

Employment

IN NEW YORK STATE

Andrew M. Cuomo, Governor
Peter M. Rivera, Commissioner

At a Glance

In May 2014, New York's seasonally adjusted unemployment rate was 6.7%, unchanged from April 2014. The nation's unemployment rate was 6.3% in May 2014. New York State had 9,011,400 nonfarm jobs in May 2014, including 7,568,600 private sector jobs, after seasonal adjustment. The number of seasonally adjusted private sector jobs in the state increased by 0.3% in April-May 2014, while those in the nation increased by 0.2%. From May 2013 to May 2014, the number of private sector jobs increased by 1.4% in the state and 2.1% in the nation (not seasonally adjusted). New York's Index of Coincident Economic Indicators increased at an annual rate of 2.1% in May 2014.

Change in Nonfarm Jobs

May 2013 - May 2014

(Data not seasonally adjusted, net change in thousands)

	Net	%
Total Nonfarm Jobs	100.7	1.1
Private Sector	106.5	1.4
Goods-producing	1.4	0.2
Nat. res. & mining	0.0	0.0
Construction	9.1	2.8
Manufacturing	-7.7	-1.7
Durable gds.	-4.1	-1.5
Nondurable gds.	-3.6	-1.9
Service-providing	99.3	1.2
Trade, trans. & util.	23.2	1.5
Wholesale trade	2.1	0.6
Retail trade	16.3	1.8
Trans., wrhs. & util.	4.8	1.8
Information	-1.2	-0.5
Financial activities	-3.2	-0.5
Prof. & bus. svcs.	30.1	2.5
Educ. & health svcs.	36.3	2.0
Leisure & hospitality	15.9	1.9
Other services	4.0	1.0
Government	-5.8	-0.4

Demand for STEM Workers Exceeds Supply...

Boosting New York State's STEM Workforce

New York State faces a shortage of skilled workers. There is a growing consensus among leaders from government, industry and higher education that our nation must increase the number of students entering the science, technology, engineering and mathematics (STEM) workforce for the U.S. to compete globally.

The STEM Challenge

Demand for STEM workers is growing much faster than supply. As reported by the President's Council of Advisors on Science and Technology, over the next decade the U.S. economy will need one million more STEM workers than our higher education system now produces. One factor contributing to the dearth of STEM workers is that 74% of students with a bachelor's degree in a STEM field do not work in a STEM job. Additionally, the State University of New York (SUNY) indicates that STEM careers

are growing 2.5 times faster than other fields in New York.

To understand the challenge, we first must identify which occupations comprise the STEM workforce. In 2012, a federal workgroup identified 63 specific STEM occupations. They also listed 35 STEM-related occupations -- mostly healthcare practitioners and technicians -- and 437 non-STEM occupations. Here, we focus on New York State's STEM workforce using the 63 STEM job titles.

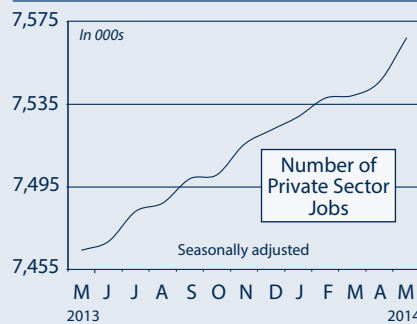
STEM Occupations and Wages

In 2012, there were 446,000 STEM workers in New York that made up 4.4% of the state's civilian workforce. The five main STEM occupational groups and their employment levels in New York State were: computer, 239,100; engineering, 113,900; life and phys-

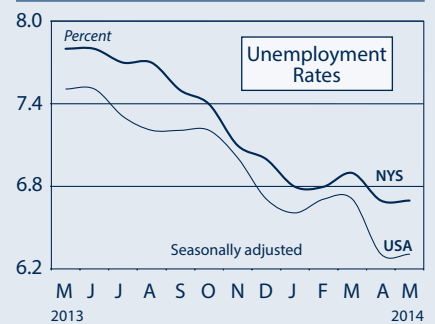
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IN MAY...

