

CONNECTICUT'S SHORT-TERM EMPLOYMENT OUTLOOK 2016-2018

*Connecticut
Department of Labor*

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***Connecticut's
Short-Term Employment Outlook:
2016-2018***

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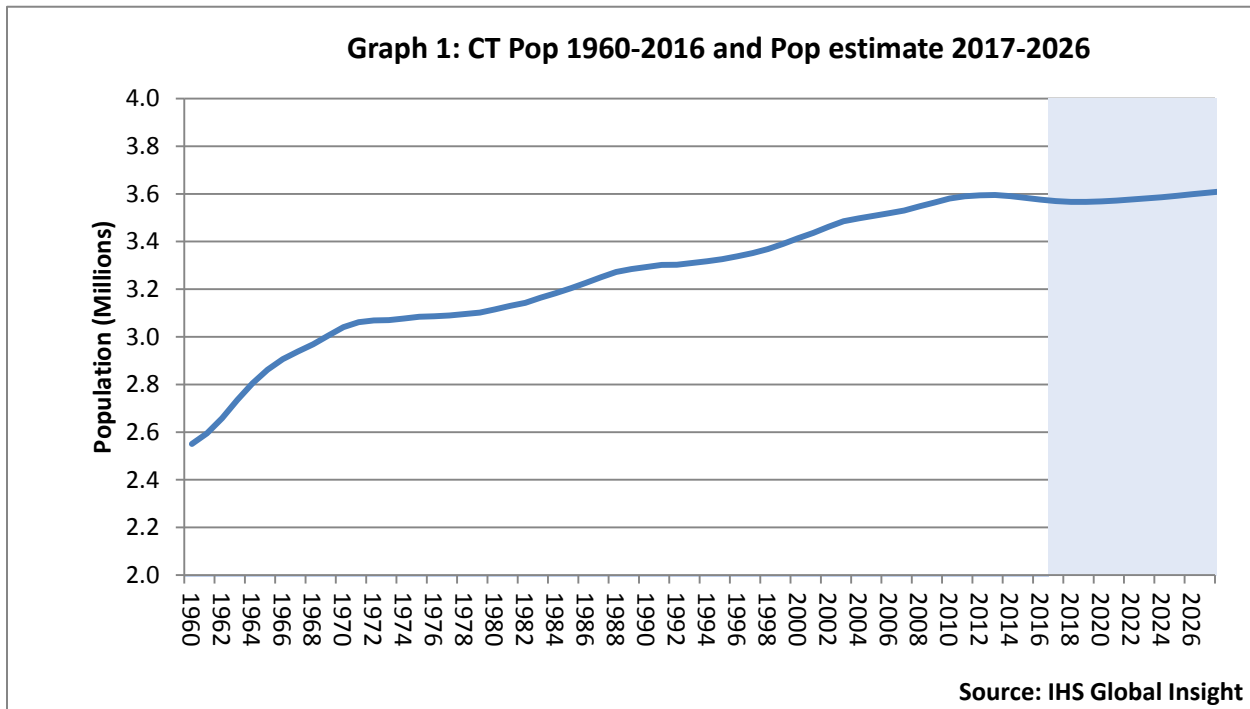
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The Connecticut Labor Market

POPULATION

Connecticut's economic outlook is driven first and foremost by its demographics. Population growth has slowed in recent years. Connecticut has experienced varied population growth rates from the early 1960s through 2010 (Graph 1). Before the peak in 2010, Connecticut's population growth rate exceeded that of New England and neighboring states. In recent years the state's population has decreased slightly and is projected to remain at about 3.6 million for the foreseeable future, while the rest of the northeast is expected to maintained slower but continued growth.



Much has been written about specific contributing components of population growth in the state, often with an emphasis of out-migration to other states, sometimes even ignoring in-migration and the resulting net change. Other factors such as birthrates, mortality, and international migration also contribute to population change. These other components in the recent past have helped buoy the state's population amid the net interstate migration losses experienced in Connecticut and the Northeast in general¹.

A recent joint report by the CT Data Collaborative and Office of Policy and Management outlines some of the factors that are contributing to Connecticut's population trends. It notes that the recent population decline is driven by net outmigration and a declining ratio of births to deaths in the state².

¹ Krzyzek, Matthew. "Connecticut Migration Patterns". *The Connecticut Economic Digest*, Vol. 18, no. 8 (2013): 4.

² Srivastava, Manisha and Riordan-Nold, Michelle. Connecticut's Population and Migration Trends: A Multi-Data Source Dive. CT OPM and CT Data Collaborative. 2017.

While the ratio of births to deaths remains positive, since 2001 births are down from 43,000 to 36,000 per year while deaths have increased from a 2008 low back up to 2001 levels of just under 31,000. The report also notes that Connecticut has migration net gains with prime aged adults and with children. International migration is also net-positive for the state, and much of that cohort has high levels of educational attainment.

As population growth impacts every facet of an economy including consumer demand, home prices, tax revenue, and school enrollment, the relatively flat growth the state is expected to experience in coming years will present an impediment towards economic expansion and development.

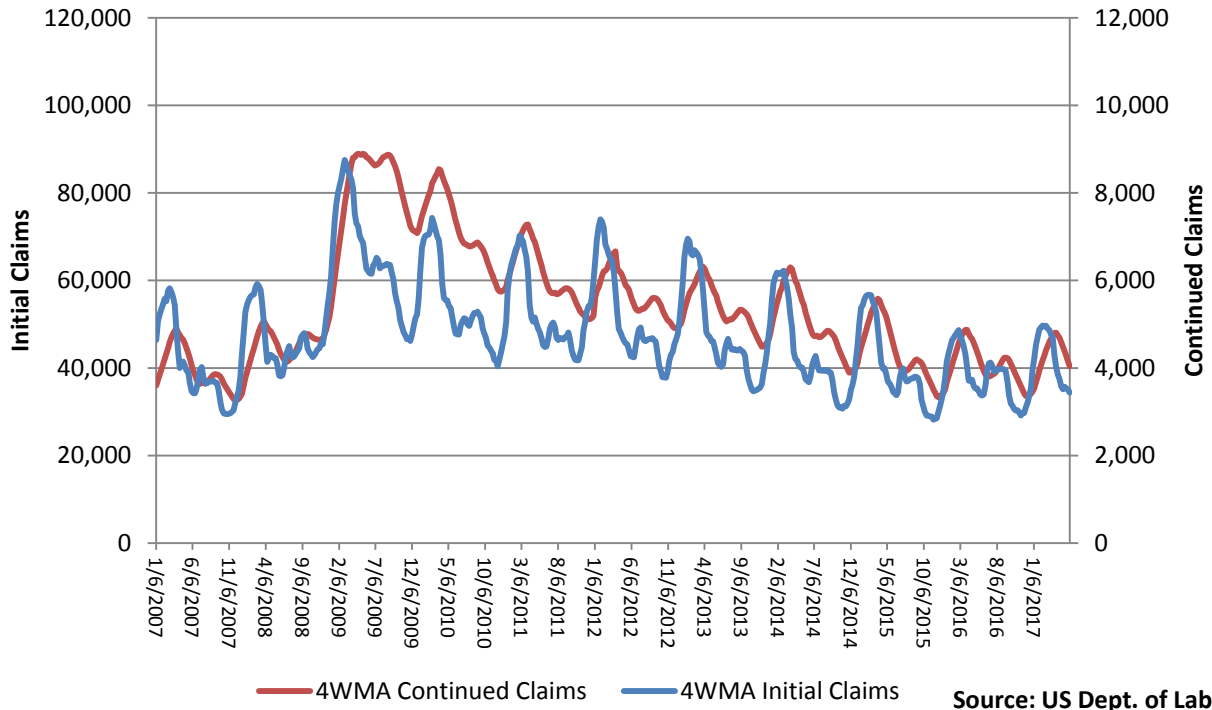
LABOR MARKET

Initial Claims and Continued Claims

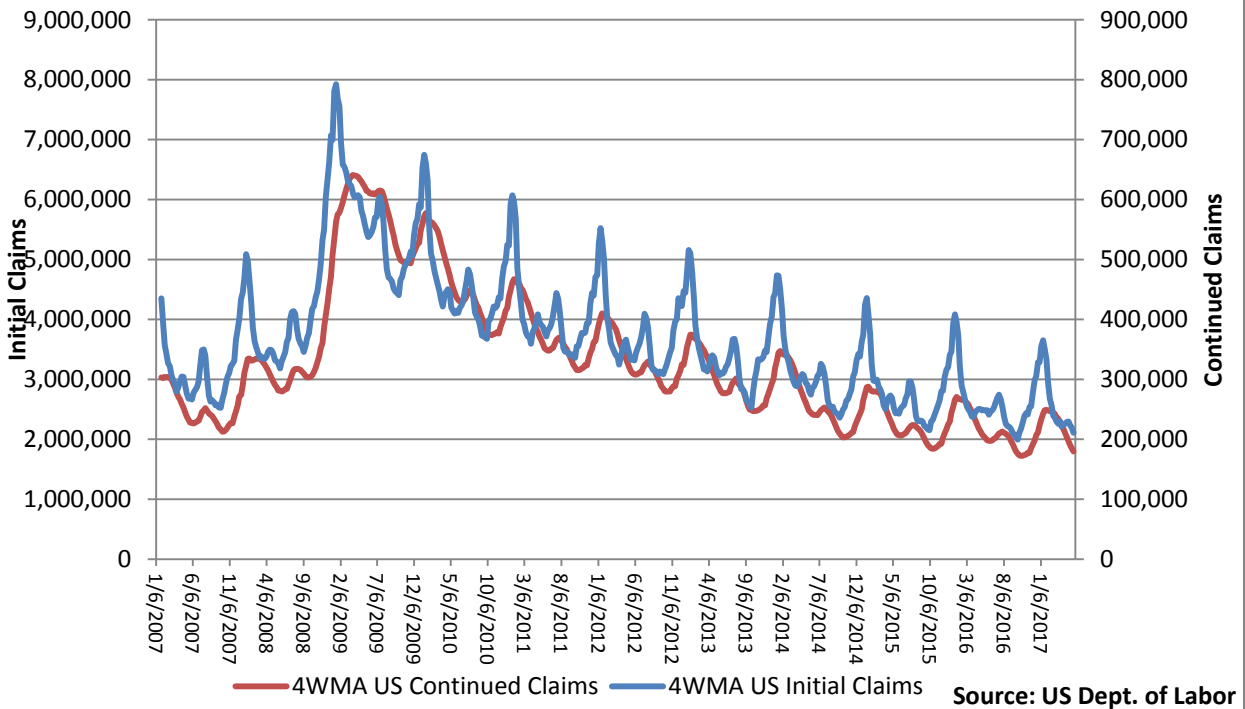
Initial Claims (IC) for Unemployment Insurance is reported weekly and is the most timely available indicator of labor-market conditions and most commonly assessed using a four-week moving average³ The most recent weekly initial claim figure of 2,601 for the week of May 27th, 2016 is among the lowest levels of the past 10 years. During the past decade initial claims have only been below current levels for a combined 10 weeks. These other instances of lower initial claims occurred during the fall months of September, October, and November, which are shown in Graph 2 to be seasonal troughs for Connecticut .

