

# Advanced Materials and Diversified Manufacturing

Analysis for Trumbull County, Ohio

## Industries Included in the Advanced Materials and Diversified Manufacturing Cluster<sup>3</sup>

- Automobile manufacturing
- Copper wire, except mechanical, drawing
- Iron and steel mills
- All other plastics product manufacturing
- Iron, steel pipe and tube from purchase steel
- Aluminum extruded product manufacturing
- Iron and steel forging
- Machine shops
- Rolled steel shape manufacturing
- Nonferrous metal, except CU and AL, shaping
- Miscellaneous fabricated metal product mfg.
- Metal coating and nonprecious engraving
- Special tool, die, jig, and fixture mfg.

## Top 5 Employing Industries 58.18% of Cluster Jobs (2006)

- Automobile manufacturing
- Copper wire, except mechanical, drawing
- Iron and steel mills
- Nonferrous metal, except CU and AL, shaping
- All other plastics product manufacturing

(1) Number of individual establishments or physical locations of a certain economic activity.

(2) Location Quotient (LQ) is a statistical measure that compares the concentration of employment in a local industry cluster to the concentration of employment in the same cluster statewide or nationally. An LQ of greater than 1.0 suggests that a locale has a competitive advantage within a cluster and is producing goods or services in excess of the local consumption, thus resulting in exportation of goods or services. An LQ of less than one suggests that an industry is falling behind local demand and is importing the good or service.

(3) Industries included in the five-county Pennsylvania and Ohio region. Not all industries may be present in each individual county.

## Cluster Statistics

Based on the North American Industrial Classification System (NAICS)	Trumbull County
Employer Units <sup>1</sup> (2006)	213
Number of Jobs (2006)	19,268
Net Change in Job Volume (2002-2006)	-4,549
Percent Change in Job Volume (2002-2006)	-19.10%
Percent of Total Region Jobs (2006)	17.91%
Average Annual Wages (2006)	\$99,981
Estimated Cluster Payroll (2006)	\$1,926,434,000
State Location Quotient <sup>2</sup> (2006)	2.34
Percent Change from 2002 State Location Quotient	-4.76%
National Location Quotient <sup>2</sup> (2006)	3.23
Percent Change from 2002 National Location Quotient	-4.17%

## Percent of County Employment (2006)

<b>Advanced Materials and Diversified Manufacturing</b>	<b>17.91%</b>
Building and Construction	5.79%
Business and Financial Services	14.36%
Information and Communication Services	1.38%
Life Sciences	12.17%
Logistics and Transportation	3.26%
Non-Targeted Industries	45.13%

## Five Most Common Occupations (2006) and Wages\*

West Central Regional high priority occupations are shown in *italics*.

<i>First-line supervisors/managers of production and operating workers</i>	\$28.54
<i>Maintenance and repair workers, general</i>	\$17.79
<i>Inspectors, testers, sorters, samplers, and weighers</i>	\$16.15
Cutting, punching, and press machine setters, operators, and tenders, metal and plastic	\$15.70
<i>Team assemblers</i>	\$13.48

## Competitive Industries by National LQ (2006)

Individual industries could demonstrate a high LQ due to the uniqueness of the business's primary function rather than competitiveness factors.

Copper wire, except mechanical, drawing	252.38
Nonferrous metal, except CU and AL, shaping	124.42
Rolling mill machinery and equipment mfg.	82.32
Secondary processing of other nonferrous	66.62
Automobile manufacturing	53.73

\*Top occupations determined by a staffing pattern provided by Economic Modeling Specialists, Inc. (EMSI). Staffing patterns are based on the available NAICS codes at the 6-digit level. Hourly wages are reflective of 2006 averages for Trumbull County, Ohio.

OH/PA 5 County Interstate Region Project:  
Columbiana, Lawrence, Mahoning,  
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West Central Job Partnership  
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Fiscal Agent and Point of Contact for  
OH/PA 5 County Interstate Region Project

All data was provided by Economic Modeling Specialists, Inc., 2008 (EMSI) for the period 2002 to 2006 and calculated by Central Pennsylvania Workforce Development Corporation, using the Pennsylvania statewide cluster definitions.

