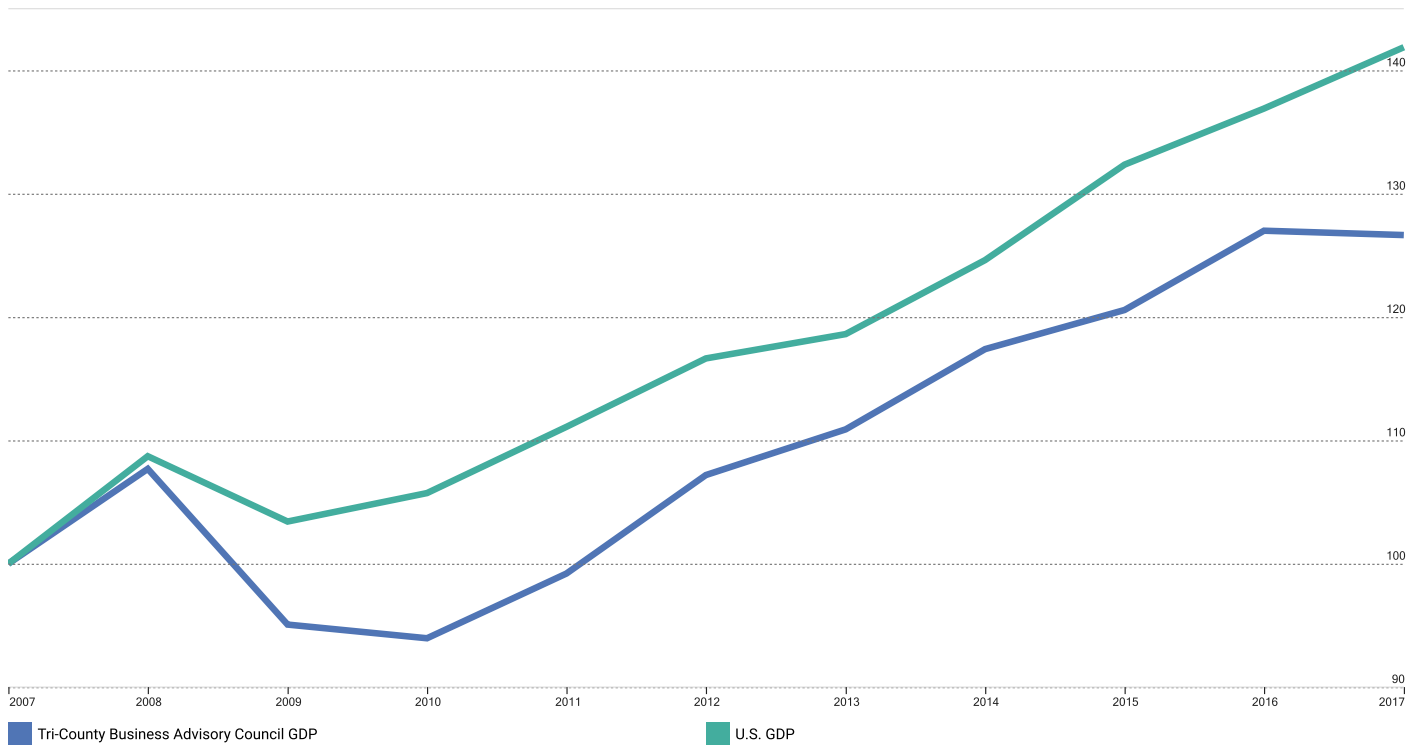


 New business formations are an important source of job creation in a regional economy, spurring innovation and competition, and driving productivity growth. Establishment data can provide an indicator of growth in businesses by counting each single location (such as a factory or a store) where business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

GDP & Productivity

In 2017, Professional, Scientific, and Technical Services produced \$0.7 billion in GDP for the Tri-County Business Advisory Council.

GDP: Indexed 2007 = 100



3.8 %

Industry Share of Total GDP /
7.2 % in the nation



2.4 % ↑

Avg Ann % Change Last 10 Yrs /
3.6 % in the nation



\$149k

Output per Worker /
\$228k 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.

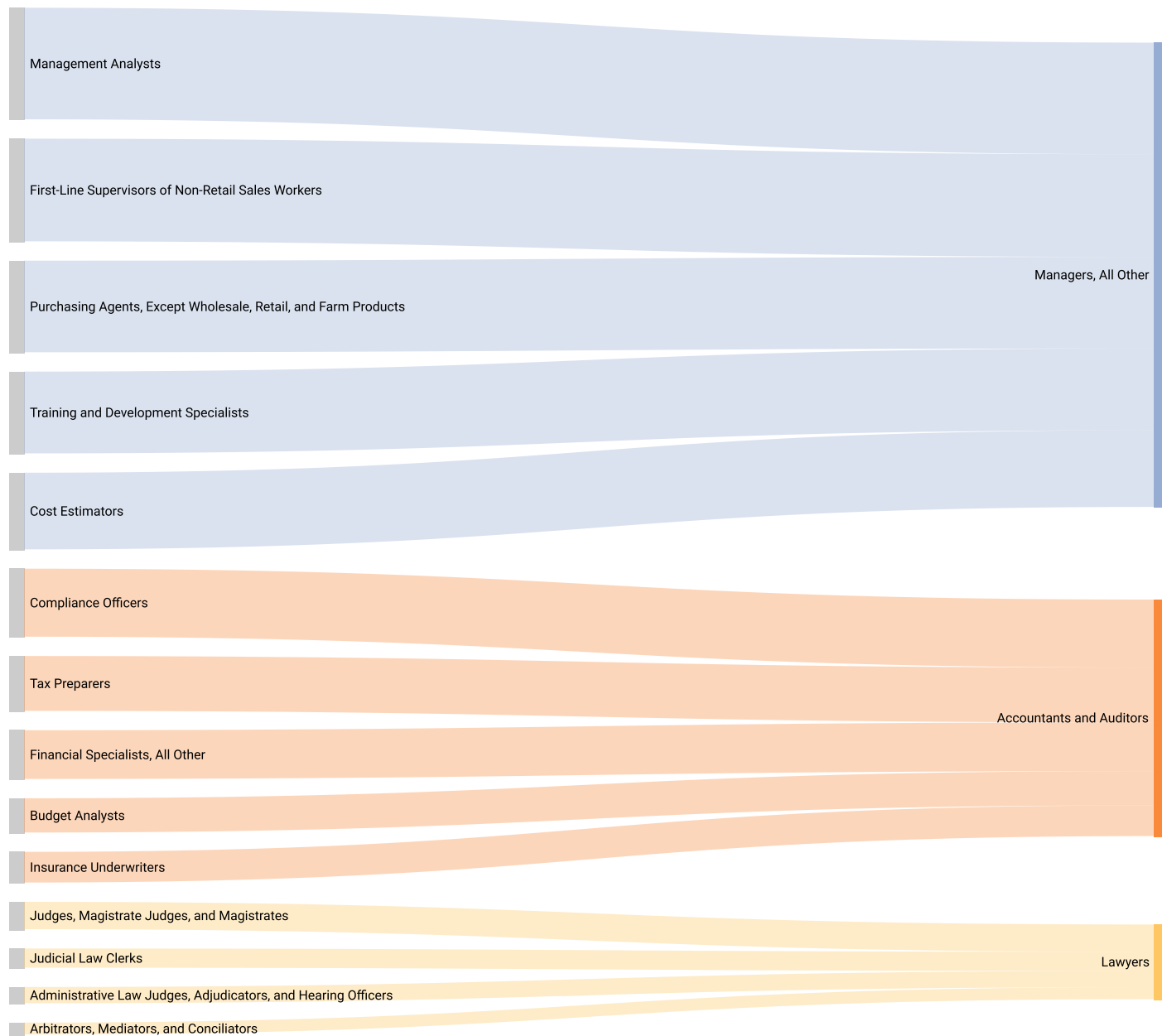
Supply Chain: Top Suppliers


As of 2018Q4, Professional, Scientific, and Technical Services in the Tri-County Business Advisory Council are estimated to make \$488.9 million in annual purchases from suppliers in the United States with about 43% or \$211.3 million of these purchases being made from businesses located in the Tri-County Business Advisory Council.

2-digit Supplier Industries	Purchases from In-Region (\$M)	Purchases from Out-of-Region (\$M)
Professional, Scientific, and Technical Services	\$47.7	\$40.6
Manufacturing	\$17.8	\$68.6
Real Estate and Rental and Leasing	\$41.2	\$28.2
Finance and Insurance	\$13.2	\$31.0
Administrative and Support and Waste Management and Remediation Services	\$23.7	\$13.5
Remaining Supplier Industries	\$67.7	\$95.8
Total	\$211.3	\$277.6

 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 Professional, Scientific, and Technical Services

Program	Awards
Appalachian State University	
Accounting	158
Advertising	83
Environmental Engineering Technology/Environmental Technology	61
Environmental Studies	80
Interior Design	20
Marketing/Marketing Management, General	100
Political Science and Government, General	78
Asheville-Buncombe Technical Community College	
Surveying Technology/Surveying	22
Veterinary/Animal Health Technology/Technician and Veterinary Assistant	16
University of North Carolina at Asheville	
Digital Arts	47

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 Tri-County Business Advisory Council, the sampling above identifies those most linked to occupations relevant to Professional, Scientific, and Technical Services.

Region Definition

Tri-County Business Advisory Council is defined as the following counties:

Avery County, North Carolina

Buncombe County, North Carolina

McDowell County, North Carolina

Madison County, North Carolina

Mitchell County, North Carolina

Watauga County, North Carolina

Yancey County, North Carolina

Data Notes

- Industry employment and wages (including total regional employment and wages) are as of 2018Q4 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 2018Q4 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 2017.
- 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 2016-2017 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.

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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.

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Management of Companies and Enterprises

Tri-County Business Advisory Council



Industry Spotlight

Avery, Buncombe, Madison, McDowell, Mitchell,
Watauga, and Yancey

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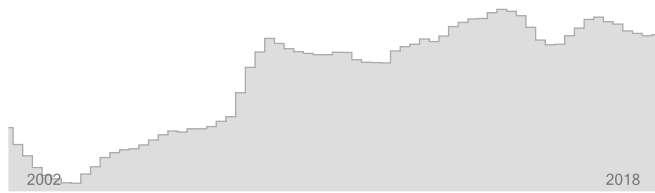
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Management of Companies and Enterprises
 Tri-County Business Advisory Council – 2018Q4

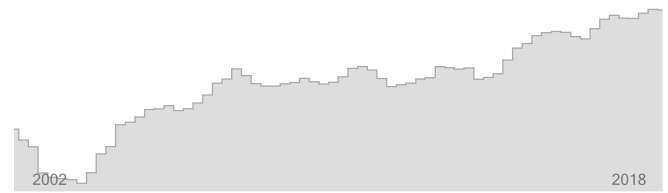
EMPLOYMENT



1,250

Regional employment / 2,347,673 in the nation

WAGES

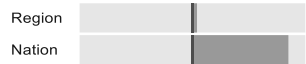


\$61,680

Avg Wages per Worker / \$123,144 in the nation

0.1% ↑

Avg Ann % Change Last 10 Years / +2.2% in the US



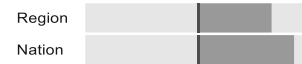
0.6%

% of Total Employment / 1.5% in the US

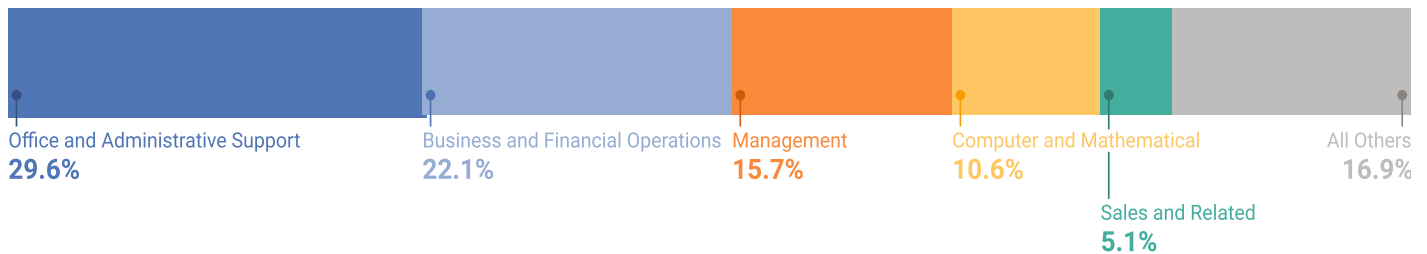


2.0% ↑

Avg Ann % Change Last 10 Years / +2.6% in the US

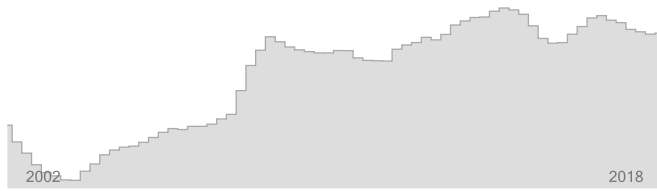


TOP OCCUPATION GROUPS

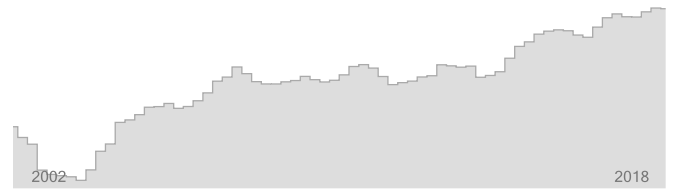


Industry Snapshot


EMPLOYMENT



WAGES

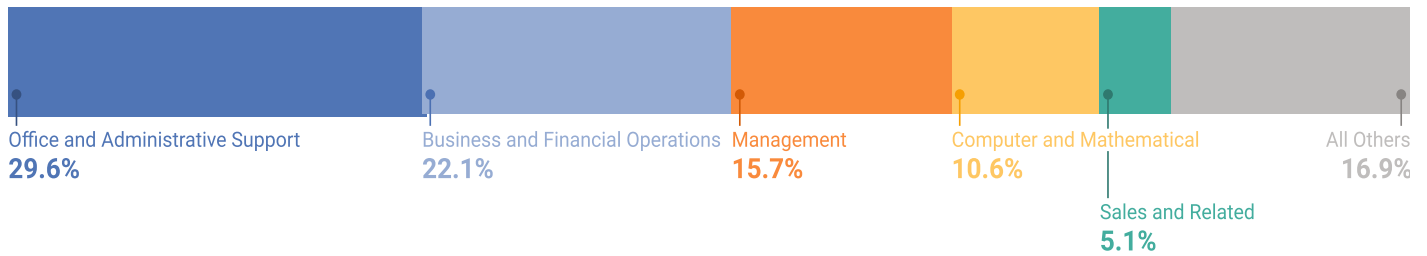


2-Digit Industry	Empl	Avg Ann Wages	LQ	5yr History	Annual Demand	Forecast Ann Growth
Management of Companies and Enterprises	1,250	\$61,680	0.40		123	0.7%

 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.

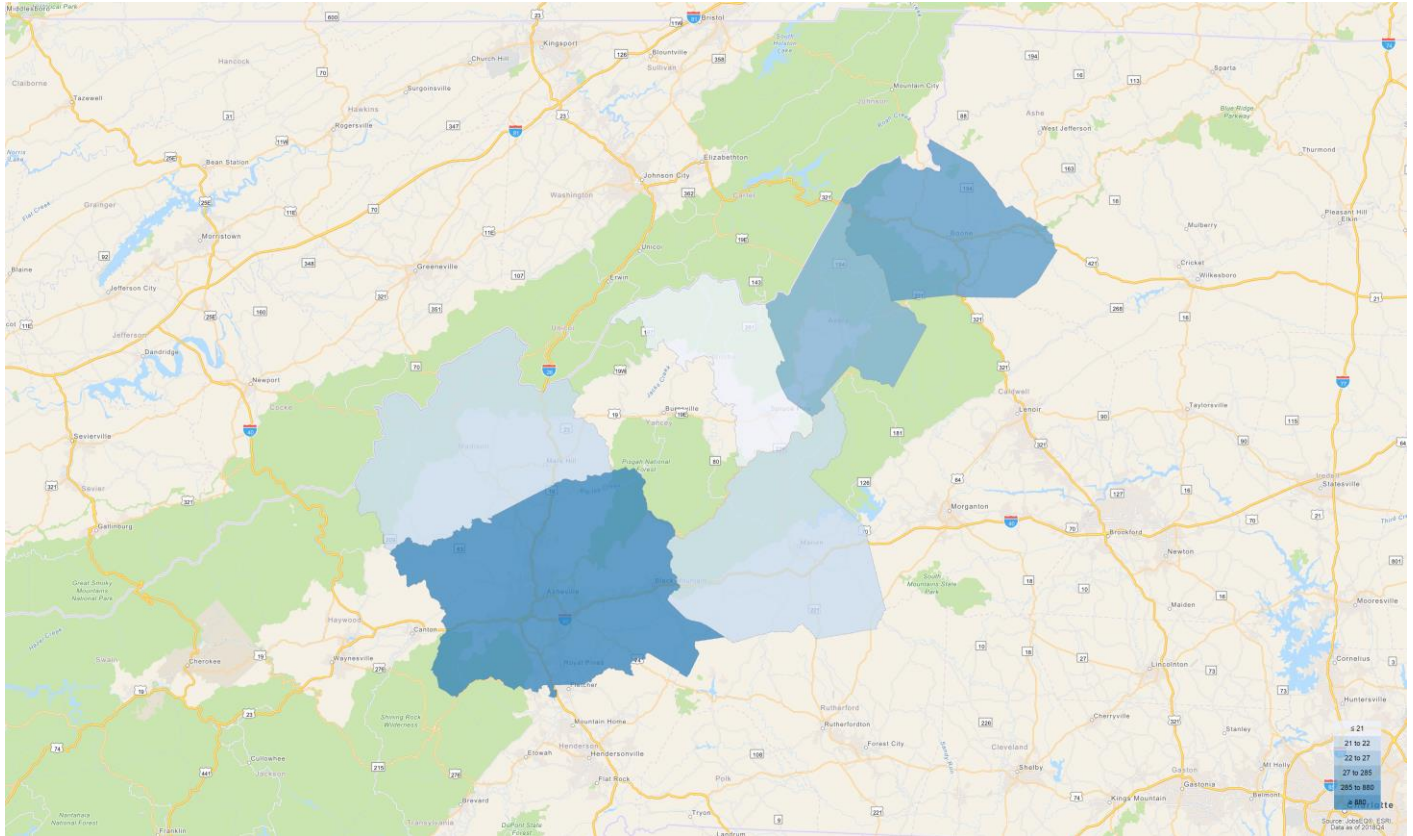
Staffing Pattern



6-digit Occupation	Empl	Avg Ann Wages	Annual Demand
Customer Service Representatives	69	\$30,100	9
Bookkeeping, Accounting, and Auditing Clerks	53	\$37,200	6
Accountants and Auditors	49	\$70,500	5
General and Operations Managers	44	\$117,500	4
Business Operations Specialists, All Other	34	\$56,600	4
First-Line Supervisors of Office and Administrative Support Workers	33	\$49,400	3
Office Clerks, General	31	\$28,900	4
Market Research Analysts and Marketing Specialists	30	\$59,000	4
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	29	\$34,100	3
Financial Managers	27	\$118,100	3
Remaining Component Occupations	807	\$56,400	81
Total	1,250		

 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
Buncombe County, North Carolina	880	Madison County, North Carolina	22
Watauga County, North Carolina	285	McDowell County, North Carolina	21
Avery County, North Carolina	28	Mitchell County, North Carolina	13

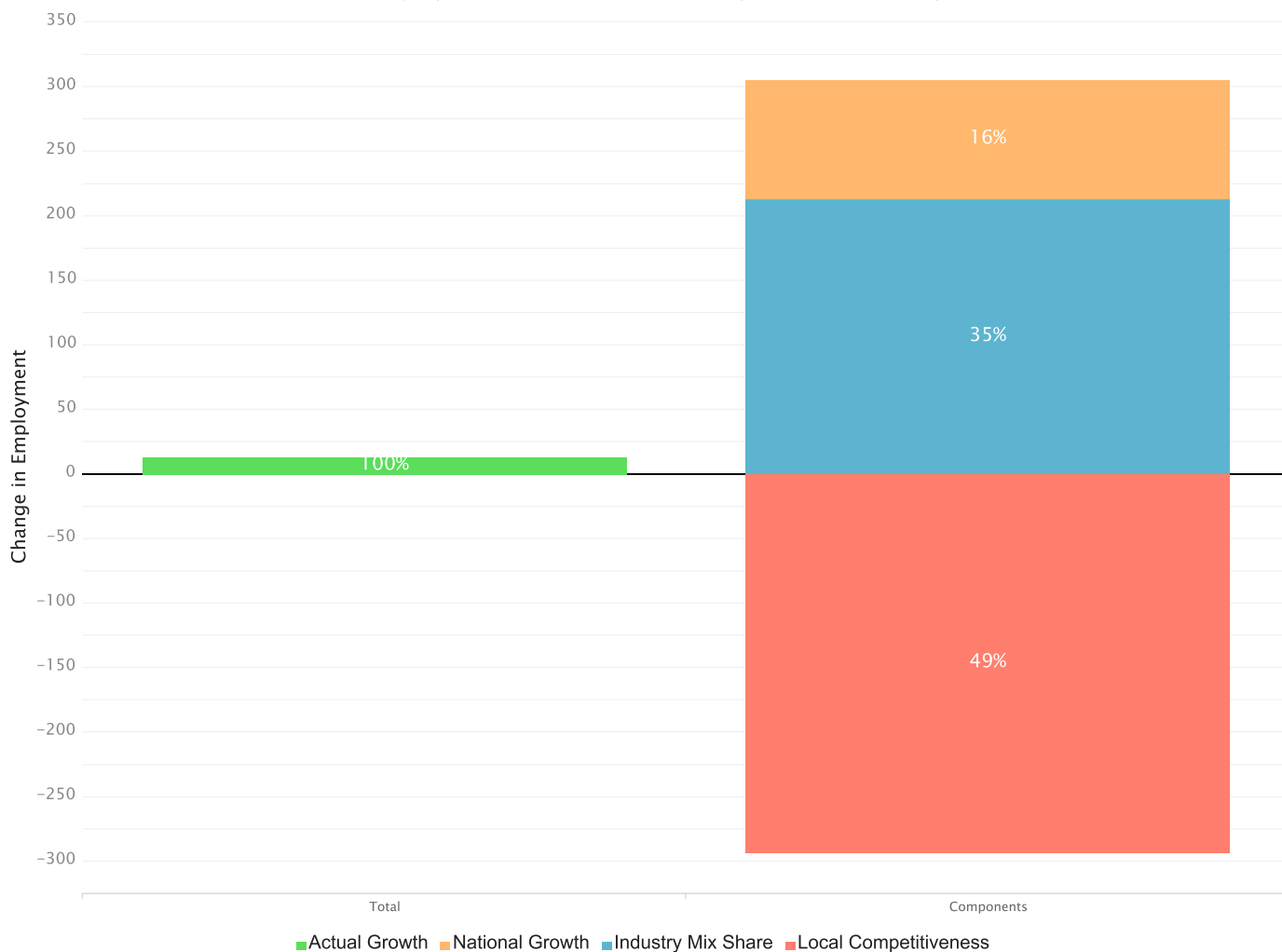
Source: JobsEQ®

💡 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 Management of Companies and Enterprises for the Tri-County Business Advisory Council added 13 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 293 jobs—meaning this industry was less competitive than its national counterpart during this period.

Drivers of Employment Growth for Tri-County Business Advisory Council



Source: JobsEQ®, Data as of 2018Q4

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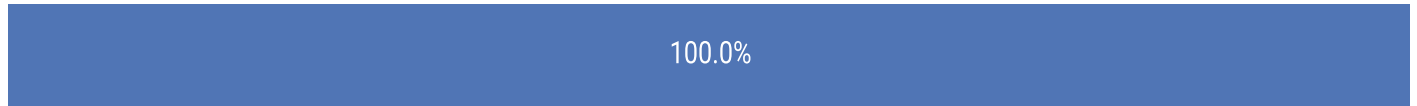
Shift-share analysis sheds light on the factors that drive regional employment growth in an industry. A positive change in local competitiveness indicates advantages that may be due to factors such as superior technology, management, and labor pool, etc.
- 

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 Management of Companies and Enterprises for the Tri-County Business Advisory Council. 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).



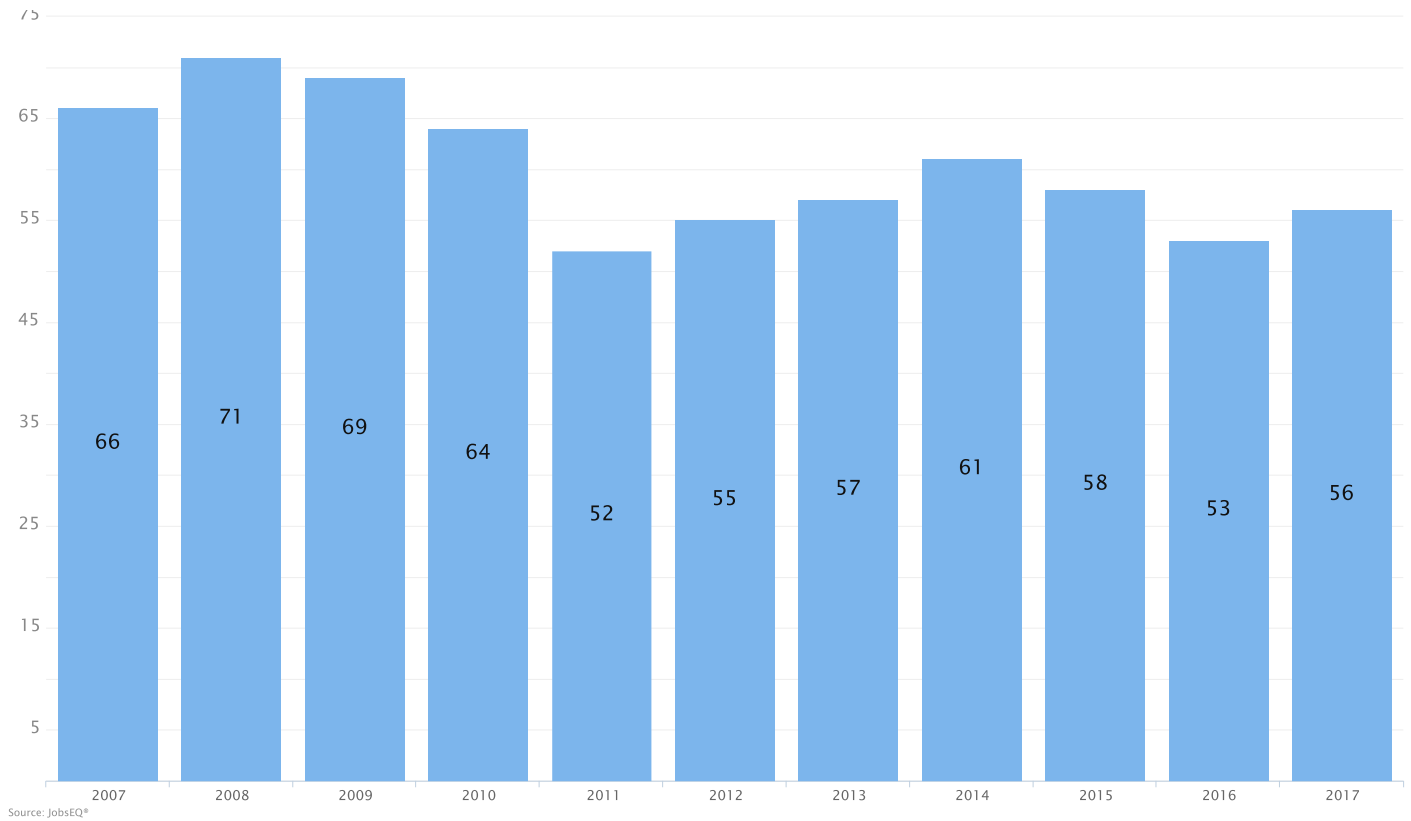
	Empl	%
Private	1,250	100.0%


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 2017, there were 56 Management of Companies and Enterprises establishments in the Tri-County Business Advisory Council (per covered employment establishment counts), a decrease from 66 establishments ten years earlier in 2007.