³ Kennedy, Daniel. Current Conditions and Outlook for the U.S. and CT Economies: 2009-11. CT DOL. 2010, p.184.

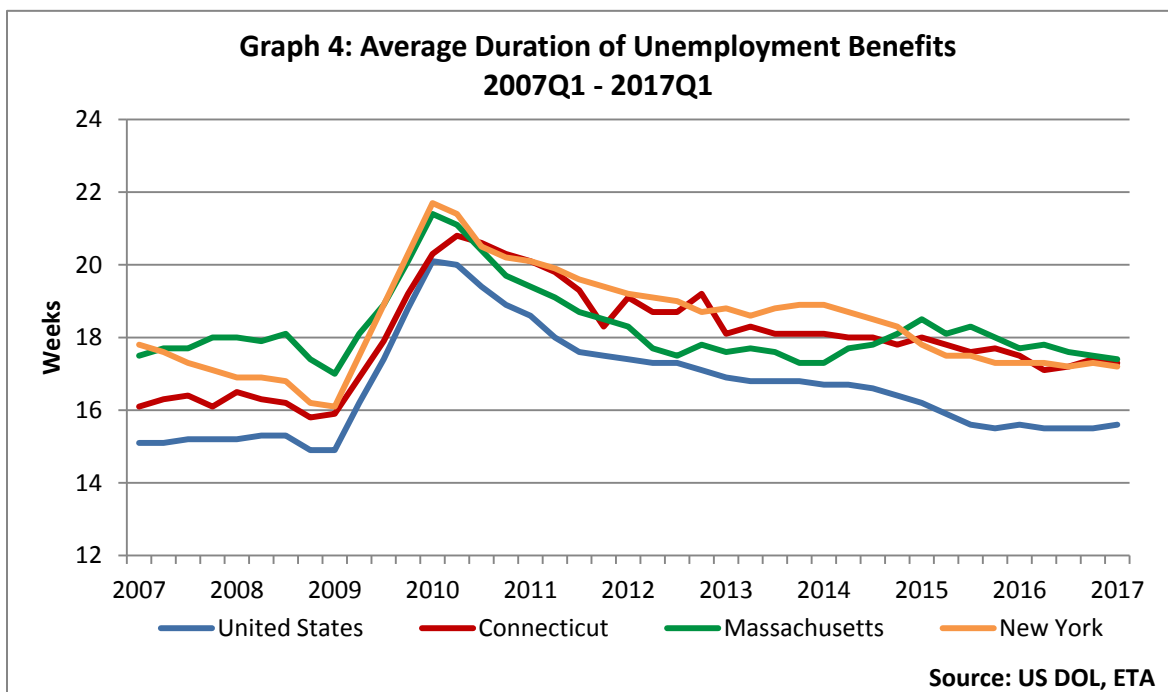
**Graph 2: Connecticut Initial Claims and Continued Claims
4 Week Moving Average 2007-2017 (Not Seasonally Adjusted)**



**Graph 3: US Initial Claims and Continued Claims
4 Week Moving Average 2007-2017 (Not Seasonally Adjusted)**



The relationship between initial and continued claims since 2007 shows the impact of the recession on the state. At the national level shown in Graph 3, initial and continued claims seem to exhibit a long term ratio of roughly 1:10, meaning that less than ten times more continued claims exist at a given time than initial claims.⁴ In Connecticut, Graph 2 shows that continued claims generally persist at a ratio above 1:10, particularly after the first quarter seasonal spikes in initial claims. The differences in the relationship of initial and continued claims shown above between US and Connecticut claims data can be seen when examining the average duration of unemployment benefits shown in Graph 4.



Graph 4 shows how the average duration of unemployment benefits collection is characteristically above the US average for Connecticut and neighboring New York and Massachusetts. Nearby states not shown that exhibit similar behavior include Pennsylvania, New Jersey, and Rhode Island. Northern New England states have average duration below US levels, but also have labor markets performing differently from other parts of the country, and in recent years appear to be experiencing a pronounced labor shortage.⁵

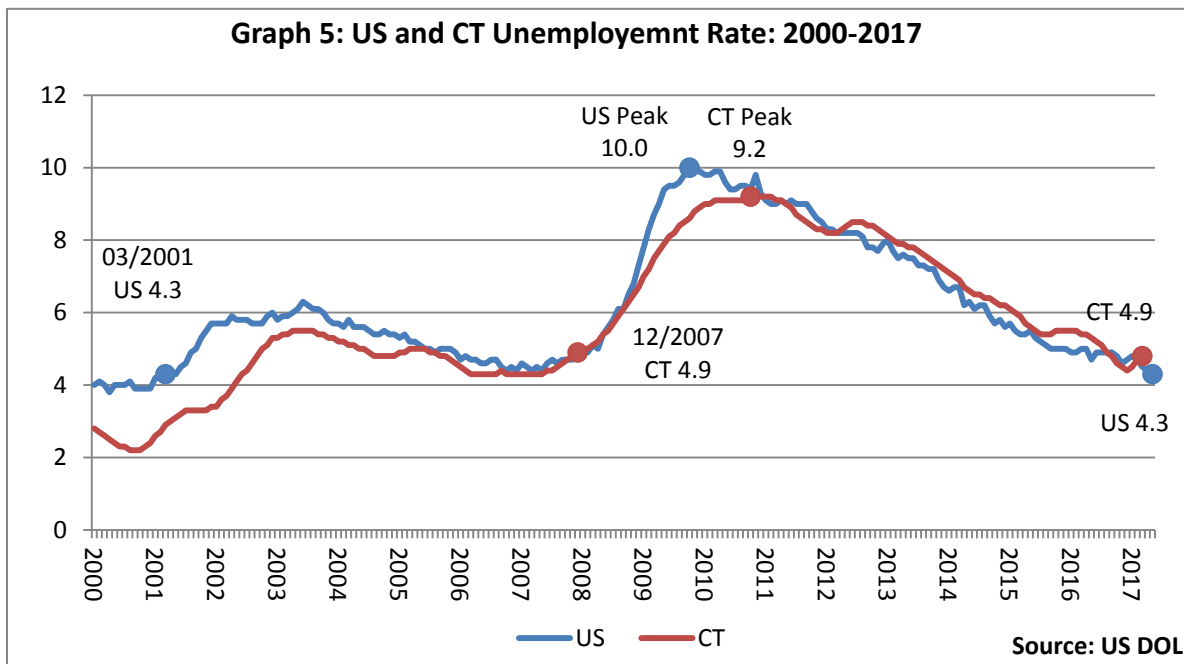
⁴ Krzyzek, Matthew and Pilipaitis, Sarah. Connecticut's Short Term Employment Outlook: 2015-2017. CT DOL. 2016, p.13.

⁵ Kamp, Jon and Jennifer Levitz. Northern New England's Good Jobless Numbers? They're Bad. Wall Street Journal, 04/21/17.