February 2008

# Building and Construction

Analysis for Trumbull County, Ohio

## Industries Included in the Building and Construction Cluster<sup>3</sup>

- Site preparation contractors
- Plumbing and HVAC contractors
- Electrical contractors
- Painting and wall covering contractors
- All other specialty trade contractors
- New single-family general contractors
- Residential remodelers
- Commercial building construction
- Masonry contractors
- Roofing contractors
- Finish carpentry contractors
- Drywall and insulation contractors
- Fabricated structural metal manufacturing
- Highway, street, and bridge construction
- Poured concrete structure contractors
- Plumbing equip. merchant wholesalers

## Top 5 Employing Industries 37.13% of Cluster Jobs (2006)

- Commercial building construction
- Plumbing and HVAC contractors
- Site preparation contractors
- Electrical contractors
- New single-family general contractors

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(3) Industries included in the five-county Pennsylvania and Ohio region. Not all industries may be present in each individual county.

## Cluster Statistics

Based on the North American Industrial Classification System (NAICS)	Trumbull County
Employer Units <sup>1</sup> (2006)	585
Number of Jobs (2006)	6,232
Net Change in Job Volume (2002-2006)	392
Percent Change in Job Volume (2002-2006)	6.71%
Percent of Total Region Jobs (2006)	5.79%
Average Annual Wages (2006)	\$40,500
Estimated Cluster Payroll (2006)	\$252,396,000
State Location Quotient <sup>2</sup> (2006)	0.84
Percent Change from 2002 State Location Quotient	4.54%
National Location Quotient <sup>2</sup> (2006)	0.77
Percent Change from 2002 National Location Quotient	0.34%

## Percent of County Employment (2006)

Advanced Materials and Diversified Manufacturing	17.91%
<b>Building and Construction</b>	<b>5.79%</b>
Business and Financial Services	14.36%
Information and Communication Services	1.38%
Life Sciences	12.17%
Logistics and Transportation	3.26%
Non-Targeted Industries	45.13%

## Five Most Common Occupations (2006) and Wages\*

West Central Regional high priority occupations are shown in *italics*.

<i>Construction managers</i>	\$36.74
<i>Electricians</i>	\$29.45
<i>First-line supervisors/managers of construction trades and extraction workers</i>	\$27.73
<i>Carpenters</i>	\$21.21
<i>Construction laborers</i>	\$21.19

## Competitive Industries by National LQ (2006)

Individual industries could demonstrate a high LQ due to the uniqueness of the business's primary function rather than competitiveness factors.

Flat glass manufacturing	13.15
Fabricated structural metal manufacturing	2.79
Plumbing equip. merchant wholesalers	2.74
Metal window and door manufacturing	2.62
Glass and glazing contractors	1.98

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# Business and Financial Services

Analysis for Trumbull County, Ohio

## Industries Included in the Business and Financial Services Cluster<sup>3</sup>

- Janitorial services
- Temporary help services
- Lessors of residential buildings
- Insurance agencies and brokerages
- Telemarketing bureaus
- Commercial banking
- Managing offices
- Landscaping services
- Offices of real estate agents and brokers
- All other professional and technical services
- Offices of lawyers
- Lessors of nonresidential buildings
- Office administrative services
- Other activities related to real estate
- Other accounting services
- Direct property and casualty insurers

## Top 5 Employing Industries 31.49% of Cluster Jobs (2006)

- Telemarketing bureaus
- Temporary help services
- Janitorial services
- Lessors of residential buildings
- Landscaping services

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(3) Industries included in the five-county Pennsylvania and Ohio region. Not all industries may be present in each individual county.

## Cluster Statistics

Based on the North American Industrial Classification System (NAICS)	Trumbull County
Employer Units <sup>1</sup> (2006)	987
Number of Jobs (2006)	15,457
Net Change in Job Volume (2002-2006)	967
Percent Change in Job Volume (2002-2006)	6.67%
Percent of Total Region Jobs (2006)	14.36%
Average Annual Wages (2006)	\$31,287
Estimated Cluster Payroll (2006)	\$483,603,000
State Location Quotient <sup>2</sup> (2006)	0.80
Percent Change from 2002 State Location Quotient	2.28%
National Location Quotient <sup>2</sup> (2006)	0.74
Percent Change from 2002 National Location Quotient	2.81%

## Percent of County Employment (2006)

Advanced Materials and Diversified Manufacturing	17.91%
Building and Construction	5.79%
<b>Business and Financial Services</b>	<b>14.36%</b>
Information and Communication Services	1.38%
Life Sciences	12.17%
Logistics and Transportation	3.26%
Non-Targeted Industries	45.13%

## Five Most Common Occupations (2006) and Wages\*

West Central Regional high priority occupations are shown in *italics*.

