NOVEMBER 2018

TARGET INDUSTRY ANALYSIS

THE CHOCTAW NATION OF OKLAHOMA

TIP strategies
AUSTIN • SEATTLE

CONTENTS

INTRODUCTION 1
FOOD PROCESSING 14
DISTRIBUTION AND LOGISTICS 18
NATURAL RESOURCES VALUE CHAIN 22
TOURISM 26
AEROSPACE AND DEFENSE 30
    UNMANNED AIRCRAFT SYSTEMS 35
MATERIALS PROCESSING AND REMANUFACTURING 37
STRATEGIC CONSIDERATIONS 41

Cover image credits: (top row, left to right) TIP Strategies staff photo, TIP Strategies staff photo, TIP Strategies staff photo, TIP Strategies staff photo, and Cypress Reflections by Lane Pearman via Flickr (CC BY 2.0); (far left middle) IMG_9439 by Jack Gray via Flickr (CC BY 2.0); (bottom row, left to right) TIP Strategies staff photo; Talimena Scenic Drive by Alex Butterfield via Flickr (CC BY 2.0), TIP Strategies staff photo, and TIP Strategies staff photo.

INTRODUCTION

Communities select target industries to narrow the focus of their economic development marketing efforts to generate leads and attract new business. Target industries are chosen because they represent the best opportunities for new investment and job growth.

A three-pronged approach was used to select the target industries for the Choctaw Nation of Oklahoma (CNO) and southeast Oklahoma. This includes a quantitative analysis of industry trends both regionally and nationally; qualitative input about the region's unique assets and key challenges; and strategic factors that will influence industry growth regionally, nationally, and globally.

The process of identifying target industries is outlined on the following page. This process incorporates all three elements of the targeting approach and results in a strong strategic framework to guide CNO's economic development marketing activities.

Through this process, six target industries were identified:

- Food processing
- Logistics and distribution
- Natural resources value chain
- Tourism
- Aerospace and defense
- Materials processing and remanufacturing

On the following pages, we present the findings from the steps of the targeting process. Following the findings are industry profiles that include industry descriptions and trends, market opportunities, staffing patterns, and resources for industry intelligence and networking.

THE TARGETING APPROACH

QUANTITATIVE
What do the data tell us?

QUALITATIVE
What have we learned about the region's assets and challenges?

STRATEGIC
What trends, relationships, etc. will influence opportunities going forward?

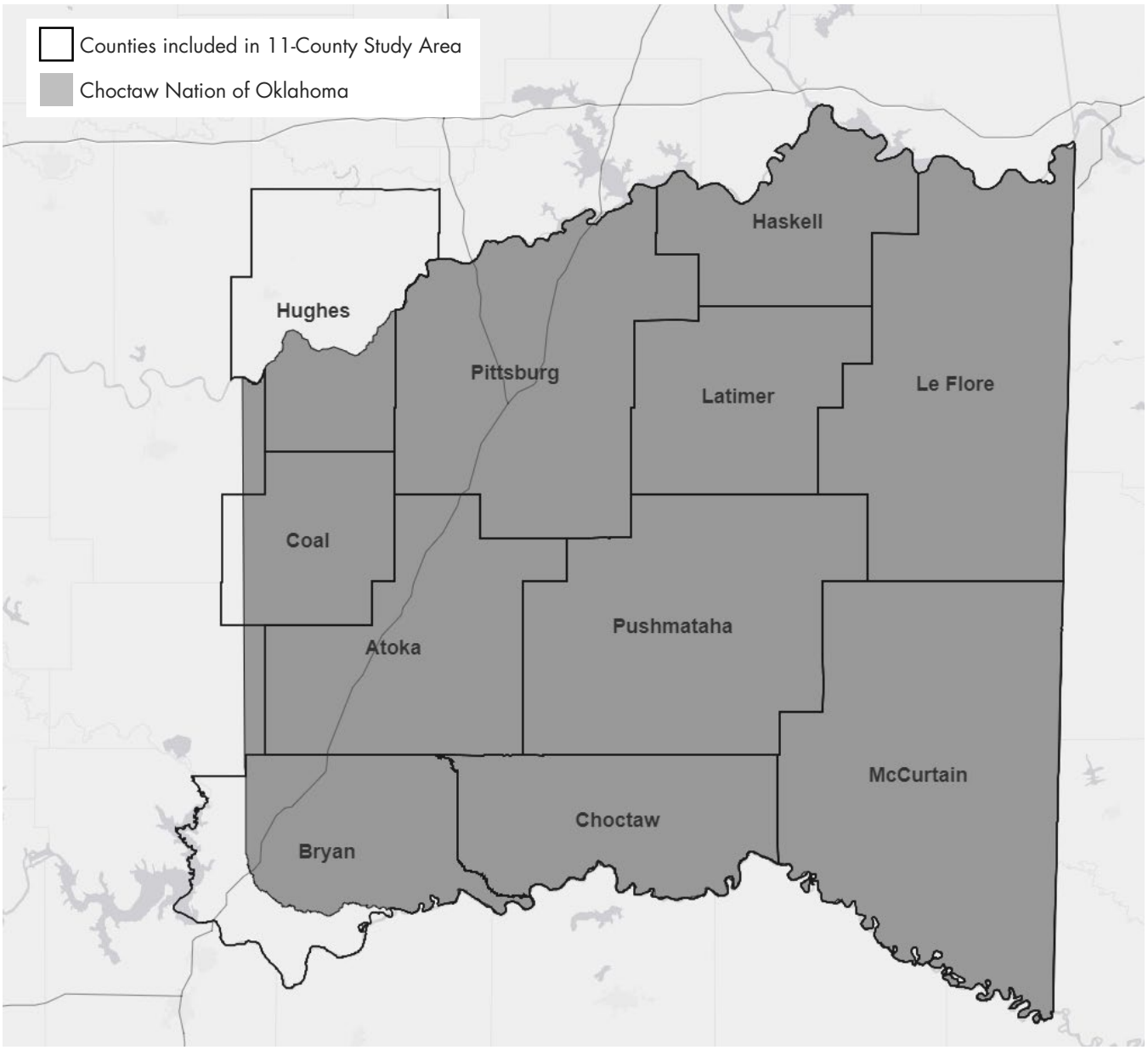
In identifying target sectors, our team examined detailed data to identify which industries are well-established in the region, how they performed in recent years, and how they are expected to perform in the near term. For this analysis we looked at factors including strategic assets, existing initiatives, critical mass, competitive advantage, growth prospects, and cross-sector synergies.

In the first phase of this project — the economic assessment — we reviewed employment using standard NAICS industry classifications. For the targeting analysis, we take this a step further by filtering employment within an industry "cluster" framework developed by the US Economic Development Administration in conjunction with the Institute for Strategy and Competitiveness at Harvard Business School.

In addition, an analysis of capital investments relies on categories defined by fDi Markets, an operating subsidiary of the *Financial Times*. Next, the analysis of entrepreneurial investment relies on categories of venture capital investment defined by PricewaterhouseCoopers.

THE GEOGRAPHY

The Target Industry Analysis was completed for the 11-County Area that most closely aligns with the boundaries of the Choctaw Nation (see map below). Note: parts of Hughes County, Coal County, and Bryan County lie outside the boundaries of the Choctaw Nation; however, these counties were included in the analysis. Conversely, the Choctaw Nation does include small portions of Ponotoc and Johnston Counties, but these counties were not included in the analysis.



THE TARGETING PROCESS

Source: TIP Strategies

KEY FINDINGS FROM THE TARGETING PROCESS

Note: tribal employment is classified under Local Government, which is considered a local cluster. While we acknowledge that many of the Choctaw business lines would be considered traded sectors, it is not possible to break tribal employment out by business line to make adjustment to the sector totals. As a result, Hospitality & Tourism, Business Services, and Aerospace and Defense are understated in this analysis.

Fewer jobs in the 11-County Area are in traded sectors compared to the US (66 percent versus. 73 percent), demonstrating a higher dependency on local spending in the economy.

Livestock Processing, Oil & Gas Production & Transportation, and Federal Government are the largest traded clusters in the 11-County Area. Livestock Processing and Forestry have the largest location quotients (LQs), which signals a high concentration of these industries in the region compared to the US. Other traded clusters with significant LQs include Oil & Gas Production & Transportation, Wood Products, and Nonmetal Mining.

The total growth rate for all traded sectors in southeast Oklahoma is expected to be slightly lower than the US over the next five years (4.4 percent versus 5.5 percent). This is largely due to projected job losses in the Education and Knowledge Creation sector and in Livestock Processing.

However, the projected growth rates of the region's top traded clusters outpace the national projected growth rate for the clusters, which means the relative concentration of the clusters will likely increase in the region over the near-term. Downstream Chemical Products and Upstream Chemical Products stand out as growing close to 50 percent over the next five years.

The top three occupations by postings in 2017 are Heavy and Tractor-Trailer Truck Drivers, Telecommunication Equipment Installers and Repairers, and Merchandise Displayers and Window Trimmers. These occupations also have LQs above 1.25, demonstrating a unique advantage. Optimization Software, IDSC Expert Fuel and Utility Trailers were the top three skills requested by job postings in 2017. The 11-County Area also has many high-demand skills related to trucking and transportation.

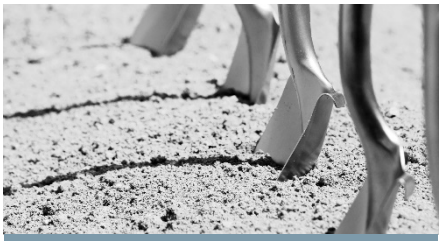
Foreign and out-of-state investment into the 11-County Area was largely directed into the Coal, Oil and Natural Gas sector and the Metals sector. Other destinations for investment included Automotive OEM, Plastics, and Wood Products. Investment in Metals and Wood Products also had high LQs, showing that the 11-County Area had proportionally more investment in these areas than the US as a whole.

Inbound investment into the 11-County Area came from across the US. The largest number of deals came from Texas and Oklahoma.

COMPETITIVE POSITIONING

MARKET ACCESS

- 28 million US households within a one-day drive
- 63 million US households within one-and-a-half day drive



SITES & BUILDINGS

- Ample inventory of raw land; favorable cost
- Few new buildings

TRANSPORTATION

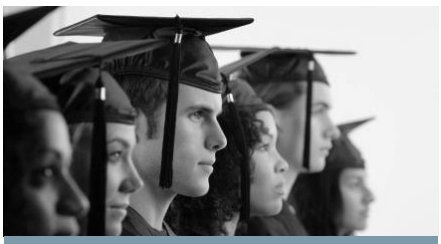
- Highway 75/69
- Indian Nation Turnpike
- Class I Railroads: UP, BNSF, KC
- Shortlines: KRR, AOK, TO & E
- Navigable Waterway: MKARN System, Ports of Keota and Carl Albert

UTILITIES

- Affordable electricity rates – lower than the national average
- Natural gas availability
- Ample water sources
- 100 Gb/s fiber

WORKFORCE

- Laborforce over 100,000
- Strengths: middle skill/ industrial



EDUCATION

- Full range of post-secondary opportunities at KTC, Southeastern Oklahoma State, Carl Albert, Eastern Oklahoma State
- Proximity to University of Oklahoma and Oklahoma State University

Source: TIP Strategies

EMPLOYMENT CLUSTERS: TRADED VS LOCAL

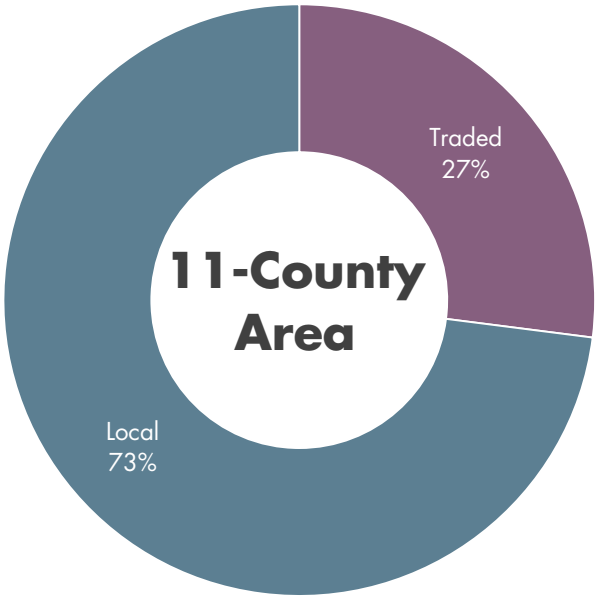
EMPLOYMENT IN 2017 BASED ON CLUSTER TYPE

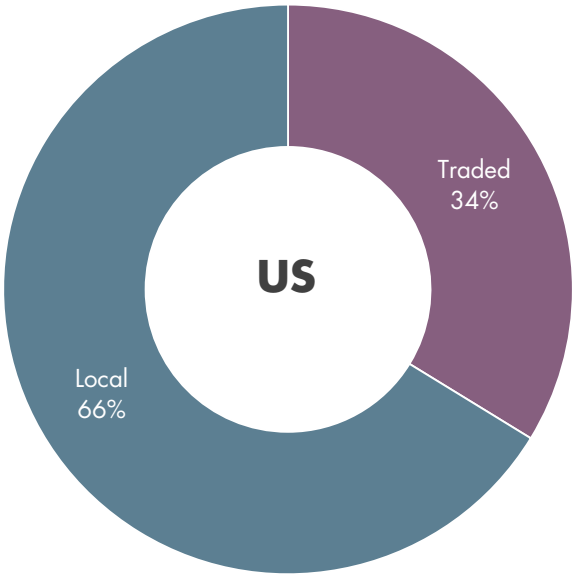
LOCAL CLUSTERS

- Primarily serve local markets
- Present in virtually every market
- Location is not dependent upon competitive advantage

TRADED CLUSTERS

- Serve outside markets
- Free to choose where they locate
- Tend to be highly concentrated in a few regions that have specific advantage





WHY IT MATTERS

Increasing the ratio of traded-to-local clusters is a common strategy for enhancing economic prosperity. "Traded" clusters are emphasized by economic developers because they include industries and firms that typically produce goods and services for customers beyond the local region. These traded activities are thus more likely to produce externally generated revenues which can, in turn, help boost local tax coffers. As an example, a dentist office might serve local customers exclusively, while a manufacturing plant, a data center, or a hotel would typically serve paying customers beyond the local area. The ability of traded clusters to serve larger markets also presents greater opportunity for employment growth, whereas a dentist office might face more finite geographic limits to expansion.

Source(s): US Bureau of Labor Statistics; EMSI 2017.4 – QCEW Employees, Non-QCEW Employees, and Self-Employed; Institute for Strategy and Competitiveness at Harvard Business School; TIP Strategies.
Note(s): The cluster methodology developed at Harvard Business School has been adjusted by TIP Strategies to align with the 6-digit NAICS classifications used by EMSI.

EMPLOYMENT CLUSTERS — WEIGHT (SIZE & CONCENTRATION)

TRADED CLUSTERS EMPLOYING THE MOST WORKERS LOCALLY IN 2017

LOCATION QUOTIENTS: BELOW AVG→ ←ABOVE AVG

	US		11-County Area		
	% of national employment		*% of local employment*		*LQ*
Livestock Processing	0.3%		3.4%		10.35
Oil & Gas Prod. & Transport.	0.4%		2.4%		6.09
Federal Government (civilian)	1.4%		2.3%		1.64
Business Services	5.9%		2.2%		0.36
Distribution & E-commerce	3.7%		1.9%		0.52
Transport. & Logistics	1.3%		1.9%		1.42
Educ. & Knowledge Creation	4.2%		1.6%		0.37
Agricultural Inputs & Services	1.1%		1.5%		1.32
Wood Products	0.2%		1.2%		4.71
Hospitality & Tourism	2.1%		1.1%		0.54
Federal Government (military)	1.2%		1.1%		0.85
Construction Products & Services	0.6%		0.9%		1.59
Forestry	0.1%		0.6%		10.46
Nonmetal Mining	0.1%		0.5%		9.06
Aerospace Vehicles & Defense	0.4%		0.5%		1.42
OTHER TRADED CLUSTERS	10.8%		4.0%		
ALL LOCAL CLUSTERS	66.2%		73.0%		
Total	**100.0%**		**100.0%**		

WHY IT MATTERS

While local clusters (such as dentist offices) typically account for a similar share of employment across communities of varying size, the share of total employment represented by traded clusters (such as automotive assembly plants) may differ dramatically from one community to the next. Traded clusters that account for a larger-than-average share of total employment can suggest areas of competitive advantage. This figure compares the distribution of employment by cluster in the US (first column) with the local area (second column). The third column uses location quotients (LQs) to convey the intensity of employment locally relative to the US. If a traded cluster represents 1% of US employment and 5% of local employment, its LQ would be 5.0, meaning that the traded cluster in the local area is 5 times as large as would be expected based on national patterns.

