



Target Industry Cluster Analysis

Foothills Region, North Carolina

Table of contents

01 Overview

02 Target Industry Clusters

01 overview

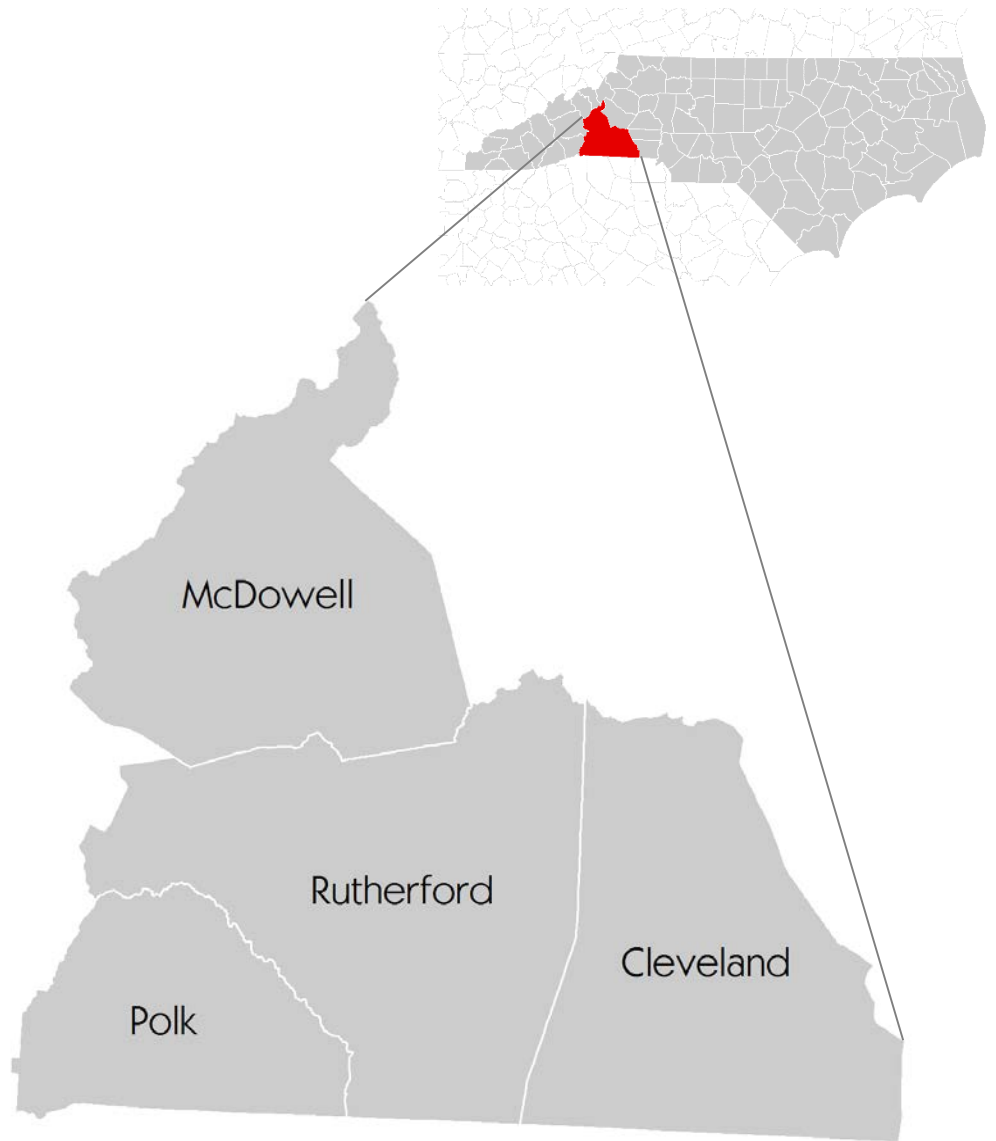
Foothills Region, NC

Overview

Foothills Region

The Foothills Region is comprised of four North Carolina counties. Interstate I-40 passes through the northern part of the region connecting to I-77 to the east and I-26 to the west.

- Cleveland
- McDowell
- Polk
- Rutherford



02 target industry clusters

Apparel and Textiles

Chemicals

Forest and Wood Products

**Fabricated Metal Products
Manufacturing**

Primary Metal Manufacturing

Shift-Share Analysis by Top Industry Sectors

Apparel and Textiles Cluster

Industries	Jobs 2014	National Trend, 2009-2014	Industry Trend, 2009-2014	Cumulative Expected Growth	Actual Job Growth, 2009-2014	Regional Performance, 2009-2014
		A	B	C=A+B	D	D-C
Broadwoven Fabric Mills	986	44	-86	-42	301	↑ 343
Carpet and Rug Mills	414	29	-105	-76	-43	↑ 33
Fiber, Yarn, and Thread Mills	383	35	-51	-16	-169	-153
Upholstered Household Furniture Manufacturing	264	7	-1	6	160	↑ 154
Rope, Cordage, Twine, Tire Cord, and Tire Fabric Mills	233	12	-23	-11	47	↑ 58
Artificial and Synthetic Fibers and Filaments Manufacturing	206	5	-8	-3	130	↑ 133
Textile and Fabric Finishing Mills	205	21	-89	-68	-120	-52
All Other Miscellaneous Textile Product Mills	171	5	-2	3	97	↑ 94
Piece Goods, Notions, and Other Dry Goods Merchant Wholesalers	103	5	-1	4	18	↑ 14
Fabric Coating Mills	101	5	14	19	24	↑ 5
Nonwoven Fabric Mills	96	3	1	4	51	↑ 47
Men's and Boys' Cut and Sew Apparel Manufacturing	85	4	-12	-8	19	↑ 27
Commercial Screen Printing	75	2	3	5	45	↑ 40
Outdoor Advertising	62	3	1	4	12	↑ 8
Knit Fabric Mills	61	9	-15	-6	-71	-65

Note: Upward arrow (↑) indicates regional competitiveness.

section 02

Top Industry Sectors

Apparel and Textiles Cluster

Industries	Exports 2013 (\$ Millions)	Jobs 2013	Export per job 2013 (\$)	LQ 2014
Broadwoven Fabric Mills	\$195.4	921	\$212,262	64.3
Carpet and Rug Mills	\$101.7	396	\$256,981	24.6
Fiber, Yarn, and Thread Mills	\$106.4	396	\$268,875	24.9
Upholstered Household Furniture Manufacturing	\$18.4	109	\$168,778	8.6
Rope, Cordage, Twine, Tire Cord, and Tire Fabric Mills	\$52.6	264	\$199,401	70.3
Artificial and Synthetic Fibers and Filaments Manufacturing	\$78.8	184	\$428,795	14.9
Textile and Fabric Finishing Mills	\$23.4	202	\$115,682	14.3
All Other Miscellaneous Textile Product Mills	\$12.3	131	\$93,810	8.6
Piece Goods, Notions, and Other Dry Goods Merchant Wholesalers	\$14.6	110	\$132,070	6.2
Fabric Coating Mills	\$15.3	101	\$151,693	21.2
Nonwoven Fabric Mills	\$38.9	133	\$292,331	14.0
Men's and Boys' Cut and Sew Apparel Manufacturing	\$7.3	110	\$66,459	5.2
Commercial Screen Printing	\$6.7	80	\$82,843	1.7
Outdoor Advertising	\$5.2	58	\$88,836	2.3
Knit Fabric Mills	\$19.4	75	\$258,466	16.0