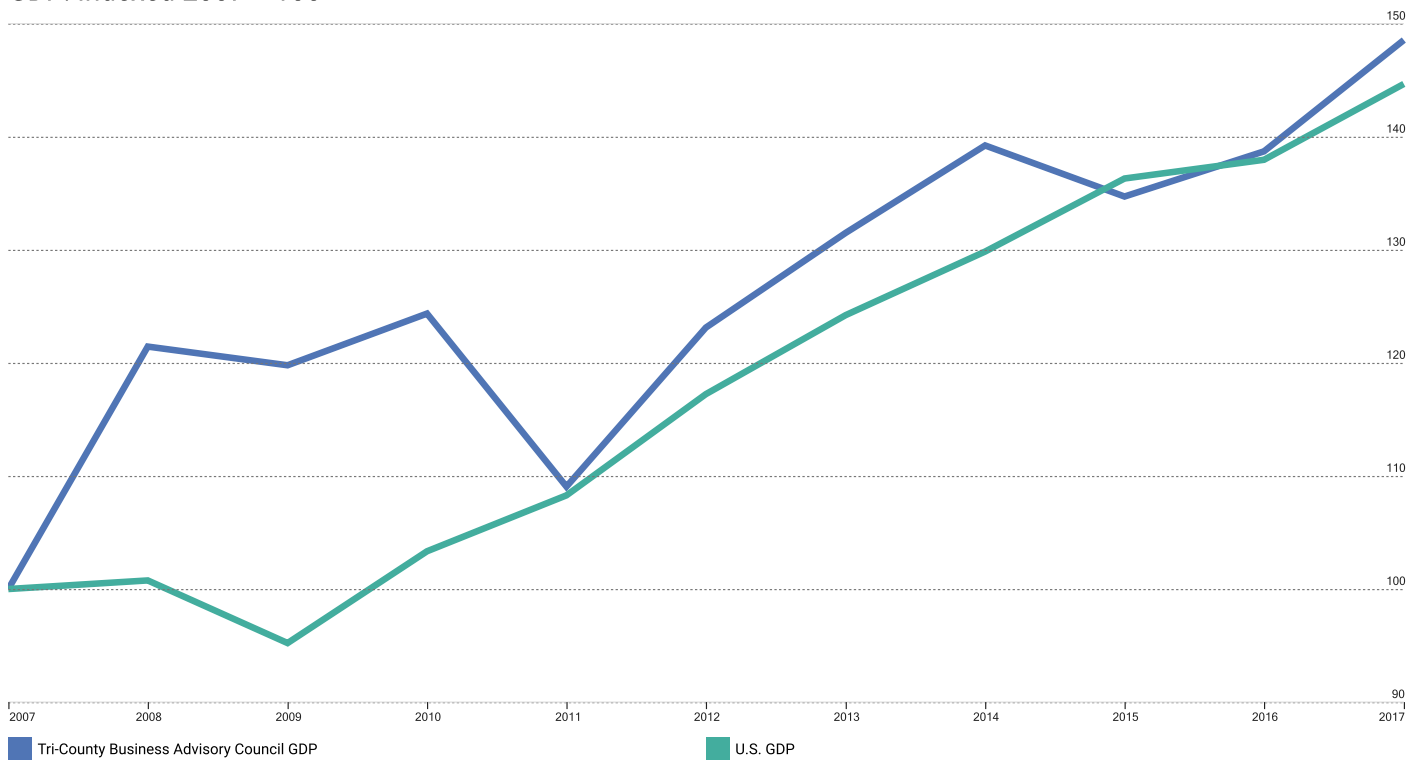


 New business formations are an important source of job creation in a regional economy, spurring innovation and competition, and driving productivity growth. Establishment data can provide an indicator of growth in businesses by counting each single location (such as a factory or a store) where business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

GDP & Productivity

In 2017, Management of Companies and Enterprises produced \$0.1 billion in GDP for the Tri-County Business Advisory Council.

GDP: Indexed 2007 = 100



0.6 %

Industry Share of Total GDP /
1.9 % in the nation



4.0 % ↑

Avg Ann % Change Last 10 Yrs /
3.8 % in the nation



\$140k

Output per Worker /
\$231k 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.

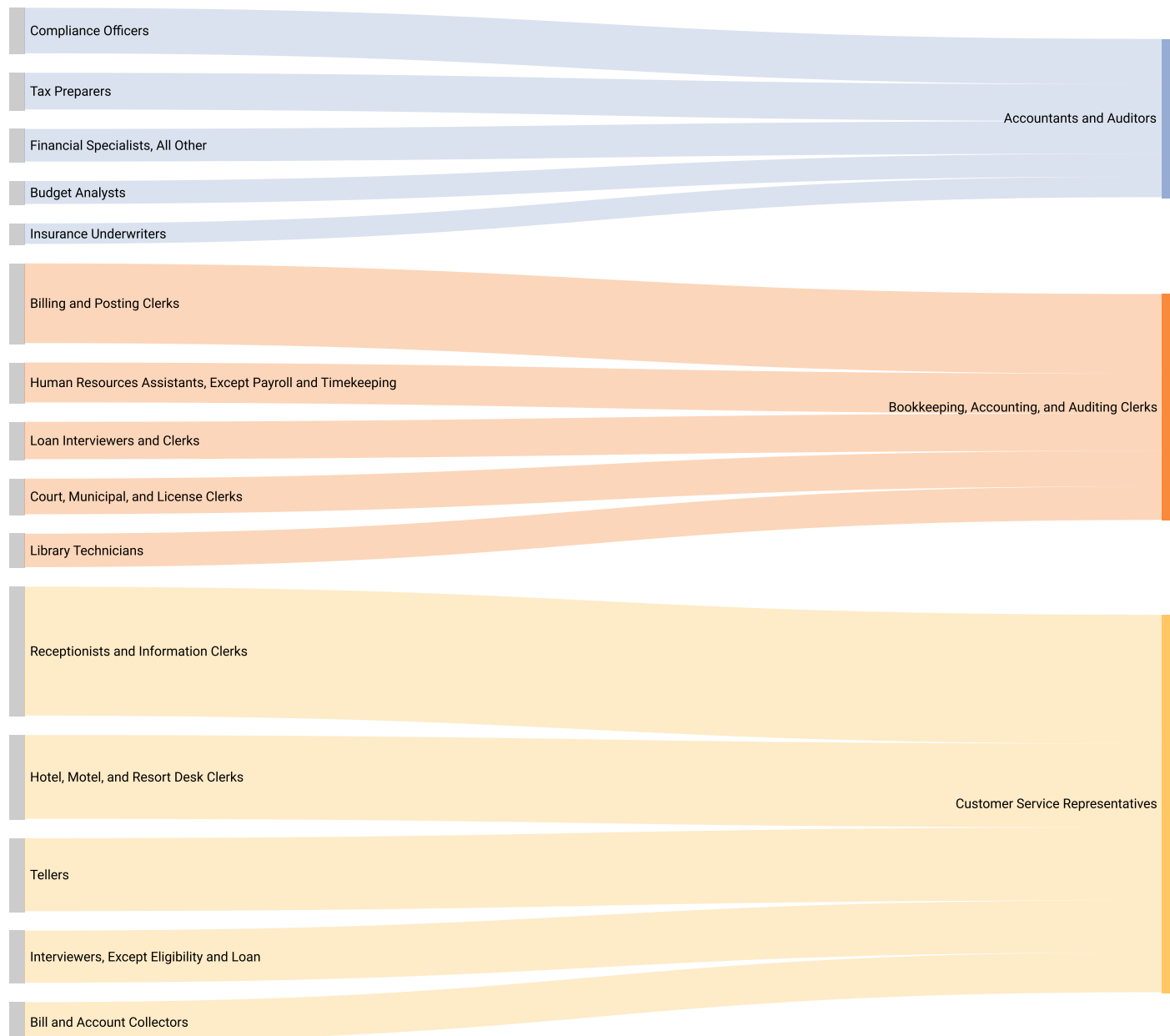
Supply Chain: Top Suppliers


As of 2018Q4, Management of Companies and Enterprises in the Tri-County Business Advisory Council are estimated to make \$86.4 million in annual purchases from suppliers in the United States with about 59% or \$51.4 million of these purchases being made from businesses located in the Tri-County Business Advisory Council.

2-digit Supplier Industries	Purchases from In-Region (\$M)	Purchases from Out-of-Region (\$M)
Professional, Scientific, and Technical Services	\$15.6	\$7.3
Real Estate and Rental and Leasing	\$10.7	\$5.0
Finance and Insurance	\$5.9	\$4.8
Information	\$4.5	\$3.3
Manufacturing	\$1.7	\$6.0
Remaining Supplier Industries	\$13.0	\$8.6
Total	\$51.4	\$35.0

 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 Management of Companies and Enterprises

Program	Awards
Appalachian State University	
Accounting	158
Business Administration and Management, General	250
Computer Science	77
Finance, General	114
Management Information Systems, General	66
Marketing/Marketing Management, General	100
Public Relations/Image Management	64
Asheville-Buncombe Technical Community College	
Information Technology	36
Medical Office Management/Administration	55
Mayland Community College	
Engineering Technology, General	40

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 Tri-County Business Advisory Council, the sampling above identifies those most linked to occupations relevant to Management of Companies and Enterprises.

Region Definition

Tri-County Business Advisory Council is defined as the following counties:

Avery County, North Carolina

Buncombe County, North Carolina

McDowell County, North Carolina

Madison County, North Carolina

Mitchell County, North Carolina

Watauga County, North Carolina

Yancey County, North Carolina

Data Notes

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- Occupation employment is as of 2018Q4 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 2017.
- 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 2016-2017 academic year.
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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.

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Administrative and Support and Waste Management and Remediation Services

Tri-County Business Advisory Council



Industry Spotlight

Avery, Buncombe, Madison, McDowell, Mitchell,
Watauga, and Yancey

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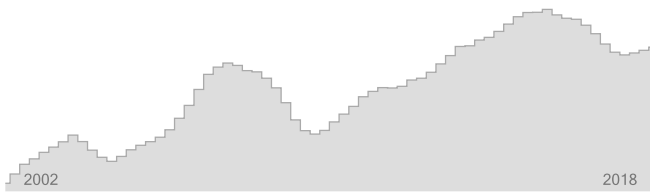
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Administrative and Support and Waste Management and Remediation Services Tri-County Business Advisory Council – 2018Q4

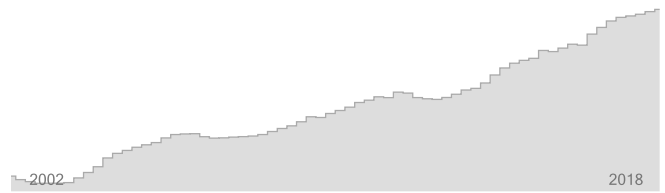
EMPLOYMENT



10,902

Regional employment / **10,164,629** in the nation

WAGES

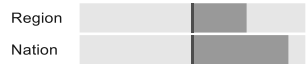


\$31,838

Avg Wages per Worker / **\$39,764** in the nation

0.7% ↑

Avg Ann % Change Last 10 Years / **+1.3%** in the US



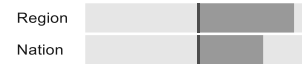
5.1%

% of Total Employment / **6.5%** in the US

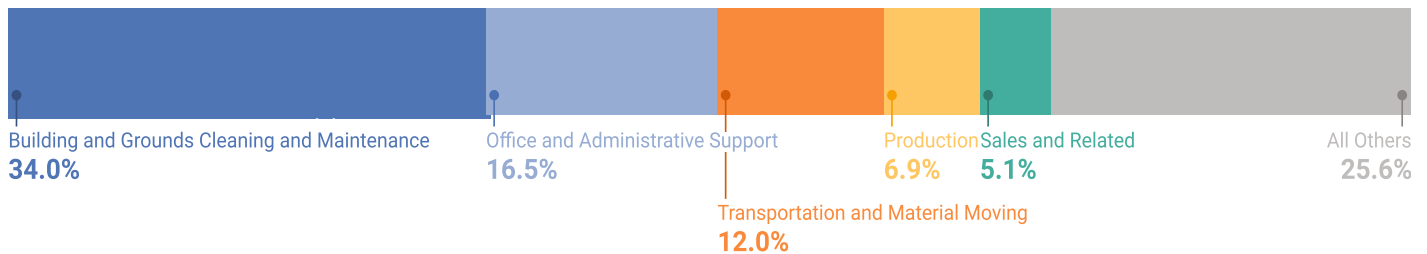


3.4% ↑

Avg Ann % Change Last 10 Years / **+2.3%** in the US

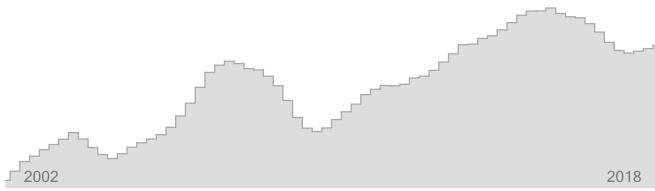


TOP OCCUPATION GROUPS



Industry Snapshot

EMPLOYMENT



WAGES

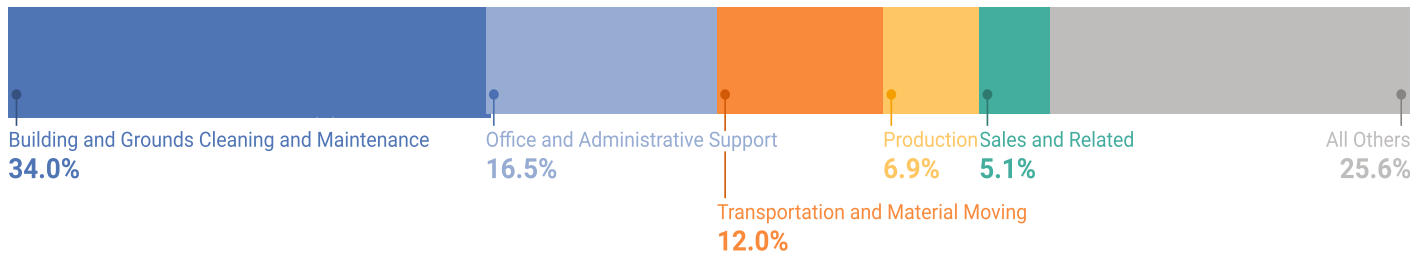


2-Digit Industry	Empl	Avg Ann Wages	LQ	5yr History	Annual Demand	Forecast Ann Growth
Administrative and Support and Waste Management and Remediation Services	10,902	\$31,838	0.80		1,379	1.1%


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.

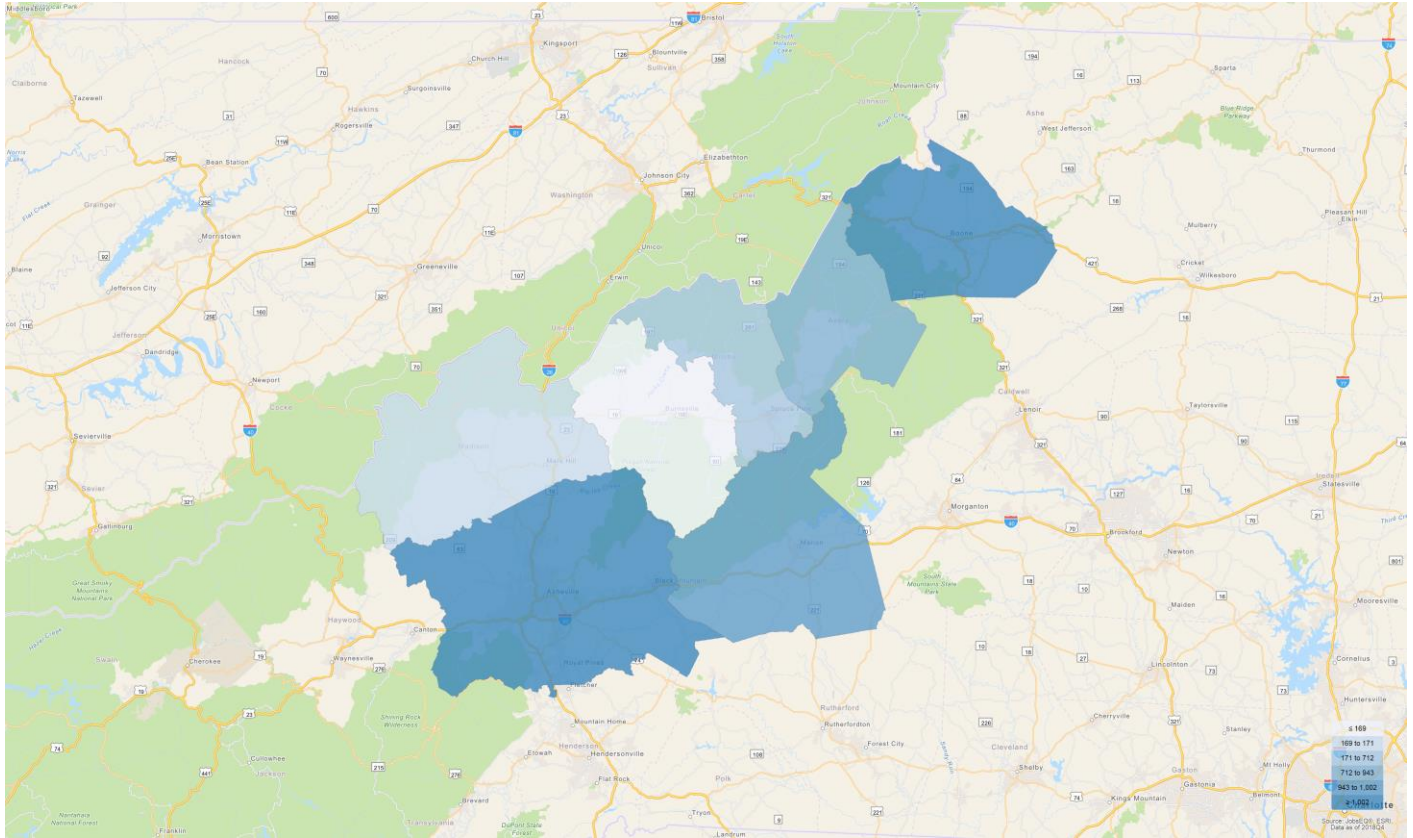
Staffing Pattern



6-digit Occupation	Empl	Avg Ann Wages	Annual Demand
Landscaping and Groundskeeping Workers	1,457	\$27,500	190
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	1,181	\$24,300	174
Laborers and Freight, Stock, and Material Movers, Hand	657	\$28,600	103
Maids and Housekeeping Cleaners	440	\$24,100	63
Customer Service Representatives	409	\$30,100	59
Security Guards	330	\$31,400	49
Office Clerks, General	309	\$28,900	37
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	198	\$34,100	21
First-Line Supervisors of Housekeeping and Janitorial Workers	193	\$38,000	24
Managers, All Other	185	\$84,500	15
Remaining Component Occupations	5,500	\$48,000	680
Total	10,902		

 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
Buncombe County, North Carolina	7,770	Mitchell County, North Carolina	171
Watauga County, North Carolina	1,003	Madison County, North Carolina	170
McDowell County, North Carolina	944	Yancey County, North Carolina	133
Avery County, North Carolina	712		

Source: JobsEQ®

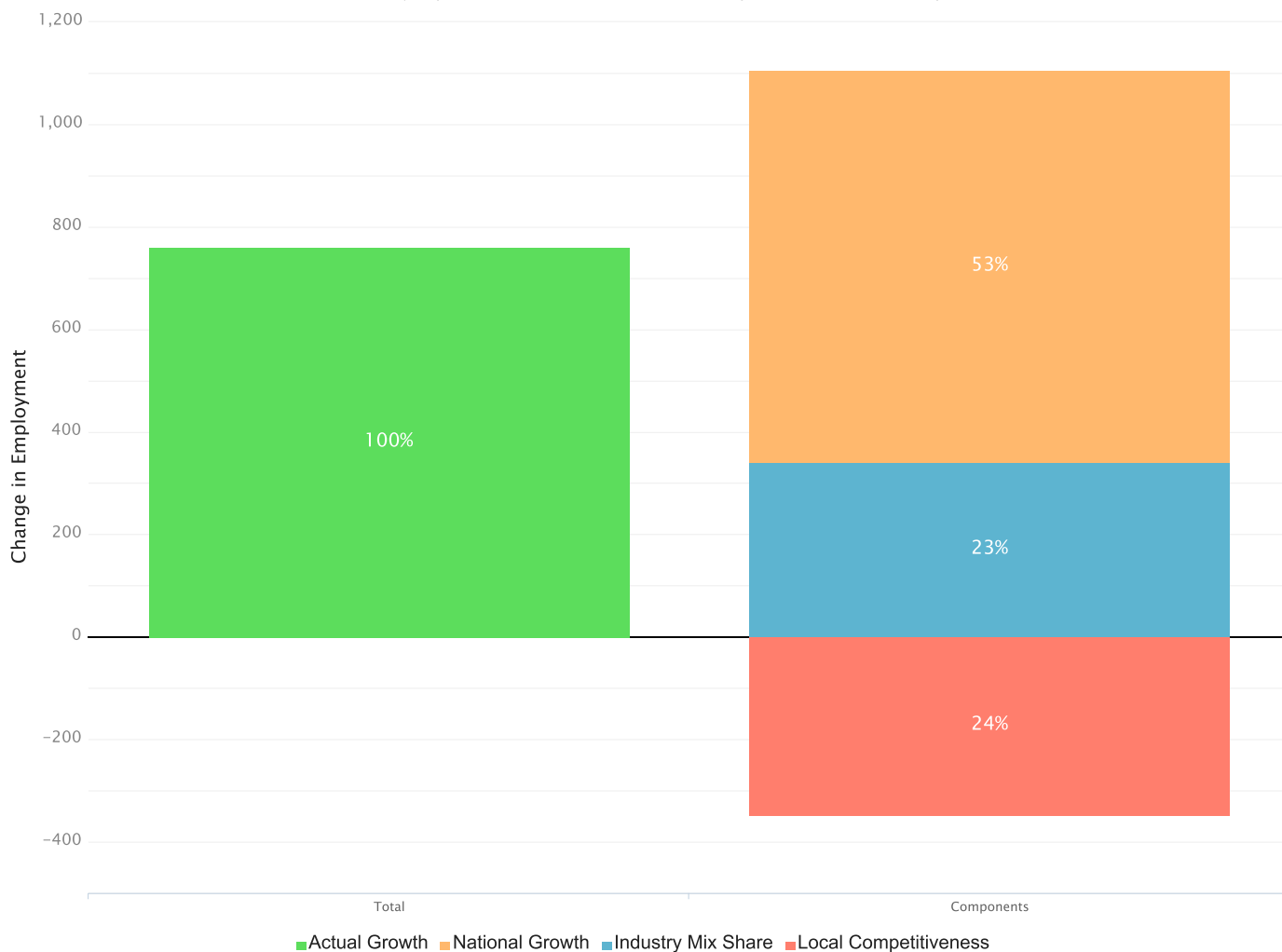


A geographic concentration of firms in related fields of business may reduce production costs, attract more suppliers and customers, and increase supply and demand for specialized labor, but may also increase competitive pressure and drive down prices.



Drivers of Employment Growth

Over the ten years ending 2018, employment in Administrative and Support and Waste Management and Remediation Services for the Tri-County Business Advisory Council added 759 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 347 jobs—meaning this industry was less competitive than its national counterpart during this period.

Drivers of Employment Growth for Tri-County Business Advisory Council



Source: JobsEQ®, Data as of 2018Q4

-  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 Administrative and Support and Waste Management and Remediation Services for the Tri-County Business Advisory Council. 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).



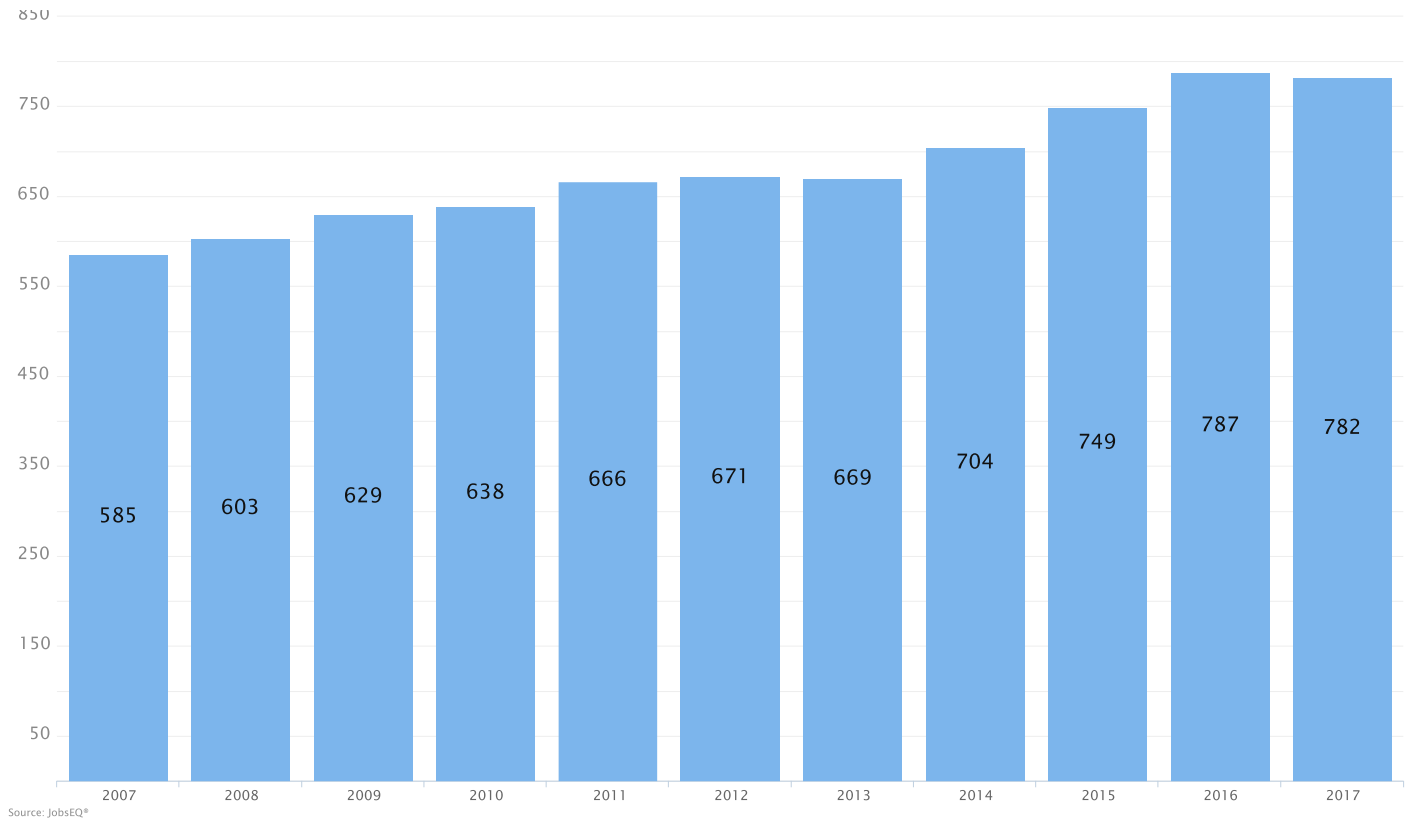
	Empl	%
Private	9,258	84.9%
Self-Employment	1,593	14.6%
Local Government	10	0.1%
State Government	41	0.4%


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 2017, there were 782 Administrative and Support and Waste Management and Remediation Services establishments in the Tri-County Business Advisory Council (per covered employment establishment counts), an increase from 585 establishments ten years earlier in 2007.