Source(s): US Bureau of Labor Statistics; EMSI 2017.4 – QCEW Employees, Non-QCEW Employees, and Self-Employed; Institute for Strategy and Competitiveness at Harvard Business School; TIP Strategies.
Note(s): The cluster methodology developed at Harvard Business School has been adjusted by TIP Strategies to align with the 6-digit NAICS classifications used by EMSI.

EMPLOYMENT CLUSTERS — PROJECTED GROWTH

TRADED CLUSTERS WITH PROJECTED LOCAL JOB GAINS OF 10 OR MORE, 2017-2022

	US	11-County Area	
	5-year % change in national employment	*5-year % change in local employment*	*net gain*
Business Services	10.3%	13.7%	+259
Distribution & E-commerce	7.6%	12.0%	+205
Hospitality & Tourism	6.8%	15.0%	+147
Construction Products & Services	12.7%	17.3%	+137
Oil & Gas Prod. & Transport.	1.9%	4.5%	+93
Nonmetal Mining	5.5%	17.5%	+84
Food Processing & Mfg.	6.8%	15.6%	+71
Transport. & Logistics	4.8%	3.7%	+61
Aerospace Vehicles & Defense	-0.9%	11.3%	+54
Financial Services	6.3%	9.5%	+42
Downstream Chemical Products	0.7%	44.9%	+41
Forestry	-1.4%	6.1%	+35
Upstream Metal Mfg.	-0.5%	11.1%	+30
Marketing, Design, & Publishing	8.1%	24.0%	+24
Upstream Chemical Products	0.7%	50.3%	+23
Downstream Metal Products	3.9%	13.4%	+21
Trailers, Campers, & Appliances	4.0%	15.1%	+20
Paper & Packaging	-3.3%	15.1%	+11
ALL TRADED CLUSTERS	5.5%	4.4%	+1,060
ALL LOCAL CLUSTERS	6.2%	6.2%	+3,993
Total	**6.0%**	**5.7%**	

WHY IT MATTERS

Understanding anticipated job growth in traded clusters is an essential element of the targeting process. This figure compares projected net job gains in percentage terms over a five-year horizon for the US (first column) and the local area (second column). The column on the far right shows projections (in numeric terms) for local net job gains in traded clusters in descending order. The last three rows of the exhibit—showing projected job growth aggregated for traded clusters, local clusters, and total employment—can help inform strategic discussions and refine goals for the future.

Source(s): US Bureau of Labor Statistics; EMSI 2018.1 – QCEW Employees, Non-QCEW Employees, and Self-Employed; Institute for Strategy and Competitiveness at Harvard Business School; TIP Strategies.
Note(s): The cluster methodology developed at Harvard Business School has been adjusted by TIP Strategies to align with the 6-digit NAICS classifications used by EMSI.

TALENT DEMAND INDICATORS

ANALYSIS OF UNIQUE LOCAL JOB POSTINGS DURING CALENDAR YEAR 2017

INTENSITY OF JOB POSTINGS RELATIVE TO US: BELOW AVG→ ←ABOVE AVG

HIGH-DEMAND LOCAL OCCUPATIONS	*location quotient*	HIGH-DEMAND LOCAL SKILLS	*location quotient*
Heavy and Tractor-Trailer Truck Drivers	4.91	Optimization Software	14.06
Telecom. Equip.Installers and Repairers	2.38	I.D.S.C. Expert Fuel	13.32
Merchandise Displayers and Window Trimmers	1.65	Utility Trailers	11.57
Laborers and Freight, Stock, and Material Movers, Hand	1.03	Flatbed Trailers	8.03
First-Line Supervisors of Retail Sales Workers	0.94	Hoppers	6.93
Licensed Practical and Licensed Vocational Nurses	0.90	Flatbed Trucks	5.38
First-Line Supervisors of Production and Operating Workers	0.90	Flatbed Scanners	5.38
Maintenance and Repair Workers, General	0.86	Straight Trucks	4.59
Light Truck or Delivery Services Drivers	0.84	Freight+	4.46
Sales Representatives, Wholesale and Manufacturing	0.77	Handheld Scanners	4.46
Cashiers	0.76	Step Ladders	4.40
Retail Salespersons	0.67	Refrigerated Trailers	4.32
Combined Food Preparation and Serving Workers	0.60	Tractor-Trailers	3.71
First-Line Supervisors of Food Preparers and Servers	0.59	Box Cutters	3.45
Stock Clerks and Order Fillers	0.55	Dollies	3.40
Customer Service Representatives	0.52	Forklifts	0.88
Medical and Health Services Managers	0.45	Critical Care	0.70
Registered Nurses	0.38	Preventive Maintenance	0.57
Computer User Support Specialists	0.34	Bilingual	0.51
First-Line Supervisors of Office Support Workers	0.30	Quality Assurance	0.27

WHY IT MATTERS

An analysis of job postings can help reframe our understanding of the local job market from the employer's perspective rather than simply through the lens of government statistics. This back-of-the-envelope analysis uses job postings from the prior calendar year to identify the most sought-out occupations (first column) and the most frequently occurring words and phrases (second column). LQs are used to approximate the local intensity of recruiting efforts and illustrate employer demand for specific "hard skills." A help wanted ad that appears locally at 5 times the relative rate as the US would have an LQ of 5.0; likewise a specific skill that appears more frequently in local postings than the national average would have an LQ greater than 1.0, suggesting higher demand in the local market. The results should prompt strategic questions about the alignment of the region's talent pipeline with the needs of employers and with target (traded) clusters.

Source(s): CEB Talent Neuron; TIP Strategies.

INBOUND FIXED CAPITAL INVESTMENT

FOREIGN AND OUT-OF-STATE INVESTMENT 2008-2017

LOCATION QUOTIENTS: BELOW AVG→ ←ABOVE AVG

	US	11-County Area	
	% of national inbound investment	*% of local inbound investment*	*LQ*
Coal, Oil and Natural Gas	12.6%	63.6%	**5.06**
Metals	2.9%	18.6%	**6.45**
Automotive OEM	3.4%	8.5%	**2.49**
Plastics	1.6%	2.9%	**1.84**
Wood Products	0.3%	2.4%	**7.34**
Textiles	3.8%	2.2%	**0.58**
Transportation	4.2%	0.8%	**0.20**
Ceramics & Glass	0.2%	0.5%	**2.03**
Business Services	2.8%	0.4%	**0.15**
Other Sectors	66.9%	0.0%	
Total	**100.0%**	**100.0%**	

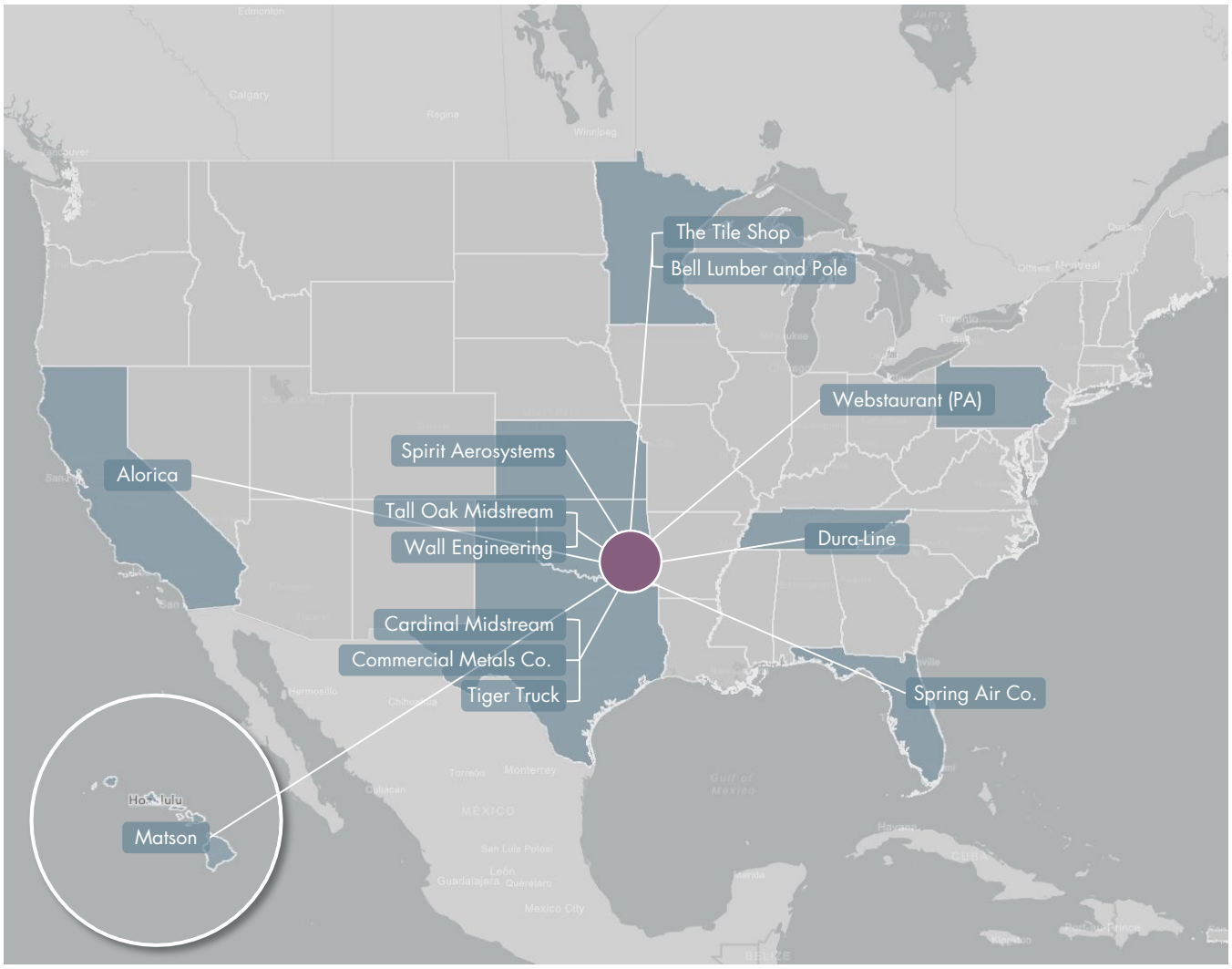
WHY IT MATTERS

Industry analysis often focuses heavily, sometimes exclusively, on employment patterns. For a fuller understanding of local industry trends, a review of capital investment flows is useful. This figure compares the distribution (in percentage terms) of inbound investment by industry at the national and local levels. The first column shows cross-state and foreign investment in the US. The second column shows inbound investment into the local area from companies based out-of-state (including foreign investment), sorted in descending order. The column on the far right uses LQs to convey the intensity of capital investment in these sectors locally relative to the US. While the cluster definitions differ slightly from the EDA framework, the concepts are similar.

Source(s): fDi Markets; TIP Strategies.
Note(s): Inbound investment includes foreign and out-of-state sources. It excludes in-state sources of investment.

INBOUND INVESTMENT

AN ANALYSIS OF EXPANSION ANNOUNCEMENTS SINCE 2007



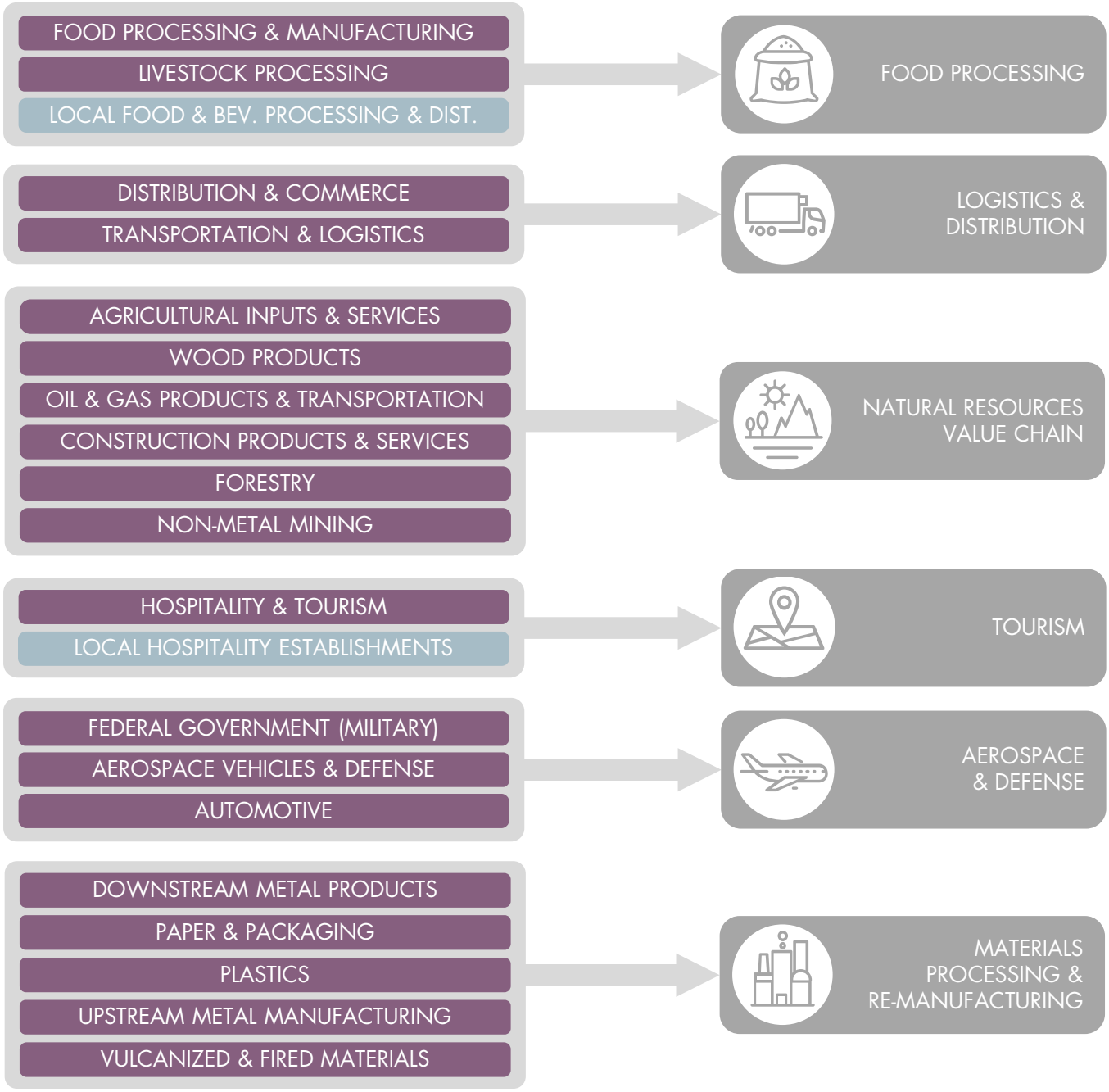
COMPANY	DESTINATION	STATE OF ORIGIN
Commercial Metals Company	Bryan County	Texas
Webstaurant	Bryan County	Pennsylvania
Wall Engineering	Bryan County	Oklahoma
Spirit Aerosystems	Pittsburg County	Kansas
Tall Oak Midstream	Hughes County	Oklahoma
The Tile Shop	Bryan County	Minnesota
Alorica	Bryan County	California
Spring Air Company	Bryan County	Florida
Matson (Alexander & Baldwin)	Bryan County	Hawaii
Cardinal Midstream	Coal County (OK)	Texas
Tiger Truck	Le Flore (OK)	Texas
Bell Lumber and Pole	McCurtain County (OK)	Minnesota
Dura-Line	Pittsburg County (OK)	Tennessee

Source(s): fDi Markets; State of Oklahoma; TIP Strategies.

