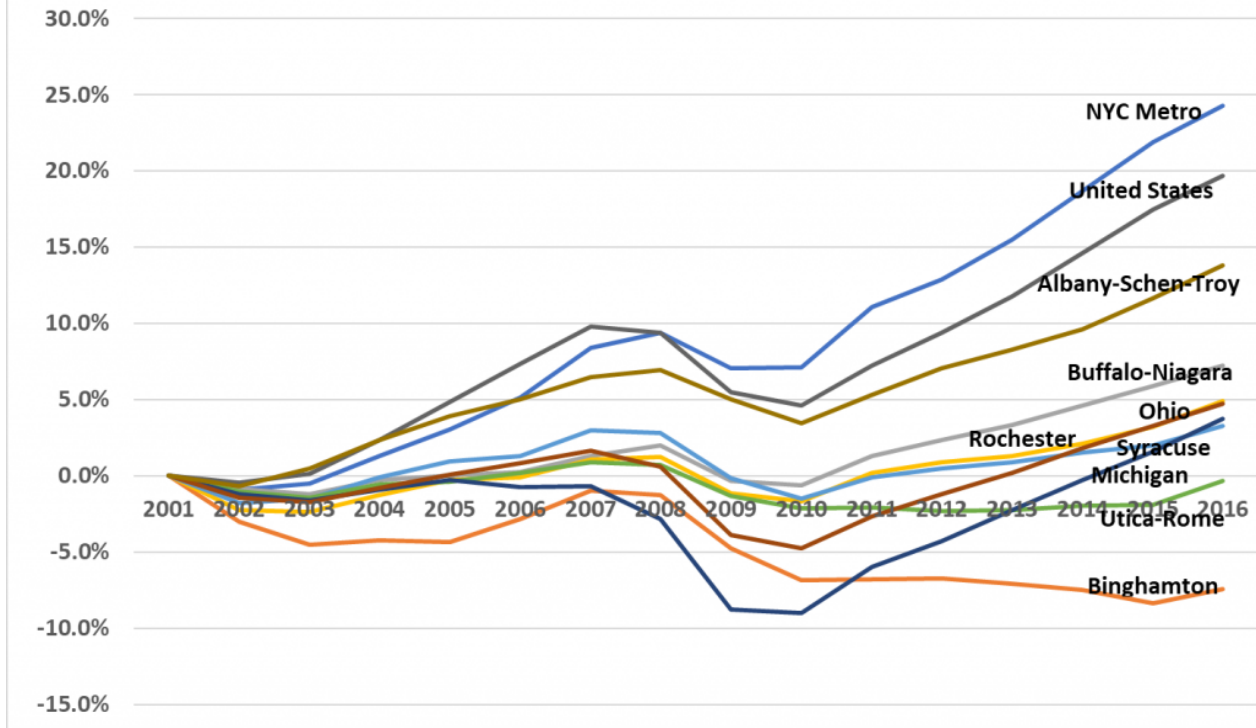


Traded Employment Losses Since 2001 in Upstate New York

Metropolitan areas in Central and Western New York, like others in the Rust Belt that had high concentrations of manufacturing employment, have been hit hard by the loss of manufacturing jobs. Ninety-one thousand net manufacturing jobs were lost in the 2001-2010 decade in five upstate metropolitan areas – Utica-Rome, Syracuse, Rochester, Binghamton, and Buffalo-Niagara Falls. During that same period, only 62,000 net service sector jobs were created in these areas. The period between 2001 and 2010 was an extraordinary decline in manufacturing, but it was not unique. Manufacturing employment in these Central and Western New York metropolitan areas has declined in every decade, beginning in 1970.

Private Sector Employment Change NYS Metros, Michigan, Ohio & U. S. 2001-2016



The challenges facing upstate metropolitan areas that had high concentrations of manufacturing employment in the twentieth century are not unique. In fact, most rust belt metropolitan areas have seen employment stagnate since 2001. While manufacturing employment has significantly decreased, service sector employment in most rust belt metropolitan areas has grown more slowly than in the nation. In fact, more than half of the region's job creation deficit compared to the nation since 2001 is associated with slow service sector growth.

