WICHITA AREA METROPOLITAN PLANNING ORGANIZATION

WAMPO

In Partnership With:

CEDBR
Center for Economic Development and Business Research

JEO CONSULTING GROUP

WAMPO Economic Development Report – Advanced Manufacturing

May 2023

Contents

Introduction and Summary

The aim of this report is to analyze the progress of economic development in the WAMPO region selected target sectors. The Greater Wichita Partnership has identified key development sectors as part of its economic development initiatives: advanced manufacturing, aerospace, agriculture, energy, healthcare, IT systems & support, and transportation. Each sector will be outlined in this report with an investigation into its industry landscape, labor, the balance of trade, and general trends.

Advanced manufacturing within the Wichita MSA has been in a growth cycle, increasing its relative competitiveness. The three companies that dominate the advanced manufacturing sector are Coleman, Hustler Turf, and Case New Holland. The five largest subsectors are plastics, architectural metals, machine shops, coating, and agriculture machinery. Employment grew in four of the five, and productivity increased in three over six years.

The sector has a significant competitive labor advantage over its competitors, as the region has a high labor concentration in purchase agents, assemblers, machinists, and inspectors. The skills, knowledge, and abilities within this segment tend to require more education and experience than the broader manufacturing industry, as this study outlines. Therefore, the region's higher relative number of skilled laborers creates a competitive advantage over other markets.

The broader market conditions for advanced manufacturing play to Wichita's strategic advantage, as this segment has high barriers to entry, low substitutions, and lots of competition. Since the region already has strong firms with proprietary technology, those companies are expected to remain competitive. In addition, providing a healthy competitive business environment through access to qualified-skilled labor, a relatively competitive tax environment, and adequate heavy highway infrastructure increases the profitability of this sector.

Industry Landscape

The following NAICS codes, provided by the Greater Wichita Partnership, constitute the advanced manufacturing category. These codes were used to extract specific industry data related to these subsections.

Advanced Manufacturing and Materials		
NAICS	Description	Subsector
3321	Forging and Stamping	Machinery & Manufacturing
3322	Cutlery and Handtool Manufacturing	Machinery & Manufacturing
3323	Architectural and Structural Metals Manufacturing	Machinery & Manufacturing
3324	Boiler, Tank, and Shipping Container Manufacturing	Machinery & Manufacturing
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	Machinery & Manufacturing
3328	Coating, Engraving, Heat Treating, and Allied Activities	Machinery & Manufacturing
3329	Other Fabricated Metal Product Manufacturing	Machinery & Manufacturing
3331	Agriculture, Construction, and Mining Machinery Manufacturing	Machinery & Manufacturing
3332	Industrial Machinery Manufacturing	Machinery & Manufacturing
3333	Commercial and Service Industry Machinery Manufacturing	Machinery & Manufacturing
3334	Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	Machinery & Manufacturing
3335	Metalworking Machinery Manufacturing	Machinery & Manufacturing
3336	Engine, Turbine, and Power Transmission Equipment Manufacturing	Machinery & Manufacturing
3339	Other General Purpose Machinery Manufacturing	Machinery & Manufacturing
3362	Motor Vehicle Body and Trailer Manufacturing	Machinery & Manufacturing
3363	Motor Vehicle Parts Manufacturing	Machinery & Manufacturing
3391	Medical Equipment and Supplies Manufacturing	Machinery & Manufacturing
3399	Other Miscellaneous Manufacturing	Machinery & Manufacturing
3252	**Resin, Synthetic Rubber, and Artificial and Synthetic Fibers and Filaments Manufacturing**	**Plastics & Composites**
3261	**Plastics Product Manufacturing**	**Plastics & Composites**
3262	**Rubber Product Manufacturing**	**Plastics & Composites**

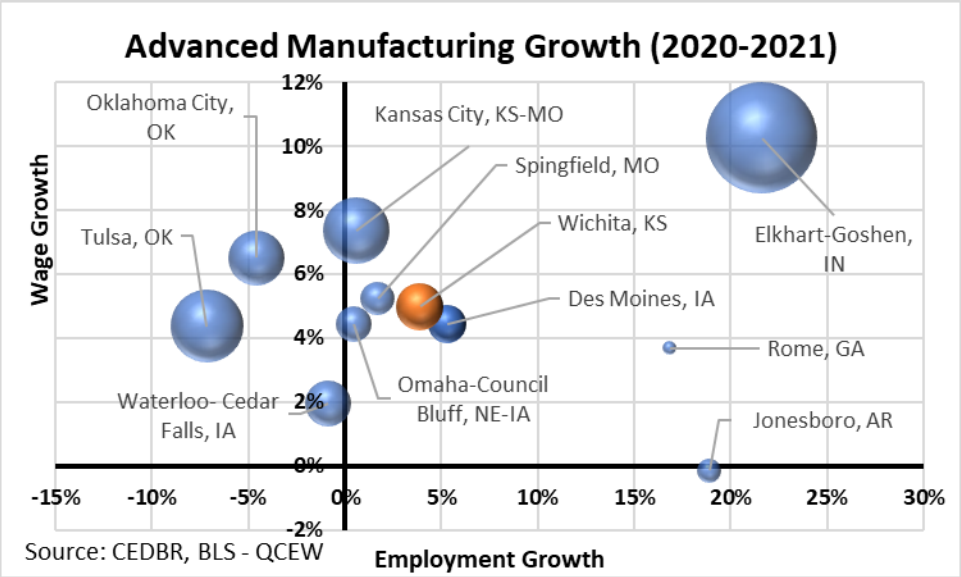
In order to give perspective to the climate of this key sector, a list of other communities with strong manufacturing sectors has been identified using their location quotients. Additionally, for consistent comparison, other Midwestern cities have been included to convey where Wichita has growth opportunities.