TARGETING FRAMEWORK

TRADED and **LOCAL** clusters emerge from the analysis...

...to provide a foundation for **TARGET SECTORS**



Source(s): U.S. Economic Development Administration; Institute for Strategy and Competitiveness at Harvard Business School; TIP Strategies.

TARGETS BY GEOGRAPHY

Although the target sectors were based on an analysis of the entire 11-County area, the sectors are more applicable to some counties over others. A summary of which industries fit with which counties is provided below:

	FOOD PROCESSING	LOGISTICS & DISTRIBUTION	NATURAL RESOURCES & VALUE CHAIN	TOURISM	AEROSPACE/ DEFENSE	RE-MANUFACTURING
Atoka	●	●	●		●	●
Bryan	●	●	●	●	●	●
Choctaw	●		●	●		
Coal	●		●			
Haskell	●	●	●			●
Hughes	●		●			
Latimer	●		●	●		
Le Flore	●	●	●	●		●
McCurtain	●	●	●	●		●
Pushmataha	●		●	●		●
Pittsburg	●	●	●	●	●	●

FOOD PROCESSING

The 11-County Area access to large urban markets (i.e. Dallas-Fort Worth, Oklahoma City, Tulsa, etc.) make food processing a potential growth area. Tyson Foods and AOK Foods are major employers in this target that benefit from the region's market access. Prairie Brewing Company in McAlester is a local business success that was able to prosper from local government support and access to nearby major markets. Now this company distributes nationwide and is still expanding. Lovera's Market in Krebs is another example of a local success story that is able to access a larger market through online sales.

For this target, Livestock Processing and Local Food & Beverage Processing are large components. This target declined for the 11-County Area between 2007-2017, but at a slower rate than the overall job decline. Jobs in this target are expected to grow nationally (4.6 percent) and in the 11-County Area (1.5 percent) between 2017-2022. This target has been more volatile over the last 10 years than in the US.

When viewing staffing patterns, cashiers and laborers make up a large percentage of the jobs at 16.4 percent combined. Occupations like Farmworkers, Animals, Graders & Sorters, Food & Tobacco Machine Workers and Food Cooking Machine Workers have high LQs. Few occupations pay above the US median.

MARKET OPPORTUNITIES

- **Specialty foods and beverages:** connect local producers with online markets and gourmet food economics of nearby metros through e-commerce and small business assistance.
- **Food technology and equipment:** attract manufacturers and designers of equipment that could serve food industries of North Texas and Oklahoma.
- **Value-added agriculture:** attract processors of raw product harvested in southeast Oklahoma.
  - Pecans, soybeans, beef (some dairy), pork, sheep, and poultry
- **Import substitution:** encourage the production of food crops that are currently imported but could be grown locally. Work with large purchasers (tribe, hospitals, school districts) to identify common items that are currently purchased from outside of the region and partner with agricultural programs at higher education institutions, the USDA, and the Cooperative Extension Service to grow and process these foods locally, if possible.

11-COUNTY AREA ADVANTAGES

- Major Employers: Tyson Foods, AOK Foods.
- Meat Processing and Food Safety program at Eastern Oklahoma State College
- Agricultural roots of the region
- Proximity to growing, major markets
  - 63 million households in 900 mile radius (up 5.6% since 2010)

TARGET SNAPSHOT

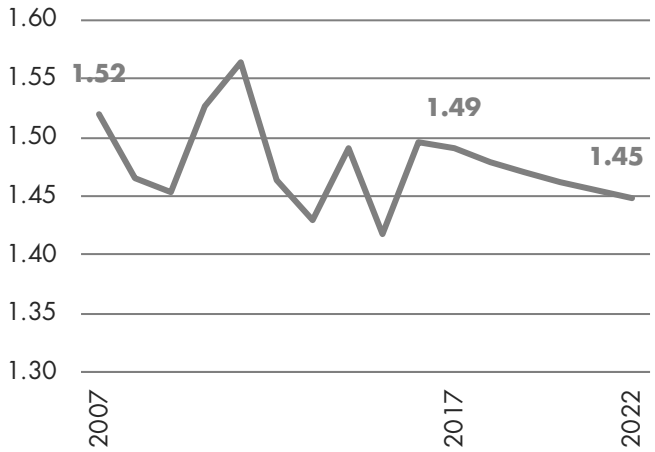
11-COUNTY AREA	TOTAL	TARGET
2017 Establishments	5,303	149
2017 Employment	88,040	4,986
Net Chg., 2007-2017	-6,783	-341
Pct. Chg., 2007-2017	-7.2%	-6.4%

EMPLOYMENT OUTLOOK

US OVERALL	TOTAL	TARGET
Net Chg., 2017-2022	+9,492,023	+280,901
Pct. Chg., 2017-2022	+6.0%	+4.6%
11-COUNTY AREA	**TOTAL**	**TARGET**
Net Chg., 2017-2022	+5,033	+73
Pct. Chg., 2017-2022	+5.7%	+1.5%

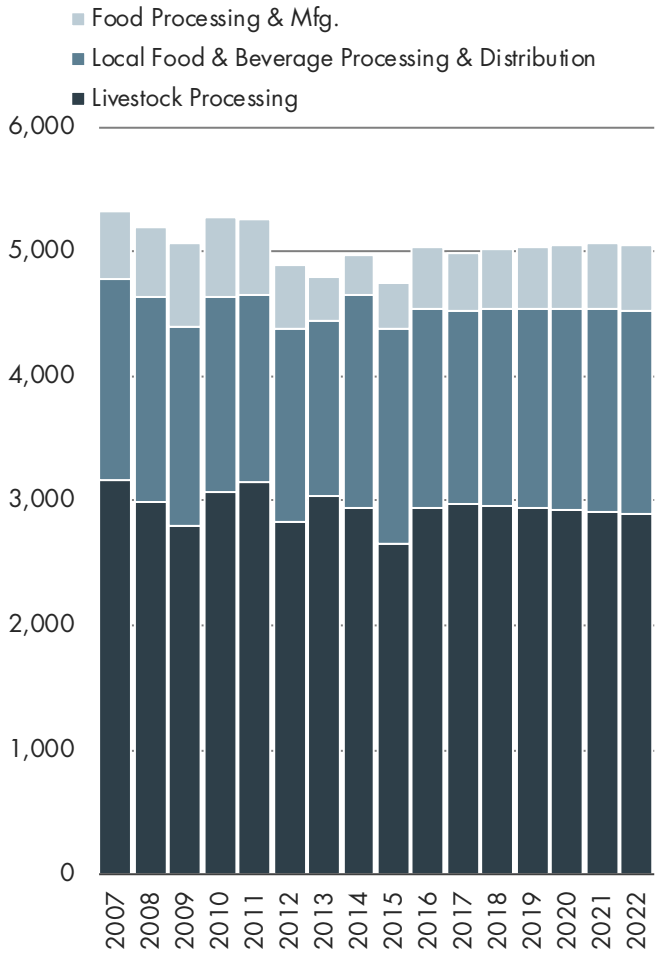
TARGET CONCENTRATION

LOCATION QUOTIENT TREND



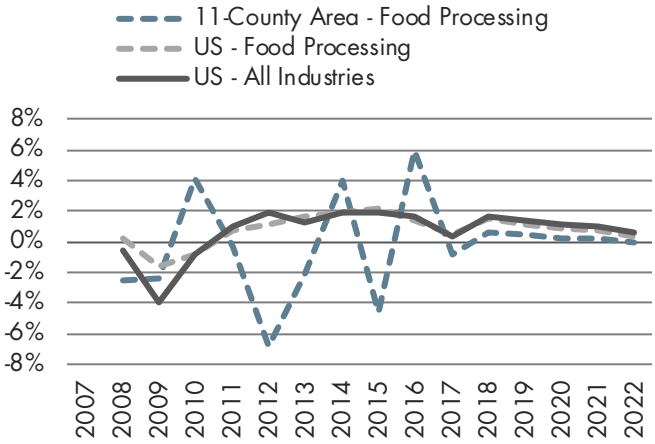
TARGET COMPONENTS

ANNUAL EMPLOYMENT



TARGET GROWTH

ANNUAL % CHANGE IN EMPLOYMENT



KEY FOCUS AREAS

NAICS	DESCRIPTION
311615	Poultry Processing
311119	Other Animal Food Manufacturing
311224	Soybean and Other Oilseed Processing
311811	Retail Bakeries
312140	Distilleries
312120	Breweries

Source(s): US Bureau of Labor Statistics; EMSI 2017.4 – QCEW Employees, Non-QCEW Employees, and Self-Employed; U.S. Economic Development Administration; Institute for Strategy and Competitiveness at Harvard Business School; TIP Strategies.
Note(s): The cluster methodology developed at Harvard Business School has been adjusted by TIP Strategies to align with the 6-digit NAICS classifications used by EMSI.

TARGET STAFFING PATTERNS

LQs & RELATIVE EARNINGS: BELOW AVG→ ←ABOVE AVG

STANDARD OCCUPATIONAL CLASSIFICATION		EMPLOYMENT			EARNINGS	
Code	Description	2017 Jobs	% of Target	LQ (US= 1.00)	Local Hourly Median	Relative to US (US=1.00)
41-2011	Cashiers	484	10.3%	0.61	9.34	0.92
53-7062	Laborers/Freight, Stock, & Material Movers, Hand	286	6.1%	2.03	14.00	1.07
51-3022	Meat, Poultry, & Fish Cutters & Trimmers	252	5.4%	2.38	9.80	0.80
51-3023	Slaughterers & Meat Packers	239	5.1%	4.12	9.65	0.73
43-5081	Stock Clerks & Order Fillers	219	4.7%	0.46	12.08	1.03
51-9111	Packaging & Filling Machine Workers	211	4.5%	1.56	13.62	0.97
51-9198	Helpers–Production Workers	150	3.2%	3.41	11.38	0.91
53-7064	Packers & Packagers, Hand	117	2.5%	0.68	9.71	0.86
45-2093	Farmworkers, Animals (Incl. Aquaculture)	111	2.4%	14.46	10.17	0.84
51-1011	First-Line Supvsr., Production & Operating Workers	110	2.3%	1.76	24.18	0.86
51-3092	Food Batchmakers	107	2.3%	1.04	11.69	0.85
51-3021	Butchers & Meat Cutters	105	2.2%	1.14	12.44	0.83
41-1011	First-Line Supvsr., Retail Sales Workers	104	2.2%	0.58	15.61	0.92
45-2041	Graders & Sorters, Agricultural Products	99	2.1%	7.82	11.05	0.98
35-2021	Food Preparation Workers	97	2.1%	0.64	9.36	0.86
51-3093	Food Cooking Machine Workers	97	2.1%	4.59	11.18	0.82
51-3099	Food Processing Workers, All Other	85	1.8%	4.00	9.53	0.81
51-3091	Food & Tobacco Machine Workers	73	1.5%	5.46	10.29	0.73
49-9071	Maintenance & Repair Workers, General	70	1.5%	1.80	15.84	0.88
53-7051	Industrial Truck & Tractor Operators	69	1.5%	1.36	16.64	1.03
51-9061	Inspectors, Testers, Sorters, Samplers, & Weighers	69	1.5%	1.99	16.33	0.90
41-2031	Retail Salespersons	64	1.4%	0.32	10.37	0.92
53-3032	Heavy & Tractor-Trailer Truck Drivers	62	1.3%	0.78	19.26	0.97
37-2011	Janitors & Cleaners, Exc. Maids & Housekeepers	59	1.2%	1.48	10.89	0.90
43-5071	Shipping, Receiving, & Traffic Clerks	55	1.2%	1.21	15.16	0.99

WHY IT MATTERS

Each target industry is underpinned by its workforce, making the occupational composition of each target worthy of further analysis. This exhibit shows each target's largest occupational contributors. The number of local jobs for each occupation is shown along with the occupation's weight (in percentage terms) within the target. The LQ compares the occupation's local weight to its national weight within this target. An LQ that exceeds 1.00 indicates a local occupation employed more heavily by the local target industry than national patterns might imply, while an LQ below 1.00 indicates relatively lighter local reliance on the occupation. Median local hourly earnings accompany the occupations shown in the exhibit. Wage ratios exceeding 1.00 indicate higher pay than the same occupation might expect nationally, while ratios below 1.00 suggest relatively lower compensation than the national level.

Source(s): US Bureau of Labor Statistics; EMSI 2017.4 – QCEW Employees, Non-QCEW Employees, and Self-Employed; U.S. Economic Development Administration; Institute for Strategy and Competitiveness at Harvard Business School; TIP Strategies.
Note(s): The cluster methodology developed at Harvard Business School has been adjusted by TIP Strategies to align with the 6-digit NAICS classifications used by EMSI.

INDUSTRY INTELLIGENCE

FOOD PROCESSING		
TRADE ASSOCIATIONS		
US Poultry & Egg Association		www.uspoultry.org
North American Meat Institute		www.meatinstitute.org
American Feed Industry Association		www.afia.org
Grocery Manufacturers Association		www.gmaonline.org
Institute of Food Technologists (IFT)		www.ift.org
Specialty Food Association		www.specialtyfood.com
Food Processing Suppliers Association (FPSA)		www.fpsa.org
Agricultural Retailers Association (ARA)		www.aradc.org
RELEVANT CONFERENCES/EVENTS		
PACK EXPO		
14-17 October 2018	*Chicago, IL*	www.packexpointernational.com
ARA Conference & Expo 2018		
27-29 November 2018	*Boca Raton, FL*	www.aradc.org/conference/home
Winter Fancy Food Show		
13-15 January 2019	*San Francisco, CA*	www.specialtyfood.com/shows-events/winter-fancy-food-show
International Production & Processing Expo		
12-14 February 2019	*Atlanta, GA*	ippexpo.com
FPSA 2019 Annual Conference		
19-21 March 2019	*San Antonio, TX*	www.fpsa.org/annual-conference
GMA Science Forum		
26-27 March 2019	*Washington, DC*	www.gmaonline.org/forms/meeting/Microsite/scienceforum19
ProFood Tech		
26-28 March 2019	*Chicago, IL*	www.profoodtech.com
IFT Food Expo 2019		
2-5 June 2019	*New Orleans, LA*	eventegg.com/ift
PROCESS EXPO		
8-11 October 2019	*Chicago, IL*	www.myprocessexpo.com
TRADE PUBLICATIONS		
Food Technology		www.ift.org/food-technology.aspx
Food Processing		www.foodprocessing.com
Food Safety		www.foodsafetymagazine.com
Food Engineering		www.foodengineeringmag.com/publications/3
Poultry World		www.poultryworld.net
Specialty Food Magazine		www.specialtyfood.com/digital-edition
People Matters		www.uspoultry.org/peoplematters_arch/peoplematters_current.cfm

Source(s): TIP Strategies.

DISTRIBUTION AND LOGISTICS

Transportation infrastructure such as highway 69/75, the port of Keota (access to MKARNS), and a mixture of Class 1 railroads and short-lines are strong assets for the 11-County Area and the Distribution and Logistics target. These assets create strong connections to larger markets that exist outside the 11-County Area (i.e. Dallas-Fort Worth, Oklahoma City, Tulsa, etc.). The ability to move goods allows a variety of transportation-dependent industries to flourish in the region. Big Lots Distribution Center and Indian Nation Wholesale Company are major employers in this target, but this target also benefits other industries such as food distribution and industries that transport natural resources (timber, coal, etc.).

For this target, Distribution & Commerce and Transportation & Logistics are large components. This target has been growing slowly in the region with the exception of a sharp increase between 2011 and 2013. Jobs in this target are expected to grow nationally (6.9 percent) and in the 11-County Area (6.0 percent) between 2017-2022.

When viewing staffing patterns, the prominence of Heavy and Tractor-Trailer Truck Drivers is apparent as this occupation accounts for almost a quarter of all jobs in this target. This occupation along with Railroad Conductors & Yardmasters, Locomotive Engineers, and Rail Car Repairers have high LQs. However, despite these strengths, many occupations pay below the US median.