The weak performance of the region's service sector is in part a reflection of the manufacturing employment losses, since much service sector employment has historically depended on manufacturing. Almost all manufacturing firms are so-called "traded" businesses, since they sell products outside the regions where they are produced. These businesses import income into regions through the sale of products and services that they export. In contrast, local businesses sell products and services within regions.

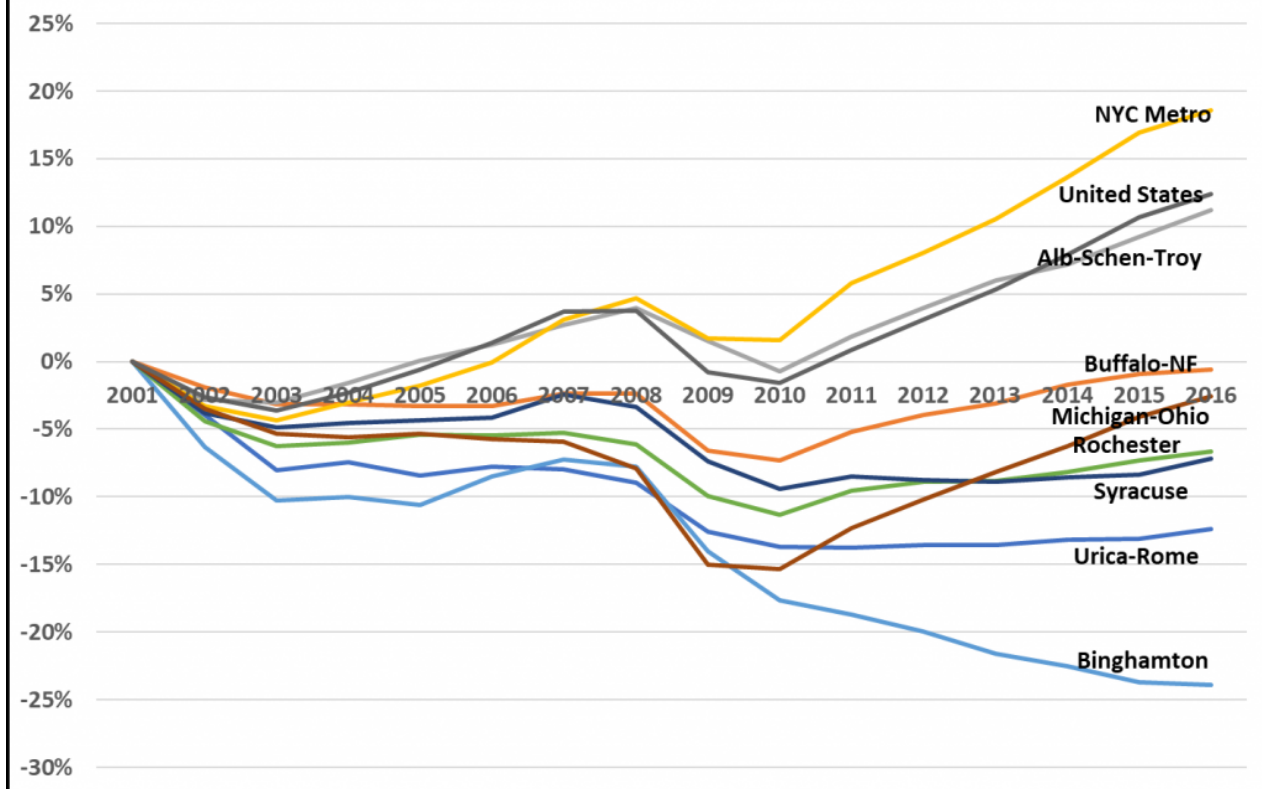
Manufacturing industries typically produce products that are exported from the metropolitan areas where they are made.^[1] But, service providers operate in many cases within local markets. For example, lawn care providers, hair dressers and barbers, restaurants and retail stores (other than those with an on-line presence) generally trade within a relatively small area. Other service providers export their services. Industries like financial services, information services, on-line retailers and institutions of higher education serve larger regional, national or international markets.

