

LaGrange County Economic Development Plan

Regional Business Cluster Analysis

The Location Quotient (LQ) technique is a common economic analysis method to determine the value of a community's business clusters. In this analysis, we are comparing the regional economies in which LaGrange County participates to the national economy. The purpose of this type of analysis is to identify basic employers, those establishments that are exporting goods out the county or region and bringing capital back into the community.

This is an important concept in understanding the nature of wealth creation. If a shop that sharpens saw blades purchases a loaf of bread from a local bakery or if the baker has his or her saw blades sharpened, capital is simply exchanged within the community. But, if the baker begins packaging bread and exporting it for sale outside the region, the money used to purchase the bread in another location now becomes new capital within the baker's community. The baker creates additional wealth where his or her business is located. It's not simply an exchange of existing capital. Goods are exported and capital imported. The baker has become a basic employer.

It is important to take advantage of the economic development opportunities presented by regional business sectors with strong basic employers. Location quotients help to identify these areas. An LQ is a ratio comparing the specialization of a job sector in a given region against its specialization in larger reference area. By specialization we are referring to the share of jobs a sector has as a percentage of a regional economy in comparison to the share it has in a larger referenced economy, in this case the nation. This comparison takes the form of a ratio or quotation. We are assuming that if an industry has a greater share than expected of a given industry, then that "extra" industry employment is assumed to be basic because those jobs are above what a local economy should have to serve local needs. A greater share would be a quotient over 1; a smaller share less than 1; and 1 indicating exactly the same degree of specialization locally and nationally.

This approach assumes that the local economy would have that same percentage of its workers in the food processing industry to serve its local needs as the nation. That would result in an LQ of 1. If, for example, food processing including our baker employed 3% of the total local workforce and the national economy had only 1.5% of its workforce in food processing. Any employment over and above the expected average percentage (in this case 1.5%) is, therefore, considered to consist of basic sector jobs because these workers are assumed to be exporting their goods and services to non-local areas. In this case, the LQ is $3/1.5$ or 2. If the percentages had been identical, an LQ of 1, or if the local percentage had been less than the reference percentage, then we would conclude that the local area has no basic sector employment for that industry as the area can only, at best, meet their local demand and not export these goods and services.

In order to identify regional growth trends and better understand development opportunities, SDG conducted a location quotient analysis across 17 industry clusters and 6 manufacturing subclusters. For the years 2003 and 2009, this analysis compares LQs in employment (number of jobs), business

establishments and wages in four regional economies in which LaGrange County participates or may take advantage of:

- **LaGrange County Region** - consisting of LaGrange County and nearby counties. This region includes including DeKalb, Elkhart, LaGrange, Noble, and Steuben counties in Indiana and Branch and St. Joseph counties in Michigan.
- **South Bend-Michiwaka MSA** – the key economic engine on the I-80/I-90 corridor to its west.
- **Ft. Wayne MSA** – the key economic engine on the I-69 corridor to its southeast.
- **Grand Rapids, Michigan MSA** – an important regional economic engine.

A. LaGrange County Region - Employment

Midwest states and Northern Indiana and Michigan, in particular, were among the areas hardest hit by the national recession that began in 2008. Total employment in the LaGrange County Region lost 39,578 jobs between 2003 and 2009. Nearly all of the 17 industry clusters experienced job losses. Clusters particularly hard hit by were Advanced Materials which declined by 54.6% and the Manufacturing Supercluster¹ which declined by 34.8%.

In the case of the LaGrange County Region, the location quotient analysis using employment data reveals an economy with several mature industry clusters. Clusters are considered mature which have an LQ over 1 and which experienced a loss of jobs over a specified period of time, in this case between 2003 and 2009. During this time period, the region's mature industries with high LQs included the Manufacturing Supercluster (LQ=5.3), Transportation Equipment Manufacturing subcluster (LQ=12.48), Fabricated Metal Product Manufacturing subcluster (LQ=5.40), Primary Metal Manufacturing subcluster (LQ=5.02), Forest and Wood Products (LQ=3.29), and Chemicals and Chemical-Based Products (LQ=3.19).