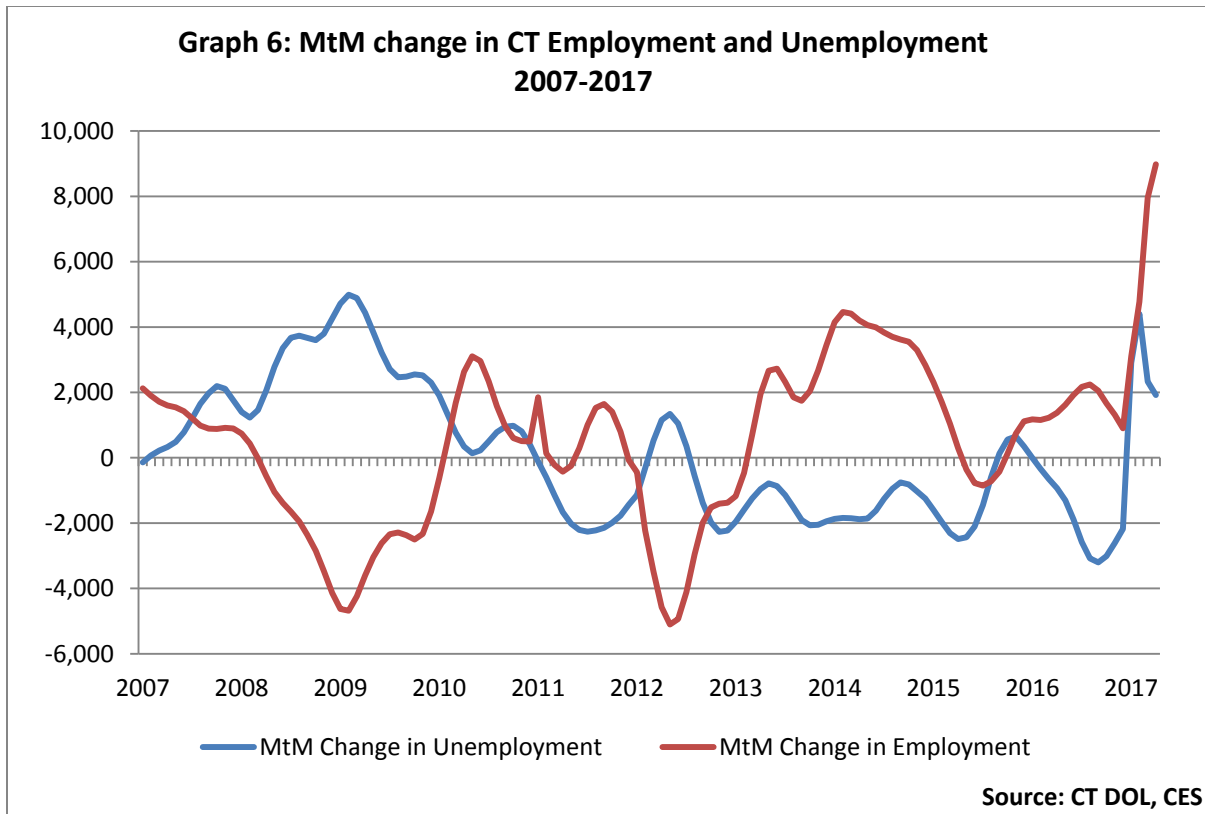
CT Unemployment Rate

The unemployment rate is one of the most commonly reported measures of overall economic performance. The US unemployment rate climbed precipitously from levels below 5 percent in late 2007 to a peak of 10 percent in October 2009, the highest level since 1982. It has since fallen to 4.4 percent as of April 2017, a level last seen in May 2007.

Connecticut's unemployment rate change over the past ten years has exhibited some differences over corresponding US levels, peaking a year later in October 2010 at 9.2 percent, after having remained significantly below US levels from late 2008 onward. Its post-peak rates were initially below US levels, but from March 2012 through August 2016, Connecticut's unemployment rate was characteristically above national rates, ranging between 0.1-0.6 percentage points through August 2016.



The recent uptick in the Connecticut unemployment rate shown in Graph 5 began in January of this year and is occurring amid consistent labor force expansion and employment growth, both positive indicators for the state economy. Graph 6 illustrates the significant employment gains CT has made in the beginning of 2017.

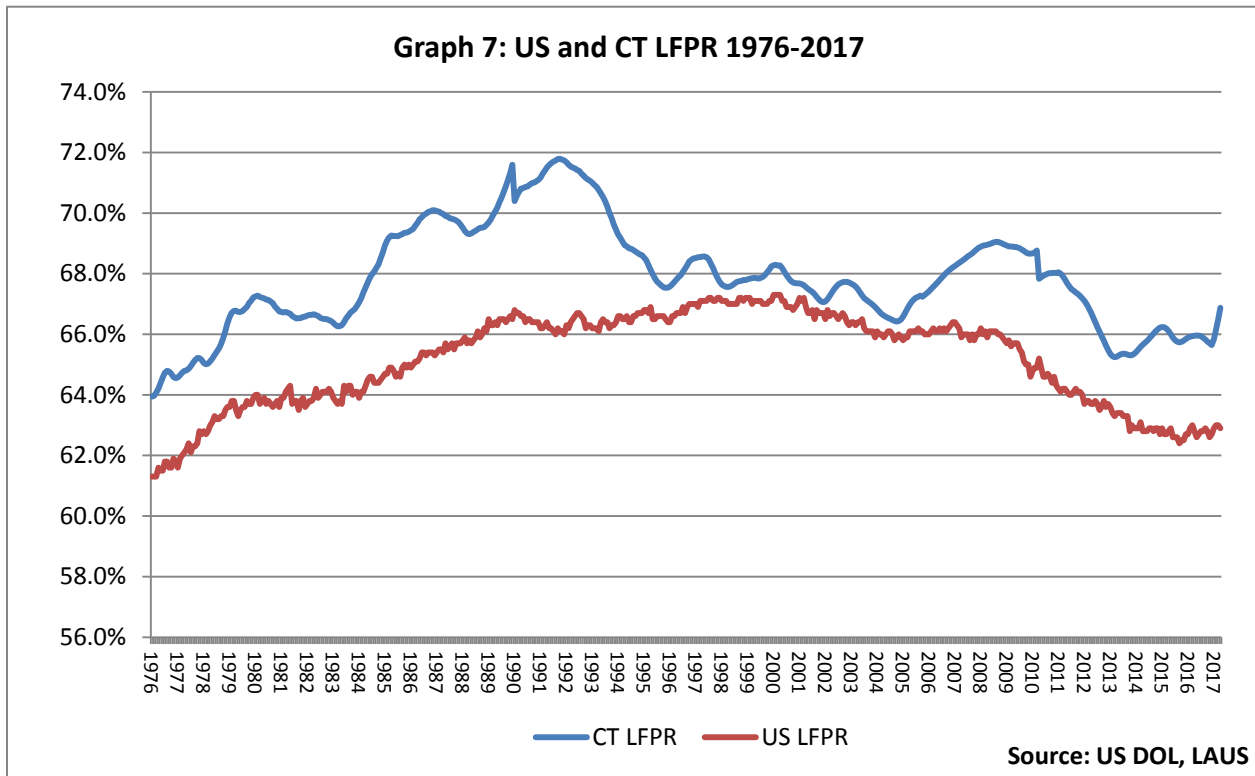


Labor Force Participation

The decline in labor force participation rate (LFPR) has been an often discussed post-recession statistic, particularly for high median age states in the Northeast. Many factors contribute to this labor market change. A 2014 Congressional Budget Office report found that of the 3 percentage point decline in US LFPR from 2007 to 2013, 1.5 points was the result of long-term trends (mostly population aging), about 1 point resulted from temporary weakness in employment, and about 0.5 point of the decline was due to the slow recovery, mostly discouraged workers dropping out of the labor force.⁶ After increasing for decades, the LFPR for the US population 16 and older largely leveled off by 1989 and remained between 66 and just over 67 percent throughout the 1990s. It started to decline following a 1997-2000 peak level of 67.1 annual percent. From late 2003 through 2008 it remained at or just above 66 percent but has since resumed its downward trend and has fallen and remained at or below 63 percent since November 2013. The BLS has identified this downward trend since at least 2000, projecting it to continue through upcoming decades and to level off to just below 59 percent by about 2050.⁷ In the past year the US LFPR has remained at or below 63 percent and was 62.9 percent as of April 2017.

⁶Congressional Budget Office. *The Slow Recovery of the Labor Market* (February 2014), <https://www.cbo.gov/publication/45011>

⁷ Canon, Maria et al. "A Closer Look at the Decline in the Labor Force Participation Rate." *The Regional Economist*. St. Louis Federal Reserve Bank (October, 2013)

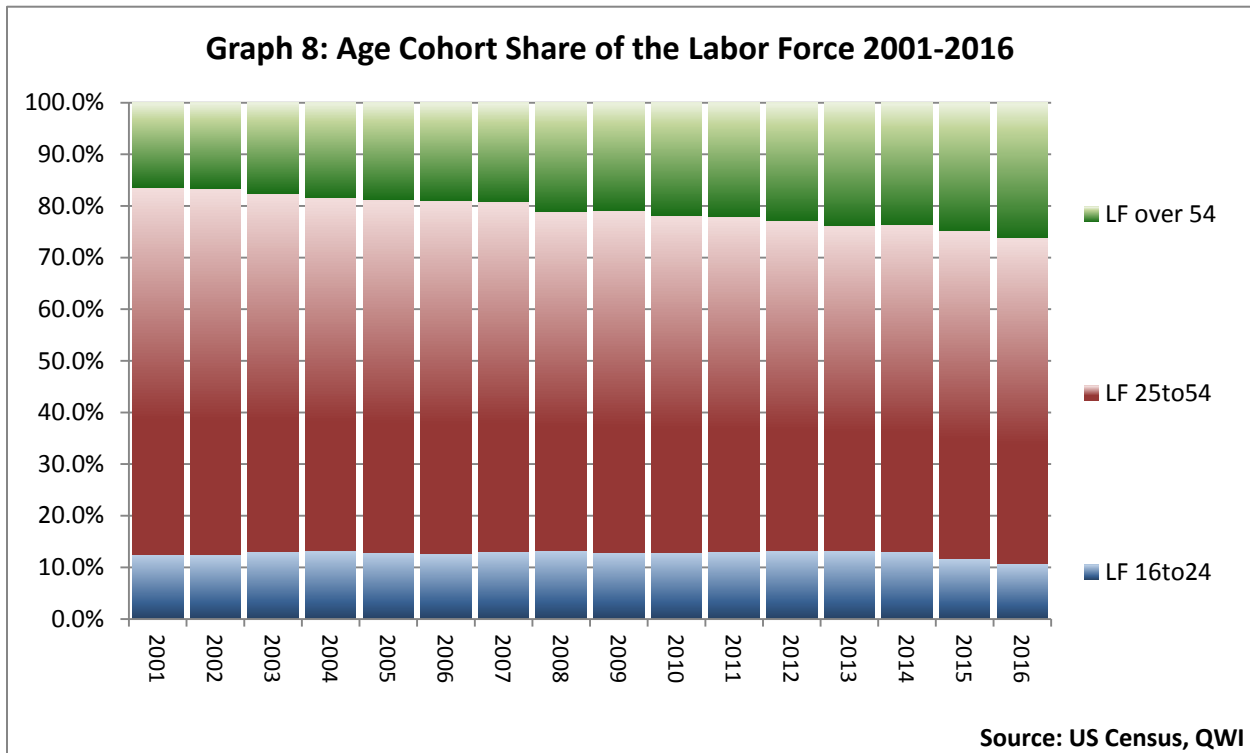


The Connecticut labor market has exhibited some different LFPR behavior, peaking at 71.8 percent in the fall of 1991. Graph 7 shows both the monthly US and CT labor force participation rates from 1976 through April 2017 to highlight how the long term differences of the areas. Connecticut’s rate dipped to below 69 percent from the mid 1990s through to a 2004 low of 66.1 percent, during that time the state’s participation rate was closest to national levels. From mid 2004 onward it increased to a peak of 69.0 percent for most of 2008. In recent years Connecticut’s LFPR fell to 35 year low of 65.2 percent during the beginning of 2013, and has gradually increased 66.9 percent as of early 2017.