Because local services are bought in local, rather than regional or national markets, local service employment is proportional to local populations. Because traded jobs export products and services and replace imports, they create more jobs within their regions. Consequently, economic development strategies focus on strengthening existing traded industries, and attracting traded employment.

This post examines changes in traded industry employment in New York State, Michigan, Ohio and the United States. The data shows that traded employment grew nationally from 2001 to 2016, but not in Central and Western New York metropolitan areas, or in Ohio and Michigan. It also shows that while traded service sector employment has grown in most metropolitan areas in upstate New York and the rust belt, growth in some cases has been insufficient to offset losses in manufacturing employment. Even so, traded service employment continues to increase its share of total traded employment. In 2016, more than 70% of traded employment in every New York metropolitan area except for Binghamton was in the service sector. Nationally, 80% of traded employment was in service industries.

Employment Change – Traded and Local Industries

Traded Employment - 2001 to 2016 NYS, Ohio & Michigan Metro Areas



Except for the New York City and Albany-Schenectady-Troy metropolitan areas, traded industry employment in New York metropolitan areas and in Ohio and Michigan did not do as well between 2001 and 2016 as the United States, which grew by 13.3%. [2] The Rochester and Syracuse MSA's saw decreases in traded employment of more than 6%, while in Utica-Rome it decreased by 12.4%. The Binghamton MSA, which was hard hit by the closure of IBM's first manufacturing plant, lost 24% of traded employment between 2001 and 2016. New York City had an increase in traded employment of 19%, while Albany-Schenectady-Troy's traded employment increased by 11%.

| Employment Change: 2001-2016 - Traded Industries | | | | | |
|--|-------------------|-------------------|-------------------|------------------|------------------|
| New York State, Michigan/Ohio & U. S. Metro Areas | | | | | |
| | 2001 | 2010 | 2016 | 2001-2010 | 2010-2016 |
| Albany-Schen-Troy | 137,356 | 136,726 | 153,296 | -0.5% | 12.1% |
| Binghamton | 41,510 | 34,248 | 31,559 | -17.5% | -7.9% |
| Buffalo-Niagara | 202,489 | 188,084 | 201,907 | -7.1% | 7.3% |
| Michigan-Ohio | 3,412,400 | 2,892,548 | 3,332,594 | -15.2% | 15.2% |
| NYC Metro | 2,124,574 | 2,158,866 | 2,520,940 | 1.6% | 16.8% |
| Rochester | 219,347 | 194,171 | 204,452 | -11.5% | 5.3% |
| Syracuse | 119,943 | 108,718 | 111,191 | -9.4% | 2.3% |
| Utica-Rome | 43,859 | 38,247 | 38,746 | -12.8% | 1.3% |
| United States | 45,248,359 | 44,728,112 | 51,246,405 | -1.1% | 14.6% |

Metropolitan areas in Michigan and Ohio had greater employment losses between 2001 and 2010 than those in New York State, other than Binghamton. Since 2010, Michigan and Ohio metros have recovered employment at nearly the rate of the nation growing 15% compared to 17%.

| Employment Change: 2001-2016 - Local Industries | | | | | |
|--|-------------------|-------------------|-------------------|------------------|------------------|
| New York State, Michigan/Ohio & U. S. Metro Areas | | | | | |
| | 2001 | 2010 | 2016 | 2001-2010 | 2010-2016 |
| Albany-Schen-Troy | 268,279 | 281,534 | 306,795 | 4.9% | 9.0% |
| Binghamton | 69,052 | 69,503 | 71,266 | 0.7% | 2.5% |
| Buffalo-Niagara | 337,698 | 348,742 | 377,352 | 3.3% | 8.2% |
| Michigan-Ohio | 5,417,800 | 5,342,466 | 5,923,016 | -1.4% | 10.9% |
| NYC Metro | 3,899,513 | 4,421,212 | 5,229,519 | 13.4% | 18.3% |
| Rochester | 324,109 | 336,241 | 363,210 | 3.7% | 8.0% |
| Syracuse | 197,835 | 204,590 | 217,338 | 3.4% | 6.2% |
| Utica-Rome | 81,435 | 83,480 | 85,020 | 2.5% | 1.8% |
| United States | 77,783,047 | 84,799,493 | 98,264,943 | 9.0% | 15.9% |

Local employment increased by 9% between 2001 and 2010 in the United States. New York City metropolitan local employment growth during that period was greater than the nation – 13.4%. Metropolitan areas upstate had much weaker growth. Albany-Schenectady-Troy local employment growth was strongest, at 5%. Between 2010 and 2016, the New York City metropolitan area again had local industry employment growth that exceeded the nation – 18% to 16%. Local industry employment growth in upstate metropolitan areas was much weaker – less than 10% in each case.

