



Target Industry Cluster Analysis

Lower Peninsula Region, Michigan



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01 overview

Lower Peninsula Region, MI

Overview

Lower Peninsula Region

The Lower Peninsula Region is comprised of four Michigan counties. U.S. 31 passes through the western part of the region and connects to I-75 located at the eastern edge of the region.

- Benzie
- Grand Traverse
- Kalkaska
- Manistee



02 target industry clusters

Agribusiness, Food Processing & Technology

Transportation & Logistics

Advanced Materials

Energy (Fossil & Renewable)

Arts, Entertainment, Recreation & Visitor Industries

Information Technology & Telecommunications

Education & Knowledge Creation

Forest & Wood Products

Shift-Share Analysis by Top Industry Sectors

Agribusiness, Food Processing And Technology 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
Crop Production	1,046	78	-58	20	-164	-184
Commercial Bakeries	502	0	0	0	501	↑ 501
Fruit and Vegetable Canning	349	20	-34	-14	31	↑ 45
Animal Production and Aquaculture	265	4	-6	-2	201	↑ 203
Postharvest Crop Activities (except Cotton Ginning)	171	10	5	15	19	↑ 4
Dried and Dehydrated Food Manufacturing	144	16	-7	9	-108	-117
Meat Processed from Carcasses	117	32	-4	28	-384	-412
Frozen Fruit, Juice, and Vegetable Manufacturing	114	2	-1	1	91	↑ 90
Wineries	103	6	20	26	15	-11
Pesticide and Other Agricultural Chemical Manufacturing	98	8	-10	-2	-20	-18
Bottled Water Manufacturing	72	1	-1	0	64	↑ 64
Retail Bakeries	70	2	8	10	41	↑ 31
Farm Labor Contractors and Crew Leaders	54	3	3	6	1	-5
Soil Preparation, Planting, and Cultivating	53	3	2	5	15	↑ 10
Spice and Extract Manufacturing	42	0	0	0	42	↑ 42

Note: Upward arrow (↑) indicates regional competitiveness.

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

Top 15 Inputs by Dollars

Agribusiness, Food Processing And Technology Cluster

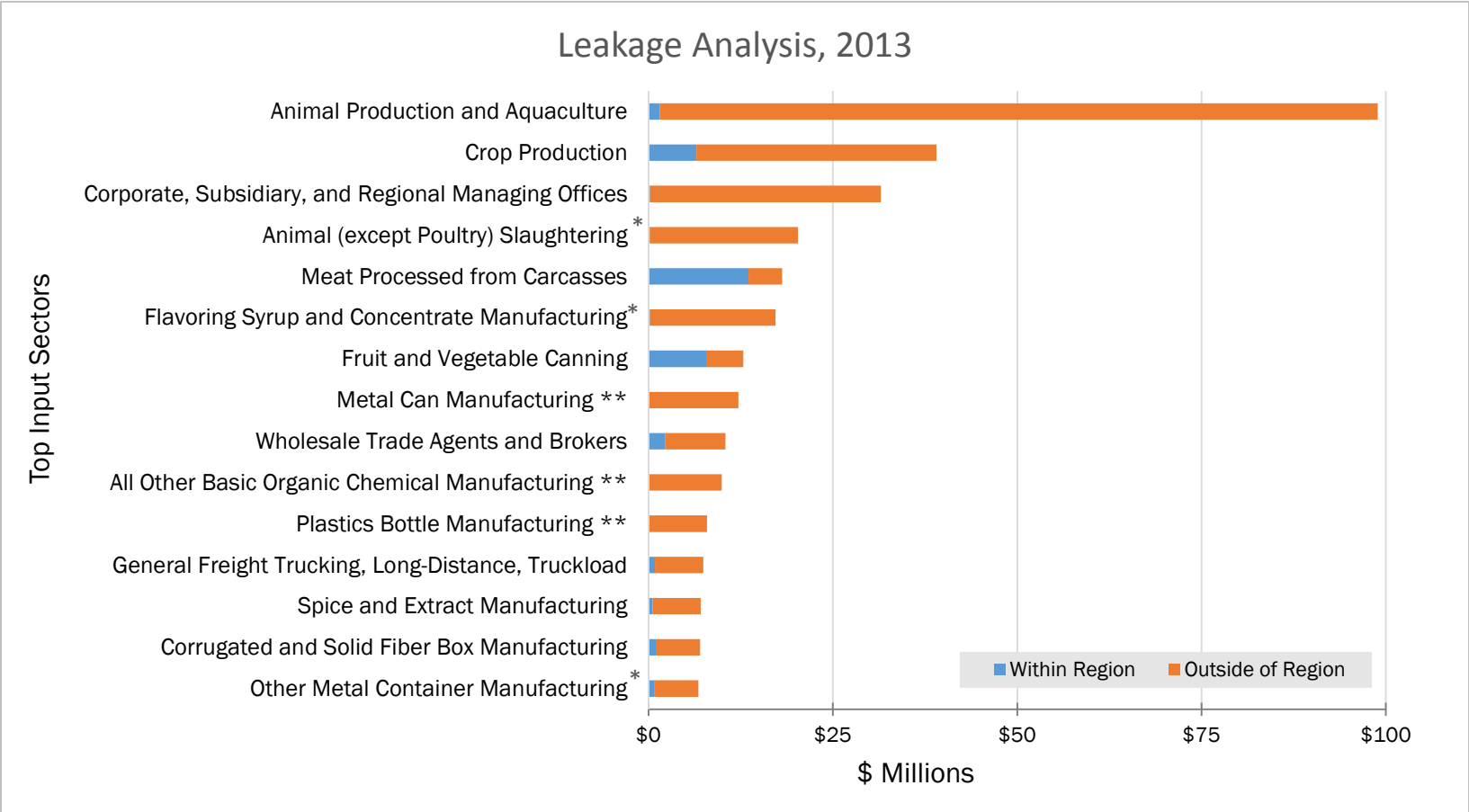
Industries	Estimated Input (\$ Millions), 2013	% In-Region	% Out of Region
Animal Production and Aquaculture	\$98.89	2%	98%
Crop Production	\$39.04	17%	83%
Corporate, Subsidiary, and Regional Managing Offices	\$31.53	1%	99%
Animal (except Poultry) Slaughtering *	\$20.26	1%	99%
Meat Processed from Carcasses	\$18.13	75%	25%
Flavoring Syrup and Concentrate Manufacturing *	\$17.22	1%	99%
Fruit and Vegetable Canning	\$12.84	61%	39%
Metal Can Manufacturing **	\$12.19	0%	100%
Wholesale Trade Agents and Brokers	\$10.44	21%	79%
All Other Basic Organic Chemical Manufacturing **	\$9.94	0%	100%
Plastics Bottle Manufacturing **	\$7.91	0%	100%
General Freight Trucking, Long-Distance, Truckload	\$7.41	12%	88%
Spice and Extract Manufacturing	\$7.06	8%	92%
Corrugated and Solid Fiber Box Manufacturing	\$7.01	14%	86%
Other Metal Container Manufacturing *	\$6.75	11%	89%

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

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Top 15 Inputs by Dollars

Agribusiness, Food Processing And Technology Cluster



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

Top Occupations

Agribusiness, Food Processing And Technology Cluster

Occupations	Jobs 2014	% Change, 2009-2014	Median Hourly Earnings	Entry Level Education
Farmers, Ranchers, and Other Agricultural Managers	1,002	-5%	\$10.2	High school diploma or equivalent
Farmworkers and Laborers, Crop, Nursery, and Greenhouse	237	32%	\$9.9	Less than high school
Packaging and Filling Machine Operators and Tenders	165	17%	\$15.0	High school diploma or equivalent
Team Assemblers	152	36%	\$11.1	High school diploma or equivalent
Food Batchmakers	112	49%	\$18.7	High school diploma or equivalent
Bakers	86	760%	\$11.5	Less than high school
Packers and Packagers, Hand	70	19%	\$10.2	Less than high school
Food and Tobacco Roasting, Baking, and Drying Machine Operators and Tenders	68	79%	\$12.0	Less than high school
Helpers--Production Workers	67	16%	\$13.7	Less than high school
Laborers and Freight, Stock, and Material Movers, Hand	67	-8%	\$12.8	Less than high school
First-Line Supervisors of Production and Operating Workers	65	20%	\$23.5	Postsecondary non-degree award
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	57	30%	\$22.7	High school diploma or equivalent
Industrial Machinery Mechanics	49	14%	\$18.8	High school diploma or equivalent
Agricultural Equipment Operators	45	25%	\$12.5	Less than high school
Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders	42	27%	\$15.5	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.

