Most of us know the U.S. census runs every 10 years and is used to generate population estimates, among many other data points. But did you know that it is also used by labor economists to determine when new job titles like ‘barista’, ‘chief knowledge officer’ or ‘sommelier’ become widespread enough for the U.S. Bureau of Labor Statistics (BLS) to add these titles to its comprehensive list of occupations? Here, we review three broad occupational categories developed by economics professors David Autor of MIT and Anna Salomons (A&S) of Utrecht University in the Netherlands to describe new job titles in the U.S. labor market (see the table on page 3 for examples). By the way, ‘barista’ and ‘chief knowledge officer’ first appeared in the 2000 Census and ‘sommelier’ in 2010.

Frontier Work
The first occupational category described by A&S is “frontier work.” Job titles in this category pave the way for the future. In every decade, they tend to be the high-paying jobs that are usually filled by highly-educated, highly-skilled workers. Current examples include robot integrators, cloud computing specialists, and autonomous vehicle programmers.

The interesting thing about frontier jobs is that the titles in this category change as technology advances. For instance, in 1980, a word processing supervisor was considered frontier work. Today, word processing is no longer considered high-skilled work. In fact, most jobs now require it. A&S expect to see frontier jobs like machine learning engineers added to the BLS jobs list after the next census in 2020.

Continued on page 2
Focus on Western New York

Steady Job Growth Boosts Western New York Region
by Timothy Glass, Labor Market Analyst, Western New York Region

The Western New York (WNY) regional economy has enjoyed steady private sector job growth in recent years. Between 2013 and 2018, the WNY region’s private sector job count increased by 14,300, or 2.7%, to 546,200, according to employment data from the Current Employment Statistics (CES) program.

The region’s job growth has been broad-based. From 2013 to 2018, the industry sectors enjoying the strongest growth were education and health services (+7,300), leisure and hospitality (+4,500), financial activities (+4,300), natural resources, mining and construction (+1,700) and other services (+1,000), per CES data.

The steady job growth has resulted in a much lower regional unemployment rate, which fell from 7.7% to 4.7% in 2013-18. This decline in the jobless rate means that 22,400 fewer residents of Western New York were on the unemployment rolls in 2018 compared to five years earlier.

WNY Regional Developments

The Northland Workforce Training Center (NWTC) opened in Buffalo in the fall of 2018 to help boost skill levels of the local workforce and to meet the needs of growing industries. On its website, the center describes itself as an “industry-driven, public-private partnership...focused on closing the skills gap of the local labor pool and creating economic on-ramps...for Western New Yorkers seeking high-paying advanced manufacturing and energy careers.”

NWTC currently has around 100 students and expects to have more than 300 once it is fully operational. The $60 million facility will offer degree programs for middle-skill manufacturing occupations such as welders, machinists, electricians and technicians. Northland provides for-credit, certificate and degree programs as core offerings through its educational partners, SUNY Alfred State College and SUNY Erie Community College.

The Buffalo Urban Development Corporation is coordinating the redevelopment of the Northland campus, using state and local funding to demolish or transform aging and abandoned buildings. The overarching goal is to create a light-industrial economic hub in Buffalo and provide space for thousands of manufacturing jobs over the next few years. The second phase of this project has already begun and will be home to Buffalo Manufacturing Works—an advanced manufacturing complex that is expected to employ nearly 300 workers.

In August 2018, Sinatra & Co. Real Estate unveiled their Heritage Point project as the newest phase of development at Canalside in downtown Buffalo. Two five-story brick buildings will house restaurants, shops, offices and residential units. The new buildings will include 71,000 square-feet of retail and office space as well as 41 apartments. The company estimates it will spend approximately $21 million on the project.

Another Canalside project is the 4,000-square-foot Longshed Building. It will house the construction of a replica of the packet boat that New York State Governor DeWitt Clinton used in 1825 to traverse the newly-opened Erie Canal. The new boat is expected to serve as a centerpiece for the redevelopment underway at Canalside. The Buffalo Maritime Center is building the new vessel.