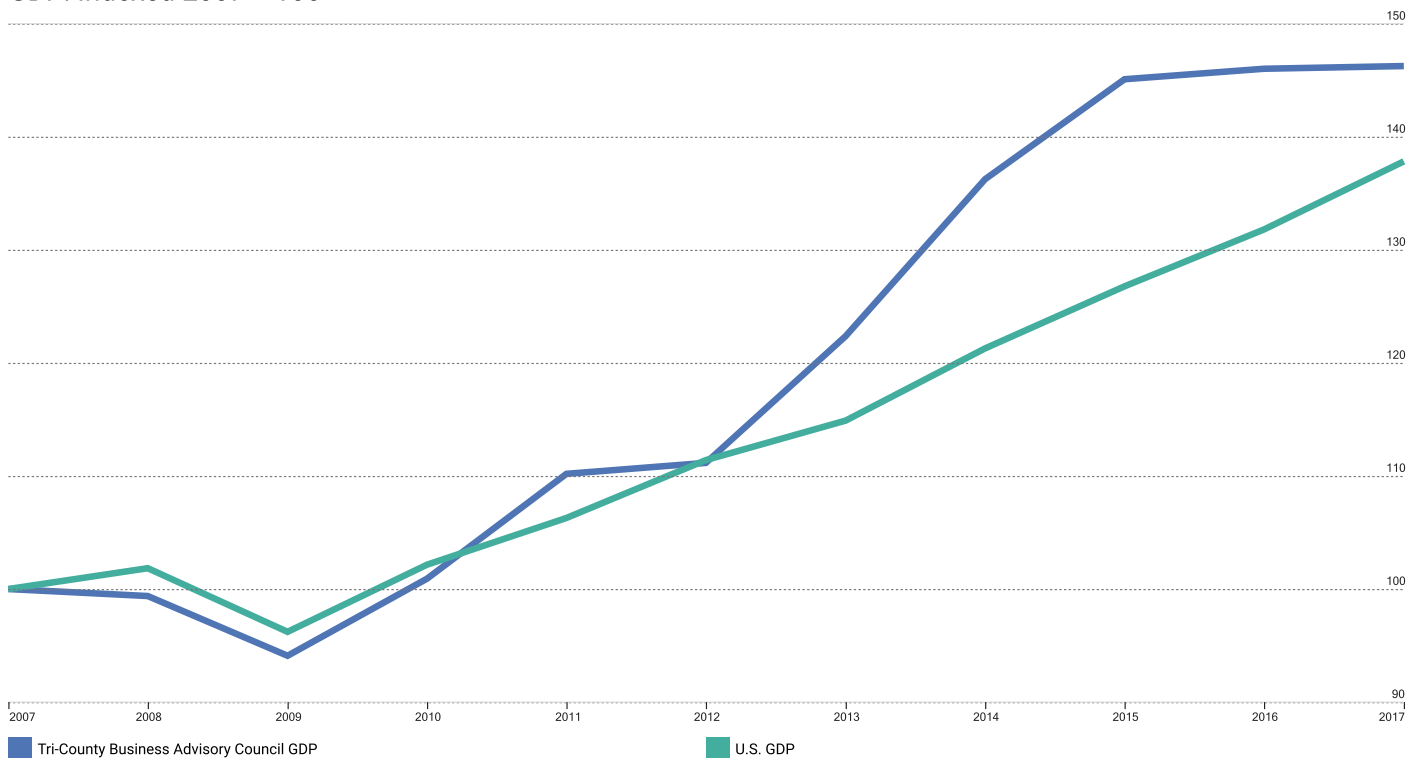


 New business formations are an important source of job creation in a regional economy, spurring innovation and competition, and driving productivity growth. Establishment data can provide an indicator of growth in businesses by counting each single location (such as a factory or a store) where business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

GDP & Productivity

In 2017, Administrative and Support and Waste Management and Remediation Services produced \$0.5 billion in GDP for the Tri-County Business Advisory Council.

GDP: Indexed 2007 = 100



2.8 %

Industry Share of Total GDP /
3.1 % in the nation



3.9 % ↑

Avg Ann % Change Last 10 Yrs /
3.3 % in the nation



\$88k

Output per Worker /
\$108k 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.

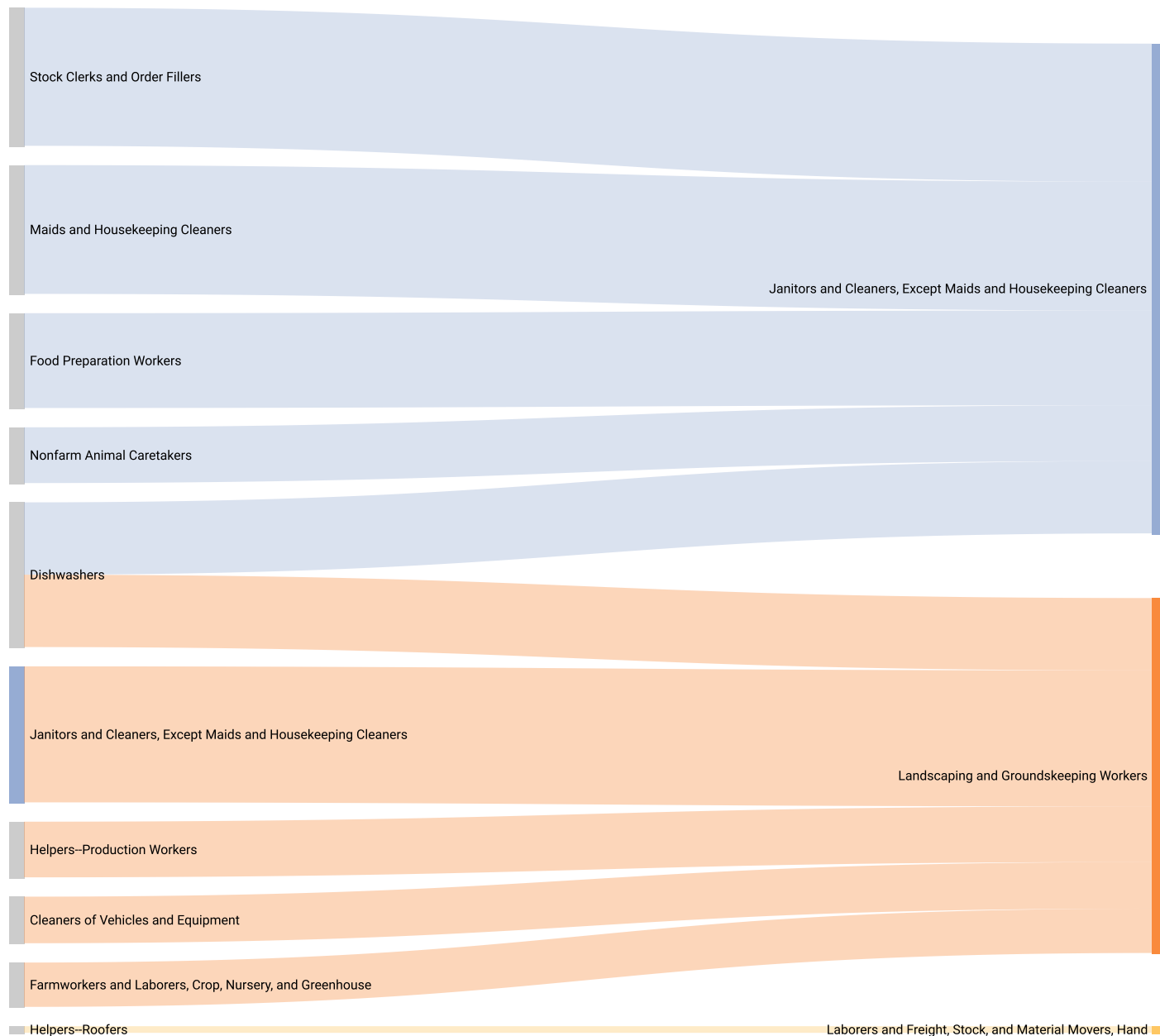
Supply Chain: Top Suppliers


As of 2018Q4, Administrative and Support and Waste Management and Remediation Services in the Tri-County Business Advisory Council are estimated to make \$399.9 million in annual purchases from suppliers in the United States with about 35% or \$140.8 million of these purchases being made from businesses located in the Tri-County Business Advisory Council.

2-digit Supplier Industries	Purchases from In-Region (\$M)	Purchases from Out-of-Region (\$M)
Manufacturing	\$16.7	\$65.5
Professional, Scientific, and Technical Services	\$21.2	\$30.5
Real Estate and Rental and Leasing	\$21.5	\$23.2
Administrative and Support and Waste Management and Remediation Services	\$21.2	\$18.9
Finance and Insurance	\$6.8	\$29.7
Remaining Supplier Industries	\$53.4	\$91.4
Total	\$140.8	\$259.1

 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 Administrative and Support and Waste Management and Remediation Services

Program	Awards
Appalachian State University	
Business Administration and Management, General	250
Criminal Justice/Safety Studies	146
Environmental Engineering Technology/Environmental Technology	61
Marketing/Marketing Management, General	100
Political Science and Government, General	78
Registered Nursing/Registered Nurse	192
Asheville-Buncombe Technical Community College	
Criminal Justice/Police Science	48
Criminal Justice/Safety Studies	124
Lees-McRae College	
Criminal Justice/Law Enforcement Administration	54
Mayland Community College	
Applied Horticulture/Horticulture Operations, General	30

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 Tri-County Business Advisory Council, the sampling above identifies those most linked to occupations relevant to Administrative and Support and Waste Management and Remediation Services.

Region Definition

Tri-County Business Advisory Council is defined as the following counties:

Avery County, North Carolina

Buncombe County, North Carolina

McDowell County, North Carolina

Madison County, North Carolina

Mitchell County, North Carolina

Watauga County, North Carolina

Yancey County, North Carolina

Data Notes

- Industry employment and wages (including total regional employment and wages) are as of 2018Q4 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 2018Q4 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 2017.
- 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 2016-2017 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.



Educational Services

Tri-County Business Advisory Council



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Educational Services
Tri-County Business Advisory Council – 2018Q4

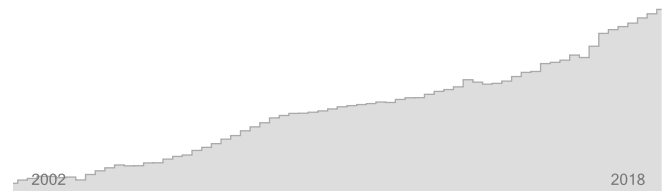
EMPLOYMENT



17,387

Regional employment / **12,890,687** in the nation

WAGES

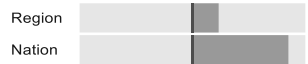


\$39,366

Avg Wages per Worker / **\$50,504** in the nation

0.1% ↑

Avg Ann % Change Last 10 Years / **+0.5%** in the US



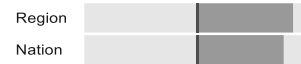
8.2%

% of Total Employment / **8.2%** in the US



2.3% ↑

Avg Ann % Change Last 10 Years / **+2.1%** in the US



TOP OCCUPATION GROUPS

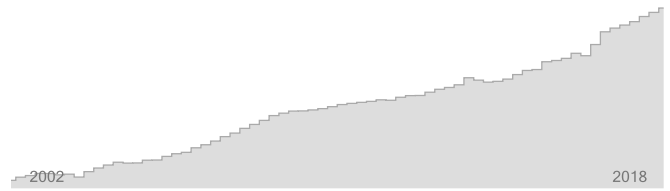


Industry Snapshot

EMPLOYMENT



WAGES



2-Digit Industry	Empl	Avg Ann Wages	LQ	5yr History	Annual Demand	Forecast Ann Growth
Educational Services	17,387	\$39,366	1.00		1,735	0.7%


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.

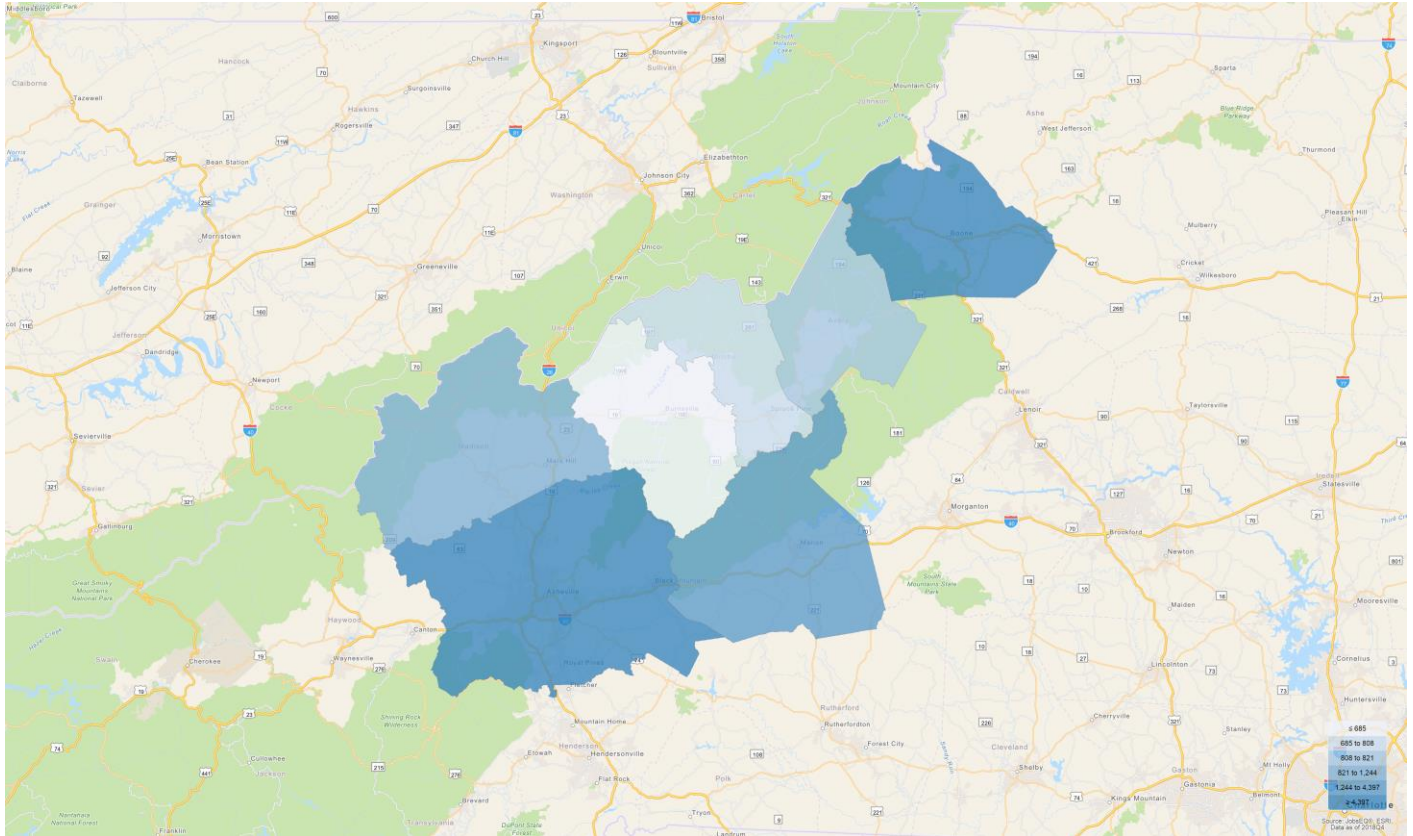
Staffing Pattern



6-digit Occupation	Empl	Avg Ann Wages	Annual Demand
Elementary School Teachers, Except Special Education	1,356	\$43,900	108
Teacher Assistants	1,080	\$24,200	121
Secondary School Teachers, Except Special and Career/Technical Education	969	\$45,500	76
Middle School Teachers, Except Special and Career/Technical Education	739	\$45,300	60
Substitute Teachers	648	\$25,000	76
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	561	\$34,100	54
Office Clerks, General	561	\$28,900	63
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	468	\$24,300	65
Teachers and Instructors, All Other	437	\$38,100	55
Vocational Education Teachers, Postsecondary	405	\$51,100	33
Remaining Component Occupations	10,125	\$57,000	1,040
Total	17,387		

 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
Buncombe County, North Carolina	9,036	Avery County, North Carolina	808
Watauga County, North Carolina	4,397	Mitchell County, North Carolina	685
McDowell County, North Carolina	1,245	Yancey County, North Carolina	394
Madison County, North Carolina	822		

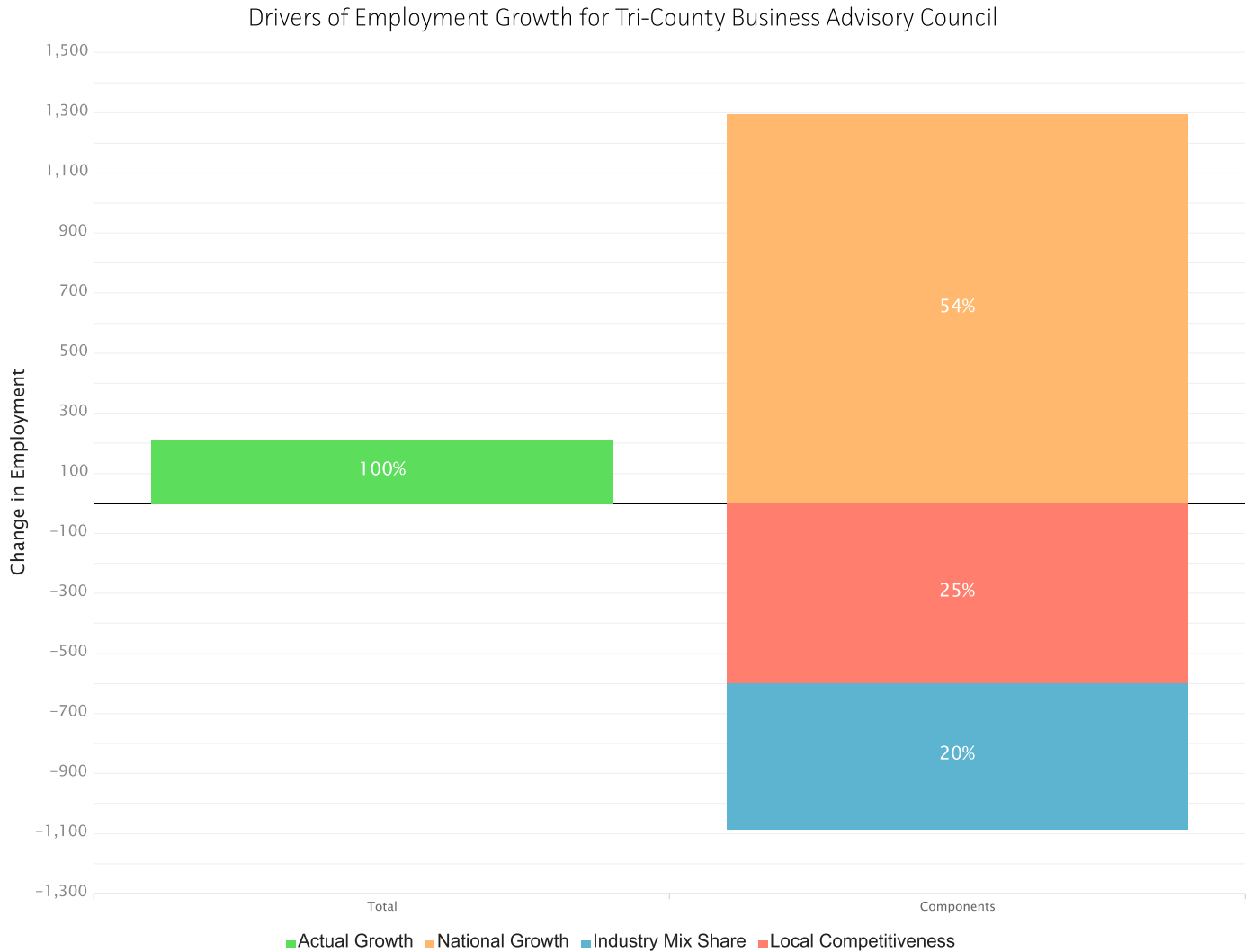
Source: JobsEQ®





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 Educational Services for the Tri-County Business Advisory Council added 212 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 596 jobs—meaning this industry was less competitive than its national counterpart during this period.



-  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 Educational Services for the Tri-County Business Advisory Council. 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).



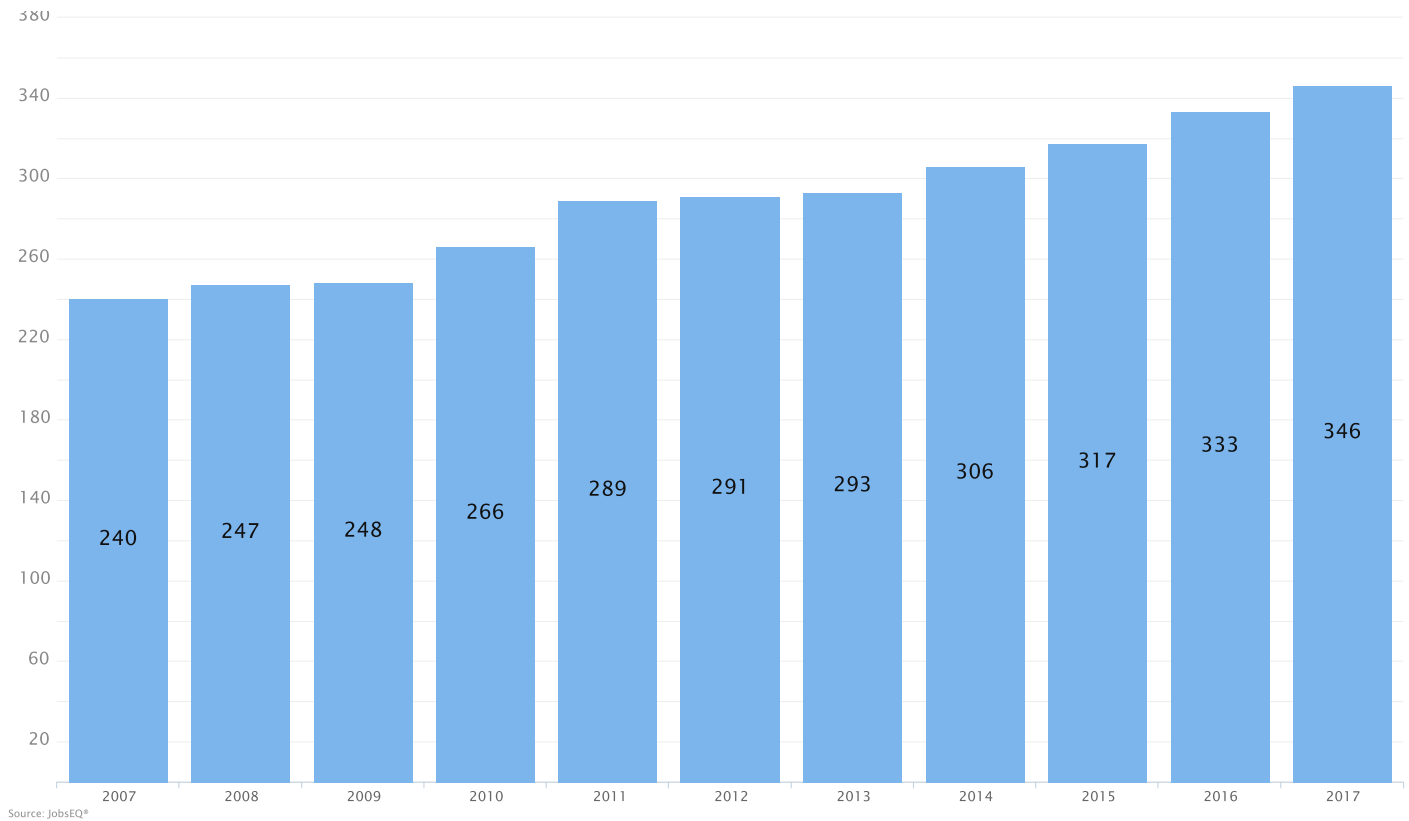
	Empl	%
Private	3,303	19.0%
Self-Employment	431	2.5%
Local Government	7,461	42.9%
State Government	6,192	35.6%
Other Non-Covered	0	0.0%


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 2017, there were 346 Educational Services establishments in the Tri-County Business Advisory Council (per covered employment establishment counts), an increase from 240 establishments ten years earlier in 2007.

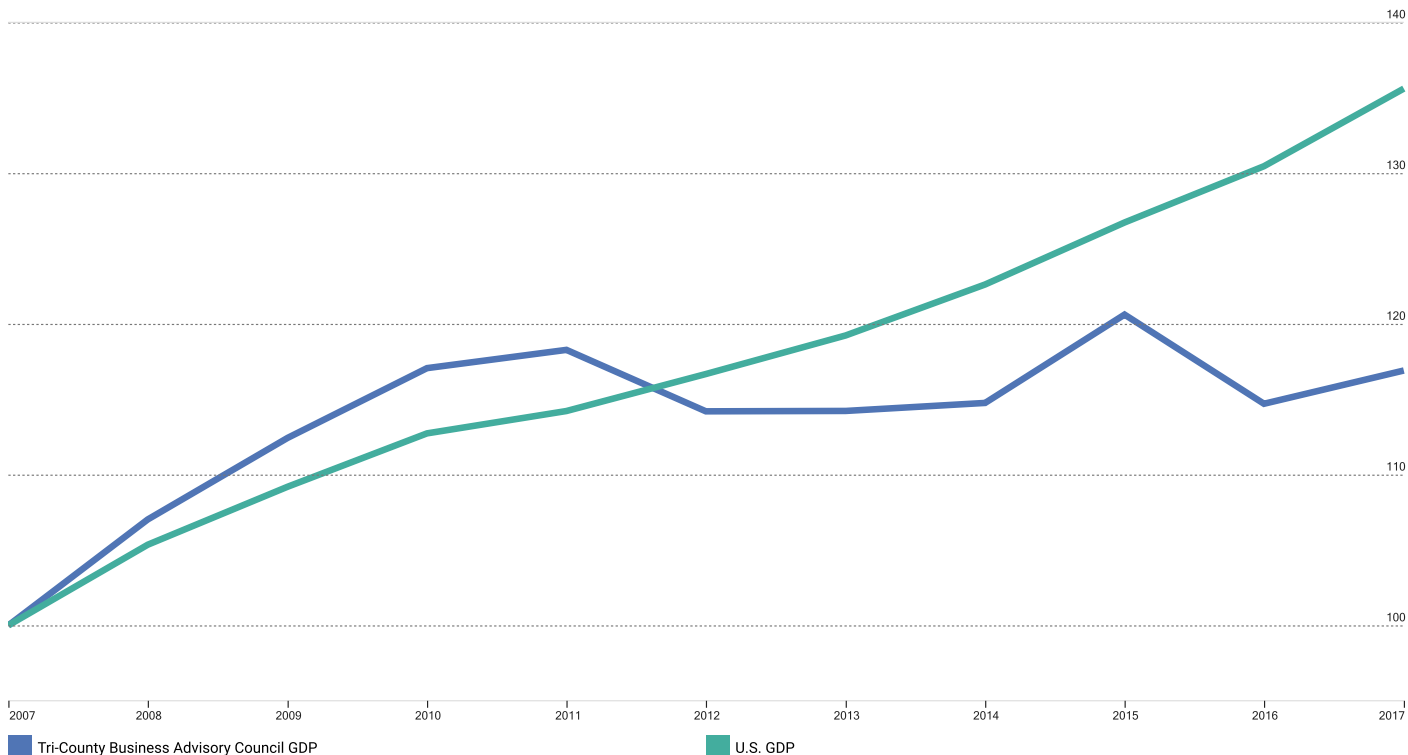


 New business formations are an important source of job creation in a regional economy, spurring innovation and competition, and driving productivity growth. Establishment data can provide an indicator of growth in businesses by counting each single location (such as a factory or a store) where business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

GDP & Productivity

In 2017, Educational Services produced \$1.1 billion in GDP for the Tri-County Business Advisory Council.

