A look at Connecticut's Bioscience Industry Employment

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The events of the past year have highlighted the importance of Bioscience. The immediate need for pandemic mitigation resulted in a global mobilization that rapidly produced vaccines and increased medical equipment production. Bioscience doesn't fall within a specific North American Industrial Classification System (NAICS) industry code and contains a broad cross-section of service industries and goods producing industries such as pharmaceutical, chemical, and medical device manufacturing.

In February 2012, the Connecticut Economic Digest published an article on Bioscience which overviewed key industries that make up that sector in the state. The table below uses the bioscience industry cluster defined in that article and shows that in 2019 (the last year of annual data), the state had over a thousand Bioscience establishments that employed over 23,000 workers. This industry definition doesn’t account for the total impact of Bioscience on overall employment given spillover effects on other sectors such as Education and Health Care, and it doesn’t account for the total labor supply of available workers given that many employed in other forms of manufacturing or research & development have compatible occupational skills that would be relevant to an employer looking to expand in the state.

The pie chart illustrates that across all Bioscience industries, about half are in the service sector and half are in the goods producing sector. Among the 8 industries, the largest two industries, Research & Development in Sciences (32%) and Medical Equipment &
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The graph on page 3 illustrates how overall Bioscience employment has increased in recent years after steady declines from the early 2000s through 2017. Bioscience employment is separated into its manufacturing and service providing components to show that the longer-term trend of decline is driven by manufacturing while the overall employment stabilization and growth in recent years is the result of gains within its service providing component. Since 2017, Bioscience manufacturing (and manufacturing overall) have arrested trends of long-term decline and added jobs from 2017-19. Both Bioscience components saw employment growth in 2018 and 2019. The long-term Bioscience manufacturing change reflects shifts that have occurred within manufacturing overall. Connecticut manufacturing (NAICS 31-33) had declined from the early 1990s through mid-2016 and has since added jobs. Most of the overall manufacturing gains have occurred within Transportation Equipment Manufacturing, which is the largest component of manufacturing in the state. This manufacturing shift differentiates Connecticut from adjacent states, which have continued to decline.

Bioscience During the Past Year
The preceding section utilized the most current annual average data to illustrate long term trends in Connecticut’s Bioscience industry. Quarterly QCEW data available through 2020Q3 can help explain how Bioscience has been impacted by the pandemic. Overall, Bioscience is down -1.2% from 2019Q3, Bioscience Manufacturing is down -2.8% while Bioscience Service Providing is up 0.2%. These changes differ greatly from the three larger two-digit sectors from which the Bioscience...
Manufacturing (NAICS 31-33) is down -6.3%, Professional & Technical Services (NAICS 54) is down -4.7%, and Health Care & Social Assistance (NAICS 62) is down -3.9% during the year ending 2020Q3. As no industry has been immune from the impact of COVID-19 on the Connecticut economy, the comparatively slight employment shifts for Bioscience cluster industries when compared to larger overall employment suggests that it could be poised for renewed growth as the economy improves.

### Projections and Conclusions

The CT Department of Labor, along with agencies in all 50 states and US territories conduct annual short-term two-year projections that the Connecticut Economic Digest will review in detail next month. These projections are done at 6-digit occupation and 4-digit industry level. Three of the eight Bioscience industries fall within that 4-digit industry threshold and provide indication of where Bioscience may be heading in the short term. From 2020Q2 to 2022Q2, Medical & Diagnostic Laboratories (+8.0%), Medical Equipment & Supplies Manuf. (+5.1%), and Pharmaceutical & Medical Manuf. (+0.1%) are all projected to maintain or increase employment. Overall, the Bioscience industry cluster in Connecticut has grown from 2017-2019, shown tempered employment declines during the pandemic, and is projected to add jobs in coming years.

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   https://www1.ctdol.state.ct.us/lmi/digest/articles/feb2012.pdf

3. For more info on CT manufacturing employment change, see page 23 of:

4. See the March 2021 CT Econ. Digest for a more in-depth review of the pandemic’s impact: https://www1.ctdol.state.ct.us/lmi/digest/pdfs/cedmar21.pdf

5. Projections for all 50 states and US territories can be downloaded at: www.ProjectionsCentral.com