Labor Force Participation by Age Cohorts

State-level age cohort labor force participation rate annual average data is available from 2001 through 2016⁸. Breaking down the overall labor force participation rate into three component age cohorts helps pinpoint contributing demographic trends. These three groups exhibit differing degrees of attachment to the labor force, those under 25 are more likely to be in school, those age 25 to 54 (also known as prime age workers) are most likely to be in the labor force, and those over 54 are more likely to leave the labor force and enter retirement.

⁸ Bureau of Labor Statistics. Expanded State Employment Status Demographic Data. <https://www.bls.gov/lau/ex14tables.htm>

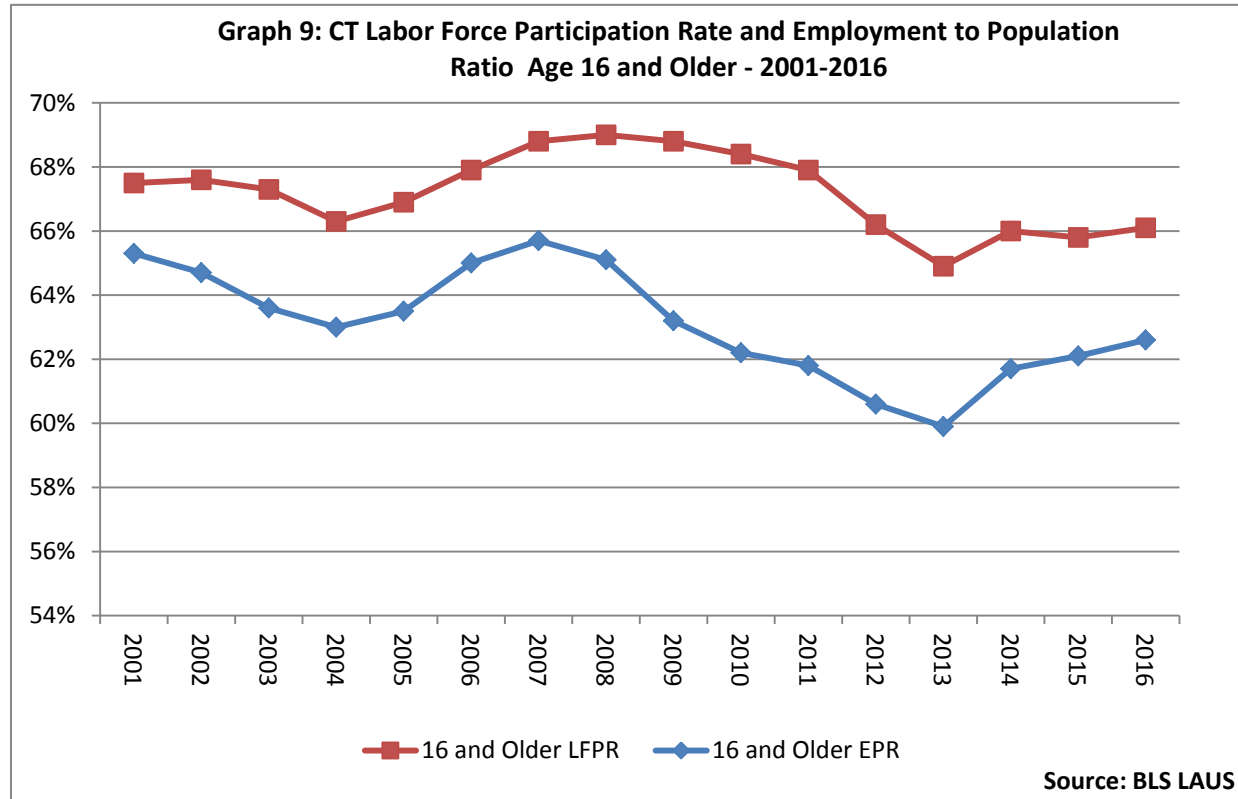


The changing age-cohort mix of the labor force is shown on Graph 8. Since 2001, the prime age workforce has gradually decreased its labor force share as the age 54 cohort has increased. The former falling from 71 percent to 63.1 percent, while the latter increased by nearly 10 percentage points to 26.2 percent. This corresponds with Connecticut’s increasing median age, which was 40.4 years in 2015, up from 39.3 years in 2005 according to the US Census. The US had a median age of 37.6 years in 2015 and 36.4 in 2005. As Connecticut ages, the impact of varied age cohort labor force participation rates will be important considerations for policymakers and employers, with certain industries such as manufacturing experiencing greater age-related pressures on its workforce. The aging of the Connecticut workforce does present some challenges as labor markets adapt, fortunately the state can build on strategies being implemented in other economies such as Germany that are undergoing similar demographic labor force shifts.⁹

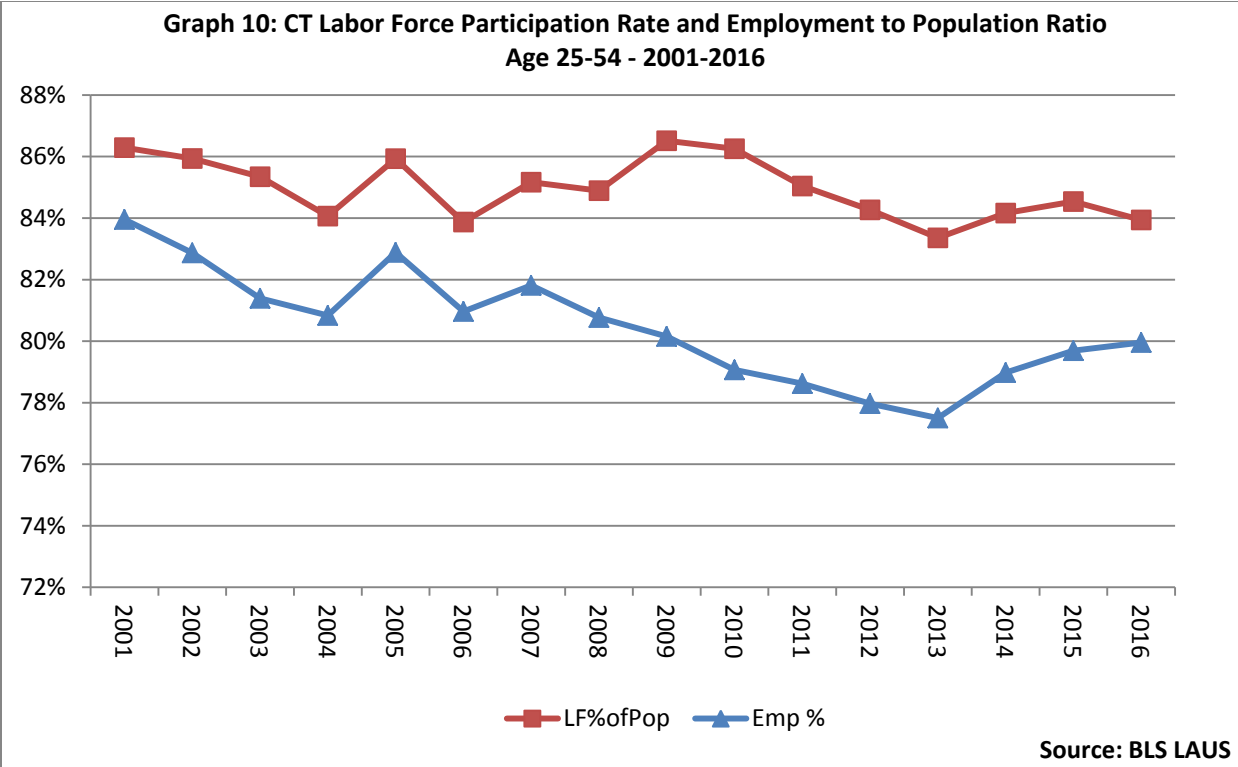
Graph 9 shows the overall Connecticut annual average LFPR and employment to population ratio (EPR) from 2001-2016 and helps contextualize the following age cohort shifts. A key interrelation between the two variables can be seen when examining how EPR peaked in 2007, while the LFPR peaked a year

⁹ Loch, Christoph, et. al. “The Globe: How BMW is Defusing the Demographic Time Bomb.” *Harvard Business Review*. Boston. (March, 2010)