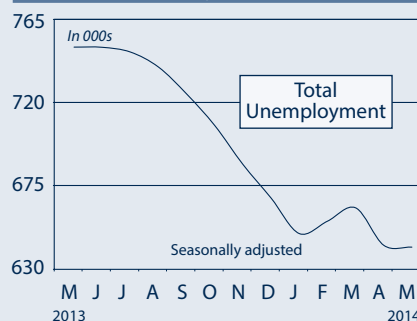
...NYS private sector jobs increased



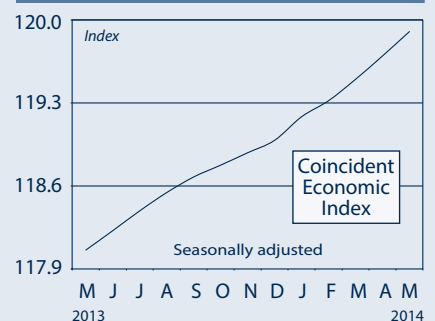
...NYS unemployment rate unchanged



...NYS unemployment decreased



...NYS economic index increased



Focus on the Capital Region

High-Tech Industries in the Capital Region

by Jim Ross, Labor Market Analyst, Capital Region

The Capital Region Economic Development Council has made support of the region's growing high-tech industries a priority. This article attempts to answer two important related questions:

- What are the region's high-tech industries?
- What are the principal occupations in these industries?

Definitions Make a Difference

Since there is no official definition of high-tech industries, the Workforce Information Council (WIC), a federal-state cooperative group, recently developed a list of high-tech industries. Their definition is based on an industry's share of workers in science, technology, engineering and mathematics (STEM) job titles.

Industries with a concentration of STEM jobs at least 2.5 times greater than the national average are defined as "high-tech" by the WIC (i.e., STEM occupations must comprise at least 15.2% of an industry's total job count). This criteria yields a total of 46 industries (4-digit NAICS), including 13 that are related to health care.

Since most STEM initiatives focus on the dearth of students entering the core science, engineering and information technology fields, the 13 health care industries were omitted from this analysis. This leaves 33 "core high-tech" industries.

Core High-Tech Industries

The Capital Region's core high-tech industries include just over 2,000 firms and 41,800 jobs, with average compensation (including benefits) of \$107,200, according to data from Economic Modeling Specialists Intl. Most local

high-tech jobs are found in Albany, Schenectady and Saratoga counties.

This industry group enjoyed a net gain of 2,387 jobs, or 6.1%, between 2008 and 2014. This gain far outpaced the comparable national increase (+0.8%). Much of this growth reflects the expansion of the Global Foundries chip plant in Saratoga County. Though not the only industry to experience sizable growth, semiconductor manufacturing added 2,400 jobs (+871%). Saratoga County's high-tech job count grew by almost 3,200, or 63%, over the period.

The five core high-tech industries with the most jobs in the Capital Region were: scientific research and development services, 9,010; architectural and engineering services, 4,920; computer systems design, 4,680; engine, turbine and power transmission equipment, 2,730; and semiconductor manufacturing, 2,690.

Over two-thirds of workers in the region's core high-tech sector are male and three-quarters of all workers are between 25 and 54 years of age. As Baby Boomers age, retirements and the lost knowledge that accompanies them are a growing concern. There are 7,200 local high-tech workers between the ages of 55 and 64, representing 17% of sector employment. This closely mirrors the Capital Region's labor market as a whole. There are, however, six high-tech industries with concentrations over 20%, including five in manufacturing.

High-Tech Occupations

Since high-tech industries are defined based on their concentration of STEM occupations, it is not surprising that they account for the most sector



jobs. Looking first at occupational groups, computer (15.7%) and engineering (7.9%) occupations have the highest employment shares. Business operations specialists (6.2%), a non-STEM job group, and life, physical and social science technicians (5.5%) round out the short list of occupational groups with at least 5% of total jobs in the high-tech sector.

Turning to specific job titles, there were 10 occupations that each accounted for at least 2% of high-tech jobs in the Capital Region. The top five occupations in the Capital Region's high-tech sector are computer programmers (1,390), customer service representatives (1,230), computer systems analysts (1,100), software developers (1,090) and secretaries and administrative assistants (1,010).

Summary

The Capital Region's high-tech sector provided positive momentum for the local economy from 2008 to 2014, even as our traditionally dominant job providers -- education, health care and government -- underperformed compared to the nation. If the region's high-tech sector is to continue as a source of local economic strength, it is critical for our workforce partners to develop a pipeline of skilled STEM and non-STEM workers. For more information about high-tech industries and occupations in the Capital Region, see:

labor.ny.gov/stats/cap/index.shtm. ■

Boosting New York State's STEM... from page 1

ical science, 53,000; social science, 28,100; and mathematical, 12,000.

The five largest individual STEM occupations (all computer-related) are: software developers (42,400); programmers (35,700); support specialists (33,600); systems analysts (32,400); and computer and information systems managers (30,900). The largest non-computer STEM occupations are psychologists with 22,500 jobs, and engineering technicians with 21,000 jobs.

