

## **New York State's Labor Market Regions Industry Analysis**

### **Objectives**

This analysis is intended to assist regional strategic planning efforts in identifying sectors and industries to target for the purpose of workforce and economic development. We examine jobs in manufacturing for each of New York State's ten Labor Market Regions. Using data supplied to us by the Research and Statistics Division of the New York State Department of Labor (NYSDOL) we look at regional employment in each of the sub-sectors of manufacturing. NYSDOL classifies each employment establishment according to the North American Industrial Classification System (NAICS) and uses data collected from employers as part of the Unemployment Insurance program and reported in the Quarterly Census of Employment and Wages to report on jobs and wages in sub-sectors of the economy. NAICS codes are a standard way of classifying industries into groups of employers conducting similar activities. NAICS codes can have from 2 to 6 digits with the classifications becoming more specific as the number of digits increase. There are twenty-one sub-sectors of manufacturing represented by 3-digit codes ranging from 311 for food manufacturing to 339 for miscellaneous manufacturing.

## NAICS Codes for Sub-Sectors of Manufacturing

<u>NAICS Code</u>	<u>Description</u>
31-33	Manufacturing
311	Food Manufacturing
312	Beverage & Tobacco Product Manufacturing
313	Textile Mills
314	Textile Product Mills
315	Apparel Manufacturing
316	Leather and Allied Product Manufacturing
321	Wood Product Manufacturing
322	Paper Manufacturing
323	Printing and Related Support Activities
324	Petroleum & Coal Products Manufacturing
325	Chemical Manufacturing
326	Plastics & Rubber Products Manufacturing
327	Nonmetallic Mineral Product Mfg
331	Primary Metal Manufacturing
332	Fabricated Metal Product Manufacturing
333	Machinery Manufacturing
334	Computer and Electronic Product Mfg
335	Electrical Equipment and Appliances
336	Transportation Equipment Manufacturing
337	Furniture and Related Product Mfg
339	Miscellaneous Manufacturing

For each of the regions we look at the number of jobs in the sub-sectors of manufacturing, in order to determine how important the sub-sector is to regional employment, the degree to which the sub-sector represents a regional specialization, whether the number of jobs are expanding or contracting, and how competitive regional employers in the sub-sector have been relative to all employers in that sub-sector in the U.S. economy. Efforts such as business retention and expansion, for example, can focus on employers who are part of key industry groups for the region. These industry groups may be in different stages of development--such as emerging, dominating or contracting--and the information contained here will help to better understand where key industry groups stand.

In our analysis we use the final annual data from the Quarterly Census of Employment and Wages for 2006 and we use annual data for 2001 to calculate change. The Number of Jobs is the annual average reported for 2006, and Rate of Change in Jobs is the percentage change in jobs between the annual averages for 2001 and 2006. Specialization is determined by comparing the region's proportion of private sector employment in a sub-sector of manufacturing with the national proportion of employment in that sub-sector. This measure of specialization is called a Location Quotient and is determined by calculating the ratio of a region's proportion of jobs in a sub-sector compared with the national proportion. The greater the ratio the more specialized is the region. The Competitiveness of a region's employers is determined by comparing the rate of change in employment for a region's sub-sector relative to the national rate of change for that sub-sector. It can also be thought of as change in "market share" relative to national employment in that sub-sector.

### **United States – National Context**

Between 2001 and 2006 while the jobs in the private sector increased 3.1 percent the number of jobs in manufacturing decreased from 16.4 million to 14.1

million for a decline of 13.9 percent. Every manufacturing sub-sector in the United States had a decrease in the number of jobs over this period, although some more so than others. On a proportional basis the greatest declines were in Apparel Manufacturing (NAICS 315) at 44.0 percent; Textile Mills (NAICS 313) at 41.3 percent; and Leather and Allied Product Manufacturing (NAICS 316) at 38.4 percent. The smallest declines were in Wood Product Manufacturing (NAICS 321) at 2.6 percent; Food Manufacturing (NAICS 311) at 5.4 percent; Beverage and Tobacco Product Manufacturing (NAICS 312) at 5.8 percent; and Nonmetallic Mineral Product Manufacturing (NAICS 327) at 5.9 percent. Between 2001 and 2003 the nation's economy was in recession and the period 2003 to 2006 was one of recovery. The annual data on jobs show ups and downs and not a steady consistent picture by any means. However we are focused on five year intervals rather than shorter term fluctuations. In some cases regional employment in a sub-sector was in a strong competitive position because it was increasing employment while the sub-sector was reducing jobs nationally. In other cases a regional sub-sector appears to be in a strong competitive position even though it is trimming jobs, because the national rate of loss in that sub-sector is even greater. In order to get a better picture requires looking at all four measures: number of jobs in 2006; rate of change in jobs between 2001 and 2006; degree of regional specialization in 2006; and competitive position vis a vis the national economy for the period 2001 to 2006. The tables and especially the figures that accompany this analysis present all four measures for each sub-sector for all ten Labor Market Regions of New York State.

Tables

**United States**

**NAICS**

<b><u>Code</u></b>	<b><u>Manufacturing Sub-Sector</u></b>	<b><u>2001</u></b>	<b><u>2006</u></b>	<b><u>Change</u></b>
	Total Private Employment	109,304,802	112,718,858	3.1%
31-33	Total Manufacturing Jobs	16,386,001	14,110,663	-13.9%
311	Food Manufacturing	1,554,605	1,470,037	-5.4%
312	Beverage & Tobacco Product Manufacturing	207,285	195,253	-5.8%
313	Textile Mills	330,072	193,872	-41.3%
314	Textile Product Mills	203,341	160,558	-21.0%
315	Apparel Manufacturing	426,027	238,684	-44.0%
316	Leather and Allied Product Manufacturing	59,571	36,667	-38.4%
321	Wood Product Manufacturing	570,296	555,237	-2.6%
322	Paper Manufacturing	577,030	468,422	-18.8%
323	Printing and Related Support Activities	765,258	632,677	-17.3%
324	Petroleum & Coal Products Manufacturing	120,967	113,056	-6.5%
325	Chemical Manufacturing	954,204	860,169	-9.9%
326	Plastics & Rubber Products Manufacturing	894,801	793,246	-11.3%
327	Nonmetallic Mineral Product Mfg	543,042	510,769	-5.9%
331	Primary Metal Manufacturing	569,917	463,139	-18.7%
332	Fabricated Metal Product Manufacturing	1,668,100	1,545,100	-7.4%
333	Machinery Manufacturing	1,360,793	1,178,059	-13.4%
334	Computer and Electronic Product Mfg	1,748,134	1,303,575	-25.4%
335	Electrical Equipment and Appliances	552,013	431,701	-21.8%
336	Transportation Equipment Manufacturing	1,924,338	1,756,024	-8.7%
337	Furniture and Related Product Mfg	642,820	557,036	-13.3%
339	Miscellaneous Manufacturing	713,389	647,383	-9.3%

## **Capital Region**

Total private sector employment in the Capital Region kept pace with the national rate of change, increasing by 3.0 percent between 2001 and 2006. The manufacturing sector was also consistent with the national rate of change with a 12.5 percent decrease in jobs.

### Number of Jobs

The leading sub-sectors of Manufacturing with the greatest number of jobs in 2006 were Machinery Manufacturing (NAICS 333) with 3,978 jobs in 2006; Paper Manufacturing (NAICS 322) with 3,340 jobs; and Chemical Manufacturing (NAICS 325) with 3,053 jobs. In the accompanying figure, these sub-sectors are the largest circles or “bubbles.” That is what gives these figures the name of “Bubble Charts” because the size of the circles conveys information as well as the location of the circle.

### Rate of Change in Jobs

We have used color coding to group sub-sectors by three categories of change in the number of jobs between 2001 and 2006. The green bubbles are for sub-sectors where jobs increased by 5 percent or more; red for decreases of 5 percent or more; and yellow for the sub-sectors with a rate of job change falling in between, that is between -5 and +5 percent in rate of change between 2001 and 2006. Jobs in Furniture and Related Product Manufacturing (NAICS 337) increased by 20.0 percent from 1,578 jobs in 2001 to 1,893 jobs in 2006, while that sub-sector was shedding jobs nationally at a rate of 13.3 percent. We will provide more on that dimension when we get to *Competitive Position*. The other sub-sector of manufacturing with substantial growth in the Capital Region was Computer and Electronic Product Manufacturing (NAICS 334) at 13.0 percent. Three sub-sectors held relatively steady and are displayed in yellow in the figure. Jobs in Food Manufacturing (NAICS 311) showed almost no change, increasing slightly from 2,243 jobs in 2001 to 2,246 jobs in 2006 for a percentage change of 0.1 percent. Jobs in Chemical Manufacturing (NAICS 325) and Nonmetallic Mineral Product Manufacturing (NAICS 327) dipped slightly decreasing 1.5 percent and 3.8 percent respectively.

### Specialization

The degree of industry specialization by sub-sector in a regional labor market is measured by the ratio of the regional proportion of employment to the national proportion of employment for that sub-sector. It is termed the Location Quotient. We developed an index of specialization for each sub-sector where a score of zero meant that employment in a sub-sector matched the national proportion of employment for that sub-sector. A positive index number means the region is specialized in that sub-sector and the greater the number the more specialized compared with the nation. A negative index number means a lower degree of specialization. A high degree of specialization may mean the sub-sector serves as major source on revenue to the region and hence its importance to the regional economy may be greater than simply the number of jobs on the sub-sector. Within the manufacturing sub-sector, the Capital Region is most specialized in Paper Manufacturing (NAICS 322) which accounted for more than twice the national proportion of jobs in that sub-sector. Nonmetallic Mineral Product Manufacturing (NAICS 327) and Miscellaneous Manufacturing (NAICS 339) were the region's second and third greatest specializations. The region's economy is least specialized in its two smallest sub-sectors, Apparel Manufacturing (NAICS 315) and Primary Metal Manufacturing (NAICS 331) along with Transportation Equipment Manufacturing (NAICS 336).

### Competitive Position

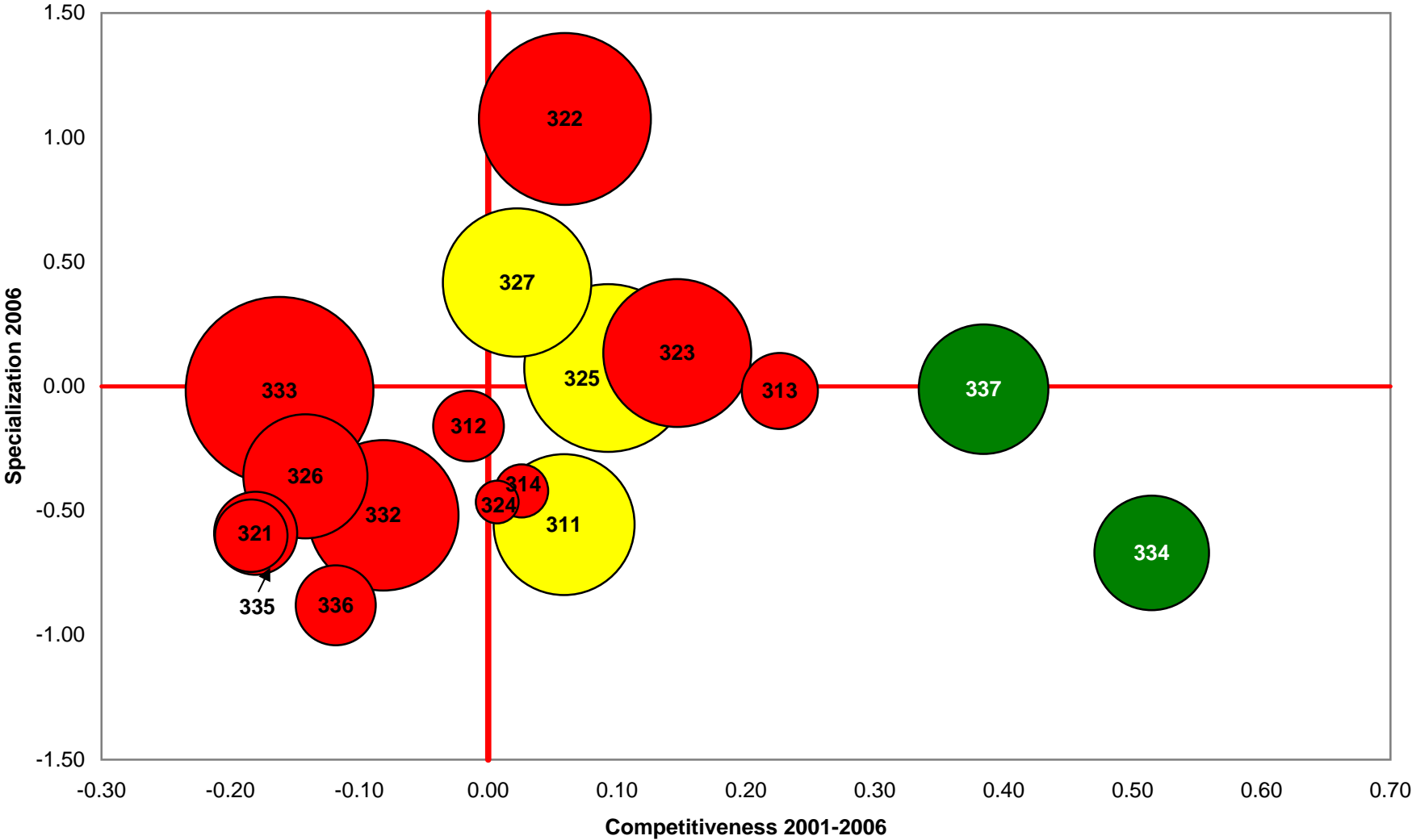
The rate of change in employment for a region's sub-sector relative to the national rate of change for that sub-sector is a measure of competitive position. It can also be thought of as change in "market share" relative to national employment in that sub-sector. On this measure, the Capital District's most competitive sub-sectors are Computer and Electronic Product Manufacturing (NAICS 334) and Furniture and Related Product Manufacturing (NAICS 337). While Textile Mills (NAICS 313) may appear to be in a strong competitive position based on its index score, it had a -28.0 percentage change in jobs for the period 2001 to 2006 while nationally the sub-sector declined at the rate of 41.3 percent. Computer and Electronic Product Manufacturing (NAICS 334) and