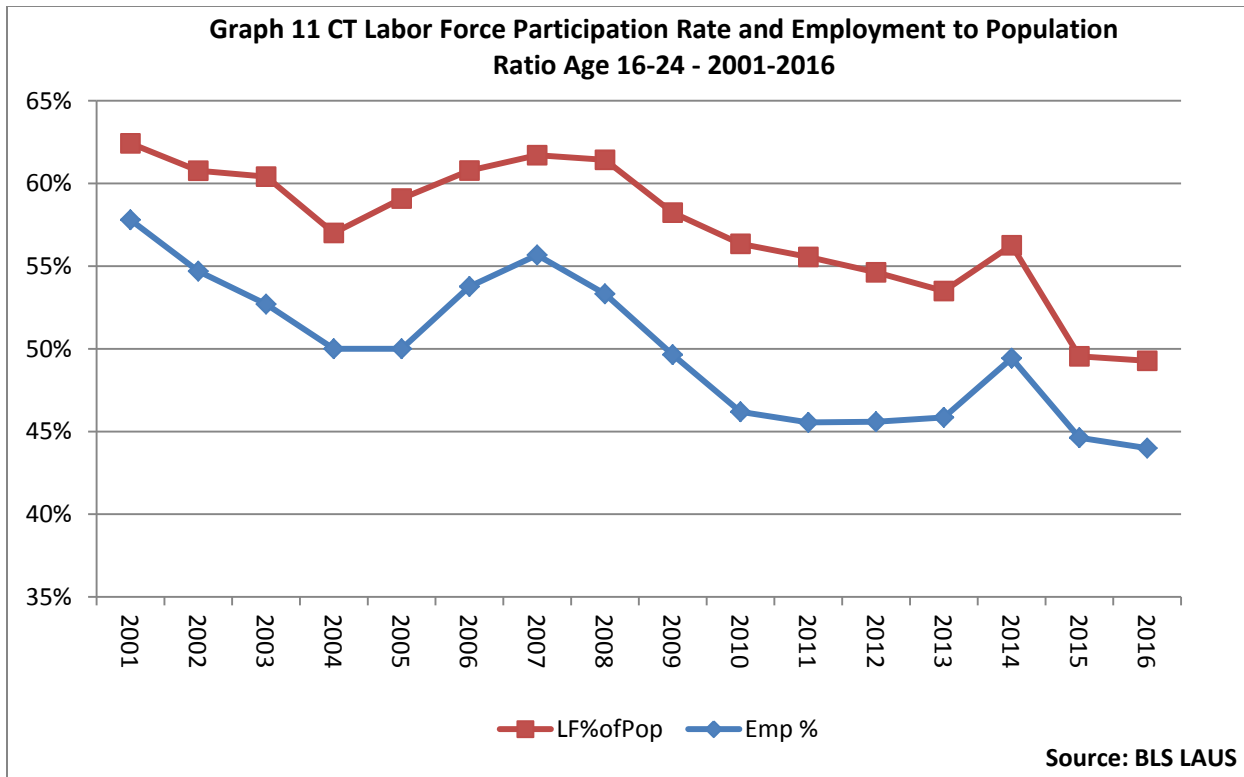
later during subsequent years of high unemployment, the gap between the two measures widened. After reaching a series low in 2013, the two rates have begun to converge as EPR increases more than the corresponding LFPR. As Connecticut’s median age increases, it is important to examine the differing levels of labor force attachment held by various age cohorts.



Graph 10 shows annual average LFPR and employment to population ratios (EPR) for prime age workers in Connecticut from 2000 to 2016. Compared to the Connecticut labor force overall, the LFPR for prime age workers is significantly higher, ranging from 83-86 percent, while the overall economy ranges from 64 to 69 percent. Its LFPR peak rate of 86.5% occurred in 2009, a year after the overall economy. This peak prime aged LFPR occurred while the corresponding EPR for this cohort diverged downward, a widening gap between the two ratios is the result of increasing unemployment. Since reaching a 2013 trough, the gap between prime aged LFPR and EPR has narrowed. The total LFPR has ranged between 83 and 84.5% while the EPR has increased steadily from 77.5% to 80% as of 2016.

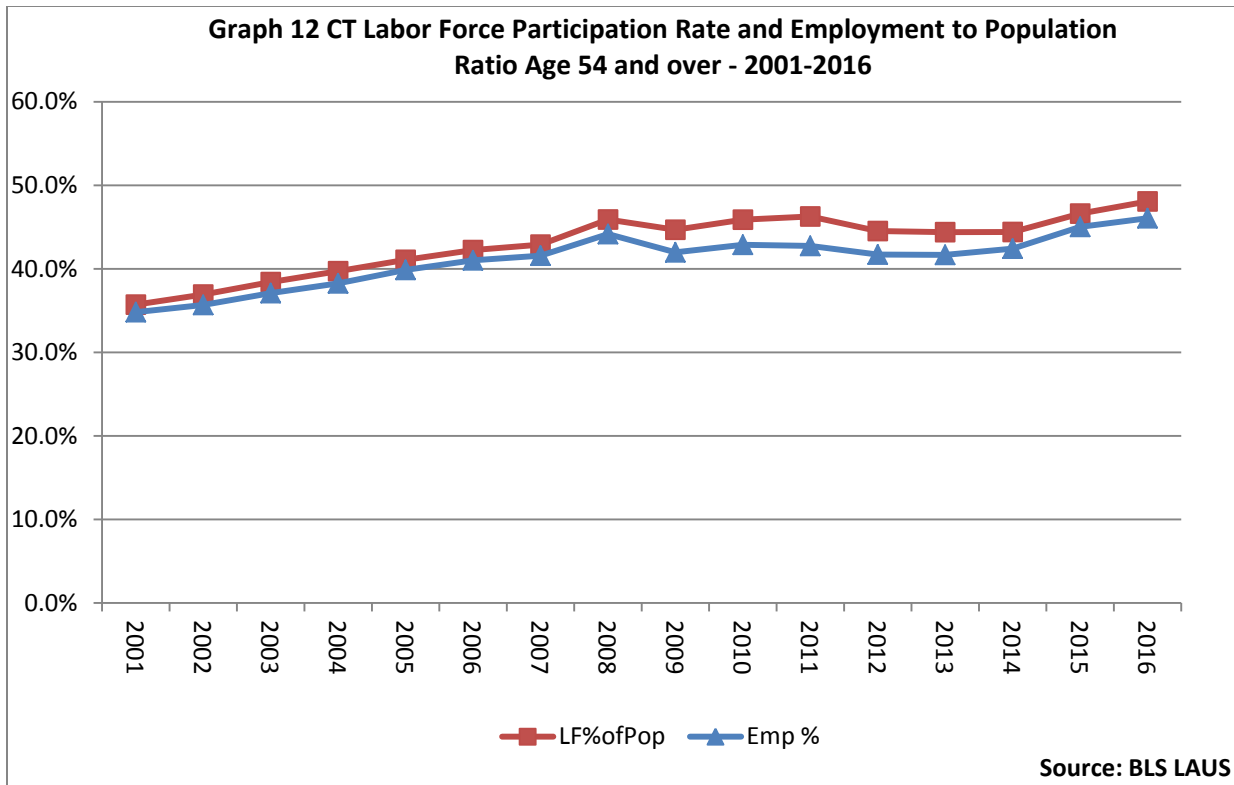


The younger 16 to 24 age cohort has LFPR below that of prime age workers due primarily to school enrollment. Graph 11 shows the LFPR and EPR for workers under 25. In the early 2000s, the cohort’s peaks and troughs largely corresponded with the overall labor force. Since the recession, the cohort has gradually fallen from a 2007 peak of 61.7% to a low of 49 percent in 2016. Unlike prime aged workers, which saw its LFPR and EPR diverge during the recession due to EPR shifts, young workers in Connecticut have had a declining LFPR in the wake of the recession while corresponding EPR remained relatively steady. From 2010 through 2013 the LFPR fell three percentage points while EPR held at 46 percent. After a 2014 uptick, the LFPR and EPR for young workers in 2016 was 49 and 44 percent respectively, down significantly from 2000 levels of 62 and 58 percent.



As Connecticut’s labor force ages, the steady participation rate of the over 54 workforce that has increased during the recovery is a positive labor market shift for the state. Since the recession, the LFPR has ranged between 44.3% and a high of 48.1% in 2016. This cohort’s steadily increasing LFPR mirrors national trends and has been shown to be driven by the 55-64 population.¹⁰ Another notable attribute of this age cohort is the very close relationship between labor force participation and employment to population ratio, indicating that few unemployed older workers remain in the labor force.

¹⁰ Krzyzek, Matthew and Sarah Pilipaitis. Connecticut’s Short Term Employment Outlook: 2015-2017. CT DOL. 2016, p.16.



The percent share of employment over age 54 by industry is shown on Table 1. Therein it shows that Manufacturing and Public Administration have the largest 2016 shares of post-prime age workers, while the smallest shares are in Leisure and Hospitality, Information, and Construction.

Knowing which industries have significant employment shares nearing retirement is important for workforce development as it helps identify sectors that are likely to have lots of replacement openings and also a need for robust procedures to prevent loss of organizational knowledge, skills, and methods. Though older in aggregate than the US, this challenge is not unique to Connecticut, recent research notes that “by 2020, 25 million Baby Boomers, who make up more than 40 percent of the U.S. labor force, will be exiting the workforce in large numbers and leaving many jobs to be filled”.¹¹

Adjusting to the needs of older workers and mitigating their departure from the labor force are important considerations in the short term, especially given low unemployment levels at present.

¹¹ Tishman, Francine, et. al. Employer Strategies for Responding to an Aging Workforce. NTAR Leadership Center. 2012, p.4.