Key Advanced Manufacturing Communities
Wichita, KS MSA
Kansas City, MO-KS MSA
Des Moines- West Des Moines, IA MSA
Elkhart-Goshen, IN MSA
Jonesboro, AR MSA
Oklahoma City, OK MSA
Omaha-Council Bluffs, NE-IA MSA
Rome, GA MSA
Springfield, MO MSA
Tulsa, OK MSA
Waterloo-Cedar Falls, IA MSA

The comparison cities were selected based on the following criteria: employment concentration, size of the town, and preference for Midwest. Furthermore, all of the communities were vetted with the Greater Wichita Partnership as communities that the Wichita area competes within the respective sector.

In order to capture the broad industry landscape and recent competitiveness of the advanced manufacturing sector within the Wichita area, this study developed a growth matrix. The matrix captures the relative growth and size of the market compared to the selected comparable communities. Any city within the top right quadrant should be considered in a growth mode. Those in the bottom left quadrant are in declining sectors. The other two quadrants, bottom right and top left, identify economic weaknesses that must be addressed.

Of the cities being compared in the advanced manufacturing sector, Elkhart-Goshen, IN, had the most robust employment along with a high wage growth and employment growth relative to the other locations. Other Midwest locations, such as Waterloo-Cedar Falls, Oklahoma City, and Tulsa, have seen wage declines for the advanced manufacturing sector from 2020 to 2021. Meanwhile, the Wichita MSA saw increases in both wages and establishments over this time period. Overall, Wichita's advanced manufacturing sector was highly competitive.



Labor

In the realm of advanced manufacturing employment, Wichita, Kansas, has displayed consistent growth over the years. Starting with 9,028 employees in 2015, Wichita's advanced manufacturing sector witnessed a steady rise to 9,347 employees in 2021, representing a 1% annualized growth over the six years. Notably, between 2020 and 2021, the city experienced a 4% increase in employment, showcasing its resilience and ability to adapt even in challenging times. These figures highlight Wichita's status as a strong player in the advanced manufacturing industry, contributing to its economic vitality and establishing it as a hub for innovation and skilled manufacturing talent. Wichita's biggest competitors, based on growth, are Jonesboro, Rome, and Elkhart.

Advanced Manufacturing Employment

								Annualized growth	
	2015	2016	2017	2018	2019	2020	2021	2015-21	2020-21
Des Moines	5,466	5,348	5,488	5,884	6,052	5,703	6,006	1%	5%
Elkhart-Goshen, IN MSA	42,241	44,256	48,985	50,551	47,247	43,358	52,735	4%	22%
Jonesboro, AR MSA	1,393	1,473	1,678	1,751	1,909	1,967	2,338	10%	19%
KC	17,903	18,377	18,603	19,727	19,588	18,511	18,623	1%	1%
OKC	16,812	14,651	14,706	15,333	15,394	13,634	13,009	-3%	-5%
Omaha	5,791	5,533	5,401	5,377	5,349	5,235	5,258	-1%	0%
Rome, GA MSA	485	481	580	544	551	577	674	6%	17%
Springfield, MO MSA	4,665	4,228	4,071	4,747	4,750	4,564	4,642	0%	2%
Tulsa	27,630	24,946	24,645	25,803	26,660	24,053	22,330	-3%	-7%
Waterloo-Cedar Falls, IA MSA	9,270	9,034	8,731	9,020	9,081	8,723	8,649	-1%	-1%
Wichita, KS	9,028	9,190	9,090	9,162	9,452	8,998	9,347	1%	4%

Source: CEDBR, BLS- QCEW

When examining the larger sectors within advanced manufacturing employment, several noteworthy trends emerge. In the field of plastics product manufacturing, there has been consistent growth from 1,137 employees in 2015 to 1,384 employees in 2021, representing a 3% annualized growth over the six years. Similarly, machine shops, turned products, and screw manufacturing experienced substantial growth, increasing from 1,085 employees in 2015 to 1,389 employees in 2021, with an annualized growth rate of 4%. However, it is essential to note that some sectors faced challenges during this period. For example, coating, engraving, heat treating, and allied services witnessed a decline, dropping from 1,125 employees in 2015 to 820 employees in 2021, reflecting a significant decrease of 18% in annualized growth. Overall, these figures highlight the dynamic nature of advanced manufacturing employment and the varying trajectories of different sectors within the industry.

Advanced Manufacturing Employment

	2015	2016	2017	2018	2019	2020	2021	Annualized growth 2015-21	Annualized growth 2020-21
Resin, synthetic rubber, and artificial									
Plastics product manufacturing	1,137	1,180	1,222	1,262	1,303	1,343	1,384	3%	3%
Rubber product manufacturing	101	102	102	102	103	103	103	0%	0%
Forging and stamping									
Cutlery and handtool	26	26	27	28	28	29	29	2%	3%
Architectural and structural metals	1,246	1,218	1,300	1,261	1,255	1,303	1,327	1%	2%
Boiler, tank, and shipping container	87	87	89	88	90	89	91	1%	3%
Machine shops; turned product; and screw	1,085	1,139	1,191	1,253	1,310	1,308	1,389	4%	6%
Coating, engraving, heat treating, and allied	1,125	1,120	1,114	1,204	1,277	1,002	820	-4%	-18%
Other fabricated metal product	482	516	480	483	535	466	475	0%	2%
Agriculture, construction, and mining	2,625	2,710	2,459	2,349	2,401	2,265	2,534	0%	12%
Industrial machinery									
Commercial and service industry machinery	180	163	152	151	177	124	129	-4%	4%
Ventilation, heating, air-conditioning									
Metalworking machinery	132	152	170	173	149	143	164	3%	15%
Engine, turbine, and power transmission									
Other general purpose machinery	802	777	784	809	824	823	902	2%	10%
Motor vehicle body and trailer									

