LEHD: Data that Help Better Explain the Connecticut Labor Market

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Connecticut has now regained 73% of the jobs lost during the COVID-19 shutdown and the unemployment rate has fallen to 6.4% as of October 2021. These numbers give a “snapshot” of economic conditions based on the Current Employment Statistics (CES) and Local Area Unemployment Statistics (LAUS), two surveys that provide a timely picture of Connecticut’s labor market conditions.

While not as timely, more detail regarding the workings of the labor market is available through the Longitudinal Employer-Household Dynamics (LEHD) data published by the U.S. Census Bureau. This data is possible due to the Local Employment Dynamics (LED) partnership between the Census Bureau and state workforce agencies including the Connecticut Department of Labor.

**On The Map**

The LEHD data include “On The Map” which provides information on where people live and work. In 2019 (latest available year) On The Map shows that approximately 1.2 million private sector workers lived and worked in Connecticut while 110,500 workers who live in other states worked in Connecticut and 145,500 Connecticut residents worked in other states.

The cities with the most payroll employment in Connecticut are Hartford, New Haven, and Stamford but only 12%, 23% and 29% of these jobs are held by residents of those cities. From the perspective of city residents who hold payroll jobs, 72% of Hartford residents, 58% of New Haven residents, and 63% of Stamford residents who have jobs work outside the city where they live. With regard to Stamford, 9.8% (more than 6,000 workers) work in New York City but nearly as many work in Greenwich. And the commute isn’t all in one direction. More than 1,400 Stamford workers live in Manhattan although even more live in Norwalk, Bridgeport, Greenwich, Fairfield, Stratford, and Trumbull.

One possible explanation for the relatively small number of workers who live and work in the same city is the fact that Connecticut cities and towns are geographically small. A worker doesn’t have to travel far from home to find a job in another town. However, On The Map shows that significant cross-border commuting occurs even when larger geographic areas are considered. Connecticut is divided into five Workforce Development Areas. For example, in the Eastern region, 30% of the workers live outside the region and 43% of the residents with payroll jobs work outside the region. In the Southwest the numbers are 42% and 42% — 42% of workers come from outside the region, 42% of residents with jobs work outside the region. For every region the amount of inflow and outflow increased from 2009 to 2019 - suggesting that on average workers were working a bit farther from home before the COVID-19 pandemic.

**Quarterly Workforce Indicators (QWI)**

The LEHD data also include the Post-Secondary Employment Outcomes (PSEO) discussed later in this article and the Quarterly Workforce Indicators (QWI). The QWI provides a great deal of information about the dynamics of the labor market including hiring and separations by industry and demographic characteristics such as gender, age, and race. The QWI also provides data regarding employment by firm size.

The Hires and Separations information will be of particular interest as we track the economic recovery from the pandemic. While the net change in jobs receives the most attention, hires and separations are many times greater than the net change each month. In 2019 (the year before the pandemic) hires averaged 241,337 per quarter in Connecticut and were over 280,000 in the third quarter of 2020 (latest available). Hires are only half of the story; the other half is separations which jumped to over 350,000 in the first quarter of 2020 during the COVID-19 shutdown and still outpaced hires in the second quarter (latest available). The age profile of separations shows that the number of separations increased in the first quarter of 2020 compared to the first quarter of 2019 for all age groups (not surprising given that the COVID-19 shutdown affected everyone). Consistent with other employment data, separations increased the most in the Accommodation & Food Services, Health Care & Social Assistance, and Retail Trade sectors.