Traded Industry Employment – Manufacturing vs. Services

Manufacturing

| Employment Change: 2001-2016 - Traded Manufacturing Industries | | | | | |
|---|-------------------|------------------|------------------|------------------|------------------|
| New York State, Michigan/Ohio & U. S. Metro Areas | | | | | |
| | 2001 | 2010 | 2016 | 2001-2010 | 2010-2016 |
| Albany-Schen-Troy | 26,482 | 19,988 | 25,999 | -24.5% | 30.1% |
| Binghamton | 20,423 | 13,816 | 11,206 | -32.3% | -18.9% |
| Buffalo | 74,358 | 47,646 | 50,326 | -35.9% | 5.6% |
| Michigan-Ohio | 1,331,323 | 814,792 | 959,088 | -38.8% | 17.7% |
| NYC Metro | 307,437 | 193,290 | 191,653 | -37.1% | -0.8% |
| Rochester | 92,393 | 59,028 | 57,245 | -36.1% | -3.0% |
| Syracuse | 38,765 | 26,038 | 24,398 | -32.8% | -6.3% |
| Utica-Rome | 16,096 | 10,981 | 11,170 | -31.8% | 1.7% |
| United States | 12,895,692 | 9,177,079 | 9,904,047 | -28.8% | 7.9% |

Between 2001 and 2010, 3,700,000 traded manufacturing jobs were lost in the United States – nearly three of every ten manufacturing jobs that existed in 2001. Much of the lost manufacturing loss was the result of increased off-shore competition – 2.4 million jobs by one estimate.[\[3\]](#) But other factors were important as well. Increases in productivity have played a significant role over the long-term in reducing manufacturing employment. And, technological change has displaced major manufacturers, like Kodak, that depended on the sale of products like photographic film that became inferior to new competition.

Traded manufacturing employment losses hit New York State metropolitan areas harder between 2001 and 2010 than the United States. Most metropolitan areas in New York State lost more than 30% of traded manufacturing jobs between 2001 and 2010, compared with 29% for the United States. Michigan/Ohio metropolitan areas were hit even harder than those in New York, losing 39% of manufacturing employment.

Traded manufacturing employment began to rebound in 2010, gaining 727,000 jobs. Nationally, traded manufacturing employment increased by 8%. Michigan and Ohio rebounded even more strongly, gaining 144,300 jobs – 18%. Most metropolitan areas in New York State saw weaker recoveries, or continued manufacturing employment losses. Three metropolitan areas saw

increases – Albany-Schenectady-Troy gained 6,000 jobs (30%), Buffalo gained 2,700 (5.6%) and Utica-Rome gained 190 (1.7%). The New York City metropolitan area, Syracuse, Rochester and Binghamton had continued losses. Binghamton lost 19% of its traded manufacturing employment between 2010 and 2016 (2,600 jobs), after losing 6,600 traded manufacturing jobs between 2001 and 2010.

Services

| Employment Change: 2001-2016 - Traded Service Industries | | | | | |
|---|-------------------|-------------------|-------------------|------------------|------------------|
| New York State, Michigan/Ohio & U. S. Metro Areas | | | | | |
| | 2001 | 2010 | 2016 | 2001-2010 | 2010-2016 |
| Albany-Schen-Troy | 107,666 | 113,348 | 123,623 | 5.3% | 9.1% |
| Binghamton | 19,955 | 19,238 | 19,161 | -3.6% | -0.4% |
| Buffalo-Niagara | 125,116 | 137,105 | 148,066 | 9.6% | 8.0% |
| Michigan-Ohio | 2,010,289 | 2,007,903 | 2,292,343 | -0.1% | 14.2% |
| NYC Metro | 1,786,490 | 1,931,865 | 2,288,193 | 8.1% | 18.4% |
| Rochester | 122,696 | 130,703 | 142,337 | 6.5% | 8.9% |
| Syracuse | 78,745 | 80,102 | 84,190 | 1.7% | 5.1% |
| Utica-Rome | 26,701 | 26,087 | 26,341 | -2.3% | 1.0% |
| United States | 30,695,511 | 33,632,188 | 39,157,124 | 9.6% | 16.4% |