Source: CEDBR, BLS- QCEW

Advanced Manufacturing Establishments

Communities	Annual 2020	Annual 2021	YR/YR %
Wichita, KS MSA	256	262	2%
Kansas City, MO-KS MSA	571	581	2%
Des Moines- West Des Moines, IA MSA	174	176	1%
Elkhart-Goshen, IN MSA	407	412	1%
Jonesboro, AR MSA	33	32	-3%
Oklahoma City, OK MSA	463	443	-4%
Omaha-Council Bluffs, NE-IA MSA	172	179	4%
Rome, GA MSA	26	26	0%
Springfield, MO MSA	157	156	-1%
Tulsa, OK MSA	705	678	-4%
Waterloo-Cedar Falls, IA MSA	94	95	1%

Source: CEDBR, BLS- QCEW

Advanced Manufacturing Wages							
Community	2015	2016	2017	2018	2019	2020	2021
Des Moines	$ 53,445	$ 53,254	$ 54,655	$ 56,893	$ 57,917	$ 61,051	$ 63,750
Elkhart-Foshen, IN	$ 41,755	$ 43,508	$ 45,431	$ 45,466	$ 46,479	$ 49,767	$ 54,872
Jonesboro, AR	$ 51,059	$ 51,778	$ 53,375	$ 54,870	$ 55,454	$ 59,293	$ 59,209
Kansas City, Missouri	$ 54,684	$ 56,109	$ 56,542	$ 56,200	$ 57,220	$ 59,548	$ 63,935
Oklahoma City, OK	$ 50,139	$ 49,574	$ 53,508	$ 55,753	$ 57,470	$ 60,479	$ 64,411
Omaha, NE	$ 52,851	$ 52,096	$ 53,400	$ 55,293	$ 56,996	$ 60,079	$ 62,750
Rome, GA	$ 64,368	$ 65,861	$ 65,772	$ 65,043	$ 69,138	$ 71,374	$ 74,005
Springfield, MO	$ 41,856	$ 43,595	$ 44,648	$ 44,290	$ 45,497	$ 47,728	$ 50,230
Tulsa, OK	$ 54,880	$ 55,031	$ 57,348	$ 59,673	$ 60,247	$ 60,008	$ 62,625
Waterloo-Cedar Falls, IA	$ 56,809	$ 56,020	$ 60,554	$ 61,573	$ 61,711	$ 64,133	$ 65,386
Wichita, KS	$ 48,121	$ 48,562	$ 50,136	$ 52,160	$ 53,527	$ 54,436	$ 57,149
Souce: CEDBR, BLS - QCEW							

Another important aspect of labor is occupation classifications within an industry. The following list is an approximation of the labor supply for each of these categories. In total level, the three largest key occupations within the Wichita area were aircraft structures, miscellaneous assemblers, and inspectors.

Key Occupations		
Occupation	Wichita MSA Employment	US Employment
Helpers--Production Workers	400	131,600
Inspectors, Testers, Sorters, Samplers, and Weighers	2,660	370,510
Machinists	1,560	262,700
Buyers and Purchasing Agents	1,570	110,710
Aircraft Structure, Surfaces, Rigging, and Systems Assemblers	5,340	-
Miscellaneous Assemblers and Fabricators	3,200	-

Source: CEDBR: BLS, OES

Wages and location quotients were gathered for each occupation for the Wichita MSA. While each occupation had an above-average location quotient compared to the rest of the United States, the category of aircraft structures, surfaces, rigging, and systems assemblers had the highest location quotient of 82.69, indicating that Wichita was over eighty-two times more concentrated than the nation, giving the region a distinct labor advantage.

A location quotient is a statistical measure used to compare the concentration or specialization of a particular industry or occupation in a specific geographic area relative to its concentration in a larger reference area, typically a region or a nation. It is calculated by dividing the proportion of employment in a specific industry or occupation in the target area by the proportion of employment in the same industry or occupation in the reference area, and then comparing the result to a value of one. A location quotient greater than 1 indicates a higher concentration of the industry or occupation in the target area compared to the reference area, suggesting specialization or a comparative advantage in that particular sector. Conversely, a location quotient of less than 1 indicates a lower concentration, less specialization in the industry or occupation in the target area.

2021 Labor Costs - Advanced Manufacturing

Occupation (SOC code)	Mean Wage	10th Percentile Wage	90th Percentile Wage	Location Quotient
Buyers and Purchasing Agents(131020)	$73,550	$38,010	$106,950	1.69
Aircraft Structure, Surfaces, Rigging, and Systems Assemblers(512011)				82.96
Miscellaneous Assemblers and Fabricators(512090)	$38,460	$27,260	$55,370	1.1
Machinists(514041)	$47,700	$31,190	$66,850	2.46
Inspectors, Testers, Sorters, Samplers, and Weighers(519061)	$61,130	$37,130	$84,460	2.29
Helpers--Production Workers(519198)	$38,190	$28,130	$63,170	1.03

Source: CEDBR, BLS-OES

Productivity is an important component of the labor discussion. Using national figures, the following list of occupations has been detailed for the advanced manufacturing sector, where productivity is compared against the base year 2012. Those sectors with increasing productivity, as represented by rates above 100, are growing and have the opportunity for increased wages and profitability.

The consistently most productive segment was in metalworking machinery, while the steepest decline in productivity was seen in HVAC and commercial refrigeration equipment. Of the five most significant employment sectors within Wichita, three were growing, and two declined.