GDP: Indexed 2007 = 100



5.9 %

Industry Share of Total GDP /
5.5 % in the nation



1.6 % ↑

Avg Ann % Change Last 10 Yrs /
3.1 % in the nation



\$67k

Output per Worker /
\$87k 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 2018Q4, Educational Services in the Tri-County Business Advisory Council are estimated to make \$552.9 million in annual purchases from suppliers in the United States with about 38% or \$209.0 million of these purchases being made from businesses located in the Tri-County Business Advisory Council.

2-digit Supplier Industries	Purchases from In-Region (\$M)	Purchases from Out-of-Region (\$M)
Real Estate and Rental and Leasing	\$79.8	\$54.0
Manufacturing	\$23.7	\$91.3
Utilities	\$16.2	\$33.4
Administrative and Support and Waste Management and Remediation Services	\$18.7	\$19.0
Professional, Scientific, and Technical Services	\$11.5	\$23.4
Remaining Supplier Industries	\$59.2	\$122.7
Total	\$209.0	\$343.9

 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 Educational Services

Program	Awards
Appalachian State University	
Biology/Biological Sciences, General	146
Educational/Instructional Technology	51
Elementary Education and Teaching	168
English Language and Literature, General	87
Higher Education/Higher Education Administration	48
Junior High/Intermediate/Middle School Education and Teaching	47
Reading Teacher Education	47
Secondary School Administration/Principalship	67
Asheville-Buncombe Technical Community College	
Liberal Arts and Sciences/Liberal Studies	386
Lees-McRae College	
Elementary Education and Teaching	38

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 Tri-County Business Advisory Council, the sampling above identifies those most linked to occupations relevant to Educational Services.

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- Occupation employment is as of 2018Q4 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 2017.
- 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 2016-2017 academic year.
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- 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.

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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.



Health Care and Social Assistance

Tri-County Business Advisory Council



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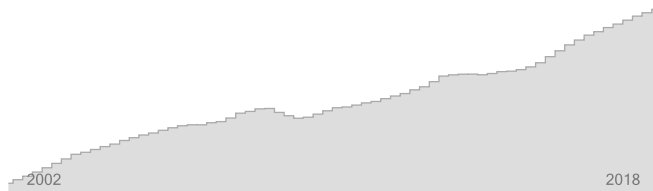
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Health Care and Social Assistance
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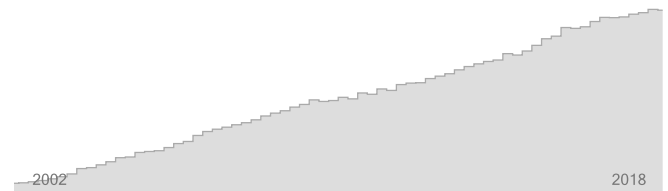
EMPLOYMENT



36,578

Regional employment / **22,533,090** in the nation

WAGES

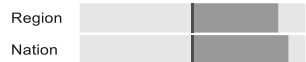


\$53,242

Avg Wages per Worker / **\$51,071** in the nation

1.9% ↑

Avg Ann % Change Last 10 Years / **+2.1%** in the US



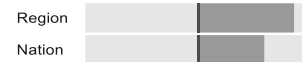
17.2%

% of Total Employment / **14.3%** in the US

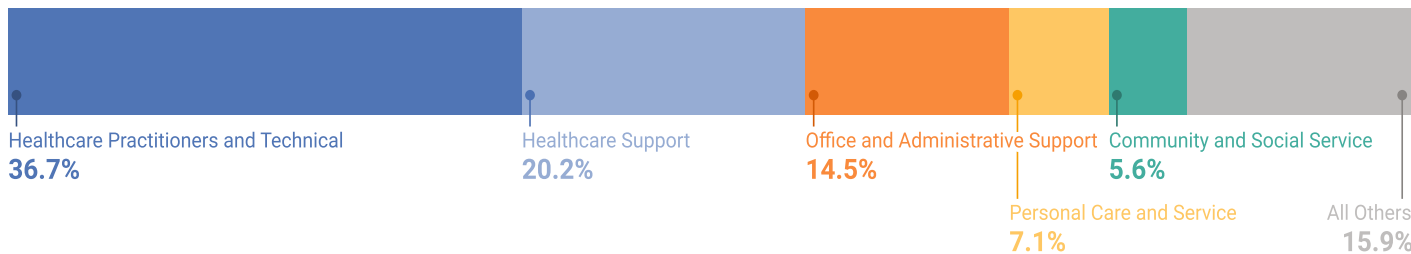


2.6% ↑

Avg Ann % Change Last 10 Years / **+1.8%** in the US

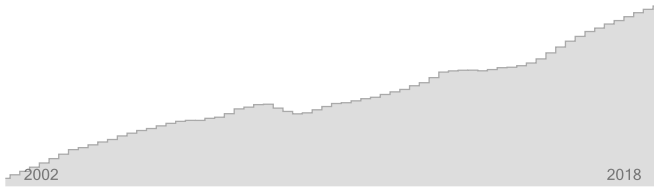


TOP OCCUPATION GROUPS

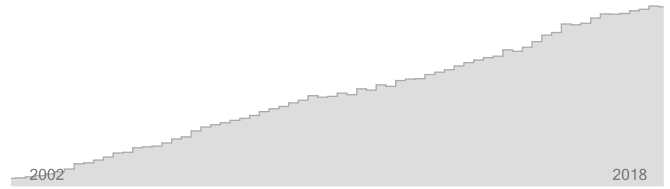


Industry Snapshot

EMPLOYMENT



WAGES

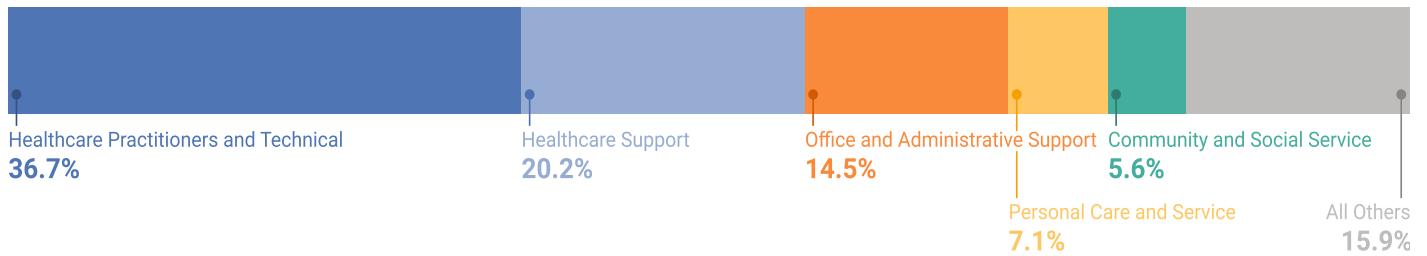


2-Digit Industry	Empl	Avg Ann Wages	LQ	5yr History	Annual Demand	Forecast Ann Growth
Health Care and Social Assistance	36,578	\$53,242	1.20		4,130	1.8%


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.

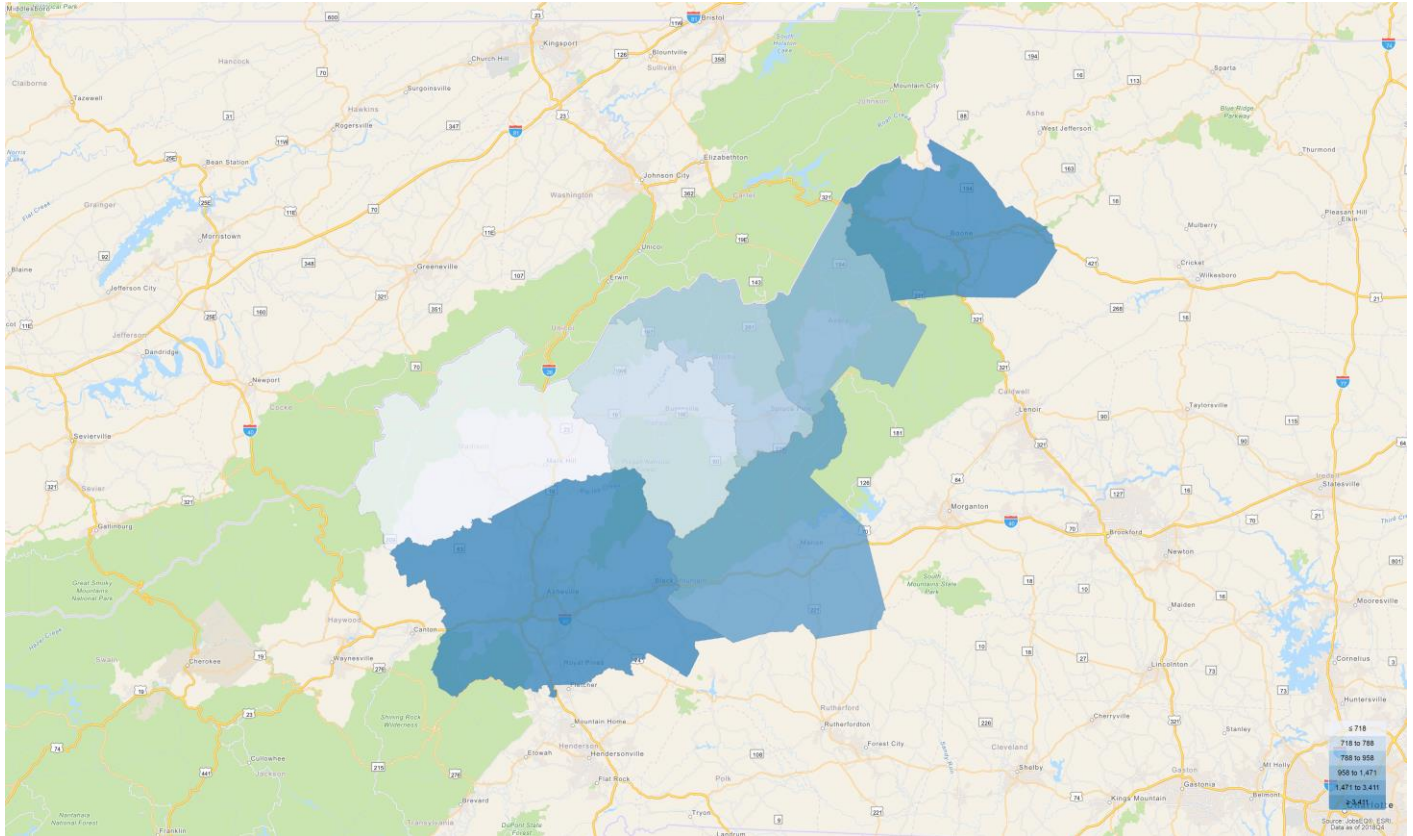
Staffing Pattern



6-digit Occupation	Empl	Avg Ann Wages	Annual Demand
Registered Nurses	5,153	\$62,800	362
Nursing Assistants	2,959	\$26,500	377
Personal Care Aides	1,529	\$24,500	287
Home Health Aides	1,462	\$24,100	248
Medical Assistants	1,116	\$31,600	160
Licensed Practical and Licensed Vocational Nurses	998	\$42,400	87
Receptionists and Information Clerks	962	\$28,200	151
Medical Secretaries	943	\$32,500	128
Physicians and Surgeons, All Other	717	\$241,100	31
Office Clerks, General	651	\$28,900	84
Remaining Component Occupations	20,061	\$56,900	2,234
Total	36,578		

 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
Buncombe County, North Carolina	28,605	Mitchell County, North Carolina	788
Watauga County, North Carolina	3,411	Yancey County, North Carolina	718
McDowell County, North Carolina	1,471	Madison County, North Carolina	626
Avery County, North Carolina	958		

Source: JobsEQ®

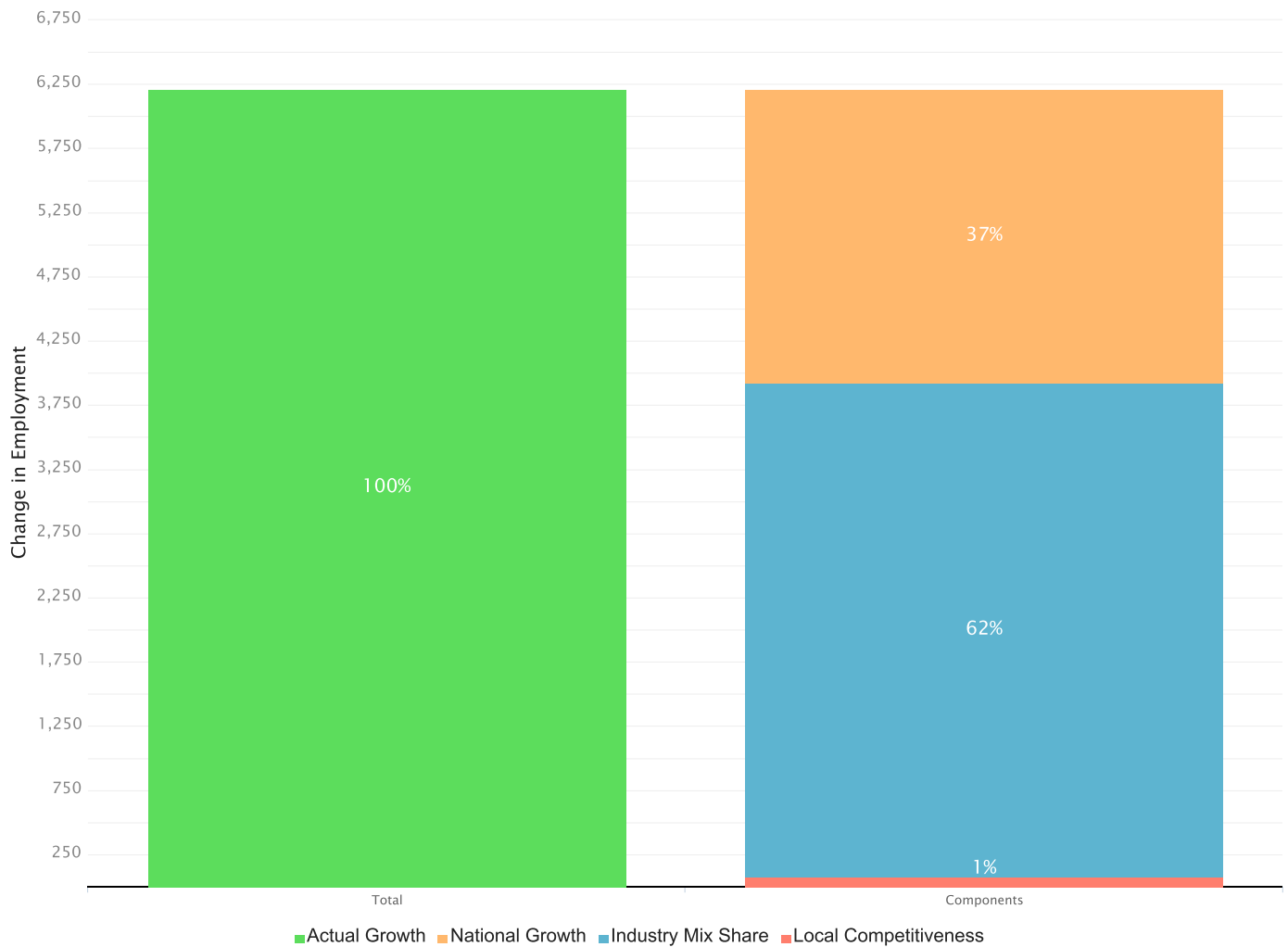




A geographic concentration of firms in related fields of business may reduce production costs, attract more suppliers and customers, and increase supply and demand for specialized labor, but may also increase competitive pressure and drive down prices.

Drivers of Employment Growth

Over the ten years ending 2018, employment in Health Care and Social Assistance for the Tri-County Business Advisory Council added 6,209 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 gain of 75 jobs—meaning this industry was more competitive than its national counterpart during this period.

Drivers of Employment Growth for Tri-County Business Advisory Council

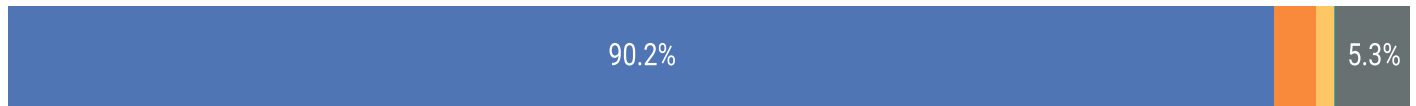


-  Shift-share analysis sheds light on the factors that drive regional employment growth in an industry. A positive change in local competitiveness indicates advantages that may be due to factors such as superior technology, management, and labor pool, etc.
-  National growth is due to the overall growth 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 Health Care and Social Assistance for the Tri-County Business Advisory Council. 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).



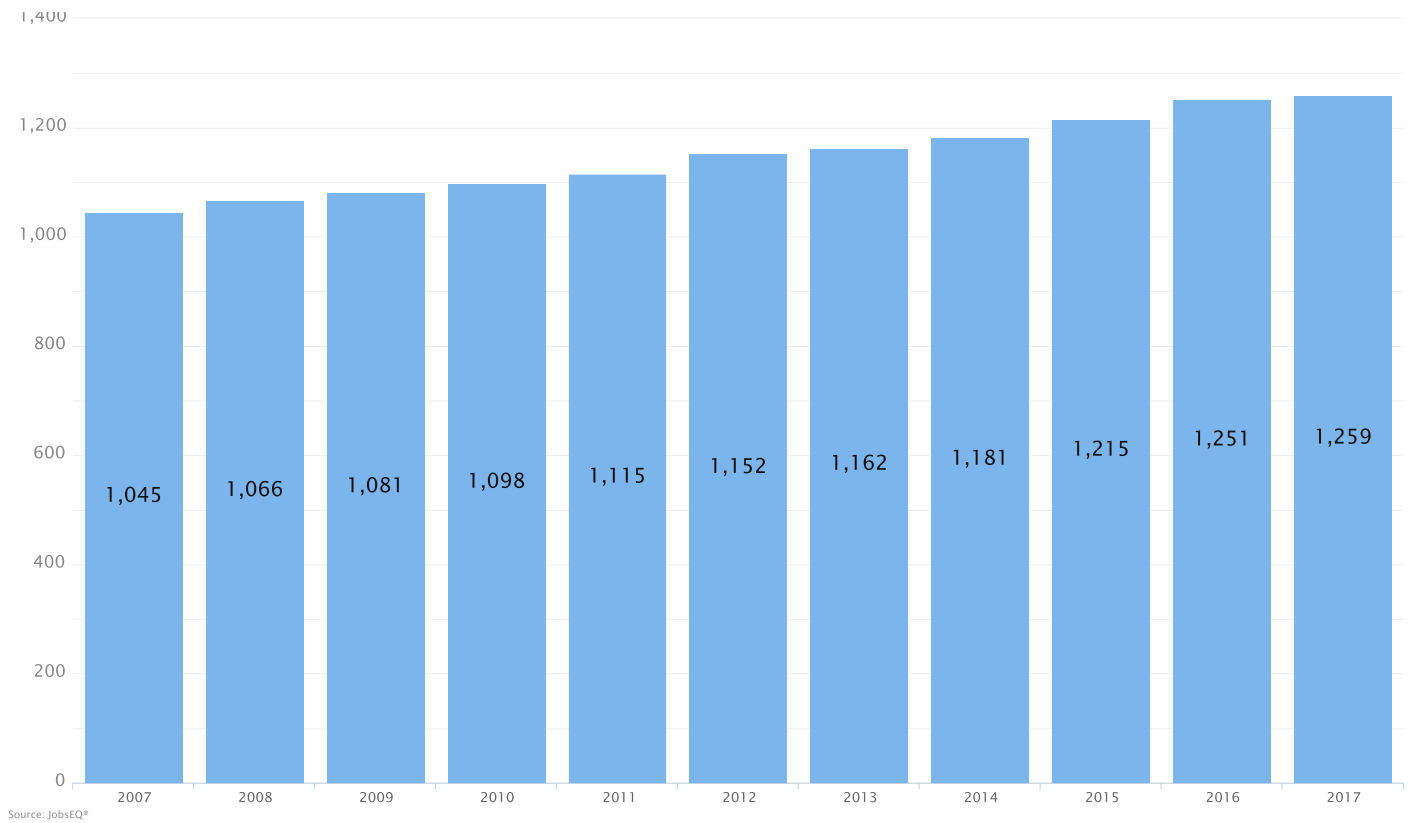
	Empl	%
Private	33,011	90.2%
Self-Employment	1,138	3.1%
Local Government	471	1.3%
State Government	19	0.1%
Federal Government	1,939	5.3%


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 2017, there were 1,259 Health Care and Social Assistance establishments in the Tri-County Business Advisory Council (per covered employment establishment counts), an increase from 1,045 establishments ten years earlier in 2007.

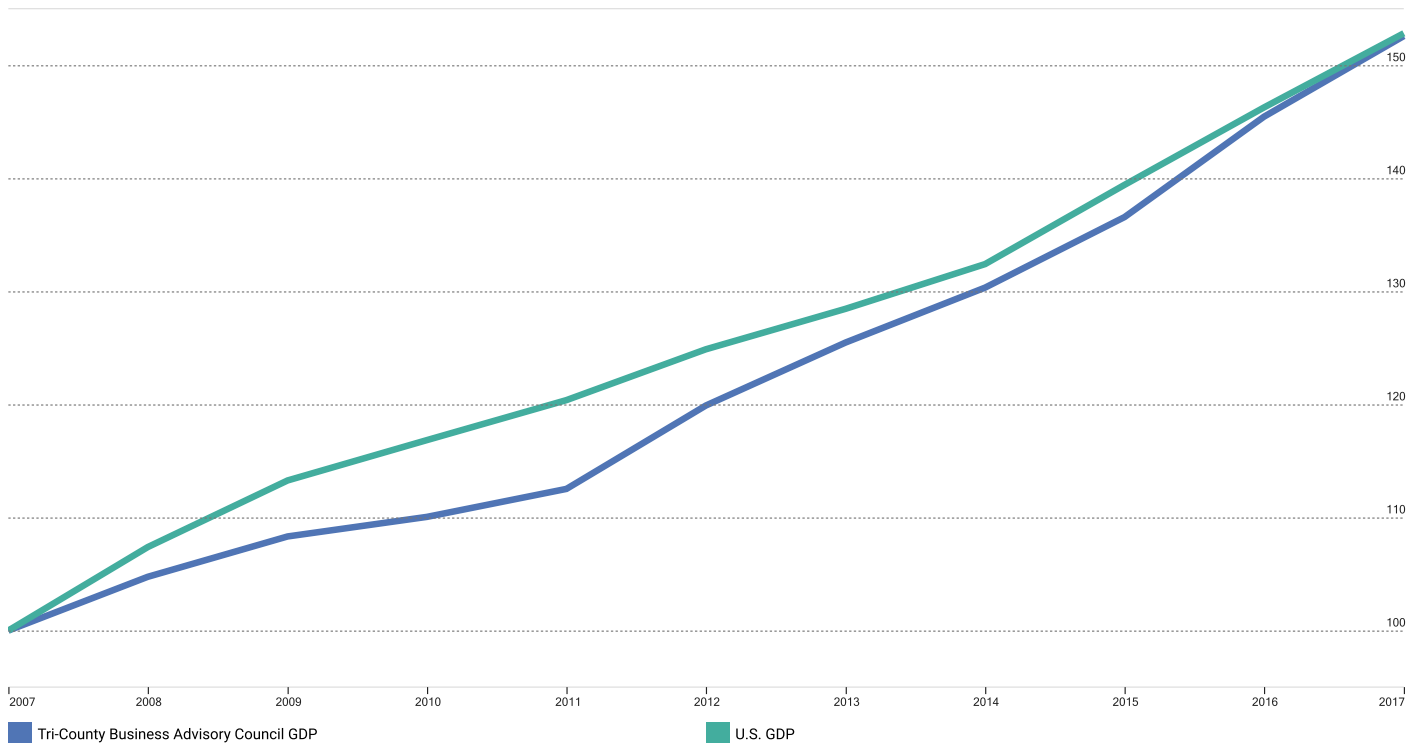


 New business formations are an important source of job creation in a regional economy, spurring innovation and competition, and driving productivity growth. Establishment data can provide an indicator of growth in businesses by counting each single location (such as a factory or a store) where business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

GDP & Productivity

In 2017, Health Care and Social Assistance produced \$2.8 billion in GDP for the Tri-County Business Advisory Council.

GDP: Indexed 2007 = 100



15.0 %

Industry Share of Total GDP /
8.4 % in the nation



4.3 % ↑

Avg Ann % Change Last 10 Yrs /
4.3 % in the nation



\$143k

Output per Worker /
\$124k 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.

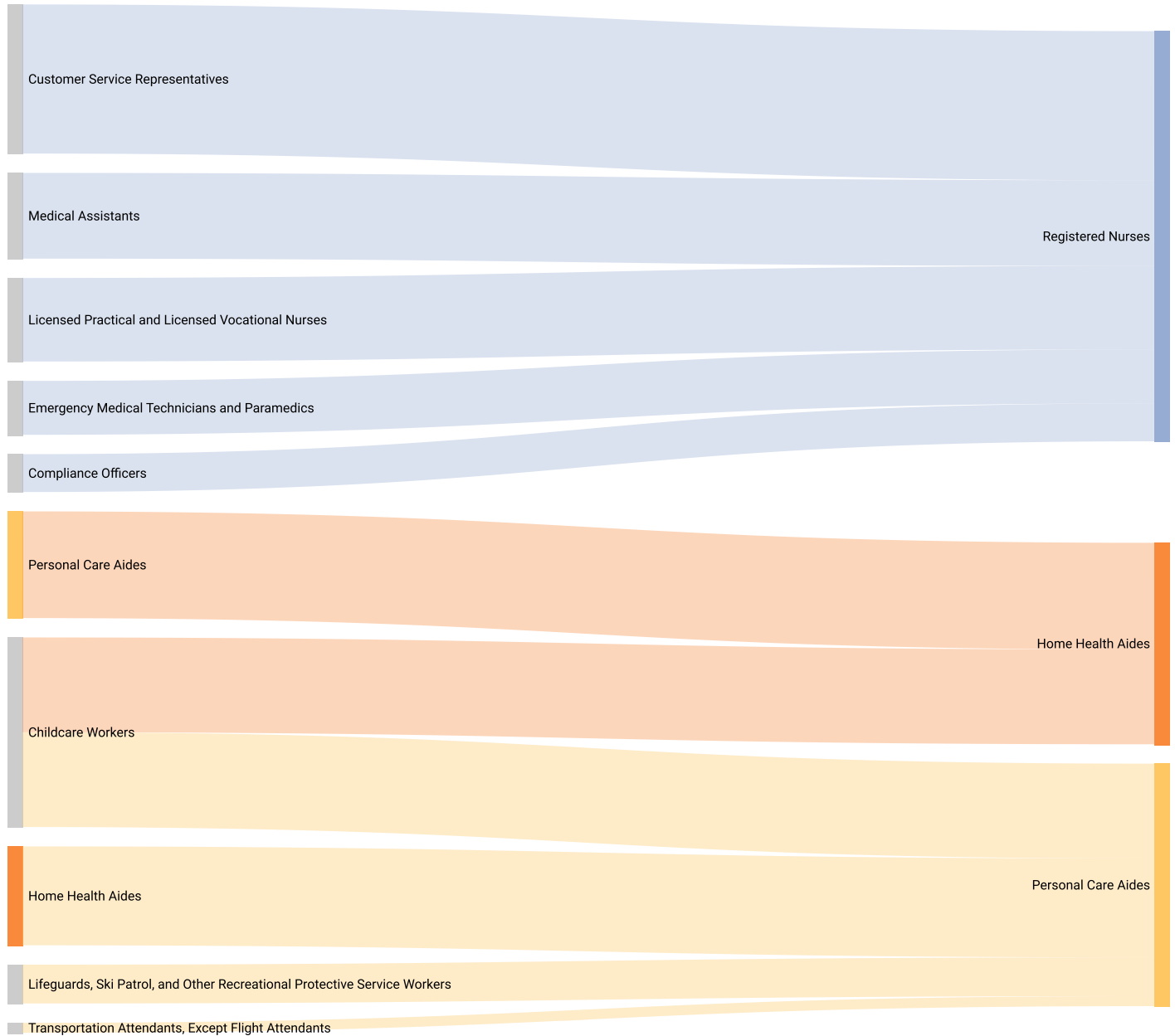
Supply Chain: Top Suppliers


As of 2018Q4, Health Care and Social Assistance in the Tri-County Business Advisory Council are estimated to make \$2.7 billion in annual purchases from suppliers in the United States with about 29% or \$0.8 billion of these purchases being made from businesses located in the Tri-County Business Advisory Council.