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Shift-Share Analysis by Top Industry Sectors

Transportation And Logistics 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
Couriers and Express Delivery Services	237	15	6	21	10	-11
General Warehousing and Storage	106	7	18	25	-7	-32
Refrigerated Warehousing and Storage	104	1	1	2	92	↑ 90
General Freight Trucking, Long-Distance, Truckload	100	9	-6	3	-45	-48
Local Messengers and Local Delivery	87	3	8	11	40	↑ 29
General Freight Trucking, Local	83	7	-5	2	-28	-30
Specialized Freight (except Used Goods) Trucking, Long-Distance	73	2	3	5	40	↑ 35
General Freight Trucking, Long-Distance, Less Than Truckload	61	4	6	10	-6	-16
Specialized Freight (except Used Goods) Trucking, Local	55	4	4	8	-14	-22
Process, Physical Distribution, and Logistics Consulting Services	50	5	4	9	-21	-30
Motor Vehicle Towing	45	3	3	6	5	-1
Freight Transportation Arrangement	44	3	3	6	5	-1
Used Household and Office Goods Moving	39	4	3	7	-18	-25
Scheduled Passenger Air Transportation	37	3	-4	-1	-15	-14
Nonscheduled Chartered Passenger Air Transportation	32	1	-2	-1	8	↑ 9

Note: Upward arrow (↑) indicates regional competitiveness.

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Top 15 Inputs by Dollars

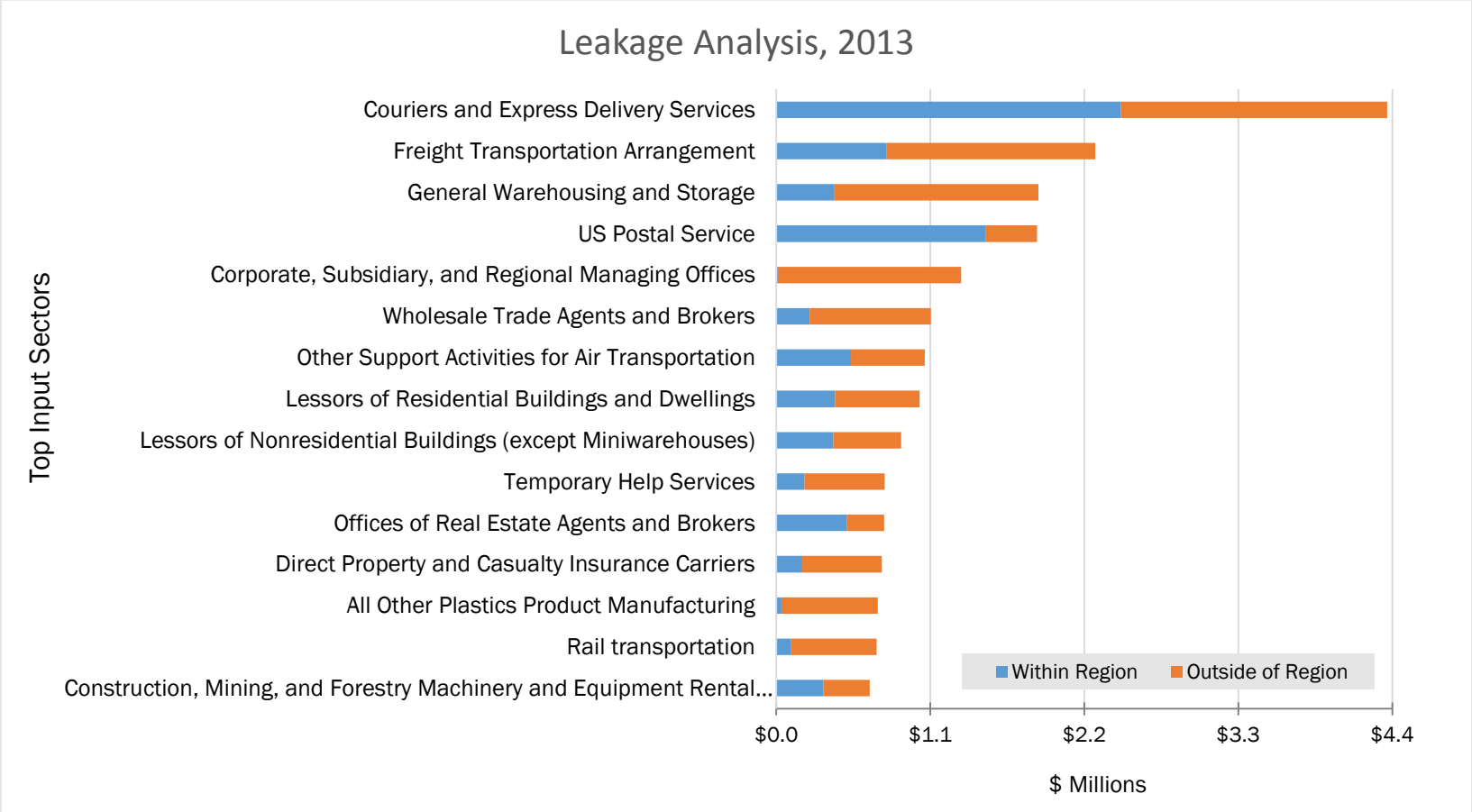
Transportation And Logistics Cluster

Industries	Estimated Input (\$ Millions), 2013	% In-Region	% Out of Region
Couriers and Express Delivery Services	\$4.36	56%	44%
Freight Transportation Arrangement	\$2.28	35%	65%
General Warehousing and Storage	\$1.87	22%	78%
US Postal Service	\$1.86	80%	20%
Corporate, Subsidiary, and Regional Managing Offices	\$1.32	1%	99%
Wholesale Trade Agents and Brokers	\$1.10	22%	78%
Other Support Activities for Air Transportation	\$1.06	50%	50%
Lessors of Residential Buildings and Dwellings	\$1.02	41%	59%
Lessors of Nonresidential Buildings (except Miniwarehouses)	\$0.89	46%	54%
Temporary Help Services	\$0.77	26%	74%
Offices of Real Estate Agents and Brokers	\$0.77	65%	35%
Direct Property and Casualty Insurance Carriers	\$0.75	24%	76%
All Other Plastics Product Manufacturing	\$0.73	5%	95%
Rail transportation	\$0.72	15%	85%
Construction, Mining, and Forestry Machinery and Equipment Rental and Leasing	\$0.67	50%	50%

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Top 15 Inputs by Dollars

Transportation And Logistics Cluster



Top Occupations

Transportation And Logistics Cluster

Occupations	Jobs 2014	% Change, 2009-2014	Median Hourly Earnings	Entry Level Education
Heavy and Tractor-Trailer Truck Drivers	345	-10%	\$16.8	Postsecondary non-degree award
Laborers and Freight, Stock, and Material Movers, Hand	143	21%	\$12.8	Less than high school
Light Truck or Delivery Services Drivers	129	24%	\$14.8	High school diploma or equivalent
Couriers and Messengers	82	6%	\$11.3	High school diploma or equivalent
Managers, All Other	64	19%	\$15.2	High school diploma or equivalent
Airline Pilots, Copilots, and Flight Engineers	28	27%	\$37.1	Bachelor's degree
Office Clerks, General	25	9%	\$13.9	High school diploma or equivalent
Transportation, Storage, and Distribution Managers	19	58%	\$27.0	High school diploma or equivalent
Sales Representatives, Services, All Other	18	-5%	\$20.7	High school diploma or equivalent
Management Analysts	17	6%	\$26.0	Bachelor's degree
First-Line Supervisors of Transportation and Material-Moving Machine and Vehicle Operators	17	6%	\$20.9	High school diploma or equivalent
Industrial Truck and Tractor Operators	15	15%	\$17.2	Less than high school
General and Operations Managers	15	0%	\$31.0	Bachelor's degree
Bookkeeping, Accounting, and Auditing Clerks	13	8%	\$15.5	High school diploma or equivalent
Shipping, Receiving, and Traffic Clerks	13	44%	\$14.1	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.

