

Growth Trends in Utah's Life Sciences Industry

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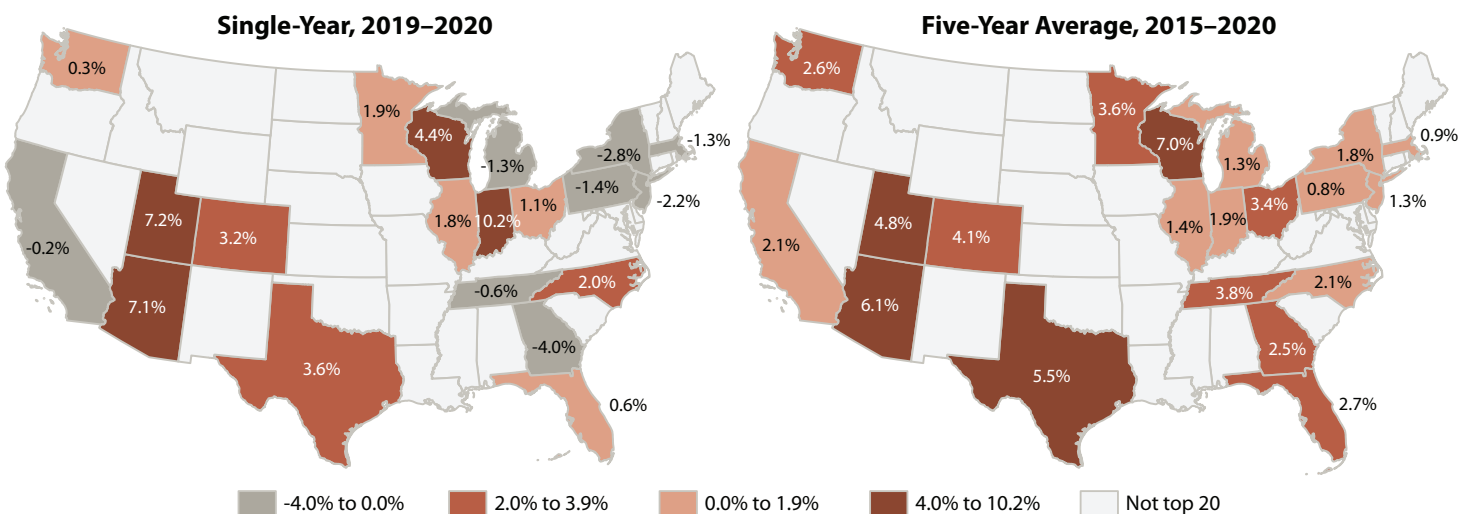
Utah's mature life sciences industry continues to experience strong growth relative to nationwide trends, even during recessions. Newly released data show that employment trends the Gardner Institute first identified through 2017 persisted into the pandemic.¹ The number of life sciences jobs in Utah jumped 7.2% in 2020 (see Figure 1). This is the second highest single-year growth among states with large-scale life sciences activity. As for five-year trends, industry employment gains in Utah tempered slightly from 5.0% per year from 2012 to 2017 to 4.8% per year from 2015 to 2020.²

Utah Life Sciences: Comparisons with Other Leading States

- In 2020, Utah's life sciences job growth reached an exceptional 7.2% amid nationwide employment gains in the industry averaging 0.5%. Utah's growth ranked second among the 20 largest state life sciences industries, eight of which contracted since 2019.

- From 2015 to 2020, job growth in the life sciences industry averaged 4.8% per year in Utah, fourth among the 20 largest states by life sciences employment.
- Utah's single-year and five-year life sciences growth rates exceeded national trends of 0.5% and 2.6%, respectively, in annual employment growth.
- Since 2007, even through business cycle fluctuations, growth in the life sciences industry has outpaced the rest of Utah's economy. For example, life sciences employment gains were robust in 2020 when the state experienced an overall 1.8% contraction in average employment.
- In 2020, Utah's workforce concentration in life sciences reached 1.9% of all employees, first among states and more than double the national average of 0.9%. Utah had the 15th most life sciences jobs of any state, which was high for the 31st largest employed workforce in the U.S.