2-digit Supplier Industries	Purchases from In-Region (\$M)	Purchases from Out-of-Region (\$M)
Manufacturing	\$110.8	\$374.1
Finance and Insurance	\$49.7	\$409.2
Real Estate and Rental and Leasing	\$196.0	\$242.1
Professional, Scientific, and Technical Services	\$103.0	\$222.8
Administrative and Support and Waste Management and Remediation Services	\$95.1	\$111.5
Remaining Supplier Industries	\$234.0	\$550.5
Total	\$788.5	\$1,910.2

 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 Health Care and Social Assistance

Program	Awards
Appalachian State University	
Dietetics/Dietitian	84
Health/Health Care Administration/Management	50
Registered Nursing/Registered Nurse	192
Asheville-Buncombe Technical Community College	
Medical Office Management/Administration	55
Phlebotomy Technician/Phlebotomist	33
Registered Nursing/Registered Nurse	67
Daoist Traditions College of Chinese Medical Arts	
Acupuncture and Oriental Medicine	21
Lees-McRae College	
Registered Nursing/Registered Nurse	95
Mayland Community College	
Medical/Clinical Assistant	22
McDowell Technical Community College	
Licensed Practical/Vocational Nurse Training	32

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 Tri-County Business Advisory Council, the sampling above identifies those most linked to occupations relevant to Health Care and Social Assistance.

Region Definition

Tri-County Business Advisory Council is defined as the following counties:

Avery County, North Carolina

Buncombe County, North Carolina

McDowell County, North Carolina

Madison County, North Carolina

Mitchell County, North Carolina

Watauga County, North Carolina

Yancey County, North Carolina

Data Notes

- Industry employment and wages (including total regional employment and wages) are as of 2018Q4 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 2018Q4 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 2017.
- 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 2016-2017 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.



Arts, Entertainment, and Recreation

Tri-County Business Advisory Council



Industry Spotlight

Avery, Buncombe, Madison, McDowell, Mitchell,
Watauga, and Yancey

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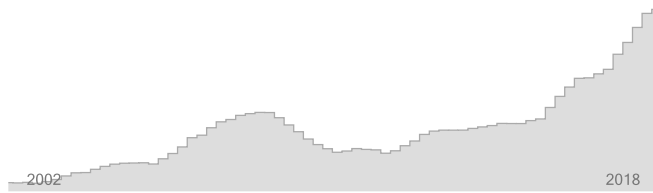
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Arts, Entertainment, and Recreation
Tri-County Business Advisory Council – 2018Q4

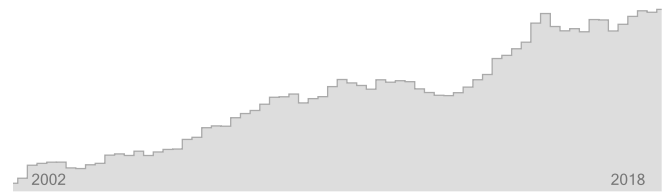
EMPLOYMENT



6,295

Regional employment / **3,128,934** in the nation

WAGES



\$26,922

Avg Wages per Worker / **\$36,519** in the nation

2.8% ↑

Avg Ann % Change Last 10 Years / **+1.2%** in the US



3.0%

% of Total Employment / **2.0%** in the US

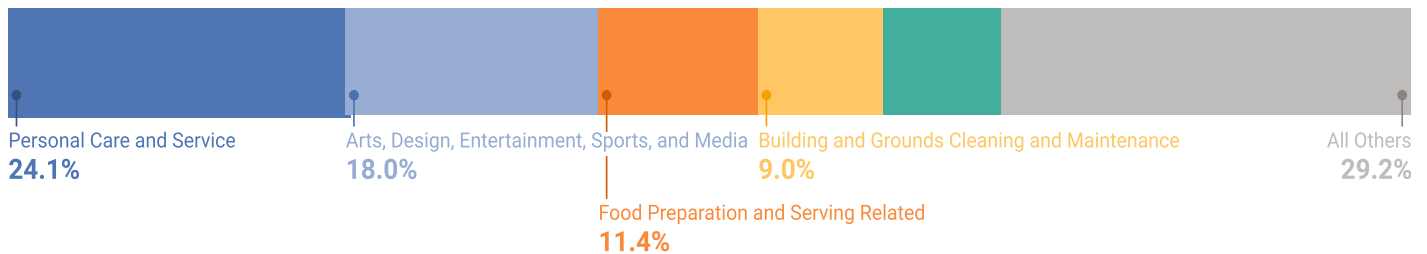


1.5% ↑

Avg Ann % Change Last 10 Years / **+1.6%** in the US

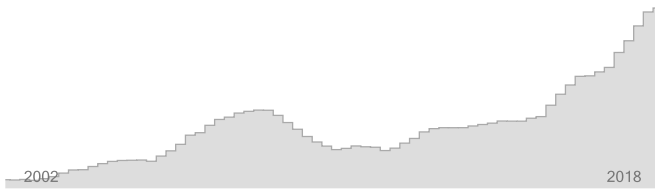


TOP OCCUPATION GROUPS

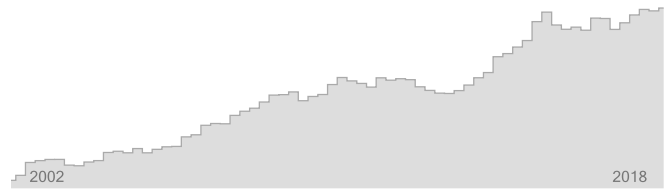



Industry Snapshot


EMPLOYMENT



WAGES

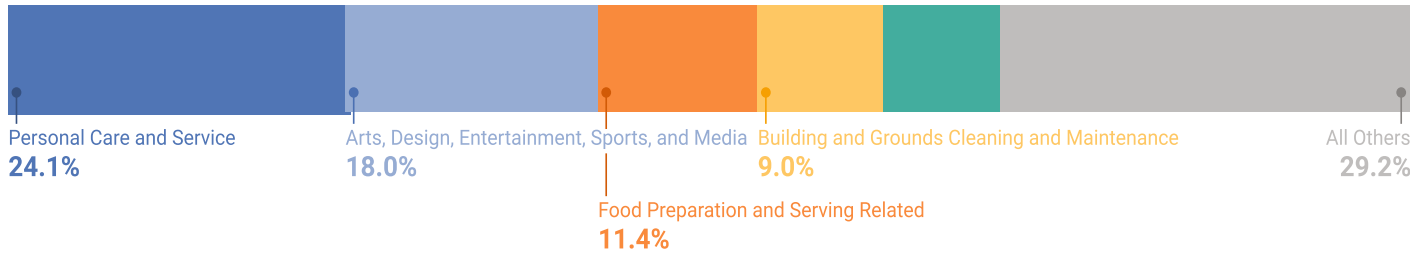


2-Digit Industry	Empl	Avg Ann Wages	LQ	5yr History	Annual Demand	Forecast Ann Growth
Arts, Entertainment, and Recreation	6,295	\$26,922	1.49		958	1.2%


 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.

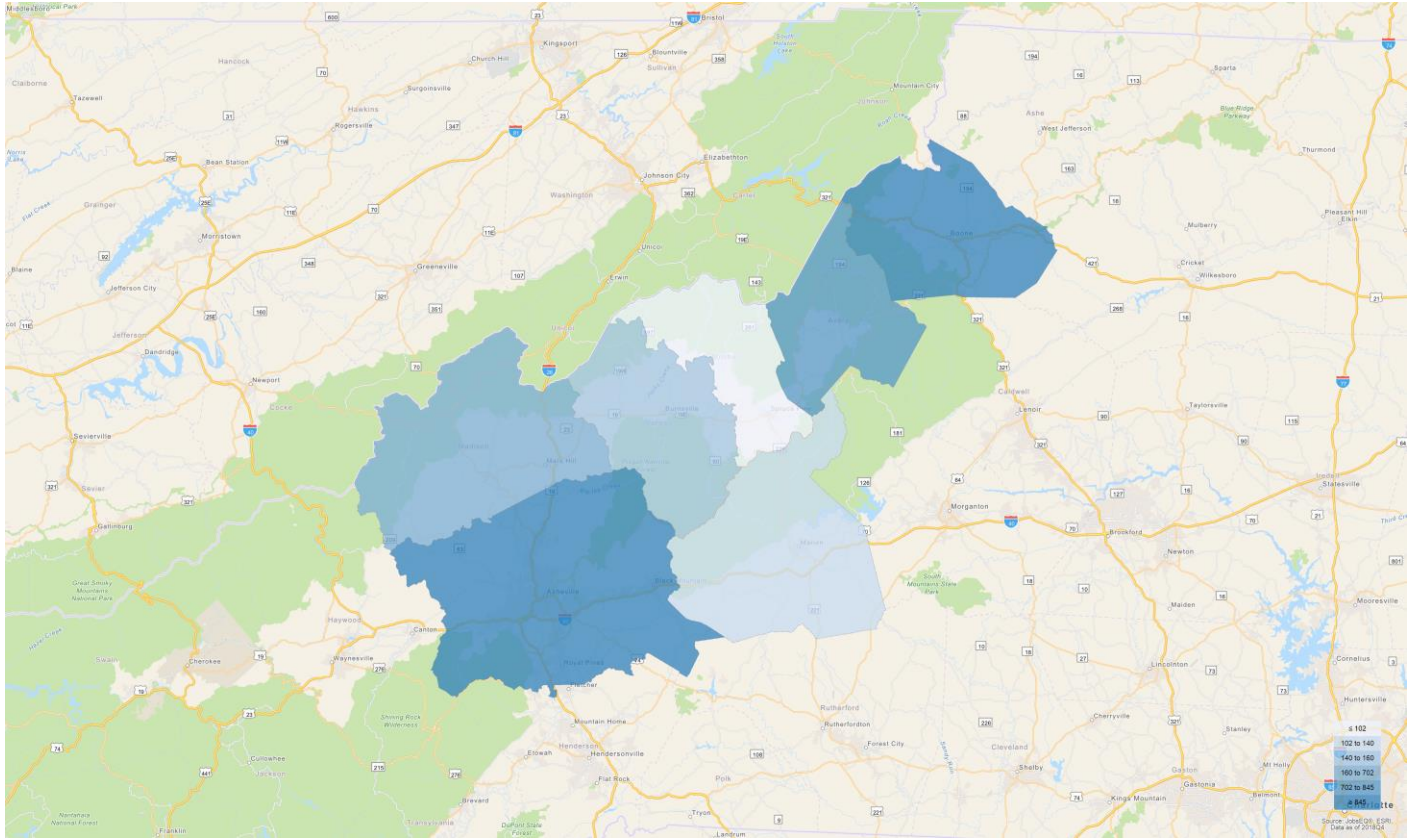
Staffing Pattern



6-digit Occupation	Empl	Avg Ann Wages	Annual Demand
Amusement and Recreation Attendants	583	\$24,100	141
Landscaping and Groundskeeping Workers	366	\$27,500	48
Tour Guides and Escorts	249	\$25,500	50
Writers and Authors	233	\$59,400	23
Waiters and Waitresses	219	\$26,200	44
Fitness Trainers and Aerobics Instructors	209	\$31,500	38
Cashiers	164	\$24,100	33
Musicians and Singers	146	\$28,000	16
Retail Salespersons	142	\$26,900	23
Security Guards	141	\$31,400	21
Remaining Component Occupations	3,813	\$46,200	526
Total	6,295		

 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
Buncombe County, North Carolina	4,301	Yancey County, North Carolina	141
Watauga County, North Carolina	845	McDowell County, North Carolina	103
Avery County, North Carolina	703	Mitchell County, North Carolina	42
Madison County, North Carolina	161		

Source: JobsEQ®

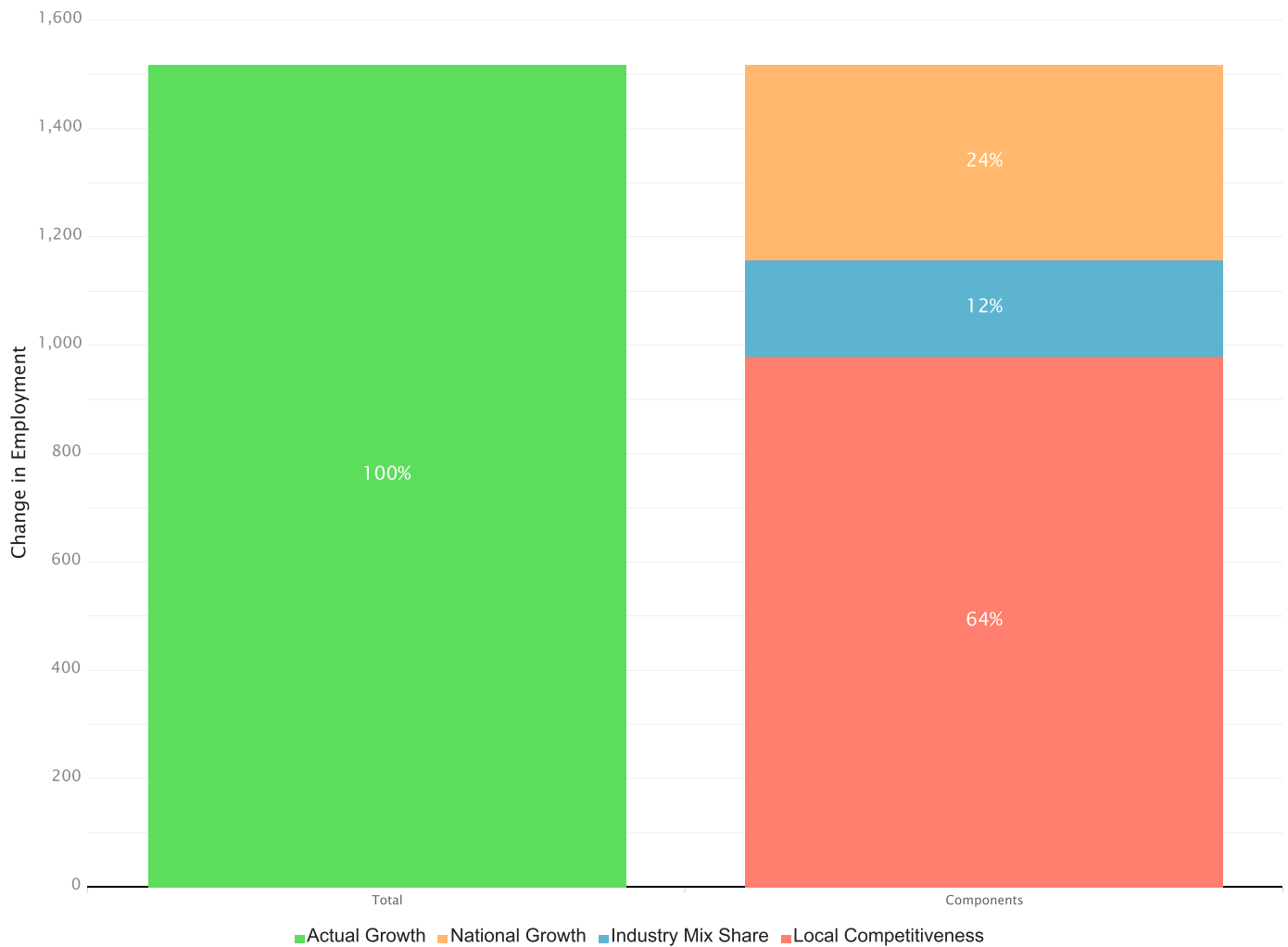


A geographic concentration of firms in related fields of business may reduce production costs, attract more suppliers and customers, and increase supply and demand for specialized labor, but may also increase competitive pressure and drive down prices.



Drivers of Employment Growth

Over the ten years ending 2018, employment in Arts, Entertainment, and Recreation for the Tri-County Business Advisory Council added 1,518 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 gain of 978 jobs—meaning this industry was more competitive than its national counterpart during this period.

Drivers of Employment Growth for Tri-County Business Advisory Council



Source: JobsEQ®, Data as of 2018Q4

-  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 Arts, Entertainment, and Recreation for the Tri-County Business Advisory Council. 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).



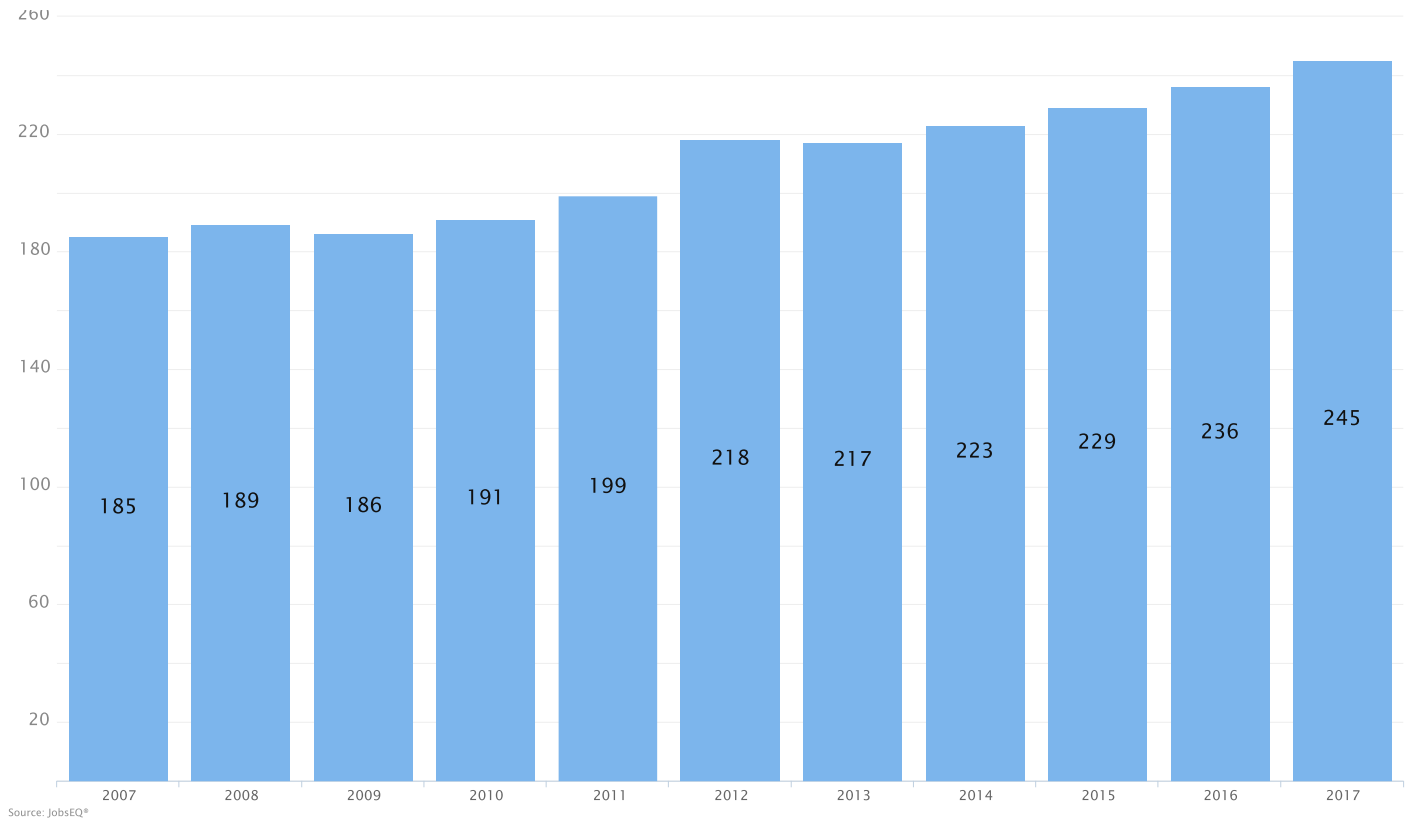
	Empl	%
Private	5,262	83.6%
Self-Employment	938	14.9%
State Government	10	0.2%
Federal Government	85	1.3%


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 2017, there were 245 Arts, Entertainment, and Recreation establishments in the Tri-County Business Advisory Council (per covered employment establishment counts), an increase from 185 establishments ten years earlier in 2007.

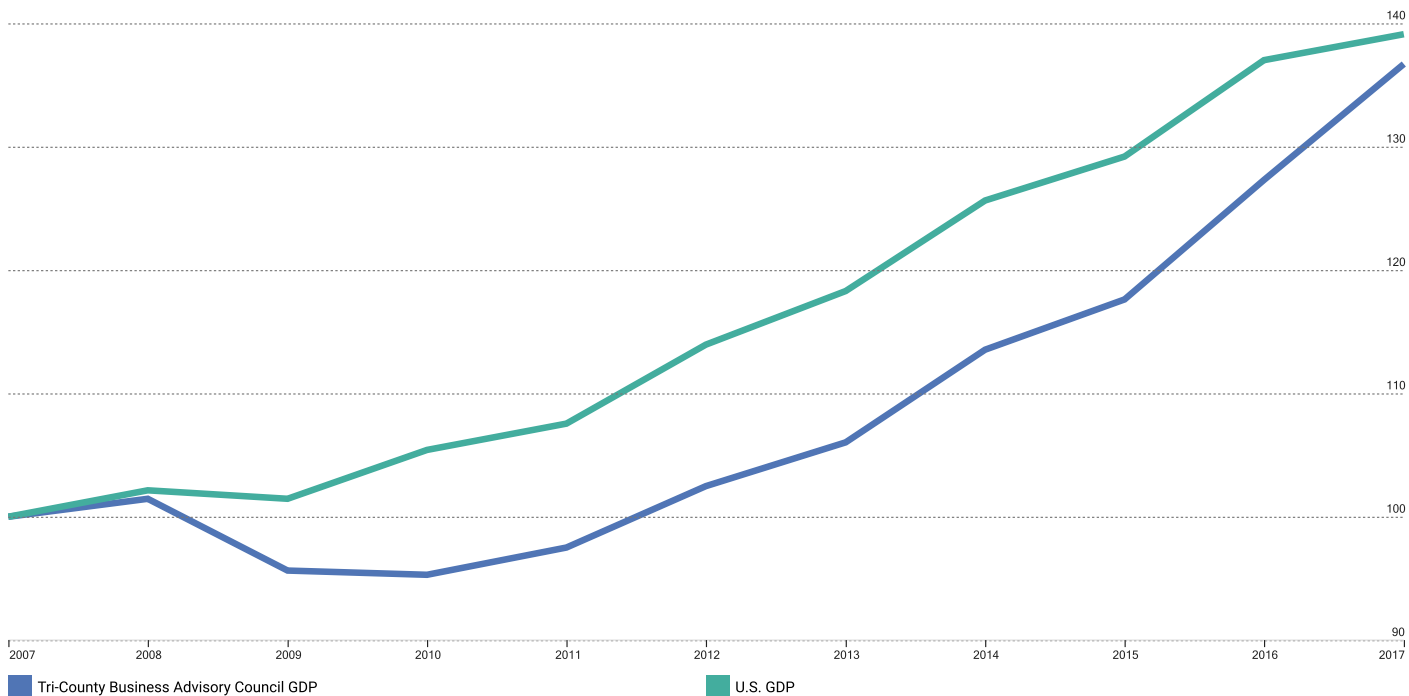


 New business formations are an important source of job creation in a regional economy, spurring innovation and competition, and driving productivity growth. Establishment data can provide an indicator of growth in businesses by counting each single location (such as a factory or a store) where business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

GDP & Productivity

In 2017, Arts, Entertainment, and Recreation produced \$0.3 billion in GDP for the Tri-County Business Advisory Council.

GDP: Indexed 2007 = 100



1.4 %
 Industry Share of Total GDP /
1.1 % in the nation

Region	<div style="width: 100%; height: 10px; background-color: #ccc; position: relative;"><div style="width: 100%; height: 10px; background-color: #888;"></div></div>
Nation	<div style="width: 100%; height: 10px; background-color: #ccc; position: relative;"><div style="width: 100%; height: 10px; background-color: #888;"></div></div>

3.2 % ↑
 Avg Ann % Change Last 10 Yrs /
3.4 % in the nation

Region	<div style="width: 100%; height: 10px; background-color: #ccc; position: relative;"><div style="width: 100%; height: 10px; background-color: #888;"></div></div>
Nation	<div style="width: 100%; height: 10px; background-color: #ccc; position: relative;"><div style="width: 100%; height: 10px; background-color: #888;"></div></div>

\$133k
 Output per Worker /
\$206k in the nation

Region	<div style="width: 100%; height: 10px; background-color: #ccc; position: relative;"><div style="width: 100%; height: 10px; background-color: #888;"></div></div>
Nation	<div style="width: 100%; height: 10px; background-color: #ccc; position: relative;"><div style="width: 100%; height: 10px; background-color: #888;"></div></div>


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

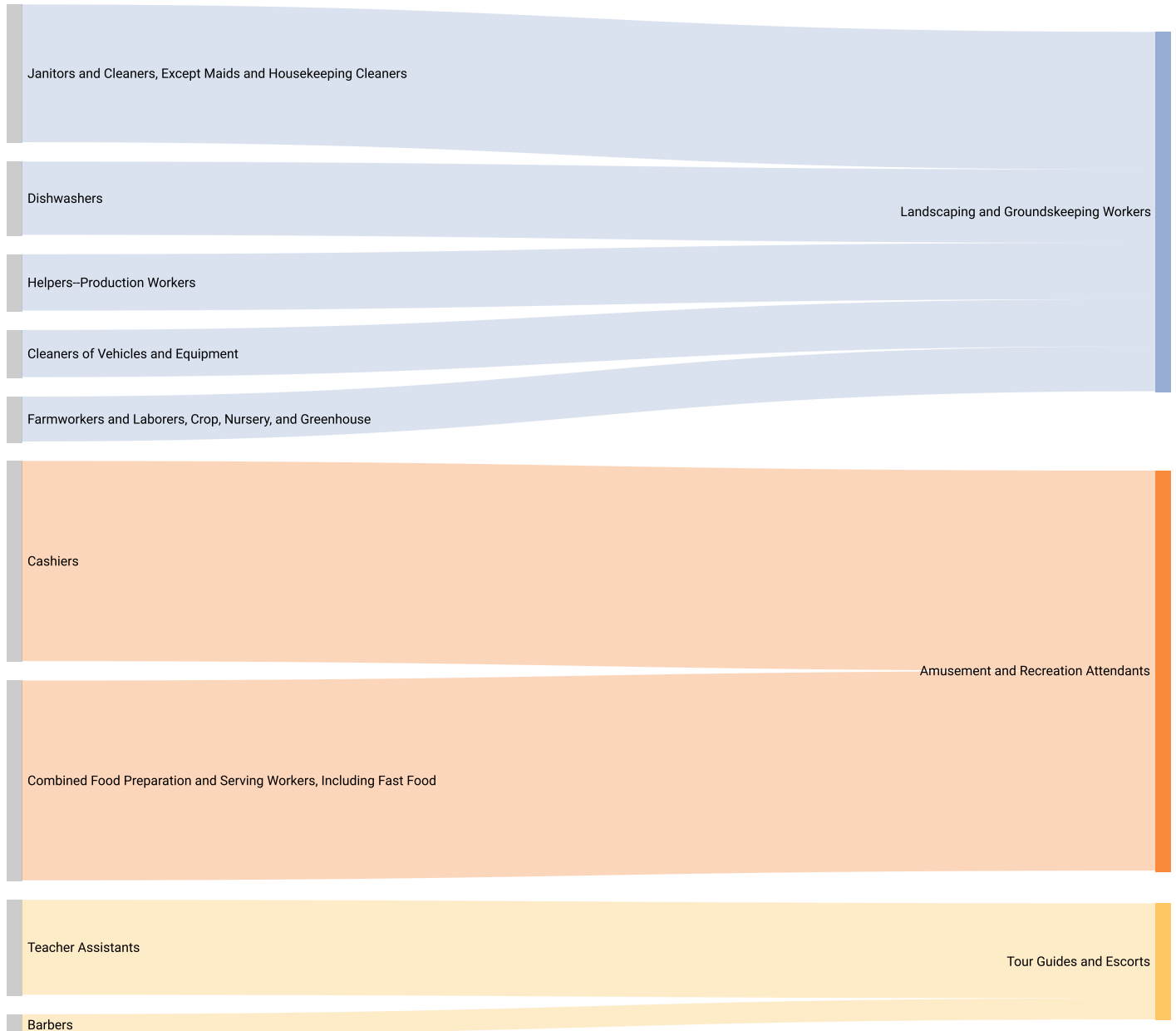
Supply Chain: Top Suppliers


As of 2018Q4, Arts, Entertainment, and Recreation in the Tri-County Business Advisory Council are estimated to make \$419.1 million in annual purchases from suppliers in the United States with about 31% or \$131.7 million of these purchases being made from businesses located in the Tri-County Business Advisory Council.