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Shift-Share Analysis by Top Industry Sectors

Advanced Materials 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
Machine Shops	365	14	31	45	150	↑ 105
Special Die and Tool, Die Set, Jig, and Fixture Manufacturing	317	14	10	24	96	↑ 72
Air and Gas Compressor Manufacturing	210	2	2	4	173	↑ 169
Other Measuring and Controlling Device Manufacturing	134	3	-2	1	85	↑ 84
Pesticide and Other Agricultural Chemical Manufacturing	98	8	-10	-2	-20	-18
Cutting Tool and Machine Tool Accessory Manufacturing	94	4	12	16	33	↑ 17
Semiconductor and Related Device Manufacturing	89	2	-3	-1	52	↑ 53
All Other Miscellaneous Fabricated Metal Product Manufacturing	83	3	1	4	35	↑ 31
Other Motor Vehicle Parts Manufacturing	62	12	40	52	-129	-181
All Other Plastics Product Manufacturing	62	6	2	8	-34	-42
Other Aluminum Rolling, Drawing, and Extruding	61	5	1	6	-18	-24
Metal Coating, Engraving (except Jewelry and Silverware), and Allied Services to Manufacturers	55	1	2	3	34	↑ 31
Machine Tool Manufacturing	55	3	2	5	7	↑ 2
Industrial Mold Manufacturing	52	3	5	8	5	-3
Abrasive Product Manufacturing	50	1	1	2	40	↑ 38

Note: Upward arrow (↑) indicates regional competitiveness.

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Top 15 Inputs by Dollars

Advanced Materials Cluster

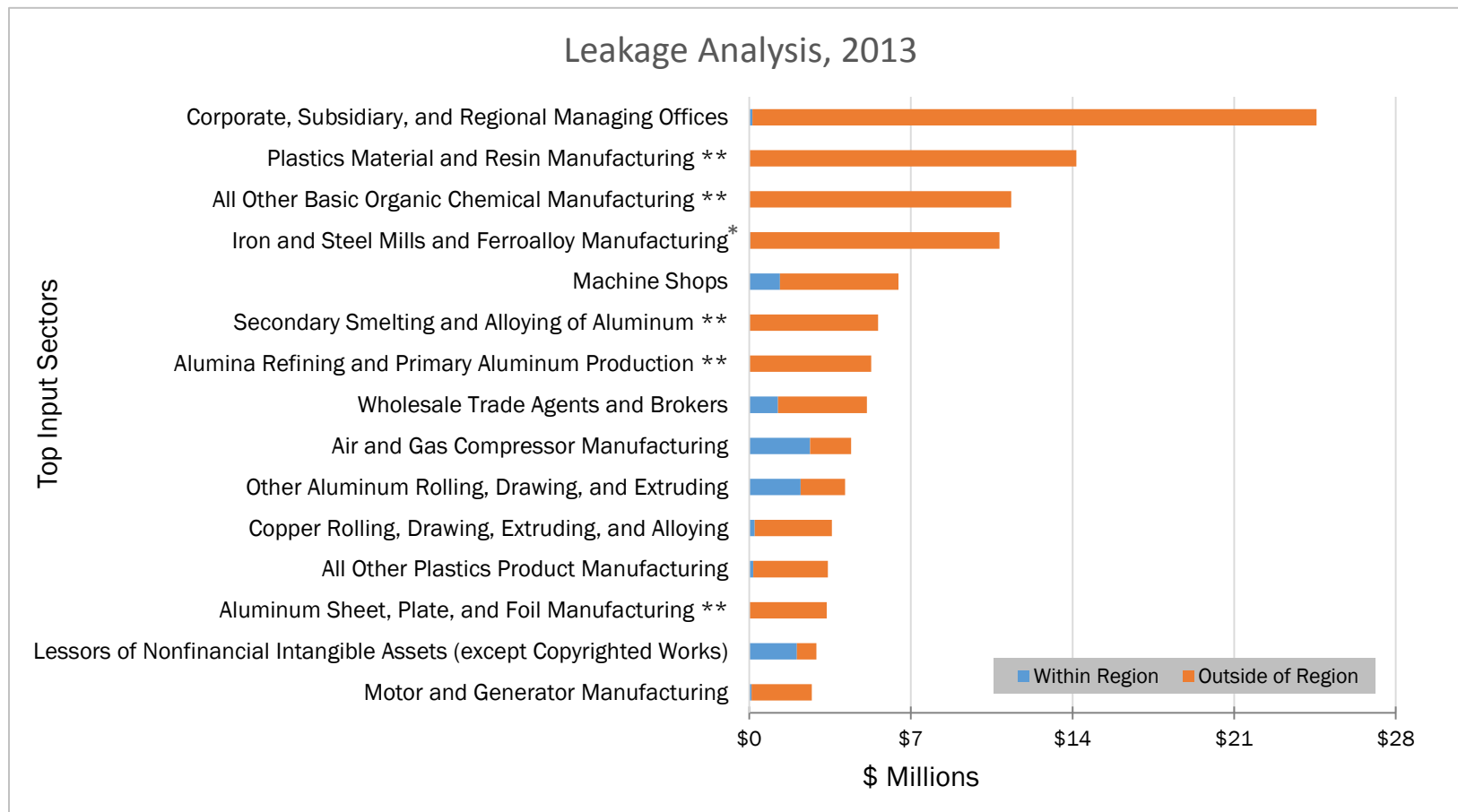
Industries	Estimated Input (\$ Millions), 2013	% In-Region	% Out of Region
Corporate, Subsidiary, and Regional Managing Offices	\$24.57	1%	99%
Plastics Material and Resin Manufacturing **	\$14.17	0%	100%
All Other Basic Organic Chemical Manufacturing **	\$11.35	0%	100%
Iron and Steel Mills and Ferroalloy Manufacturing *	\$10.84	0%	100%
Machine Shops	\$6.46	21%	79%
Secondary Smelting and Alloying of Aluminum **	\$5.58	0%	100%
Alumina Refining and Primary Aluminum Production **	\$5.29	0%	100%
Wholesale Trade Agents and Brokers	\$5.09	24%	76%
Air and Gas Compressor Manufacturing	\$4.41	60%	40%
Other Aluminum Rolling, Drawing, and Extruding	\$4.15	54%	46%
Copper Rolling, Drawing, Extruding, and Alloying	\$3.57	7%	93%
All Other Plastics Product Manufacturing	\$3.41	5%	95%
Aluminum Sheet, Plate, and Foil Manufacturing **	\$3.35	0%	100%
Lessors of Nonfinancial Intangible Assets (except Copyrighted Works)	\$2.91	71%	29%
Motor and Generator Manufacturing	\$2.70	4%	96%

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

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Top 15 Inputs by Dollars

Advanced Materials Cluster



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

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Top Occupations

Advanced Materials Cluster

Occupations	Jobs 2014	% Change, 2009-2014	Median Hourly Earnings	Entry Level Education
Team Assemblers	303	42%	\$11.1	High school diploma or equivalent
Machinists	259	61%	\$18.2	High school diploma or equivalent
Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic	139	28%	\$14.4	High school diploma or equivalent
First-Line Supervisors of Production and Operating Workers	80	27%	\$23.5	Postsecondary non-degree award
Computer-Controlled Machine Tool Operators, Metal and Plastic	65	59%	\$14.8	High school diploma or equivalent
General and Operations Managers	51	38%	\$31.0	Bachelor's degree
Inspectors, Testers, Sorters, Samplers, and Weighers	50	11%	\$18.4	High school diploma or equivalent
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	48	37%	\$22.7	High school diploma or equivalent
Office Clerks, General	46	44%	\$13.9	High school diploma or equivalent
Tool and Die Makers	45	2%	\$22.3	High school diploma or equivalent
Mechanical Engineers	35	35%	\$33.4	Bachelor's degree
Helpers--Production Workers	33	18%	\$13.7	Less than high school
Managers, All Other	33	-6%	\$15.2	High school diploma or equivalent
Industrial Engineers	32	28%	\$32.4	Bachelor's degree
Milling and Planing Machine Setters, Operators, and Tenders, Metal and Plastic	31	63%	\$14.8	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.