Chemical Manufacturing (NAICS 325) are two manufacturing sub-sectors of the regional economy that have been very competitive position vis a vis the national economy. These sub-sectors provide a substantial number of jobs in the region with rates of change that exceed the national rates in those sub-sectors.

Chemical Manufacturing provided 3,175 jobs in 2006 and while the rate of change for 2001-2006 was -1.5 percent, nationally the rate was -9.9 percent.

Computer and Electronic Product Manufacturing provided 1,482 jobs in 2006 and its growth rate for 2001-2006 was 13 percent while than the national rate was in decline by 25.4 percent.

**Capital Region  
Regional Specialization and Competitiveness in Manufacturing**



Tables

Capital Region

<b>NAICS</b>				<b>Percentage</b>	<b>2006</b>	<b>2001-06</b>
<b>Code</b>	<b>Manufacturing Sub-Sector</b>	<b>2001</b>	<b>2006</b>	<b>Change</b>	<b>Specialization Index</b>	<b>Competitiveness Index</b>
	Total Private Employment	376,210	387,542	3.0%		
31-33	Total Manufacturing Jobs	36,899	32,300	-12.5%		
311	Food Manufacturing	2,243	2,246	0.1%	-0.556	0.059
312	Beverage & Tobacco Product Manufacturing	608	564	-7.2%	-0.160	-0.015
313	Textile Mills	908	654	-28.0%	-0.019	0.226
314	Textile Product Mills	395	320	-19.0%	-0.420	0.026
315	Apparel Manufacturing	273	106	-61.2%	-0.871	-0.307
316	Leather and Allied Product Manufacturing	N/A	N/A	N/A	N/A	N/A
321	Wood Product Manufacturing	980	782	-20.2%	-0.590	-0.180
322	Paper Manufacturing	3,883	3,340	-14.0%	1.074	0.060
323	Printing and Related Support Activities	2,601	2,466	-5.2%	0.134	0.147
324	Petroleum & Coal Products Manufacturing	221	208	-5.9%	-0.465	0.007
325	Chemical Manufacturing	3,222	3,175	-1.5%	0.074	0.093
326	Plastics & Rubber Products Manufacturing	2,287	1,740	-23.9%	-0.362	-0.142
327	Nonmetallic Mineral Product Mfg	2,587	2,488	-3.8%	0.417	0.022
331	Primary Metal Manufacturing	377	117	-69.0%	-0.927	-0.618
332	Fabricated Metal Product Manufacturing	3,006	2,558	-14.9%	-0.518	-0.081
333	Machinery Manufacturing	5,482	3,978	-27.4%	-0.018	-0.162
334	Computer and Electronic Product Mfg	1,312	1,482	13.0%	-0.669	0.515
335	Electrical Equipment and Appliances	929	593	-36.2%	-0.600	-0.184
336	Transportation Equipment Manufacturing	901	725	-19.5%	-0.880	-0.118
337	Furniture and Related Product Mfg	1,578	1,893	20.0%	-0.012	0.384
339	Miscellaneous Manufacturing	3,091	2,853	-7.7%	0.282	0.017

## **Central New York Region**

Total private sector employment in the Central New York Region declined 1.5 percent between 2001 and 2006. The manufacturing sector declined more rapidly than the national rate with a -19.2 percent rate of change in jobs.

### Number of Jobs

The leading sub-sectors of Manufacturing with the greatest number of jobs in 2006 were Computer and Electronic Product Manufacturing (NAICS 334) with 5,524 jobs and Machinery Manufacturing (NAICS 333) with 4,467 jobs in 2006. Others providing a substantial number of jobs are Fabricated Metal Product Manufacturing (NAICS 332) with 3,778 jobs; Transportation Equipment Manufacturing (NAICS 336) with 3,596 jobs; and Primary Metal Manufacturing (NAICS 331) with 3,058 jobs.

### Rate of Change in Jobs

Only one sub-sector, Wood Product Manufacturing (NAICS 321), had a substantial rate of increase in the number of jobs between 2001 and 2006. The rate of increase was 9.1 percent and the number of jobs increased from 836 jobs in 2001 to 912 jobs in 2006. Three sub-sectors held relatively steady and are displayed in yellow in the figure for Central New York. Jobs in Textile Product Mills (NAICS 314), while a relatively few jobs—364 jobs in 2006, did increase by 2.2 percent. There were several large scale declines, the largest being Machinery Manufacturing (NAICS 333) with a drop from 7,079 jobs in 2001 to 4,467 jobs in 2006 which was a 36.9 percent loss. Other major job losses were in Nonmetallic Mineral Product Manufacturing (NAICS 327) with a 30.1 percent decline and Fabricated Metal Product Manufacturing (NAICS 332) declining by 25.2 percent.

### Specialization

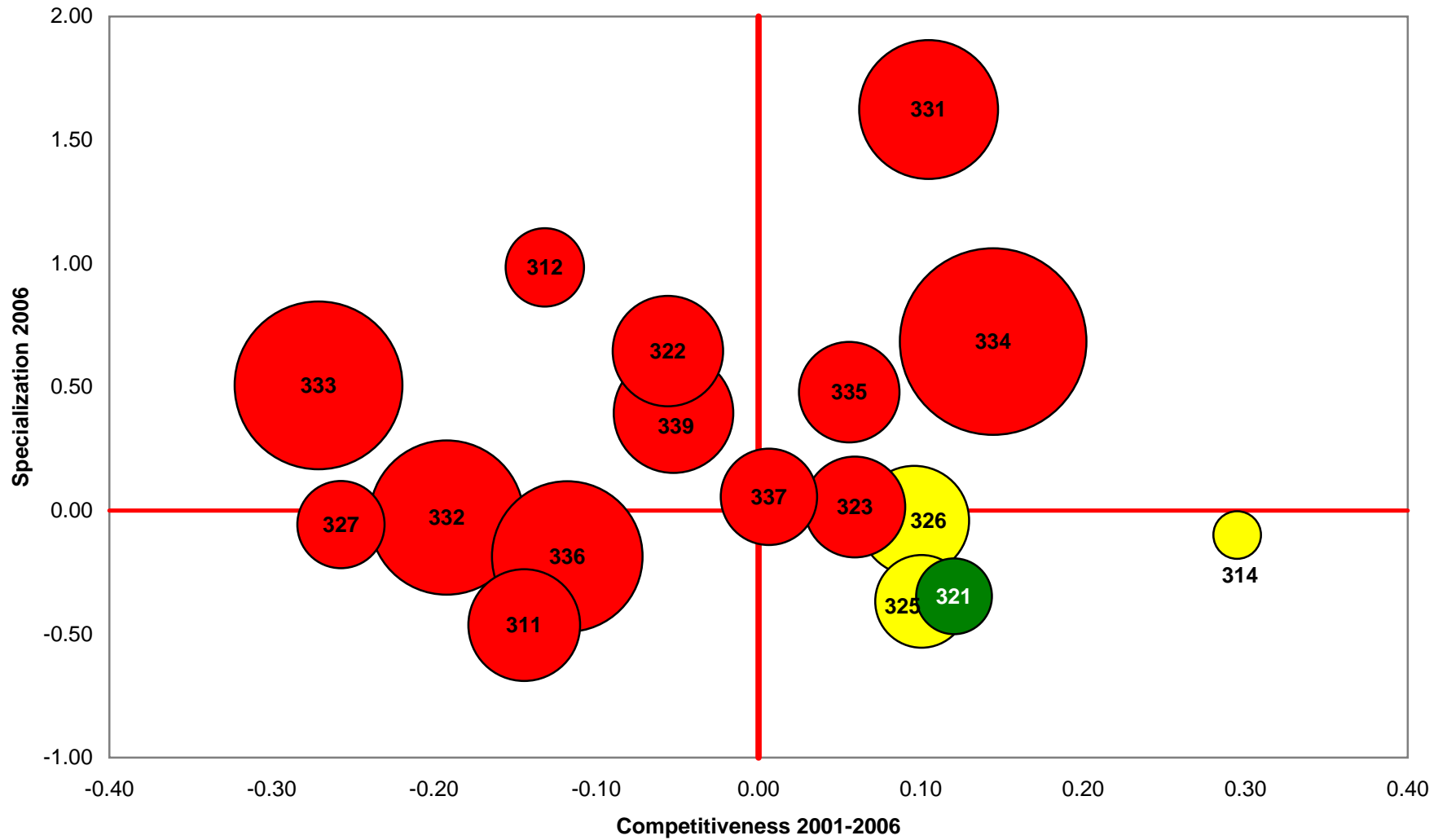
Within the Central New York sub-sectors of manufacturing the most specialized are Primary Metal Manufacturing (NAICS 331); and Beverage and Tobacco Product Manufacturing (NAICS 312). Note how far these are above the horizontal red line which represents the national average for proportion of employment in a sub-sector. Other sub-sectors in which the region is specialized include

Computer and Electronic Product Manufacturing (NAICS 334); Paper Manufacturing (NAICS 322); Machinery Manufacturing (NAICS 333); and Electrical Equipment and Appliances (NAICS 335).

*Competitive Position*

Some of Central New York's most competitive sub-sectors with approximately 1,000 or more jobs are Computer and Electronic Product Manufacturing (NAICS 334); Wood Product Manufacturing (NAICS 321) and Primary Metal Manufacturing (NAICS 331). Computers (334) and Primary Metals (331) lost jobs but at a slower rate than was the case nationally. They merit a closer look to understand why they were able to retain a portion of jobs than was the national average for these sub-sectors. On the other hand, Machinery Manufacturing (NAICS 333) lost jobs at a rate far greater than the national average. While Machinery Manufacturing is still a regional specialization in Central New York, it is contracting at a rapid pace.