Productivity

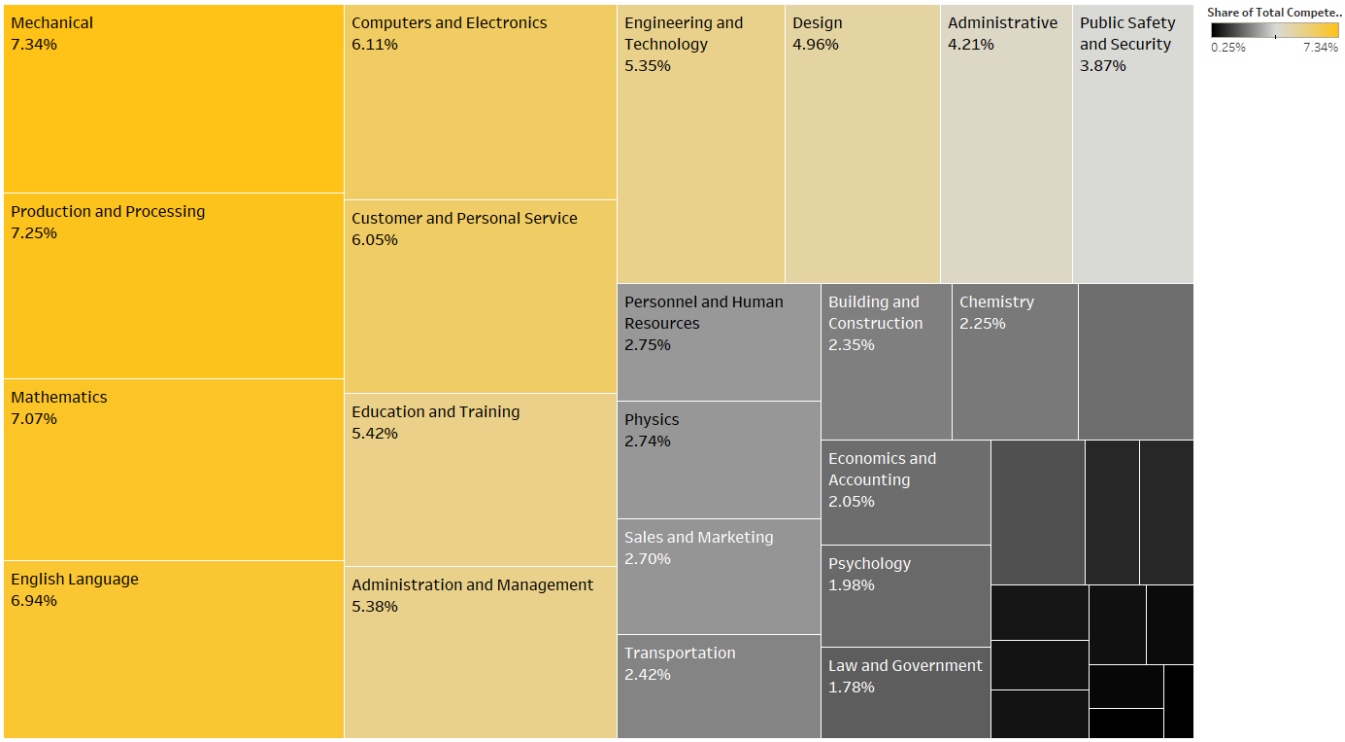
Industry	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Resin, synthetic rubber, and artificial synthetic fibers and filaments	99.0	94.4	100.0	100.1	92.8	86.8	89.7	91.5	92.3	82.0	80.2	83.6
Plastics products	97.1	95.9	100.0	99.8	98.7	97.5	97.9	94.0	95.3	92.9	93.4	93.9
Rubber products	96.4	103.7	100.0	97.6	94.5	95.3	94.0	96.8	99.7	99.5	92.7	99.6
Forging and stamping	96.0	99.4	100.0	101.4	97.8	93.7	89.4	90.5	98.0	98.8	91.0	88.6
Cutlery and handtools	117.9	114.5	100.0	97.0	106.6	108.4	99.4	108.8	103.5	102.5	99.2	102.7
Architectural and structural metals	103.2	97.5	100.0	99.1	99.7	100.7	102.6	105.3	101.6	100.8	106.6	102.7
Boilers, tanks, and shipping containers	96.9	98.2	100.0	97.7	97.2	95.4	95.4	102.2	104.6	102.6	104.1	103.3
Machine shops; turned products; and screws, nuts, and bolts	95.6	98.2	100.0	98.3	96.9	94.4	94.0	100.5	105.6	100.5	97.4	107.8
Coating, engraving, heat treating, and allied activities	104.1	107.6	100.0	98.5	100.5	93.8	91.0	91.2	95.1	94.7	88.1	106.4
Other fabricated metal products	101.0	108.8	100.0	98.5	94.1	91.0	91.6	84.7	87.9	88.8	92.6	93.8
Agriculture, construction, and mining machinery	93.4	96.1	100.0	94.5	94.9	78.3	73.4	78.3	84.8	86.0	81.5	92.3
Industrial machinery	104.8	112.1	100.0	97.3	91.4	87.5	85.4	90.8	92.8	90.6	87.3	84.3
Commercial and service industry machinery	83.6	86.2	100.0	100.3	101.6	99.0	97.5	87.9	92.7	86.8	86.5	101.4
HVAC and commercial refrigeration equipment	93.8	92.8	100.0	101.2	91.6	91.4	87.2	86.6	86.7	83.5	82.7	78.1
Metalworking machinery	99.4	103.5	100.0	101.2	103.1	103.3	101.3	111.2	109.6	99.7	108.4	124.4
Engine, turbine, and power transmission equipment	78.1	88.2	100.0	89.5	86.5	86.7	80.1	83.7	86.1	82.7	76.5	85.3
Other general purpose machinery	95.5	98.4	100.0	95.8	94.2	87.8	87.5	87.8	87.7	85.4	81.1	84.0
Motor vehicle bodies and trailers	93.2	95.4	100.0	105.6	107.7	107.6	107.2	117.4	114.1	113.4	105.3	120.3
Motor vehicle parts	95.1	96.3	100.0	98.1	101.4	100.1	97.8	96.6	96.6	96.8	94.3	96.5
Medical equipment and supplies	102.6	103.1	100.0	105.6	96.6	94.7	95.5	93.8	96.3	89.2	88.5	94.2
Other miscellaneous manufacturing	117.2	112.4	100.0	101.5	103.5	101.7	101.6	93.4	95.1	91.0	93.3	98.8