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Shift-Share Analysis by Top Industry Sectors

Energy (Fossil And Renewable) 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
Crude Petroleum and Natural Gas Extraction	2,185	110	594	704	481	-223
Gasoline Stations with Convenience Stores	792	31	-2	29	303	↑ 274
Plumbing, Heating, and Air-Conditioning Contractors	618	40	5	45	-11	-56
Support Activities for Oil and Gas Operations	606	31	345	376	122	-254
Electrical Contractors and Other Wiring Installation Contractors	530	24	-17	7	153	↑ 146
Engineering Services	362	24	-13	11	-19	-30
Drilling Oil and Gas Wells	205	8	54	62	83	↑ 21
Natural Gas Liquid Extraction	197	5	71	76	121	↑ 45
Miscellaneous Intermediation	187	11	9	20	19	-1
Petroleum and Petroleum Products Merchant Wholesalers (except Bulk Stations and Terminals)	139	9	-6	3	6	↑ 3
Other Measuring and Controlling Device Manufacturing	134	3	-2	1	85	↑ 84
Other Scientific and Technical Consulting Services	123	5	6	11	42	↑ 31
Water and Sewer Line and Related Structures Construction	114	4	-5	-1	47	↑ 48
Environmental Consulting Services	112	8	-3	5	-11	-16
Geophysical Surveying and Mapping Services	107	5	6	11	23	↑ 12

Note: Upward arrow (↑) indicates regional competitiveness.

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Top 15 Inputs by Dollars

Energy (Fossil And Renewable) Cluster

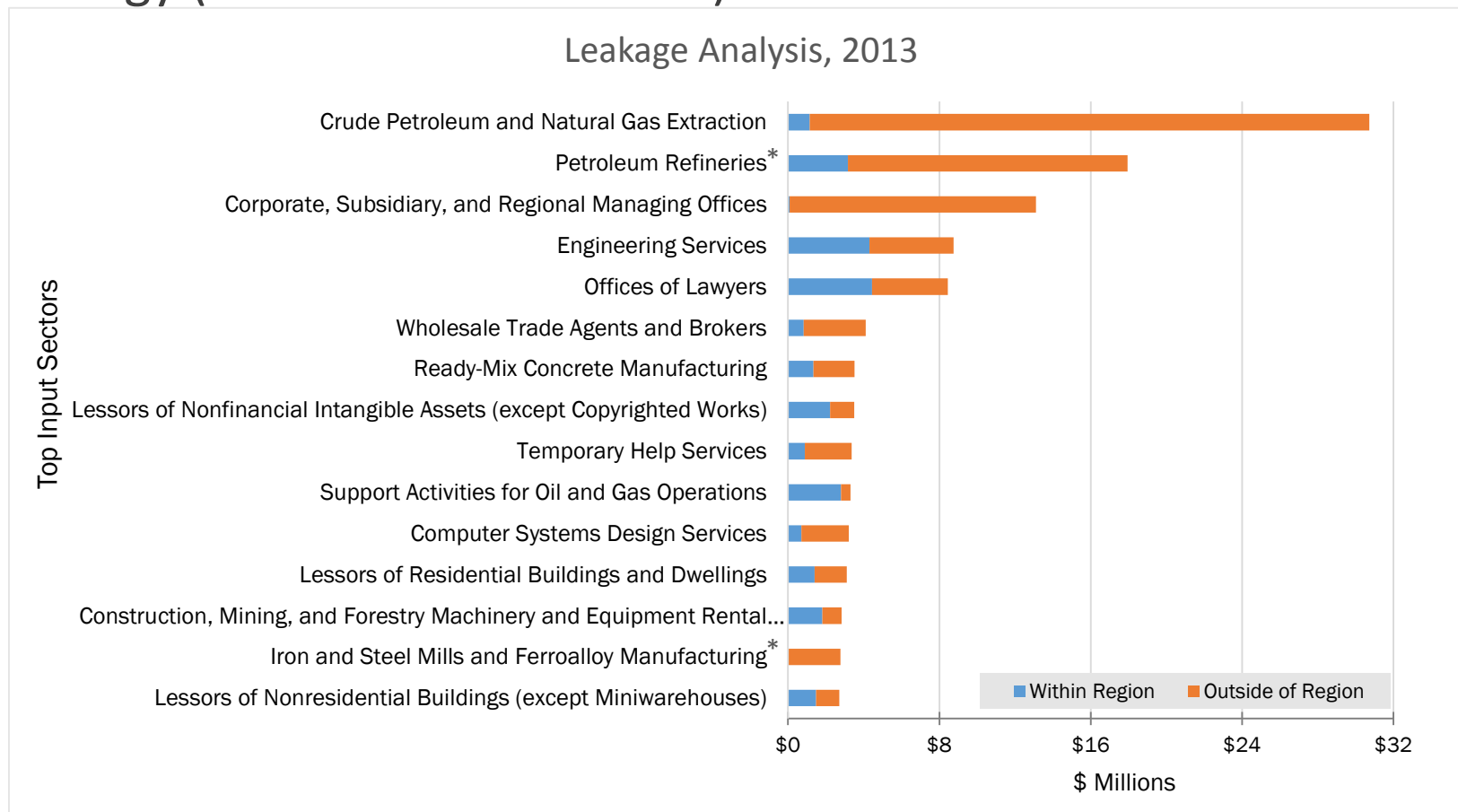
Industries	Estimated Input (\$ Millions), 2013	% In-Region	% Out of Region
Crude Petroleum and Natural Gas Extraction	\$30.72	4%	96%
Petroleum Refineries *	\$17.94	18%	82%
Corporate, Subsidiary, and Regional Managing Offices	\$13.10	1%	99%
Engineering Services	\$8.75	49%	51%
Offices of Lawyers	\$8.44	53%	47%
Wholesale Trade Agents and Brokers	\$4.10	20%	80%
Ready-Mix Concrete Manufacturing	\$3.51	38%	62%
Lessors of Nonfinancial Intangible Assets (except Copyrighted Works)	\$3.51	63%	37%
Temporary Help Services	\$3.36	27%	73%
Support Activities for Oil and Gas Operations	\$3.30	85%	15%
Computer Systems Design Services	\$3.22	22%	78%
Lessors of Residential Buildings and Dwellings	\$3.10	45%	55%
Construction, Mining, and Forestry Machinery and Equipment Rental and Leasing	\$2.84	64%	36%
Iron and Steel Mills and Ferroalloy Manufacturing *	\$2.78	0%	100%
Lessors of Nonresidential Buildings (except Miniwarehouses)	\$2.71	54%	46%

Note: * industry sector has less than 10 jobs as calculated by EMSI.