Industry clusters are considered emerging which have an LQ of less than 1 and which experienced an increase in jobs over a specified period of time. Three emerging industry clusters of note in the LaGrange County Region include Agribusiness, Food Processing & Technology, Biomedical/Biotechnical (Life Sciences), and Education & Knowledge Creation. All three of these industry clusters experienced increasing employment, but the Education & Knowledge Creation industry's growth outpaced the nation's by nearly five times. Emerging clusters may have the potential to become basic employers and Stars.

Stars are those industry clusters which have an LQ of over 1 and which have experienced job growth over the specified period of time. Between 2003 and 2009, only Machinery Manufacturing met this technical definition, although it experienced a minimal 2.5% increase in jobs. This increase

¹ As indicated in the tables, the Manufacturing Supercluster is a broad category which contains a number of subclusters, industries which engage more specialized manufacturing processes.

outperformed the nation, which saw over a 16% decline, but Machinery Manufacturing is not a major employer nationally or regionally.

With regard to 2009 employment quotients, the region has experienced some diversification but remains concentrated in the Manufacturing Supercluster. Ten of the 23 industry clusters and Manufacturing subclusters possess quotients greater than 1.0. Five more have quotients between 0.65 and 0.99. Five clusters stand out for their particularly low quotients, and four emerge due to their outperformance and growth.

The cluster with the highest specialization of employment, the Transportation Equipment Manufacturing subcluster, has increased its high LQ from 12.02 in 2003 to 12.48 in 2009. With the exception of the Machinery Manufacturing subcluster, all other notably high quotient industries experienced minor decreases in their specialization. Several of the LaGrange County Region's high quotient industries would be classified as mature. Nevertheless, these industries are exporting goods, building wealth, and are the major employers in the LaGrange County Region. And as reported first-hand in our employer focus groups, many are already creating jobs again as the recession ends.

Table 1 indicates changes in employment clusters in the LaGrange County Region between 2003 and 2009. The percent change in the region's employment during that time period is compared with the national average.

Table 1: Employment Industry Clusters – 2003 – 2009

Clusters which experienced job growth over this period are highlighted.

The table is sorted based on the 2009 LQ from highest to lowest.

Subclusters within the Manufacturing Supercluster are marked with an asterisk.

Industry Description	LaGrange Region - Industry Clusters - Employment (2003)	Region 2003 LQ	LaGrange Region - Industry Clusters - Employment (2009)	Region 2009 LQ	%Change in LQ	Change in Employment #	% Change in Employment	% Change in U.S.
Total All Industries	220,757	1	181,179			-39,578	-17.9%	0.6%
Transportation Equipment Mfg*	37,050	12.02	24,336	12.48	3.8%	-12,714	-34.3%	-22.4%
Fabricated Metal Product Mfg*	15,225	5.92	9,974	5.4	-8.8%	-5,251	-34.5%	-10.9%
Manufacturing Supercluster	63,960	5.52	41,713	5.3	-4.0%	-22,247	-34.8%	-16.7%
Primary Metal Mfg*	5,093	6.21	2,570	5.02	-19.2%	-2,523	-49.5%	-18.8%
Forest & Wood Products	16,527	3.4	9,617	3.29	-3.2%	-6,910	-41.8%	-26.1%
Chemicals & Chemical Based Products	13,833	3.27	9,151	3.19	-2.4%	-4,682	-33.8%	-17.0%
Machinery Mfg*	2,878	1.45	2,949	2.05	41.4%	71	2.5%	-16.4%
Electrical Equipment, Appliance & Component Mfg*	1,700	2.15	855	1.63	-24.2%	-845	-49.7%	-12.0%
Glass & Ceramics	1,649	1.69	808	1.28	-24.3%	-841	-51.0%	-20.8%
Advanced Materials	15,772	1.72	7,157	1.08	-37.2%	-8,615	-54.6%	-11.5%
Agribusiness, Food Processing & Technology	3,329	0.6	3,969	0.91	51.7%	640	19.2%	-2.6%
Biomedical/Biotechnical (Life Sciences)	3,996	0.57	4,496	0.68	19.3%	500	12.5%	15.9%
Apparel & Textiles	1,214	0.5	935	0.67	34.0%	-279	-23.0%	-30.2%
Education & Knowledge Creation	9,101	0.44	11,903	0.65	47.7%	2,802	30.8%	6.6%
Computer & Electronic Product Mfg*	2,017	0.86	1,032	0.65	-24.4%	-985	-48.8%	-23.3%
Printing & Publishing	2,229	0.49	2,123	0.64	30.6%	-106	-4.8%	-11.6%
Transportation & Logistics	2,583	0.4	2,865	0.55	37.5%	282	10.9%	-0.3%
Energy (Fossil & Renewable)	5,005	0.4	3,359	0.32	-20.0%	-1,646	-32.9%	3.4%
Business & Financial Services	4,329	0.23	4,209	0.27	17.4%	-120	-2.8%	3.7%
Arts, Entertainment, Recreation & Visitor Industries	1,976	0.23	1,853	0.26	13.0%	-123	-6.2%	0.8%
Defense & Security	2,900	0.26	2,390	0.26	0.0%	-510	-17.6%	2.4%
Information Technology & Telecommunications	2,402	0.23	1,564	0.19	-17.4%	-838	-34.9%	-2.1%
Mining	25	0.08	10	0.04	-50.0%	-15	-60.0%	2.3%