### Central New York Region Regional Specialization and Competitiveness in Manufacturing



Tables

Central New York Region

<b>NAICS</b>					<b>2006</b>	<b>2001-06</b>
<b>Code</b>	<b>Manufacturing Sub-Sector</b>	<b>2001</b>	<b>2006</b>	<b>Percentage Change</b>	<b>Specialization Index</b>	<b>Competitiveness Index</b>
	Total Private Employment	288,137	283,692	-1.5%		
31-33	Total Manufacturing Jobs	47,569	38,442	-19.2%		
311	Food Manufacturing	2,452	1,984	-19.1%	-0.464	-0.144
312	Beverage & Tobacco Product Manufacturing	1,192	975	-18.2%	0.984	-0.132
313	Textile Mills	N/A	N/A	N/A	N/A	N/A
314	Textile Product Mills	356	364	2.2%	-0.099	0.295
315	Apparel Manufacturing	233	N/A	N/A	N/A	N/A
316	Leather and Allied Product Manufacturing	N/A	N/A	N/A	N/A	N/A
321	Wood Product Manufacturing	836	912	9.1%	-0.347	0.120
322	Paper Manufacturing	2,531	1,940	-23.4%	0.646	-0.056
323	Printing and Related Support Activities	1,844	1,615	-12.4%	0.014	0.059
324	Petroleum & Coal Products Manufacturing	N/A	N/A	N/A	N/A	N/A
325	Chemical Manufacturing	1,380	1,369	-0.8%	-0.368	0.100
326	Plastics & Rubber Products Manufacturing	1,970	1,914	-2.8%	-0.041	0.096
327	Nonmetallic Mineral Product Mfg	1,735	1,212	-30.1%	-0.057	-0.257
331	Primary Metal Manufacturing	3,406	3,058	-10.2%	1.623	0.105
332	Fabricated Metal Product Manufacturing	5,049	3,778	-25.2%	-0.028	-0.192
333	Machinery Manufacturing	7,079	4,467	-36.9%	0.507	-0.271
334	Computer and Electronic Product Mfg	6,472	5,524	-14.6%	0.684	0.145
335	Electrical Equipment and Appliances	1,946	1,607	-17.4%	0.479	0.056
336	Transportation Equipment Manufacturing	4,467	3,596	-19.5%	-0.186	-0.118
337	Furniture and Related Product Mfg	1,697	1,480	-12.8%	0.056	0.006
339	Miscellaneous Manufacturing					

## **Finger Lakes Region**

Total private sector employment in the Finger Lakes Region declined 2.2 percent between 2001 and 2006. The manufacturing sector declined more rapidly than the national rate with a -19.1 percent rate of change in jobs.

### Number of Jobs

The leading sub-sectors of Manufacturing with the greatest number of jobs in 2006 were Machinery Manufacturing (NAICS 333) with 15,882 jobs and Chemical Manufacturing (NAICS 325) with 15,519 jobs. Others providing a substantial number of jobs are Fabricated Metal Product Manufacturing (NAICS 332) with 9,100 jobs; and Computer and Electronic Product Manufacturing (NAICS 334) with 8,153 jobs.

### Rate of Change in Jobs

None of the manufacturing sub-sectors in the Finger Lakes Region had a substantial rate of increase in the number of jobs between 2001 and 2006. Printing and Related Support Activities (NAICS 323) held onto jobs fairly well over the period, only slipping a small amount from 3,292 jobs in 2001 to 3,215 in 2006. There were a few sub-sectors with notable job losses. Primary among these was Chemical Manufacturing (NAICS 325) with a -34.0 percent rate of job loss, sliding from 23,516 in 2001 to 15,519 in 2006. Other major declines in manufacturing jobs were found in Nonmetallic Mineral Product Manufacturing (NAICS 327) with a 28.6 percent decline and Transportation Equipment Manufacturing (NAICS 336) declining by 22.7 percent.

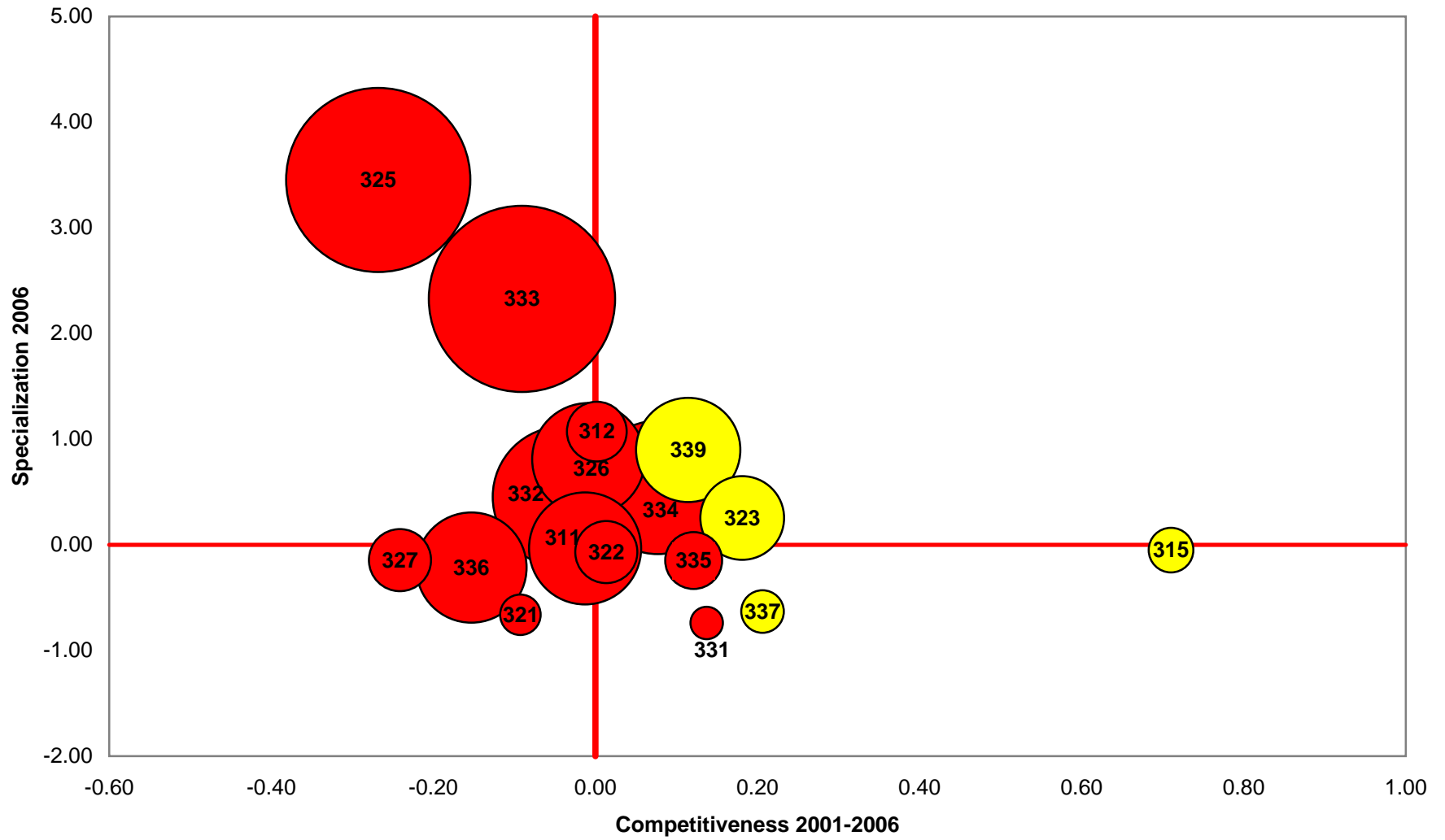
### Specialization

The sub-sectors of manufacturing in which the Finger Lakes are most specialized include Chemical Manufacturing (NAICS 325) and Machinery Manufacturing (NAICS 333). On the accompanying bubble chart, note how large the bubbles are and how far above the national average they are relative to other sub-sectors of manufacturing in the region. The loss of jobs in these two sub-sectors is what is primarily driving the decline of jobs in manufacturing in general.

### Competitive Position

The two main sub-sectors of manufacturing in the Finger Lakes Region, Chemical Manufacturing (NAICS 325) and Machinery Manufacturing (NAICS 333) have weak competitive positions relative to the rest of the United States. The rate of decline in jobs is far greater than the average for the nation. The sub-sectors with the strongest competitive position and relatively stable employment are Furniture and Related Product Manufacturing (NAICS 337); Printing and Related Support Activities (NAICS 323); and Miscellaneous Manufacturing (NAICS 339). While Apparel Manufacturing (NAICS 315) appears to be in a very strong competitive position it is misleading. Jobs in this sub-sector declined by 4.2 percent over the period 2001-2006, which looks relatively good compared with the national rate of decline of -44.0 percent.

# Finger Lakes Region Regional Specialization and Competitiveness in Manufacturing



Tables

**Finger Lakes Region**

<b>NAICS</b>					<b>2006</b>	<b>2001-06</b>
<b>Code</b>	<b>Manufacturing Sub-Sector</b>	<b>2001</b>	<b>2006</b>	<b>Percentage Change</b>	<b>Specialization Index</b>	<b>Competitiveness Index</b>
	Total Private Employment	467,323	456,830	-2.2%		
31-33	Total Manufacturing Jobs	104,453	84,483	-19.1%		
311	Food Manufacturing	6,159	5,750	-6.6%	-0.035	-0.013
312	Beverage & Tobacco Product Manufacturing	1,737	1,639	-5.6%	1.071	0.002
313	Textile Mills	291	255	-12.4%	-0.675	0.492
314	Textile Product Mills	294	304	3.4%	-0.533	0.310
315	Apparel Manufacturing	958	918	-4.2%	-0.051	0.710
316	Leather and Allied Product Manufacturing	N/A	N/A	N/A	N/A	N/A
321	Wood Product Manufacturing	859	759	-11.6%	-0.663	-0.092
322	Paper Manufacturing	2,149	1,768	-17.7%	-0.069	0.013
323	Printing and Related Support Activities	3,292	3,215	-2.3%	0.254	0.181
324	Petroleum & Coal Products Manufacturing	138	106	-23.2%	-0.769	-0.178
325	Chemical Manufacturing	23,516	15,519	-34.0%	3.452	-0.268
326	Plastics & Rubber Products Manufacturing	6,616	5,815	-12.1%	0.809	-0.009
327	Nonmetallic Mineral Product Mfg	2,477	1,768	-28.6%	-0.146	-0.241
331	Primary Metal Manufacturing	528	488	-7.6%	-0.740	0.137
332	Fabricated Metal Product Manufacturing	10,231	9,100	-11.1%	0.453	-0.040
333	Machinery Manufacturing	20,173	15,882	-21.3%	2.326	-0.091
334	Computer and Electronic Product Mfg	10,151	8,153	-19.7%	0.543	0.077
335	Electrical Equipment and Appliances	1,697	1,488	-12.3%	-0.150	0.121
336	Transportation Equipment Manufacturing	7,215	5,577	-22.7%	-0.216	-0.153
337	Furniture and Related Product Mfg	796	832	4.5%	-0.631	0.206
339	Miscellaneous Manufacturing	4,922	4,978	1.1%	0.897	0.114

## **Hudson Valley Region**

Total private sector employment in the Hudson Valley Region grew by 3.4 percent between 2001 and 2006, which was slightly higher than the national rate of growth of 3.1 percent. The manufacturing sector declined by -6.7 percent while the national rate of loss of jobs in manufacturing was -13.9 percent.

### Number of Jobs

The manufacturing sub-sectors with greatest number jobs in the region in 2006 were Computer and Electronic Product Manufacturing (NAICS 334) with 18,937 jobs and Chemical Manufacturing (NAICS 325) with 8,880 jobs. Other manufacturing sub-sector accounting for many of the region's jobs were Fabricated Metal Product Manufacturing (NAICS 332) with 4,916 jobs and Food Manufacturing (NAICS 311) with 4,557 jobs.

### Rate of Change in Jobs

Two manufacturing sub-sectors in the Hudson Valley Region had substantial rates of increase in the number of jobs between 2001 and 2006. Computer and Electronic Product Manufacturing (NAICS 334) jumped by 10.7 percent adding more than 1,800 jobs. Employers in Furniture and Related Product Manufacturing (NAICS 337) increased their employees from 1,254 in 2001 to 1,436 in 2006 for a percentage change of 14.5 percent. Other sub-sectors with increases in employment were Transportation Equipment Manufacturing (NAICS 336) growing by 5.1 percent and Food Manufacturing (NAICS 311) increasing by 3.2 percent. More than offsetting the increased employment in these sub-sectors or manufacturing were major declines in several areas of manufacturing in the region. On a percentage basis the greatest decline was the -33.7 percent loss of jobs in Apparel Manufacturing (NAICS 315) as jobs shrank from 789 to 523 over the period. The sub-sectors with the greatest loss of jobs were Miscellaneous Manufacturing (NAICS 339) down by almost 900 jobs. The number of jobs decreased in Printing and Related Support Activities (NAICS 323) by 774 and in Fabricated Metal Product Manufacturing (NAICS 332) by 737.

