

### Introduction

This edition of Kevin's Corner uses data from the Quarterly Census of Employment and Wages program to review recent changes to employment in the Professional & Technical Services sector and its component sub-sectors.

Professional & Technical Services (NAICS 54) is a wide-ranging sector comprised of firms that specialize according to expertise and provide these services to clients in a variety of industries and, in some cases, to households. Activities performed include: legal advice and representation; accounting, bookkeeping, and payroll services; architectural, engineering, and specialized design services; computer services; consulting services; research services; advertising services; photographic services; translation and interpretation services; veterinary services; and other professional, scientific, and technical services.<sup>1</sup>

In recent years Professional & Technical Services has been one of the fastest growing sectors in the Vermont economy. It offers high wages due in large part to the education and training required to perform the work. Growth in this sector has been especially pronounced since 2019.

### Sources

This review relies on data from the Quarterly Census of Employment and Wages (QCEW), a program that collects and aggregates employment and wage data for all firms covered by the state of Vermont's Unemployment Insurance (UI) program. QCEW uses administrative records from the UI program to create a census of

employment and wages sorted by geographies and by industries. Because all UI-covered firms ("covered employment") are obligated to participate, QCEW is considered the most accurate count of employment in the state. Sub-sectors with very low levels of employment or few firms are removed from this analysis to protect confidentiality.

Industries are sorted by the North American Industry Classification System, a six-digit classification system that assigns a code based on the primary business activity of the firm or establishment. The digits are a hierarchy, each successive digit in a NAICS code more precisely defining the business activity. As an example, NAICS 11 consists of firms engaged in Agriculture, Forestry, Fishing and Hunting. NAICS 111 is more narrowly defined as the subset of 11 engaged in Crop Production. NAICS 1113 again narrows the definition to those crop producers engaged in Fruit and Tree Nut Farming. Further, 11133 narrows the definition to the subset engaged in Non-citrus Fruit and Tree Nut Farming while 111331 is the six-digit NAICS for Apple Orchards.

### Employment Trends in the Sector

The sixteen-year changes in employment are best understood as two distinct periods, the years prior to the global pandemic and those impacted by it. Therefore, this analysis will review the entire period, then divide the period into 2006-2019 and 2020-2022.

### *Changes in Employment, 2006 - 2022*

Between 2006 and 2022 Vermont's employment in Professional, Scientific & Technical Services increased from 13,256 to 17,106, an increase of 3,850 or a compound annual growth rate (CAGR) of 1.6%.

<sup>1</sup> Industry at a Glance, Bureau of Labor Statistics.

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During that same period all industry employment declined by 1,903 or a CAGR of -0.04%.

### *Changes in employment, 2006 - 2019*

Between 2006 and 2019 annual average employment in Professional and Technical Services increased from 13,256 to 14,992, a compound annual growth rate of 1.0%, well above the all-industry rate of 0.2%.

### *Changes in employment, 2019 - 2022*

The industry was one of only two private-sector, 2-digit NAICS industries to add employment between 2019 and 2020; Management of Companies & Enterprises being the other. While employment growth was modest (+77 or 0.5%) it stands out in a period that saw unprecedented employment declines (-24,784 or -8.7%) across all private ownership.

Between 2020 and 2022 employment growth in Professional & Technical Services far outpaced total private industry growth. Across all industries, employment increased by an annual average of 8,755 or 3.0% each year. Professional, Scientific & Technical Services was responsible for 1,019 of those jobs, an annual growth rate of 6.5%.

*Table 1: Compound Annual Growth Rate in Employment*

| Time Period        | Professional & Technical Services | All industries |
|--------------------|-----------------------------------|----------------|
| <b>2006 - 2022</b> | 1.6%                              | -0.04%         |
| <b>2006 - 2019</b> | 1.0%                              | 0.2%           |
| <b>2020 - 2022</b> | 6.5%                              | 3.0%           |

### *Subsector employment, 2019 - 2020*

This section focuses on employment changes within Professional & Technical Service at the start of the pandemic. It compares annual

averages for the 73 publishable private-sector subsectors in 2019 and 2020. (Note: Confidentiality restrictions prevent us from publishing many of the subsectors in this Industry). Among the 73 publishable sectors, 26 experienced employment growth between 2019 and 2020, a time in which the annual average in all-industry employment declined by over 27,000 jobs. Those 28 sectors added 1,451 jobs. 45 sectors lost employment while two saw no change.

The largest numerical employment declines between 2019 and 2020 were in Management Consulting Services. The industry lost 89 jobs (-6.5%). Other subsectors with large losses include Computer Systems Design Services (-70 or -5.2%); Offices of Lawyers (-59 or -3.3%); and Veterinary Services (-28 or -2.4%). See Table 2.