B. Job Creation in Key Industry Clusters

With a few exceptions, nearly all of the region's industry clusters lost jobs from 2003 to 2009; total absolute employment in the region declined 17.9% during that time. Total employment in the region was 181,179 in 2009.

A total of 22,247 jobs were lost in the Manufacturing Supercluster during that time period. Several other key industry clusters similarly experienced declining absolute employment but not on the same dire scale as in Manufacturing. Table 1 includes more detailed information on employment changes in these industry clusters.

Analysis of job creation in the LaGrange County Region reveals that five key clusters experienced gains in absolute employment numbers between 2003 and 2009. The Machinery Manufacturing subcluster is the only industry that both created jobs and outperformed the national quotient level within the LaGrange County Region. However, the number of jobs created by this industry subcluster is not particularly significant – it only added 71 jobs.

The Education & Knowledge Creation industry created the most jobs; it added 2,802 between 2003 and 2009. Other industries that created jobs included Agribusiness, Food Processing & Technology (+640), Biomedical/Biotechnical (Life Sciences) (+500), and Transportation & Logistics (+282). These industry clusters are highlighted in the Table 1.

C. LaGrange County Region– Establishments

When analyzing location quotients using establishment data, the LaGrange County Region demonstrated outperformance in 16 of the 23 clusters with only seven industries falling below 1.0. Ten clusters possess quotients greater than 2.0. In most of these high quotient cases, positive growth trends were also observed.

The period of 2003 through 2009 reveals some quotient degradation in terms of percentage change. Four industry clusters experienced quotient growth of greater than 100%. Of this group, only two clusters had a quotient above 1.0 in 2009. This is not to say that all establishments in every industry increased in absolute terms. However, the regional quotient ratios universally outperformed national trends.

As in the employment quotient distribution, the establishment quotient was largely concentrated in Manufacturing in the LaGrange County Region. The quotient for the Manufacturing supercluster grew by 7.3% between 2003 and 2009 but lost 48 establishments.

The number of establishments notably increased in several clusters: Advanced Materials (+260), Business & Financial Services (+216), Information Technology & Telecommunications (+197), and Energy

(Fossil & Renewable (+191)). Table 2 includes more detailed information regarding the change in establishments between 2003 and 2009 in the LaGrange County Region.