Table 1: Total Employment Share of Workforce Over Age 54

Industry Sector	Over Age 54 % of Total Employment			2004-10	2010-16
	2004	2010	2016	Percentage Point Change	Percentage Point Change
All Industries	17.6%	21.9%	25.4%	4.4%	3.5%
Natural Resources and Mining	19.0%	23.1%	28.5%	4.1%	5.4%
Construction	15.2%	19.3%	24.4%	4.1%	5.1%
Manufacturing	21.2%	27.8%	35.3%	6.5%	7.5%
Trade, Transportation, and Utilities	16.4%	20.0%	24.0%	3.6%	4.0%
Information	14.8%	19.5%	23.2%	4.7%	3.7%
Financial Activities	15.0%	19.1%	25.2%	4.1%	6.0%
Professional and Business Services	16.2%	20.1%	25.0%	4.0%	4.9%
Education and Health Services	20.6%	25.4%	*	4.8%	*
Leisure and Hospitality	11.7%	14.4%	17.0%	2.8%	2.6%
Other	19.3%	22.9%	26.7%	3.6%	3.8%
Public Administration	20.3%	25.2%	30.1%	4.9%	4.8%
All Industries	17.6%	21.9%	25.4%	4.4%	3.5%
* Suppressed				Source: US Census, QWI	

Connecticut Industry Overview

As of 2016, Connecticut had not fully recovered all of the jobs lost during the great recession. On an annual basis, employment peaked in 2008, hit a trough in 2010 and has been growing ever since. Several sectors remain below the employment levels achieved in 2008. Manufacturing, Finance & Insurance, and Construction are still below their 2008 levels. Indeed Finance & Insurance, Manufacturing, Art, Entertainment & Recreation (which includes Gambling Industries), and Government have continued to shed jobs even after the low point for overall employment in 2010. Educational Services declined from 2015 to 2016.

Despite these changes, the structure of the Connecticut economy has remained largely stable. Health Care, Retail Trade, Educational Services and Manufacturing are the largest four sectors in the Connecticut economy followed by Accommodation & Food Service, Finance & Insurance, and Professions, Scientific & Technical Services. Compared to 2008, as a portion of the total Connecticut employment, manufacturing is 1.5 percentage points lower, Finance & Insurance is 0.9 percent points lower and Construction is down 0.4 percentage points. On the other hand, Health Care and Accommodation & Food Service are both up 0.9 percentage points.

The decreases in manufacturing and finance and insurance employment corresponds with decreases in state GDP in those sectors. Prior to the recession these two sectors were the largest contributors to overall state GDP, as is shown in Table 2. Manufacturing sector state GDP peaked in 2007 at 41.9 Billion dollars but fell to 27.7 Billion in 2009 and was 24.9 billion as of 2016. Finance Peaked in 2009 at 74.1 billion, reached a 2014 low of 60 billion, and was 61.5 billion in 2016.

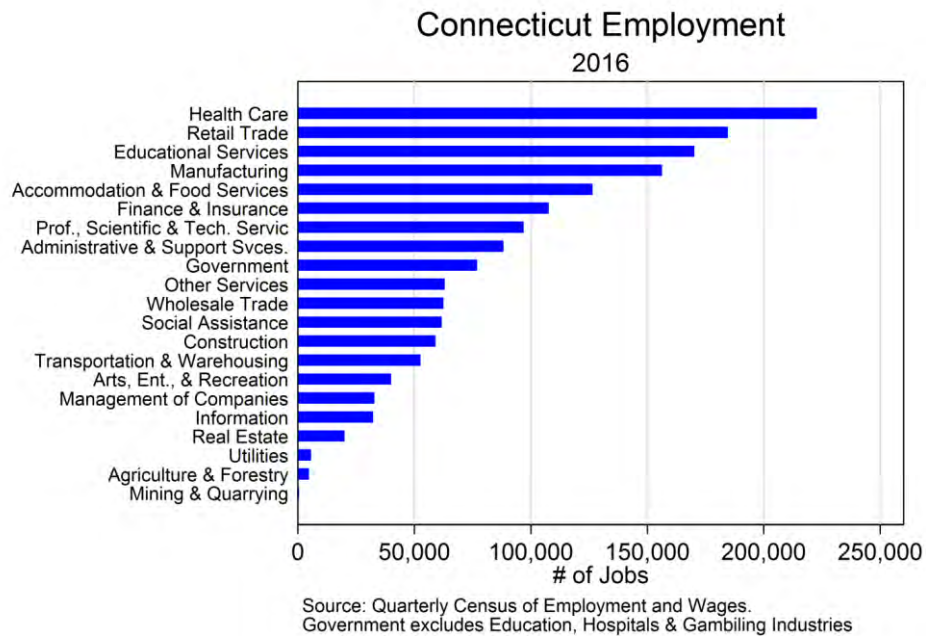
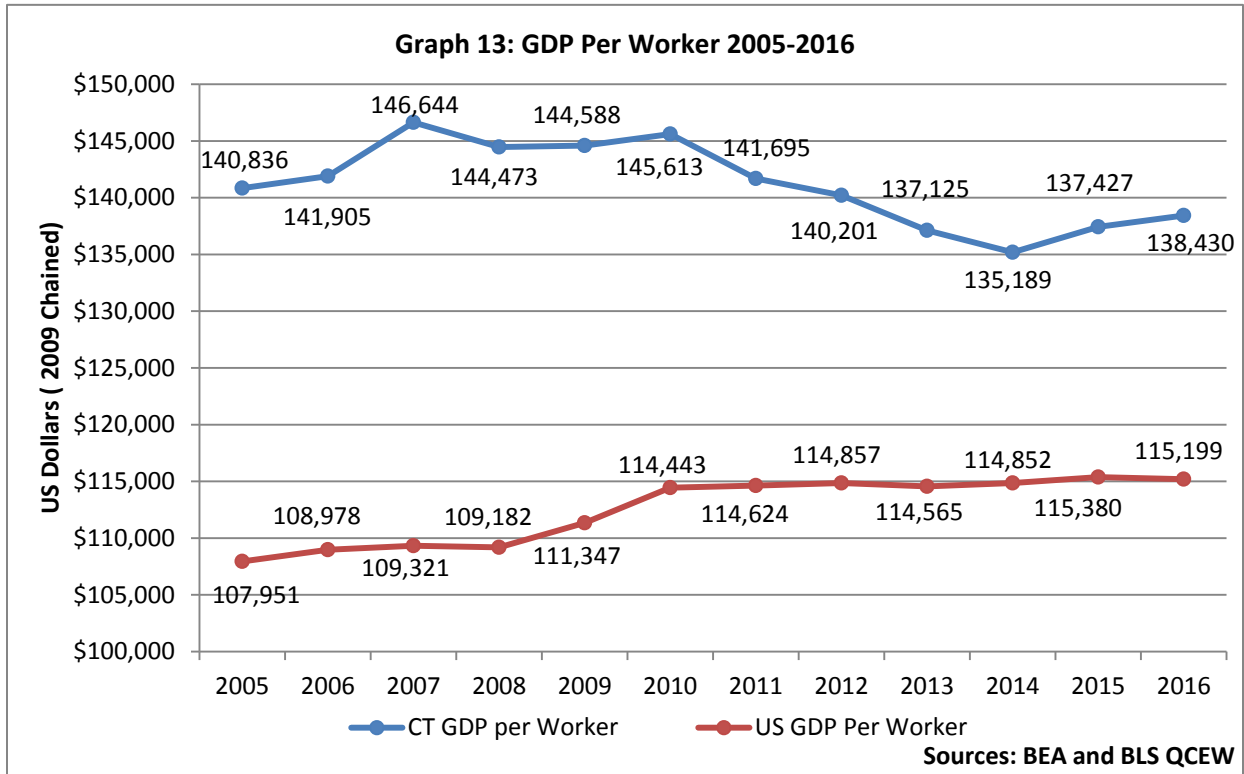
Table 2: Connecticut GDP By Industry Sector 2005 - 2016 (\$ Billions Chained 2009 Dollars)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Total All Industries	237.28	247.25	243.86	233.56	232.36	228.45	228.21	224.93	223.55	228.52	230.72
Natural Resources and Mining	0.58	0.52	0.39	0.41	0.42	0.33	0.37	0.39	0.43	0.46	0.54
Trade, Transp. & Utilities	34.54	35.13	34.86	32.42	32.97	33.28	34.17	34.45	34.71	35.89	36.63
Construction	8.62	8.44	7.88	7.26	6.78	6.67	6.81	6.64	6.45	6.84	7.03
Manufacturing	39.82	41.94	38.96	27.69	28.41	26.56	26.51	26.82	25.38	25.31	24.91
Information	8.45	9.83	10.37	9.91	9.84	9.70	9.89	11.33	11.32	12.81	13.34
Financial Activities	62.93	67.60	66.48	74.11	72.19	69.42	66.13	61.40	60.00	60.80	61.46
Prof. Business Services	26.12	27.11	27.75	24.58	24.91	25.55	26.99	27.02	28.42	29.24	29.85
Education and Health Services	20.36	20.56	21.81	22.19	22.13	22.24	22.70	22.69	23.05	23.11	23.09
Leisure and Hospitality	6.89	6.63	6.62	6.53	6.63	6.85	7.09	6.91	6.57	6.78	6.79
Other services, except government	5.28	5.12	4.72	4.49	4.33	4.25	4.33	4.23	4.28	4.33	4.37
Government	24.15	24.56	24.47	23.99	23.77	23.68	23.33	23.37	23.28	23.50	23.34

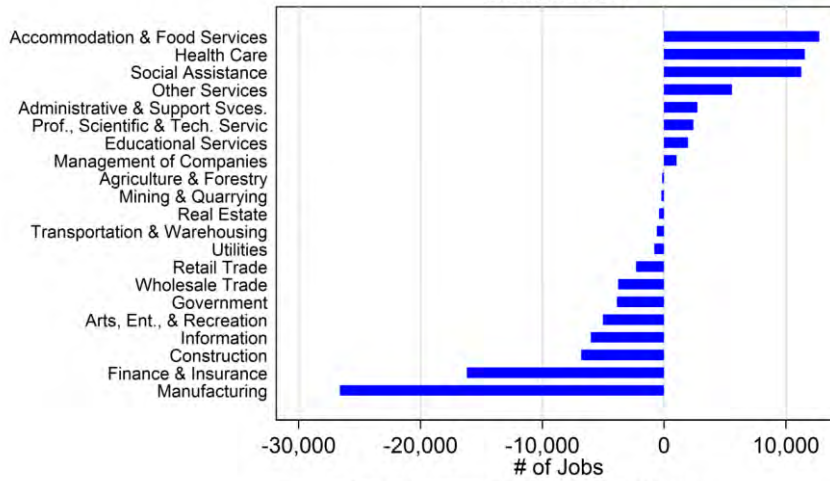
Source: Bureau of Economic Analysis

The result of decreases in high output per worker industries in the state is shown in Graph 13, which shows annual average GDP per worker for Connecticut and the United States. At the US level, it shows that GDP per worker has held around \$114-\$115 thousand from 2010 onward. In Connecticut,

from 2010 through 2014 output per Connecticut worker fell, but has rebounded in the past few years. Industries that have had GDP grown since that 2014 trough include Information (+\$2.02 Billion), Trade, Transportation and Utilities (+\$1.92 Billion) and Financial Activities (+\$1.47 Billion). Overall GDP in Connecticut is up \$7.17 Billion from 2014 to 2016 and employment is up 13 thousand.