MARKET OPPORTUNITIES

- **Warehousing & distribution centers:** capitalize on the region's proximity to major to attract additional distribution centers along the Hwy 69/75 corridor and near the future I-49 corridor.
- **UAS delivery companies:** leverage the UAS Integration Pilot Program to attract UAS delivery companies to the region.
- **Outbound cargo at port:** continue to explore products that can fill outbound barges from the Ports of Keota & Carl Albert to enhance the economics of port operations.

11-COUNTY AREA ADVANTAGES

- Major Employers: Big Lots and Indian Nation Wholesale Co.
- Strong transportation infrastructure
- Proximity to growing, major markets
    - 63 million households in 900 mile radius (up 5.6% since 2010)

TARGET SNAPSHOT

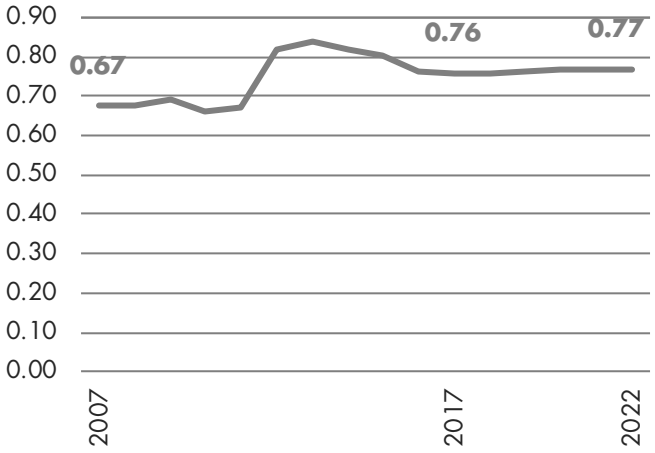
11-COUNTY AREA	TOTAL	TARGET
2017 Establishments	5,303	280
2017 Employment	88,040	3,344
Net Chg., 2007-2017	-6,783	+164
Pct. Chg., 2007-2017	-7.2%	+5.1%

EMPLOYMENT OUTLOOK

US OVERALL	TOTAL	TARGET
Net Chg., 2017-2022	+9,492,023	+550,471
Pct. Chg., 2017-2022	+6.0%	+6.9%
11-COUNTY AREA	**TOTAL**	**TARGET**
Net Chg., 2017-2022	+5,033	+266
Pct. Chg., 2017-2022	+5.7%	+7.9%

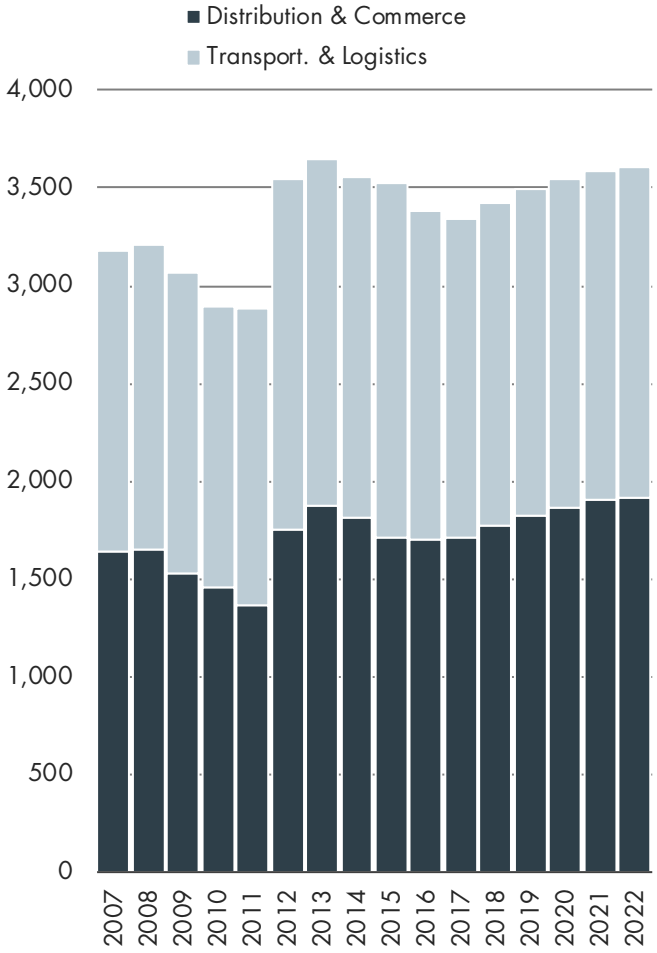
TARGET CONCENTRATION

LOCATION QUOTIENT TREND



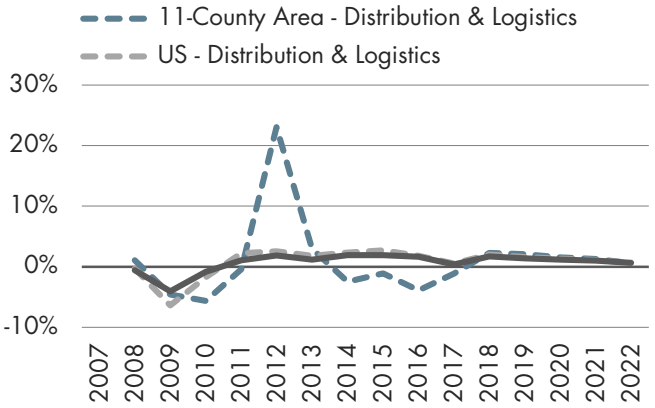
TARGET COMPONENTS

ANNUAL EMPLOYMENT



TARGET GROWTH

ANNUAL % CHANGE IN EMPLOYMENT



KEY FOCUS AREAS

NAICS	DESCRIPTION
484121	General Freight Trucking, Long-Distance, Truckload
493110	General Warehousing and Storage
482110	Rail transportation
484230	Specialized Freight (except Used Goods) Trucking, Long-Distance
493190	Other Warehousing and Storage
425120	Wholesale Trade Agents and Brokers
488210	Support Activities for Rail Transportation

Source(s): US Bureau of Labor Statistics; EMSI 2017.4 – QCEW Employees, Non-QCEW Employees, and Self-Employed; U.S. Economic Development Administration; Institute for Strategy and Competitiveness at Harvard Business School; TIP Strategies.
Note(s): The cluster methodology developed at Harvard Business School has been adjusted by TIP Strategies to align with the 6-digit NAICS classifications used by EMSI.

TARGET STAFFING PATTERNS

LQs & RELATIVE EARNINGS: BELOW AVG→ ←ABOVE AVG

STANDARD OCCUPATIONAL CLASSIFICATION		EMPLOYMENT			EARNINGS	
Code	Description	2017 Jobs	% of Target	LQ (US= 1.00)	Local Hourly Median	Relative to US (US=1.00)
53-3032	Heavy & Tractor-Trailer Truck Drivers	791	24.1%	2.80	19.26	0.97
53-7062	Laborers/Freight, Stock, & Material Movers, Hand	353	10.8%	1.24	14.00	1.07
53-7051	Industrial Truck & Tractor Operators	166	5.1%	1.83	16.64	1.03
43-5081	Stock Clerks & Order Fillers	123	3.8%	1.23	12.08	1.03
53-3033	Light Truck or Delivery Services Drivers	95	2.9%	1.50	15.26	1.01
41-4012	Sales Reps., Whls. & Mfg., Exc. Tech. & Scientific	80	2.4%	0.27	21.51	0.80
53-1048	First-Line Supvsr., Transp. & Material-Moving Ops.	78	2.4%	1.56	25.91	1.01
43-5071	Shipping, Receiving, & Traffic Clerks	69	2.1%	0.82	15.16	0.99
11-1021	General & Operations Managers	64	2.0%	0.79	34.52	0.72
53-4031	Railroad Conductors & Yardmasters	55	1.7%	3.40	20.58	0.71
43-9061	Office Clerks, General	54	1.7%	0.69	12.15	0.80
43-6014	Secretaries/Admin. Asst., Exc. Legal, Med., & Exec.	52	1.6%	1.13	13.24	0.78
41-4011	Sales Reps., Whls. & Mfg., Tech. & Scientific	52	1.6%	0.71	16.81	0.45
43-4051	Customer Service Representatives	50	1.5%	0.38	12.97	0.82
43-3031	Bookkeeping, Accounting, & Auditing Clerks	49	1.5%	0.96	15.49	0.82
53-4011	Locomotive Engineers	47	1.4%	3.39	22.79	0.78
43-1011	First-Line Supvsr., Office & Admin. Support	39	1.2%	0.82	20.52	0.78
53-7064	Packers & Packagers, Hand	37	1.1%	0.61	9.71	0.86
49-3031	Bus/Truck Mechanics & Diesel Engine Specialists	35	1.1%	1.73	17.50	0.80
41-1012	First-Line Supvsr., Non-Retail Sales Workers	32	1.0%	0.95	17.46	0.64
43-5032	Dispatchers, Except Police, Fire, & Ambulance	32	1.0%	1.73	17.47	0.93
49-9071	Maintenance & Repair Workers, General	28	0.9%	1.09	15.84	0.88
49-3043	Rail Car Repairers	24	0.7%	3.02	25.12	0.91
49-3042	Mobile Heavy Equip. Mechanics, Except Engines	23	0.7%	1.24	17.33	0.72
53-3031	Driver/Sales Workers	22	0.7%	0.97	9.86	0.85

WHY IT MATTERS

Each target industry is underpinned by its workforce, making the occupational composition of each target worthy of further analysis. This exhibit shows each target's largest occupational contributors. The number of local jobs for each occupation is shown along with the occupation's weight (in percentage terms) within the target. The LQ compares the occupation's local weight to its national weight within this target. An LQ that exceeds 1.00 indicates a local occupation employed more heavily by the local target industry than national patterns might imply, while an LQ below 1.00 indicates relatively lighter local reliance on the occupation. Median local hourly earnings accompany the occupations shown in the exhibit. Wage ratios exceeding 1.00 indicate higher pay than the same occupation might expect nationally, while ratios below 1.00 suggest relatively lower compensation than the national level.

Source(s): US Bureau of Labor Statistics; EMSI 2017.4 – QCEW Employees, Non-QCEW Employees, and Self-Employed; U.S. Economic Development Administration; Institute for Strategy and Competitiveness at Harvard Business School; TIP Strategies.
Note(s): The cluster methodology developed at Harvard Business School has been adjusted by TIP Strategies to align with the 6-digit NAICS classifications used by EMSI.

INDUSTRY INTELLIGENCE

DISTRIBUTION & LOGISTICS		
TRADE ASSOCIATIONS		
International Foodservice Distributors Association		www.ifdaonline.org
Convenience Distribution Association		cdaweb.net
Logistics & Transportation Association of North America (LTNA)		www.ltna.org
Transportation and Logistics Council (TLC)		www.tlcouncil.org
American Trucking Associations		www.trucking.org
Association of American Railroads (AAR)		www.aar.org
Industrial Supply Association (ISA)		www.isapartners.org
American Logistics Association		www.ala-national.org
Oklahoma Wholesale Marketers Association		www.owmanet.org
National Association of Wholesaler-Distributors (NAW)		www.naw.org
RELEVANT CONFERENCES/EVENTS		
FTR Transportation Conference 2018		
11-13 September 2018	*Indianapolis, IN*	www.ftrconference.com
2018 LTNA National Conference		
17-19 October 2018	*New Orleans, LA*	www.ltna.org/2018-conference-details.html
Distribution Solutions Conference		
28-30 October 2018	San *Antonio, TX*	www.ifdaonline.org/events/distribution-solutions-conference
Mid-America Trucking Show 2019		
28-30 March 2019	*Louisville, KY*	www.truckingshow.com
ISA Convention 2019		
6-8 April 2019	*Houston, TX*	www.isapartners.org/convention
TRADE PUBLICATIONS		
Journal of Commerce		www.joc.com
American Shipper		americanshipper.com
International Journal of Shipping and Transport Logistics		www.inderscienceonline.com/loi/ijstl
Progressive Railroading		www.progressiverailroading.com
American Trucker		www.trucker.com/american-trucker-magazine

Source(s): TIP Strategies.

NATURAL RESOURCES VALUE CHAIN

The 11-County Area has obvious assets in the Natural Resources Value Chain cluster. The presence of natural resources such as oil, natural gas, timber, water, coal, and stone position the 11-County Area as a prime location for businesses related to these natural resources. Major employers include Julian Lumber, Martin Marietta, Cardinal Glass, US Pipeline, Teal Jones, Dominance/Pan Pacific, Weyerhaeuser, International Paper Co., and JM Huber Engineered Woods. These industries provide a wide-range of jobs from low skill to high skill and often pay higher than average wages.

Between 2007 and 2017 employment in the Natural Resources Value Chain cluster declined at a faster rate than overall employment for the 11-County Area. However, the cluster is expected to grow 7.2 percent between 2017-2022. Oil & Gas Production & Transportation is the largest segment followed by Wood Products and Construction Products & Services. An LQ of 3.69 in 2017 demonstrates a unique advantage in natural resources for the 11-County Area. However, this cluster has been more volatile over the last 10 years locally than in the US.

Farmworkers & Laborers and Agricultural Managers make up 14.7 percent of all workers in the cluster. Roustabouts, Oil & Gas also make up a significant proportion at 6.1 percent of all jobs. Of the top 25 occupations in this cluster, most have LQs that are considered average or above average, showing a distinct advantage. This target has few occupations that pay above the US average. Three of the four high-paying occupations are related to the forestry industry.

MARKET OPPORTUNITIES

- **Export promotion:** help connect stone distributors/quarries with new markets, particularly those that could be reached via rail or barge.
- **Construction product manufacturing:** target additional engineered wood products, trusses, and other construction products to manufacture in the region and serve the booming housing market of North Texas.
- **Leverage networks:** work with the existing base of companies in this cluster to attract new business segments to the region or support the expansion of existing lines.
- **Alternative wood products:** diversify the forest products industry by encouraging economic uses for non-traditional forest products such as red cedar.
- **New value chains:** use the WealthWorks model to build value chains around underutilized resources.