Traded service sector employment in the United States increased in both the 2001-2010 and 2010-2016 periods, though the gain between 2010 and 2016 was larger than in the earlier period – 5,500,500 vs 3,000,000. Between 2001 and 2010, only the Buffalo-Niagara metropolitan area equaled the national rate of increase – 9.6%. The New York City metropolitan areas saw an employment increase that approached that for the United States – 8.1% vs. 9.6%. Rochester and Syracuse had smaller increases, while service sector employment in Utica-Rome and Binghamton decreased. Metropolitan areas in Michigan and Ohio also had slightly less service traded sector employment in 2010 than in 2001.

Between 2010 and 2016, national traded service sector employment increased by 16.4% compared with 9.6% in the earlier period. New York City's traded service employment increased by 18.4%, while metropolitan areas in Michigan and Ohio had an increase of 14.2%. All the metropolitan areas in

upstate New York had increases of less than 10%, with Albany-Schenectady-Troy showing the strongest growth – 9.1%, followed by Rochester with 8.9% and Buffalo-Niagara Falls with 8%. Binghamton again lost traded service sector employment .

Traded Manufacturing and Service Employment 2010-2016

Following the great recession of 2008-2010, manufacturing employment rebounded nationally, as well as in several upstate New York metropolitan areas. How much employment growth did traded manufacturing and service employment each contribute?

| Employment Change: 2010-2016 | | |
|--|----------------------|------------------|
| New York State, Michigan/Ohio & U. S. Metro Areas | | |
| | Manufacturing | Services |
| Albany-Schen-Troy | 6,012 | 10,275 |
| Binghamton | (2,611) | (77) |
| Buffalo | 2,680 | 10,961 |
| Michigan-Ohio | 144,296 | 284,441 |
| NYC Metro | (1,638) | 356,329 |
| Rochester | (1,783) | 11,634 |
| Syracuse | (1,641) | 4,088 |
| Utica-Rome | 190 | 254 |
| United States | 726,968 | 5,524,935 |

The performance of metropolitan areas showed substantial differences. Nationally, manufacturing generated 11% of traded employment growth between 2010 and 2016. But, in Albany-Schenectady-Troy. Utica-Rome and Michigan and Ohio metropolitan areas, manufacturing accounted for one-third or more of employment growth. In Buffalo, manufacturing provided 20% of traded growth. But in Binghamton, the New York City metropolitan area, Rochester and Syracuse, manufacturing employment continued to decline.

| Traded Employment - 2001 | | | |
|---|----------------------|-------------------|-------------------|
| New York, Michigan & Ohio & U. S. Metros | | | |
| | Manufacturing | Services | % Services |
| Albany-Schen-Troy | 26,482 | 107,666 | 80.3% |
| Binghamton | 20,423 | 19,955 | 49.4% |
| Buffalo-Niagara | 74,358 | 125,116 | 62.7% |
| Michigan-Ohio | 1,331,323 | 2,010,289 | 60.2% |
| NYC Metro | 307,437 | 1,786,490 | 85.3% |
| Rochester | 92,393 | 122,696 | 57.0% |
| Syracuse | 38,765 | 78,745 | 67.0% |
| Utica-Rome | 16,096 | 26,701 | 62.4% |
| United States | 12,895,692 | 30,695,511 | 70.4% |

Because manufacturing employment dropped sharply between 2001 and 2016, and traded service employment generally increased, service employment now constitutes more than two-thirds of all traded employment nationally, and in most of the rust belt metropolitan areas studied.