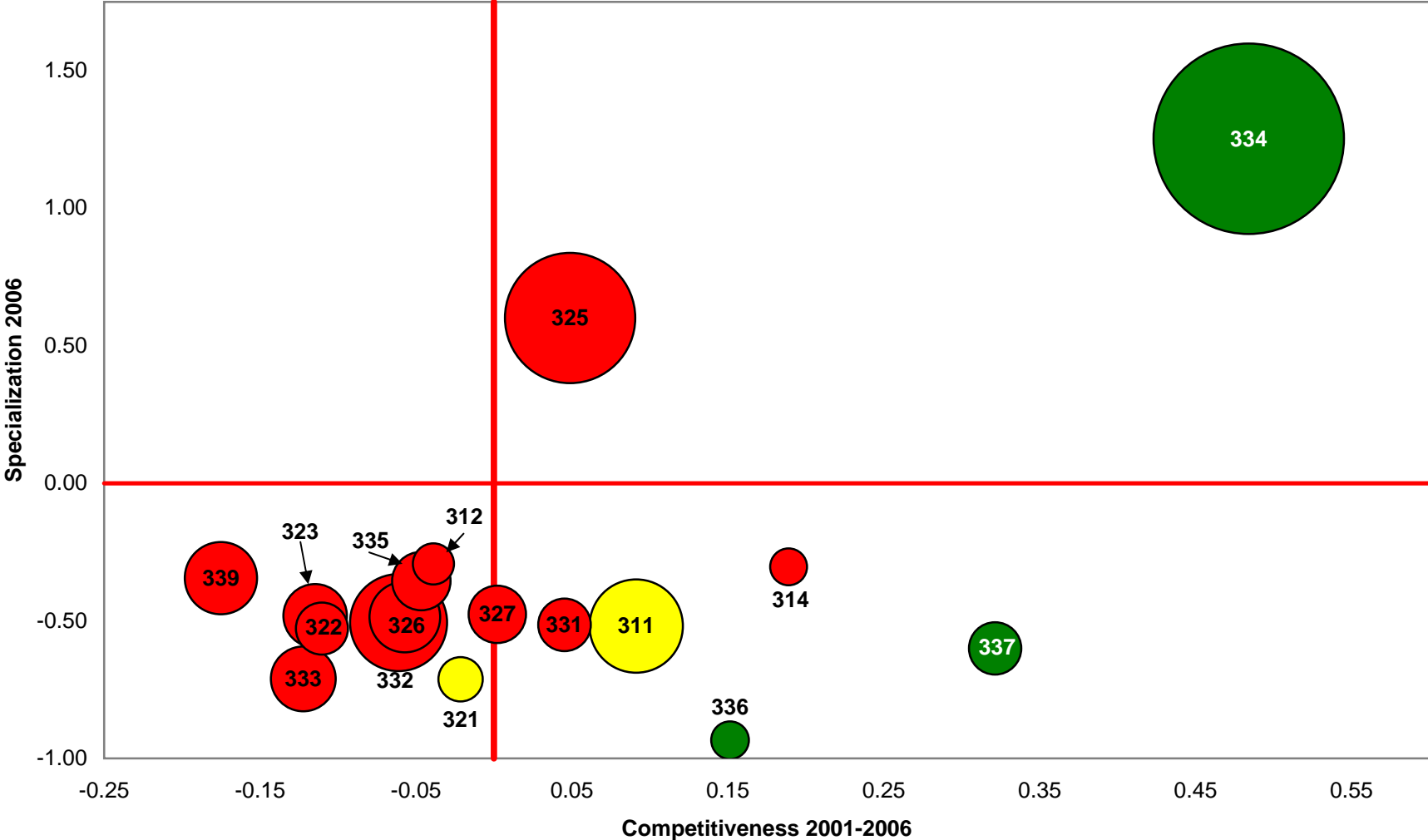
### Specialization

Manufacturing in the Hudson Valley Region is concentrated in two sub-sectors-- Computer and Electronic Product Manufacturing (NAICS 334) and Chemical Manufacturing (NAICS 325). In addition to Computers, the other sub-sectors of manufacturing identified above as having increases in employment, Transportation (NAICS 336) and Furniture (NAICS 337) were not regional specializations. They represent a small proportion of the Hudson Valley's private sector employment relative to the national economy, but were areas of growth.

#### Competitive Position

With respect to shares of national employment there are a number of sub-sectors of manufacturing in which the Hudson Valley Region has been in a relatively strong competitive position. Employers in the region expanded the number of jobs in Computer and Electronic Product Manufacturing (NAICS 334) at a high rate of growth between 2001 and 2006 while on a national scale the sub-sector was contracting. Furniture and Related Product Manufacturing (NAICS 337) increased their employees also in contrast with the national trend. These two sub-sectors of the regions manufacturing economy gained substantial shares of national employment as depicted in their position of the horizontal axis of the regional bubble chart.

Hudson Valley Region  
Regional Specialization and Competitiveness in Manufacturing



Tables

**Hudson Valley Region**

<b>NAICS</b>				<b>Percentage</b>	<b>2006</b>	<b>2001-06</b>
<b>Code</b>	<b>Manufacturing Sub-Sector</b>	<b>2001</b>	<b>2006</b>	<b>Change</b>	<b>Specialization Index</b>	<b>Competitiveness Index</b>
	Total Private Employment	703,027	727,040	3.4%		
31-33	Total Manufacturing Jobs	63,859	59,611	-6.7%		
311	Food Manufacturing	4,416	4,557	3.2%	-0.519	0.091
312	Beverage & Tobacco Product Manufacturing	983	890	-9.5%	-0.293	-0.039
313	Textile Mills	734	509	-30.7%	-0.593	0.181
314	Textile Product Mills	768	721	-6.1%	-0.304	0.189
315	Apparel Manufacturing	789	523	-33.7%	-0.660	0.183
316	Leather and Allied Product Manufacturing	257	180	-30.0%	-0.239	0.138
321	Wood Product Manufacturing	1,080	1,029	-4.7%	-0.713	-0.021
322	Paper Manufacturing	1,973	1,425	-27.8%	-0.528	-0.110
323	Printing and Related Support Activities	2,888	2,114	-26.8%	-0.482	-0.115
324	Petroleum & Coal Products Manufacturing	226	224	-0.9%	-0.693	0.061
325	Chemical Manufacturing	9,392	8,880	-5.5%	0.601	0.049
326	Plastics & Rubber Products Manufacturing	3,144	2,628	-16.4%	-0.486	-0.057
327	Nonmetallic Mineral Product Mfg	1,829	1,724	-5.7%	-0.477	0.002
331	Primary Metal Manufacturing	1,707	1,450	-15.1%	-0.515	0.045
332	Fabricated Metal Product Manufacturing	5,653	4,916	-13.0%	-0.507	-0.061
333	Machinery Manufacturing	2,890	2,196	-24.0%	-0.711	-0.122
334	Computer and Electronic Product Mfg	17,111	18,937	10.7%	1.252	0.484
335	Electrical Equipment and Appliances	2,406	1,794	-25.4%	-0.356	-0.047
336	Transportation Equipment Manufacturing	710	746	5.1%	-0.934	0.151
337	Furniture and Related Product Mfg	1,254	1,436	14.5%	-0.600	0.321
339	Miscellaneous Manufacturing	3,652	2,734	-25.1%	-0.345	-0.175

## **Long Island Region**

Total private sector employment in the Long Island Region grew by 3.2 percent between 2001 and 2006, approximately the same as the national rate of growth of 3.1 percent. The manufacturing sector declined by -13.4 percent also quite similar to the national rate of loss of jobs in manufacturing which was -13.9 percent.

### Number of Jobs

The Computer and Electronic Product Manufacturing (NAICS 334) with 15,876 jobs was the largest sub-sector, followed by Chemical Manufacturing (NAICS 325) with 9,974 jobs and Fabricated Metal Product Manufacturing (NAICS 332) with 9,005 jobs.

### Rate of Change in Jobs

Two manufacturing sub-sectors in the Long Island Region had substantial rates of increase in the number of jobs between 2001 and 2006. The number of jobs in Wood Product Manufacturing (NAICS 321) increased by 38.9 percent. The base of employment in 2001 was small, 578 jobs, and so the increase of 225 jobs to 803 in 2006 resulted in a most impressive rate of change. The other growing sub-sector was Electrical Equipment and Appliances (NAICS 335). The number of jobs increased from 2,263 in 2001 to 2,479 in 2006 for a 9.5 percent rate of increase. On the downside, Computer and Electronic Product Manufacturing (NAICS 334) slumped by -26.2 percent losing almost 6,000 jobs. The Plastics & Rubber Products Manufacturing (NAICS 326) and Machinery Manufacturing (NAICS 333) sub-sectors each lost about 1,300 jobs.

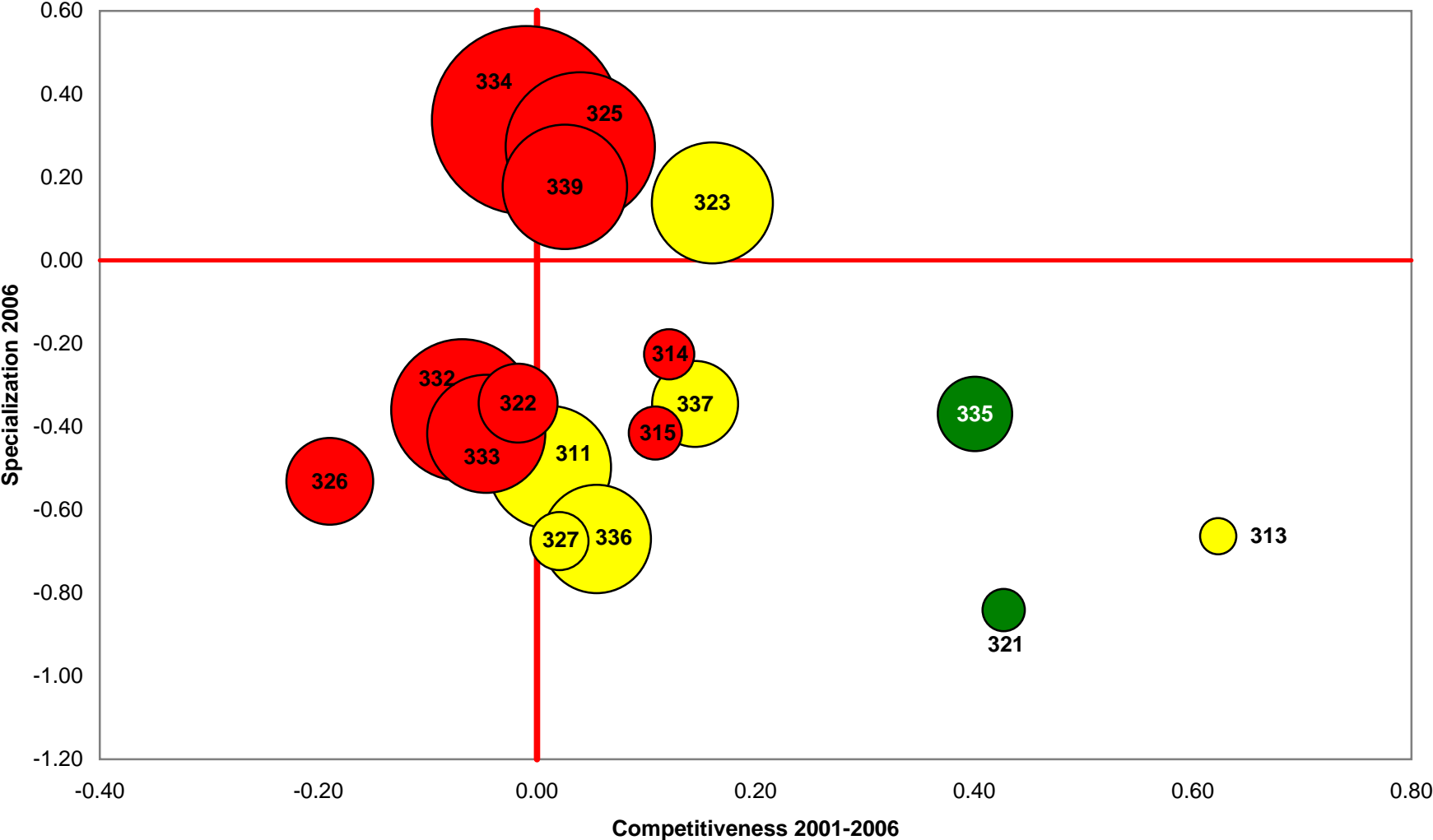
### Specialization

Four sub-sectors of manufacturing accounted for relatively high proportions of regional employment and represent Long Island's manufacturing specialization. These were Computer and Electronic Product Manufacturing (NAICS 334), Chemical Manufacturing (NAICS 325), Miscellaneous Manufacturing (NAICS 339), and Printing and Related Support Activities (NAICS 323).

### Competitive Position

Many of the manufacturing sub-sectors in the Long Island Region were in relatively strong competitive positions with respect to shares of national employment, as depicted in the accompanying figure and the bubbles to the right of the vertical axis. Picking out three of these for a closer look, we'll focus on Electrical Equipment and Appliances (NAICS 335), Printing and Related Support Activities (NAICS 323), and Furniture and Related Product Manufacturing (NAICS 337). Employers in the Electrical Equipment and Appliances sub-sector of the Long Island Region increased their number of jobs by 9.5 percent for the period 2001-2006 while in the nation at large employment in that sub-sector shrank by -21.8 percent. This regional expansion in the face of substantial contract nationally is indicative of a competitive advantage the region possessed. The other sub-sectors of Printing and Furniture were losing jobs, but at a far slower rate than the national economy. So even though jobs were declining the increased share of national employment is suggestive of a regional advantage and strength of the local employers in the sub-sectors.