Table 2: LaGrange County Region Establishments					
Industry Description	Industry Clusters - Establishments (2003)	2003 LQ	Industry Clusters - Establishments (2009)	2009 LQ	% Change in LQ
Total All Industries	10,589	1	10,714	1	
Advanced Materials	346	1.87	606	3.61	93.0%
Agribusiness, Food Processing & Technology	174	0.92	281	1.63	77.2%
Apparel & Textiles	52	0.47	108	1.13	140.4%
Arts, Entertainment, Recreation & Visitor Industries	157	0.48	306	0.97	102.1%
Biomedical/Biotechnical (Life Sciences)	317	1.31	423	1.55	18.3%
Business & Financial Services	822	0.52	1,038	0.63	21.2%
Chemicals & Chemical Based Products	246	2.65	249	3.03	14.3%
Defense & Security	147	0.41	258	0.71	73.2%
Education & Knowledge Creation	105	0.49	202	0.85	73.5%
Energy (Fossil & Renewable)	508	0.73	699	0.99	35.6%
Forest & Wood Products	428	1.74	503	2.28	31.0%
Glass & Ceramics	58	2.02	76	3.03	50.0%
Information Technology & Telecommunications	123	0.24	320	0.62	158.3%
Manufacturing Supercluster	836	4.49	788	4.82	7.3%
Computer & Electronic Product Mfg*	30	1.13	26	1.16	2.7%
Electrical Equipment, Appliance & Component Mfg*	37	3.8	33	3.76	-1.1%
Fabricated Metal Product Mfg*	300	3.77	305	4.26	13.0%
Machinery Mfg*	147	3.44	136	3.8	10.5%
Primary Metal Mfg*	46	5.75	40	5.67	-1.4%
Transportation Equipment Mfg*	276	13.9	248	13.84	-0.4%
Mining	6	0.44	21	1.47	234.1%
Printing & Publishing	105	0.43	182	0.78	81.4%
Transportation & Logistics	282	1.15	369	1.54	33.9%

D. LaGrange County Region - Wages

Similar to the results seen with the employment quotients, ten out of 23 clusters possessed values higher than 1.0. There were a few significant outperformers. Seven industries had quotients higher than 2.0 culminating at 10.77 demonstrated by the Transportation Equipment Manufacturing subcluster, which is up from 10.63 in 2003.

Overall, wages declined in several industry clusters. Some notable exceptions include Agribusiness, Food Processing & Technology, Biomedical/Biotechnical (Life Sciences), Business & Financial Services, Education & Knowledge Creation. More detailed information on wages in the LaGrange County Region is included in Table 3.

Industry Description	Industry Clusters - Wages (2003)	2003 LQ	Industry Clusters - Wages (2009)	2009 LQ	% Change in LQ
Total All Industries	\$7,072,324,466	1	\$6,308,893,539	1	
Advanced Materials	\$562,501,351	1.33	\$293,082,178	0.86	-35.3%
Agribusiness, Food Processing & Technology	\$86,338,251	0.6	\$124,524,422	1.02	70.0%
Apparel & Textiles	\$31,744,562	0.45	\$29,011,635	0.66	46.7%
Arts, Entertainment, Recreation & Visitor Industries	\$28,041,189	0.13	\$26,367,431	0.14	7.7%
Biomedical/Biotechnical (Life Sciences)	\$145,773,673	0.57	\$198,417,991	0.75	31.6%
Business & Financial Services	\$158,018,961	0.16	\$168,527,277	0.18	12.5%
Chemicals & Chemical Based Products	\$504,296,353	2.81	\$394,481,362	2.95	5.0%
Defense & Security	\$97,239,201	0.19	\$101,265,805	0.22	15.8%
Education & Knowledge Creation	\$282,354,641	0.45	\$401,882,563	0.67	48.9%
Energy (Fossil & Renewable)	\$135,866,959	0.25	\$118,329,115	0.22	-12.0%
Forest & Wood Products	\$582,564,002	3.83	\$362,955,398	3.76	-1.8%
Glass & Ceramics	\$48,230,796	1.48	\$28,393,556	1.32	-10.8%
Information Technology & Telecommunications	\$88,983,264	0.15	\$74,656,526	0.15	0.0%
Transportation & Logistics	\$102,668,638	0.48	\$119,921,868	0.67	39.6%
Manufacturing Supercluster	\$2,552,914,211	4.96	\$1,785,711,822	4.78	-3.6%
Primary Metal Mfg	\$225,440,842	6.8	\$147,417,121	6.89	1.3%
Fabricated Metal Product Mfg	\$532,545,745	6.14	\$382,869,639	5.79	-5.7%
Machinery Mfg	\$115,723,646	1.43	\$128,575,332	2.05	43.4%
Computer & Electronic Product Mfg	\$71,244,086	0.51	\$45,395,668	0.44	-13.7%
Electrical Equipment, Appliance & Component Mfg	\$52,212,737	1.79	\$27,658,387	1.28	-28.5%
Transportation Equipment Mfg	\$1,555,747,155	10.63	\$1,053,795,675	10.77	1.3%
Mining	\$945,029	0.08	\$341,126	0.03	-62.5%
Printing & Publishing	\$78,618,202	0.4	\$78,788,105	0.5	25.0%

E. South Bend-Mishawaka MSA

The average annual total employment in 2009 was 122,598 in the South Bend-Mishawaka MSA, which includes St. Joseph County, Indiana and Cass County, Michigan.² This represents a 7.2 percent decline from 2003.