<i>Real estate sales agents</i>	\$24.16
Real estate brokers	\$21.81
<i>Customer service representatives</i>	\$15.50
Janitors and cleaners, except maids and housekeeping cleaners	\$12.40
<i>Telemarketers</i>	\$10.24

## Competitive Industries by National LQ (2006)

Individual industries could demonstrate a high LQ due to the uniqueness of the business's primary function rather than competitiveness factors.

Telemarketing bureaus	6.81
Home health equipment rental	5.39
Display advertising	3.77
Other credit intermediation activities	3.26
Communication equipment repair	2.72

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# Information and Communication Services

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## Industries Included in the Information and Communication Services Cluster<sup>3</sup>

- Wired telecommunications carriers
- Engineering services
- Newspaper publishers
- Custom computer programming services
- Data processing and related services
- Computer systems design services
- Cellular and other wireless carriers
- Other computer related services
- Cable and other program distribution
- Television broadcasting
- Telecommunications resellers
- Other technical consulting services
- Testing laboratories
- Internet publishing and broadcasting
- Radio stations
- Internet service providers
- Periodical publishers

## Top 5 Employing Industries 54.67% of Cluster Jobs (2006)

- Data processing and related services
- Wired telecommunications carriers
- Engineering services
- Other computer related services
- Testing laboratories

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(3) Industries included in the five-county Pennsylvania and Ohio region. Not all industries may be present in each individual county.

## Cluster Statistics

Based on the North American Industrial Classification System (NAICS)	Trumbull County
Employer Units <sup>1</sup> (2006)	106
Number of Jobs (2006)	1,489
Net Change in Job Volume (2002-2006)	-264
Percent Change in Job Volume (2002-2006)	-15.06%
Percent of Total Region Jobs (2006)	1.38%
Average Annual Wages (2006)	\$42,748
Estimated Cluster Payroll (2006)	\$63,652,000
State Location Quotient <sup>2</sup> (2006)	0.44
Percent Change from 2002 State Location Quotient	-11.23%
National Location Quotient <sup>2</sup> (2006)	0.37
Percent Change from 2002 National Location Quotient	-11.43%

## Percent of County Employment (2006)

Advanced Materials and Diversified Manufacturing	17.91%
Building and Construction	5.79%
Business and Financial Services	14.36%
<b>Information and Communication Services</b>	<b>1.38%</b>
Life Sciences	12.17%
Logistics and Transportation	3.26%
Non-Targeted Industries	45.13%

## Five Most Common Occupations (2006) and Wages\*

West Central Regional high priority occupations are shown in *italics*.

<i>Computer software engineers, systems software</i>	\$38.59
<i>Network systems and data communications analysts</i>	\$33.88
<i>Telecommunications equipment installers and repairers, except line installers</i>	\$29.93
<i>Computer support specialists</i>	\$21.21
<i>Customer service representatives</i>	\$15.50

## Competitive Industries by National LQ (2006)

Individual industries could demonstrate a high LQ due to the uniqueness of the business's primary function rather than competitiveness factors.

Sound recording studios	2.95
Data processing and related services	1.26
Internet service providers	1.20
Other computer related services	1.08
Testing laboratories	1.02

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## Industries Included in the Life Sciences Cluster<sup>3</sup>

- General medical and surgical hospitals
- Nursing care facilities
- Offices of physicians, except mental health
- Home health care services
- Offices of dentists
- Pharmacies and drug stores
- Offices of specialty therapists
- Continuing care retirement communities
- Residential mental retardation facilities
- Outpatient mental health centers
- Homes for the elderly
- Ambulance services
- Other residential care facilities
- Residential mental and substance abuse care

## Top 5 Employing Industries

### 75.52% of Cluster Jobs (2006)

- General medical and surgical hospitals
- Nursing care facilities
- Offices of physicians, except mental health
- Home health care services
- Offices of dentists