*Table 2: Largest Employment Declines, 2019 - 2020*

| Industry                         | Employment 2019 | Employment 2020 | Change | %     |
|----------------------------------|-----------------|-----------------|--------|-------|
| Management Consulting Services   | 1,362           | 1,273           | -89    | -6.5% |
| Computer Systems Design Services | 1,336           | 1,266           | -70    | -5.2% |
| Offices of Lawyers               | 1,807           | 1,748           | -59    | -3.3% |
| Veterinary Services              | 1,189           | 1,161           | -28    | -2.4% |

Perhaps not surprisingly, Research and Development in the Physical, Engineering, and Life Sciences (except Nanotechnology and Biotechnology) saw significant gains during the period, increasing by 256 or 100.8%. Other subsectors that experienced significant numerical growth included Engineering Services (+93 or 6.1%) and Accounting, Tax Preparation, Bookkeeping & Payroll Services (+45 or 3.2%). See Table 3.

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*Table 3: Largest Employment Increases, 2019 – 2020*

| Industry                              | Employment 2019 | Employment 2020 | Change | %      |
|---------------------------------------|-----------------|-----------------|--------|--------|
| Research & Development, Life Sciences | 254             | 510             | 256    | 100.8% |
| Engineering Services                  | 1,537           | 1,630           | 93     | 6.1%   |
| Accounting & Tax Prep                 | 1,400           | 1,445           | 45     | 3.2%   |

### *Changes in subsector employment, 2020 – 2022*

Between 2020 and 2022 sixty five subsectors gained employment, adding a total of 6,317 jobs. Only 8 sectors lost jobs and two saw no change. The total employment decline among those 8 sectors was 171 jobs.

The largest numerical gains were in Management, Scientific & Technical Consulting Services which added 531 jobs (+22.7%), 431 of which were in the industry's subsector, Management Consulting Services. Engineering Services added 417 jobs or 25.6%. Computer Systems Design and Related Services added 332 or 7.9%.

Among the few industries to lose employment over the period, the largest losses were in Other Management Consulting Services (-81 or -49.4%). Tax Preparation Services fell by 28 or 21.9%. Testing Laboratories & Services fell by 25 (-16.3%). See Table 4

*Table 4: Largest Employment Increases and Declines, 2020 - 2022*

| Industry   | Employment 2020 | Employment 2022 | Change | %      |
|--|-----------------|-----------------|--------|--------|
| Management, Scientific & Technical Consulting Services | 2,340           | 2,871           | 531    | 22.7%  |
| Engineering Services                                   | 1,630           | 2,047           | 417    | 25.6%  |
| Computer Systems Design & Related Svcs                 | 4,199           | 4,531           | 332    | 7.9%   |
| Other Management Consulting Services                   | 164             | 83              | -81    | -49.4% |
| Tax Preparation  | 128             | 100             | -28    | -21.9% |
| Testing Laboratories                                   | 153             | 128             | -25    | -16.3% |

### *Changes in Wages*

Private-sector wages in Professional & Technical Services are well above the average for all industries. In 2022 the average annual wage in the sector was \$106,931, third highest among 2-digit industry sectors behind Management of Companies (\$122,439) and Utilities (\$112,632). The average annual wage for all industries over that same year was \$59,597. As mentioned in the introduction section, wages in the industry tend to be higher due to the high levels of specialization and education required to perform the tasks associated with many of the positions.

Since 2006 all-industry average annual wages have increased at a compound annual growth rate of 3.3%. Within Professional & Technical Services the compound annual wage growth rate over the same period is somewhat higher at 3.9%. See Table 5.

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*Table 5: Vermont Employment and Wages in NAICS 54*

| <b>Year</b> | <b>Employment</b> | <b>Average Annual Wage</b> |
|-------------|-------------------|----------------------------|
| <b>2006</b> | 13,256            | \$57,358                   |
| <b>2007</b> | 13,306            | \$57,264                   |
| <b>2008</b> | 13,509            | \$59,673                   |
| <b>2009</b> | 13,063            | \$60,286                   |
| <b>2010</b> | 13,532            | \$63,987                   |
| <b>2011</b> | 13,631            | \$64,689                   |
| <b>2012</b> | 14,048            | \$66,048                   |
| <b>2013</b> | 14,071            | \$68,896                   |
| <b>2014</b> | 13,866            | \$70,972                   |
| <b>2015</b> | 14,214            | \$73,713                   |
| <b>2016</b> | 14,332            | \$75,612                   |
| <b>2017</b> | 14,529            | \$77,842                   |
| <b>2018</b> | 14,651            | \$80,305                   |
| <b>2019</b> | 14,992            | \$84,097                   |
| <b>2020</b> | 15,070            | \$90,851                   |
| <b>2021</b> | 16,043            | \$99,289                   |
| <b>2022</b> | 17,106            | \$106,931                  |

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