When looking across the top employment clusters, the South Bend-Mishawaka MSA possesses both strengths and opportunities for growth. The MSA's top sector, Education & Knowledge Creation, demonstrates both basic employment characteristics and sizeable absolute employment growth over the analyzed period. This is likely attributable to the presence of the University of Notre Dame and its new venture Innovation Park. The MSA's Manufacturing Supercluster and Transportation Equipment Mfg subcluster remain basic employers, but both industries experienced decreasing total employment between 2003 and 2009. In fact, all of the Manufacturing subclusters experienced declines in total employment – most notably the Primary Metal Mfg subcluster lost approximately 60% of its jobs during this time period.

The establishment quotient showed modest growth; two of the top employment clusters had a higher specialization of establishments than the nation. The wage quotients roughly mirrored the employment analysis. Table 4 presents employment, establishment, and wage data for the South Bend-Mishawaka MSA.

Table 4: South Bend-Mishawaka MSA								
Clusters which experienced job growth over this period are highlighted.								
The table is sorted based on the 2009 Employment LQ from highest to lowest.								
	Employment				Establishments		Wage	
	2009 # of Jobs	% Change 2003-09	2009 LQ	% Change in LQ 2003-09	2009 LQ	% Change in LQ 2003-09	2009 LQ	% Change in LQ 2003-09
Transportation Equipment Mfg*	4,365	-33.6%	3.31	-7.0%	3.50	11.5%	4.75	26.7%
Primary Metal Mfg*	761	-58.2%	2.2	-40.7%	2.89	-17.4%	2.86	-26.1%
Fabricated Metal Product Mfg*	2,517	-13.2%	2.02	6.9%	2.35	13.0%	2.28	3.6%
Manufacturing Supercluster	9,458	-29.3%	1.78	-7.8%	2.40	10.1%	2.12	7.6%
Chemicals & Chemical Based Products	2,732	-20.7%	1.41	3.7%	1.85	-1.6%	1.12	-2.6%
Education & Knowledge Creation	17,299	17.5%	1.40	18.6%	0.93	47.6%	1.58	18.8%
Glass & Ceramics	487	-30.9%	1.14	-5.8%	1.31	35.1%	1.98	8.2%
Electrical Equipment, Appliance & Component Mfg*	405	-40.9%	1.14	-21.4%	1.97	-17.9%	1.26	21.3%

² Employment totals used in the LQ analysis do not add to the total employment due to non-disclosure requirements of the Bureau of Labor Statistics and may be due to the definitions of the 17 industry clusters that use specific NAICS designations.

Table 4: South Bend-Mishawaka MSA

Clusters which experienced job growth over this period are highlighted.
The table is sorted based on the 2009 Employment LQ from highest to lowest.

	Employment				Establishments		Wage	
	2009 # of Jobs	% Change 2003-09	2009 LQ	% Change in LQ 2003-09	2009 LQ	% Change in LQ 2003-09	2009 LQ	% Change in LQ 2003-09
Machinery Mfg*	1,033	-11.2%	1.06	8.2%	3.02	13.5%	1.15	9.5%
Forest & Wood Products	2,058	0.2%	1.04	46.5%	1.23	13.9%	1.15	57.5%
Printing & Publishing	1,824	3.6%	0.82	28.1%	1.01	20.2%	0.64	23.1%
Transportation & Logistics	2,821	-1.9%	0.80	6.7%	1.35	35.0%	0.81	-2.4%
Biomedical/Biotechnical (Life Sciences)	3,444	-4.3%	0.77	-10.5%	1.28	15.3%	0.79	-16.8%
Advanced Materials	2,789	-26.7%	0.62	-10.1%	2.25	69.2%	0.51	-21.5%
Business & Financial Services	6,162	-18.0%	0.58	-13.4%	0.90	-2.2%	0.46	-14.8%
Defense & Security	3,495	-3.3%	0.56	1.8%	0.88	18.9%	0.55	0.0%
Information Technology & Telecommunications	3,088	-11.8%	0.54	-3.6%	0.88	18.9%	0.45	-2.2%
Energy (Fossil & Renewable)	3,794	-28.5%	0.53	-25.4%	1.0	6.4%	0.43	-27.1%
Arts, Entertainment, Recreation & Visitor Industries	2,552	-7.6%	0.52	-1.9%	0.9	20.0%	0.37	-2.6%
Computer & Electronic Product Mfg*	378	64.3%	0.35	118.8%	0.70	32.1%	0.17	88.9%
Agribusiness, Food Processing & Technology	916	5.2%	0.31	19.2%	0.77	63.8%	0.33	22.2%
Apparel & Textiles	233	-9.3%	0.25	39.9%	0.81	76.1%	0.30	50.0%
Mining	D	D	D	D	0.55	D	D	D