Note: Sorted similarly as the shift-share analysis slide

section 02

Top 15 Inputs by Dollars

Apparel and Textiles Cluster

Industries	Estimated Input (\$ Millions), 2013	% In-Region	% Out of Region
Corporate, Subsidiary, and Regional Managing Offices	\$49.05	1%	99%
Artificial and Synthetic Fibers and Filaments Manufacturing	\$47.35	20%	80%
Fiber, Yarn, and Thread Mills	\$26.96	51%	49%
Plastics Material and Resin Manufacturing	\$22.88	6%	94%
Synthetic Rubber Manufacturing	\$20.58	8%	92%
All Other Basic Organic Chemical Manufacturing **	\$14.66	0%	100%
Crop Production	\$14.52	17%	83%
Petrochemical Manufacturing **	\$10.73	0%	100%
Textile and Fabric Finishing Mills	\$7.56	11%	89%
Wholesale Trade Agents and Brokers	\$6.60	7%	93%
Broadwoven Fabric Mills	\$5.71	81%	19%
General Freight Trucking, Long-Distance, Truckload	\$4.36	14%	86%
All Other Professional, Scientific, and Technical Services	\$3.86	17%	83%
Synthetic Dye and Pigment Manufacturing **	\$3.66	0%	100%
Engineering Services	\$3.37	10%	90%

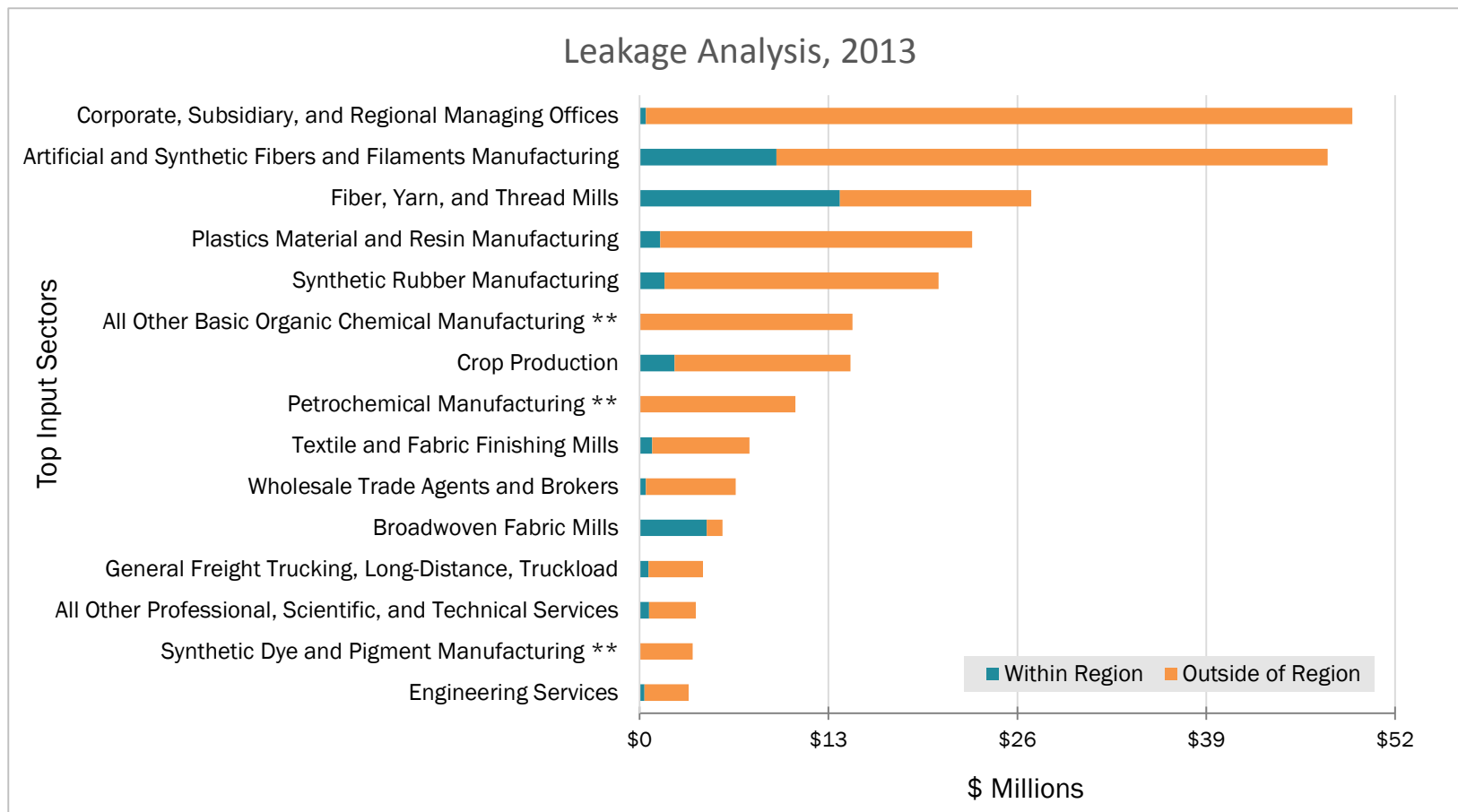
Note: ** industry sector is not present in the region.

section 02

Source: EMSI Class of Worker 2015.4 (QCEW, non-QCEW, self-employed and extended proprietors).

Top 15 Inputs by Dollars

Apparel and Textiles Cluster



Note: ** industry sector is not present in the region.

section 02

Top Occupations

Apparel and Textiles Cluster

Occupations	Jobs 2014	% Change, 2009-2014	Median Hourly Earnings	Entry Level Education
Textile Winding, Twisting, and Drawing Out Machine Setters, Operators, and Tenders	398	-6%	\$11.7	High school diploma or equivalent
Textile Knitting and Weaving Machine Setters, Operators, and Tenders	335	14%	\$12.0	High school diploma or equivalent
Sewing Machine Operators	286	14%	\$10.1	Less than high school
Extruding and Forming Machine Setters, Operators, and Tenders, Synthetic and Glass Fibers	169	29%	\$17.9	High school diploma or equivalent
First-Line Supervisors of Production and Operating Workers	137	17%	\$23.9	Postsecondary non-degree award
Textile Bleaching and Dyeing Machine Operators and Tenders	112	-12%	\$11.8	High school diploma or equivalent
Inspectors, Testers, Sorters, Samplers, and Weighers	109	6%	\$15.6	High school diploma or equivalent
Packers and Packagers, Hand	106	-5%	\$10.5	Less than high school
Textile, Apparel, and Furnishings Workers, All Other	91	11%	\$12.1	High school diploma or equivalent
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	89	16%	\$22.8	High school diploma or equivalent
Laborers and Freight, Stock, and Material Movers, Hand	82	4%	\$11.3	Less than high school
Maintenance and Repair Workers, General	73	18%	\$15.7	High school diploma or equivalent
Coating, Painting, and Spraying Machine Setters, Operators, and Tenders	69	-1%	\$15.3	High school diploma or equivalent
Shipping, Receiving, and Traffic Clerks	65	10%	\$13.4	High school diploma or equivalent
Helpers--Production Workers	59	18%	\$10.2	Less than high school

