Long Term Industry and Occupational Projections: 2012-2022

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Every two years the Connecticut Department of Labor produces and publishes ten year projections by industry and occupation. This year’s projections cover the period 2012-2022, which invites a comparison to the previous ten year period.

The 2002-2012 period spans the global financial and economic crisis that caused the worst national recession since the Great Depression. While employment started to increase after the first quarter of 2010, by 2012 employment in many industries was still below 2002 levels. Importantly, the industries that grew the most after the recovery started were not necessarily the same as those that lost the most during the recession, so the industry and occupational mix of the economy has changed. The long term projections help put these changes into perspective and peek over the horizon to see what the industry and occupational profile of the economy would look like if full employment could be achieved within the next decade.

The process starts when the U.S. Bureau of Labor Statistics (BLS) issues its national projections. These are then used to produce the state projections.

NATIONAL PROJECTIONS

Labor Force

The U.S. labor force is projected to increase by 8.5 million workers from 2012 to 2022 (a 0.5% annualized growth rate) with the 2022 labor force projected to be older and more diverse. The number of workers aged 55 and older is expected to increase by more than nine million while the number aged 16 to 24 is projected to decrease by 2.8 million with the largest labor force cohort – those aged 25 to 54 – up just 1.9 million. The increase in the number of older workers occurs as the last of the baby boom generation ages into this category – continuing the huge impact of this generation on the composition of the labor force. In 1992, less than 12% of the labor force was age 55 and over. By 2022, this portion will be more than double with over 25% of the labor force. This may actually underestimate the impact of this age group on the labor force because it is based on the BLS projection that the labor force participation rate for those 55 and older will rise just one percentage point by 2022, to 41.5%. On average, people are living longer and healthier lives. Many workers are financially unprepared for retirement, and there will be a large group of workers toward the younger end of the 55+ group. All of this could lead to an even larger increase in the labor force participation rate for those 55 and older will rise just one percentage point by 2022, to 41.5%.
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Chart 1: U.S. Industry History and Projections

The aging population is also increasing demand for health care. The Health Care sector is projected to expand by over 4 million jobs from 2012 to 2022, an acceleration from the 2.8 million added from 2002 to 2012 (Chart 1). The Professional, Scientific and Technical Services sector is projected to increase by 1.8 million jobs with about one third of that increase in Computer Systems Design and Related Services. Management Consulting, Architectural and Engineering Services, and Accounting all contribute significantly to the growth in this sector. The third largest growth sector is Construction, but even after the strong growth projected over the next ten years, employment will remain below the employment levels of the 2005-2007 period. Most other sectors are expected to show decent growth. Two exceptions are Information and Manufacturing. Information declined by more than 700,000 jobs from 2002 to 2012, as newspaper publishers and telecommunications companies shed hundreds of thousands of workers. Declines are expected to continue through 2022 but at a much slower pace. Declines in newspaper publishing and telecommunications are expected to be much smaller, while the software publishers, broadcasting, and data processing industries are expected to add employment. Finally, manufacturing declines are expected to be much smaller over the next ten years than over the past ten. Manufacturing employment declined by more than 3 million jobs from 2002 to 2012, and the decline over the next ten years will be closer to 500,000. Several industries within the manufacturing sector which declined over the past ten years are expected to add jobs in the next ten including the manufacturing of pharmaceuticals and medicine, cement and concrete products, architectural and structural metals, motor vehicles, and furniture.

Occupations

Four of the six occupations projected to add the most jobs in the next ten years are in the health care sector: Personal Care Aides, Registered Nurses, Home Health Aides, and Nursing Assistants. The other two are Retail Salespersons and Food Prep & Serving workers. As Chart 2 shows, Healthcare Practitioners and Technical, Office & Administrative Support, Construction and Extraction, Healthcare Support, and Personal Care are the occupational groups expected to add the most jobs over the next ten years. All occupational groups are expected to increase employment over the next ten years with the exception of Farming, Fishing, and Forest occupations.

CONNECTICUT PROJECTIONS

Connecticut employment is projected by industry and
occupation using the national projections, forecasts of state employment growth, and other data and information about the Connecticut economy. The long term (2012 to 2022) projections assume a full-employment economy at the end of the period. This is because the Labor Department does not attempt to forecast the ups and downs of the business cycle that far into the future.

**Industry**

The largest sector, and the one expected to add the most jobs over the next ten years, is **Health Care** (Chart 3). Driven by the aging population, employment is projected to grow by nearly 40,000 jobs by 2022. Most of that growth is expected to be in Ambulatory Care settings – offices of practitioners and outpatient centers. Home health care services are also expected to add employment. Hospitals and Assisted Living Facilities are also expected to grow, but employment at Skilled Nursing Facilities (nursing homes) is expected to remain flat.

**Educational Services** is projected to add almost 18,000 jobs over the next ten years, the second largest sector in terms of job growth as elementary and secondary schools, colleges and universities (public and private) are expected to add employment. This is a smaller increase than experienced over the past 10 years, driven by slower projected growth in the school-aged population.