Long Island Region  
Regional Specialization and Competitiveness in Manufacturing



Tables

**Long Island Region**

<b>NAICS</b>				<b>Percentage</b>	<b>2006</b>	<b>2001-06</b>
<b>Code</b>	<b>Manufacturing Sub-Sector</b>	<b>2001</b>	<b>2006</b>	<b>Change</b>	<b>Specialization Index</b>	<b>Competitiveness Index</b>
	Total Private Employment	994,533	1,026,748	3.2%		
31-33	Total Manufacturing Jobs	97,976	84,879	-13.4%		
311	Food Manufacturing	7,031	6,726	-4.3%	-0.498	0.012
312	Beverage & Tobacco Product Manufacturing	243	342	40.7%	-0.808	0.494
313	Textile Mills	623	594	-4.7%	-0.664	0.623
314	Textile Product Mills	1,279	1,132	-11.5%	-0.226	0.121
315	Apparel Manufacturing	2,047	1,271	-37.9%	-0.415	0.108
316	Leather and Allied Product Manufacturing	192	166	-13.5%	-0.503	0.405
321	Wood Product Manufacturing	578	803	38.9%	-0.841	0.427
322	Paper Manufacturing	3,511	2,801	-20.2%	-0.344	-0.017
323	Printing and Related Support Activities	6,835	6,558	-4.1%	0.138	0.161
324	Petroleum & Coal Products Manufacturing	180	169	-6.1%	-0.836	0.005
325	Chemical Manufacturing	10,643	9,974	-6.3%	0.273	0.040
326	Plastics & Rubber Products Manufacturing	4,711	3,385	-28.1%	-0.532	-0.189
327	Nonmetallic Mineral Product Mfg	1,574	1,511	-4.0%	-0.675	0.021
331	Primary Metal Manufacturing	472	305	-35.4%	-0.928	-0.205
332	Fabricated Metal Product Manufacturing	10,436	9,005	-13.7%	-0.360	-0.068
333	Machinery Manufacturing	7,574	6,253	-17.4%	-0.417	-0.046
334	Computer and Electronic Product Mfg	21,502	15,876	-26.2%	0.337	-0.010
335	Electrical Equipment and Appliances	2,263	2,479	9.5%	-0.370	0.401
336	Transportation Equipment Manufacturing	5,479	5,273	-3.8%	-0.670	0.055
337	Furniture and Related Product Mfg	3,349	3,322	-0.8%	-0.345	0.145
339	Miscellaneous Manufacturing	7,455	6,938	-6.9%	0.177	0.026

## **Mohawk Valley Region**

In general employment was declining in the Mohawk Valley Region across many sectors of the economy between 2001 and 2006. Total private sector employment declined -1.6 percent, and the manufacturing sector declined by -19.1.

### Number of Jobs

The Fabricated Metal Product Manufacturing (NAICS 332) with 2,978 jobs was the largest sub-sector, followed by Primary Metal Manufacturing (NAICS 331) with 2,398 jobs. Other leading sub-sectors accounting for most of the manufacturing jobs in the Mohawk Valley Region include Food Manufacturing (NAICS 311) with 1,973 jobs; Computer and Electronic Product Manufacturing (NAICS 334) with 1,749 jobs; Printing and Related Support Activities (NAICS 323) with 1,583 jobs; and Machinery Manufacturing (NAICS 333) with 1,525 jobs.

### Rate of Change in Jobs

Changes in the number of manufacturing jobs in the Mohawk Valley Region between 2001 and 2006 ranged from a 15.3 percent increase in the Electrical Equipment and Appliances (NAICS 335) sub-sector to a decline of -58.1 percent in Miscellaneous Manufacturing (NAICS 339). The high growth rate of jobs in Electrical Equipment was on a small base of 340 jobs in 2001, and contributed an increase of 52 jobs for a total 392 in 2006. Electrical Equipment is not represented on the bubble chart because of small number of jobs and the extreme growth rate relative to the nation. The number of jobs in Miscellaneous Manufacturing declined from 2,299 in 2001 down to 963 in 2006. The two largest sub-sectors of Manufacturing in 2006—Fabricated Metal Product Manufacturing (NAICS 332) with 2,978 jobs and Primary Metal Manufacturing (NAICS 331) with 2,398 jobs—lost jobs between 2001 and 2006. Fabricated Metal declined by -4.7 percent and Primary Metal by -16.4 percent. The number of jobs in Food Manufacturing (NAICS 311), third largest sub-sector of manufacturing, grew by 5.6 percent for the period, adding 105 jobs.

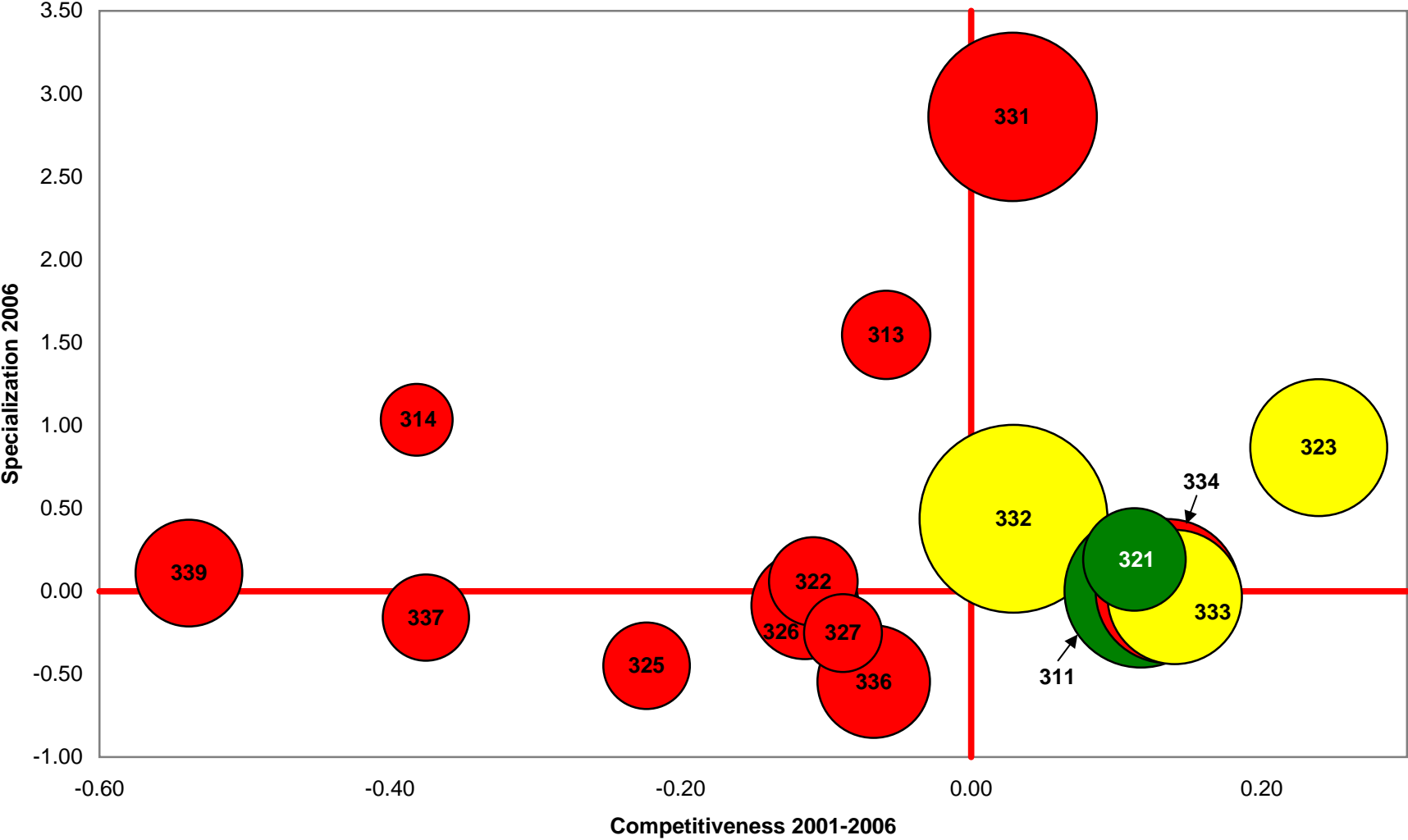
### Specialization

The Mohawk Valley's highest specialization is in Primary Metal Manufacturing (NAICS 331) with a proportion of regional private sector employment that was four times the national average. Note that the bubble for sub-sector 331 is located high on the vertical axis of the figure and is a relatively large bubble, representing the 2,398 jobs in 2006. Other sub-sectors of manufacturing in which the region has specializations include Textile Mills (NAICS 313); Textile Product Mills (NAICS 314); and Printing and Related Support Activities (NAICS 323). Two of the sub-sectors that increased employment for the period--Wood Product Manufacturing (NAICS 321) and Food Manufacturing (NAICS 311)--did not represent specializations. Their share of regional employment was about the same as the national average for those sub-sectors, but if growth were to continue they may become specializations.

#### Competitive Position

The competitive position of manufacturing sub-sectors in the Mohawk Valley Region is one of "good news – bad news". The sub-sectors with the greatest number of jobs were in relatively strong competitive positions or at least holding their own with respect to shares of national employment, as depicted in the accompanying figure and the bubbles to the right of the vertical axis. Those sub-sectors in weak competitive positions on the left hand side of the figure generally accounted for few jobs. That is the good news. The bad news is that sub-sectors in Computer and Electronic Product Manufacturing (NAICS 334); and Primary Metal Manufacturing (NAICS 331) were gaining in shares of national employment in those sub-sectors by losing jobs at a slower pace than these sub-sectors were declining nationally. Back to focus on the positive, there were five sub-sectors in which employment was growing or at least steady AND there were in good competitive positions relative their counterparts in the United States. These were the green and yellow bubbles on the right side of the figure representing Printing and Related Support Activities (NAICS 323); Machinery Manufacturing (NAICS 333); Wood Product Manufacturing (NAICS 321); Food Manufacturing (NAICS 311); and Fabricated Metal Product Manufacturing (NAICS 332).

Mohawk Valley Region  
Regional Specialization and Competitiveness in Manufacturing



Tables

**Mohawk Valley Region**

<b>NAICS</b>				<b>Percentage</b>	<b>2006</b>	<b>2001-06</b>
<b>Code</b>	<b>Manufacturing Sub-Sector</b>	<b>2001</b>	<b>2006</b>	<b>Change</b>	<b>Specialization Index</b>	<b>Competitiveness Index</b>
	Total Private Employment	153,671	151,193	-1.6%		
31-33	Total Manufacturing Jobs	26,120	21,121	-19.1%		
311	Food Manufacturing	1,868	1,973	5.6%	0.001	0.117
312	Beverage & Tobacco Product Manufacturing	216	233	7.9%	-0.110	0.145
313	Textile Mills	1,197	662	-44.7%	1.546	-0.058
314	Textile Product Mills	897	438	-51.2%	1.034	-0.382
315	Apparel Manufacturing	374	203	-45.7%	-0.366	-0.031
316	Leather and Allied Product Manufacturing	813	605	-25.6%	11.301	0.209
321	Wood Product Manufacturing	819	887	8.3%	0.191	0.112
322	Paper Manufacturing	919	665	-27.6%	0.058	-0.109
323	Printing and Related Support Activities	1,545	1,583	2.5%	0.865	0.239
324	Petroleum & Coal Products Manufacturing	69	52	-24.6%	-0.657	-0.194
325	Chemical Manufacturing	907	635	-30.0%	-0.450	-0.223
326	Plastics & Rubber Products Manufacturing	1,238	972	-21.5%	-0.086	-0.114
327	Nonmetallic Mineral Product Mfg	597	512	-14.2%	-0.253	-0.088
331	Primary Metal Manufacturing	2,869	2,398	-16.4%	2.860	0.029
332	Fabricated Metal Product Manufacturing	3,124	2,978	-4.7%	0.437	0.029
333	Machinery Manufacturing	1,545	1,525	-1.3%	-0.035	0.140
334	Computer and Electronic Product Mfg	2,066	1,749	-15.3%	0.000	0.135
335	Electrical Equipment and Appliances	340	392	15.3%	-0.323	0.474
336	Transportation Equipment Manufacturing	1,258	1,071	-14.9%	-0.545	-0.067
337	Furniture and Related Product Mfg	1,160	628	-45.9%	-0.159	-0.375
339	Miscellaneous Manufacturing	2,299	963	-58.1%	0.109	-0.538

## **New York City Region**

Employment in the private sector of the New York City Region has not increased between 2001 and 2006, losing approximately 6,000 jobs for a rate of decline of 0.2 percent. Jobs in the manufacturing sector have declined by -31.8 percent, dropping from 154,428 jobs in 2001 to 105,330 in 2006.