**Firm Size**

Data on firm size show that larger firms in Connecticut lost proportionately less employment than smaller ones during the worst quarter of the pandemic (Data on firm size are only available through the 2nd quarter of 2020, a quarter that included the COVID-19 shutdown). When comparing the most recent quarter to a year prior, overall employment fell by 141,818 with firms with 250 or more employees showing proportionally smaller declines than firms with less than 50 workers. This aggregate comparison of quarterly counts isn’t longitudinal, i.e., it doesn’t track specific firm employment migration from one cohort to another over time. What it shows is that smaller firms in 2020Q2 comprised a smaller share of overall employment than they did a year prior.  
 Figure 2 details the employment shifts shown in Figure 1. While employment fell for firms in all size categories, the percent losses were greater for smaller firm size cohorts than larger ones. Firms with less than 50 employees lost 59,987 and those with 250 or more were down 58,332, which amount to percent losses of -14.4% and -7.5% respectively.  
 Connecticut’s losses for the under 50 cohort are shown in Figure 3 to be lower than neighboring states. For larger cohorts, the 500+ group in Connecticut had larger percent declines. The Connecticut 50-249 cohort lost proportionately more jobs than Rhode Island, equivalent losses to Massachusetts, and fewer than New York.

**Overall Connecticut Industry Trends Illustrated in QWI:** As previously noted, during the second quarter of 2020 — the quarter of the COVID-19 shutdown — total private employment was down 141,817 or -9.9% from the second quarter of 2019. Just over half (50.1%) of that decline occurred in three industries, Accommodation & Food Services (-38,471 or 27.1% share of total decline), Other Services (-18,828 or 13.3% share), and Retail Trade (-13,799 or 9.7% share). All but one sector experienced declines during the 2019Q2-2020Q2 period. Transportation & Warehousing was up as a result of a shift to online shopping caused by the pandemic and longer-term growth trends. Transportation and Warehousing has been growing in the state since 2010 and was up 12.4% over the year ending 2020Q1.  
  
**Industry Employment Change by Size Cohort** Figure 4 shows 2020Q2 employment by industry by firm size and percent change from 2019Q2. For the total economy, the firm size cohorts with the largest percent declines were 20-49 employees

(-15.9%) and 0-19 employees

(-13.5%). For the three larger firm size cohorts, the declines were proportionately smaller the larger the firm size category. Firms with 500 or more employees had a 7.3 percent decline.  
 Most large industries were down less than 10% over the 2019Q2-2020Q2 period. The three largest industries, Health Care & Social Assistance, Retail Trade, and Manufacturing were respectively down 2.6%, 7.9%, and 3.0%. Among these three industries, most firm size cohorts had between 0% and

10% declines, with four exceptions. Health & Care and Social assistance saw a 12.6% increase in the 0-19 firm size cohort, Retail Trade had three cohorts with over 10% losses, the largest being the 250-499 employee cohort, down 38.3%. For manufacturing, the larger the firm size the smaller the decline. Small manufacturers employing 19 or less workers fell 9.4% while the largest employers were down 0.4%.   
 Industries with the largest percent declines were Arts, Entertainment & Recreation

(-38.2%), Accommodation & Food Services (-30.1%) and Other Services (-28.7%).   
 The losses in Arts, Entertainment & Recreation were driven by percent losses at larger employers, though every firm size cohort experienced declines of 27.2% or more. The 500+ and 250-499 employee cohorts had the largest percent losses, down 46.4% and 41.7% respectively. That sector was down 9,937 from 2019Q2 to 2020Q2 and the employment share of firms with 50 workers or less increased from 45.9% to 49.4% as the larger firms had larger percent losses.  
 Accommodation & Food Services was the fourth largest private industry in 2019Q2, employing 127,836 workers, with 53.7% of employment in firms of 49 or less. In 2020Q2, it was the sixth largest after falling 38,471 to 89,365, the largest employment drop of any industry. Employment losses for firm size cohorts of 249 or less were within a few percentage points of the 30.1% loss for the industry overall. The 250-499 employee firm size cohort shifted down by 40.0% and the 500+ firm size cohort had a much smaller percent shift of -23.7%. This suggests that larger employers within this industry were able to mitigate the COVID-19 recession better than smaller employers.

The Other Services industry encompasses firms engaging in services not categorized by other industries. Much of the employment in this industry falls within hairdressers and barber shops, nail salons, automotive service, and machinery repair.1 The largest firm size loss in Other Services occurred in the 0-19 employees cohort, which was down 35.7%. However, about half of the overall losses in Other Services occurred in the Private Households (NAICS 813) component industry, which fell 66.6% from 13,658 to 4,558, much of this drop due to reclassification of this employment into another industry. Even after the steep losses, the 0-19 employment cohort makes up more than half of the employment in the sector. The much smaller 250-499 cohort of Other Services saw a large percent increase, up 60.2% or +644 employees, the largest percent gain of any industry firm size cohort.