Source: CEDBR, BLS

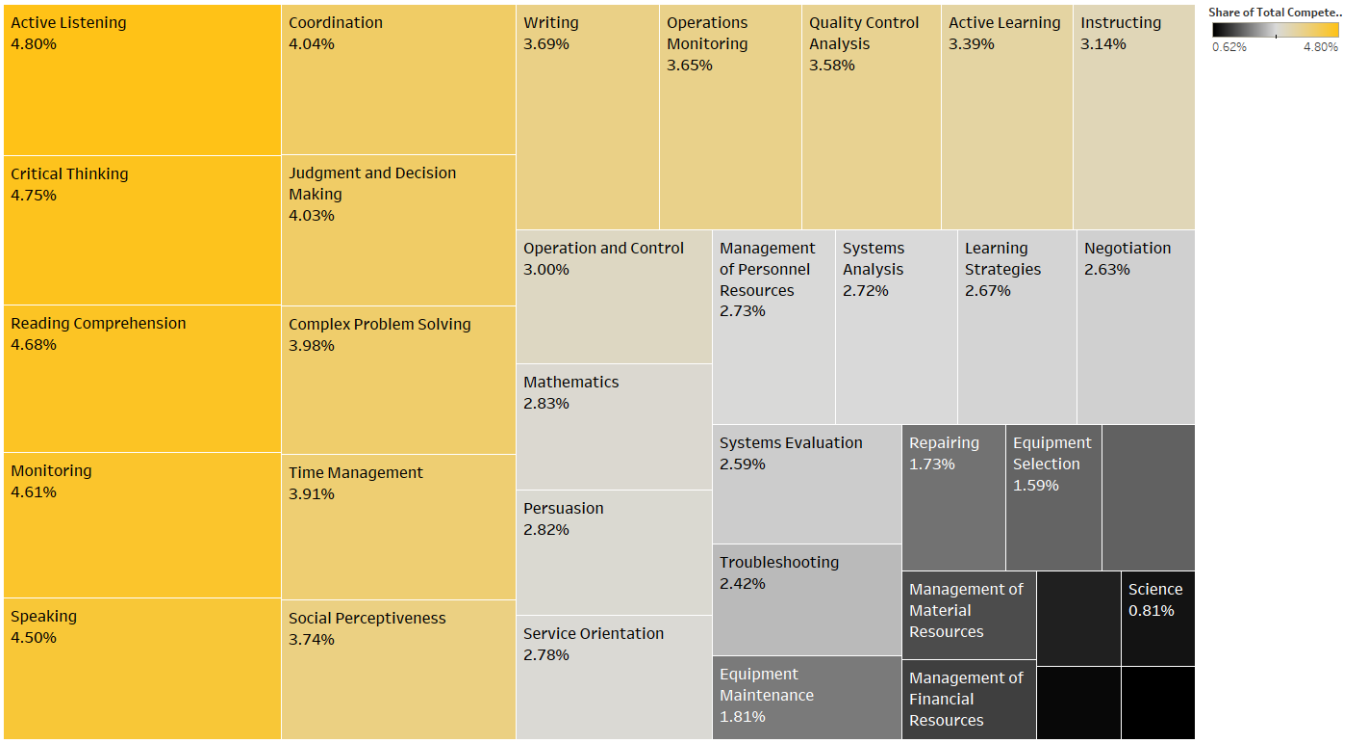
Another component of the labor discussion is the skills, knowledge, and abilities required for the sector of the workforce. In the advanced manufacturing sector, the most important skills were oral comprehension and near vision. The most critical knowledge component was mechanical, production and processing, and mathematics. The top abilities were active listening, critical thinking, and reading comprehension.

Skills

Knowledge



Abilities



To summarize the labor conversation through the framework of this particular sector, it is important to consider the top employers. Therefore, a list of all organizations within this sector with 100 employees or more has been collected. With knowledge of these particular businesses' locations and workforce density, WAMPO can leverage this list to analyze what thoroughfares can be strengthened to propagate the industry.

Key WAMPO players

Company Name	Location Employee Size
Coleman Co Inc	1,300
Hustler Turf Equipment	800
Hustler Turf Equipment Inc	700
CNH Wichita	600
Excel Industries Inc	350
Metal-Fab Inc	300
Precision Machining Inc	264
Katch	250
Valence Chrome Plus Intl	250
Airxcel Inc	210
Great Plains Industries Inc	200
Metal Finishing Co	200
Weckworth Manufacturing	200
Allied Crane LLC	150
Perfekta Inc	150
XLT Smart Solutions	150
International Cold Storage	140
Pratt Recycling	138
Vornado Air LLC	130
Harlow Aerostructures LLC	125
WSM Industries	125
National Plastics Color	112
Invista	101
Aerospace Systems Cmpnents Inc	100
AMETEK Advanced Industries	100
Chance Morgan Inc	100
Dynamic NC	100
Quik Tek Machining	100

Source: CEDBR, Data Axle

Key WAMPO Thoroughfares

Using the list of major firms in the WAMPO region, the demand on the transportation system can be evaluated through three parameters; inbound goods, outbound goods, and the labor movement. When assessing the largest firm, Coleman, both the inbound and outbound goods will have a demand for heavy highway traffic. The main labor access corridor is on 37th St via I-135.