Note: SOC (Standard Occupation Classification) 5-digit occupations are included by jobs in 2014. Extended proprietors include estimates for underreported self employment, proprietorships, trusts, partnerships and cooperatives.

section 02

Shift-Share Analysis by Top Industry Sectors

Chemicals Cluster

Industries	Jobs 2014	National Trend, 2009-2014	Industry Trend, 2009-2014	Cumulative Expected Growth	Actual Job Growth, 2009-2014	Regional Performance, 2009-2014
		A	B	C=A+B	D	D-C
Pharmaceutical Preparation Manufacturing	3,068	142	-246	-104	855	↑ 959
Other Pressed and Blown Glass and Glassware Manufacturing	482	31	-32	-1	2	↑ 3
All Other Plastics Product Manufacturing	211	22	7	29	-133	-162
Artificial and Synthetic Fibers and Filaments Manufacturing	206	5	-8	-3	130	↑ 133
Plastics Bottle Manufacturing	106	3	-5	-2	66	↑ 68
Petroleum and Petroleum Products Merchant Wholesalers (except Bulk Stations and Terminals)	67	8	-5	3	-53	-56
Rubber and Plastics Hoses and Belting Manufacturing	59	8	4	12	-67	-79
All Other Rubber Product Manufacturing	47	1	0	1	27	↑ 26
Industrial Gas Manufacturing	47	1	-1	0	25	↑ 25
Plastics Material and Resin Manufacturing	46	8	-3	5	-86	-91
Ready-Mix Concrete Manufacturing	45	4	-7	-3	-11	-8
All Other Miscellaneous Chemical Product and Preparation Manufacturing	40	14	2	16	-176	-192
Plastics Bag and Pouch Manufacturing	33	4	-4	0	-23	-23
Cut Stone and Stone Product Manufacturing	33	2	3	5	0	-5
Plastics Materials and Basic Forms and Shapes Merchant Wholesalers	26	4	-1	3	-32	-35

Note: Upward arrow (↑) indicates regional competitiveness.

section 02

Top Industry Sectors

Chemicals Cluster

Industries	Exports 2013 (\$ Millions)	Jobs 2013	Export per job 2013 (\$)	LQ 2014
Pharmaceutical Preparation Manufacturing	\$738.2	2,448	\$301,594	27.5
Other Pressed and Blown Glass and Glassware Manufacturing	\$105.4	537	\$196,118	48.6
All Other Plastics Product Manufacturing	\$52.5	197	\$266,405	1.4
Artificial and Synthetic Fibers and Filaments Manufacturing	\$78.8	184	\$428,795	14.9
Plastics Bottle Manufacturing	\$32.8	110	\$297,588	6.5
Petroleum and Petroleum Products Merchant Wholesalers (except Bulk Stations and Terminals)	\$6.1	70	\$86,095	1.9
Rubber and Plastics Hoses and Belting Manufacturing	\$11.6	63	\$183,187	4.6
All Other Rubber Product Manufacturing	\$5.8	32	\$181,814	3.5
Industrial Gas Manufacturing	\$18.2	44	\$410,973	4.7
Plastics Material and Resin Manufacturing	\$69.5	62	\$1,129,280	1.5
Ready-Mix Concrete Manufacturing	\$5.6	38	\$146,572	0.9
All Other Miscellaneous Chemical Product and Preparation Manufacturing	\$25.4	52	\$484,625	1.9
Plastics Bag and Pouch Manufacturing	\$11.7	28	\$421,725	2.0
Cut Stone and Stone Product Manufacturing	\$2.1	38	\$56,763	2.0
Plastics Materials and Basic Forms and Shapes Merchant Wholesalers	\$4.4	28	\$160,704	2.1