Figure 1. Life Sciences Industry Annual Job Growth
Percentage Change for States with the 20 Largest Life Sciences Industries



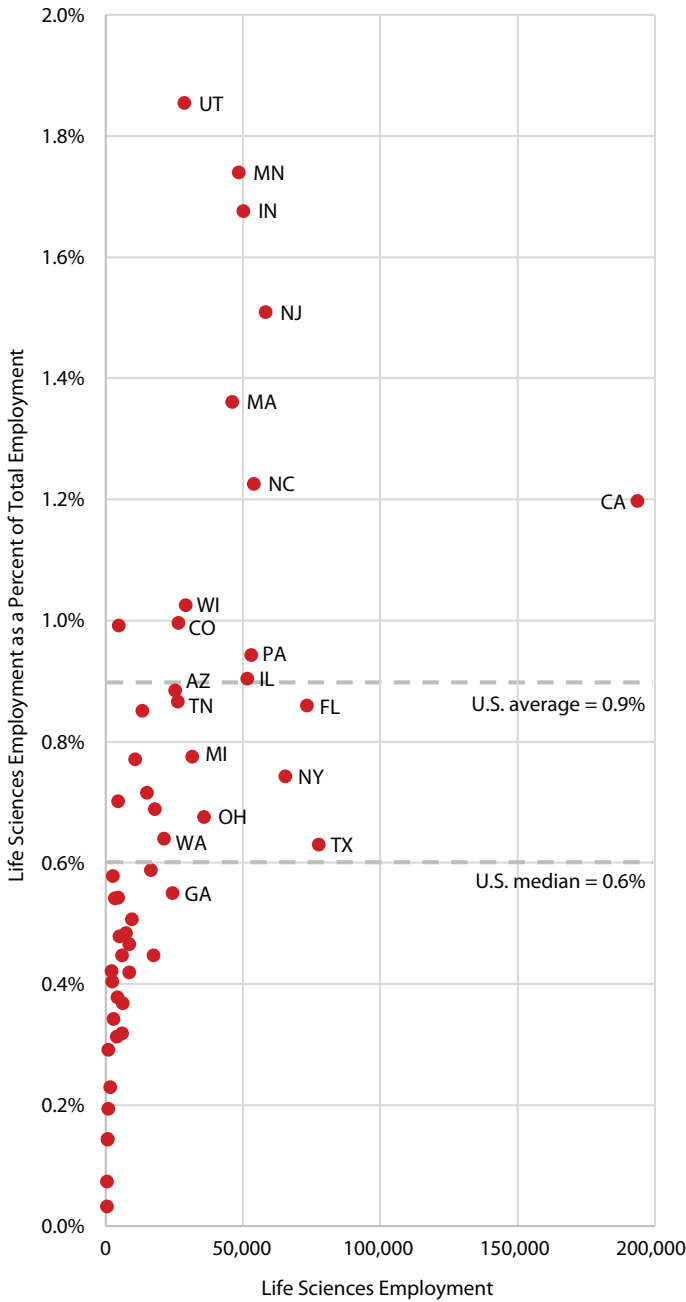
Note: Top 20 states selected by their 2020 life sciences employment level. Alaska and Hawaii, not shown, were not among the states providing the most life sciences jobs. Source: Kem C. Gardner Policy Institute analysis of data from the U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages

Workforce Specialization Patterns: Utah's High and Rising Emphasis on Life Sciences Talent

Among states, Utah had the highest workforce concentration in life sciences at 1.9% in 2020 (see Figure 2). Only eight states had more than 1.0% of all employees working at life sciences companies, and the nationwide median was only 0.6%. Like the vast majority of states, Utah's share increased since 2015 (1.6%) when the state also ranked first (see Figure 3). Within the life

