Cincinnati MSA Industry Clusters in Context

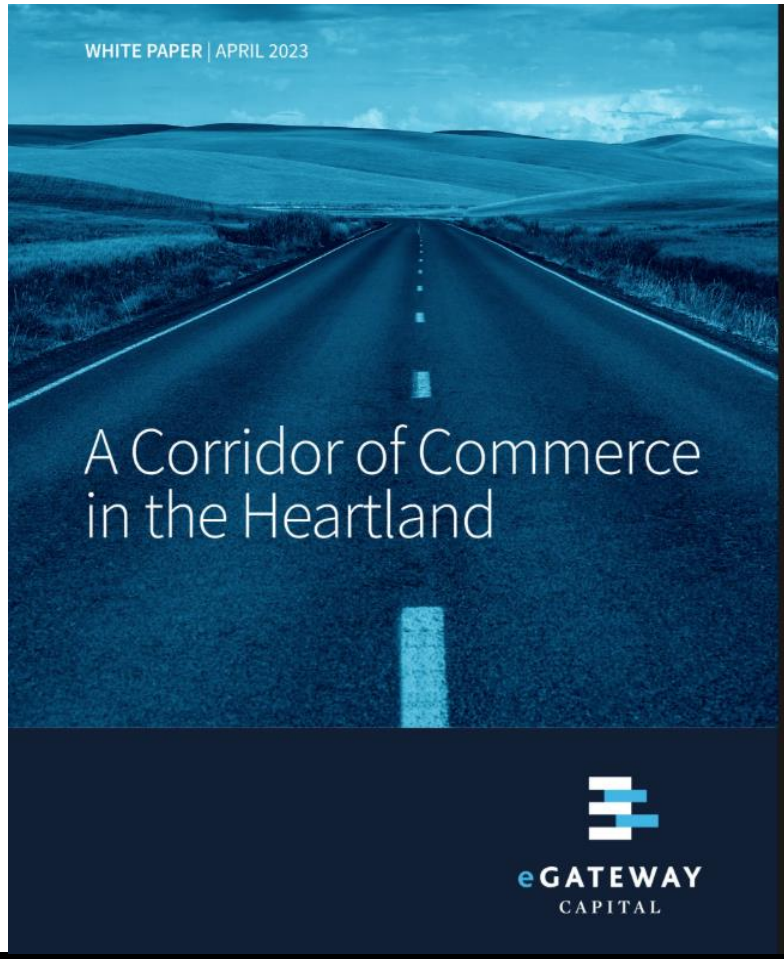
Janet Harrah
Senior Director

Dylan Fogt
CEAD Student Fellow

Project Purpose & Corridor of Commerce

Regional Collaboration as Economic Catalyst

- Industry cluster trends pre- & post-COVID
- Identify resilient sectors and emerging opportunities
- Connect six metros: Cincinnati, Columbus, Dayton, Louisville, Nashville, Memphis
- Leverage market access advantages for long-term prosperity



Identifying Industry Clusters

Focused on Traded Clusters

Traded clusters consist of industries that sell goods and services beyond regional boundaries, connecting the local economy to broader markets.

Attributes:

- higher wages
- export potential
- enhanced innovation
- specialized infrastructure

Criteria for Selecting Clusters

- **Employment Size:** 6K or more
- **Employment Growth:** 14.3% or more
- **Location Quotient (LQ):** 1.25 or more
- **Wage Levels:** $66,831 or more
- **Industry Type:** Fast growing industry nationally
- **Market Share:** Cincinnati is grabbing market share nationally

These quantitative thresholds ensure that selected clusters have sufficient scale, provide quality employment, and demonstrate regional competitive advantage.

Final Cluster Recommendations

Based on strategic importance, wage levels, and growth potential.

Cincinnati MSA:

- Life Sciences
- Transportation and Logistics
- Advanced Manufacturing
- Aerospace and Aviation
- Wholesale Trade

Common Clusters Corridor/Cincinnati MSA:

- Transportation and Logistics, Manufacturing

These five clusters represent significant economic engines, strategically positioned for continued development in the Cincinnati MSA

Industry Cluster Profiles

A comprehensive economic analysis of key industry clusters driving growth and employment in the Cincinnati Metropolitan Statistical Area.