### Number of Jobs

The largest sub-sector for employment in manufacturing in 2006 was Apparel Manufacturing (NAICS 315) with 25,241 jobs, almost one-fourth of the manufacturing jobs in New York City. Food Manufacturing (NAICS 311) with 14,223 jobs; Miscellaneous Manufacturing (NAICS 339) with 14,117 jobs; Printing and Related Support Activities (NAICS 323) with 10,723 jobs; and Fabricated Metal Product Manufacturing with 7,764 jobs rounded out the top five sub-sectors of manufacturing in the region.

### Rate of Change in Jobs

None of the sub-sectors of manufacturing in the New York City Region had increases in employment between 2001 and 2006. The only exception was Petroleum and Coal Products Manufacturing (NAICS 324) with a miniscule 84 jobs in 2006. Apparel Manufacturing (NAICS 315) declined by -46.7 percent with a drop from 47,322 jobs in 2001 to 25,241 in 2006. The Textile Mills (NAICS 313) sub-sector had the steepest rate of decline, -59.6 percent with employment shrinking from 6,032 in 2001 to 2,439 in 2006. The only significant sub-sector to avoid a double digit decline was Food Manufacturing (NAICS 311) with a rate of change of -5.2 percent.

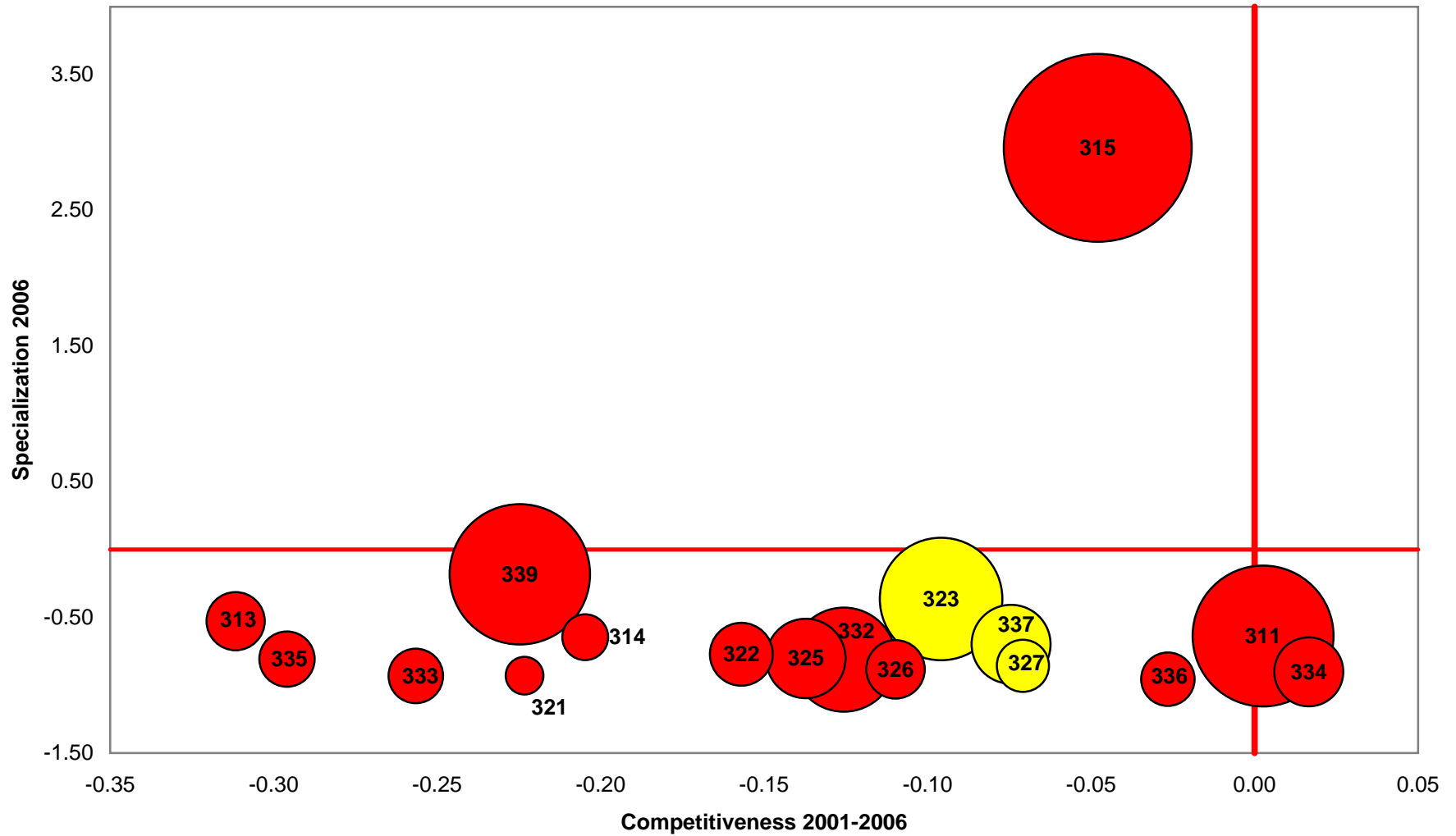
### Specialization

The only sub-sector of manufacturing in which New York City's proportion of employment exceeds the national average is Apparel Manufacturing (NAICS 315). Even after the precipitous decline over the period 2001 – 2006, the proportion of employment in Apparel Manufacturing is approximately four times the national average.

### Competitive Position

There were no manufacturing sub-sectors in the New York City Region that were in relatively strong competitive positions with respect to shares of national employment, as depicted in the accompanying figure. In the accompanying figure the vertical axis representing a neutral competitive position (aka “holding your own”) is to the extreme right hand side. With the exceptions of Food Manufacturing (NAICS 311) and Computer and Electronic Product Manufacturing (NAICS 334), all the other sub-sectors of manufacturing as losing ground relative to the national economy.

**New York City Region  
Regional Specialization and Competitiveness in Manufacturing**



Tables

**New York City Region**

<b>NAICS</b>				<b>Percentage</b>	<b>2006</b>	<b>2001-06</b>
<b>Code</b>	<b>Manufacturing Sub-Sector</b>	<b>2001</b>	<b>2006</b>	<b>Change</b>	<b>Specialization</b>	<b>Competitiveness</b>
					<b>Index</b>	<b>Index</b>
	Total Private Employment	3,015,861	3,009,933	-0.2%		
31-33	Total Manufacturing Jobs	154,428	105,330	-31.8%		
311	Food Manufacturing	15,002	14,223	-5.2%	-0.638	0.003
312	Beverage & Tobacco Product Manufacturing	1,242	804	-35.3%	-0.846	-0.313
313	Textile Mills	6,032	2,439	-59.6%	-0.529	-0.312
314	Textile Product Mills	2,411	1,514	-37.2%	-0.647	-0.205
315	Apparel Manufacturing	47,322	25,241	-46.7%	2.960	-0.048
316	Leather and Allied Product Manufacturing	1,384	877	-36.6%	-0.104	0.029
321	Wood Product Manufacturing	1,366	1,033	-24.4%	-0.930	-0.223
322	Paper Manufacturing	4,160	2,847	-31.6%	-0.772	-0.157
323	Printing and Related Support Activities	14,345	10,723	-25.2%	-0.365	-0.096
324	Petroleum & Coal Products Manufacturing	68	84	23.5%	-0.972	0.322
325	Chemical Manufacturing	5,813	4,521	-22.2%	-0.803	-0.137
326	Plastics & Rubber Products Manufacturing	3,121	2,463	-21.1%	-0.884	-0.110
327	Nonmetallic Mineral Product Mfg	2,229	1,948	-12.6%	-0.857	-0.071
331	Primary Metal Manufacturing	546	435	-20.3%	-0.965	-0.020
332	Fabricated Metal Product Manufacturing	9,586	7,764	-19.0%	-0.812	-0.126
333	Machinery Manufacturing	3,331	2,144	-35.6%	-0.932	-0.257
334	Computer and Electronic Product Mfg	4,501	3,412	-24.2%	-0.902	0.017
335	Electrical Equipment and Appliances	4,008	2,207	-44.9%	-0.809	-0.296
336	Transportation Equipment Manufacturing	2,320	2,061	-11.2%	-0.956	-0.026
337	Furniture and Related Product Mfg	5,577	4,473	-19.8%	-0.699	-0.074
339	Miscellaneous Manufacturing	20,065	14,117	-29.6%	-0.183	-0.225

## **North Country Region**

The North Country Region has lagged behind the United States in job growth but not by much. Total employment in the private sector of the North Country Region grew by 2.1 percent between 2001 and 2006, adding about 2,300 jobs. The national rate of increase in private sector jobs for the same period was 3.1 percent. In the manufacturing sector jobs in the region have declined by -15.6 percent, dropping from 16,712 jobs in 2001 to 14,111 in 2006. For the nation as a whole the rate of decline in manufacturing employment was slightly less, - 13.9 percent.

### *Number of Jobs*

The diversity within manufacturing in the North Country is demonstrated by the spread of jobs over a number of sub-sectors. The largest sub-sectors for employment in manufacturing in 2006 were Paper Manufacturing (NAICS 322) with 2,408 jobs, followed by Chemical Manufacturing (NAICS 325) with 1,900 jobs. Primary Metal Manufacturing (NAICS 331) with 1,769 jobs and Food Manufacturing (NAICS 311) with 1,362 jobs were next in size followed by Transportation Equipment Manufacturing (NAICS 336) with 1,028 jobs.

### *Rate of Change in Jobs*

All of the five largest sub-sectors of manufacturing in the North Country Region declined in employment between 2001 and 2006. Paper Manufacturing (NAICS 322), the largest sub-sector, had a decline of -17.2 percent for the period with a loss of 501 jobs. Among the major sub-sectors, the greatest rate of decline happened to Primary Metal Manufacturing (NAICS 331) which lost 783 jobs for a rate of change of -30.7 percent. A number of the smaller sub-sectors had an increase in jobs for the period 2001 – 2006. Miscellaneous Manufacturing (NAICS 339) added 148 jobs for an increase of 21.1 percent. Wood Product Manufacturing (NAICS 321) increased by 9.0 percent and Fabricated Metal Product Manufacturing also increased employment by 9.0 percent.

### *Specialization*

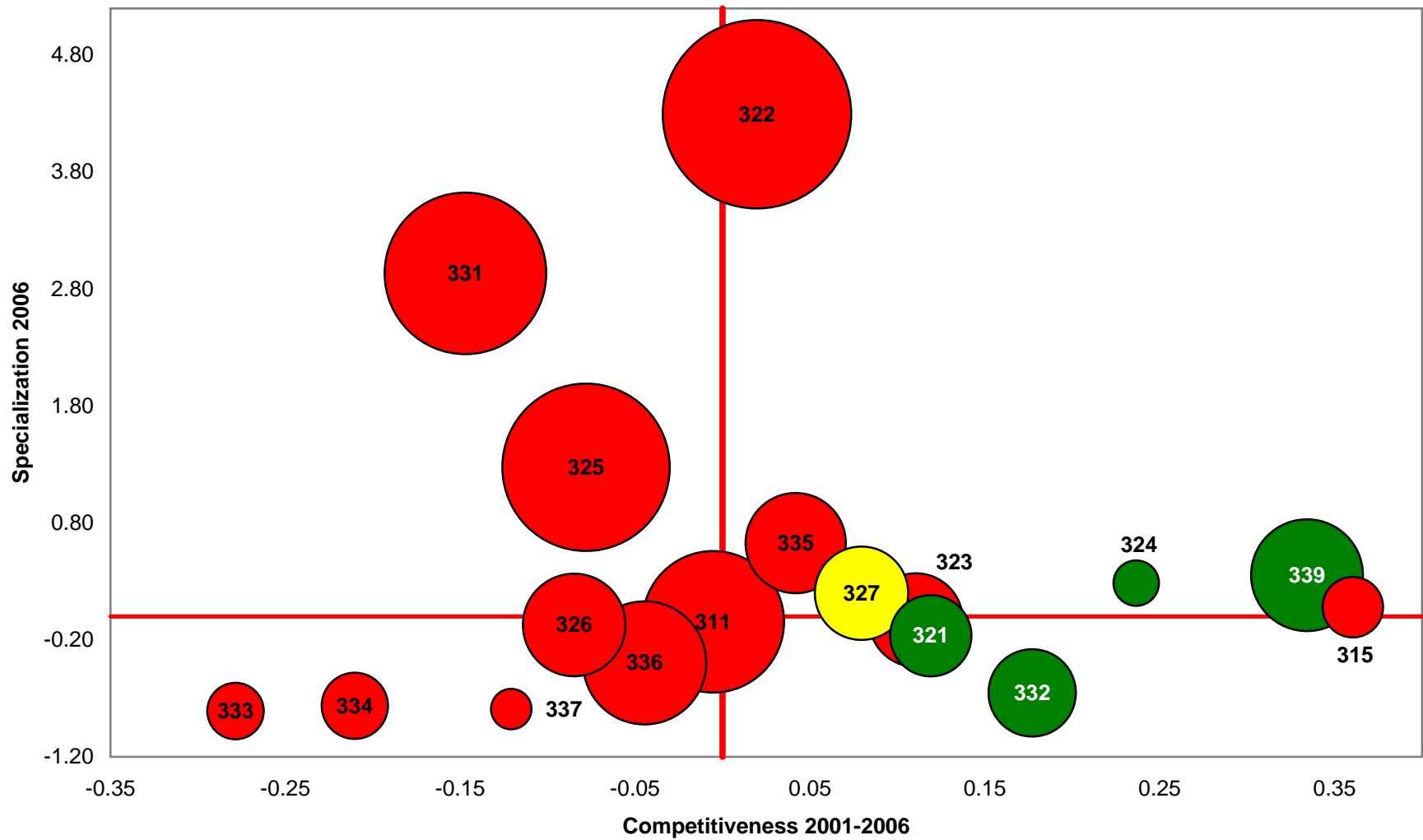
The three sub-sectors of manufacturing in which the North Country Region is most specialized are Paper Manufacturing (NAICS 322), the region's largest sub-