Note: Sorted similarly as the shift-share analysis slide

section 02

Top 15 Inputs by Dollars

Chemicals Cluster

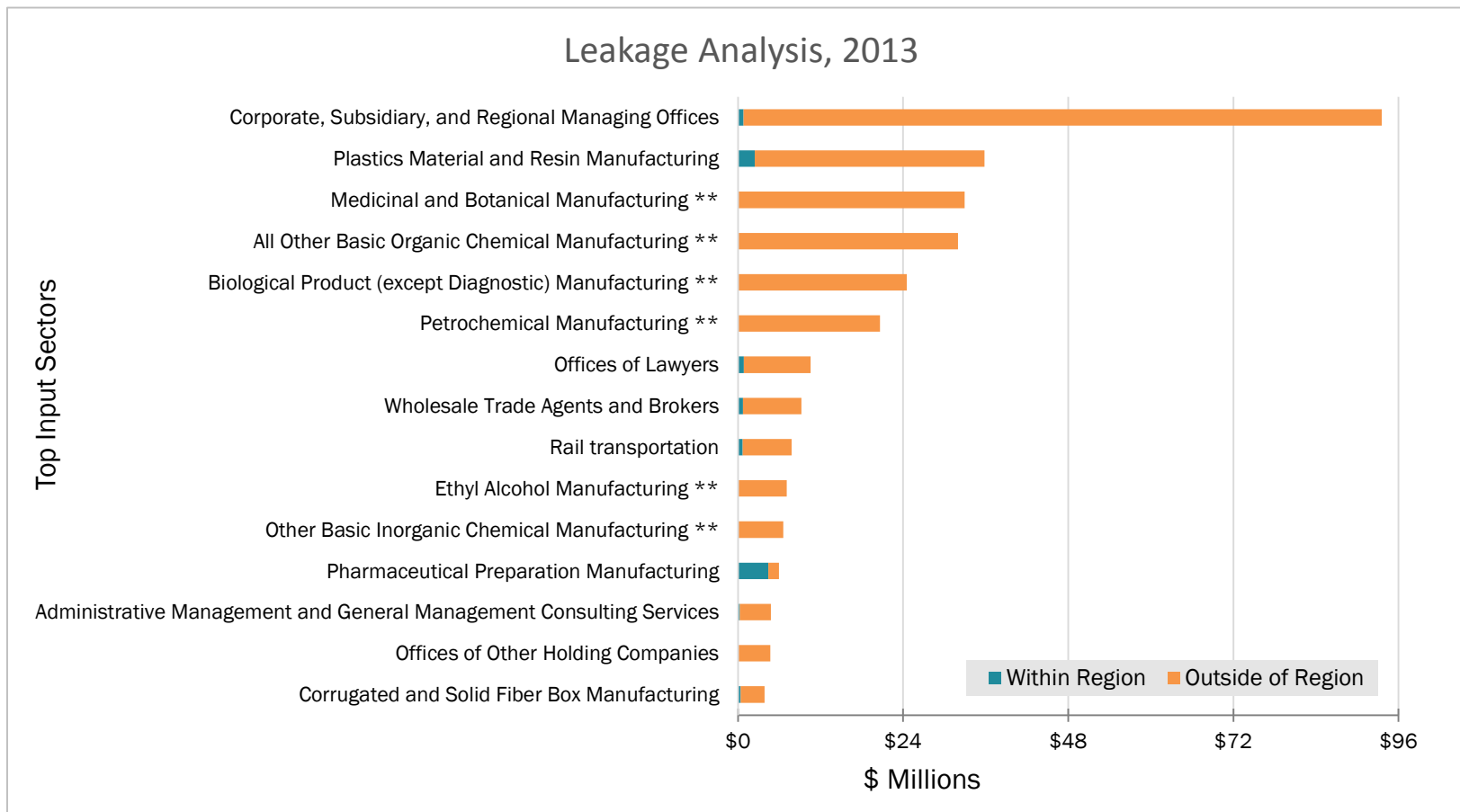
Industries	Estimated Input (\$ Millions), 2013	% In-Region	% Out of Region
Corporate, Subsidiary, and Regional Managing Offices	\$93.55	1%	99%
Plastics Material and Resin Manufacturing	\$35.83	7%	93%
Medicinal and Botanical Manufacturing **	\$32.94	0%	100%
All Other Basic Organic Chemical Manufacturing **	\$31.97	0%	100%
Biological Product (except Diagnostic) Manufacturing **	\$24.51	0%	100%
Petrochemical Manufacturing **	\$20.62	0%	100%
Offices of Lawyers	\$10.55	8%	92%
Wholesale Trade Agents and Brokers	\$9.21	8%	92%
Rail transportation	\$7.80	9%	91%
Ethyl Alcohol Manufacturing **	\$7.10	0%	100%
Other Basic Inorganic Chemical Manufacturing **	\$6.58	0%	100%
Pharmaceutical Preparation Manufacturing	\$5.95	74%	26%
Administrative Management and General Management Consulting Services	\$4.79	6%	94%
Offices of Other Holding Companies	\$4.70	1%	99%
Corrugated and Solid Fiber Box Manufacturing	\$3.88	10%	90%

Note: ** industry sector is not present in the region .

section 02

Top 15 Inputs by Dollars

Chemicals Cluster



Note: ** industry sector is not present in the region.

section 02

Top Occupations

Chemicals Cluster

Occupations	Jobs 2014	% Change, 2009-2014	Median Hourly Earnings	Entry Level Education
Packaging and Filling Machine Operators and Tenders	429	35%	\$15.1	High school diploma or equivalent
Inspectors, Testers, Sorters, Samplers, and Weighers	253	33%	\$15.6	High school diploma or equivalent
First-Line Supervisors of Production and Operating Workers	215	19%	\$23.9	Postsecondary non-degree award
Mixing and Blending Machine Setters, Operators, and Tenders	175	13%	\$16.6	High school diploma or equivalent
Packers and Packagers, Hand	170	21%	\$10.5	Less than high school
Team Assemblers	160	-2%	\$12.1	High school diploma or equivalent
Maintenance and Repair Workers, General	160	23%	\$15.7	High school diploma or equivalent
Chemical Equipment Operators and Tenders	117	15%	\$14.2	High school diploma or equivalent
Laborers and Freight, Stock, and Material Movers, Hand	93	6%	\$11.3	Less than high school
Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders	89	46%	\$21.8	High school diploma or equivalent
Shipping, Receiving, and Traffic Clerks	80	14%	\$13.4	High school diploma or equivalent
Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and Tenders	80	1%	\$13.7	High school diploma or equivalent
Industrial Engineers	77	22%	\$33.4	Bachelor's degree
General and Operations Managers	72	6%	\$42.4	Bachelor's degree
Extruding and Drawing Machine Setters, Operators, and Tenders, Metal and Plastic	72	-14%	\$17.5	High school diploma or equivalent

Note: SOC (Standard Occupation Classification) 5-digit occupations are included by jobs in 2014. Extended proprietors include estimates for underreported self employment, proprietorships, trusts, partnerships and cooperatives.

section 02

Shift-Share Analysis by Top Industry Sectors

Forest And Wood Products Cluster

Industries	Jobs 2014	National Trend, 2009-2014	Industry Trend, 2009-2014	Cumulative Expected Growth	Actual Job Growth, 2009-2014	Regional Performance, 2009-2014
		A	B	C=A+B	D	D-C
Nonupholstered Wood Household Furniture Manufacturing	333	21	-61	-40	-2	↑ 38
Sawmills	327	9	2	11	180	↑ 169
Hardwood Veneer and Plywood Manufacturing	309	19	-18	1	18	↑ 17
Wood Kitchen Cabinet and Countertop Manufacturing	296	3	-6	-3	243	↑ 246
Upholstered Household Furniture Manufacturing	264	7	-1	6	160	↑ 154
Logging	253	13	23	36	53	↑ 17
Wood Container and Pallet Manufacturing	237	12	6	18	53	↑ 35
Finish Carpentry Contractors	201	14	-19	-5	-14	-9
Folding Paperboard Box Manufacturing	187	12	-28	-16	-5	↑ 11
Flooring Contractors	109	10	-14	-4	-48	-44
Corrugated and Solid Fiber Box Manufacturing	104	9	-16	-7	-42	-35
Cut Stock, Resawing Lumber, and Planing	76	2	0	2	44	↑ 42
Roofing Contractors	75	7	-3	4	-32	-36
Framing Contractors	74	4	-6	-2	12	↑ 14
Siding Contractors	52	4	-10	-6	-19	-13

Note: Upward arrow (↑) indicates regional competitiveness.

section 02

Top Industry Sectors

Forest And Wood Products Cluster

Industries	Exports 2013 (\$ Millions)	Jobs 2013	Export per job 2013 (\$)	LQ 2014
Nonupholstered Wood Household Furniture Manufacturing	\$21.4	345	\$62,123	14.4
Sawmills	\$60.6	310	\$195,529	6.7
Hardwood Veneer and Plywood Manufacturing	\$70.2	270	\$259,677	37.0
Wood Kitchen Cabinet and Countertop Manufacturing	\$36.6	352	\$104,007	4.5
Upholstered Household Furniture Manufacturing	\$18.4	109	\$168,778	8.6
Logging	\$16.6	226	\$73,112	3.8
Wood Container and Pallet Manufacturing	\$30.8	230	\$133,984	6.7
Finish Carpentry Contractors	\$5.5	202	\$27,147	1.0
Folding Paperboard Box Manufacturing	\$43.3	235	\$184,439	12.8
Flooring Contractors	\$3.3	104	\$31,920	1.1
Corrugated and Solid Fiber Box Manufacturing	\$52.9	105	\$503,256	2.1
Cut Stock, Resawing Lumber, and Planing	\$6.1	71	\$86,368	8.8
Roofing Contractors	\$2.2	86	\$25,225	0.6
Framing Contractors	\$1.0	54	\$18,922	1.2
Siding Contractors	\$1.1	47	\$24,030	1.4