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## Cluster Statistics

Based on the North American Industrial Classification System (NAICS)	Trumbull County
Employer Units <sup>1</sup> (2006)	519
Number of Jobs (2006)	13,095
Net Change in Job Volume (2002-2006)	2,525
Percent Change in Job Volume (2002-2006)	23.89%
Percent of Total Region Jobs (2006)	12.17%
Average Annual Wages (2006)	\$41,494
Estimated Cluster Payroll (2006)	\$543,364,000
State Location Quotient <sup>2</sup> (2006)	1.00
Percent Change from 2002 State Location Quotient	22.43%
National Location Quotient <sup>2</sup> (2006)	1.25
Percent Change from 2002 National Location Quotient	23.41%

## Percent of County Employment (2006)

Advanced Materials and Diversified Manufacturing	17.91%
Building and Construction	5.79%
Business and Financial Services	14.36%
Information and Communication Services	1.38%
<b>Life Sciences</b>	<b>12.17%</b>
Logistics and Transportation	3.26%
Non-Targeted Industries	45.13%

## Five Most Common Occupations (2006) and Wages\*

West Central Regional high priority occupations are shown in *italics*.

<i>Registered nurses</i>	\$31.76
<i>Licensed practical and licensed vocational nurses</i>	\$20.02
<i>Medical secretaries</i>	\$13.30
<i>Nursing aides, orderlies, and attendants</i>	\$12.38
<i>Home health aides</i>	\$10.79

## Competitive Industries by National LQ (2006)

Individual industries could demonstrate a high LQ due to the uniqueness of the business's primary function rather than competitiveness factors.

Psychiatric and substance abuse hospitals	4.22
Ophthalmic goods manufacturing	4.21
Offices of podiatrists	4.17
Nursing care facilities	2.28
Offices of mental health physicians	2.18

\*Top occupations determined by a staffing pattern provided by Economic Modeling Specialists, Inc. (EMSI). Staffing patterns are based on the available NAICS codes at the 6-digit level. Hourly wages are reflective of 2006 averages for Trumbull County, Ohio.

# Logistics and Transportation

Analysis for Trumbull County, Ohio

## Industries Included in the Logistics and Transportation Cluster<sup>3</sup>

- General freight trucking, long-distance TL
- Other specialized trucking, local
- General freight trucking, local
- General freight trucking, long-distance LTL
- Couriers
- General warehousing and storage
- Line-haul railroads
- Process and logistics consulting services
- Other specialized trucking, long-distance
- Other warehousing and storage
- Freight transportation arrangement
- Used household and office goods moving
- Miniwarehouse and self-storage unit operators

## Top 5 Employing Industries 69.97% of Cluster Jobs (2006)

- General freight trucking, long-distance TL
- Couriers
- General warehousing and storage
- General freight trucking, long-distance LTL
- General freight trucking, local

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## Cluster Statistics

Based on the North American Industrial Classification System (NAICS)	Trumbull County
Employer Units <sup>1</sup> (2006)	140
Number of Jobs (2006)	3,506
Net Change in Job Volume (2002-2006)	-108
Percent Change in Job Volume (2002-2006)	-2.98%
Percent of Total Region Jobs (2006)	3.26%
Average Annual Wages (2006)	\$43,930
Estimated Cluster Payroll (2006)	\$154,019,000
State Location Quotient <sup>2</sup> (2006)	1.10
Percent Change from 2002 State Location Quotient	-7.88%
National Location Quotient <sup>2</sup> (2006)	1.26
Percent Change from 2002 National Location Quotient	-3.83%

## Percent of County Employment (2006)

Advanced Materials and Diversified Manufacturing	17.91%
Building and Construction	5.79%
Business and Financial Services	14.36%
Information and Communication Services	1.38%
Life Sciences	12.17%
<b>Logistics and Transportation</b>	<b>3.26%</b>
Non-Targeted Industries	45.13%

## Five Most Common Occupations (2006) and Wages\*

West Central Regional high priority occupations are shown in *italics*.

<i>Truck drivers, heavy and tractor-trailer</i>	\$20.74
<i>Truck drivers, light or delivery services</i>	\$16.39
<i>Laborers and freight, stock, and material movers, hand</i>	\$14.68
<i>Driver/sales workers</i>	\$13.26
Couriers and messengers	\$10.82

## Competitive Industries by National LQ (2006)

Individual industries could demonstrate a high LQ due to the uniqueness of the business's primary function rather than competitiveness factors.

All other support activities for transport.	10.37
Support activities for rail transportation	5.41
Other warehousing and storage	3.37
General freight trucking, long-distance LTL	2.09
Process and logistics consulting services	2.02

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