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Top 15 Inputs by Dollars

Energy (Fossil And Renewable) Cluster



Note: * industry sector has less than 10 jobs as calculated by EMSI.

section 02

Top Occupations

Energy (Fossil And Renewable) Cluster

Occupations	Jobs 2014	% Change, 2009-2014	Median Hourly Earnings	Entry Level Education
Cashiers	600	73%	\$9.6	Less than high school
Wellhead Pumpers	459	57%	\$18.0	Less than high school
General and Operations Managers	364	27%	\$31.0	Bachelor's degree
Managers, All Other	320	22%	\$15.2	High school diploma or equivalent
Property, Real Estate, and Community Association Managers	294	75%	\$14.7	High school diploma or equivalent
Chief Executives	253	691%	\$29.2	Bachelor's degree
First-Line Supervisors of Construction Trades and Extraction Workers	195	-38%	\$17.7	High school diploma or equivalent
Construction Laborers	190	30%	\$14.6	Less than high school
Electricians	178	33%	\$17.7	High school diploma or equivalent
Office Clerks, General	159	18%	\$13.9	High school diploma or equivalent
Bookkeeping, Accounting, and Auditing Clerks	148	70%	\$15.5	High school diploma or equivalent
Heavy and Tractor-Trailer Truck Drivers	126	11%	\$16.8	Postsecondary non-degree award
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	119	0%	\$17.3	Postsecondary non-degree award
Personal Financial Advisors	116	66%	\$31.2	Bachelor's degree
Service Unit Operators, Oil, Gas, and Mining	112	20%	\$24.6	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.

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Shift-Share Analysis by Top Industry Sectors

Arts, Entertainment, Recreation And Visitor Industries 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
Hotels (except Casino Hotels) and Motels	2,166	131	51	182	134	-48
Independent Artists, Writers, and Performers	879	48	38	86	125	↑ 39
Golf Courses and Country Clubs	425	27	-8	19	8	-11
All Other Amusement and Recreation Industries	231	11	28	39	65	↑ 26
Fitness and Recreational Sports Centers	159	12	10	22	-32	-54
Radio Stations	126	11	-11	0	-42	-42
Recreational and Vacation Camps (except Campgrounds)	110	5	7	12	28	↑ 16
Travel Agencies	104	8	-11	-3	-23	-20
RV (Recreational Vehicle) Parks and Campgrounds	92	5	8	13	13	0
Sports Teams and Clubs	89	4	10	14	34	↑ 20
Television Broadcasting	75	6	2	8	-22	-30
Marinas	69	4	5	9	4	-5
Bowling Centers	68	4	-8	-4	2	↑ 6
Motion Picture Theaters (except Drive-Ins)	63	4	-5	-1	3	↑ 4
Other Spectator Sports	48	3	-2	1	3	↑ 2

Note: Upward arrow (↑) indicates regional competitiveness.

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Top 15 Inputs by Dollars

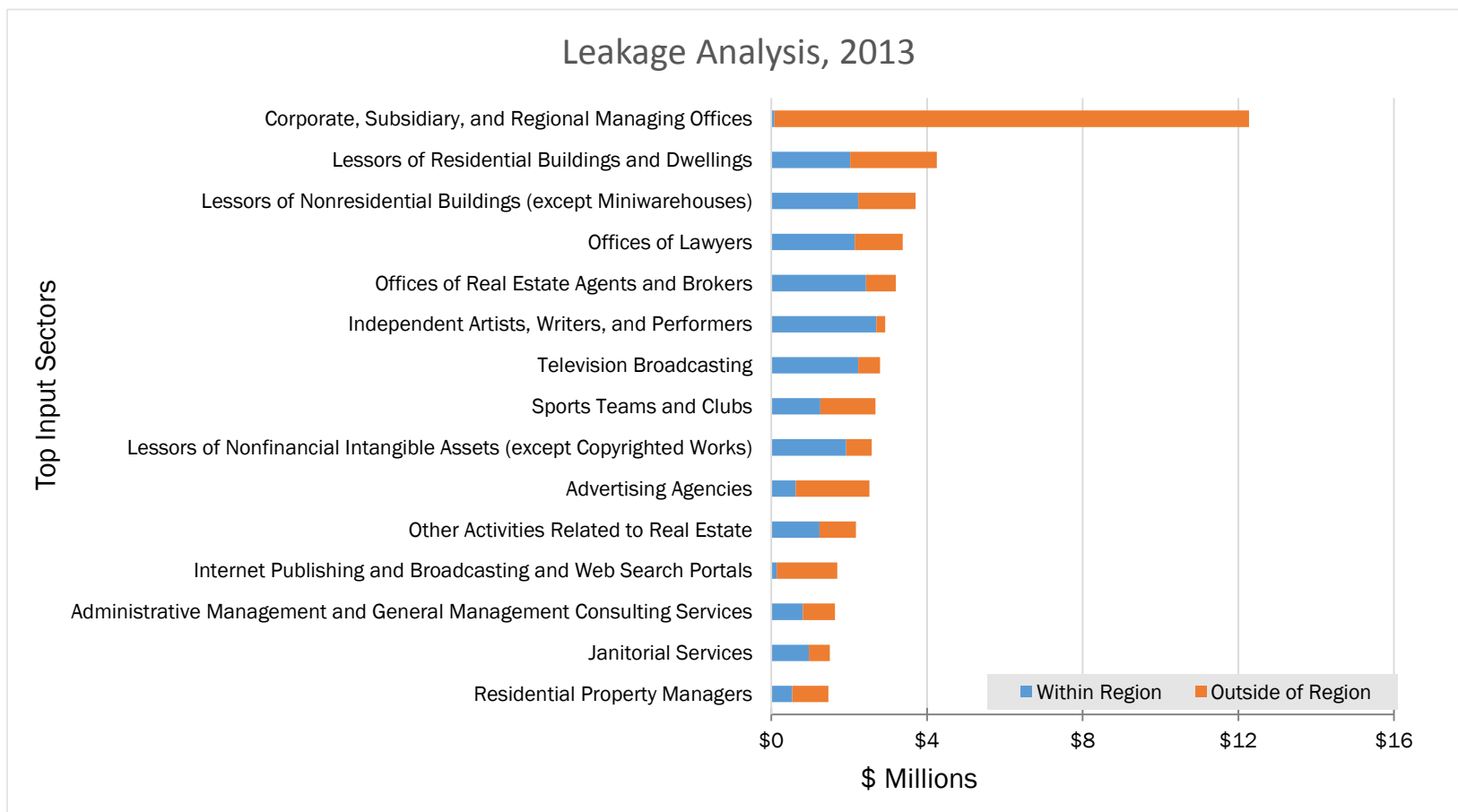
Arts, Entertainment, Recreation And Visitor Industries Cluster

Industries	Estimated Input (\$ Millions), 2013	% In-Region	% Out of Region
Corporate, Subsidiary, and Regional Managing Offices	\$12.28	1%	99%
Lessors of Residential Buildings and Dwellings	\$4.25	48%	52%
Lessors of Nonresidential Buildings (except Miniwarehouses)	\$3.71	60%	40%
Offices of Lawyers	\$3.37	64%	36%
Offices of Real Estate Agents and Brokers	\$3.19	76%	24%
Independent Artists, Writers, and Performers	\$2.93	92%	8%
Television Broadcasting	\$2.79	80%	20%
Sports Teams and Clubs	\$2.68	47%	53%
Lessors of Nonfinancial Intangible Assets (except Copyrighted Works)	\$2.58	75%	25%
Advertising Agencies	\$2.52	25%	75%
Other Activities Related to Real Estate	\$2.17	57%	43%
Internet Publishing and Broadcasting and Web Search Portals	\$1.69	8%	92%
Administrative Management and General Management Consulting Services	\$1.63	50%	50%
Janitorial Services	\$1.50	64%	36%
Residential Property Managers	\$1.46	37%	63%

section 02

Top 15 Inputs by Dollars

Arts, Entertainment, Recreation And Visitor Industries Cluster



section 02

Top Occupations

Arts, Entertainment, Recreation And Visitor Industries Cluster

Occupations	Jobs 2014	% Change, 2009-2014	Median Hourly Earnings	Entry Level Education
Maids and Housekeeping Cleaners	459	4%	\$9.0	Less than high school
Hotel, Motel, and Resort Desk Clerks	352	6%	\$9.8	High school diploma or equivalent
Waiters and Waitresses	256	6%	\$9.2	Less than high school
Musicians and Singers	241	21%	\$17.7	High school diploma or equivalent
Writers and Authors	206	18%	\$18.7	Bachelor's degree
Fitness Trainers and Aerobics Instructors	163	4%	\$15.8	High school diploma or equivalent
Landscaping and Groundskeeping Workers	159	16%	\$11.4	Less than high school
Maintenance and Repair Workers, General	142	8%	\$15.6	High school diploma or equivalent
Lodging Managers	130	-10%	\$14.7	High school diploma or equivalent
Cooks, Restaurant	121	7%	\$10.5	Less than high school
Fine Artists, Including Painters, Sculptors, and Illustrators	117	7%	\$9.9	High school diploma or equivalent
Amusement and Recreation Attendants	115	10%	\$9.5	Less than high school
Bartenders	97	9%	\$9.3	Less than high school
Coaches and Scouts	84	29%	\$12.8	Bachelor's degree
Dining Room and Cafeteria Attendants and Bartender Helpers	83	6%	\$9.3	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