Close behind education, and in a turnaround from the previous ten years, **Professional, Scientific, and Technical Services** are projected to add 17,500 jobs over the next ten years, with the largest gain in the Computer Systems Design industry. Similar to the national projections, Management Consulting, Accounting, and Architectural and Engineering Services are projected to grow strongly.

Most other sectors are expected to add jobs over the next ten years. For example, **Construction** is expected to add over 11,000 jobs after a similar decline over the past decade with all major industries within the sector expected to grow strongly. In another major turnaround, **Manufacturing** is projected to add jobs. While the growth is less than 1% over 10 years, this follows a decline of over 40,000 jobs over the prior decade. Growth is uneven with some manufacturing industries growing while others contract.

Two sectors that are expected to decline over the next ten years are **Information and Arts, Entertainment & Recreation**, although the declines will be significantly smaller in the next ten years than over the prior ten. Newspaper publishing is the main reason for the information decline, while increased competition in other states for Connecticut’s casino business will cause declines in the Entertainment sector.

**Occupations**

Consistent with the industry projections, the largest increases in employment are projected to be in Healthcare, Education and Personal Care categories (Chart 4). Registered Nurses, Physical Therapists, Home Health Aides, Personal Care Aides and Teachers at all levels are all projected to grow significantly over the next ten years. Office and Administrative Support, Management, Food Preparation & Serving, Business & Financial Operations, Construction & Extraction, and Sales occupations
are all expected to add thousands of jobs over the next ten years.

In addition to growth, the projections include estimates of openings due to replacement needs as workers retire or move on to new occupations. The occupations with the most openings (Retail Salespersons, Cashiers, Waiters & Waitresses, Food Prep & Serving workers) are those with high replacement needs (Chart 5). While some workers make their careers in these occupations, for many these jobs are held for a few years before the workers move on in their careers. Interestingly, the growth in demand for health care workers is such that Registered Nurses, a career-oriented occupation, is fifth in terms of total openings.

Education and Training

Each occupation is assigned a minimum education category based on our best knowledge of the minimum education required to enter the occupation. Particular jobs within an occupation may have different requirements but in most cases these requirements will be at or above the minimum for the occupation. In addition, some occupations require work experience in a related occupation. Finally, some additional on-the-job training, an apprenticeship, or an internship might be required to become proficient in the occupation. The projections show significant growth in many occupations that require a college or even a professional or advanced degree in fields from health care, education, finance, and information technology. Occupations with a minimum education requirement beyond high school and less than a Bachelor’s Degree, or those requiring a high school diploma plus an apprenticeship, internship, or moderate or long-term on-the-job training are classified as “Middle Skill” occupations. The largest occupation in the Middle Skill category is registered nurse because it’s possible to become a registered nurse without a Bachelor’s Degree (although many jobs within the nursing field may require a Bachelor’s). Other middle skill occupations projected to grow over the next ten years cover a wide variety of fields in industries ranging from health care, education, construction, and transportation. Less growth is expected in occupations that require only a high school diploma, although there will be some growth in child care, security, and clerical occupations. Finally, there will be growth in occupations that don’t necessarily require a high school diploma to enter the occupation, such as Personal Care Aides, Retail Sales Clerk, or Waiter or Waitress. However, any particular job within an occupation may have additional requirements. An individual employer, for example, may decide to require a high school diploma or another credential for a particular position even if the minimum requirement to enter the occupation is lower.

Education and Wages

The projections suggest that education will remain valuable over the next ten years. While we are projecting thousands of annual openings in occupations with a minimum education requirement of less than a high school diploma, the current median wage for these occupations is less than $30,000 per year (assuming full-year, full-time work). On the other hand, most of
the openings in high-paying occupations (those with a current median annual wage of $75,000 or more) require a college degree or even a professional or advanced degree. Chart 6 shows the number of annual growth openings projected for occupations by current median annual wage and minimum education and training requirements. The chart shows that there will be opportunities for workers in low-skill, low-paying jobs to increase their incomes by gaining a credential and entering a Middle Skill occupation, while those who are able to graduate from college will greatly increase their chances of a high-paying career.

**Accuracy of the Projections**

When evaluating the projections it is important to keep a few things in mind. The projections are based on the assumption of a full employment economy in 2022. Given the ups and downs of the business cycle, it is possible that the average annual openings are not attempting to predict how many openings there will be in a given occupation in any particular year. As the word “average” suggests, some years will be higher, others will be lower. Finally, while the projections take into account as much currently available economic and labor market data as we can evaluate, there will be changes over the next ten years which no one can anticipate. Our projections are for industries and occupations that currently exist. New industries and occupations that we can’t even imagine today may well become significant by 2022.

**Conclusion**

Connecticut’s economy is on the mend from a terrible recession. Although still over 6%, the unemployment rate has been falling for the past three years. The assumption of full employment in 2022 requires employment growth of less than 1% per year for ten years. While some years will have slower growth – and some faster – the average growth rate is realistic and attainable. Projection details are available here: http://www1.ctdol.state.ct.us/lmi/projections.asp

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**GENERAL ECONOMIC INDICATORS**

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**Sources:** *The Connecticut Economy, University of Connecticut **Farmington Bank ***Federal Reserve Bank of Philadelphia*