Note: Sorted similarly as the shift-share analysis slide

section 02

Top 15 Inputs by Dollars

Forest And Wood Products Cluster

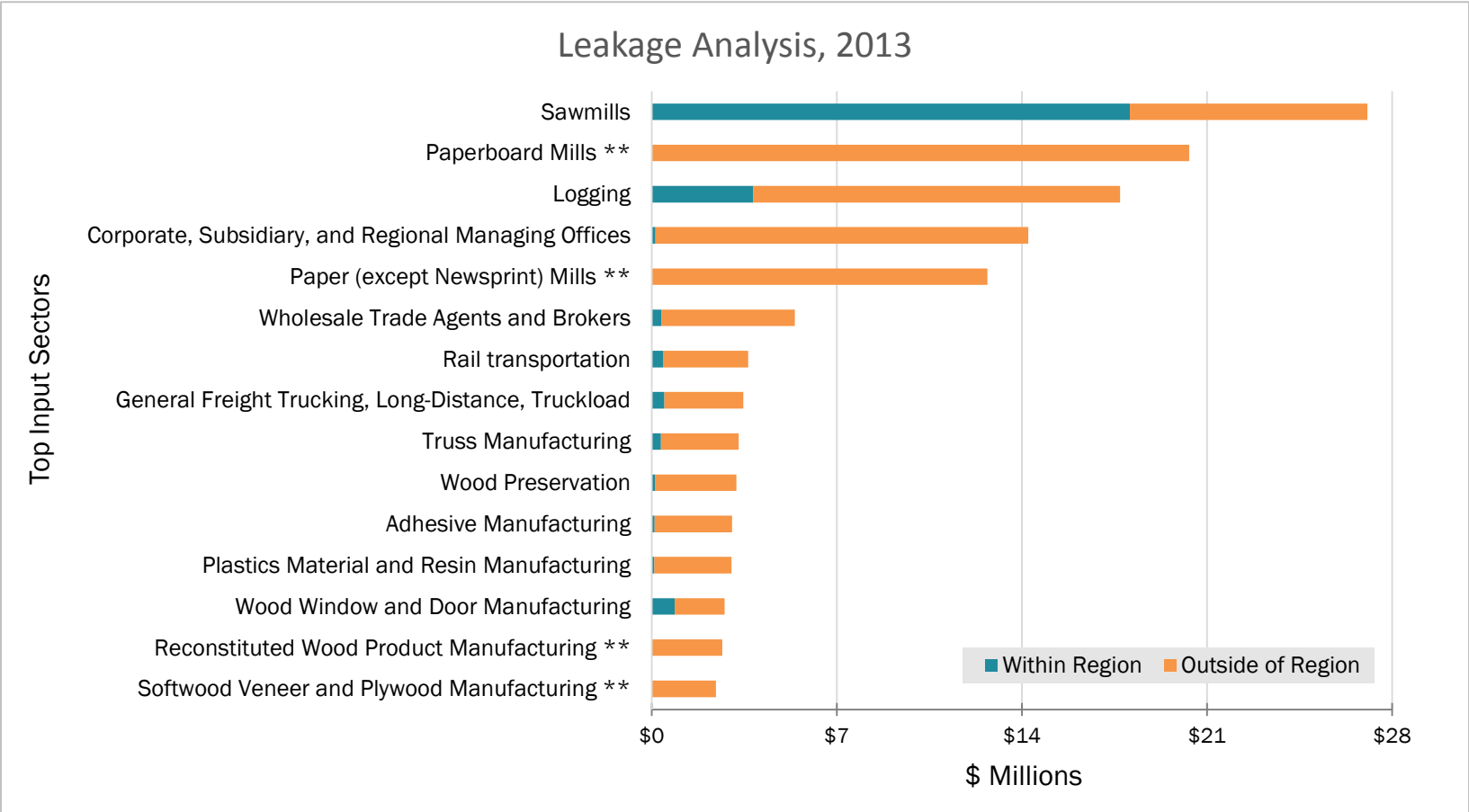
Industries	Estimated Input (\$ Millions), 2013	% In-Region	% Out of Region
Sawmills	\$27.06	67%	33%
Paperboard Mills **	\$20.32	0%	100%
Logging	\$17.71	22%	78%
Corporate, Subsidiary, and Regional Managing Offices	\$14.23	1%	99%
Paper (except Newsprint) Mills **	\$12.69	0%	100%
Wholesale Trade Agents and Brokers	\$5.41	7%	93%
Rail transportation	\$3.65	12%	88%
General Freight Trucking, Long-Distance, Truckload	\$3.46	14%	86%
Truss Manufacturing	\$3.28	10%	90%
Wood Preservation *	\$3.20	4%	96%
Adhesive Manufacturing	\$3.04	4%	96%
Plastics Material and Resin Manufacturing	\$3.01	3%	97%
Wood Window and Door Manufacturing	\$2.76	31%	69%
Reconstituted Wood Product Manufacturing **	\$2.66	0%	100%
Softwood Veneer and Plywood Manufacturing **	\$2.42	0%	100%

Note: * industry sector has less than 10 jobs as calculated by EMSI; ** industry sector is not present in the region .

section 02

Top 15 Inputs by Dollars

Forest And Wood Products Cluster



Note: ** industry sector is not present in the region.

section 02

Source: EMSI Class of Worker 2015.4 (QCEW, non -QCEW, self-employed and extended proprietors).