sector; Primary Metal Manufacturing (NAICS 331); and Chemical Manufacturing (NAICS 325). In the accompanying figure, these are the bubbles furthest above the horizontal line representing the national proportion of employment in a sub-sector. All three of these sub-sectors experienced substantial losses of employment for the period 2001 – 2006. The growing sub-sectors, Miscellaneous Manufacturing (NAICS 339); Petroleum and Coal Products Manufacturing (NAICS 324); Fabricated Metal Product Manufacturing (NAICS 332); and Wood Product Manufacturing (NAICS 321) did not represent regional specializations in 2006 but could if growth continued.

### Competitive Position

A number of manufacturing sub-sectors in the North Country Region were in relatively strong competitive positions with respect to shares of national employment, as depicted in the accompanying figure. The bubbles located to the right of the vertical axis, which represents a neutral competitive position, are the manufacturing sub-sectors in the strongest competitive position. For the period 2001 – 2006 regional employment in Miscellaneous Manufacturing (NAICS 339) increased by 21.1 percent while nationally it was declining -9.3 percent. Unfortunately the category of “Miscellaneous” is not very descriptive and encompasses all manufacturing activities not covered in the more explicit sub-sectors. A closer analysis within this sub-sector to the industry group level, also referred to as the 4-digit NAICS level, should be conducted to determine what opportunities exist. Other sub-sectors in strong competitive positions and growing jobs in the region include Fabricated Metal Product Manufacturing (NAICS 332), Wood Product Manufacturing (NAICS 321), and Nonmetallic Mineral Product Manufacturing (NAICS 327).

### North Country Region Regional Specialization and Competitiveness in Manufacturing



Tables

**North Country Region**

<b>NAICS</b>				<b>Percentage</b>	<b>2006</b>	<b>2001-06</b>
<b>Code</b>	<b>Manufacturing Sub-Sector</b>	<b>2001</b>	<b>2006</b>	<b>Change</b>	<b>Specialization Index</b>	<b>Competitiveness Index</b>
	Total Private Employment	107,197	109,434	2.1%		
31-33	Total Manufacturing Jobs	16,712	14,111	-15.6%		
311	Food Manufacturing	1,448	1,362	-5.9%	-0.046	-0.005
312	Beverage & Tobacco Product Manufacturing	29	35	20.7%	-0.815	0.281
313	Textile Mills	167	N/A	N/A	N/A	N/A
314	Textile Product Mills	N/A	90	N/A	-0.423	N/A
315	Apparel Manufacturing	328	250	-23.8%	0.079	0.360
316	Leather and Allied Product Manufacturing	12	N/A	N/A	N/A	N/A
321	Wood Product Manufacturing	413	450	9.0%	-0.165	0.119
322	Paper Manufacturing	2,909	2,408	-17.2%	4.295	0.020
323	Printing and Related Support Activities	648	595	-8.2%	-0.031	0.111
324	Petroleum & Coal Products Manufacturing	122	141	15.6%	0.285	0.237
325	Chemical Manufacturing	2,286	1,900	-16.9%	1.275	-0.078
326	Plastics & Rubber Products Manufacturing	880	714	-18.9%	-0.073	-0.085
327	Nonmetallic Mineral Product Mfg	585	594	1.5%	0.198	0.080
331	Primary Metal Manufacturing	2,552	1,769	-30.7%	2.934	-0.147
332	Fabricated Metal Product Manufacturing	476	519	9.0%	-0.654	0.177
333	Machinery Manufacturing	349	218	-37.5%	-0.809	-0.278
334	Computer and Electronic Product Mfg	506	298	-41.1%	-0.765	-0.210
335	Electrical Equipment and Appliances	837	682	-18.5%	0.627	0.042
336	Transportation Equipment Manufacturing	1,179	1,028	-12.8%	-0.397	-0.045
337	Furniture and Related Product Mfg	147	112	-23.8%	-0.793	-0.121
339	Miscellaneous Manufacturing	702	850	21.1%	0.352	0.334

## **Southern Tier Region**

The Southern Tier Region has lagged behind the United States in total private sector job growth but kept pace with the national rate of change in manufacturing. Granted the national rate of change in manufacturing has been one of decline, losing jobs at the rate of -13.9 percent for the period 2001 – 2006 but at least the regional decline has not exceeded the national rate. Total employment in the private sector of the Southern Tier Region decreased by -4.5 percent between 2001 and 2006, losing about 10,000 jobs. The national rate of increase in private sector jobs for the same period was 3.1 percent. In the manufacturing sector jobs in the region have declined by -13.9 percent, dropping from 49,971 jobs in 2001 to 43,049 in 2006.

### Number of Jobs

The largest sub-sector for employment in manufacturing in 2006 was Computer and Electronic Product Manufacturing (NAICS 334) with 13,677 jobs, representing almost one-third of the manufacturing jobs in Southern Tier. The next largest sub-sector was Transportation Equipment Manufacturing (NAICS 336) with 5,095 jobs. Other substantial sub-sectors of manufacturing included Machinery Manufacturing (NAICS 333) with 4,542 jobs; Fabricated Metal Product Manufacturing (NAICS 332) with 3,454 jobs; and Food Manufacturing (NAICS 311) with 2,525 jobs.

### Rate of Change in Jobs

Two sub-sectors of manufacturing in the Southern Tier Region increased employment by more than 20.0 percent between 2001 and 2006. The number of jobs in Transportation Equipment Manufacturing (NAICS 336) increased from 4,169 to 5,095 for a rate of growth of 22.2 percent. A similarly high rate of growth happened in the Chemical Manufacturing (NAICS 325) sub-sector where employment grew from 1,528 to 1,843 for the period, for an increase of 20.6 percent. Employment in the region's largest manufacturing sub-sector, Computer and Electronic Product Manufacturing (NAICS 334), declined from 15,318 in 2001 to 13,677 in 2006, for a loss of -10.7 percent. To put this loss into

perspective, for the same period the national rate of change for the Computers sub-sector was -25.4 percent.

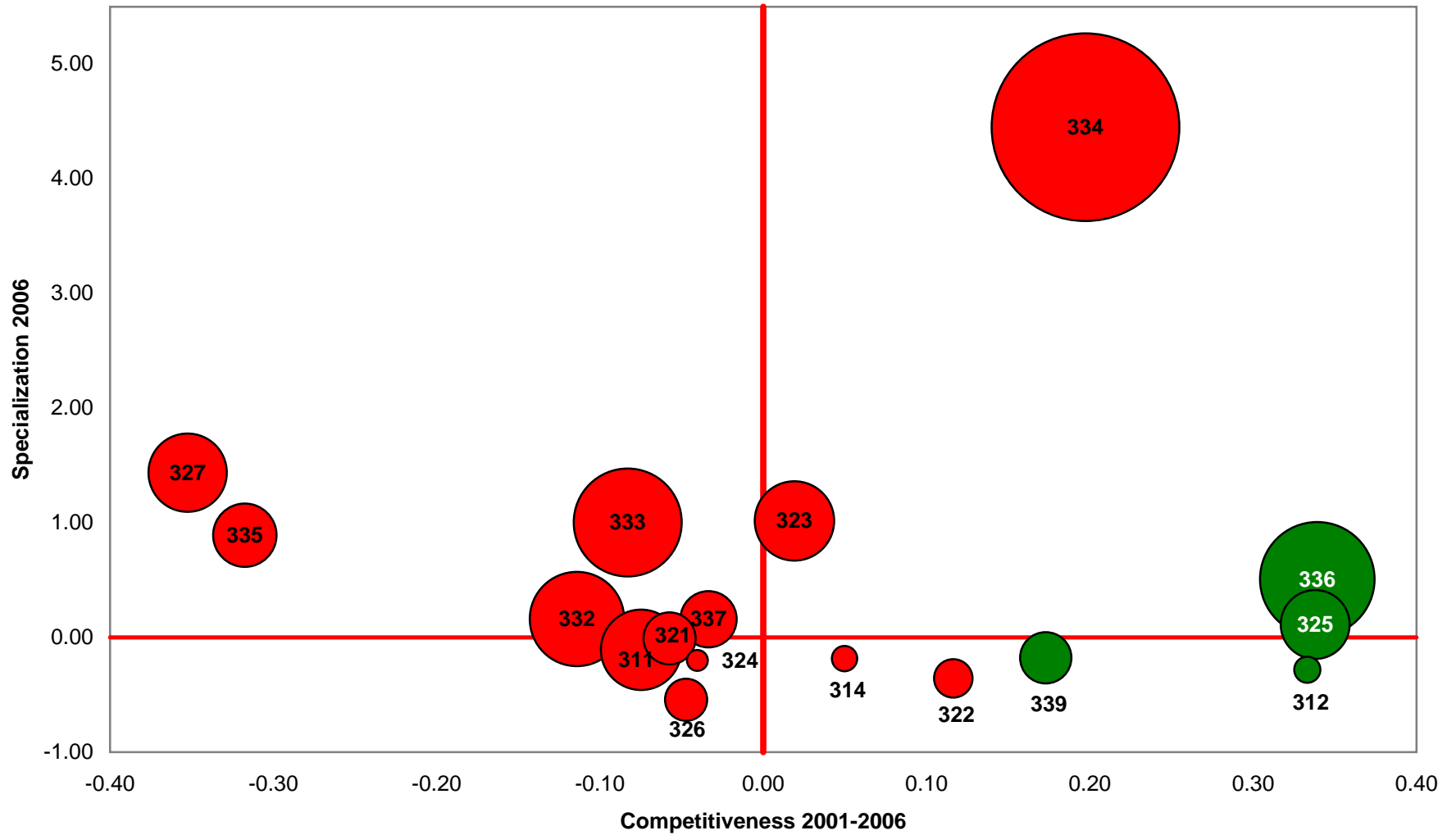
### Specialization

The Southern Tier manufacturing economy is specialized in Computer and Electronic Product Manufacturing (NAICS 334), with a proportion of employment in the sub-sector that is over five times greater than the national average. Other areas of manufacturing that represent regional specializations for the Southern Tier include Nonmetallic Mineral Product Manufacturing (NAICS 327); Printing and Related Support Activities (NAICS 323); and Machinery Manufacturing (NAICS 333). The Transportation Equipment Manufacturing (NAICS 336) and Chemical Manufacturing (NAICS 325) sub-sectors did not score highly as regional specializations for the Southern Tier in 2006, but continued growth will change that.

### Competitive Position

Three major sub-sectors of manufacturing in the Southern Tier Region were in strong competitive positions with respect to shares of national employment, as depicted in the accompanying figure. The bubbles located to the right of the vertical axis are the manufacturing sub-sectors in the strongest competitive position. For the period 2001 – 2006 regional employment in Transportation Equipment Manufacturing (NAICS 336) and Chemical Manufacturing (NAICS 325) sub-sectors each increased by more than 20 percent and gained in shares of nation employment in their sub-sector. These are emerging industries in the Southern Tier. Even though jobs in Computer and Electronic Product Manufacturing (NAICS 334) decreased for the period, the rate of loss was far less than the national average, which indicates a relative strength in the region's employers in this sub-sector.