Change in Connecticut Employment 2008 to 2016



Source: Quarterly Census of Employment and Wages.
Government excludes Education, Hospitals & Gambling Industries

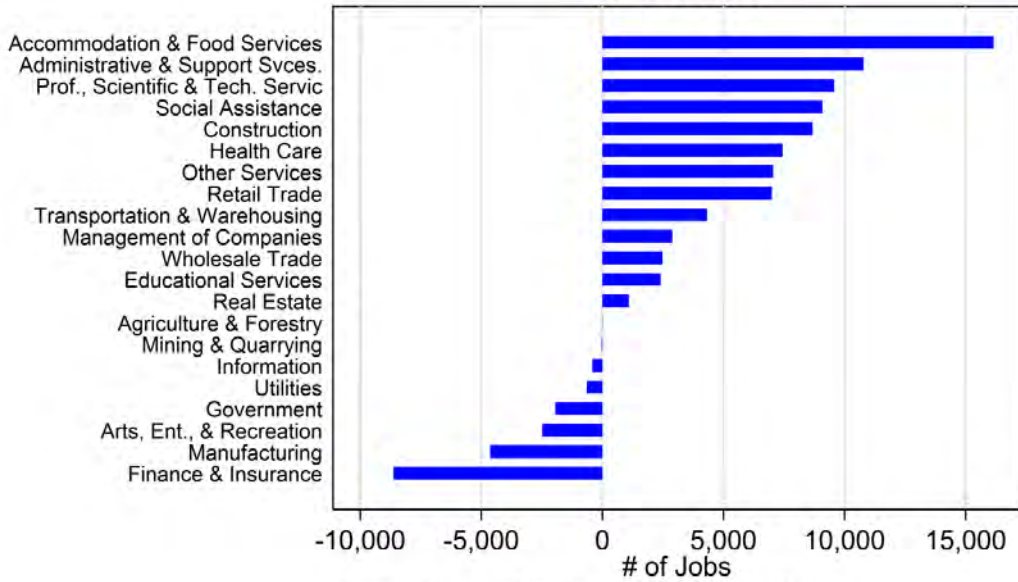
Structure of Connecticut Employment

Industry Sector	Employment	Percent of Total		
	2016	2008	2010	2016
All Sectors	1,666,636	100.0	100.0	100.0
Agriculture & Forestry	4,736	0.3	0.3	0.3
Mining & Quarrying	556	0.0	0.0	0.0
Utilities	5,626	0.4	0.4	0.3
Construction	59,068	3.9	3.2	3.5
Manufacturing	156,421	10.8	10.1	9.4
Wholesale Trade	62,547	3.9	3.8	3.8
Retail Trade	184,638	11.1	11.1	11.1
Transportation & Warehousing	52,686	3.2	3.0	3.2
Information	32,366	2.3	2.1	1.9
Finance & Insurance	107,775	7.3	7.3	6.5
Real Estate	20,009	1.2	1.2	1.2
Prof., Scientific & Tech. Services	96,973	5.6	5.5	5.8
Management of Companies	32,917	1.9	1.9	2.0
Administrative & Support Svces.	88,363	5.1	4.9	5.3
Educational Services	170,301	10.0	10.5	10.2
Health Care	222,837	12.5	13.5	13.4
Social Assistance	61,738	3.0	3.3	3.7
Arts, Ent., & Recreation	40,065	2.7	2.7	2.4
Accommodation & Food Services	126,553	6.7	6.9	7.6
Other Services	63,057	3.4	3.5	3.8
Government	77,038	4.8	4.9	4.6

Source: Quarterly Census of Employment and Wages.

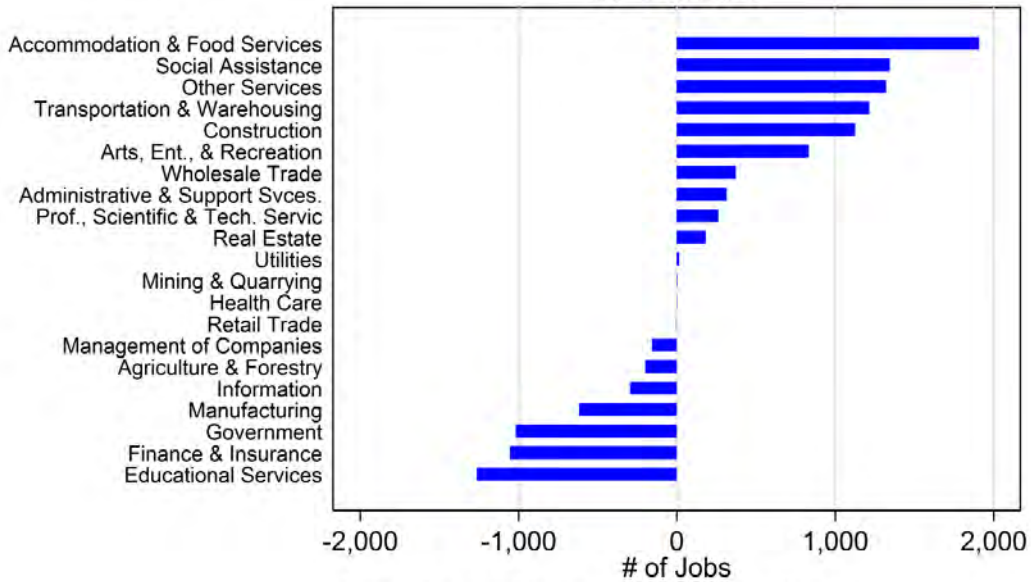
Government excludes Education, Hospitals, and Gambling Industries.

Change in Connecticut Employment 2010 to 2016



Source: Quarterly Census of Employment and Wages.
Government excludes Education, Hospitals & Gambling Industries

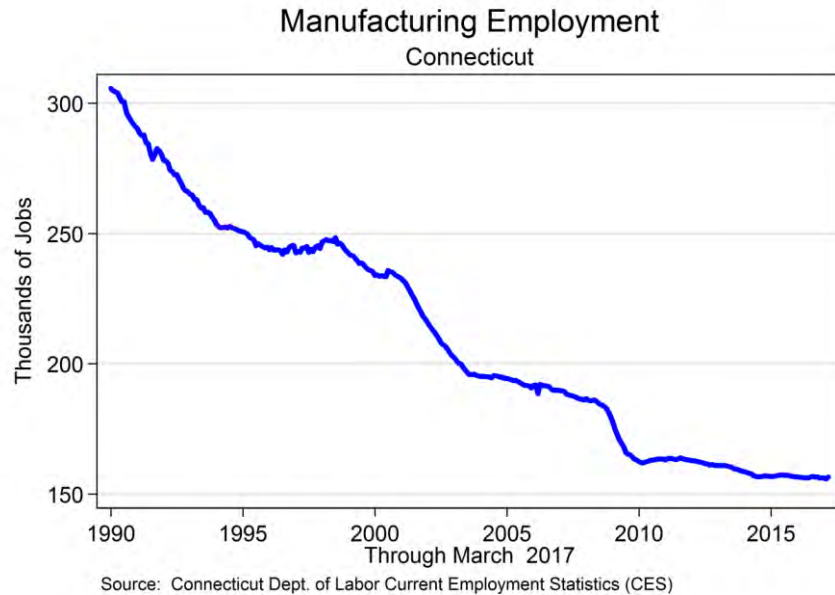
Change in Connecticut Employment 2015 to 2016



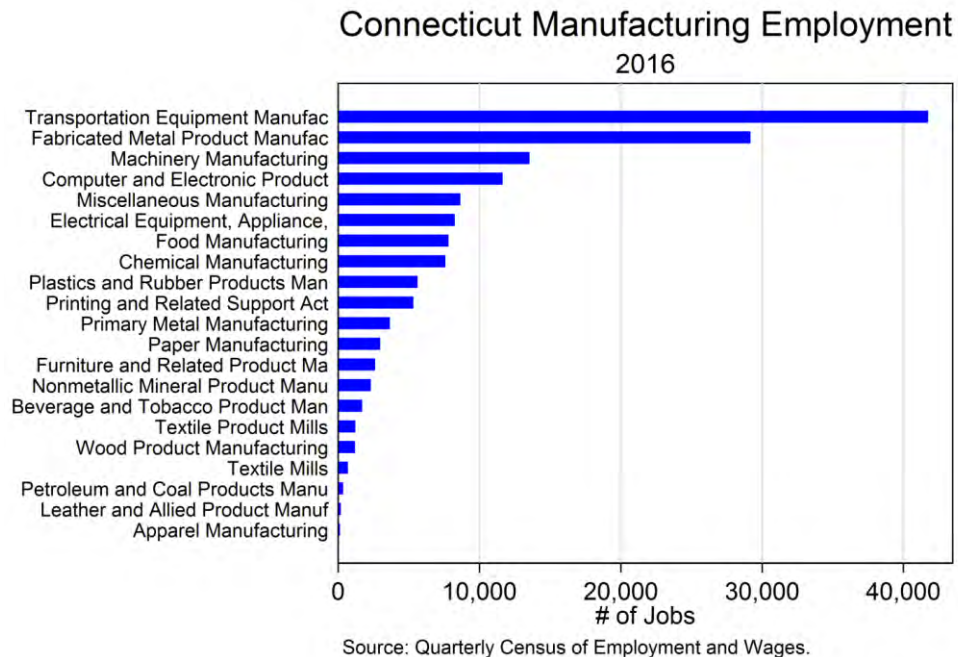
Source: Quarterly Census of Employment and Wages.
Government excludes Education, Hospitals & Gambling Industries