Top Occupations

Forest And Wood Products Cluster

Occupations	Jobs 2014	% Change, 2009-2014	Median Hourly Earnings	Entry Level Education
Woodworking Machine Setters, Operators, and Tenders, Except Sawing	291	35%	\$11.6	High school diploma or equivalent
Team Assemblers	188	13%	\$12.1	High school diploma or equivalent
Carpenters	141	-8%	\$13.0	High school diploma or equivalent
Cabinetmakers and Bench Carpenters	140	73%	\$15.9	High school diploma or equivalent
Sawing Machine Setters, Operators, and Tenders, Wood	136	60%	\$11.8	High school diploma or equivalent
Logging Equipment Operators	116	25%	\$13.0	High school diploma or equivalent
Laborers and Freight, Stock, and Material Movers, Hand	104	37%	\$11.3	Less than high school
Construction Laborers	99	9%	\$10.9	Less than high school
First-Line Supervisors of Production and Operating Workers	83	22%	\$23.9	Postsecondary non-degree award
Fallers	72	36%	\$16.5	High school diploma or equivalent
Coating, Painting, and Spraying Machine Setters, Operators, and Tenders	65	67%	\$15.3	High school diploma or equivalent
Heavy and Tractor-Trailer Truck Drivers	62	41%	\$16.9	Postsecondary non-degree award
Packers and Packagers, Hand	57	30%	\$10.5	Less than high school
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	56	14%	\$22.8	High school diploma or equivalent
Helpers--Production Workers	55	12%	\$10.2	Less than high school

Note: SOC (Standard Occupation Classification) 5-digit occupations are included by jobs in 2014. Extended proprietors include estimates for underreported self employment, proprietorships, trusts, partnerships and cooperatives.

section 02

Shift-Share Analysis by Top Industry Sectors

Fabricated Metal Product Manufacturing Cluster

Industries	Jobs 2014	National Trend, 2009-2014	Industry Trend, 2009-2014	Cumulative Expected Growth	Actual Job Growth, 2009-2014	Regional Performance, 2009-2014
		A	B	C=A+B	D	D-C
Other Metal Valve and Pipe Fitting Manufacturing	368	24	-43	-19	-5	↑ 14
Machine Shops	247	19	42	61	-42	-103
Ball and Roller Bearing Manufacturing	193	12	-11	1	4	↑ 3
Fabricated Structural Metal Manufacturing	171	3	-1	2	123	↑ 121
Fluid Power Valve and Hose Fitting Manufacturing	165	15	40	55	-63	-118
Sheet Metal Work Manufacturing	145	3	2	5	94	↑ 89
All Other Miscellaneous Fabricated Metal Product Manufacturing	137	7	2	9	32	↑ 23
Fabricated Pipe and Pipe Fitting Manufacturing	51	0	2	2	44	↑ 42
Ornamental and Architectural Metal Work Manufacturing	47	1	-1	0	30	↑ 30
Metal Coating, Engraving (except Jewelry and Silverware), and Allied Services to Manufacturers	38	0	0	0	35	↑ 35
Electroplating, Plating, Polishing, Anodizing, and Coloring	34	1	1	2	12	↑ 10
Plate Work Manufacturing	15	2	2	4	-21	-25

Note: Upward arrow (↑) indicates regional competitiveness. EMSI does not show sufficient jobs for Iron and Steel Forging; Prefabricated Metal Building and Component Manufacturing; and Saw Blade and Handtool Manufacturing.

section 02

Top Industry Sectors

Fabricated Metal Product Manufacturing Cluster

Industries	Exports 2013 (\$ Millions)	Jobs 2013	Export per job 2013 (\$)	LQ 2014
Other Metal Valve and Pipe Fitting Manufacturing	\$83.9	329	\$255,042	42.9
Machine Shops	\$25.4	294	\$86,419	1.5
Ball and Roller Bearing Manufacturing	\$41.4	194	\$213,506	13.1
Fabricated Structural Metal Manufacturing	\$29.8	162	\$184,445	3.5
Fluid Power Valve and Hose Fitting Manufacturing	\$33.5	198	\$169,669	8.0
Sheet Metal Work Manufacturing	\$20.5	132	\$155,233	2.6
All Other Miscellaneous Fabricated Metal Product Manufacturing	\$12.9	138	\$93,807	3.2
Fabricated Pipe and Pipe Fitting Manufacturing	\$3.3	37	\$87,649	2.5
Ornamental and Architectural Metal Work Manufacturing	\$7.0	49	\$145,015	2.2
Metal Coating, Engraving (except Jewelry and Silverware), and Allied Services to Manufacturers	\$5.5	31	\$177,471	1.2
Electroplating, Plating, Polishing, Anodizing, and Coloring	\$3.8	31	\$122,512	1.0
Plate Work Manufacturing	\$2.0	14	\$140,755	0.6

Note: Sorted similarly as the shift-share analysis slide

EMS I does not show sufficient jobs for Iron and Steel Forging; Prefabricated Metal Building and Component Manufacturing; and Saw Blade and Handtool Manufacturing.

section 02

Top 15 Inputs by Dollars

Fabricated Metal Product Manufacturing Cluster

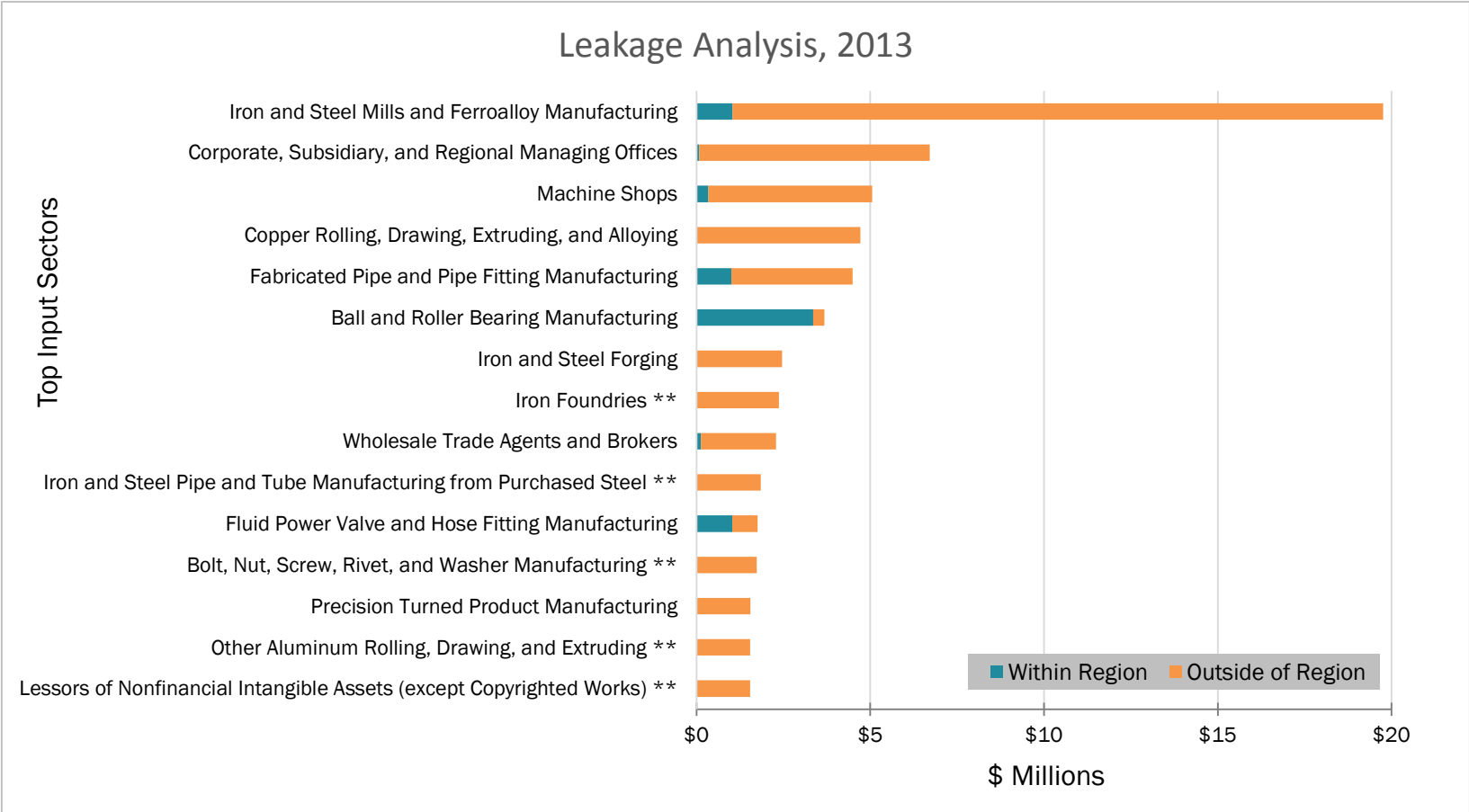
Industries	Estimated Input (\$ Millions), 2013	% In-Region	% Out of Region
Iron and Steel Mills and Ferroalloy Manufacturing	\$19.76	5%	95%
Corporate, Subsidiary, and Regional Managing Offices	\$6.71	1%	99%
Machine Shops	\$5.05	7%	93%
Copper Rolling, Drawing, Extruding, and Alloying *	\$4.71	0%	100%
Fabricated Pipe and Pipe Fitting Manufacturing	\$4.49	22%	78%
Ball and Roller Bearing Manufacturing	\$3.68	91%	9%
Iron and Steel Forging *	\$2.46	0%	100%
Iron Foundries **	\$2.37	0%	100%
Wholesale Trade Agents and Brokers	\$2.29	6%	94%
Iron and Steel Pipe and Tube Manufacturing from Purchased Steel **	\$1.85	0%	100%
Fluid Power Valve and Hose Fitting Manufacturing	\$1.76	59%	41%
Bolt, Nut, Screw, Rivet, and Washer Manufacturing **	\$1.73	0%	100%
Precision Turned Product Manufacturing *	\$1.55	0%	100%
Other Aluminum Rolling, Drawing, and Extruding **	\$1.54	0%	100%
Lessors of Nonfinancial Intangible Assets (except Copyrighted Works) **	\$1.54	0%	100%