**Southern Tier Region  
Regional Specialization and Competitiveness in Manufacturing**



Tables

**Southern Tier Region**

<b>NAICS</b>				<b>Percentage</b>	<b>2006</b>	<b>2001-06</b>
<b>Code</b>	<b>Manufacturing Sub-Sector</b>	<b>2001</b>	<b>2006</b>	<b>Change</b>	<b>Specialization Index</b>	<b>Competitiveness Index</b>
	Total Private Employment	227,255	217,032	-4.5%		
31-33	Total Manufacturing Jobs	49,971	43,049	-13.9%		
311	Food Manufacturing	2,886	2,525	-12.5%	-0.108	-0.075
312	Beverage & Tobacco Product Manufacturing	215	270	25.6%	-0.282	0.333
313	Textile Mills	127	98	-22.8%	-0.737	0.314
314	Textile Product Mills	304	252	-17.1%	-0.185	0.050
315	Apparel Manufacturing	125	N/A	N/A	N/A	N/A
316	Leather and Allied Product Manufacturing	N/A	N/A	N/A	N/A	N/A
321	Wood Product Manufacturing	1,155	1,060	-8.2%	-0.008	-0.057
322	Paper Manufacturing	640	580	-9.4%	-0.357	0.116
323	Printing and Related Support Activities	2,915	2,456	-15.7%	1.016	0.019
324	Petroleum & Coal Products Manufacturing	194	174	-10.3%	-0.201	-0.040
325	Chemical Manufacturing	1,528	1,843	20.6%	0.113	0.338
326	Plastics & Rubber Products Manufacturing	824	696	-15.5%	-0.544	-0.047
327	Nonmetallic Mineral Product Mfg	3,934	2,396	-39.1%	1.436	-0.352
331	Primary Metal Manufacturing	232	54	-76.7%	-0.939	-0.714
332	Fabricated Metal Product Manufacturing	4,209	3,454	-17.9%	0.161	-0.114
333	Machinery Manufacturing	5,721	4,542	-20.6%	1.002	-0.083
334	Computer and Electronic Product Mfg	15,318	13,677	-10.7%	4.449	0.197
335	Electrical Equipment and Appliances	2,945	1,572	-46.6%	0.891	-0.317
336	Transportation Equipment Manufacturing	4,169	5,095	22.2%	0.507	0.339
337	Furniture and Related Product Mfg	1,483	1,242	-16.3%	0.158	-0.034
339	Miscellaneous Manufacturing	962	1,024	6.4%	-0.178	0.173

## **Western New York Region**

The Western New York Region has lagged behind the United States in total private sector job growth and lost jobs in manufacturing at a faster pace than the nation. Total employment in the private sector of the Western New York Region decreased by -1.7 percent between 2001 and 2006, losing about 9,000 jobs. The national rate of increase in private sector jobs for the same period was 3.1 percent. In the manufacturing sector jobs in the region have declined by -19.1 percent, dropping from 99,465 jobs in 2001 to 80,446 in 2006.

### *Number of Jobs*

The largest sub-sector for employment in manufacturing in 2006 was Fabricated Metal Product Manufacturing (NAICS 332) with 12,411 jobs. Employment in manufacturing was spread across many sub-sectors. The top sub-sector, Fabricated Metal, only accounted for 15 percent of all jobs in manufacturing. The largest sub-sector of manufacturing was Transportation Equipment Manufacturing (NAICS 336) with 9,640 jobs. Other substantial sub-sectors of manufacturing included Food Manufacturing (NAICS 311) with 9,152 jobs; Machinery Manufacturing (NAICS 333) with 8,796 jobs; and Chemical Manufacturing (NAICS 325) with 5,601 jobs.

### *Rate of Change in Jobs*

Two sub-sectors of manufacturing in the Western New York Region increased employment between 2001 and 2006. The number of jobs in Computer and Electronic Product Manufacturing (NAICS 334), increased from 4,120 in 2001 to 4,270 in 2006, for a 3.6 percent rate of growth, while nationally the was declining by -25.4 percent. The other growing sub-sector was Beverage and Tobacco Product Manufacturing (NAICS 312) with an impressive rate of growth, 31.7 percent albeit on a modest base of 511 jobs for a net increase of 162 jobs. The Transportation Equipment Manufacturing (NAICS 336) sub-sector had the most severe loss of jobs from 14,598 to 9,640 for the period, a rate of decline of 34.0 percent. Other major sub-sectors of manufacturing with rates of change worse than negative 30 percent were Petroleum and Coal Products Manufacturing (NAICS 324) at -57.7 percent; Electrical Equipment and

Appliances (NAICS 335) at -37.1 percent; Furniture and Related Product Manufacturing (NAICS 337) at -36.0 percent; and Nonmetallic Mineral Product Manufacturing (NAICS 327) at -30.1 percent.

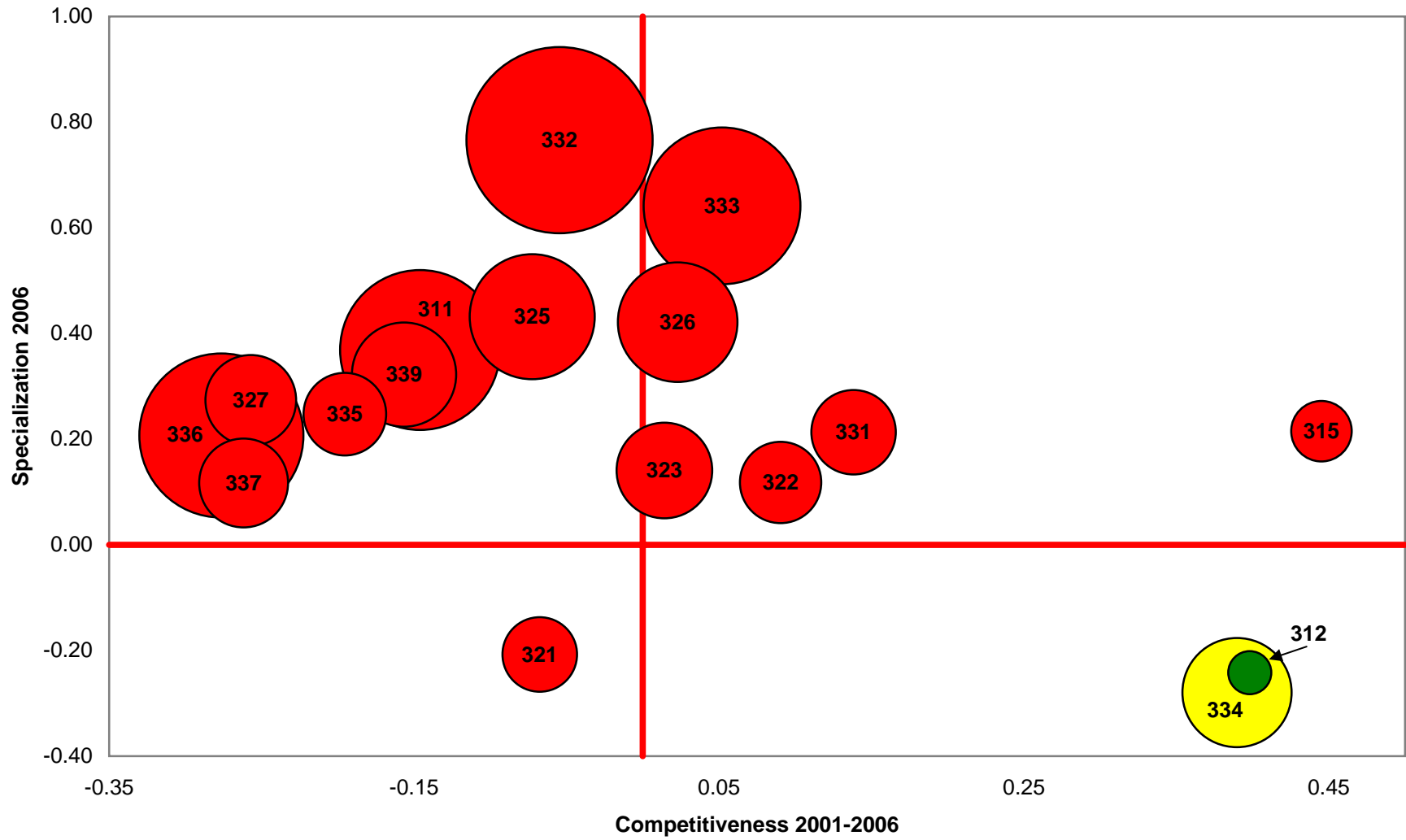
### Specialization

The Western New York economy is specialized in manufacturing in general but with no high degree of specialization in any particular sub-sector of manufacturing. The manufacturing sub-sectors of the regional economy with the greatest degrees of specialization in 2006 are Fabricated Metal Product Manufacturing (NAICS 332); Machinery Manufacturing (NAICS 333); Chemical Manufacturing (NAICS 325); and Plastics and Rubber Products Manufacturing (NAICS 326). In all of the sub-sectors of manufacturing in which the Western New York Region's proportion of employment is greater than the national average, the region is losing jobs. The only growing sub-sectors, Computer and Electronic Product Manufacturing (NAICS 334) and Beverage and Tobacco Product Manufacturing (NAICS 312) have a small proportion of total private sector employment compared with the national averages for those sub-sectors.

### Competitive Position

The bubble chart for the Western New York Region shows that only three sub-sectors of manufacturing were in strong competitive positions with respect to shares of national employment. Only two, Computer and Electronic Product Manufacturing (NAICS 334) and Beverage and Tobacco Product Manufacturing (NAICS 312) experienced actual growth in jobs. The third, Apparel Manufacturing (NAICS 315) gained in share of national employment only because the regional rate of loss of jobs was less severe than the national. The Computing and Beverage sub-sectors may have continuing potential for growth in Western New York and could be emerging industries.

### Western New York Region Regional Specialization and Competitiveness in Manufacturing



Tables

**Western New York Region**

<b>NAICS</b>				<b>Percentage</b>	<b>2006</b>	<b>2001-06</b>
<b>Code</b>	<b>Manufacturing Sub-Sector</b>	<b>2001</b>	<b>2006</b>	<b>Change</b>	<b>Specialization</b>	<b>Competitiveness</b>
					<b>Index</b>	<b>Index</b>
	Total Private Employment	521,644	512,713	-1.7%		
31-33	Total Manufacturing Jobs	99,465	80,446	-19.1%		
311	Food Manufacturing	11,334	9,152	-19.3%	0.369	-0.146
312	Beverage & Tobacco Product Manufacturing	511	673	31.7%	-0.242	0.398
313	Textile Mills	248	208	-16.1%	-0.764	0.428
314	Textile Product Mills	360	345	-4.2%	-0.528	0.214
315	Apparel Manufacturing	1,629	1,319	-19.0%	0.215	0.445
316	Leather and Allied Product Manufacturing	99	58	-41.4%	-0.652	-0.048
321	Wood Product Manufacturing	2,204	2,001	-9.2%	-0.208	-0.067
322	Paper Manufacturing	2,691	2,382	-11.5%	0.118	0.090
323	Printing and Related Support Activities	3,914	3,282	-16.1%	0.140	0.014
324	Petroleum & Coal Products Manufacturing	1,175	497	-57.7%	-0.034	-0.547
325	Chemical Manufacturing	6,699	5,601	-16.4%	0.432	-0.073
326	Plastics & Rubber Products Manufacturing	5,655	5,128	-9.3%	0.421	0.023
327	Nonmetallic Mineral Product Mfg	4,233	2,958	-30.1%	0.273	-0.257
331	Primary Metal Manufacturing	2,762	2,555	-7.5%	0.213	0.138
332	Fabricated Metal Product Manufacturing	14,172	12,411	-12.4%	0.766	-0.055
333	Machinery Manufacturing	9,658	8,796	-8.9%	0.641	0.052
334	Computer and Electronic Product Mfg	4,120	4,270	3.6%	-0.280	0.390
335	Electrical Equipment and Appliances	3,892	2,449	-37.1%	0.247	-0.195
336	Transportation Equipment Manufacturing	14,598	9,640	-34.0%	0.207	-0.276
337	Furniture and Related Product Mfg	4,424	2,830	-36.0%	0.117	-0.262
339	Miscellaneous Manufacturing	5,086	3,893	-23.5%	0.322	-0.157