F. Ft. Wayne MSA

The average annual total employment in the Fort Wayne MSA in 2009 was 191,279, which represents a 7.2 percent decline from 2003.

In analyzing location quotients between 2003 and 2009 across the same three data sets, the Ft. Wayne MSA demonstrates an economy in transition. The segment with the highest absolute employment in 2009, Manufacturing Supercluster, has seen jobs decrease over the analyzed period, while possessing a quotient indicating overperformance relative to the overall economy. Information Technology & Telecommunications and Advanced Materials both experienced growing employment and improving quotient trends.

The establishment quotients generally show positive momentum. The wage quotients reflect employment quotients, with Information Technology & Telecommunications far outperforming the others top employment clusters for the time period between 2003 and 2009. Table 5 presents employment, establishment, and wage data for the Ft. Wayne MSA.

Table 5: Ft. Wayne MSA

Clusters which experienced job growth over this period are highlighted.
The table is sorted based on the 2009 Employment LQ from highest to lowest.

	Employment				Establishments		Wage	
	2009 # of Jobs	% Change 2003-09	2009 LQ	% Change in LQ 2003-09	2009 LQ	% Change in LQ 2003-09	2009 LQ	% Change in LQ 2003-09
Primary Metal Mfg*	2,689	-21.0%	4.97	8.0%	3.23	0.3%	5.54	2.6%
Machinery Mfg*	3,981	-24.6%	2.62	-11.2%	2.98	-2.0%	2.63	-7.4%
Computer & Electronic Product Mfg*	4,363	23.8%	2.59	55.1%	0.97	40.6%	2.78	57.1%
Manufacturing Supercluster	18,938	-17.6%	2.28	3.6%	2.22	7.2%	2.56	4.1%
Electrical Equipment, Appliance & Component Mfg*	1,037	-18.9%	1.88	5.0%	2.48	61.0%	2.67	-8.6%
Transportation Equipment Mfg*	3,824	-40.9%	1.86	-19.8%	2.02	24.7%	2.36	-17.5%
Biomedical/Biotechnical (Life Sciences)	10,867	8.1%	1.56	-1.9%	2.92	-2.0%	1.9	1.6%
Fabricated Metal Product Mfg*	3,043	0.8%	1.56	20.0%	2.16	4.3%	1.48	17.5%
Chemicals & Chemical Based Products	4,398	-11.6%	1.45	11.5%	1.46	24.8%	1.34	11.7%
Transportation & Logistics	7,069	0.5%	1.29	5.7%	1.33	7.3%	1.42	7.6%
Advanced Materials	7,236	12.2%	1.04	33.3%	1.99	67.2%	1.17	64.8%
Forest & Wood Products	2,807	-19.8%	0.91	13.8%	1.31	28.4%	0.99	16.5%
Information Technology & Telecommunications	7,843	89.9%	0.88	100.0%	0.88	35.4%	0.92	142.1%
Glass & Ceramics	527	-6.1%	0.79	23.4%	1.61	87.2%	0.64	14.3%
Business & Financial Services	11,777	-9.1%	0.71	-7.8%	1.04	13.0%	0.57	-10.9%
Printing & Publishing	2,277	-10.9%	0.65	4.8%	1.16	24.7%	0.47	0.0%
Energy (Fossil & Renewable)	6,757	-8.0%	0.61	-6.2%	1.07	15.1%	0.51	-8.9%
Mining	152	-8.4%	0.56	-6.7%	1.09	-1.8%	0.52	-24.6%
Agribusiness, Food Processing & Technology	2,363	15.0%	0.51	24.4%	0.86	38.7%	0.67	34.0%
Arts, Entertainment, Recreation & Visitor Industries	3,260	-24.1%	0.43	-20.4%	0.95	20.3%	0.34	-20.9%
Defense & Security	3,590	5.7%	0.37	8.8%	0.83	23.9%	0.29	20.8%
Apparel & Textiles	526	-37.8%	0.36	-5.3%	1.03	74.6%	0.31	-6.1%
Education & Knowledge Creation	5,391	14.1%	0.28	12.0%	1.25	127.3%	0.23	15.0%