11-COUNTY AREA ADVANTAGES

- Major employers: Julian Lumber, Martin Marietta, Cardinal Glass, US Pipeline, Teal Jones, Weyerhaeuser, International Paper Co., Dominance/Pan Pacific, and JM Huber Engineered Woods
- Proximity to natural resources such as oil, natural gas, timber, water, coal, and stone
- Strong transportation infrastructure for shipping raw materials
- Access to markets in major metros – North Texas, in particular
- Cost of electricity

TARGET SNAPSHOT

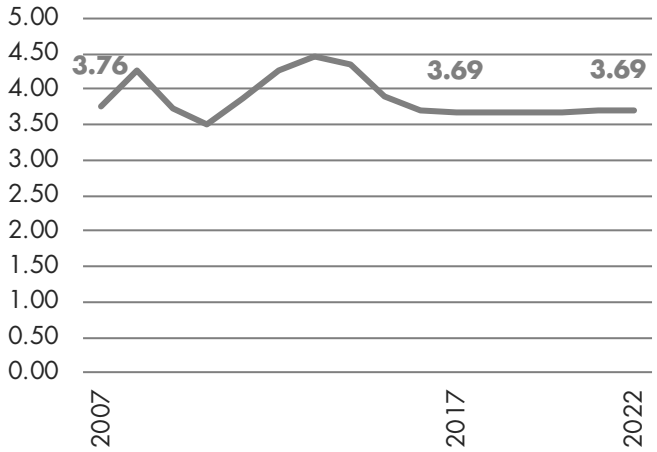
11-COUNTY AREA	TOTAL	TARGET
2017 Establishments	5,303	330
2017 Employment	88,040	5,386
Net Chg., 2007-2017	-6,783	-954
Pct. Chg., 2007-2017	-7.2%	-15.0%

EMPLOYMENT OUTLOOK

US OVERALL	TOTAL	TARGET
Net Chg., 2017-2022	+9,492,023	+192,473
Pct. Chg., 2017-2022	+6.0%	+7.3%
11-COUNTY AREA	**TOTAL**	**TARGET**
Net Chg., 2017-2022	+5,033	+389
Pct. Chg., 2017-2022	+5.7%	+7.2%

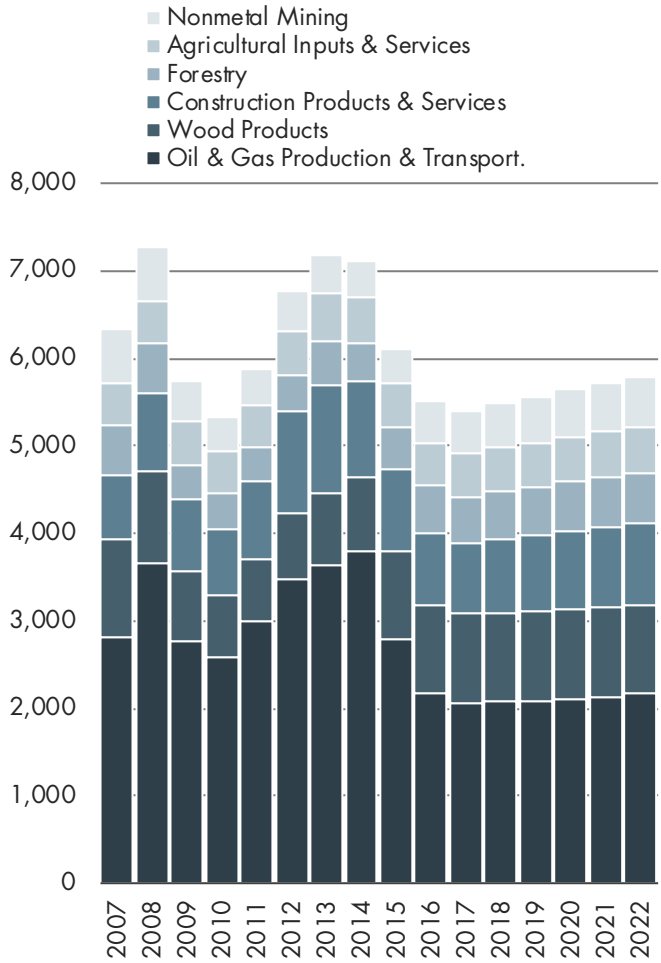
TARGET CONCENTRATION

LOCATION QUOTIENT TREND



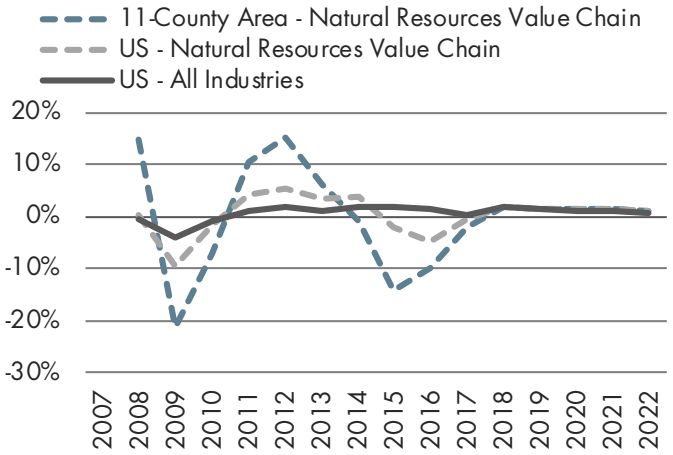
TARGET COMPONENTS

ANNUAL EMPLOYMENT



TARGET GROWTH

ANNUAL % CHANGE IN EMPLOYMENT



KEY FOCUS AREAS

NAICS	DESCRIPTION
213112	Support Activities for Oil and Gas Operations
237120	Oil and Gas Pipeline and Related Construction
212311	Dimension Stone Mining and Quarrying
115310	Support Activities for Forestry
212312	Crushed and Broken Limestone Quarrying
111000	Crop Production
321219	Reconstituted Wood Product Manufacturing
213115	Support Activities for Nonmetallic Mining
321214	Truss Manufacturing
321992	Prefabricated Wood Building Manufacturing
236210	Industrial Building Construction
113110	Timber Tract Operations

Source(s): US Bureau of Labor Statistics; EMSI 2017.4 – QCEW Employees, Non-QCEW Employees, and Self-Employed; U.S. Economic Development Administration; Institute for Strategy and Competitiveness at Harvard Business School; TIP Strategies.
Note(s): The cluster methodology developed at Harvard Business School has been adjusted by TIP Strategies to align with the 6-digit NAICS classifications used by EMSI.

TARGET STAFFING PATTERNS

LQs & RELATIVE EARNINGS: BELOW AVG→ ←ABOVE AVG

STANDARD OCCUPATIONAL CLASSIFICATION		EMPLOYMENT			EARNINGS	
Code	Description	2017 Jobs	% of Target	LQ (US= 1.00)	Local Hourly Median	Relative to US (US=1.00)
45-2092	Farmworkers & Laborers, Crop & Greenhouse	531	8.1%	0.43	14.94	1.34
11-9013	Farmers, Ranchers, & Other Agricultural Mgrs.	435	6.6%	0.56	11.74	0.95
47-5071	Roustabouts, Oil & Gas	403	6.1%	5.66	17.60	0.99
53-3032	Heavy & Tractor-Trailer Truck Drivers	250	3.8%	1.36	19.26	0.97
45-4022	Logging Equipment Operators	237	3.6%	3.75	19.94	1.18
47-5013	Service Unit Operators, Oil, Gas, & Mining	236	3.6%	3.90	19.82	0.85
53-7062	Laborers/Freight, Stock, & Material Movers, Hand	175	2.7%	1.69	14.00	1.07
51-7041	Sawing Machine Workers, Wood	172	2.6%	2.59	18.39	1.31
47-2061	Construction Laborers	169	2.6%	0.78	13.54	0.92
47-5051	Rock Splitters, Quarry	159	2.4%	25.99	12.40	0.75
47-2073	Operating Eng. & Other Constr. Equip. Operators	144	2.2%	1.24	17.68	0.80
47-1011	First-Line Supvsr., Constr. Trades & Extraction	140	2.1%	1.08	22.06	0.77
11-1021	General & Operations Managers	113	1.7%	1.22	34.52	0.72
43-6014	Secretaries/Admin. Asst., Exc. Legal, Med., & Exec.	98	1.5%	1.35	13.24	0.78
53-7051	Industrial Truck & Tractor Operators	97	1.5%	1.60	16.64	1.03
47-5012	Rotary Drill Operators, Oil & Gas	89	1.3%	3.56	22.73	0.87
51-4121	Welders, Cutters, Solderers, & Brazers	82	1.2%	1.38	17.88	0.94
51-1011	First-Line Supvsr., Production & Operating Workers	80	1.2%	1.15	24.18	0.86
43-9061	Office Clerks, General	79	1.2%	0.88	12.15	0.80
45-1011	First-Line Supvsr., Farming, Fishing, & Forestry	76	1.2%	1.02	25.70	1.16
47-5081	Helpers–Extraction Workers	76	1.1%	3.65	16.68	0.96
43-3031	Bookkeeping, Accounting, & Auditing Clerks	67	1.0%	1.09	15.49	0.82
49-9051	Electrical Power-Line Installers & Repairers	62	0.9%	1.10	24.10	0.73
47-5011	Derrick Operators, Oil & Gas	61	0.9%	3.79	23.21	1.04
49-9041	Industrial Machinery Mechanics	61	0.9%	1.16	23.68	0.97

WHY IT MATTERS

Each target industry is underpinned by its workforce, making the occupational composition of each target worthy of further analysis. This exhibit shows each target's largest occupational contributors. The number of local jobs for each occupation is shown along with the occupation's weight (in percentage terms) within the target. The LQ compares the occupation's local weight to its national weight within this target. An LQ that exceeds 1.00 indicates a local occupation employed more heavily by the local target industry than national patterns might imply, while an LQ below 1.00 indicates relatively lighter local reliance on the occupation. Median local hourly earnings accompany the occupations shown in the exhibit. Wage ratios exceeding 1.00 indicate higher pay than the same occupation might expect nationally, while ratios below 1.00 suggest relatively lower compensation than the national level.

Source(s): US Bureau of Labor Statistics; EMSI 2017.4 – QCEW Employees, Non-QCEW Employees, and Self-Employed; U.S. Economic Development Administration; Institute for Strategy and Competitiveness at Harvard Business School; TIP Strategies.
Note(s): The cluster methodology developed at Harvard Business School has been adjusted by TIP Strategies to align with the 6-digit NAICS classifications used by EMSI.

INDUSTRY INTELLIGENCE

NATURAL RESOURCES VALUE CHAIN		
TRADE ASSOCIATIONS		
Natural Stone Institute		www.naturalstoneinstitute.org
International Minerals & Mining Association		www.iom3.org/international-mining-minerals-association
Agricultural Retailers Association		www.aradc.org
American Wood Council		www.awc.org
APA- The Engineered Wood Association		www.apawood.org
Forest Products Society		www.forestprod.org
Southern Forest Products Association		sfpa.org
Western Red Cedar Lumber Association		www.realcedar.com
Construction Industry Institute		www.construction-institute.org
National Association of Home Builders		www.nahb.org
WealthWorks		www.wealthworks.org
RELEVANT CONFERENCES/EVENTS		
ETEBA Business Opportunities & Technical Conference		
2-4 October 2018	*Chicago, IL*	eteba.org/conference-2018
Future of Mining Americas		
29-30 October 2018	*Denver, CO*	americas.future-of-mining.com
American Institute of Constructors 2018 Leadership Summit		
9-11 November 2018	*Chicago, IL*	www.professionalconstructor.org/page/LeadershipSummit
39th Annual Oklahoma Governor's Water Conference and Research Symposium		
5-6 December 2018	*Midwest City, OK*	www.owrb.ok.gov/GWC/index.php
International Builders' Show		
19-21 February 2019	*Las Vegas, NV*	www.buildersshow.com
2019 AFBF Annual Convention & IDEAg Trade Show		
11-16 January 2019	*New Orleans, LA*	www.fb.org/events/afbf-annual-convention
Forest Products Machinery & Equipment Expo		
26-28 June 2019	*Atlanta, GA*	sfpaexpo.com
Oklahoma Natural Resources Conference		
TBD	*Tulsa, OK*	www.oknrc.com
TRADE PUBLICATIONS		
The Professional Constructor		www.professionalconstructor.org/page/Journal
Forest Products Journal		www.forestprod.org/buy_publications/forest_products_journal.php
Mining Journal		www.mining-journal.com
Choices		www.choicesmagazine.org
American Journal of Agricultural Economics		www.aaea.org/publications/ajae
Oil & Gas Journal		www.ogj.com/currentissue.html

Source(s): TIP Strategies.

TOURISM

The 11-County Area has many tourism assets that make the region attractive to visitors. The Choctaw Nation is a major employer with the its casinos and hospitality facilities.* Choctaw Tourism is active in representing the region in tourism trade shows and maintains the regional tourism website: choctawcountry.com. These investments elevate the region as a whole and provide a backbone of tourism destinations throughout the region. Other assets such as state parks, marinas, museums, and historical and cultural sites also create unique entertainment and recreation opportunities that differentiate the 11-County Area.

The Tourism sector consists of traded hospitality and tourism jobs and local hospitality jobs. This target grew 16.7 percent between 2007 and 2017, which was drastically greater than employment overall, which declined. Tourism in the 11-County Area is expected to grow 6.5 percent between 2017 and 2022, which is similar to Tourism growth in the US at 7.1 percent.

The top 5 occupations in the Tourism target are related to food-service establishments and account for almost 65 percent of all Tourism jobs. Most jobs in this target are low paying compared the US hourly medians. The one exception is fitness trainers & aerobics instructors.

*Choctaw Nation employment is classified under local government and is not reflected in the cluster numbers.

MARKET OPPORTUNITIES

- **Casino connections:** link existing resorts to regional tourism assets by organizing and offering tours and excursions.
- **Outdoor recreation:** coordinate with the Corps of Engineers, OK Department of Tourism & Recreation, and the US Forest Service to maximize and monetize recreational opportunities in the region's public lands.
- **Cultural & heritage tourism:** invest in the restoration and promotion of historic assets to create a Choctaw Trail that would be a rich and immersive, multi-day experience that starts at the new cultural center.
- **Resort offering expansion:** explore resort alternatives such as an adventure lodge, a family-fun theme, a luxury resort, or a retreat center to diversify resort offerings.
- **Scenic byway:** partner with the Talimena Scenic Drive Association to design and promote unique tour routes that enhance, leverage, and connect to the scenic byway.

11-COUNTY AREA ADVANTAGES

- Choctaw Nation casinos, resorts, and hotels
- Tourism boom in Hochatown/Beaver's Bend State Park
- Outdoor recreation
- Historical sites and museums, many underutilized
- Natural beauty (Ouachita Mountains and Forest, Broken Bow Lake, Lake Eufaula, etc.)
- Talimena Scenic Byway and Hwy 69 "military trail"
- Large Amish auction
- Easy access for nearby population centers to vacation (North Dallas and Oklahoma City)
- Choctaw Tourism has an established trade show calendar and represents the region and its communities

TARGET SNAPSHOT

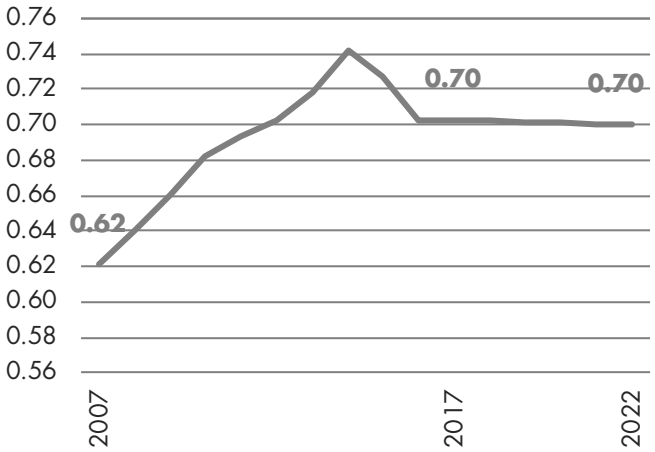
11-COUNTY AREA	TOTAL	TARGET
2017 Establishments	5,303	417
2017 Employment	88,040	6,344
Net Chg., 2007-2017	-6,783	+909
Pct. Chg., 2007-2017	-7.2%	+16.7%

EMPLOYMENT OUTLOOK

US OVERALL	TOTAL	TARGET
Net Chg., 2017-2022	+9,492,023	+1,166,912
Pct. Chg., 2017-2022	+6.0%	+7.1%
11-COUNTY AREA	**TOTAL**	**TARGET**
Net Chg., 2017-2022	+5,033	+412
Pct. Chg., 2017-2022	+5.7%	+6.5%