Overall, STEM jobs pay well. In New York State, the median annual wage for employed STEM workers is \$65,700 compared to \$33,300 for non-STEM workers. Within the STEM workforce, the best-paid group is mathematical workers with a median annual wage of \$71,700. Close behind

are STEM jobs in computers (\$70,700) and engineering (\$70,700). The lowest STEM wages are in social science occupations with annual median earnings of \$50,500.

STEM Worker Demographics

The table on page 3 shows the racial/ethnic and gender make-up of STEM and non-STEM workers in New York State. More than 7 in 10 STEM workers (72%) are male, with White males accounting for just over half (51%) of all STEM workers in the state. Among male STEM workers, Asians are the second largest group comprising 10% of New York's overall STEM workforce. A similar picture emerges among female STEM workers, with Whites (19%) and Asians (4%) comprising the two largest groups.

Hispanic and Black workers are underrepresented in the state's STEM workforce. In 2012, each group represented only 7% of STEM workers, but 18% and 14% of non-STEM workers, respectively. Looked at another way, Hispanics and Blacks together hold about 1 in 3 non-STEM jobs, but only 1 in 7 STEM jobs.

STEM workers in New York are older and better educated than non-STEM workers. Three out of four STEM workers (74%) fall in the core working-age group (25-54), which is more than workers in non-STEM jobs (66%). Conversely, fewer STEM workers (8%) are under age 25 compared to non-STEM workers (13%), since most STEM jobs typically require at least a 4-year college degree.

Continued on page 3

Unemployment Rates in New York State

Data Not Seasonally Adjusted

	MAY '13	MAY '14		MAY '13	MAY '14		MAY '13	MAY '14
New York State	7.5	6.4	Hudson Valley	6.6	5.3	Finger Lakes	6.9	5.7
Capital	6.4	5.1	Dutchess	6.7	5.3	Genesee	6.2	5.0
Albany	6.2	5.0	Orange	7.3	5.7	Livingston	7.1	6.0
Columbia	6.1	4.8	Putnam	5.8	4.7	Monroe	6.9	5.8
Greene	8.1	6.4	Rockland	5.8	4.8	Ontario	6.4	5.3
Rensselaer	6.5	5.2	Sullivan	8.6	6.9	Orleans	8.4	6.8
Saratoga	5.7	4.6	Ulster	7.7	6.0	Seneca	6.6	5.4
Schenectady	6.9	5.4	Westchester	6.2	5.1	Wayne	7.3	5.9
Warren	7.0	5.7	Mohawk Valley	7.8	6.3	Wyoming	7.0	6.0
Washington	6.6	5.8	Fulton	8.9	7.0	Yates	5.9	4.6
Central New York	7.3	6.0	Herkimer	7.5	6.3	Western New York	7.4	6.1
Cayuga	6.7	5.7	Montgomery	8.7	6.9	Allegany	7.2	5.9
Cortland	7.1	6.1	Oneida	7.7	6.2	Cattaraugus	7.8	6.5
Madison	7.4	6.1	Otsego	6.5	5.3	Chautauqua	7.5	6.4
Onondaga	7.0	5.7	Schoharie	8.0	6.8	Erie	7.3	5.9
Oswego	9.2	7.5	North Country	8.9	7.3	Niagara	7.4	6.2
Southern Tier	7.2	6.0	Clinton	8.5	6.6	Long Island	6.1	4.9
Broome	7.5	6.4	Essex	8.7	7.1	Nassau	6.0	4.8
Chemung	8.2	6.5	Franklin	8.8	7.3	Suffolk	6.2	5.0
Chenango	6.8	5.7	Hamilton	8.0	6.5	New York City	8.6	7.7
Delaware	7.7	6.3	Jefferson	9.1	7.5	Bronx	11.5	10.6
Schuyler	7.2	5.8	Lewis	9.2	7.4	Kings	9.2	8.3
Steuben	8.7	7.2	St. Lawrence	9.1	7.7	New York	7.3	6.4
Tioga	7.5	6.0				Queens	7.7	6.9
Tompkins	4.9	4.1				Richmond	7.6	7.0

Boosting New York State's STEM... from page 2

Worker Race/Ethnicity and Gender, STEM and Non-STEM Occupations, New York State, 2012

	Occupational Group*	
	STEM	Non-STEM
Total Labor Force	446,000	9,613,600
Male	72%	51%
White**	51%	30%
Asian**	10%	4%
Black**	5%	6%
Hispanic	5%	10%
Female	28%	49%
White**	19%	29%
Asian**	4%	4%
Black**	2%	8%
Hispanic	2%	8%

*Data may not sum to 100% due to rounding.
 **Refers to non-Hispanics.