Shift-Share Analysis by Top Industry Sectors

Information Technology And Telecommunications 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
Electrical Contractors and Other Wiring Installation Contractors	530	24	-17	7	153	↑ 146
Wired Telecommunications Carriers	289	21	-32	-11	-35	-24
Custom Computer Programming Services	157	14	32	46	-60	-106
Software Publishers	140	5	13	18	63	↑ 45
Other Measuring and Controlling Device Manufacturing	134	3	-2	1	85	↑ 84
Computer Systems Design Services	120	7	19	26	6	-20
Data Processing, Hosting, and Related Services	90	5	4	9	8	-1
Semiconductor and Related Device Manufacturing	89	2	-3	-1	52	↑ 53
Motor and Generator Manufacturing	61	1	-1	0	53	↑ 53
Automatic Environmental Control Manufacturing for Residential, Commercial, and Appliance Use	45	3	-4	-1	-8	-7
Telecommunications Resellers	42	1	-11	-10	19	↑ 29
Other Computer Related Services	35	2	-4	-2	1	↑ 3
Other Electronic Parts and Equipment Merchant Wholesalers	20	1	-1	0	11	↑ 11
Research and Development in the Physical, Engineering, and Life Sciences (except Biotechnology)	18	1	0	1	11	↑ 10
Other Management Consulting Services	18	2	-5	-3	-15	-12

Note: Upward arrow (↑) indicates regional competitiveness.

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Top 15 Inputs by Dollars

Information Technology And Telecommunications Cluster

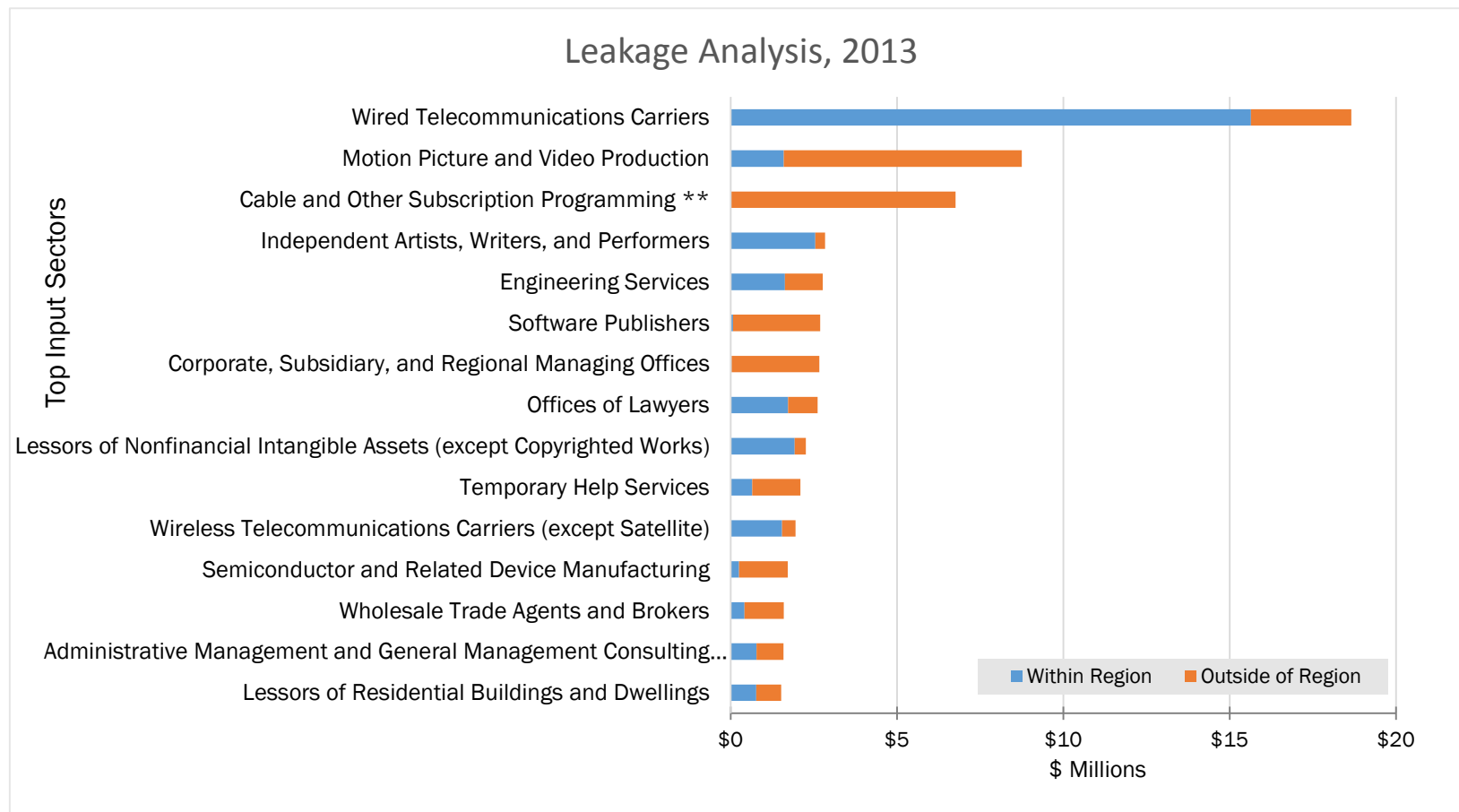
Industries	Estimated Input (\$ Millions), 2013	% In-Region	% Out of Region
Wired Telecommunications Carriers	\$18.66	84%	16%
Motion Picture and Video Production	\$8.75	18%	82%
Cable and Other Subscription Programming **	\$6.76	0%	100%
Independent Artists, Writers, and Performers	\$2.84	90%	10%
Engineering Services	\$2.77	59%	41%
Software Publishers	\$2.69	3%	97%
Corporate, Subsidiary, and Regional Managing Offices	\$2.67	1%	99%
Offices of Lawyers	\$2.62	66%	34%
Lessors of Nonfinancial Intangible Assets (except Copyrighted Works)	\$2.26	85%	15%
Temporary Help Services	\$2.09	31%	69%
Wireless Telecommunications Carriers (except Satellite)	\$1.95	79%	21%
Semiconductor and Related Device Manufacturing	\$1.71	15%	85%
Wholesale Trade Agents and Brokers	\$1.60	26%	74%
Administrative Management and General Management Consulting Services	\$1.59	49%	51%
Lessors of Residential Buildings and Dwellings	\$1.52	51%	49%

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

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Top 15 Inputs by Dollars

Information Technology And Telecommunications Cluster



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

section 02

Top Occupations

Information Technology And Telecommunications Cluster

Occupations	Jobs 2014	% Change, 2009-2014	Median Hourly Earnings	Entry Level Education
Electricians	160	38%	\$17.7	High school diploma or equivalent
Telecommunications Equipment Installers and Repairers, Except Line Installers	129	3%	\$22.8	Postsecondary non-degree award
Team Assemblers	76	65%	\$11.1	High school diploma or equivalent
Customer Service Representatives	54	8%	\$13.7	High school diploma or equivalent
Computer Programmers	52	-2%	\$24.2	Bachelor's degree
Sales Representatives, Services, All Other	51	2%	\$20.7	High school diploma or equivalent
Web Developers	49	32%	\$17.9	Associate's degree
Office Clerks, General	49	32%	\$13.9	High school diploma or equivalent
Software Developers, Applications	49	9%	\$26.8	Bachelor's degree
General and Operations Managers	47	38%	\$31.0	Bachelor's degree
Computer User Support Specialists	46	15%	\$20.2	Some college, no degree
Construction Laborers	44	63%	\$14.6	Less than high school
Managers, All Other	36	6%	\$15.2	High school diploma or equivalent
Computer Systems Analysts	33	-20%	\$23.9	Bachelor's degree
Carpenters	32	28%	\$14.7	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.