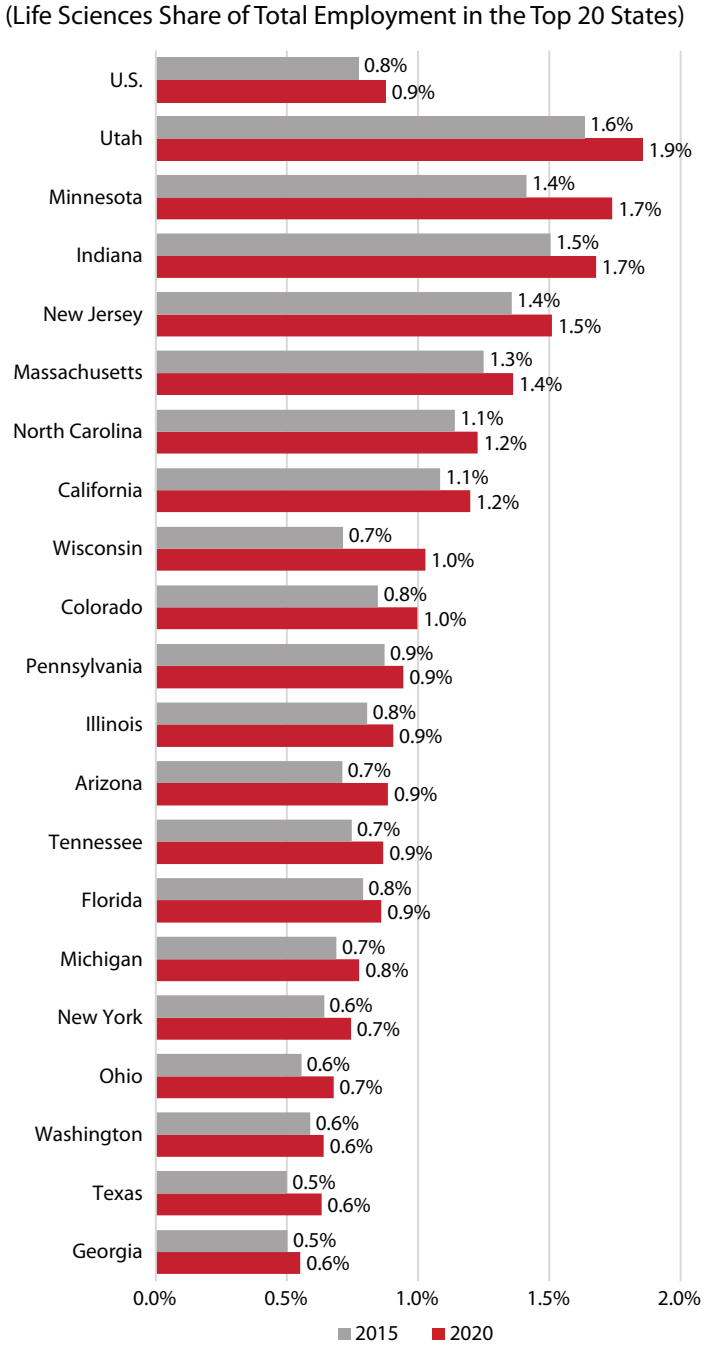
sciences industry, Utah compares favorably among states in terms of workforce specialization in devices (second), pharmaceuticals (fourth), research and laboratories (eighth), and distribution (16th), with less emphasis in agriculture and industry applications (not top 20).³

Figure 2. Life Sciences Workforce by State, 2020
(Number of Jobs and Employment Share)



Note: State abbreviations given for the top 20 states by 2020 employment in the life sciences industry. Includes all employee jobs, no self-employed workers, in 15 life sciences subindustries.
Source: Kem C. Gardner Policy Institute analysis of data from the U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages

Figure 3. Life Sciences Workforce Specialization, 2015 and 2020
(Life Sciences Share of Total Employment in the Top 20 States)



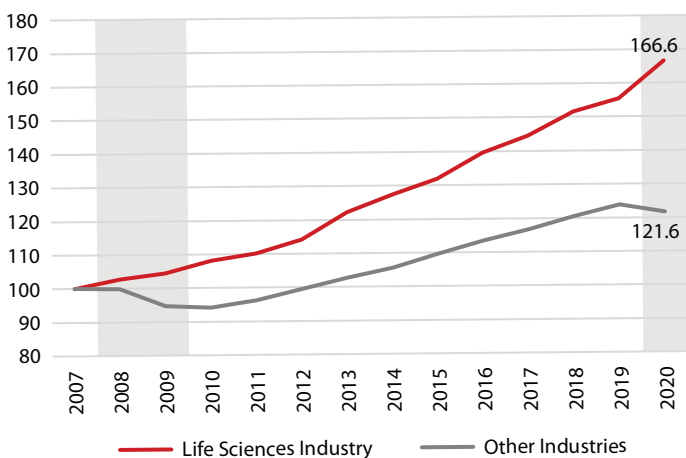
Note: Employment shares represent all employees at life sciences companies, regardless of occupation. Top 20 states selected by their 2020 life sciences employment level.
Source: Kem C. Gardner Policy Institute analysis of data from the U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages

Utah Trends: A Recession-Proof Industry?