Source: American Community Survey, 1-Year Public Use Microdata Sample

The higher educational requirement for STEM jobs shows up in the share of STEM workers who hold at least a bachelor's degree (73%). This is more than twice the rate among non-STEM workers (35%). Likewise, the rate of STEM workers with at least a master's degree (31%) is more than double of those in non-STEM jobs (14%).

Growing the STEM Workforce

New York has started several programs to increase the number of STEM workers in the pipeline. For example, the STEM Incentive Scholarship Program offers students in the top 10% of their high school graduating class a full-tuition scholarship to a SUNY or City University of New

York college if they major in a STEM field. They must remain in New York at a STEM job for five years after graduation. The state is working with non-profit groups such as Girls Inc., United Neighborhood Houses, Catholic Charities and the New York Council of Nonprofits to encourage students to apply. Award details and applications are both available at www.HESC.ny.gov. Also, the New York Academy of Sciences helped launch the Global STEM Alliance to boost student interest in STEM careers. Further information is available at www.nyas.org.

These new programs will help New York State bring a larger number and wider variety of people into its STEM workforce now and in the future. ■

by Deleep Nair and Kevin Jack

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CAPITAL

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From May 2013 to May 2014, the Capital Region's private sector job count grew by 2,700, or 0.6 percent, to 421,700. Gains were centered in natural resources, mining and construction (+2,400), educational and health services (+600), manufacturing (+300) and professional and business services (+300). Financial activities (-500) and leisure and hospitality (-300) lost the most jobs.

CENTRAL NY

Karen Knapik-Scalzo — 315-479-3391

For the 12-month period ending May 2014, the private sector job count in the Syracuse metro area declined by 2,500, or 1.0 percent, to 256,100. Growth was concentrated in trade, transportation and utilities (+500), other services (+200) and professional and business services (+200). Losses were largest in educational and health services (-2,000), natural resources, mining, and construction (-600) and financial activities (-400).

FINGER LAKES

Tammy Marino — 585-258-8870

Private sector jobs in the Rochester metro area increased over the year by 3,900, or 0.9 percent, to 442,200 in May 2014. Job gains were concentrated in educational and health services (+4,200), leisure and hospitality (+2,700) and financial activities (+500). Losses were greatest in construction (-1,200), trade, transportation and utilities (-1,000) and manufacturing (-700).

HUDSON VALLEY

John Nelson — 914-997-8798

For the 12-month period ending May 2014, private sector jobs in the Hudson Valley increased by 8,300, or 1.1 percent, to 757,600. Gains were strongest in educational and health services (+5,000), leisure and hospitality (+3,500) and trade, transportation and utilities (+1,600). Losses were largest in manufacturing (-900), natural resources, mining, and construction (-700) and financial activities (-600).

LONG ISLAND

Shital Patel — 516-934-8533

Private sector jobs on Long Island rose over the year by 15,900, or 1.5 percent, to 1,103,300 in May 2014. Gains were greatest in trade, transportation and utilities (+6,700), educational and health services (+5,900), natural resources, mining, and construction (+3,700) and professional and business services (+2,000). Job losses were greatest in financial activities (-2,300).

MOHAWK VALLEY

Mark Barbano — 315-793-2282

For the 12-month period ending May 2014, the private sector job count in the Mohawk Valley decreased by 200, or 0.1 percent, to 147,800. Job gains occurred in educational and health services (+300) and leisure and hospitality (+300). Losses were greatest in professional and business services (-400) and trade, transportation and utilities (-200).

NEW YORK CITY

James Brown — 212-775-3330

Private sector employment in New York City rose by 77,700, or 2.3 percent, to 3,503,500 for the 12-month period ending May 2014. Job growth was centered in educational and health services (+27,100), professional and business services (+17,400), trade, transportation and utilities (+15,200) and leisure and hospitality (+9,800).

NORTH COUNTRY

Alan Beideck — 518-523-7157

Private sector employment in the North Country rose over the year by 1,000, or 0.9 percent, to 113,900 in May 2014. Employment gains were greatest in educational and health services (+300), manufacturing (+300) and professional and business services (+200).

SOUTHERN TIER

Christian Harris — 607-741-4485

The private sector job count in the Southern Tier fell over the year by 2,100, or 0.9 percent, to 235,700 in May 2014. Job gains were largest in leisure and hospitality (+400) and natural resources, mining and construction (+300). Employment losses were centered in educational and health services (-1,500) and manufacturing (-500).

WESTERN NY

John Slenker — 716-851-2742

The private sector job count in the Buffalo-Niagara Falls metro area increased by 3,000, or 0.7 percent, to 461,500 over the 12 months ending May 2014. Job gains were centered in trade, transportation and utilities (+1,700), educational and health services (+1,100) and professional and business services (+1,100). Losses were greatest in financial activities (-1,000).