It is also to consider the commutes for laborers leaving the WAMPO region and returning after the completion of the workday. Hustler Turf Equipment in Newton is outside of the boundaries of the WAMPO region, but it is essential to consider the labor force commuting along I-135.

CNH (Case New Holland) Wichita is an agricultural equipment manufacturer with a large demand for heavy highway traffic. The main access corridor for labor commuting to this firm is Hoover Rd via K-42.

Balance of Trade

Overall, the total value of advanced manufacturing imports increased from $2.9 billion in 2018 to $3.7 billion in 2020, then grew to $4.1 billion in 2022. The largest subsector by value is ag & construction & machinery, which has almost doubled in size since 2019.

It is also interesting to note that the total value of Kansas exports increased from 2018 to 2020 and then decreased in 2021. Conversely, the total value of US exports increased steadily from 2018 to 2022. However, these figures are not directly related to the aerospace imports data and are included as additional context.

Imports - Advanced Manufacturing					
Subsector	2018	2019	2020	2021	2022
3321 Crowns/closures/seals & Other Packing Accessories	$390,260	$387,274	$349,057	$844,578	$1,727,322
3322 Cutlery & Handtools	$19,205,562	$22,214,620	$22,216,016	$30,852,322	$38,050,414
3323 Architectural & Structural Metals	$58,567,177	$20,094,678	$73,587,985	$26,007,408	$53,794,137
3324 Boilers, Tanks & Shipping Containers	$26,918,175	$26,392,216	$15,136,811	$29,808,738	$60,646,525
3327 Bolts/nuts/scrws/rivts/washrs & Other Turned Prods	$51,213,197	$55,248,227	$46,128,066	$50,454,966	$73,982,760
3329 Other Fabricated Metal Products	$371,388,412	$377,500,068	$487,569,166	$651,495,638	$592,822,331
3331 Ag & Construction & Machinery	$662,730,287	$660,586,432	$712,673,851	$1,010,807,417	$1,343,640,258
3332 Industrial Machinery	$136,185,594	$134,380,402	$117,874,798	$134,107,235	$119,705,522
3333 Commercial & Service Industry Machinery	$132,237,935	$90,782,384	$84,838,453	$134,990,169	$117,934,539
3334 Hvac & Commercial Refrigeration Equipment	$85,956,786	$75,239,292	$53,056,400	$136,214,067	$182,562,725
3335 Metalworking Machinery	$65,154,038	$101,300,513	$72,733,988	$76,818,791	$62,806,247
3336 Engines, Turbines & Power Transmsn Equip	$366,327,619	$277,919,410	$350,111,221	$356,604,668	$234,392,478
3339 Other General Purpose Machinery	$400,065,038	$386,284,814	$309,522,295	$378,979,652	$485,378,892
3362 Motor Vehicle Bodies & Trailers	$14,242,028	$12,798,821	$13,217,079	$22,629,455	$42,555,820
3363 Motor Vehicle Parts	$250,064,630	$247,405,950	$212,972,219	$264,598,713	$344,439,125
3391 Medical Equipment & Supplies	$51,584,653	$60,519,575	$86,752,391	$67,983,994	$60,174,029
3399 Miscellaneous Manufactured Commodities	$239,262,902	$281,788,419	$276,011,197	$395,559,199	$332,689,271
Total Advanced Manufacturing	**$2,931,494,293**	**$2,830,843,095**	**$2,934,750,993**	**$3,768,757,010**	**$4,147,302,395**
Total US Exports	**$2,536,145,273,678**	**$2,491,699,567,726**	**$2,330,836,392,063**	**$2,831,110,526,625**	**$3,246,431,588,450**