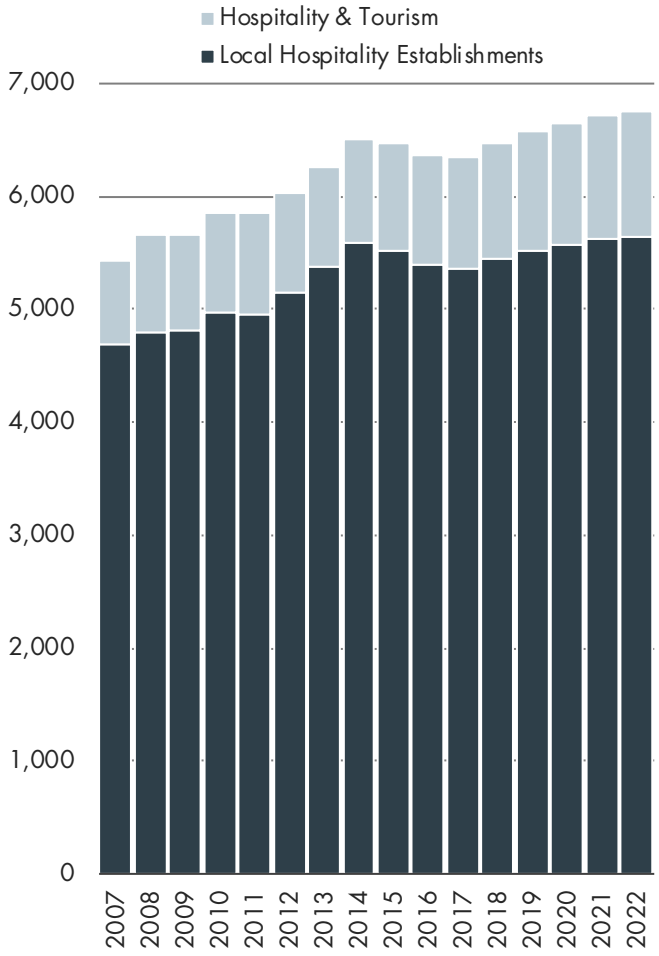
TARGET CONCENTRATION

LOCATION QUOTIENT TREND



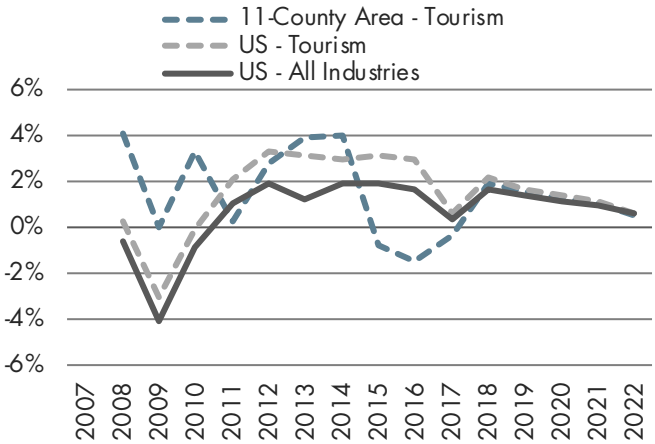
TARGET COMPONENTS

ANNUAL EMPLOYMENT



TARGET GROWTH

ANNUAL % CHANGE IN EMPLOYMENT



KEY FOCUS AREAS

NAICS	DESCRIPTION
721110	Hotels and Motels
713990	Misc. Amusement and Recreation Industries
711211	Sports Teams and Clubs
711219	Misc. Spectator Sports
721191	Bed-and-Breakfast Inns
721214	Recreational and Vacation Camps
713930	Marinas
721211	Recreational Vehicle Parks and Campgrounds
721199	Misc. Traveler Accommodation
713290	Misc. Gambling Industries

Source(s): US Bureau of Labor Statistics; EMSI 2017.4 – QCEW Employees, Non-QCEW Employees, and Self-Employed; U.S. Economic Development Administration; Institute for Strategy and Competitiveness at Harvard Business School; TIP Strategies.
Note(s): The cluster methodology developed at Harvard Business School has been adjusted by TIP Strategies to align with the 6-digit NAICS classifications used by EMSI.

TARGET STAFFING PATTERNS

LQs & RELATIVE EARNINGS: BELOW AVG→ ←ABOVE AVG

STANDARD OCCUPATIONAL CLASSIFICATION		EMPLOYMENT			EARNINGS	
Code	Description	2017 Jobs	% of Target	LQ (US= 1.00)	Local Hourly Median	Relative to US (US=1.00)
35-3021	Combined Food Prep. & Servers, Incl. Fast Food	1,321	21.0%	1.12	8.77	0.90
35-3031	Waiters & Waitresses	960	15.3%	1.02	8.77	0.88
35-2011	Cooks, Fast Food	824	13.1%	4.34	9.04	0.90
35-2014	Cooks, Restaurant	553	8.8%	1.16	10.35	0.86
35-1012	First-Line Supvsr., Food Prep. & Servers	401	6.4%	1.32	11.69	0.77
37-2012	Maids & Housekeepers	238	3.8%	1.30	8.97	0.87
35-9031	Hosts & Hostesses	188	3.0%	1.23	9.07	0.90
35-2021	Food Preparation Workers	172	2.7%	0.92	9.36	0.86
43-4081	Hotel, Motel, & Resort Desk Clerks	165	2.6%	1.78	9.38	0.85
41-2011	Cashiers	153	2.4%	0.88	9.34	0.92
35-9021	Dishwashers	138	2.2%	0.79	9.05	0.88
11-9051	Food Service Managers	133	2.1%	1.46	16.27	0.79
35-3011	Bartenders	123	2.0%	0.59	9.10	0.87
35-9011	Attendants & Bartender Helpers	79	1.3%	0.54	9.03	0.89
53-3031	Driver/Sales Workers	66	1.1%	0.85	9.86	0.85
35-3022	Counter Attendants, Cafeteria, & Concession	61	1.0%	0.48	9.64	0.94
35-2015	Cooks, Short Order	49	0.8%	0.85	9.96	0.91
39-9031	Fitness Trainers & Aerobics Instructors	47	0.8%	0.51	20.96	1.13
11-9081	Lodging Managers	38	0.6%	2.32	16.73	0.79
35-1011	Chefs & Head Cooks	31	0.5%	0.66	14.95	0.72
37-2011	Janitors & Cleaners, Exc. Maids & Housekeepers	27	0.4%	0.51	10.89	0.90
49-9071	Maintenance & Repair Workers, General	21	0.3%	0.37	15.84	0.88
11-1021	General & Operations Managers	20	0.3%	0.33	34.52	0.72
27-2022	Coaches & Scouts	20	0.3%	0.56	16.93	0.89
35-2012	Cooks, Institution & Cafeteria	19	0.3%	0.75	9.07	0.73

WHY IT MATTERS

Each target industry is underpinned by its workforce, making the occupational composition of each target worthy of further analysis. This exhibit shows each target's largest occupational contributors. The number of local jobs for each occupation is shown along with the occupation's weight (in percentage terms) within the target. The LQ compares the occupation's local weight to its national weight within this target. An LQ that exceeds 1.00 indicates a local occupation employed more heavily by the local target industry than national patterns might imply, while an LQ below 1.00 indicates relatively lighter local reliance on the occupation. Median local hourly earnings accompany the occupations shown in the exhibit. Wage ratios exceeding 1.00 indicate higher pay than the same occupation might expect nationally, while ratios below 1.00 suggest relatively lower compensation than the national level.

Source(s): US Bureau of Labor Statistics; EMSI 2017.4 – QCEW Employees, Non-QCEW Employees, and Self-Employed; U.S. Economic Development Administration; Institute for Strategy and Competitiveness at Harvard Business School; TIP Strategies.
Note(s): The cluster methodology developed at Harvard Business School has been adjusted by TIP Strategies to align with the 6-digit NAICS classifications used by EMSI.

INDUSTRY INTELLIGENCE

TRADE ASSOCIATIONS		
US Travel Association		www.ustravel.org
American Hotel & Lodging Association		www.ahla.com
Oklahoma Travel Industry Association		www.otia.info
Oklahoma Hotel & Lodging Association		oklahomahotels.org
National Forest Recreation Association		nfra.org
National Scenic Byway Foundation		www.nsbfoundation.com
American Indian Alaska Native Tourism Association (AIANTA)		www.aianta.org
National Indian Gaming Association		www.indiangaming.org
Oklahoma Indian Gaming Association		oiga.org
Native Arts & Cultures Foundation		www.nativeartsandcultures.org
Red Earth		www.redearth.org
RELEVANT CONFERENCES/EVENTS		
2018 Preserving the Historic Road		
13-16 September	*Fort Collins, CO*	www.historicroads.org/
2018 National Tribal Preservation Conference		
10-14 September 2018	*Suquamish, WA*	nathpo.org/wp/conferences/nathpo-conferences
20th Annual American Indian Tourism Conference		
17-20 September 2018	*Albuquerque, NM*	www.aianta.org/american-indian-tourism-conference
Global Gaming Expo		
8-11 October 2018	*Las Vegas, NV*	www.globalgamingexpo.com
2018 NFRA Annual Conference & Trade Show		
22-24 October 2018	*Reno, NV*	nfra.org/wp-content/uploads/2018/08/NFRAs-2018-Conference-Trade-Show.pdf
PastForward, National Preservation Conference		
13-16 November 2018	*San Francisco, CA*	www.pastforwardconference.org/pastforward2018/
OHLA Lodging Summit & Vendor Expo		
15 January 2019	*TBD, OK*	www.viethconsulting.com/Calendar/moreinfo.php?eventid=47560
Indian Gaming Tradeshow & Convention		
1-4 April 2019	*San Diego, CA*	www.indiangamingtradeshow.com
2019 IPW		
1-5 June 2019	*Anaheim, CA*	www.ipw.com
OIGA Conference & Trade Show		
22-24 July 2019	*Tulsa, OK*	oiga.org/tradeshow
Casino Marketing & Technology Conference		
23-25 July 2019	*Las Vegas, NV*	www.casinomarketingconf.com
US Travel Association's Educational Seminar for Tourism Organizations		
17-20 August 2019	*Austin, TX*	esto.ustravel.org
TRADE PUBLICATIONS		
US Travel News & Commentary		www.ustravel.org/news
Preservation Magazine		savingplaces.org/preservation-magazine#.W47S2-hKiHk
Global Gaming Business Magazine		ggbmagazine.com

AEROSPACE AND DEFENSE

The Aerospace and Defense cluster includes the federal government (military), aerospace vehicles & defense, and automotive sectors. These sectors include military vehicle and armored car manufacturing as well as unmanned aircraft system manufacturing. McAlester Army Ammunition Plant (MCAAP), Choctaw Defense, and Spirit Aero Systems are major employers.

One key advantage of the 11-County Area is the recent designation of the Choctaw Nation as an Unmanned Aircraft Systems Integration Pilot Program awardee. This opportunity could fuel innovation and new employment in the Aerospace and Defense cluster.

Though there are few individual establishments, the cluster employed more than 1,400 in 2017. With over 1,000 employees, MCAAP is, by far the largest employer. Employment in the cluster declined from 2007 and 2017 by 36 percent but is expected to grow slightly between 2017 and 2022 (1.8 percent).

The top 25 occupations in this cluster include production occupations and skilled trades as well as business operations, and engineers. Military occupations make up 28 percent of occupations in this target. Aircraft Systems Assemblers and Aircraft Mechanics & Service Technicians make up 9 percent of occupations and have high LQs, representing local strengths.

MARKET OPPORTUNITIES

- **Research and innovation:** leverage the UAS Integration Pilot Program opportunity to build CNO's research expertise and infrastructure to support activities related to the program. This will help ensure long-term economic development impact from the program is realized.
- **Military contracting:** partners with Choctaw Defense and MCAAP to actively seek new contracts and new missions.
- **Outdoor sports:** recruit manufacturers of equipment integral to the hunting and fishing industries.

11-COUNTY AREA ADVANTAGES

- Major employers: McAlester Army Ammunition Plant (MCAAP), Choctaw Defense and Aero Systems
- MCAAP is premier facility in US for bomb/ammunitions manufacturing and missile maintenance. Also largest explosive storage capacity in the country.
- Expansion of Choctaw Defense
- UAS Integration Pilot Site
- Strong hunting and fishing culture and outdoor amenities

TARGET SNAPSHOT

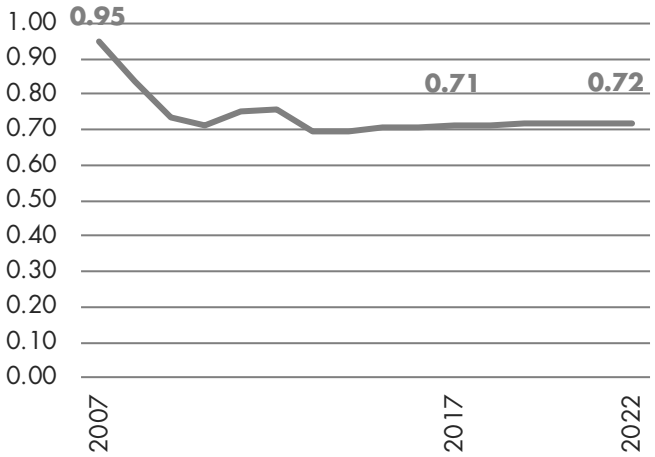
11-COUNTY AREA	TOTAL	TARGET
2017 Establishments	5,303	7
2017 Employment	88,040	1,422
Net Chg., 2007-2017	-6,783	-801
Pct. Chg., 2007-2017	-7.2%	-36.0%

EMPLOYMENT OUTLOOK

US OVERALL	TOTAL	TARGET
Net Chg., 2017-2022	+9,492,023	+53,257
Pct. Chg., 2017-2022	+6.0%	+1.5%
11-COUNTY AREA	**TOTAL**	**TARGET**
Net Chg., 2017-2022	+5,033	+25
Pct. Chg., 2017-2022	+5.7%	+1.8%

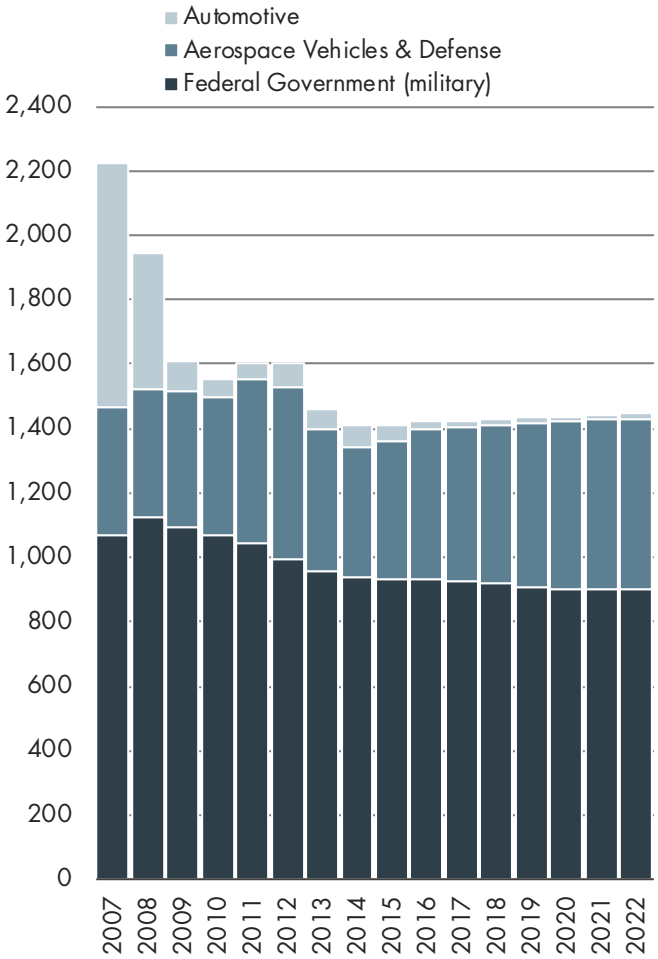
TARGET CONCENTRATION

LOCATION QUOTIENT TREND



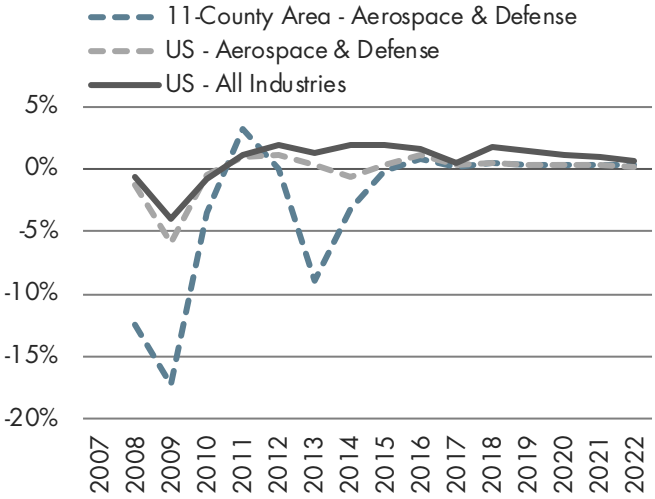
TARGET COMPONENTS

ANNUAL EMPLOYMENT



TARGET GROWTH

ANNUAL % CHANGE IN EMPLOYMENT



KEY FOCUS AREAS

NAICS	DESCRIPTION
336411	Aircraft Manufacturing
336412	Aircraft Engine and Engine Parts Manufacturing
901200	Federal Government (military)
332992	Small Arms Ammunition Manufacturing
332993	Ammunition (except Small Arms) Manufacturing
332994	Small Arms, Ordnance, and Ordnance Accessories

Source(s): US Bureau of Labor Statistics; EMSI 2017.4 – QCEW Employees, Non-QCEW Employees, and Self-Employed; U.S. Economic Development Administration; Institute for Strategy and Competitiveness at Harvard Business School; TIP Strategies.
Note(s): The cluster methodology developed at Harvard Business School has been adjusted by TIP Strategies to align with the 6-digit NAICS classifications used by EMSI.