| Traded Employment - 2016 | | | |
|---|----------------------|-------------------|-------------------|
| New York, Michigan & Ohio & U. S. Metros | | | |
| | Manufacturing | Services | % Services |
| Albany-Schen-Troy | 25,999 | 123,623 | 82.6% |
| Binghamton | 11,206 | 19,161 | 63.1% |
| Buffalo-Niagara | 50,326 | 148,066 | 74.6% |
| Michigan-Ohio | 959,088 | 2,292,343 | 70.5% |
| NYC Metro | 191,653 | 2,288,193 | 92.3% |
| Rochester | 57,245 | 142,337 | 71.3% |
| Syracuse | 24,398 | 84,190 | 77.5% |
| Utica-Rome | 11,170 | 26,341 | 70.2% |
| United States | 9,904,047 | 39,157,124 | 79.8% |

Only the Binghamton metropolitan area has less than 70% of traded employment in service industries, and even that area has shifted towards services.

Conclusions

Over the 2001 – 2016 period, manufacturing dependent upstate metropolitan areas west of Albany-Schenectady-Troy and those in Michigan and Ohio did not do well. While traded employment in the United States increased by 13.3%, every upstate metropolitan area west of Albany and those in Ohio and Michigan and had less traded employment in 2016 than in 2001. But, between 2001 and 2010 and 2010 and 2016, the employment of upstate metropolitan areas differed from other rust-belt metropolitan areas in Ohio and Michigan. Ohio and Michigan had steeper traded employment declines between 2001 and 2010 and greater growth between 2010 and 2016 than did those in Western and Central New York. The v-shaped employment change in Ohio and Michigan may have been primarily the result of the collapse and federal bail-out of the domestic auto industry during the great recession.

Traded service sector employment growth was relatively weak

during both periods in Central and Western New York metropolitan areas. Two small metropolitan areas – Utica-Rome and Binghamton had less traded service employment in 2016 than in 2001. But, despite the relatively weak growth of traded service sector employment in Central and Western New York metropolitan areas, most traded employment growth in the region came from service sector industries.

State and local governments in the rust-belt seeking to strengthen regional economies face a challenging environment. Because they have higher percentages of employment in declining and slow-growing industries than other regions, if rust-belt regions are to succeed in encouraging economic growth, they must focus on helping build employment in faster growing industries, while helping preserve the existing industrial base. Because there are relatively few large business expansions and relocations in a given year (one estimate is 1,500) [\[4\]](#), attracting businesses in growing industries can be difficult – competition can be intense and incentive costs are often very high. Supporting the growth of existing small businesses in faster growing sectors may be more cost-effective, but relatively few small businesses grow to become large employers.

Too often, policy makers think primarily of tax incentives as the primary tool to induce businesses to locate and expand within their jurisdictions. But, tax incentives have crippling weaknesses as economic development policy tools. First, they are extraordinarily wasteful. Timothy J. Bartik, in “Who Benefits from Economic Development Incentives? How Incentive Effects on Local Incomes and the Income Distribution Vary with Different Assumptions about Incentive Policy and the Local Economy” [\[5\]](#) found that 85 to 90% of typical incentive spending is wasted, because it does not affect the existence of about 85 to 90% of the jobs that receive tax incentives. Bartik writes, ““But for” the typical incentives, the probability of the incented jobs choosing the state would have

been reduced from 100 percent to 90 or 85 percent.” Because of this, Bartik concludes, “As a result, the direct budget costs of incentives significantly exceed fiscal benefits.”[\[6\]](#) Bartik estimates that fiscal benefits are 22% of incentive costs, based on his model’s assumptions.

In practical terms, the heavy use of tax incentives carries a large opportunity cost. Given that state and local budgets are constrained by tax revenues, large tax incentive expenditures are likely to result in cuts to major state programs – primarily education and social assistance. Alternatively, they can lead to tax increases, which decrease private sector demand because they reduce the number of dollars available to taxpayers to spend.

Development of successful economic development strategies at the state level requires understanding the needs of existing businesses within a region and the development of effective assistance strategies. They require the creation and maintenance of strong relationships between state, local and regional economic development organizations. They build knowledge of and relationships with existing traded businesses and seek to meet their needs. Effective organizations maintain strong business visitation programs, assemble up to date site data, and work with private developers to expand site availability, work with training providers to ensure the availability of workers with needed skills, assist expanding businesses in expediting permit processes, and where needed, provide financial assistance for capital costs and worker training.