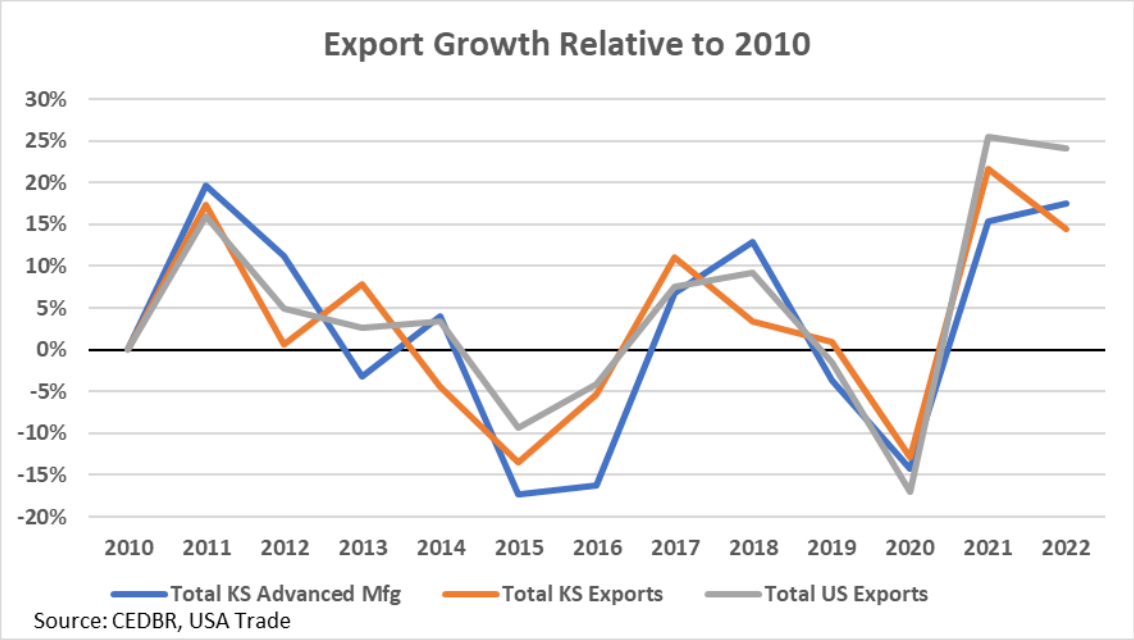
*Data not available for all subsectors

Source: CEDBR - USA Trade

Exports - Advanced Manufacturing					
Subsector	2018	2019	2020	2021	2022
3321 Crowns/closures/seals & Other Packing Accessories	$1,050,391	$697,911	$1,075,369	$172,331	$804,605
3322 Cutlery & Handtools	$14,064,195	$12,539,587	$13,070,265	$17,570,957	$15,841,743
3323 Architectural & Structural Metals	$22,624,332	$19,897,216	$22,038,537	$22,025,750	$26,456,837
3324 Boilers, Tanks & Shipping Containers	$50,021,219	$46,365,515	$55,049,663	$51,167,041	$57,620,497
3327 Bolts/nuts/scrws/rivts/washrs & Other Turned Prods	$17,787,487	$13,792,887	$12,826,847	$11,492,369	$14,631,355
3329 Other Fabricated Metal Products	$136,059,331	$143,299,329	$133,375,890	$125,711,456	$141,833,027
3331 Ag & Construction & Machinery	$587,477,864	$533,752,450	$456,255,578	$531,663,220	$623,535,488
3332 Industrial Machinery	$75,213,319	$67,365,546	$71,328,470	$95,835,501	$92,288,915
3333 Commercial & Service Industry Machinery	$53,962,484	$49,252,182	$49,096,308	$43,642,350	$55,005,966
3334 Hvac & Commercial Refrigeration Equipment	$79,065,337	$64,944,650	$44,035,331	$55,191,298	$108,865,703
3335 Metalworking Machinery	$34,057,832	$24,071,111	$17,796,359	$22,038,887	$34,591,264
3336 Engines, Turbines & Power Transmsn Equip	$27,855,934	$50,702,695	$32,390,771	$37,097,117	$63,926,847
3339 Other General Purpose Machinery	$243,560,362	$225,549,732	$195,670,394	$279,644,386	$314,392,150
3362 Motor Vehicle Bodies & Trailers	$36,157,267	$33,777,047	$25,347,348	$49,484,607	$64,324,854
3363 Motor Vehicle Parts	$72,690,272	$71,171,954	$63,698,120	$87,995,631	$72,864,547
3391 Medical Equipment & Supplies	$27,053,192	$51,804,925	$73,436,972	$30,847,142	$32,757,336
3399 Miscellaneous Manufactured Commodities	$70,703,499	$86,630,487	$69,242,549	$80,309,494	$69,909,791
3252 Resin, Syn Rubber, Artf & Syn Fibers/fil	$74,520,059	$77,133,122	$50,330,745	$28,841,416	$48,240,578
3261 Plastics Products	$147,557,044	$152,928,787	$133,844,248	$155,124,831	$176,374,147
3262 Rubber Products	$206,511,759	$191,586,822	$158,428,527	$208,931,492	$213,788,724
Total KS Advanced Mfg	$1,977,993,179	$1,917,263,955	$1,678,338,291	$1,934,787,276	$2,228,054,374
Total KS Exports	**$11,581,768,320**	**$11,681,205,948**	**$10,405,315,895**	**$12,540,570,549**	**$13,965,084,671**
Total US Exports	**$1,665,786,886,956**	**$1,645,940,338,649**	**$1,428,518,279,410**	**$1,754,300,367,662**	**$2,062,937,260,943**