TARGET STAFFING PATTERNS

LQs & RELATIVE EARNINGS: BELOW AVG→ ←ABOVE AVG

STANDARD OCCUPATIONAL CLASSIFICATION		EMPLOYMENT			EARNINGS	
Code	Description	2017 Jobs	% of Target	LQ (US= 1.00)	Local Hourly Median	Relative to US (US=1.00)
55-9999	Military occupations	399	27.9%	1.17	14.87	0.87
51-2011	Aircraft Systems Assemblers	74	5.1%	4.85	21.77	0.85
49-3011	Aircraft Mechanics & Service Technicians	56	3.9%	1.84	22.34	0.76
51-4081	Multiple Machine Tool Workers, Metal/Plastic	31	2.1%	2.79	16.03	0.95
13-1081	Logisticians	22	1.5%	1.39	40.46	1.13
51-9061	Inspectors, Testers, Sorters, Samplers, & Weighers	21	1.5%	0.83	16.33	0.90
17-2011	Aerospace Engineers	21	1.5%	1.79	40.20	0.74
33-3051	Police & Sheriff's Patrol Officers	20	1.4%	1.17	16.57	0.56
51-4041	Machinists	20	1.4%	0.99	19.90	0.97
13-1071	Human Resources Specialists	17	1.2%	1.11	22.47	0.77
49-9071	Maintenance & Repair Workers, General	16	1.1%	0.90	15.84	0.88
51-4011	CNC Machine Operators, Metal/Plastic	15	1.0%	1.29	15.65	0.83
43-5081	Stock Clerks & Order Fillers	14	1.0%	1.31	12.08	1.03
53-2011	Airline Pilots, Copilots, & Flight Engineers	14	1.0%	1.17	23.59	1.12
11-1021	General & Operations Managers	13	0.9%	1.06	34.52	0.72
51-1011	First-Line Supvsr., Production & Operating Workers	13	0.9%	0.60	24.18	0.86
11-9199	Managers, All Other	13	0.9%	1.02	18.83	0.75
51-4033	Grinding & Buffing Machine, Metal/Plastic	12	0.9%	2.00	13.62	0.84
49-2091	Avionics Technicians	12	0.8%	1.36	27.49	0.91
43-5061	Production, Planning, & Expediting Clerks	12	0.8%	1.25	19.61	0.88
11-3121	Human Resources Managers	12	0.8%	1.13	31.12	0.61
51-2028	Electrical & Electronic Equip. Assemblers	11	0.7%	0.78	16.93	1.08
51-4121	Welders, Cutters, Solderers, & Brazers	10	0.7%	0.77	17.88	0.94
49-1011	First-Line Supvsr., Mechanics, Install, & Repair	10	0.7%	1.02	27.87	0.90
11-3131	Training & Development Managers	9	0.6%	1.18	37.32	0.72

WHY IT MATTERS

Each target industry is underpinned by its workforce, making the occupational composition of each target worthy of further analysis. This exhibit shows each target's largest occupational contributors. The number of local jobs for each occupation is shown along with the occupation's weight (in percentage terms) within the target. The LQ compares the occupation's local weight to its national weight within this target. An LQ that exceeds 1.00 indicates a local occupation employed more heavily by the local target industry than national patterns might imply, while an LQ below 1.00 indicates relatively lighter local reliance on the occupation. Median local hourly earnings accompany the occupations shown in the exhibit. Wage ratios exceeding 1.00 indicate higher pay than the same occupation might expect nationally, while ratios below 1.00 suggest relatively lower compensation than the national level.

Source(s): US Bureau of Labor Statistics; EMSI 2017.4 – QCEW Employees, Non-QCEW Employees, and Self-Employed; U.S. Economic Development Administration; Institute for Strategy and Competitiveness at Harvard Business School; TIP Strategies.
Note(s): The cluster methodology developed at Harvard Business School has been adjusted by TIP Strategies to align with the 6-digit NAICS classifications used by EMSI.

INDUSTRY INTELLIGENCE

AEROSPACE & DEFENSE		
TRADE ASSOCIATIONS		
Aerospace Industries Association		www.aia-aerospace.org
National Defense Industrial Association		www.ndia.org
US Field Artillery Association		fieldartillery.org
National Aeronautic Association		naa.aero
Association for Unmanned Vehicle Systems International		www.auvsi.org
Unmanned Aerial Vehicle Systems Association (UAVSA)		www.uavsa.org
Association of Commercial Unmanned Aircraft Systems (ACUAS)		www.acuas.org
Coalition of UAS Professionals		uascoalition.org
Commercial Drone Alliance		www.commercialdronealliance.org
Unmanned Aircraft Security Team		www.unmannedaircraftsafetyteam.org
Sporting Arms and Ammunition Manufacturers Institute (SAAMI)		saami.org
National Shooting Sports Foundation (NSSF)		www.nssf.org
Air Defense Artillery Association		firsttofire.net
Aerial Rocket Artillery Association		www.araassociation.com
Association of the United States Army		www.ausa.org
Armed Forces Communications and Electronics Association (AFCEA)		www.afcea.org
Council of Defense & Space Industry Associations		www.codsia.org
National Infantry Association		infantryassn.com
US Cavalry and Armor Association		www.cavalryandarmor.com
American Institute of Aeronautics and Astronautics (AIAA)		www.aiaa.org
International Ammunition Association		cartridgecollectors.org
National Business Aviation Association		https://www.nbaa.org/
Experimental Aircraft Association		https://www.eaa.org/en/eaa
RELEVANT CONFERENCES/EVENTS		
UAS Summit & Expo		
20-22 August 2018	*Grand Forks, ND*	www.theuassummit.com
InterDrone		
5-7 September 2018	*Las Vegas, NV*	www.interdrone.com
ID60: DARPA's 60th Anniversary Symposium		
5-7 September 2018	*Oxon Hill, MD*	d60.darpa.mil
NSSF CMO Summit		
18-19 September 2018	*Pont Vedra Beach, FL*	www.nssf.org/cmosummit
2nd Annual Autonomous Capabilities for DoD Summit		
19-20 September 2018	*Alexandria, VA*	autonomy.dsigroup.org
Global Security Exchange		
23-27 September 2018	*Oxon Hill, MD*	www.auvsi.org/events/global-security-exchange
Commercial UAV Expo Americas		
1-3 October 2018	*Las Vegas, NV*	www.expouav.com
2018 AUSA Annual Meeting & Exposition		
8-10 October 2018	*Washington, DC*	ausameetings.org/2018annualmeeting

Continued, next page.

RELEVANT CONFERENCES/EVENTS		
2018 NBAA Annual Convention		
16-18 October 2018	Orlando, FL	https://www.nbaa.org/events/bace/2018/
2019 EAA AirVenture Oshkosh		
22-28 July 2019	Oshkosh, WI	https://www.eaa.org/en/airventure
21st Annual Systems Engineering Conference		
22-25 October 2018	*Tampa, FL*	www.ndia.org/events
44th Air Armament Symposium		
7-8 November 2018	*Fort Walton Beach, FL*	www.ndia.org/events/2018/11/7/44th-air-armament-symposium
Unmanned Security Expo		
14-15 November 2018	*New York, NY*	www.unmannedsecurityexpo.com
Autonomy, Robotics and AI in the Future Force		
28-29 November 2018	*Detroit, MI*	www.ausa.org/army-autonomy-ai-symposium
American Aerospace & Defense Summit 2018		
12-13 December 2018	*Glendale, AZ*	aadsummit.com
AIAA Science and Technology Forum and Exposition (AIAA SciTech 2019)		
7-11 January 2019	*San Diego, CA*	scitech.aiaa.org
Shot Show		
22-25 January 2019	*Las Vegas, NV*	shotshow.org
2019 Tactical Wheeled Vehicles Conference		
3-5 February 2019	*Monterey, CA*	www.ndia.org/events
SpeedNews 9th Annual Aerospace Raw Materials & Manufacturers Supply Chain Conference		
4 March 2019	*Beverly Hills, CA*	speednews.com/all/conference
AUVSI XPONENTIAL 2019		
29 April-2 May 2019	*Chicago, IL*	www.xponential.org/xponential2019
Energy Drone Summit 2019		
12-13 June 2019	*The Woodlands, TX*	stonefortgroup.com/energy-drone-coalition-2018
Automated Vehicles Symposium 2019		
15-18 July 2019	*Orlando, FL*	www.automatedvehiclessymposium.org
TRADE PUBLICATIONS		
Aerospace Manufacturing & Design		www.aerospacemanufacturinganddesign.com
National Defense		www.nationaldefensemagazine.org
Army Magazine		www.ausa.org/publications/army-magazine
US Cavalry & Armor Journal		www.cavalryandarmor.com/Journal/USCavalryArmorJournal.aspx
AIAA Journal		arc.aiaa.org/loi/aiaaj
Journal of Unmanned Vehicle Systems		www.nrcresearchpress.com/journal/juvs
Inside Unmanned Systems		insideunmannedsystems.com
Unmanned Systems		www.auvsi.org/magazines-library
UAS Magazine		www.uasmagazine.com
Unmanned Systems Technology		www.ust-media.com
Directions		www.directionsmag.com
DronesX		www.dronesx.com
International Ammunition Journal		cartridgecollectors.org/?page=IAA-journal-cumulative-index
SpeedNews Newsletter		speednews.com/speednews-newsletter
Aerospace Testing International Magazine		www.aerospacetestinginternational.com/
Aerospace Manufacturing Magazine		www.aero-mag.com/

Source(s): TIP Strategies.

UNMANNED AIRCRAFT SYSTEMS

*"A powered, aerial vehicle that does not carry a human operator, uses aerodynamic forces to provide vehicle lift, can fly autonomously or be piloted remotely, can be expendable or recoverable, and can carry a lethal or non-lethal payload. Ballistic or semi ballistic vehicles, cruise missiles, and artillery projectiles are not considered unmanned aerial vehicles."**

#30 *Oklahoma's rank among the states in the number of job postings for drone or UAV-related work*

WHO ARE THE MAJOR INVESTORS?

FIRM	HQ
Alumni Ventures Group	Manchester (NH)
Rothenberg Ventures	San Francisco (CA)
NextWorld Capital	San Francisco (CA)
ETF Partners	London, UK
The Flying Object	Washington (DC)
Asgard Capital	Berlin, Germany
Alumni Ventures Group	Manchester (NH)

WHERE IS KEY RESEARCH OCCURRING REGIONALLY?

- Oklahoma State Univ., Unmanned Systems Research Inst.
- University of Kansas, School of Engineering
- Univ. of Denver, Unmanned Systems Research Institute
- TAMU-Corpus Christi, Lone Star UAS Ctr of Excel. & Innov.
- Southwest Research Institute (San Antonio, TX)
- University of Memphis, FedEx Institute of Technology
- Nevada Inst. for Autonomous Systems (Las Vegas, NV)

A REFERENCE LIST FOR UAS

(Revised) definition. An early government definition of an unmanned aerial vehicle (UAV), or drone, was proposed by the USDoD (top) in a 2005 report. The commercialization of drones has since drawn more civilian oversight, primarily from the FAA, which defines an unmanned aircraft system (UAS), or drone, as simply "an aircraft without a human pilot onboard – instead, the UAS is controlled from an operator on the ground."

Key players. At the federal level, the USDoD, FAA, NASA, and Homeland Security coordinate, to some degree, on UAS integration through the interagency UAS Executive Committee. In addition, the RTCA Special Committee 228 and the ASTM International Committee provide external, non-governmental forums for industry stakeholders to advise on UAS integration policies.

Market segments. McKinsey defines the value chain as consisting of three distinct segments:

1. HARDWARE. OEM assembly, suppliers, & components.

2. OPERATIONS. Physical infrastructure, traffic management, professional operators, & mitigation systems.

3. SERVICES. Law; insurance; education & training; retail & distribution; data collection, management, & analytics.

HAVE STRATEGIC UNMANNED AIRCRAFT SYSTEMS ACQUISITIONS OCCURRED RECENTLY?

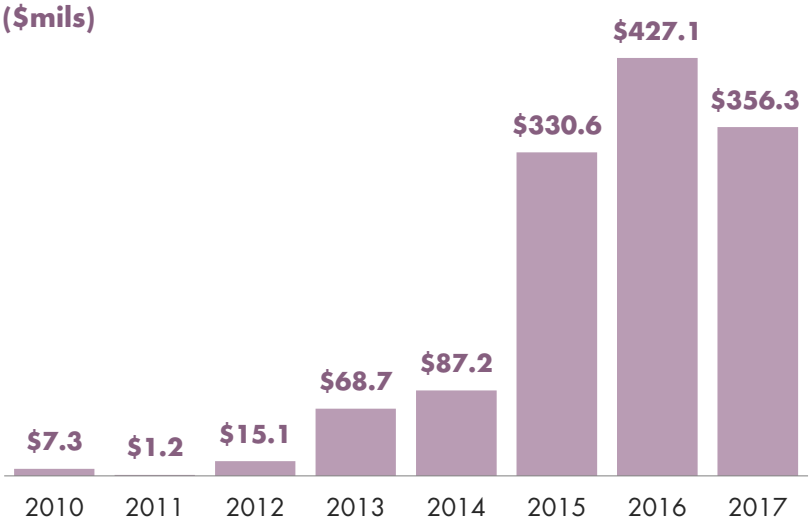
ACQUIRING FIRM	ACQUISITION TARGET	ANNOUNCED	PRICE ($ mil)
John Deere	Blue River Technology	2017	$305.0
Logic0x LLC	Stratospheric Technologies	2017	$6.3
Mycronic AB	Automation Engineering	2016	$35.0
GrabFood	Skybag	2016	$2.5
BAE Systems	Advanced Ceramics Manufacturing	2009	$14.7

Source(s): US Department of Defense, US General Accountability Office, US Federal Aviation Administration, McKinsey, Crunchbase, fDi Markets, CEB Talent Neuron, TIP Strategies.

• US Department of Defense, Office of the Secretary of Defense, "Unmanned Aircraft Systems Roadmap, 2005-2030," August 5, 2005, p. 1

Note: All information shown for UAS activity reflects national patterns unless otherwise indicated.

VENTURE EQUITY INTO US UNMANNED AIRCRAFT SYSTEMS ($mils)



Leading US recruiters for drone or UAV-related employment:

GENERAL ATOMICS

DROBOTSCOMPANY
WHERE TECHNOLOGY MEETS FRESH AIR

II-VI OPTICAL SYSTEMS

U.S.ARMY

NORTHROP GRUMMAN

Frequently requested "hard skills" needed for drone or UAV-related employment:
AVIONICS, LINUX, AND PYTHON

WHICH EMERGING STARTUPS ARE AMONG THE BEST FUNDED?

START-UP	FOUNDED	HQ	EQUITY FUNDING ($mil)
3D Robotics	2009	Berkeley, California, United States	$178.8
Airware	2011	San Francisco, California, United States	$109.3
YI Technology	2014	Bellevue, Washington, United States	$90.0
Saildrone	2012	Alameda, California, United States	$88.5
Swift Navigation	2012	San Francisco, California, United States	$48.8
Skycatch	2013	San Francisco, California, United States	$38.5
Ceres Imaging	2014	Oakland, California, United States	$35.5
CyPhy Works	2008	Danvers, Massachusetts, United States	$32.0
Pulse Aerospace	2011	Lawrence, Kansas, United States	$21.2
Fortem Technologies	2016	Pleasant Grove, Utah, United States	$20.5

WHERE HAVE NOTABLE CROSS-STATE OR CROSS-BORDER UAS INVESTMENTS BEEN ANNOUNCED?