Shift-Share Analysis by Top Industry Sectors

Education And Knowledge Creation 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
Educational Support Services	180	4	3	7	120	↑ 113
Newspaper Publishers	179	13	-62	-49	-26	↑ 23
Sports and Recreation Instruction	144	9	17	26	10	-16
Fine Arts Schools	114	6	4	10	20	↑ 10
Exam Preparation and Tutoring	83	2	0	2	55	↑ 53
All Other Miscellaneous Schools and Instruction	76	3	8	11	27	↑ 16
Periodical Publishers	68	5	-17	-12	-11	↑ 1
Professional and Management Development Training	40	2	0	2	11	↑ 9
Other Technical and Trade Schools	32	2	-3	-1	-4	-3
Automobile Driving Schools	30	2	-2	0	6	↑ 6
Colleges, Universities, and Professional Schools	26	1	0	1	13	↑ 12
Junior Colleges	21	1	-1	0	12	↑ 12
Apprenticeship Training	18	1	0	1	7	↑ 6
Internet Publishing and Broadcasting and Web Search Portals	18	2	23	25	-17	-42
Book Publishers	18	3	-8	-5	-25	-20

Note: Upward arrow (↑) indicates regional competitiveness.

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Top 15 Inputs by Dollars

Education And Knowledge Creation Cluster

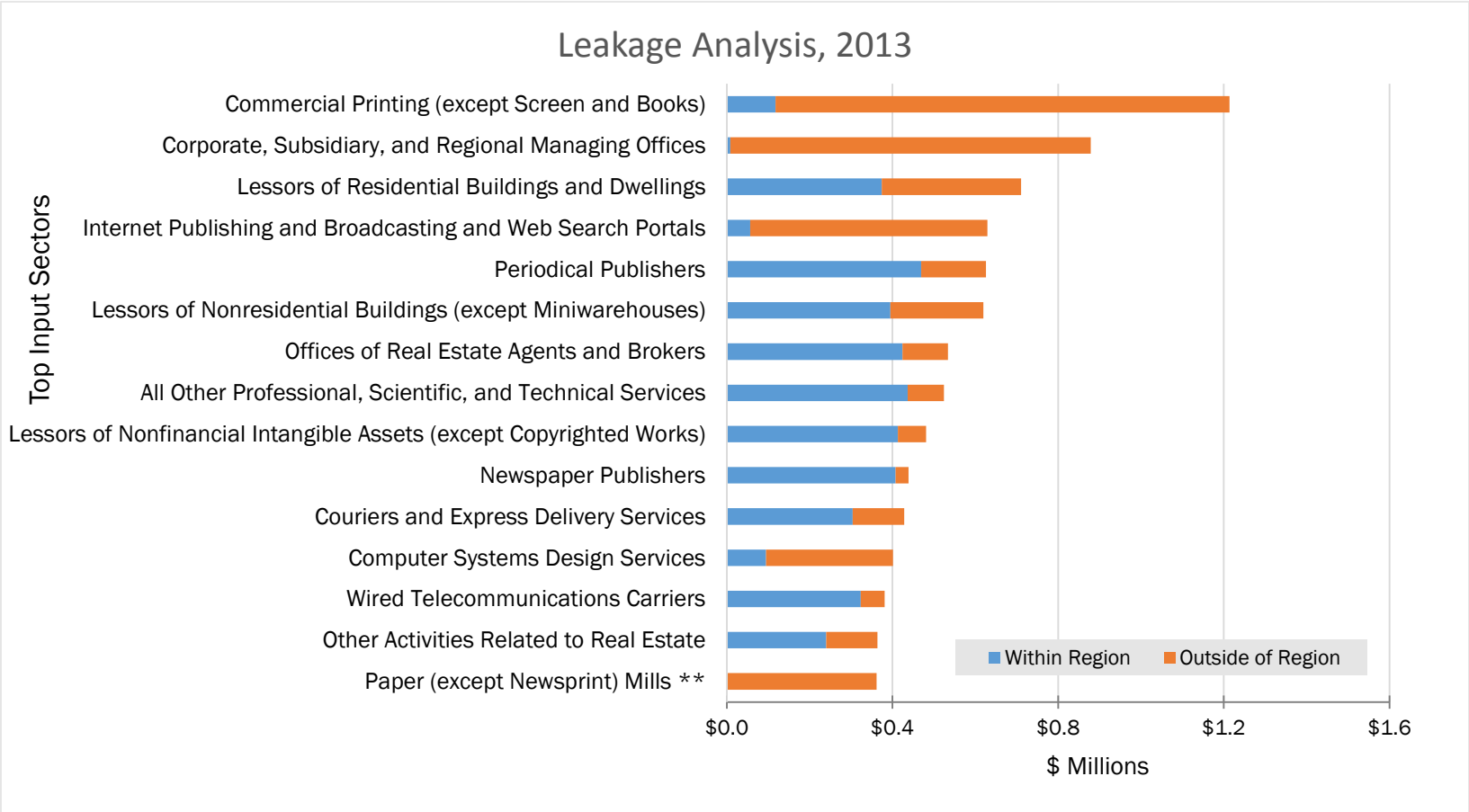
Industries	Estimated Input (\$ Millions), 2013	% In-Region	% Out of Region
Commercial Printing (except Screen and Books)	\$1.21	10%	90%
Corporate, Subsidiary, and Regional Managing Offices	\$0.88	1%	99%
Lessors of Residential Buildings and Dwellings	\$0.71	53%	47%
Internet Publishing and Broadcasting and Web Search Portals	\$0.63	9%	91%
Periodical Publishers	\$0.63	75%	25%
Lessors of Nonresidential Buildings (except Miniwarehouses)	\$0.62	64%	36%
Offices of Real Estate Agents and Brokers	\$0.53	79%	21%
All Other Professional, Scientific, and Technical Services	\$0.52	83%	17%
Lessors of Nonfinancial Intangible Assets (except Copyrighted Works)	\$0.48	86%	14%
Newspaper Publishers	\$0.44	93%	7%
Couriers and Express Delivery Services	\$0.43	71%	29%
Computer Systems Design Services	\$0.40	24%	76%
Wired Telecommunications Carriers	\$0.38	85%	15%
Other Activities Related to Real Estate	\$0.36	66%	34%
Paper (except Newsprint) Mills **	\$0.36	0%	100%

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

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Top 15 Inputs by Dollars

Education And Knowledge Creation Cluster



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

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

Top Occupations

Education And Knowledge Creation Cluster

Occupations	Jobs 2014	% Change, 2009-2014	Median Hourly Earnings	Entry Level Education
Self-Enrichment Education Teachers	187	11%	\$17.1	High school diploma or equivalent
Teachers and Instructors, All Other	161	27%	\$26.0	Bachelor's degree
Postsecondary Teachers	56	600%	\$29.8	Doctoral or professional degree
Coaches and Scouts	49	58%	\$12.8	Bachelor's degree
Office Clerks, General	36	80%	\$13.9	High school diploma or equivalent
Editors	36	-18%	\$20.9	Bachelor's degree
Reporters and Correspondents	33	-20%	\$16.2	Bachelor's degree
Advertising Sales Agents	29	-15%	\$20.7	High school diploma or equivalent
Door-to-Door Sales Workers, News and Street Vendors, and Related Workers	22	-15%	\$7.5	High school diploma or equivalent
Fitness Trainers and Aerobics Instructors	22	69%	\$15.8	High school diploma or equivalent
Instructional Coordinators	21	250%	\$31.7	Master's degree
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	20	100%	\$15.0	High school diploma or equivalent
General and Operations Managers	17	70%	\$31.0	Bachelor's degree
Managers, All Other	17	-6%	\$15.2	High school diploma or equivalent
Customer Service Representatives	14	40%	\$13.7	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.