Despite the reality that almost every sector declined through 2020Q2, 17 industry firm size cohorts had increases. Most of these firm size cohort gains were less than a few hundred, but the 500+ cohort in Transportation & Warehousing (+4,263 employees or +12.9%) and the 0-19 employees cohort in Health Care & Social Assistance (+4,013 employees or +12.6%) had sizable gains that differed greatly from other cohorts in their respective industries.

**Looking Ahead** While the latest firm size data is through the second quarter of 2020 (the worst quarter of the COVID-19 shutdown), other sources show that the Connecticut economy is rebounding from the depths of the pandemic – unprecedented job declines were followed by record employment gains. Some of the industries that were hardest hit have had the strongest recoveries – including those industries with employment concentrated in smaller firms. The data show that smaller businesses had proportionately larger declines; data we receive in the future may show they are experiencing proportionately faster growth as the economy continues to recover.  
  
**Post-Secondary Employment Outcomes (PSEO)** The graduates of Connecticut’s public colleges and universities have success in the Labor Market. We know this from the many years the Connecticut Department of Labor has reported the earnings and employment outcomes of graduates. These were first published as printed reports in collaboration with what was then the Department of Higher Education. More recently the results are on a web site in partnership with P20-WIN, the Preschool through 20 and Workforce Information Network.2 One gap in these reports is that if graduates are not employed in payroll jobs in Connecticut, the earnings and employment are not included. An important step toward filling this missing information is Post-Secondary Employment Outcomes (PSEO) data produced by the U.S. Census Bureau in partnership with colleges and universities and state workforce agencies.3

At the moment, data are considered “experimental.” There are institutions from 17 participating states although not necessarily every college in those states. In Connecticut, data on graduates from the Connecticut State Colleges and Universities (CSCU) schools are available including the four State Universities and the Community Colleges. PSEO is in expansion mode and will be adding more schools and more states over the coming months and years.  
 The good news for Connecticut is that many of the graduates who have been missing from previous reports have found employment in other states. The PSEO also allows us to see results one, five, and even ten years after graduation. For example, the table shows the results from those who graduated for Connecticut State Universities in 2007-2009, many of them graduating into the beginning of what was later to be called the “Great Recession.” One year after graduation, most were employed but many were not – either because they were in graduate school or because they had yet to find a job. By five years after graduation, hundreds more were employed and while the vast majority were employed in Connecticut, hundreds of others were employed in other states. Outside of Connecticut, the region that employed the most graduates was the Middle Atlantic which includes New York – suggesting it’s possible that many of these graduates continue to live in Connecticut and contribute to our state’s vitality as residents who happen to work in a neighboring state.  
 In addition to compiling all of this data, the Census has developed a visualization tool that makes it easy and interesting to explore this information. Click on “PSEO Explorer” which is on the left margin of the LEHD homepage https://lehd.ces.census.gov/. The explorer tool makes it possible to track the earnings growth of cohorts and the industry and geography of employment for graduates of particular programs from particular schools.

**Conclusion**

The monthly reports of jobs and unemployment will continue to receive attention because they provide timely measures of the current state of the labor market. However, among its many features, the LEHD data allows us to understand employment by firm size and to see the employment outcomes of the graduates of Connecticut’s State Colleges and Universities. As the economy recovers from the pandemic, LEHD data will provide essential insights into the changing demographics and dynamics of the workforce. n

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1 BLS. Industries At a Glance: Other Services. https://www.bls.gov/iag/tgs/iag81.htm

2 The data are available here: https://www1.ctdol.state.ct.us/LRC/LRC2.aspx. More information regarding P20-WIN is available here: https://portal.ct.gov/OPM/P20Win/

3 https://lehd.ces.census.gov/data/pseo\_experimental.html