2-digit Supplier Industries	Purchases from In-Region (\$M)	Purchases from Out-of-Region (\$M)
Real Estate and Rental and Leasing	\$37.7	\$48.3
Arts, Entertainment, and Recreation	\$22.9	\$32.8
Professional, Scientific, and Technical Services	\$14.9	\$35.8
Manufacturing	\$11.2	\$38.1
Finance and Insurance	\$2.9	\$30.8
Remaining Supplier Industries	\$42.2	\$101.6
Total	\$131.7	\$287.4

 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 Arts, Entertainment, and Recreation

Program	Awards
Appalachian State University	
Drama and Dramatics/Theatre Arts, General	16
Educational/Instructional Technology	51
Kinesiology and Exercise Science	238
Music Performance, General	24
Radio and Television	63
Speech Communication and Rhetoric	55
Lees-McRae College	
Sport and Fitness Administration/Management	18
Wildlife Biology	33
University of North Carolina at Asheville	
Digital Arts	47
Mass Communication/Media Studies	46

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 Tri-County Business Advisory Council, the sampling above identifies those most linked to occupations relevant to Arts, Entertainment, and Recreation.

Region Definition

Tri-County Business Advisory Council is defined as the following counties:

Avery County, North Carolina

Buncombe County, North Carolina

McDowell County, North Carolina

Madison County, North Carolina

Mitchell County, North Carolina

Watauga County, North Carolina

Yancey County, North Carolina

Data Notes

- Industry employment and wages (including total regional employment and wages) are as of 2018Q4 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.
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- Postsecondary awards are per the NCES and are for the 2016-2017 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.



Accommodation and Food Services

Tri-County Business Advisory Council



Industry Spotlight

Avery, Buncombe, Madison, McDowell, Mitchell,
Watauga, and Yancey

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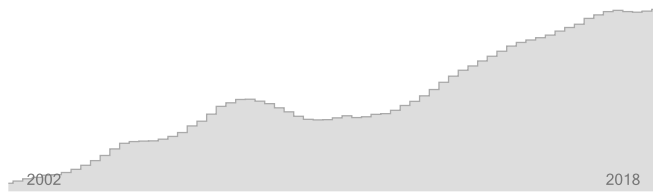
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Accommodation and Food Services
 Tri-County Business Advisory Council – 2018Q4

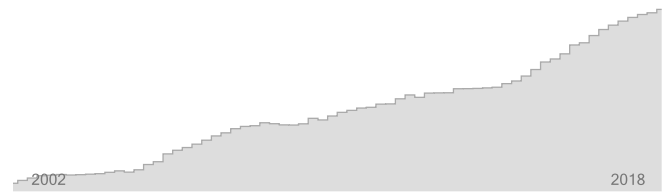
EMPLOYMENT



26,152

Regional employment / 14,182,666 in the nation

WAGES



\$20,055

Avg Wages per Worker / \$21,796 in the nation

2.2% ↑

Avg Ann % Change Last 10 Years / +1.9% in the US



12.3%

% of Total Employment / 9.0% in the US



3.0% ↑

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

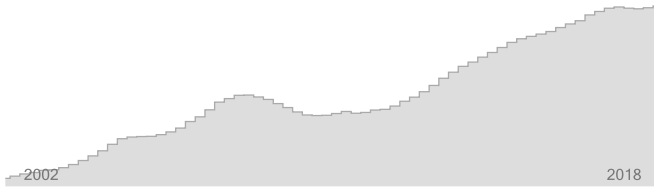


TOP OCCUPATION GROUPS

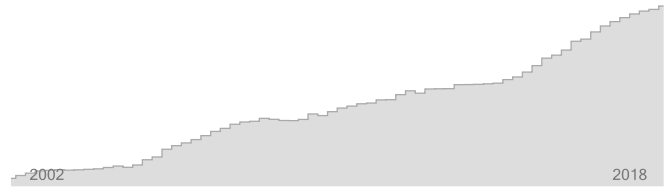



Industry Snapshot


EMPLOYMENT



WAGES



2-Digit Industry	Empl	Avg Ann Wages	LQ	5yr History	Annual Demand	Forecast Ann Growth
Accommodation and Food Services	26,152	\$20,055	1.37		4,454	0.8%

 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.

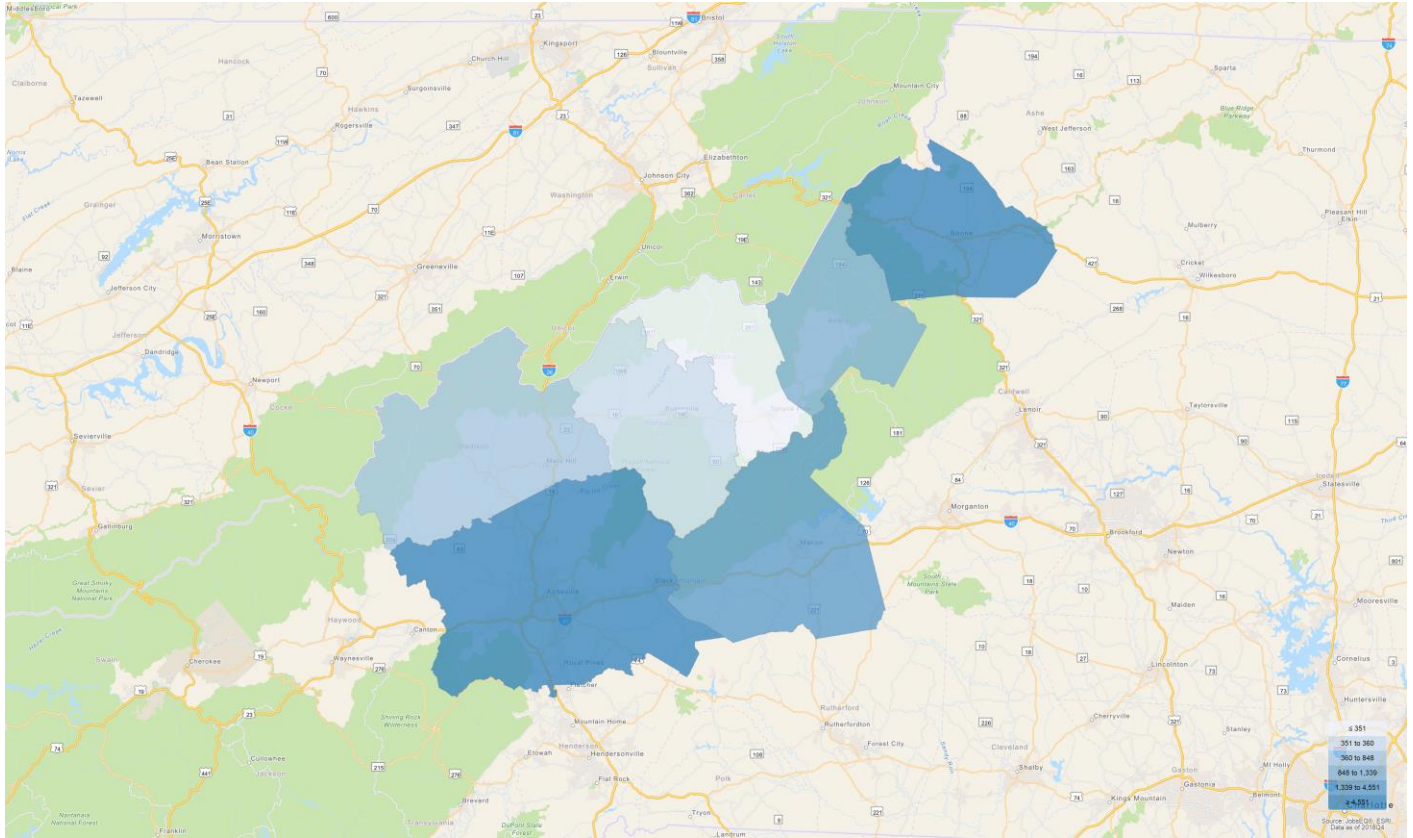
Staffing Pattern



6-digit Occupation	Empl	Avg Ann Wages	Annual Demand
Combined Food Preparation and Serving Workers, Including Fast Food	5,245	\$24,100	1,084
Waiters and Waitresses	5,113	\$26,200	1,020
Cooks, Restaurant	2,598	\$26,600	408
First-Line Supervisors of Food Preparation and Serving Workers	1,510	\$35,300	231
Maids and Housekeeping Cleaners	1,409	\$24,100	192
Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop	912	\$24,100	217
Bartenders	861	\$28,600	146
Food Preparation Workers	818	\$24,100	146
Dishwashers	794	\$24,100	127
Hotel, Motel, and Resort Desk Clerks	744	\$24,800	120
Remaining Component Occupations	6,121	\$43,300	877
Total	26,152		

 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
Buncombe County, North Carolina	18,392	Madison County, North Carolina	361
Watauga County, North Carolina	4,552	Yancey County, North Carolina	351
McDowell County, North Carolina	1,340	Mitchell County, North Carolina	308
Avery County, North Carolina	849		

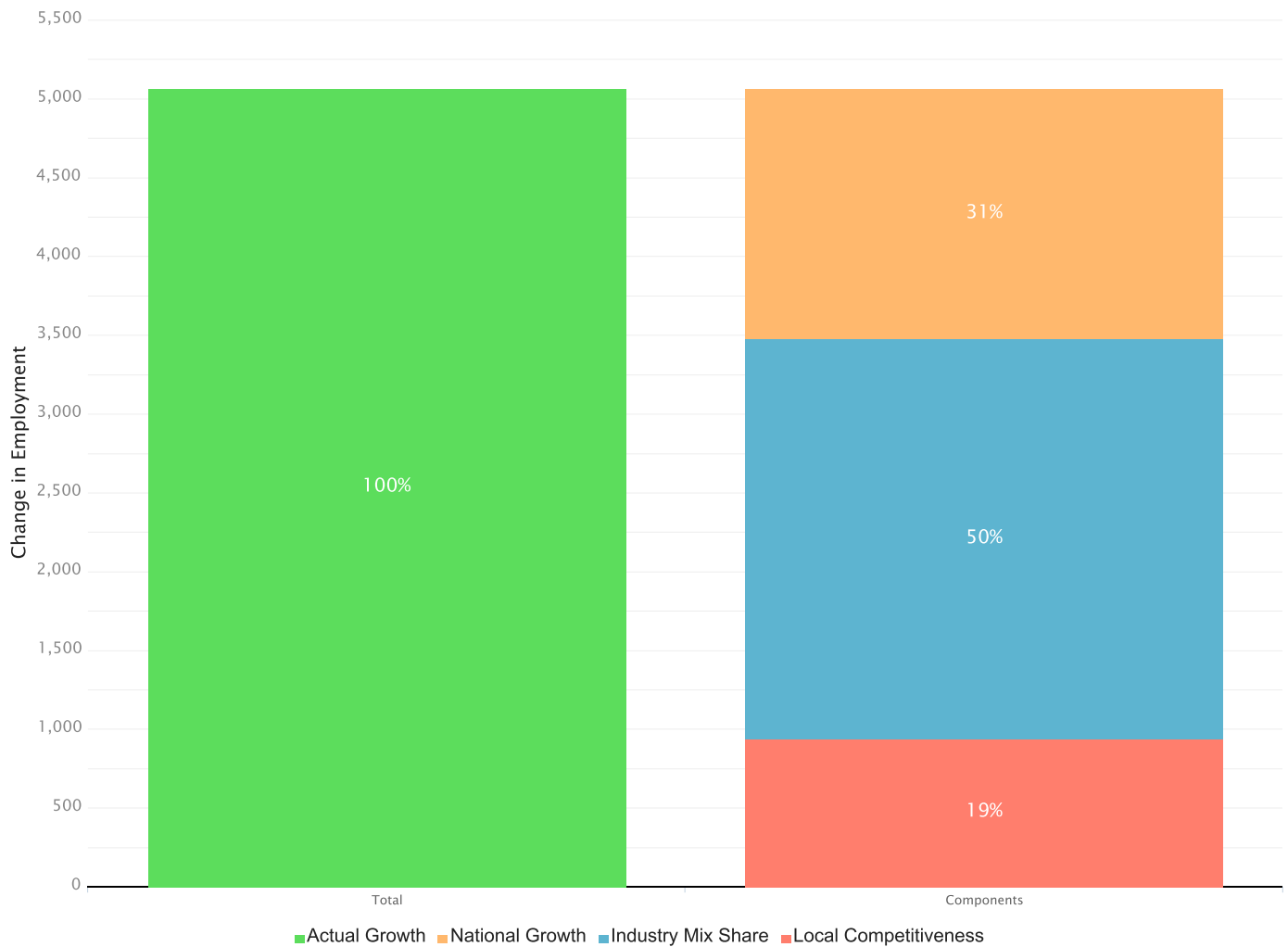
Source: JobsEQ®

💡 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 Accommodation and Food Services for the Tri-County Business Advisory Council added 5,065 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 gain of 939 jobs—meaning this industry was more competitive than its national counterpart during this period.

Drivers of Employment Growth for Tri-County Business Advisory Council



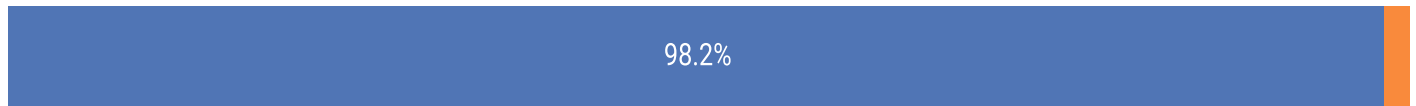
Source: JobsEQ®, Data as of 2018Q4

-  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 Accommodation and Food Services for the Tri-County Business Advisory Council. 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).



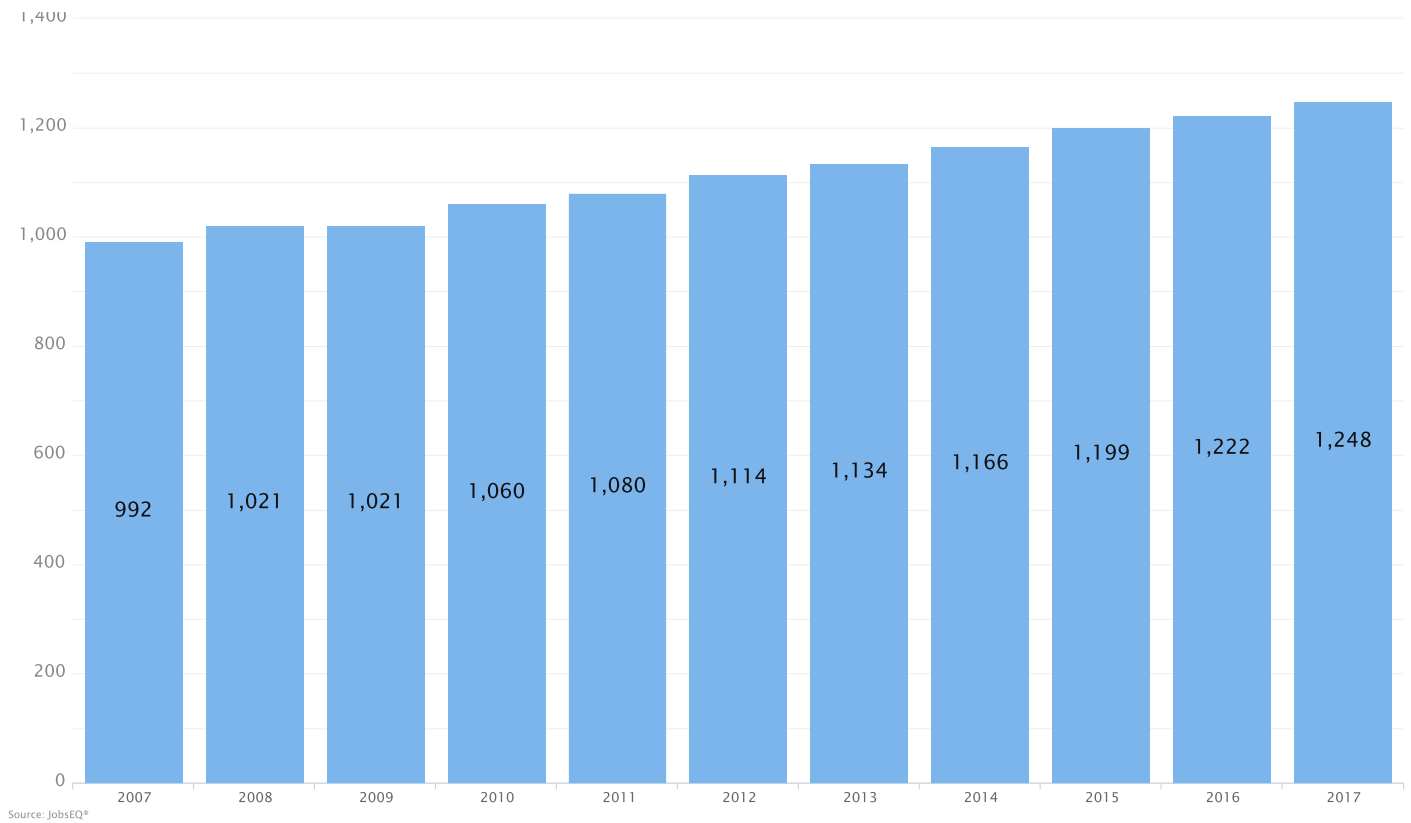
	Empl	%
Private	25,683	98.2%
Self-Employment	470	1.8%


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 2017, there were 1,248 Accommodation and Food Services establishments in the Tri-County Business Advisory Council (per covered employment establishment counts), an increase from 992 establishments ten years earlier in 2007.

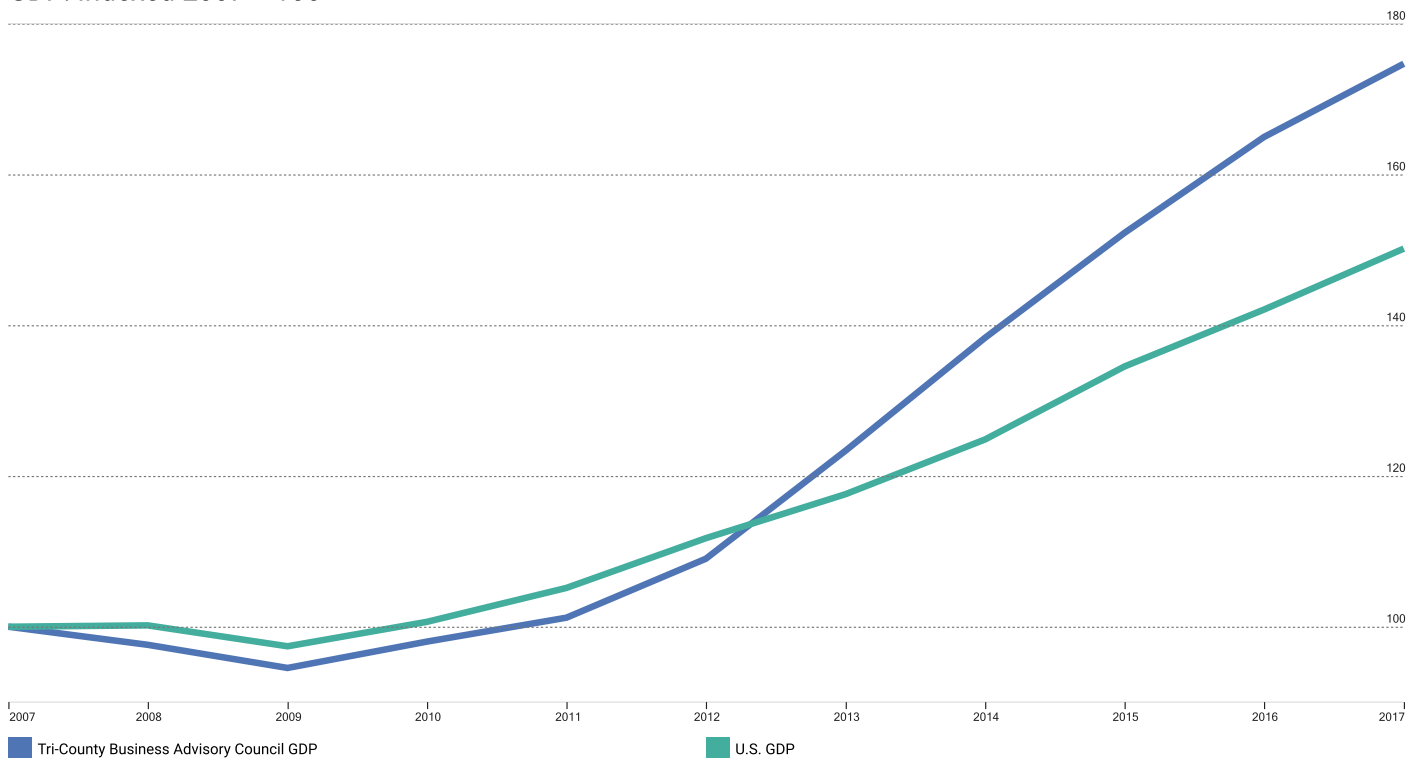


 New business formations are an important source of job creation in a regional economy, spurring innovation and competition, and driving productivity growth. Establishment data can provide an indicator of growth in businesses by counting each single location (such as a factory or a store) where business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

GDP & Productivity

In 2017, Accommodation and Food Services produced \$1.1 billion in GDP for the Tri-County Business Advisory Council.

GDP: Indexed 2007 = 100



5.7 %

Industry Share of Total GDP /
3.1 % in the nation



5.7 % ↑

Avg Ann % Change Last 10 Yrs /
4.1 % in the nation



\$66k

Output per Worker /
\$72k 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.

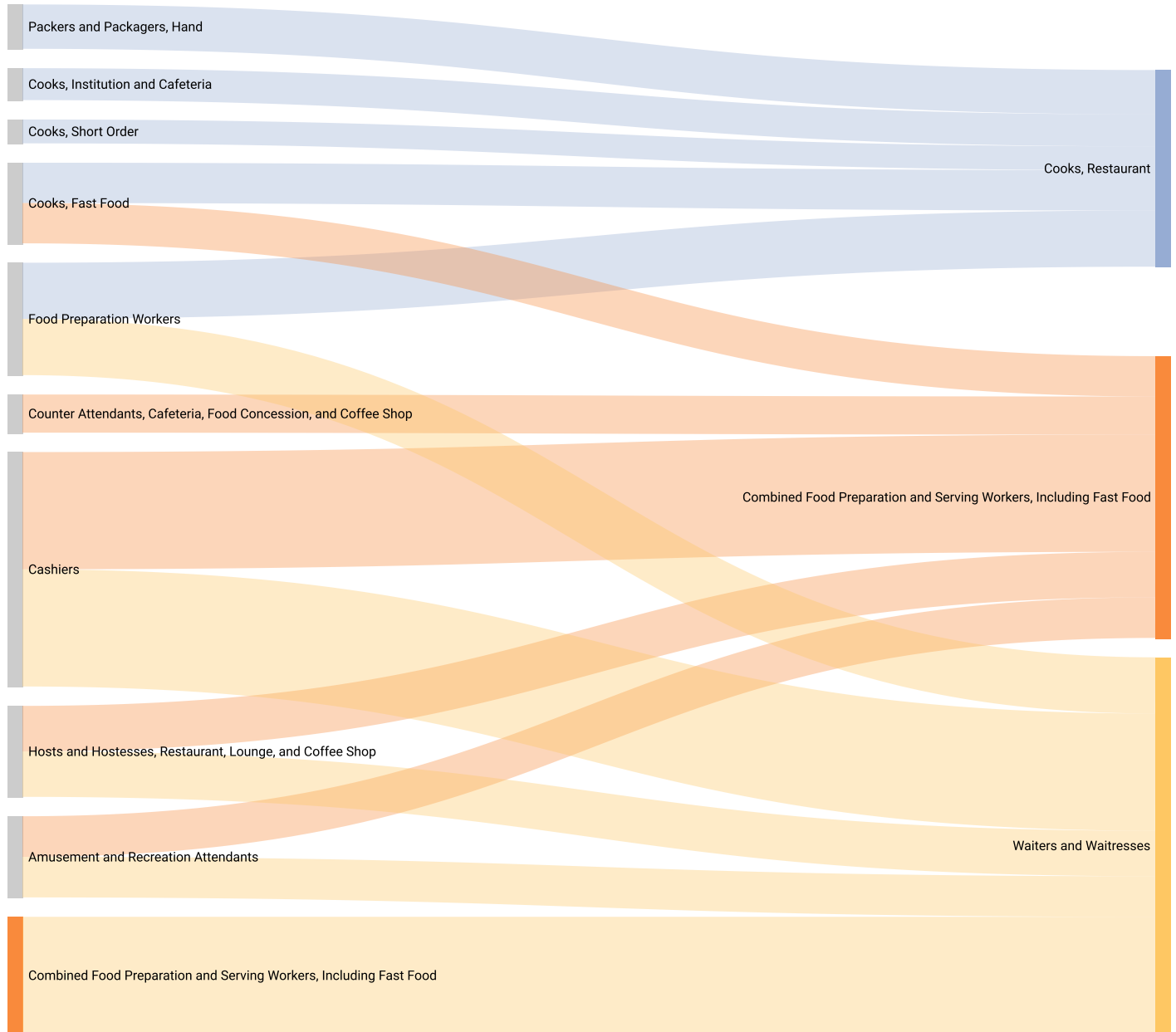
Supply Chain: Top Suppliers


As of 2018Q4, Accommodation and Food Services in the Tri-County Business Advisory Council are estimated to make \$915.9 million in annual purchases from suppliers in the United States with about 26% or \$234.1 million of these purchases being made from businesses located in the Tri-County Business Advisory Council.