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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
Paperboard Mills	348	14	-29	-15	124	↑ 139
Finish Carpentry Contractors	233	18	-24	-6	-40	-34
Logging	142	7	12	19	38	↑ 19
Roofing Contractors	142	8	-4	4	18	↑ 14
Corrugated and Solid Fiber Box Manufacturing	135	5	-8	-3	65	↑ 68
Flooring Contractors	89	6	-8	-2	-3	-1
Siding Contractors	69	4	-8	-4	9	↑ 13
Framing Contractors	57	5	-7	-2	-14	-12
Abrasive Product Manufacturing	50	1	1	2	40	↑ 38
Wood Kitchen Cabinet and Countertop Manufacturing	36	6	-10	-4	-53	-49
Lumber, Plywood, Millwork, and Wood Panel Merchant Wholesalers	30	4	-5	-1	-25	-24
Reconstituted Wood Product Manufacturing	26	1	0	1	9	↑ 8
Support Activities for Forestry	24	2	-3	-1	-8	-7
Sawmills	23	1	0	1	-1	-2
Wood Container and Pallet Manufacturing	21	1	0	1	11	↑ 10

Note: Upward arrow (↑) indicates regional competitiveness.

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Top 15 Inputs by Dollars

Forest And Wood Products Cluster

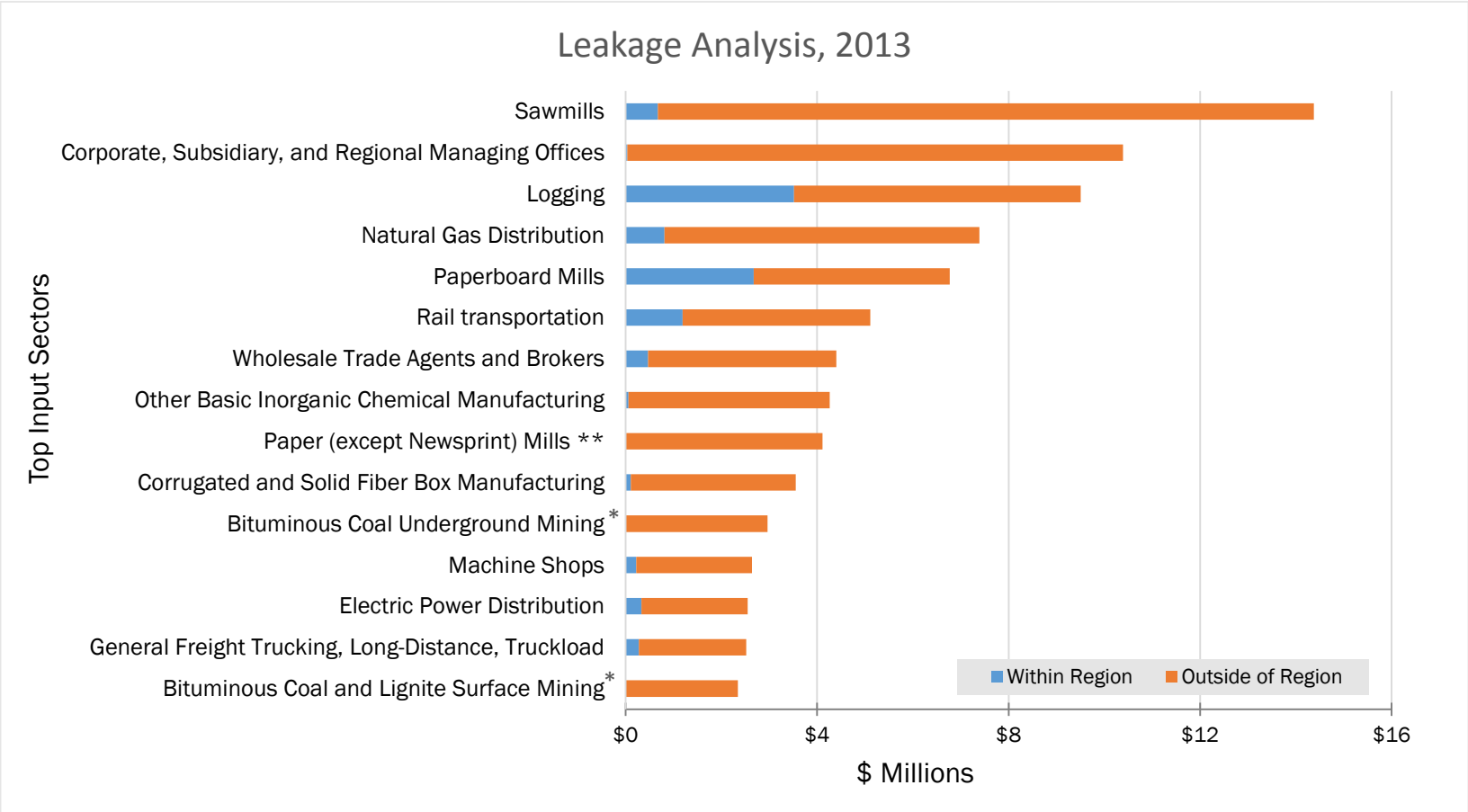
Industries	Estimated Input (\$ Millions), 2013	% In-Region	% Out of Region
Sawmills	\$14.37	5%	95%
Corporate, Subsidiary, and Regional Managing Offices	\$10.39	0%	100%
Logging	\$9.50	37%	63%
Natural Gas Distribution	\$7.39	11%	89%
Paperboard Mills	\$6.77	40%	60%
Rail transportation	\$5.11	23%	77%
Wholesale Trade Agents and Brokers	\$4.40	11%	89%
Other Basic Inorganic Chemical Manufacturing	\$4.26	1%	99%
Paper (except Newsprint) Mills **	\$4.11	0%	100%
Corrugated and Solid Fiber Box Manufacturing	\$3.55	3%	97%
Bituminous Coal Underground Mining *	\$2.97	0%	100%
Machine Shops	\$2.64	8%	92%
Electric Power Distribution	\$2.55	13%	87%
General Freight Trucking, Long-Distance, Truckload	\$2.52	11%	89%
Bituminous Coal and Lignite Surface Mining *	\$2.34	0%	100%

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

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Top 15 Inputs by Dollars

Forest And Wood Products Cluster



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

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Top Occupations

Forest And Wood Products Cluster

Occupations	Jobs 2014	% Change, 2009-2014	Median Hourly Earnings	Entry Level Education
Carpenters	121	-14%	\$14.7	High school diploma or equivalent
Roofers	102	38%	\$14.3	Less than high school
Construction Laborers	87	4%	\$14.6	Less than high school
Logging Equipment Operators	75	36%	\$14.7	High school diploma or equivalent
Paper Goods Machine Setters, Operators, and Tenders	74	45%	\$14.4	High school diploma or equivalent
Team Assemblers	64	25%	\$11.1	High school diploma or equivalent
Managers, All Other	46	21%	\$15.2	High school diploma or equivalent
Painters, Construction and Maintenance	36	-18%	\$14.5	Less than high school
Helpers--Production Workers	34	48%	\$13.7	Less than high school
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	33	-6%	\$22.7	High school diploma or equivalent
First-Line Supervisors of Production and Operating Workers	33	32%	\$23.5	Postsecondary non-degree award
Cabinetmakers and Bench Carpenters	29	-47%	\$14.5	High school diploma or equivalent
Industrial Machinery Mechanics	29	61%	\$18.8	High school diploma or equivalent
First-Line Supervisors of Construction Trades and Extraction Workers	27	-31%	\$17.7	High school diploma or equivalent
Construction Managers	26	-38%	\$17.3	Bachelor's degree

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.

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Report Contributors

This report was prepared by the Purdue Center for Regional Development, in partnership with the Southern Rural Development Center and USDA Rural Development, in support of the Stronger Economies Together program.



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