Downtown Buffalo is getting a new $277 million train station that will more than double the size of the existing Amtrak station. The new transportation hub will be elevated and located closer to the street for better visibility. In addition, New York State recently announced it will provide $100 million in funding over five years for infrastructure improvements to Buffalo’s Metro Rail system. The money will pay for track bed replacement, a new fare collection system and rebuilding escalators.

Real Estate Market Remains Strong

The robust housing market in the Buffalo-Niagara Falls metro area is another indication that the region’s economy remains strong. The median sale price of homes in the metro area rose 8% in 2018 to more than $150,000, reaching a new high. Even with prices rising to historic levels, the region is still one of the most affordable markets in the country.

In Closing

Western New York has enjoyed steady job growth in recent years. And with many new projects underway, the region clearly has an eye on its future.

New Job Titles... from page 1

Wealth Work

“Wealth work” is the second category. Of the three categories, jobs in this group are the most abundant. Occupations in this category provide services to the well-to-do. As people earn more, services represent a higher share of their purchases. However, many titles in this category offer mediocre pay. Some emerging wealth work job titles include horse exerciser, indoor landscaper-gardener and oyster preparer.

Most people are familiar with job titles falling into this category because they follow cultural trends. Some examples from past decades are hypnotherapists, marriage counselors, baristas and sommeliers. Yoga instructor and animal rehabilitation specialist are expected to be added to the BLS jobs list after the 2020 Census.

Last Mile Work

The third occupational category described by A&S is “last mile work,” which they sometimes refer to as “supporting the machine.” Jobs in this category are the ones remaining after machines take over most of the labor in a work task that used to be completed by humans. Two of the occupations A&S consider to be part of this category include adult content filterer and photo verification agent.

While these are jobs that are hard to automate, they require little skill or knowledge. As a result, these positions are usually filled by people with little formal education and the pay levels are below average.

Last mile jobs tend to disappear as technology becomes more advanced. For example, in 1980, film touch-up inspector was added to the BLS list of jobs. This job is no longer needed, as most photography today is digital. Although last mile jobs become obsolete over time, new jobs that fall within this category are constantly created. For example, A&S expect to see content tagger added to the list of jobs kept...
Unemployment Rates in New York State

Data Not Seasonally Adjusted

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New Job Titles... from page 2

Three Categories of New Occupational Titles

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<th>Work Category</th>
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<td>Robot Integrator</td>
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<td>Wealth</td>
<td>Hypnotherapist (1980)</td>
<td>Body Piercer</td>
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<td>Marriage Counselor (1990)</td>
<td>Horse Exerciser</td>
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<td>Last Mile</td>
<td>Vending Machine Attendant (1990)</td>
<td>Social Media Content Tagger</td>
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<td></td>
<td>Bicycle Messenger (2000)</td>
<td>Adult Content Filterer</td>
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</table>

Source: Autor and Salomons, 2019

by BLS in 2020. These workers categorize content on social media platforms to make finding information easier for users.

Always Churning

With each new census, new occupations emerge while others fall by the wayside. This cycle is largely a product of technological and societal trends.

One powerful force driving the churn in job titles is automation. Many former “middle-skill” job titles have declined due to the automation of routine, predictable work – think of tasks like weeding or soldering on an assembly line, food preparation or packaging objects. The disappearance of these jobs has led to ‘job polarization’—or the tendency for employment opportunities to be concentrated in either high-skill, high-wage jobs or low-skill, low-wage jobs.

The good news is that machines aren’t going to totally replace humans anytime soon. For example, a discovery in the 1980s called “Moravec’s paradox” tells us machines excel at activities like abstract thinking and reasoning, but they are not so good at activities that humans find simple.

In essence, researchers found that machines shine when learning technical tasks, but struggle with soft skills. As Professor Moravec notes, “it is ... difficult or impossible to give [computers] the skills of a one-year-old when it comes to perception and mobility.”

Therefore, certain skills and jobs, like those that involve perception or social skills, should remain free from machine takeover, at least in the near future. Moreover, when utilized effectively, human labor and computers can synergize to increase productivity, raise earnings and boost demand for skilled workers.