ECA: Three Types of Economic Impacts

Initial spending by Life Sciences companies themselves:

- Employee salaries and benefits
- Capital investments
- Operational expenditures
- Research and development

Additional economic activity from business-to-business purchases:

- Laboratory equipment suppliers
- Contract research organizations
- Professional services (legal, accounting)
- Transportation and logistics

Further activity from household spending of income earned from direct and indirect effects:

- Retail purchases
- Housing payments
- Healthcare services
- Dining and entertainment

Cluster Profile
Life Sciences

How CEAD Defines Cluster: Life Science

The Life Sciences cluster encompasses 22 NAICS codes across **pharmaceuticals, medical devices, research, & specialized distribution services.**

Manufacturing Components

325411 Medicinal & Botanical Manufacturing
325412 Pharmaceutical Preparation Manufacturing
325413 In-Vitro Diagnostic Substance Manufacturing
325414 Biological Product (except Diagnostic) Manufacturing
333310 Commercial & Service Industry Machinery Manufacturing
334510 Electromedical & Electrotherapeutic Apparatus Manufacturing
334516 Analytical Laboratory Instrument Manufacturing
334517 Irradiation Apparatus Manufacturing
339112 Surgical & Medical Instrument Manufacturing
339113 Surgical Appliance & Supplies Manufacturing
339114 Dental Equipment & Supplies Manufacturing
339115 Ophthalmic Goods Manufacturing
339116 Dental Laboratories

Distribution Components

423450 Medical, Dental, & Hospital Equipment & Supplies Merchant Wholesalers
423460 Ophthalmic Goods Merchant Wholesalers
424210 Drugs & Druggists' Sundries Merchant Wholesalers

Research Components

541380 Testing Laboratories & Services
541713 Research & Development in Nanotechnology
541714 Research & Development in Biotechnology (except Nanobiotechnology)
541715 Research & Development in the Physical, Engineering, & Life Sciences (except Nanotechnology & Biotechnology)
621511 Medical Laboratories
621512 Diagnostic Imaging Centers

Job & Wage Growth: Life Sciences

21.3%

Job Growth

Life sciences employment growth over the past decade (2013-2023) more than double the growth rate for all jobs of **10.4%**

30.9%

Real Inflation-Adjusted Wage Growth

Inflation-adjusted increase in life sciences outpaces the **5.7%** growth for all jobs

$104,535

Average Annual Salary

Life sciences average annual wage in 2023, significantly above the regional average of **$61,750** for all jobs

Life Sciences:
Economic Contribution Snapshot

$11B

Economic Output

Annual contribution to regional GDP

43,800

Jobs Supported

Direct, Indirect, Induced Employment

$387.7M

Tax Revenue

Annual state and local taxes generated

2.4X

Multiplier Effect

1 direct job = 1.4 additional jobs

The Life Sciences cluster represents a significant growth opportunity for the region, with strong innovation potential and above-average economic multiplier effects.

Cluster Profile: Advanced Manufacturing

How CEAD Defines Cluster: Advanced Manufacturing

- All manufacturing (NAICS codes 31-33) are included in the cluster
- Cincinnati particularly **excels** in
  - Food Manufacturing (Food and Flavoring) - 311
  - Paper Manufacturing – 322
  - Chemical Manufacturing – 325
  - Transportation Equipment Manufacturing – 336

Job & Wage Growth: Advanced Manufacturing

13.6%

Job Growth

Advanced Manufacturing employment growth over the past decade (2013-2023) outpaced the growth rate for all jobs of **10.4%**

5.8%

Real Inflation-Adjusted Wage Growth

Inflation-adjusted increase in advanced manufacturing on par with **5.7%** growth for all jobs

$87,103

Average Annual Salary

Advanced Manufacturing average annual wage in 2023, is roughly **40%** above the regional average of **$61,750** for all jobs

Advanced Manufacturing:
Economic Contribution Snapshot

$127.3B

Economic Output

Annual contribution to regional GDP

334,700

Jobs Supported

Direct, Indirect, Induced Employment

$3.71B

Tax Revenue

Annual state and local taxes generated

2.74X

Multiplier Effect

1 direct job = 1.74 additional jobs

Advanced Manufacturing represents the economic backbone of the region, generating over 2 times more economic output than Aerospace and Aviation and Life Sciences combined.

Cluster Profile: Aerospace and Aviation

How CEAD Defines Cluster:
Aerospace and Aviation

The Aerospace and Aviation cluster encompasses 3 NAICS codes across manufacturing and air service.