2-digit Supplier Industries	Purchases from In-Region (\$M)	Purchases from Out-of-Region (\$M)
Manufacturing	\$42.5	\$215.9
Real Estate and Rental and Leasing	\$50.5	\$71.7
Professional, Scientific, and Technical Services	\$17.5	\$57.6
Finance and Insurance	\$7.9	\$60.9
Management of Companies and Enterprises	\$22.9	\$40.2
Remaining Supplier Industries	\$92.9	\$235.5
Total	\$234.1	\$681.8

 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 Accommodation and Food Services

Program	Awards
Appalachian State University	
Business Administration and Management, General	250
Criminal Justice/Safety Studies	146
Dietetics/Dietitian	84
Hospitality Administration/Management, General	26
Kinesiology and Exercise Science	238
Asheville-Buncombe Technical Community College	
Baking and Pastry Arts/Baker/Pastry Chef	18
Criminal Justice/Safety Studies	124
Culinary Arts/Chef Training	18
Hotel, Motel, and Restaurant Management	6
Center for Massage	
Massage Therapy/Therapeutic Massage	48

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 Tri-County Business Advisory Council, the sampling above identifies those most linked to occupations relevant to Accommodation and Food Services.

Region Definition

Tri-County Business Advisory Council is defined as the following counties:

Avery County, North Carolina

Buncombe County, North Carolina

McDowell County, North Carolina

Madison County, North Carolina

Mitchell County, North Carolina

Watauga County, North Carolina

Yancey County, North Carolina

Data Notes

- Industry employment and wages (including total regional employment and wages) are as of 2018Q4 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 2018Q4 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 2017.
- 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 2016-2017 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.



Other Services (except Public Administration)

Tri-County Business Advisory Council



Industry Spotlight

Avery, Buncombe, Madison, McDowell, Mitchell,
Watauga, and Yancey

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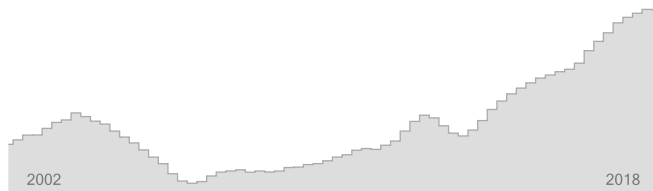
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Other Services (except Public Administration)
Tri-County Business Advisory Council – 2018Q4

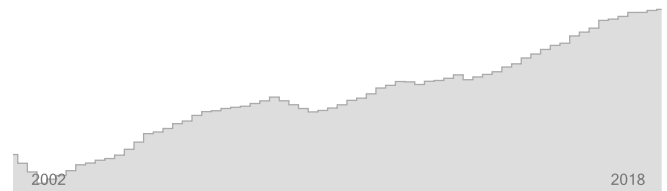
EMPLOYMENT



10,289

Regional employment / **6,899,435** in the nation

WAGES

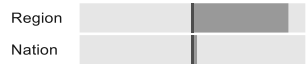


\$25,824

Avg Wages per Worker / **\$33,407** in the nation

2.0% ↑

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



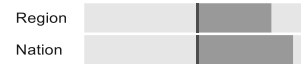
4.8%

% of Total Employment / **4.4%** in the US

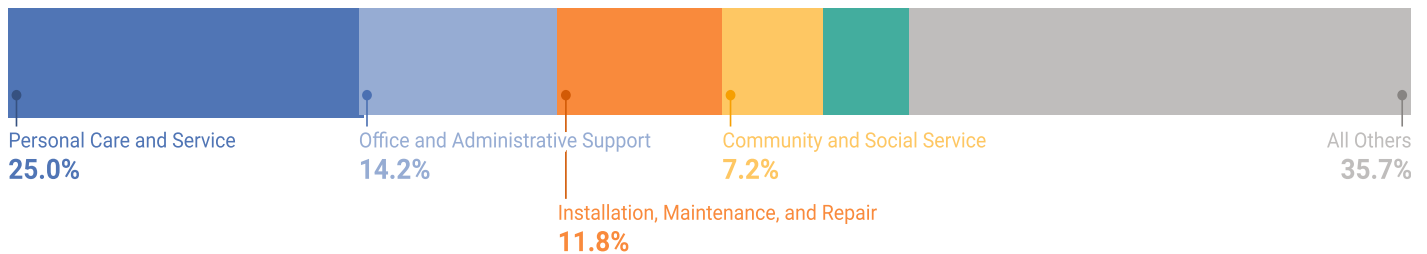


1.9% ↑

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

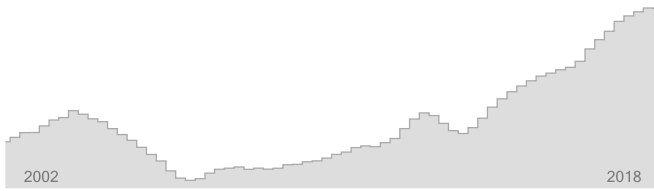


TOP OCCUPATION GROUPS

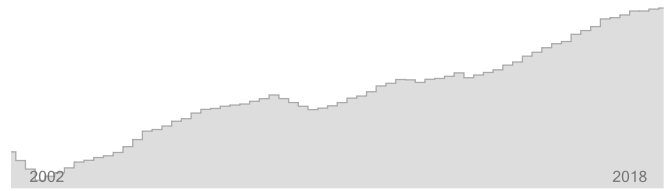


Industry Snapshot


EMPLOYMENT



WAGES

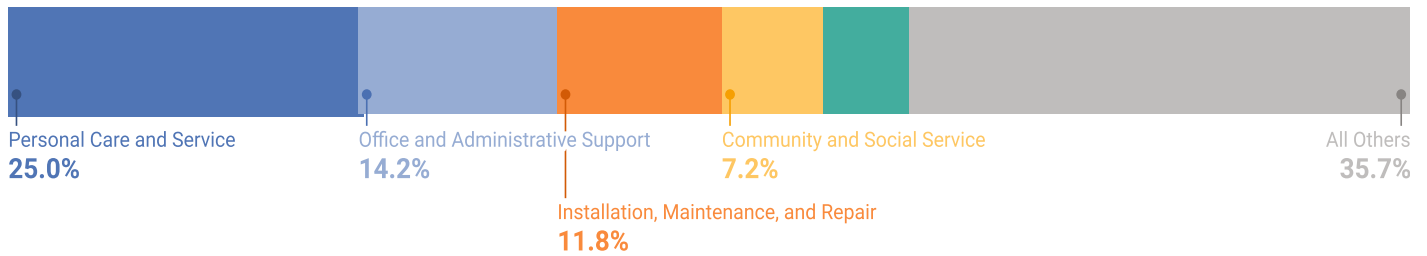


2-Digit Industry	Empl	Avg Ann Wages	LQ	5yr History	Annual Demand	Forecast Ann Growth
Other Services (except Public Administration)	10,289	\$25,824	1.11		1,244	0.7%


 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.

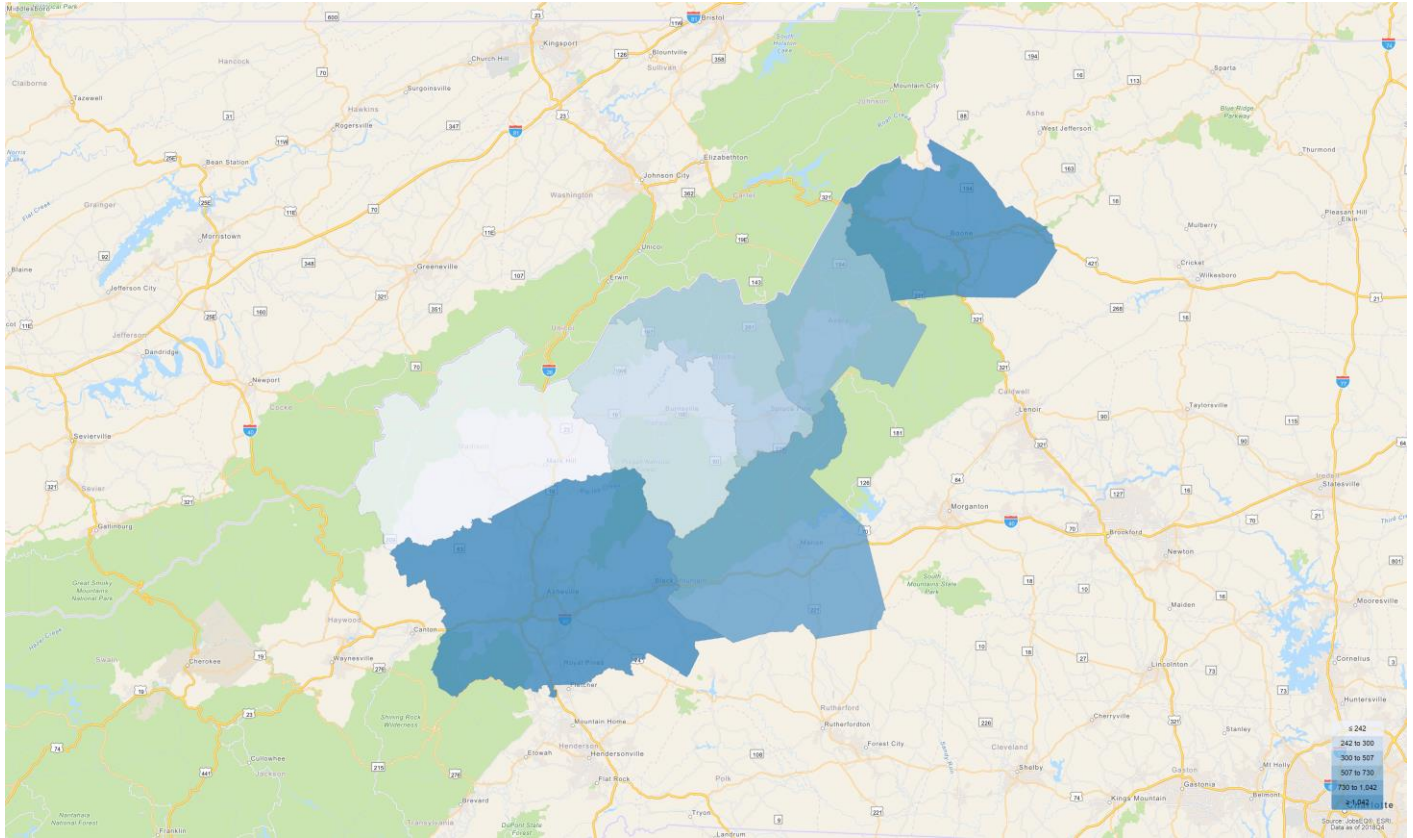
Staffing Pattern



6-digit Occupation	Empl	Avg Ann Wages	Annual Demand
Hairdressers, Hairstylists, and Cosmetologists	721	\$27,400	97
Automotive Service Technicians and Mechanics	446	\$38,500	45
Childcare Workers	425	\$24,600	64
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	424	\$34,100	41
Office Clerks, General	310	\$28,900	35
Maids and Housekeeping Cleaners	296	\$24,100	39
Nonfarm Animal Caretakers	261	\$24,100	49
Directors, Religious Activities and Education	255	\$85,000	34
Clergy	239	\$53,000	28
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	235	\$24,300	33
Remaining Component Occupations	6,638	\$47,400	824
Total	10,289		

 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
Buncombe County, North Carolina	7,227	Mitchell County, North Carolina	300
Watauga County, North Carolina	1,042	Yancey County, North Carolina	243
McDowell County, North Carolina	731	Madison County, North Carolina	238
Avery County, North Carolina	508		

Source: JobsEQ®

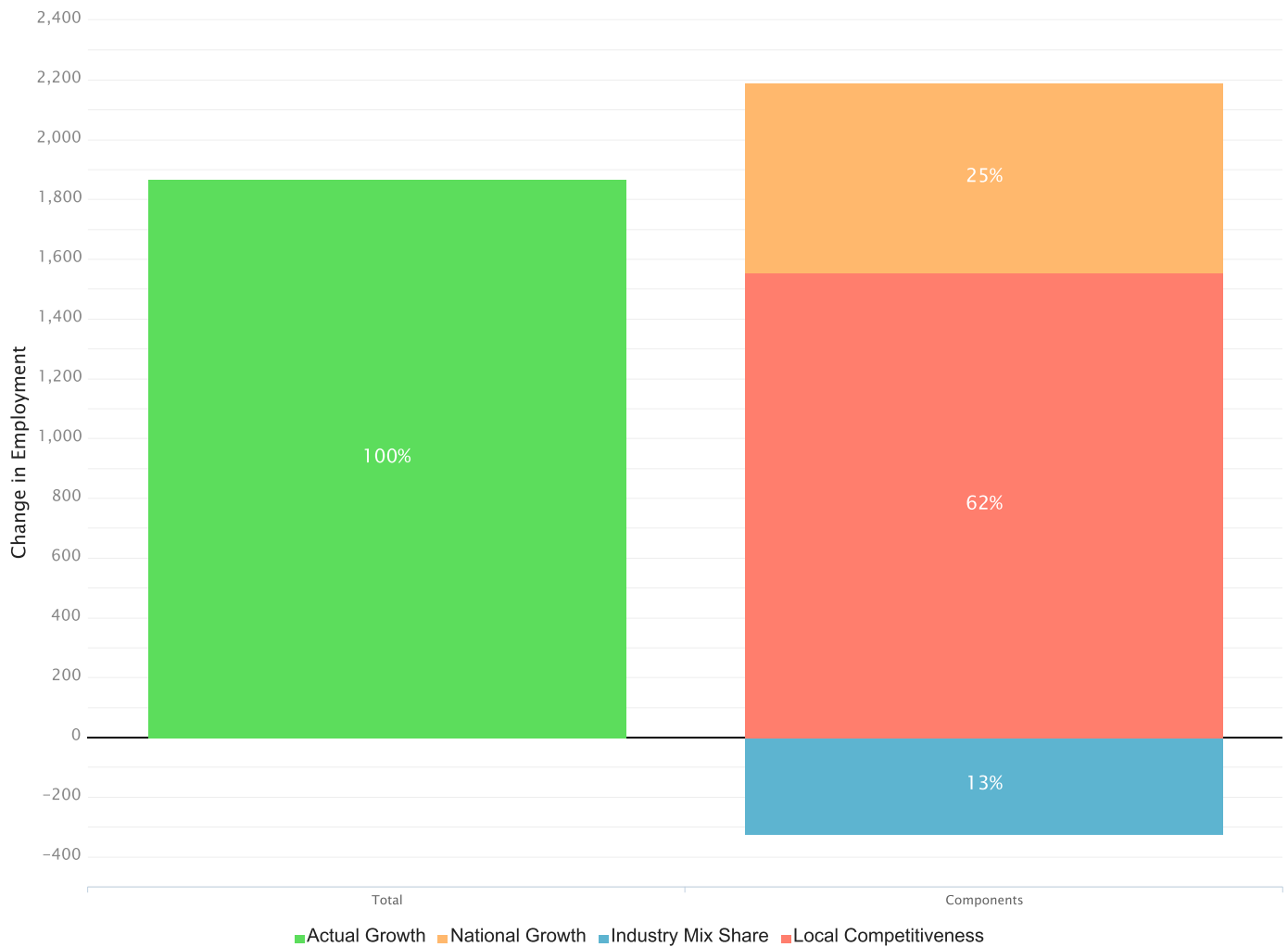


A geographic concentration of firms in related fields of business may reduce production costs, attract more suppliers and customers, and increase supply and demand for specialized labor, but may also increase competitive pressure and drive down prices.



Drivers of Employment Growth

Over the ten years ending 2018, employment in Other Services (except Public Administration) for the Tri-County Business Advisory Council added 1,865 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 gain of 1,553 jobs—meaning this industry was more competitive than its national counterpart during this period.

Drivers of Employment Growth for Tri-County Business Advisory Council



Source: JobsEQ®, Data as of 2018Q4

-  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 Other Services (except Public Administration) for the Tri-County Business Advisory Council. 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).



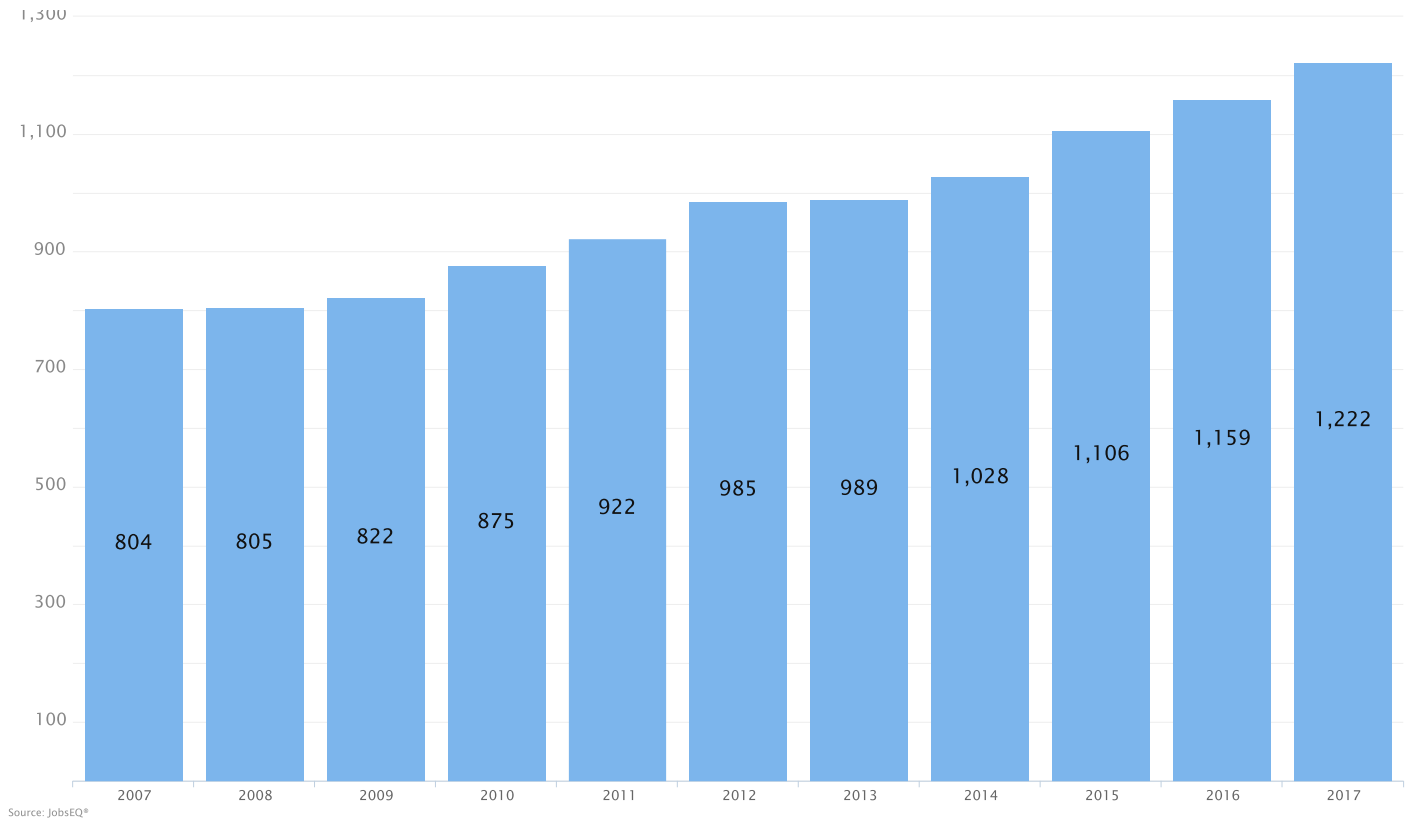
	Empl	%
Private	6,123	59.5%
Self-Employment	1,549	15.1%
Local Government	135	1.3%
Other Non-Covered	2,483	24.1%


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 2017, there were 1,222 Other Services (except Public Administration) establishments in the Tri-County Business Advisory Council (per covered employment establishment counts), an increase from 804 establishments ten years earlier in 2007.

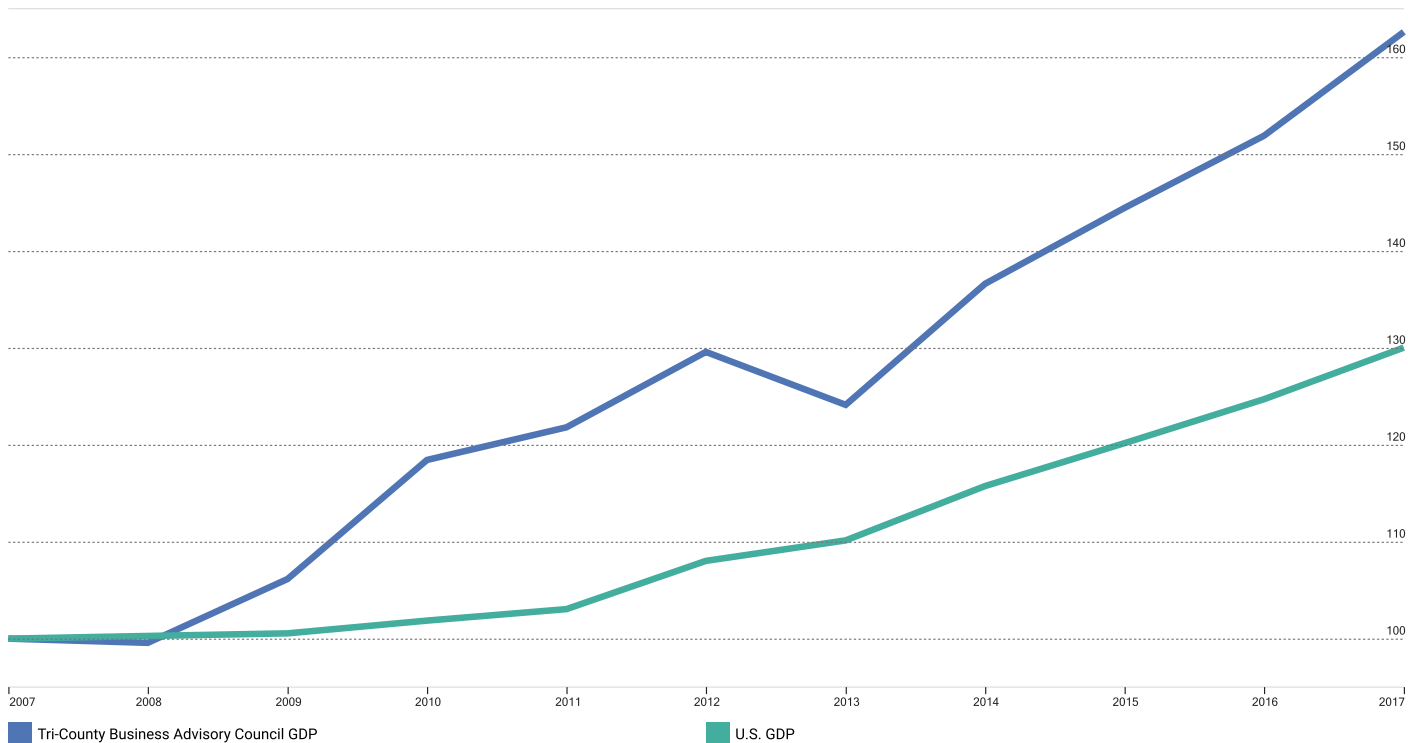


 New business formations are an important source of job creation in a regional economy, spurring innovation and competition, and driving productivity growth. Establishment data can provide an indicator of growth in businesses by counting each single location (such as a factory or a store) where business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

GDP & Productivity

In 2017, Other Services (except Public Administration) produced \$0.5 billion in GDP for the Tri-County Business Advisory Council.

GDP: Indexed 2007 = 100



2.7 %

Industry Share of Total GDP /
2.2 % in the nation



5.0 % ↑

Avg Ann % Change Last 10 Yrs /
2.7 % in the nation



\$102k

Output per Worker /
\$125k 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.

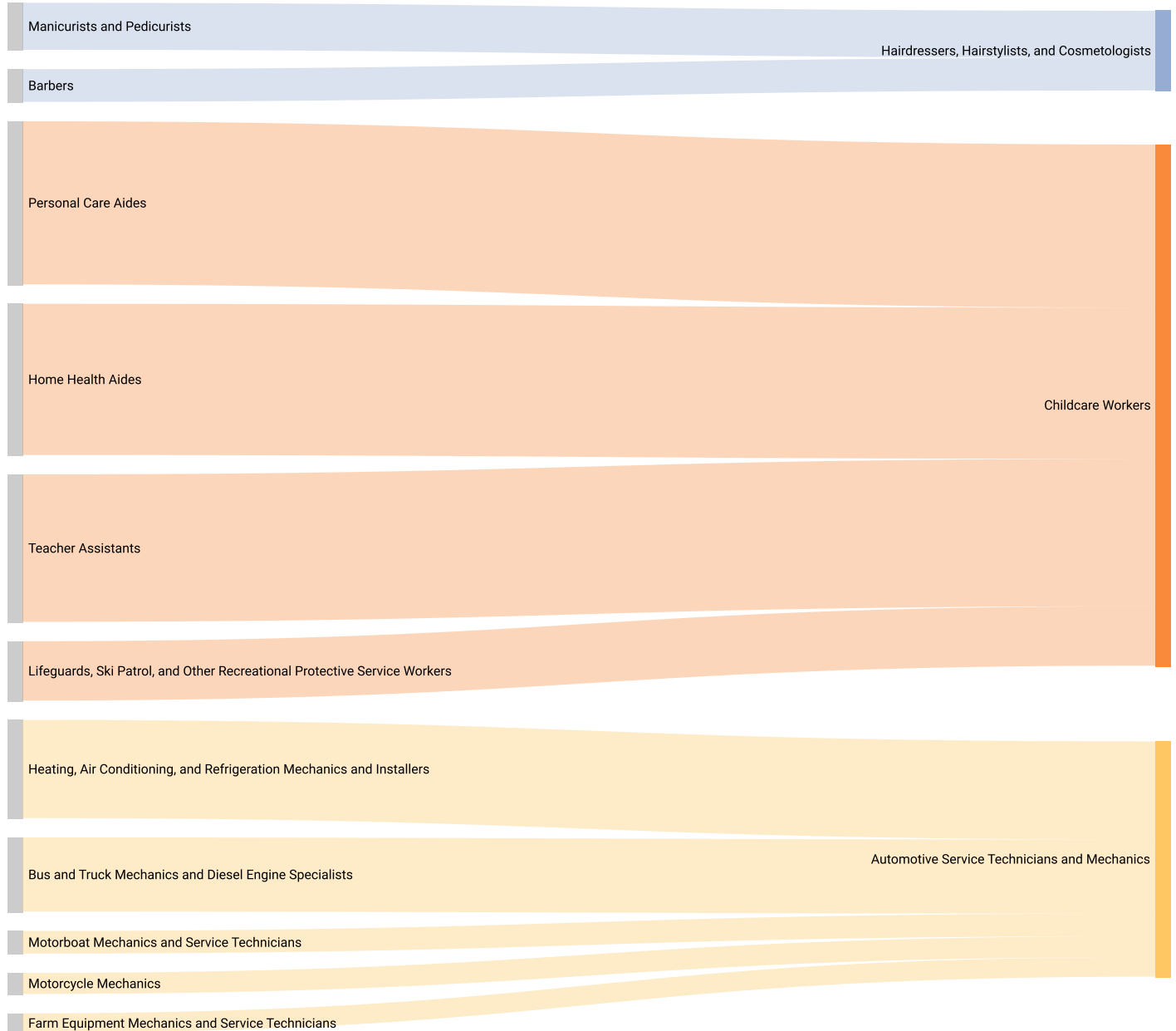
Supply Chain: Top Suppliers


As of 2018Q4, Other Services (except Public Administration) in the Tri-County Business Advisory Council are estimated to make \$433.7 million in annual purchases from suppliers in the United States with about 38% or \$163.3 million of these purchases being made from businesses located in the Tri-County Business Advisory Council.