Because of the difficulties faced by upstate metropolitan areas west of Albany-Schenectady-Troy, Governor Cuomo has focused resources on the region. The Governor proposed legislation in 2011 creating Regional Economic Development Councils. The Councils are responsible for the creation and implementation of regional economic development plans. The state provided funding to support their implementation.

The intent of the initiative is to give regions greater voice in decision making about state supported economic development efforts. As of 2018, the state has spent \$5.4 billion on projects selected through the Regional Councils.^[7] This year's funding is \$750,000,000. \$225 million is to be provided through grants and tax credits from Empire State Development, and \$525 million through other state agency programs. To be sure, much of the spending is through already existing programs, but there has been significant additional funding provided for regional initiatives.

| High Technology Manufacturing Employment | | | | |
|--|------------------|------------------|------------------|-----------------|
| United States - 2001 vs. 2016 | | | | |
| | 2001 | 2016 | Change | % Change |
| Pharmaceutical & Medicines | 233,503 | 247,268 | 13,765 | 5.9% |
| Computers and Peripherals | 199,637 | 42,665 | (156,972) | -78.6% |
| Communications Equipment | 269,498 | 87,208 | (182,290) | -67.6% |
| Semiconductors & Electronics | 603,160 | 262,922 | (340,238) | -56.4% |
| Measurement & Control Instruments | 453,496 | 374,176 | (79,320) | -17.5% |
| Aerospace Products | 449,383 | 401,046 | (48,337) | -10.8% |
| Total | 2,208,677 | 1,415,285 | (793,392) | -35.9% |
| Definition from "High Technology Employment: A NAICS Based Update," Daniel E. Hecker, Monthly Labor Review, July 2005, https://www.bls.gov/opub/mlr/2005/07/art6full.pdf | | | | |

Much of the emphasis of the regional strategies that were developed in response to the Governor's call has been on growing advanced manufacturing and high technology within upstate New York regions. And, the State has encouraged that focus with a series of large investments in high technology manufacturing facilities. It is clearly rational for regional economic developers to focus on retaining manufacturing employment, and it is possible for manufacturing employment to grow, as it has in some metropolitan areas. But, over the past forty years, manufacturing employment's share of national employment has declined. High technology manufacturing has declined along with more traditional industries. Regional economic development strategies should recognize that most employment growth in upstate New York and elsewhere, even that in traded industries that export products and services, is in services.

Future posts will examine additional employment challenges

faced by upstate metropolitan areas and the Governor's Regional Economic Development initiative.

[1] One of the relatively rare exceptions might be found in the food processing industry, such as a few dairies that only sell their products within the metropolitan areas where they are located.

[2] Source: Bureau of Labor Statistics – Current Employment Survey. Traded employment estimated as proposed by Mercedes Delgado, Richard Bryden and Samantha Zyontz, in “Categorization of Traded and Local Industries in the US Economy,”

<http://clustermapping.us/sites/default/files/files/page/Categorization%20of%20Traded%20and%20Local%20Industries%20in%20the%20US%20Economy.pdf>. In this paper the authors estimate the percentage of employment in two-digit NAICS codes that is traded. Because two digit codes are broad categories, differences in industry mix within clusters between areas are possible sources of estimation error.

[3] “Import Competition and The Great U.S. Employment Sag of The 2000s” Daron Acemoglu, David Autor, David Dorn, Gordon H. Hanson, and Brendan Price, NBER Working Paper 20395, <http://www.nber.org/papers/w20395.pdf>

[4] Timothy J. Bartik, “Local Economic Development Policies,” Upjohn Institute Working Paper No. 03-91, W. E. Upjohn Institute, 2003.

http://research.upjohn.org/cgi/viewcontent.cgi?article=1108&context=up_workingpapers

[5] http://research.upjohn.org/cgi/viewcontent.cgi?article=1037&context=up_technicalreports

[6] Ibid, pp. viii-ix.

[7] <https://regionalcouncils.ny.gov/about>