Manufacturing Components

3345 Navigational, Measuring, Electromedical, and Control Instruments Manufacturing
3364 Aerospace Product and Parts Manufacturing

Transportation Components

481 Air Transportation (both scheduled and nonscheduled

Job & Wage Growth: Aerospace and Aviation

28.5%

Job Growth

Aerospace and Aviation employment growth over the past decade (2013-2023) outpaced the growth rate for all jobs of **10.4%**

5.5%

Real Inflation-Adjusted Wage Growth

Inflation-adjusted increase in life sciences outpaces the **5.7%** growth for all jobs

$127,104

Average Annual Salary

Aerospace and Aviation average annual wage in 2023, **more than double** the regional average of **$61,750** for all jobs

Aerospace and Aviation:
Economic Contribution Snapshot

$17.5B

Economic Output

Annual contribution to regional GDP

49,500

Jobs Supported

Direct, Indirect, Induced Employment

$590M

Tax Revenue

Annual state and local taxes generated

2.63X

Multiplier Effect

1 direct job = 1.63 additional jobs

The Aerospace and Aviation sector delivers nearly twice the economic output of Life Sciences with a stronger multiplier effect, creating significant downstream economic benefits.

Cluster Profile: Transportation and Logistics

How CEAD Defines Cluster: Transportation and Logistics

- All NAICS codes under these categories are included

481	Air Transportation
482	Rail Transportation
483	Water Transportation
484	Truck Transportation
486	Pipeline Transportation
488	Support Activities for Transportation
492	Couriers and Messengers
493	Warehousing and Storage
541614	Process, Physical Distribution, and Logistics Consulting Services

Job & Wage Growth: Transportation & Logistics

98.9%

Job Growth

Transportation and Logistics employment growth over the past decade (2013-2023) nearly **10% faster** than growth rate for all jobs of **10.4%**

4%

Real Inflation-Adjusted Wage Growth

Inflation-adjusted increase in transportation and logistics lags the **5.7%** growth for all jobs

$62,069

Average Annual Salary

Transportation and Logistics average annual wage in 2023, is slightly above the average of **$61,750** for all jobs

Transportation and Logistics:
Economic Contribution Snapshot

$17B

Economic Output

Annual contribution to regional GDP

106,200

Jobs Supported

Direct, Indirect, Induced Employment

$733M

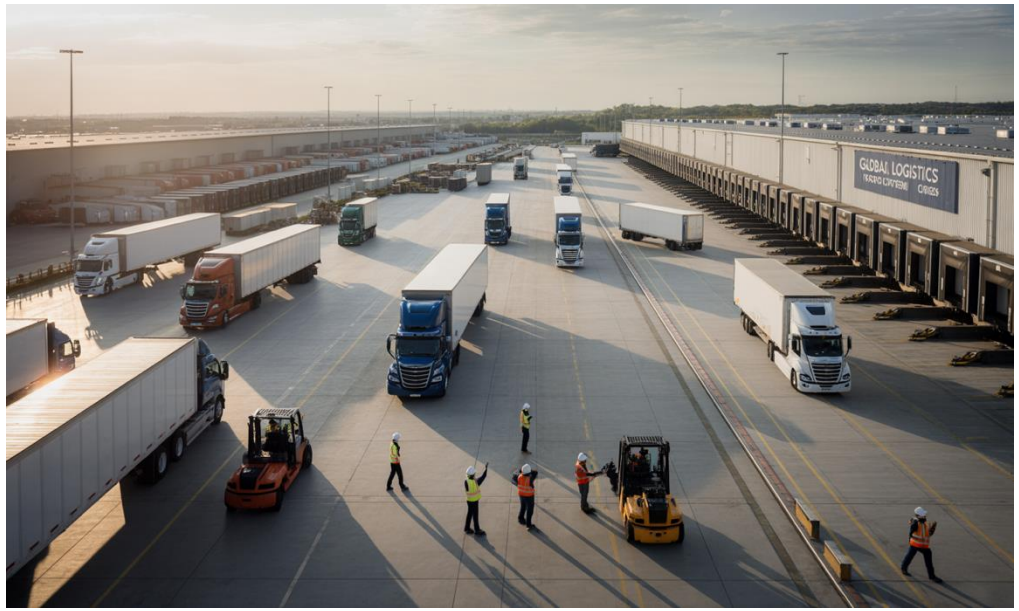
Tax Revenue

Annual state and local taxes generated

1.67X

Multiplier Effect

1 direct job = 0.67 additional jobs



Despite a lower multiplier effect than other clusters, Transportation and Logistics supports a significantly larger employment base relative to its economic output.