*Data not available for all subsectors

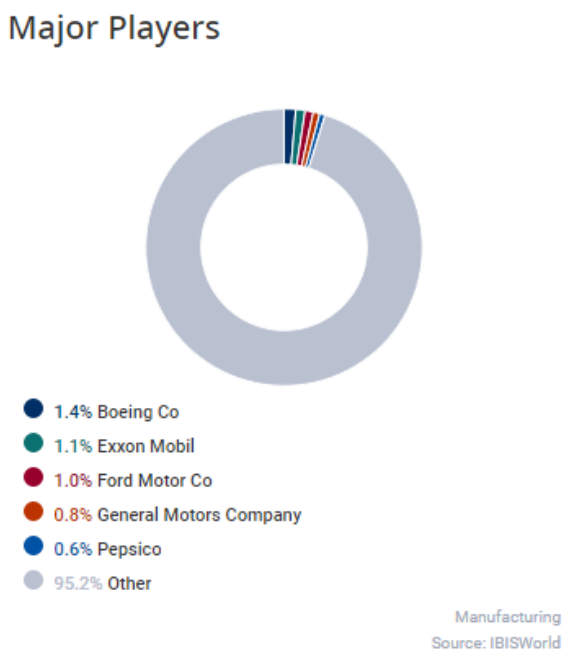
Source: CEDBR - USA Trade

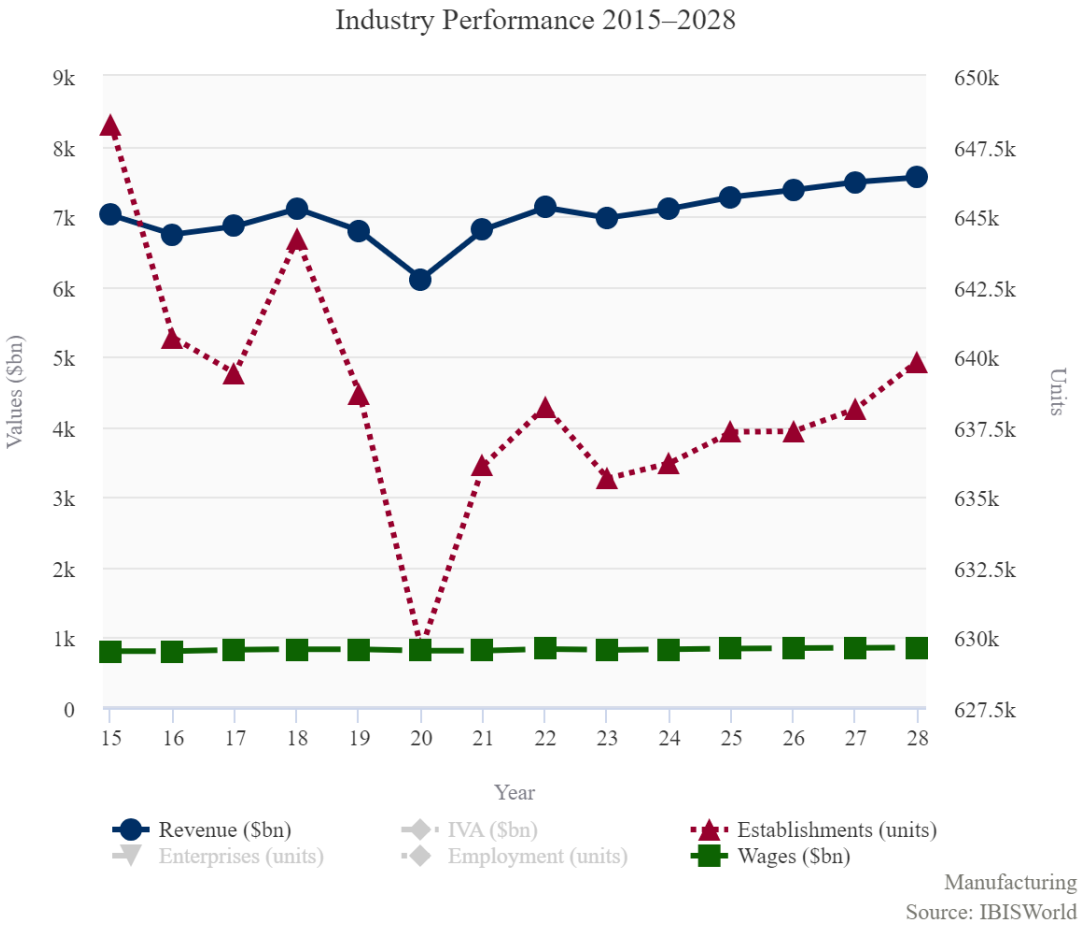


General US Trends

To assess the potential growth of the advanced manufacturing sector, this study examined five economic forces at the national level. Those broad economic conditions were then applied to the regional market, firms, and trends to provide the context of its economic competitiveness.

Overall, the US landscape in the manufacturing sector remains competitive, with no one company maintaining a majority share of the industry. In fact, only 3 of the top companies in the sector account for greater than 1%.





Threat of new entrants

- High capital requirements: The advanced manufacturing industry in Wichita is characterized by high barriers to entry, which make it difficult for new companies to enter the market. For example, setting up a new advanced manufacturing facility can range from $10 million to $100 million. However, there are several local institutional efforts to remediate these barriers, such as Deloitte's Smart Factory along with Wichita State University's GoCreate maker lab.
- Government regulations: The advanced manufacturing industry is heavily regulated, making it difficult for new companies to comply with all the requirements. For example, the Environmental Protection Agency (EPA) regulates the emissions of pollutants from advanced manufacturing facilities.
- Proprietary technology: The advanced manufacturing industry is characterized by proprietary technology, which gives existing companies a competitive advantage. For example, Wichita-based Coleman Industries has proprietary technology in designing and manufacturing outdoor equipment.

Threat of substitutes

- Low threat of substitutes: The threat of substitutes in the advanced manufacturing industry is low, as there are no close substitutes for advanced manufacturing products and services. For example, there is no other way to manufacture products with the same level of precision, efficiency, and quality as advanced manufacturing.

Bargaining power of buyers

- Moderate bargaining power of buyers: The bargaining power of buyers in the advanced manufacturing industry is moderate, as there are a limited number of major buyers, such as aerospace companies, defense contractors, and medical device manufacturers. However, buyers have some bargaining power, as they can choose to buy from other suppliers if they are unsatisfied with the price or quality of the products or services.

Bargaining power of suppliers

- Moderate bargaining power of suppliers: The bargaining power of suppliers in the advanced manufacturing industry is moderate, as there are a limited number of major suppliers, such as machine tool manufacturers, materials suppliers, and software developers. However, suppliers have some bargaining power, as they can choose to sell to other companies if they are unsatisfied with the price or volume of orders.

Rivalry among existing firms

- High rivalry among existing firms: The rivalry among existing firms in the advanced manufacturing industry is intense, as a limited number of major companies compete for a share of the market.

The advanced manufacturing industry in Wichita is a competitive sector with high rivalry among existing firms. The industry is also characterized by high barriers to entry, which make it difficult for new companies to enter the market. The threat of substitutes is low, as there are no close substitutes for advanced manufacturing products and services. The bargaining power of buyers and suppliers is moderate.

The advanced manufacturing industry is a vital part of the Wichita economy and a significant employer in the area. The industry is also a source of innovation and technology and plays an important role in the national and global economy.

Some additional factors contribute to the competitive landscape of the advanced manufacturing industry in Wichita:

- The presence of a skilled workforce: Wichita has a strong manufacturing workforce with a deep understanding of advanced manufacturing technologies.
- The availability of resources: Wichita has a strong infrastructure to support advanced manufacturing, including a robust supply chain, a network of research and development institutions, and a skilled workforce.

These factors make Wichita an attractive location for advanced manufacturing companies. In addition, the city has a strong track record of supporting the industry, and it offers several advantages that make it an excellent place to do business.