G. Grand Rapids, Michigan MSA

The average annual total employment in the Grand Rapids, MI MSA in 2009 was 343,004, which represents a 7 percent decline from 2003. The analysis of the MSA shows the top employment clusters in 2009 are similar to the other MSAs being examined. The Manufacturing Supercluster was the top employment sector in the Grand Rapids, MI MSA in 2009 and accounted for 7.3% of its absolute

employment. Three of the top five employment sectors have quotients higher than 1.0. Business & Financial Services and Energy both underperform the national average and show declines in terms of both its ratio and absolute employment. While most sectors demonstrate modest changes over the analyzed period, Biomedical/Biotechnical (Life Sciences) improved by over 200% in their establishment and wage quotients, and more than 170% in absolute employment. Table 6 presents employment, establishment, and wage data for Grand Rapids, Michigan MSA.

Table 6: Grand Rapids, Michigan MSA								
Clusters which experienced job growth over this period are highlighted.								
The table is sorted based on the 2009 Employment LQ from highest to lowest.								
	Employment				Establishments		Wage	
	2009 # of Jobs	% Change 2003-09	2009 LQ	% Change in LQ 2003-09	2009 LQ	% Change in LQ 2003-09	2009 LQ	% Change in LQ 2003-09
Machinery Mfg*	6,611	-34.8%	2.43	-20.6%	4.27	10.3%	1.60	2.6%
Transportation Equipment Mfg*	8,386	-44.1%	2.27	-22.0%	3.07	19.0%	1.97	-29.4%
Chemicals & Chemical Based Products	9,682	-25.2%	1.78	-2.7%	1.50	15.4%	1.81	-7.7%
Manufacturing Supercluster	25,062	-31.8%	1.68	-11.6%	2.57	15.8%	1.68	-13.0%
Glass & Ceramics	2,008	-20.0%	1.68	9.1%	2.29	40.5%	1.62	14.1%
Biomedical/Biotechnical (Life Sciences)	19,435	173.3%	1.56	155.7%	2.94	237.9%	1.98	288.2%
Fabricated Metal Product Mfg*	5,395	-19.5%	1.54	-1.3%	2.33	20.1%	1.60	2.6%
Forest & Wood Products	7,785	-44.6%	1.41	-18.5%	1.38	3.8%	1.60	-29.8%
Agribusiness, Food Processing & Technology	9,196	16.8%	1.11	30.6%	1.26	46.5%	1.22	37.1%
Advanced Materials	13,420	-0.8%	1.07	21.6%	2.17	51.7%	0.98	18.1%
Computer & Electronic Product Mfg*	3,159	36.9%	1.05	78.0%	0.90	28.6%	1.03	94.3%
Printing & Publishing	6,357	1.9%	1.02	24.4%	1.27	6.7%	0.80	15.9%
Apparel & Textiles	2,597	49.7%	0.98	133.3%	1.16	26.1%	0.83	102.4%
Primary Metal Mfg*	871	-54.2%	0.90	-35.3%	2.51	12.6%	1.11	-17.8%
Business & Financial Services	24,191	-5.8%	0.81	-1.2%	1	3.1%	0.66	-1.5%
Transportation & Logistics	7,394	0.4%	0.75	8.7%	0.98	4.3%	0.80	19.4%
Electrical Equipment, Appliance & Component Mfg*	642	-10.6%	0.65	20.4%	0.86	22.9%	0.89	36.9%
Defense & Security	10,582	80.9%	0.61	90.6%	0.79	14.5%	0.60	130.8%
Energy (Fossil & Renewable)	11,011	-14.0%	0.55	-9.8%	0.91	5.8%	0.44	-15.4%
Arts, Entertainment, Recreation & Visitor Industries	7,189	23.7%	0.53	35.5%	0.92	61.4%	0.36	16.1%
Information Technology & Telecommunications	7,159	-7.0%	0.45	2.3%	0.81	0.0%	0.39	8.3%
Education & Knowledge Creation	9,515	-19.9%	0.28	-17.6%	1.06	68.3%	0.23	-23.3%
Mining	41	-14.6%	0.08	-11.1%	0.84	104.9%	0.06	-25.0%