From 2007 to 2020, the number of employee jobs in Utah's life sciences industry increased by 66.6%, while all other industries grew by only a cumulative 21.6% (See Figure 4).⁴ Life sciences companies did not experience a dip in employment in 2020 or during the Great Recession, which started in late 2007. In 2020, when employment in Utah's economy contracted by 1.8%, the life sciences industry notched employment growth of 7.2%, surpassing its five-year average growth rate of 4.8%. During a period of uncertainty, life sciences companies helped address COVID-19 and buoyed up harder-hit economic sectors.⁵

Figure 4. Utah Employment Index, 2007–2020

(100 = Number of Jobs in 2007)



Note: Shaded areas indicate a U.S. recession during at least one quarter of the year. Index tracks growth paths for employee jobs, beginning in 2007 with 17,068 jobs in the life sciences industry and 1,253,300 jobs in all other industries.

Source: Kem C. Gardner Policy Institute analysis of data from the U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages

Industry Definition

Life sciences companies develop, manufacture, and distribute medical devices, pharmaceuticals, and related products. The industry includes biotechnology firms, medical laboratories, diagnostics companies, and other professional service providers. The U.S. health care system relies on life sciences products, services, and innovation.

For this analysis, the Gardner Institute defines Utah's life sciences industry to include all companies with employees in 15 six-digit industries identified by their NAICS codes: 325411–4, 334510, 334516–7, 339112–6, 423450, 423460, and 621511. Companies categorize themselves in state and federal reporting based on the North American Industry Classification System.

For a detailed single-year Utah snapshot, the Gardner Institute's August 2018 report also estimated activity from self-employed workers and added several life sciences companies not classified in these 15 industries.⁶ While somewhat less comprehensive, the 15-industry definition captures most life sciences activity in Utah.⁷ One advantage of this definition is the availability of consistent data for each year since 2007 and for states besides Utah.

Endnotes

1. For growth trends from 2002 to 2017, see page 10 of "The Economic Impacts of Utah's Life Sciences Industry" by Levi Pace and Joshua Spolsdoff, Kem C. Gardner Policy Institute, August 2018 (<http://gardner.utah.edu/wp-content/uploads/Aug2018-LifeSciencesReport.pdf>). The report also provides context regarding the industry's composition and development in Utah. In the *2020 Economic Report to the Governor* by the Utah Economic Council, Chapter 22, "Life Sciences Industry," updated part of the analysis to 2018 (see <https://gardner.utah.edu/economics-and-public-policy/2020-economic-report-to-the-governor/>).
2. For life sciences employment growth from 2012 to 2017, see chapter 22 of the *2020 Economic Report to the Governor*. Since calculating growth from December 2012 to December 2017 for that publication, the Gardner Institute has adopted a 12-month method using annual averages for 2015 and 2020 instead of December values. The authors also applied the new method to the eight-year period spanning the two five-year periods. Among states with the 20 largest life sciences industries in terms of 2020 employment, Utah ranked second for life sciences job growth from 2012 to 2020, averaging 4.8% annually.
3. Analogous to this fact sheet's overall life sciences specialization shares for 2020, state rankings by segment within the life sciences industry are based on 2018 location quotients. See "The Bioscience Economy: Propelling Life-Saving Treatments, Supporting State & Local Communities" by Biotechnology Innovation Organization and TEconomy Partners, 2020 (<https://www.bio.org/value-bioscience-innovation-growing-jobs-and-improving-quality-life>).
4. The time period for comparing life sciences to other Utah industries began in 2007 because that is the first year for which NAICS industry classification schemes allow researchers to consistently define the industry.
5. For a brief discussion of the Utah life sciences industry's capacity to provide support during the pandemic, see page 5 of "Coronavirus (COVID-19): Economic Commentary," Kem C. Gardner Policy Institute, March 2020 (<https://gardner.utah.edu/wp-content/uploads/COVID-19-Brief.pdf>).
6. See "The Economic Impacts of Utah's Life Sciences Industry" by Levi Pace and Joshua Spolsdoff.
7. Relative to the full Gardner Institute life sciences definition with self-employed workers and handpicked companies, the 15-industry definition in this fact sheet represented 61% of Utah life sciences employment in 2017 and more than 61% of worker income and GDP. Comparisons and trends for the 15-industry definition are a good indicator of the position and movement of the industry as a whole in Utah.