Note: * industry sector has less than 10 jobs as calculated by EMSI; ** industry sector is not present in the region .

section 02

Top 15 Inputs by Dollars

Fabricated Metal Product Manufacturing Cluster



Note: ** industry sector is not present in the region.

section 02

Source: EMSI Class of Worker 2015.4 (QCEW, non -QCEW, self-employed and extended proprietors).

Top Occupations

Fabricated Metal Product Manufacturing Cluster

Occupations	Jobs 2014	% Change, 2009-2014	Median Hourly Earnings	Entry Level Education
Team Assemblers	155	8%	\$12.1	High school diploma or equivalent
Machinists	137	-2%	\$18.6	High school diploma or equivalent
Welders, Cutters, Solderers, and Brazers	98	36%	\$16.3	High school diploma or equivalent
First-Line Supervisors of Production and Operating Workers	63	19%	\$23.9	Postsecondary non-degree award
Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	63	24%	\$13.4	High school diploma or equivalent
Coating, Painting, and Spraying Machine Setters, Operators, and Tenders	61	30%	\$15.3	High school diploma or equivalent
Grinding, Lapping, Polishing, and Buffing Machine Tool Setters, Operators, and Tenders, Metal and Plastic	61	7%	\$17.1	High school diploma or equivalent
Inspectors, Testers, Sorters, Samplers, and Weighers	53	10%	\$15.6	High school diploma or equivalent
Structural Metal Fabricators and Fitters	43	115%	\$17.6	High school diploma or equivalent
Computer-Controlled Machine Tool Operators, Metal and Plastic	42	11%	\$17.8	High school diploma or equivalent
Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic	33	-11%	\$10.4	High school diploma or equivalent
Laborers and Freight, Stock, and Material Movers, Hand	30	25%	\$11.3	Less than high school
Helpers--Production Workers	29	38%	\$10.2	Less than high school
Sales Representatives, Wholesale and Mfg. , Except Technical and Scientific Products	29	26%	\$22.8	High school diploma or equivalent
Lathe and Turning Machine Tool Setters, Operators, and Tenders, Metal and Plastic	28	-7%	\$18.9	High school diploma or equivalent

Note: SOC (Standard Occupation Classification) 5-digit occupations are included by jobs in 2014. Extended proprietors include estimates for underreported self employment, proprietorships, trusts, partnerships and cooperatives.

section 02

Shift-Share Analysis by Top Industry Sectors

Primary Metal Manufacturing Cluster

Industries	Jobs 2014	National Trend, 2009-2014	Industry Trend, 2009-2014	Cumulative Expected Growth	Actual Job Growth, 2009-2014	Regional Performance, 2009-2014
		A	B	C=A+B	D	D-C
Iron and Steel Mills and Ferroalloy Manufacturing	169	1	0	1	155	↑ 154
Rolled Steel Shape Manufacturing	139	0	0	0	138	↑ 138
Nonferrous Metal Die-Casting Foundries	74	8	29	37	-52	-89
Secondary Smelting, Refining, and Alloying of Nonferrous Metal (except Copper and Aluminum)	69	0	0	0	68	↑ 68

Note: Upward arrow (↑) indicates regional competitiveness. EMSI does not show any jobs for Copper Rolling, Drawing, Extruding, and Alloying and other industries.

Top Industry Sectors

Primary Metal Manufacturing Cluster

Industries	Exports 2013 (\$ Millions)	Jobs 2013	Export per job 2013 (\$)	LQ 2014
Iron and Steel Mills and Ferroalloy Manufacturing	\$76.6	117	\$656,639	3.4
Rolled Steel Shape Manufacturing	\$35.1	109	\$322,394	12.2
Nonferrous Metal Die-Casting Foundries	\$19.6	96	\$204,497	5.2
Secondary Smelting, Refining, and Alloying of Nonferrous Metal (except Copper and Aluminum)	\$12.0	17	\$722,471	11.8
Copper Rolling, Drawing, Extruding, and Alloying	\$6.0	11	\$562,465	0.0