Summing Up

The work of A&S shows that history repeats itself. The specific occupations may change over time, but the frontier/wealth/last mile work system is a useful way to classify emerging job titles. This revelation speaks to the technology and societal trends that influence the labor market and allows for better insights about the future of work.

Stay tuned...

by Kevin Phelps and Kylee Teague

Employment in New York State is published 12 times a year. To request a change of address, write to the address below and provide your old and new addresses.

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Regional Analysts’ Corner

CAPITAL
Kevin Alexander — 518-242-8245
Private sector employment in the Capital Region rose over the year by 7,200, or 1.7 percent, to 439,500 in February 2019. Gains were largest in leisure and hospitality (+4,000), professional and business services (+1,000), educational and health services (+900) and natural resources, mining and construction (+800). Losses were greatest in information (-200).

CENTRAL NY
Karen Knapik-Scalzo — 315-479-3391
Over the past 12 months, private sector jobs in the Syracuse metro area rose by 6,200, or 2.4 percent, to 262,200 in February 2019. Growth was centered in professional and business services (+2,100), educational and health services (+1,500), trade, transportation and utilities (+1,400) and natural resources, mining and construction (+600). The largest job loss occurred in financial activities (-300).

FINGER LAKES
Tammy Marino — 585-258-8870
Over the past year, private sector employment in the Rochester metro area rose by 1,000, or 0.2 percent, to 452,900 in February 2019. Gains were largest in educational and health services (+2,100) and natural resources, mining and construction (+1,700). Declines were greatest in leisure and hospitality (-1,100) and financial activities (-1,000).

HUDSON VALLEY
John Nelson — 914-997-8798
For the year ending February 2019, private sector jobs in the Hudson Valley increased by 10,600, or 1.3 percent, to 797,400. Gains were greatest in educational and health services (+5,300), professional and business services (+2,700), natural resources, mining and construction (+2,200) and other services (+1,800). Losses were centered in trade, transportation and utilities (-2,400).

LONG ISLAND
Shital Patel — 516-934-8533
Long Island’s private sector job count increased over the year by 9,600, or 0.9 percent, to 1,255,500 in February 2019. Growth was concentrated in educational and health services (+11,600), natural resources, mining and construction (+4,500) and leisure and hospitality (+4,000). Employment losses were greatest in professional and business services (-8,000) and information (-1,200).

MOHAWK VALLEY
Brion Acton — 315-793-2282
The number of private sector jobs in the Mohawk Valley was unchanged over the past year, remaining at 144,500 in February 2019. Job gains were largest in leisure and hospitality (+300). Employment losses were greatest in educational and health services (-300).

NEW YORK CITY
Elena Volovelsky — 718-613-3971
Private sector employment in New York City rose over the year by 68,700, or 1.8 percent, to 3,980,700 in February 2019. Gains were greatest in educational and health services (+43,900), professional and business services (+11,600), other services (+6,100), trade, transportation and utilities (+4,900), natural resources, mining and construction (+3,100) and information (+2,300). Losses occurred in leisure and hospitality (-1,600) and manufacturing (-1,500).

NORTH COUNTRY
Anthony Hayden — 518-523-7157
For the 12-month period ending February 2019, the North Country’s private sector employment count rose by 400, or 0.4 percent, to 106,900. Gains were largest in leisure and hospitality (+300), educational and health services (+200), manufacturing (+200) and other services (+200). Losses were greatest in trade, transportation and utilities (-600).

SOUTHERN TIER
Christian Harris — 607-741-4480
The Southern Tier’s private sector job count grew by 1,900, or 0.9 percent, to 224,100 in the year ending February 2019. Gains were largest in educational and health services (+1,400), professional and business services (+400), leisure and hospitality (+200) and manufacturing (+200). Losses were greatest in natural resources, mining and construction (+200) and trade, transportation and utilities (+200).

WESTERN NY
Timothy Glass — 716-851-2742
Over the past year, private sector jobs in the Buffalo-Niagara Falls metro area rose by 1,300, or 0.3 percent, to 464,900 in February 2019. Gains were largest in other services (+900), educational and health services (+800), natural resources, mining and construction (+700), financial activities (+400), and trade, transportation and utilities (+400). Losses were greatest in professional and business services (-1,800).