Cluster Profile
Wholesale Trade

How CEAD Defines Cluster:
Wholesale Trade

423 – Merchant Wholesalers, **Durable Goods**

424 – Merchant Wholesalers, **Nondurable Goods**

425 – Wholesale **Electronic Markets and Agents and Brokers**

Sub-sectors very different employment trends over the past decade (2013-2023):

Job & Wage Growth: Wholesale Trade

0.04%*

Job Growth

Wholesale Trade employment growth over the past decade (2013-2023) was slower than growth rate for all jobs of **10.4%**

3.3%

Real Inflation-Adjusted Wage Growth

Inflation-adjusted increase in wholesale trade lags the **5.7%** growth for all jobs

$88,472

Average Annual Salary

Wholesale trade average annual wage in 2023, significantly above the regional average of **$61,750** for all jobs

***Durable Goods: up 20.2% or 5,445 jobs**

Wholesale Trade:
Economic Contribution Snapshot

$39B

Economic Output

Annual contribution to regional GDP

140,100

Jobs Supported

Direct, Indirect, Induced Employment

$2.4B

Tax Revenue

Annual state and local taxes generated

2.62X

Multiplier Effect

1 direct job = 1.62 additional jobs

The Wholesale Trade cluster generates substantial tax revenues relative to its economic output, providing critical funding for regional infrastructure and services.

Wholesale Trade Generates Demand for Specialized Logistics Talent

Consumer Packaged Goods

Robust CPG sector requires logistics expertise in:

- Retail logistics coordination
- Inventory management systems
- Promotional shipment planning
- Multi-channel distribution

Automotive Supply Chain

Strategic location near manufacturing hubs creates demand:

- Just-in-time delivery expertise
- Parts distribution networks
- Cross-border logistics management
- Supply chain visibility systems

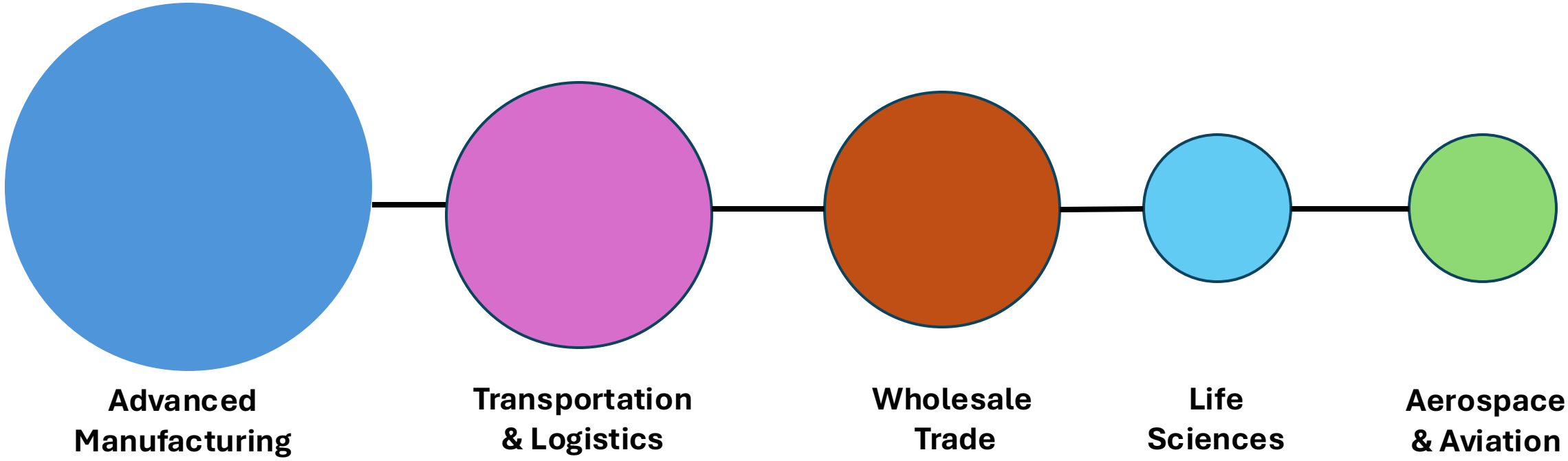
Life Sciences Distribution

Growing sector requiring specialized knowledge in:

- Regulatory compliance
- Quality management systems
- Temperature-controlled logistics
- Chain of custody documentation

Cincinnati MSA Industry Cluster Network (2023 Employment)

These interconnected clusters create multiplier effects, reinforcing each other's growth potential.



Next Steps

- **Workforce analysis**: Identify talent gaps, and critical skills shortages.
- **Competitor analysis**: Compare Cincinnati with peer metros and top competitors.
- **Technology scanning**: Identify new/emerging technologies on the horizon, which could disrupt the trajectory of this industry.