Note: Sorted similarly as the shift-share analysis slide

Top 15 Inputs by Dollars

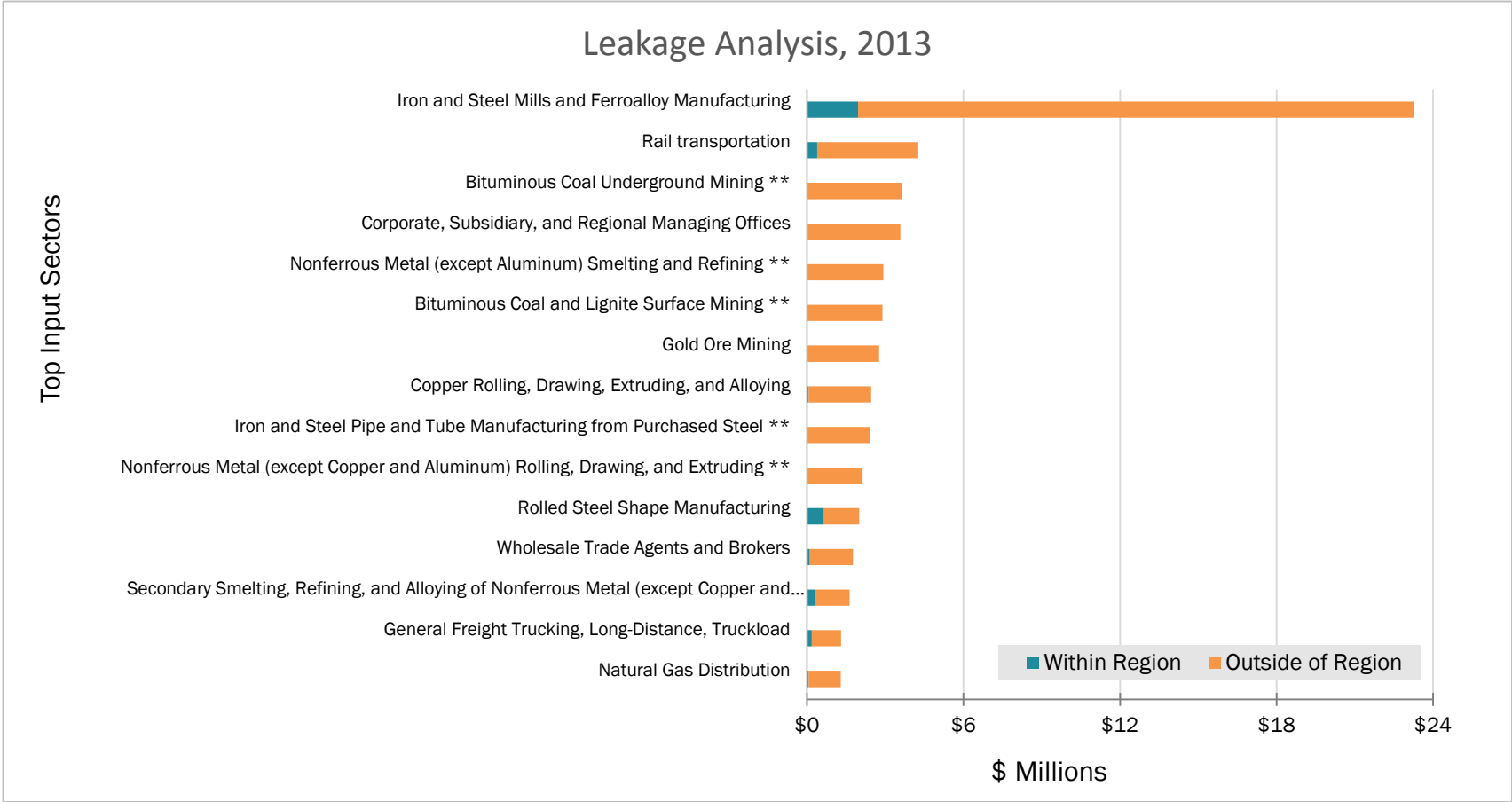
Primary Metal Manufacturing Cluster

Industries	Estimated Input (\$ Millions), 2013	% In-Region	% Out of Region
Iron and Steel Mills and Ferroalloy Manufacturing	\$23.28	8%	92%
Rail transportation	\$4.26	9%	91%
Bituminous Coal Underground Mining **	\$3.66	0%	100%
Corporate, Subsidiary, and Regional Managing Offices	\$3.58	1%	99%
Nonferrous Metal (except Aluminum) Smelting and Refining **	\$2.93	0%	100%
Bituminous Coal and Lignite Surface Mining **	\$2.89	0%	100%
Gold Ore Mining *	\$2.76	0%	100%
Copper Rolling, Drawing, Extruding, and Alloying *	\$2.46	2%	98%
Iron and Steel Pipe and Tube Manufacturing from Purchased Steel **	\$2.42	0%	100%
Nonferrous Metal (except Copper and Aluminum) Rolling, Drawing, and Extruding **	\$2.14	0%	100%
Rolled Steel Shape Manufacturing	\$2.00	33%	67%
Wholesale Trade Agents and Brokers	\$1.76	6%	94%
Secondary Smelting, Refining, and Alloying of Nonferrous Metal (except Copper and Aluminum)	\$1.63	18%	82%
General Freight Trucking, Long-Distance, Truckload	\$1.30	14%	86%
Natural Gas Distribution *	\$1.30	5%	95%

Note: ** industry sector is not present in the region.

Top 15 Inputs by Dollars

Primary Metal Manufacturing Cluster



Note: ** industry sector is not present in the region.

section 02

Source: EMSI Class of Worker 2015.4 (QCEW, non -QCEW, self-employed and extended proprietors).

Top Occupations

Primary Metal Manufacturing Cluster

Occupations	Jobs 2014	% Change, 2009-2014	Median Hourly Earnings	Entry Level Education
Extruding and Drawing Machine Setters, Operators, and Tenders, Metal and Plastic	32	52%	\$17.5	High school diploma or equivalent
First-Line Supervisors of Production and Operating Workers	22	83%	\$23.9	Postsecondary non-degree award
Metal-Refining Furnace Operators and Tenders	20	33%	\$16.4	High school diploma or equivalent
Inspectors, Testers, Sorters, Samplers, and Weighers	17	70%	\$15.6	High school diploma or equivalent
Maintenance and Repair Workers, General	17	113%	\$15.7	High school diploma or equivalent
Grinding, Lapping, Polishing, and Buffing Machine Tool Setters, Operators, and Tenders, Metal and Plastic	16	0%	\$17.1	High school diploma or equivalent
Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	15	150%	\$13.4	High school diploma or equivalent
Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic	14	-30%	\$14.2	High school diploma or equivalent
Helpers--Production Workers	13	63%	\$10.2	Less than high school
Industrial Machinery Mechanics	13	225%	\$19.6	High school diploma or equivalent
Welders, Cutters, Solderers, and Brazers	12	200%	\$16.3	High school diploma or equivalent
Rolling Machine Setters, Operators, and Tenders, Metal and Plastic	12	500%	\$14.4	High school diploma or equivalent
Industrial Truck and Tractor Operators	12	140%	\$14.4	Less than high school
Pourers and Casters, Metal	11	0%	\$12.6	High school diploma or equivalent
Laborers and Freight, Stock, and Material Movers, Hand	10	150%	\$11.3	Less than high school

Note: SOC (Standard Occupation Classification) 5-digit occupations are included by jobs in 2014. Extended proprietors include estimates for underreported self employment, proprietorships, trusts, partnerships and cooperatives.

section 02