H. Summary

Subclusters within the Manufacturing supercluster continue to be the primary employment base for the LaGrange County Region as we have defined it. Although these clusters suffered significant losses over the five year period from 2003 to 2009, their LQs remain extraordinarily high and they serve as the region's major source of higher paying jobs. They consist of Transportation Equipment Mfg* with an LQ at 12.48, Fabricated Metal Product Mfg* at 5.40, and Primary Metal Mfg* at 5.02. Additional industry clusters with high LQs that experienced major job losses include Forest and Wood Products with an LQ at 3.29 and Chemicals and Chemical-Based Products at 3.19. However, they remain basic employers that continue to each provide nearly 10,000 jobs in the LaGrange County Region. LaGrange County should consider supporting and promoting job creation within all of these basic employers.

The LaGrange County also has opportunities to diversify its economy by supporting continued growth in clusters within its region which actually increased jobs during this recessionary period. These emerging clusters included:

- Agribusiness, Food Processing & Technology
- Biomedical/Biotechnical (Life Sciences)
- Education & Knowledge Creation
- Transportation & Logistics

Analysis of the South Bend-Mishawaka, Fort Wayne, and Grand Rapids MSAs indicate varying opportunities for job creation in the following growing clusters:

- Advanced Materials
- Agribusiness, Food Processing & Technology
- Arts, Entertainment, Recreation & Visitor Industries
- Biomedical/Biotechnical (Life Sciences)
- Computer & Electronic Product Mfg*
- Defense & Security
- Education & Knowledge Creation
- Fabricated Metal Product Mfg*
- Forest & Wood Products
- Information Technology & Telecommunications
- Transportation & Logistics

Of these growing clusters, those with LQs over 1 would be considered Stars in their MSAs between 2003 and 2009. The list of "star" clusters in the MSAs is detailed in Table 7.

Star Industry Clusters	MSA	2009 # of Jobs	% Change in Jobs 2003-09	2009 LQ
Advanced Materials	Fort Wayne	7,236	12.2%	1.04
Agribusiness, Food Processing & Technology	Grand Rapids	9,196	16.8%	1.11
Biomedical/Biotechnical (Life Sciences)	Grand Rapids	19,435	173.3%	1.56
Biomedical/Biotechnical (Life Sciences)	Fort Wayne	10,867	8.1%	1.56

Table 7: Star Growth Clusters in Nearby MSAs

Star Industry Clusters	MSA	2009 # of Jobs	% Change in Jobs 2003-09	2009 LQ
Computer & Electronic Product Mfg*	Grand Rapids	3,159	36.9%	1.05
Computer & Electronic Product Mfg*	Fort Wayne	4,363	23.8%	2.59
Education & Knowledge Creation	South Bend	17,299	17.5%	1.40
Fabricated Metal Product Mfg*	Fort Wayne	3,043	0.8%	1.56
Forest & Wood Products	South Bend	2,058	0.2%	1.04
Printing & Publishing	Grand Rapids	6,357	1.9%	1.02
Transportation & Logistics	Fort Wayne	7,069	0.5%	1.29

Local economic development strategies should be:

- Addressing shared supply chain, workforce and infrastructure needs within each identified growth cluster.
- Taking advantage of supply chain, workforce, and infrastructure assets relative to each identified growth cluster.

Although LaGrange County has many of the challenges associated with more rural communities, it is developing high quality sites at the I-90/SR 9 interchange. These sites could be marketed aggressively for new businesses based on the established and emerging clusters in its own region and the emerging and star clusters in the neighboring MSAs.