2-digit Supplier Industries	Purchases from In-Region (\$M)	Purchases from Out-of-Region (\$M)
Real Estate and Rental and Leasing	\$57.1	\$42.8
Manufacturing	\$21.1	\$54.9
Finance and Insurance	\$14.2	\$49.5
Professional, Scientific, and Technical Services	\$13.2	\$25.4
Administrative and Support and Waste Management and Remediation Services	\$14.4	\$12.8
Remaining Supplier Industries	\$43.3	\$85.0
Total	\$163.3	\$270.4

 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 Other Services (except Public Administration)

Program	Awards
Appalachian State University	
Child Development	22
Kinesiology and Exercise Science	238
Music Performance, General	24
Public Relations/Image Management	64
Asheville-Buncombe Technical Community College	
Aesthetics/Estheticians and Skin Care Specialist	19
Automobile/Automotive Mechanics Technology/Technician	37
Cosmetology/Cosmetologist, General	14
Medium/Heavy Vehicle and Truck Technology/Technician	33
Carolina College of Hair Design	
Cosmetology/Cosmetologist, General	23
Center for Massage	
Massage Therapy/Therapeutic Massage	48

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 Tri-County Business Advisory Council, the sampling above identifies those most linked to occupations relevant to Other Services (except Public Administration).

Region Definition

Tri-County Business Advisory Council is defined as the following counties:

Avery County, North Carolina

Buncombe County, North Carolina

McDowell County, North Carolina

Madison County, North Carolina

Mitchell County, North Carolina

Watauga County, North Carolina

Yancey County, North Carolina

Data Notes

- Industry employment and wages (including total regional employment and wages) are as of 2018Q4 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 2018Q4 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 2017.
- 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 2016-2017 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.



Public Administration

Tri-County Business Advisory Council



Industry Spotlight

Avery, Buncombe, Madison, McDowell, Mitchell,
Watauga, and Yancey

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Public Administration
Tri-County Business Advisory Council – 2018Q4

EMPLOYMENT



9,644

Regional employment / 7,406,122 in the nation

WAGES



\$45,588

Avg Wages per Worker / \$64,955 in the nation

0.0% ↓

Avg Ann % Change Last 10 Years / +0.0% in the US



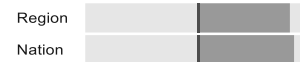
4.5%

% of Total Employment / 4.7% in the US

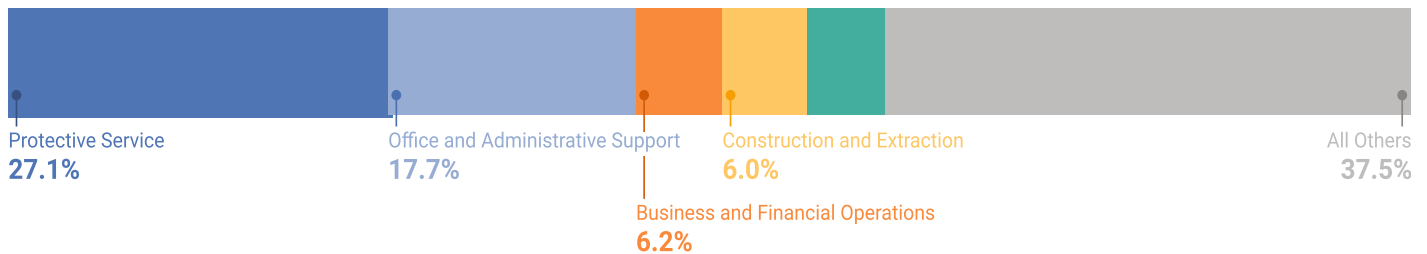


2.0% ↑

Avg Ann % Change Last 10 Years / +2.1% in the US

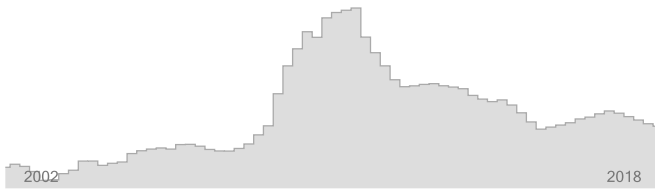


TOP OCCUPATION GROUPS

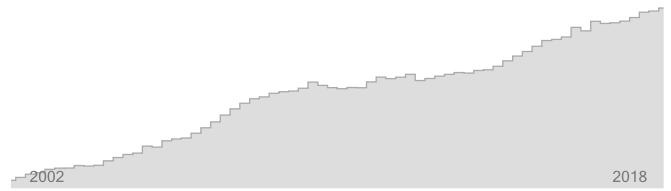


Industry Snapshot


EMPLOYMENT



WAGES

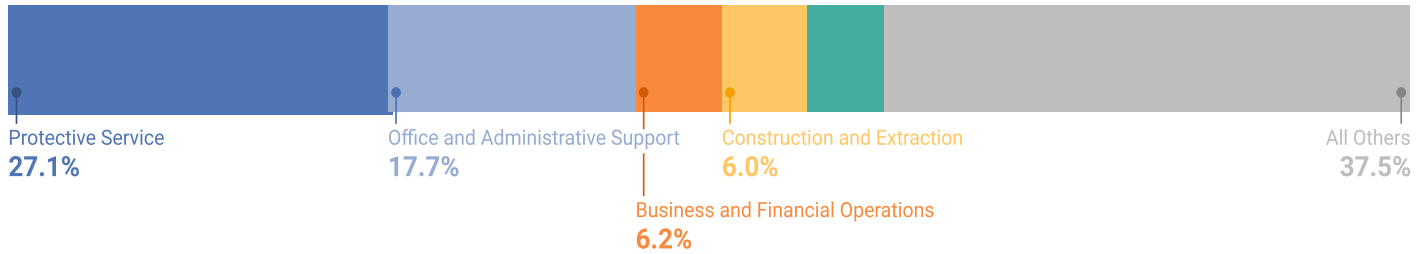


2-Digit Industry	Empl	Avg Ann Wages	LQ	5yr History	Annual Demand	Forecast Ann Growth
Public Administration	9,644	\$45,588	0.97		920	0.3%

 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.

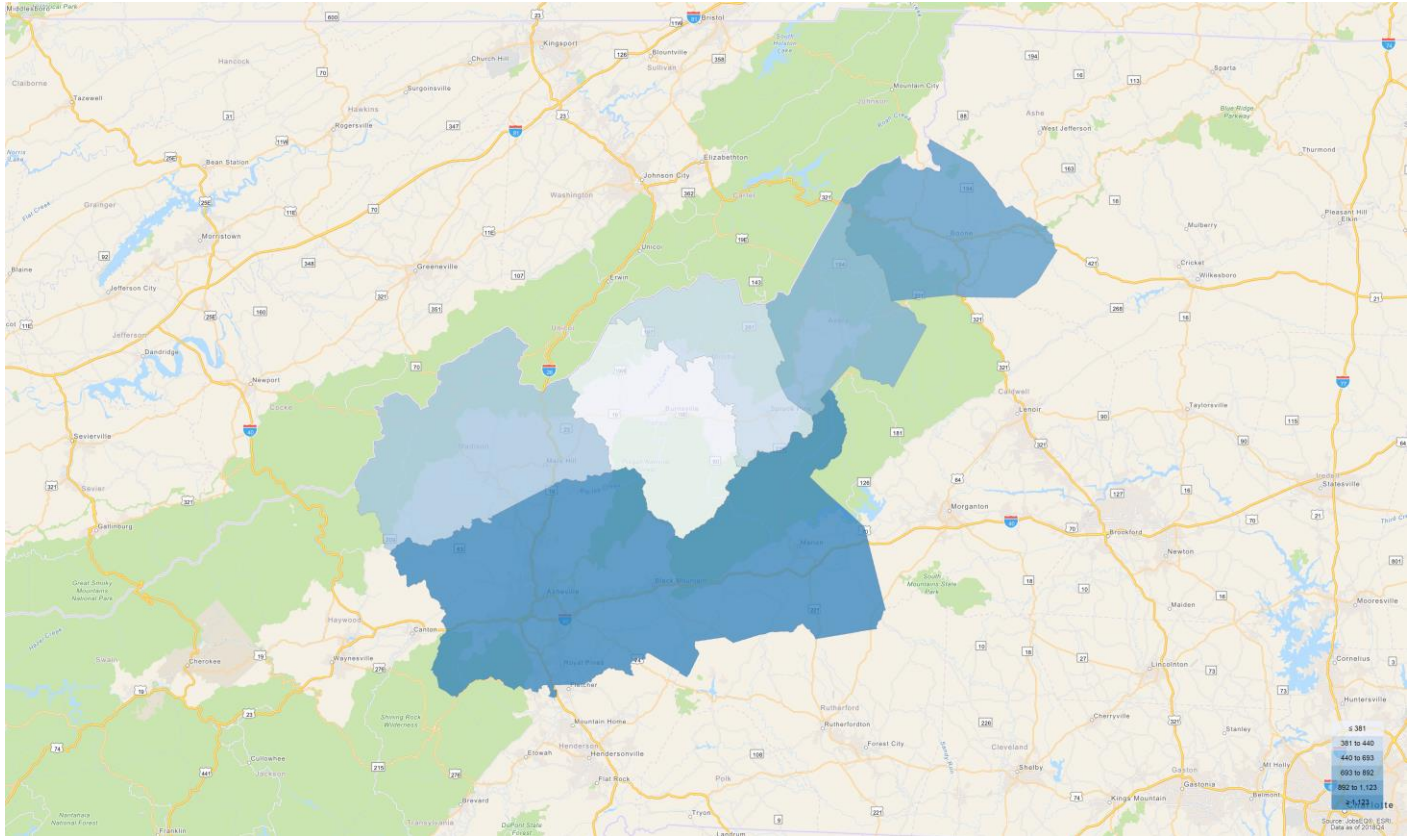
Staffing Pattern



6-digit Occupation	Empl	Avg Ann Wages	Annual Demand
Police and Sheriff's Patrol Officers	732	\$43,400	52
Correctional Officers and Jailers	717	\$35,600	51
Firefighters	586	\$31,700	44
Office Clerks, General	289	\$28,900	32
Highway Maintenance Workers	258	\$36,500	27
Eligibility Interviewers, Government Programs	232	\$42,000	22
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	201	\$34,100	19
Maintenance and Repair Workers, General	165	\$38,100	17
Child, Family, and School Social Workers	164	\$43,500	18
Emergency Medical Technicians and Paramedics	142	\$37,100	9
Remaining Component Occupations	6,123	\$53,200	637
Total	9,644		

 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
Buncombe County, North Carolina	5,973	Madison County, North Carolina	440
McDowell County, North Carolina	1,123	Mitchell County, North Carolina	381
Watauga County, North Carolina	893	Yancey County, North Carolina	140
Avery County, North Carolina	693		

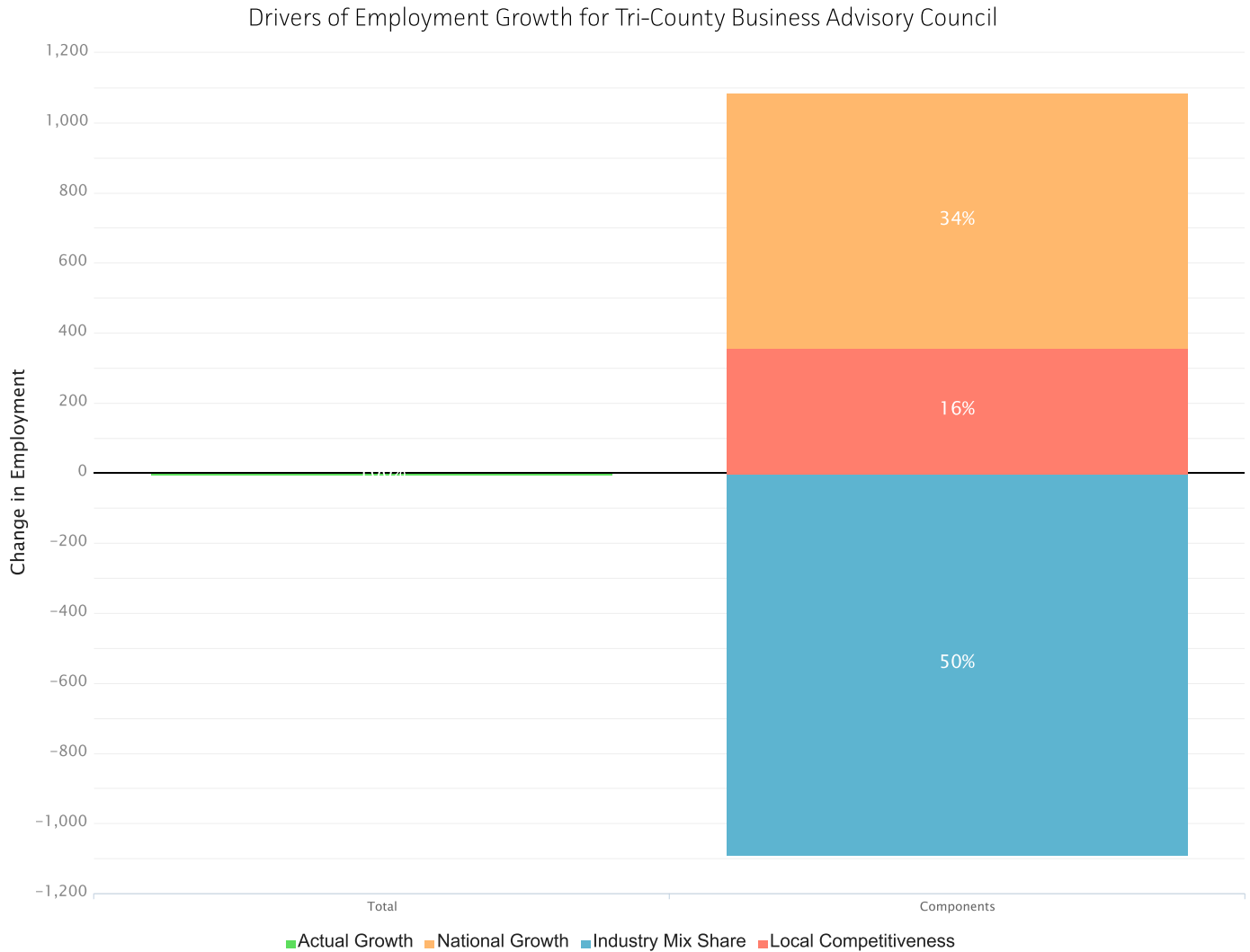
Source: JobsEQ®



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 Public Administration for the Tri-County Business Advisory Council shed 3 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 gain of 356 jobs—meaning this industry was more competitive than its national counterpart during this period.



Source: JobsEQ®, Data as of 2018Q4

- 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 Public Administration for the Tri-County Business Advisory Council. 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).



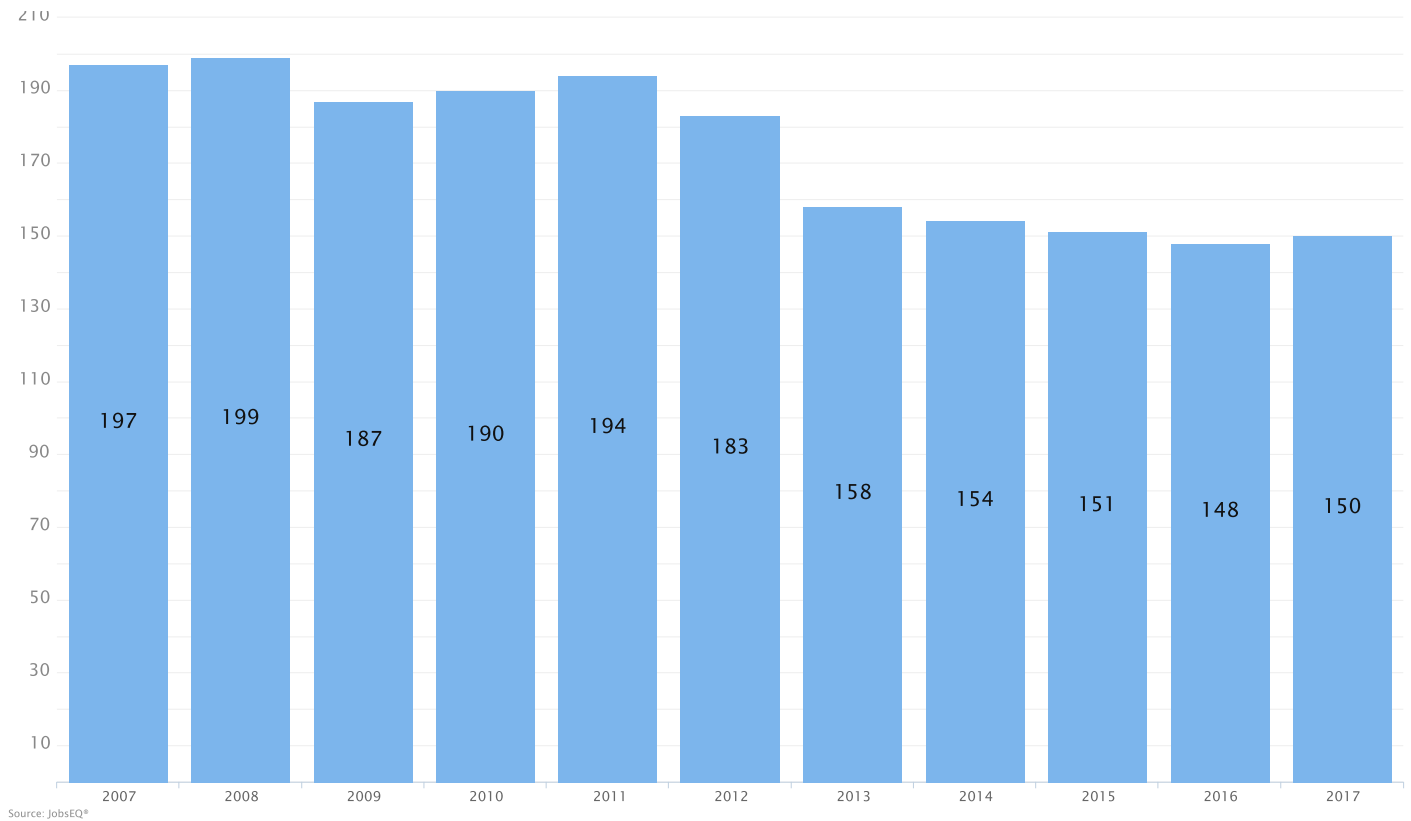
	Empl	%
Local Government	5,887	61.0%
State Government	3,212	33.3%
Federal Government	545	5.7%


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 2017, there were 150 Public Administration establishments in the Tri-County Business Advisory Council (per covered employment establishment counts), a decrease from 197 establishments ten years earlier in 2007.

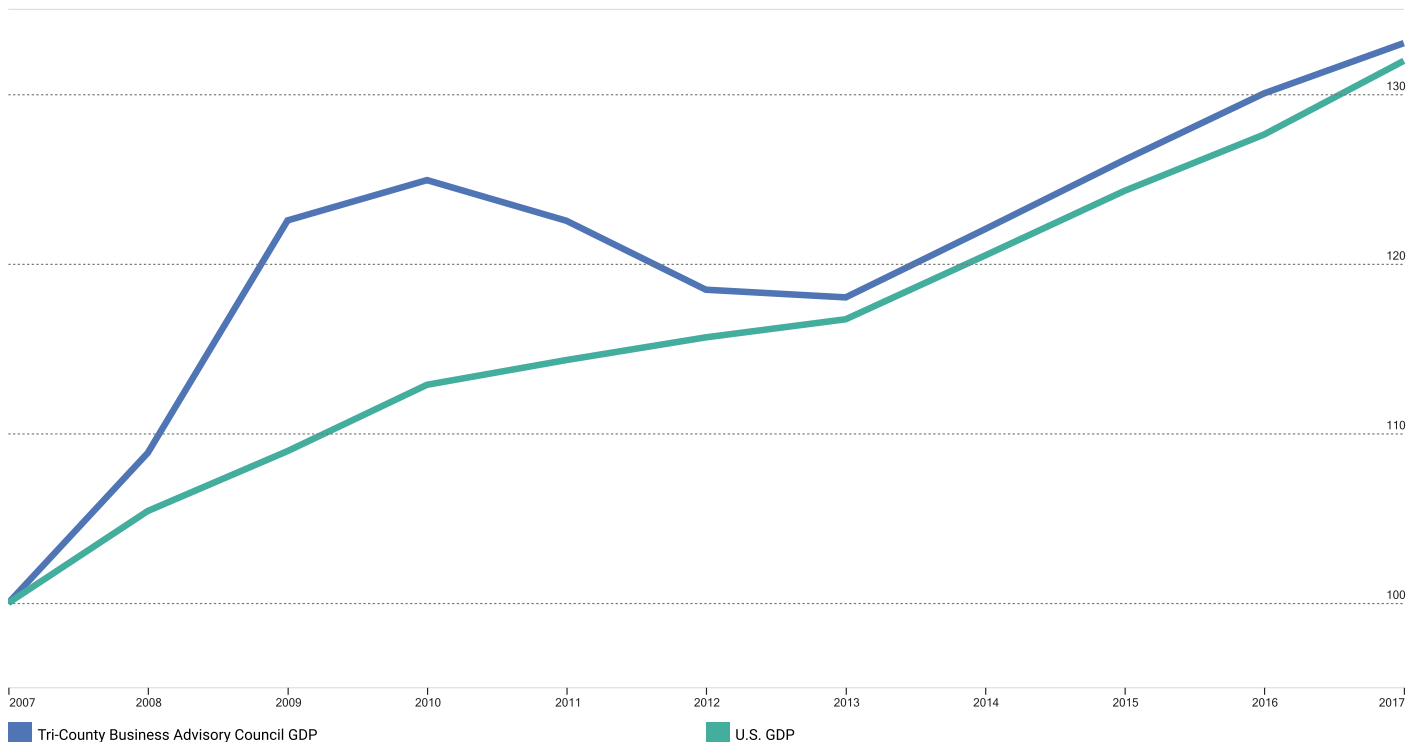


 New business formations are an important source of job creation in a regional economy, spurring innovation and competition, and driving productivity growth. Establishment data can provide an indicator of growth in businesses by counting each single location (such as a factory or a store) where business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

GDP & Productivity

In 2017, Public Administration produced \$0.8 billion in GDP for the Tri-County Business Advisory Council.

GDP: Indexed 2007 = 100



4.1 %

Industry Share of Total GDP /
4.4 % in the nation



2.9 % ↑

Avg Ann % Change Last 10 Yrs /
2.8 % in the nation



\$157k

Output per Worker /
\$278k 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.

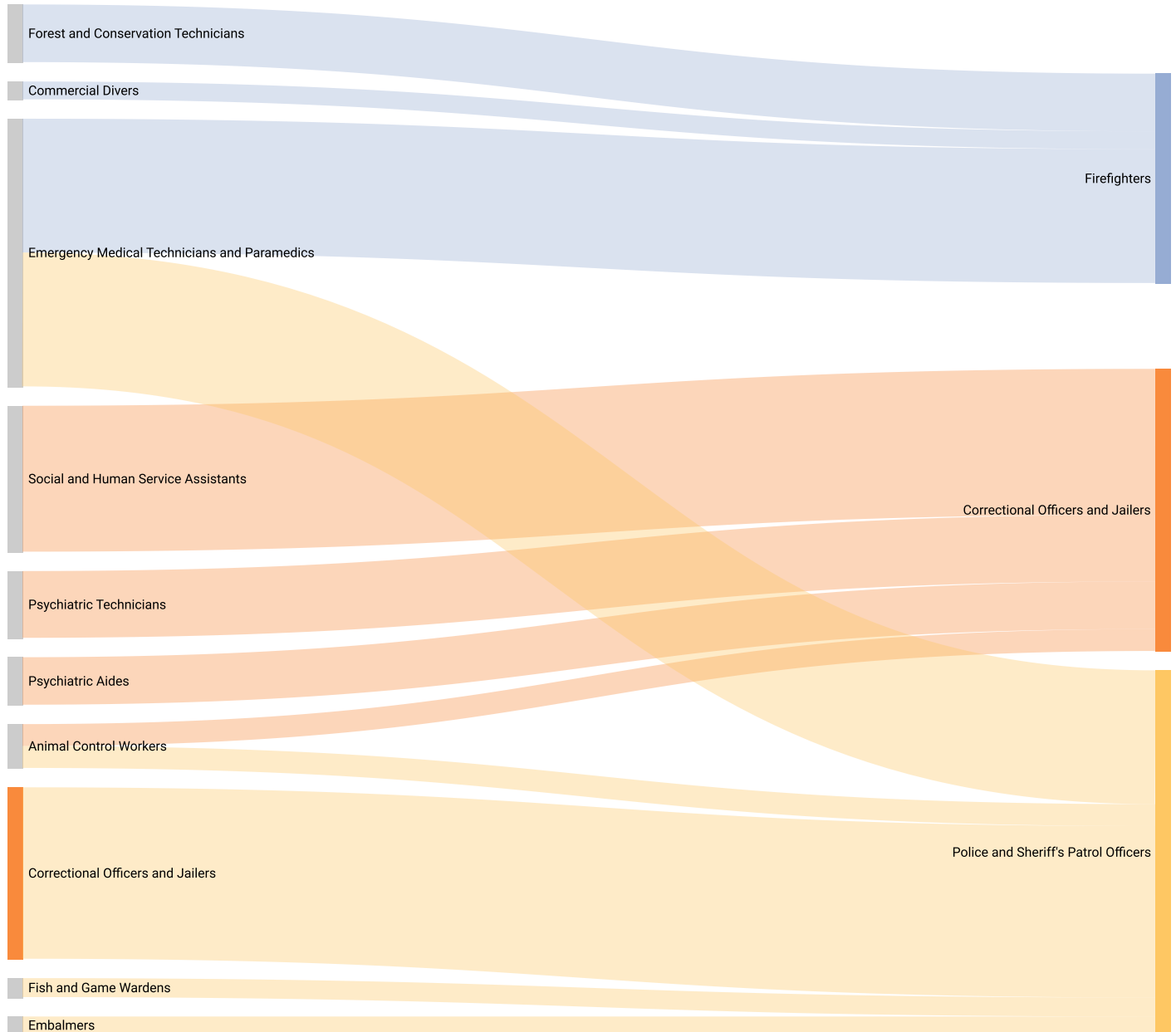
Supply Chain: Top Suppliers


As of 2018Q4, Public Administration in the Tri-County Business Advisory Council are estimated to make \$672.9 million in annual purchases from suppliers in the United States with about 21% or \$141.8 million of these purchases being made from businesses located in the Tri-County Business Advisory Council.

2-digit Supplier Industries	Purchases from In-Region (\$M)	Purchases from Out-of-Region (\$M)
Manufacturing	\$22.3	\$170.0
Professional, Scientific, and Technical Services	\$24.7	\$72.7
Information	\$9.6	\$42.3
Real Estate and Rental and Leasing	\$12.9	\$30.9
Administrative and Support and Waste Management and Remediation Services	\$15.4	\$25.4
Remaining Supplier Industries	\$56.8	\$189.9
Total	\$141.8	\$531.1

 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 Public Administration

Program	Awards
Appalachian State University	
Criminal Justice/Safety Studies	146
Environmental Engineering Technology/Environmental Technology	61
Environmental Studies	80
Linguistic, Comparative, and Related Language Studies and Services, Other	24
Social Work	132
Asheville-Buncombe Technical Community College	
Criminal Justice/Safety Studies	124
Fire Prevention and Safety Technology/Technician	8
Lees-McRae College	
Wildlife Biology	33
University of North Carolina at Asheville	
Environmental Studies	59
Warren Wilson College	
Environmental Studies	30

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 Tri-County Business Advisory Council, the sampling above identifies those most linked to occupations relevant to Public Administration.

Region Definition

Tri-County Business Advisory Council is defined as the following counties:

Avery County, North Carolina

Buncombe County, North Carolina

McDowell County, North Carolina

Madison County, North Carolina

Mitchell County, North Carolina

Watauga County, North Carolina

Yancey County, North Carolina

Data Notes

- Industry employment and wages (including total regional employment and wages) are as of 2018Q4 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 2018Q4 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 2017.
- 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 2016-2017 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.