PROSPECT	HQ	DESTINATION	YEAR	JOBS	CAPEX ($mil)
Boeing	Chicago (IL)	Cambridge (MA)	2018	300	—
Delair-Tech	Toulouse, France	Los Angeles (CA)	2016	13	10.2
Delta Drone	Grenoble, France	Denver (CO)	2016	13	10.2
General Atomics Aeronautical Systems (GA-ASI)	San Diego (CA)	Grand Forks (ND)	2015	48	35.2
General Atomics Aeronautical Systems (GA-ASI)	San Diego (CA)	Beavercreek (OH)	2014	13	10.2
General Atomics	San Diego (CA)	Warner Robins (GA)	2014	13	10.2
General Atomics	San Diego (CA)	Shannon (MS)	2012	25	12

Source(s): US Department of Defense, US General Accountability Office, US Federal Aviation Administration, McKinsey, Crunchbase, fDi Markets, CEB Talent Neuron, TIP Strategies.

MATERIALS PROCESSING AND REMANUFACTURING

Companies in this cluster work with a variety of materials, including metals, glass, plastics, and wood products to manufacture goods, some using recycled content and some using new inputs. There is an opportunity to grow the cluster with companies that focus on incorporating recycled content into their production process. This is known as remanufacturing.

Currently, the US produces more recycling than it has markets to use them, especially since China is no longer accepting recycled plastics. As a result, there is a concerted push in the recycling industry to develop new markets and uses for recycled products. The Choctaw Nation has already seen a rise in the number of remanufacturing companies that are looking to expand their operations and has a growing cluster. Companies that use recycled products in their processes include CMC Metals Company, International Paper, and Old Castle.

The largest components of Materials Processing and Remanufacturing are Plastics, Vulcanized and Fired Materials, and Upstream Metal Manufacturing. This cluster has 20 business establishments and employs approximately 1,000 people. The cluster declined 18.8 percent between 2007 and 2017 and is expected to grow 2.9 percent in the 11-County Area over the next 5 years.

Top occupations for this target include Multiple Machine Tool Workers and Welders, Cutters, Solderers, & Brazers, making up 13 percent of jobs. The region has high LQs in a number of occupations that support the cluster, demonstrating a strong workforce to support industry growth.

MARKET OPPORTUNITIES

- **Market development:** partner with existing companies and regional higher education institutions (research institutes and engineering schools) to explore ways to incorporate recycled content into existing processes. CNO could also play a role by expanding its recycling centers to amass more product and by purchasing products with higher percentages of recycled content.
- **Recruitment:** work through manufacturers associations and relevant recycling/reuse associations to build relationships with remanufacturing companies and their value chains. Leverage these relationships to recruit new companies to the region.

11-COUNTY AREA ADVANTAGES

- Major Employers: CMC Metals, International Paper, Old Castle
- Proximity to major metros that generate large stocks of recycling
- Transportation infrastructure, including rail
- Low cost electricity
- Ample water

TARGET SNAPSHOT

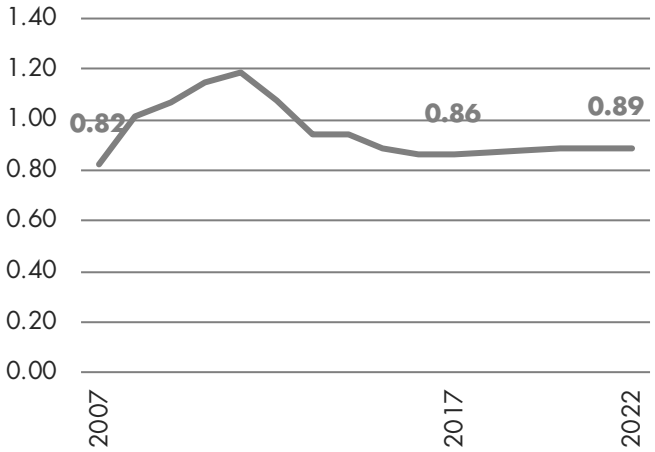
11-COUNTY AREA	TOTAL	TARGET
2017 Establishments	5,303	20
2017 Employment	88,040	999
Net Chg., 2007-2017	-6,783	-232
Pct. Chg., 2007-2017	-7.2%	-18.8%

EMPLOYMENT OUTLOOK

US OVERALL	TOTAL	TARGET
Net Chg., 2017-2022	+9,492,023	-2,343
Pct. Chg., 2017-2022	+6.0%	-0.1%
11-COUNTY AREA	**TOTAL**	**TARGET**
Net Chg., 2017-2022	+5,033	+29
Pct. Chg., 2017-2022	+5.7%	+2.9%

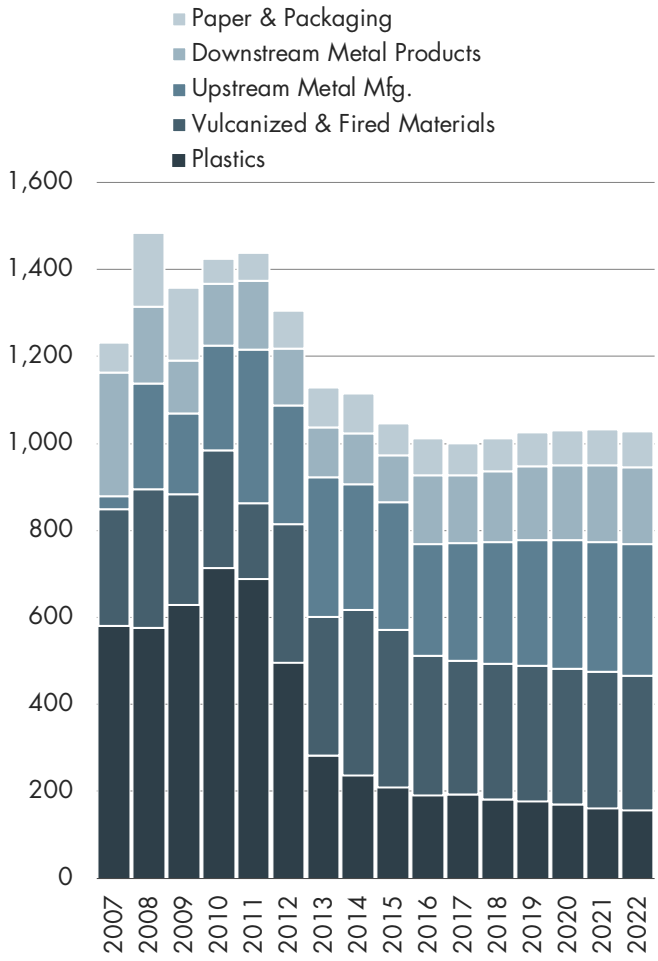
TARGET CONCENTRATION

LOCATION QUOTIENT TREND



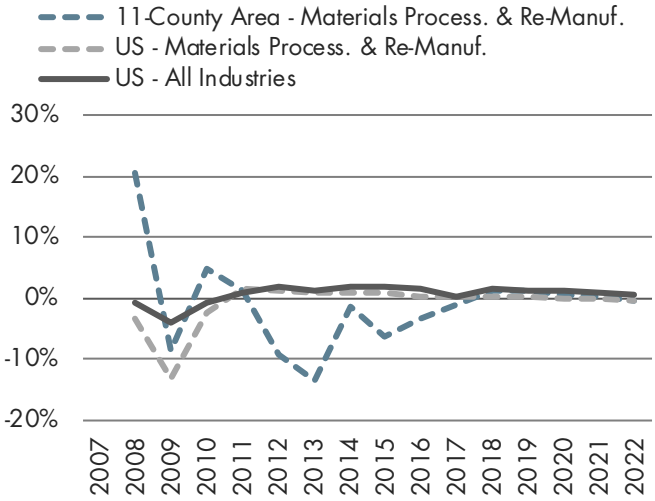
TARGET COMPONENTS

ANNUAL EMPLOYMENT



TARGET GROWTH

ANNUAL % CHANGE IN EMPLOYMENT



KEY FOCUS AREAS

NAICS	DESCRIPTION
322211	Corrugated and Solid Fiber Box Mfg
326113	Unlaminated Plastics Film and Sheet
326199	Misc Plastics Product Manufacturing
327211	Flat Glass Manufacturing
331110	Iron and Steel Mfg
332311	Prefabricated Metal Products Mfg
332323	Ornamental Metal Work Mfg
332613	Spring Manufacturing
332999	Misc Fabricated Metal Product Mfg

Source(s): US Bureau of Labor Statistics; EMSI 2017.4 – QCEW Employees, Non-QCEW Employees, and Self-Employed; U.S. Economic Development Administration; Institute for Strategy and Competitiveness at Harvard Business School; TIP Strategies.
Note(s): The cluster methodology developed at Harvard Business School has been adjusted by TIP Strategies to align with the 6-digit NAICS classifications used by EMSI.

TARGET STAFFING PATTERNS

LQs & RELATIVE EARNINGS: BELOW AVG→ ←ABOVE AVG

STANDARD OCCUPATIONAL CLASSIFICATION		EMPLOYMENT			EARNINGS	
Code	Description	2017 Jobs	% of Target	LQ (US= 1.00)	Local Hourly Median	Relative to US (US=1.00)
51-4081	Multiple Machine Tool Workers, Metal/Plastic	72	6.5%	4.29	16.03	0.95
51-4121	Welders, Cutters, Solderers, & Brazers	70	6.4%	2.33	17.88	0.94
51-4031	Cutting, Punching, & Press Machine, Metal/Plastic	48	4.4%	1.49	14.64	0.92
51-9041	Extruding, Forming, & Compacting Machine	45	4.1%	2.30	17.78	1.10
51-1011	First-Line Supvsr., Production & Operating Workers	43	3.9%	0.93	24.18	0.86
53-3032	Heavy & Tractor-Trailer Truck Drivers	42	3.8%	2.49	19.26	0.97
53-7062	Laborers/Freight, Stock, & Material Movers, Hand	33	3.1%	1.08	14.00	1.07
51-4021	Extruding & Drawing Machine, Metal/Plastic	26	2.3%	0.95	20.94	1.26
51-9195	Molders, Shapers, & Casters, Except Metal/Plastic	26	2.3%	3.69	11.96	0.73
51-9032	Cutting & Slicing Machine Workers	25	2.3%	2.06	14.30	0.88
51-4033	Grinding & Buffing Machine, Metal/Plastic	24	2.2%	2.87	13.62	0.84
51-2098	Assemblers & Fabricators, All Other	24	2.2%	0.37	12.53	0.84
51-9061	Inspectors, Testers, Sorters, Samplers, & Weighers	23	2.1%	0.70	16.33	0.90
51-9198	Helpers–Production Workers	23	2.1%	0.81	11.38	0.91
51-4041	Machinists	22	2.0%	1.14	19.90	0.97
43-5071	Shipping, Receiving, & Traffic Clerks	20	1.8%	0.92	15.16	0.99
11-1021	General & Operations Managers	20	1.8%	1.08	34.52	0.72
49-9071	Maintenance & Repair Workers, General	18	1.7%	0.82	15.84	0.88
53-7051	Industrial Truck & Tractor Operators	18	1.7%	0.98	16.64	1.03
51-9197	Tire Builders	18	1.7%	1.75	21.55	1.11
51-4011	CNC Machine Operators, Metal/Plastic	17	1.5%	1.23	15.65	0.83
49-9043	Maintenance Workers, Machinery	16	1.5%	2.05	20.91	0.96
51-9196	Paper Goods Machine Workers	14	1.3%	0.34	17.69	0.97
51-4034	Lathe & Turning Machine, Metal/Plastic	13	1.2%	4.70	18.91	1.02
51-9121	Coating, Painting, & Spraying Machine Workers	13	1.2%	1.41	14.58	0.91

WHY IT MATTERS

Each target industry is underpinned by its workforce, making the occupational composition of each target worthy of further analysis. This exhibit shows each target's largest occupational contributors. The number of local jobs for each occupation is shown along with the occupation's weight (in percentage terms) within the target. The LQ compares the occupation's local weight to its national weight within this target. An LQ that exceeds 1.00 indicates a local occupation employed more heavily by the local target industry than national patterns might imply, while an LQ below 1.00 indicates relatively lighter local reliance on the occupation. Median local hourly earnings accompany the occupations shown in the exhibit. Wage ratios exceeding 1.00 indicate higher pay than the same occupation might expect nationally, while ratios below 1.00 suggest relatively lower compensation than the national level.

Source(s): US Bureau of Labor Statistics; EMSI 2017.4 – QCEW Employees, Non-QCEW Employees, and Self-Employed; U.S. Economic Development Administration; Institute for Strategy and Competitiveness at Harvard Business School; TIP Strategies.
Note(s): The cluster methodology developed at Harvard Business School has been adjusted by TIP Strategies to align with the 6-digit NAICS classifications used by EMSI.

INDUSTRY INTELLIGENCE

MATERIALS PROCESSING & RE-MANUFACTURING		
TRADE ASSOCIATIONS		
National Waste & Recycling Association		wasterecycling.org
National Recycling Coalition		nrcrecycles.org
Building Materials Reuse Association		bmra.org
Institute of Scrap Recycling Industries		www.isri.org
Construction & Demolition Recycling Association		cdrecycling.org
Association of Plastic Recyclers		plasticsrecycling.org
Plastics Industry Association		www.plasticsindustry.org
Oklahoma Recycling Association		www.recycleok.org
RELEVANT CONFERENCES/EVENTS		
GlassBuild America		
12-14 September 2018	*Las Vegas, NV*	www.glassbuildamerica.com
Decon + Reuse 2018		
19-21 September 2018	*Grand Rapids, MI*	bmra.org/decon-reuse-18
2018 Oklahoma Recycling Conference		
20 September 2018	*Stillwater, OK*	www.recycleok.org/oklahoma-events-activities
Paper & Plastics Recycling Conference North America		
17-19 October 2018	*Chicago, IL*	paperplasticsna.recyclingtodayevents.com
Resource Recycling Conference		
22-24 October 2018	*St. Louis, MO*	rrconference.com
2019 C&D World Exhibition & Conference		
9-12 March 2019	*Brooklyn, NY*	cdrecycling.org/news/events/2019-c-d-world-exhibition-conference/
ISRI Convention & Exhibition		
8-11 April 2019	*Los Angeles, CA*	isri2018.org
Waste Expo		
6-9 May 2019	*Las Vegas, NV*	www.wasteexpo.com
NPE2021: The Plastics Show		
17-21 May 2021	*Orlando, FL*	www.npe.org
TRADE PUBLICATIONS		
Recycling Product News		www.recyclingproductnews.com
Resources, Conservation and Recycling		www.journals.elsevier.com/resources-conservation-and-recycling
Recycling		www.mdpi.com/journal/recycling
Advances in Recycling & Waste Management		www.omicsonline.org/advances-in-recycling-waste-management.php
Scrap		www.scrap.org
Recycling Today		www.recyclingtoday.com
Construction & Demolition Recycling		www.cdrecycler.com

Source(s): TIP Strategies.

STRATEGIC CONSIDERATIONS

In support of business attraction efforts and target industry marketing by Choctaw Economic Development and its community partners, the following strategies can be undertaken:

1. **Build a knowledge base.** Use the conferences, associations, and publications as resources to build a strong base of knowledge and expertise in each of the target clusters. Keep a database of industries players, follow industry trends, track capital and investment flows, and look for opportunities to build relationships with the players that represent good prospects for the region.

2. **Leverage the network of existing businesses.** Strengthen relationships with the businesses already located in the 11-county area. Ensure that their needs are met and that they are happy "customers." As they communicate with their own industry peers, they can become your indirect sales force. Let them know what kinds of companies you're looking for and encourage them to help you look for prospects.

3. **Develop marketing materials.** For each industry cluster, create a brochure that is accessible online through the Choctaw Economic Development website. Highlight the region's key advantages, major employers, and incentives programs.

4. **Ensure availability of shovel-ready sites.** For the most marketable sites identified through the inventory, support investments in basic infrastructure, preliminary environmental assessments and engineering studies, and potentially design renderings. This will ensure that competitive sites are available to support business attraction efforts.