Manufacturing

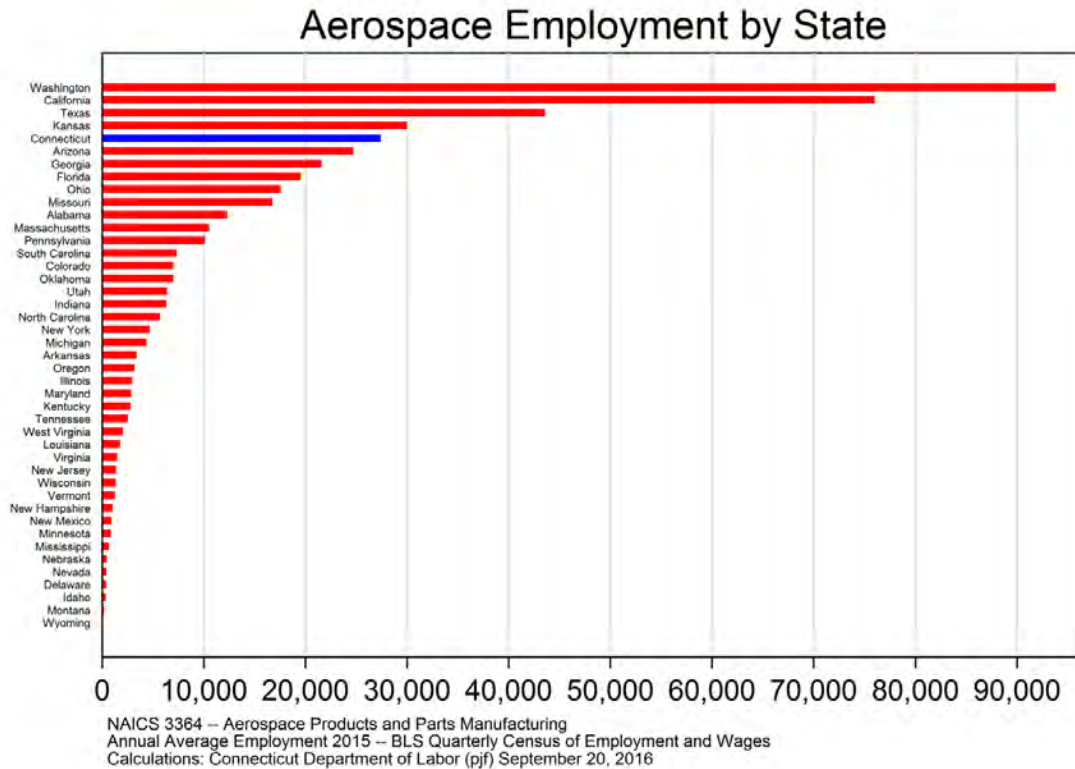
The story that most people think they know about Connecticut manufacturing employment is one of constant decline. And it's true that manufacturing has had some steep declines in the past. However, these declines ended nearly a decade ago, and a better characterization of the years since 2010 is "flat". As of March 2017, Manufacturing jobs were up from one year ago.



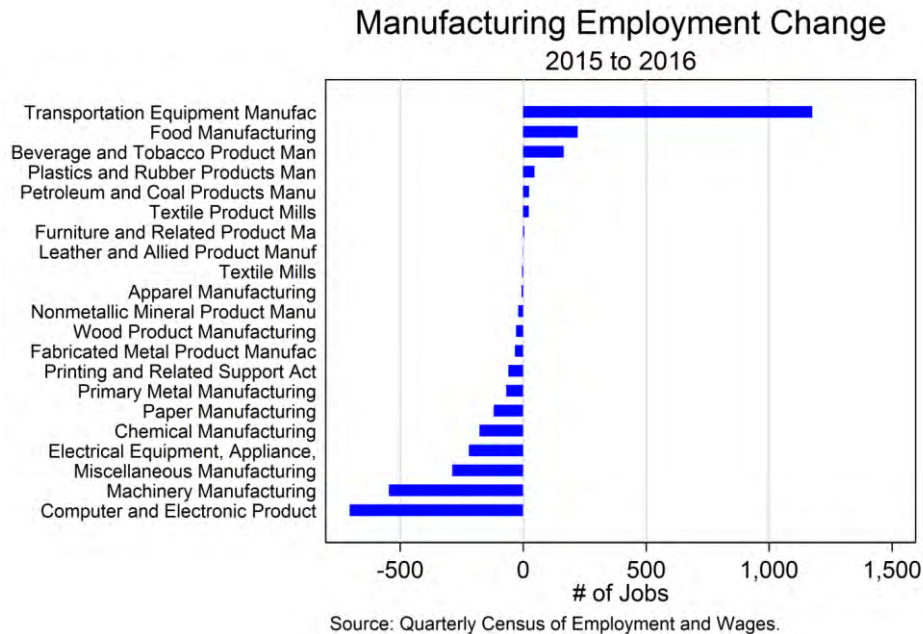
Transportation equipment is Connecticut's largest manufacturing industry – including both aerospace and shipbuilding.



Connecticut is one of the top states in term of total employment in the aerospace industry



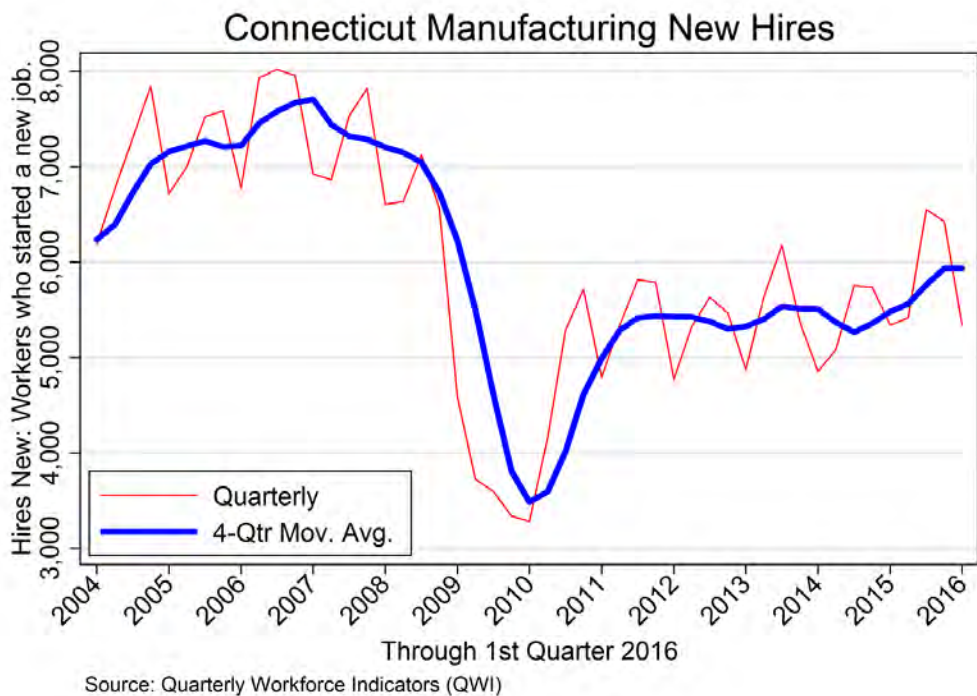
Over the past year, some manufacturing industries have expanded while others have contracted – the “flat” overall picture obscures the dynamics in the sector.



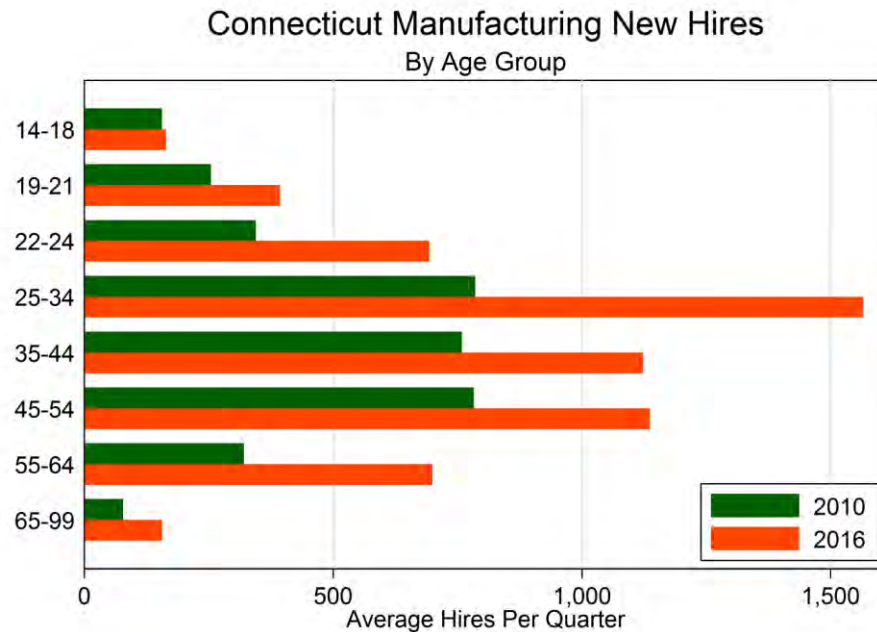
Growth in shipbuilding has been particularly strong.



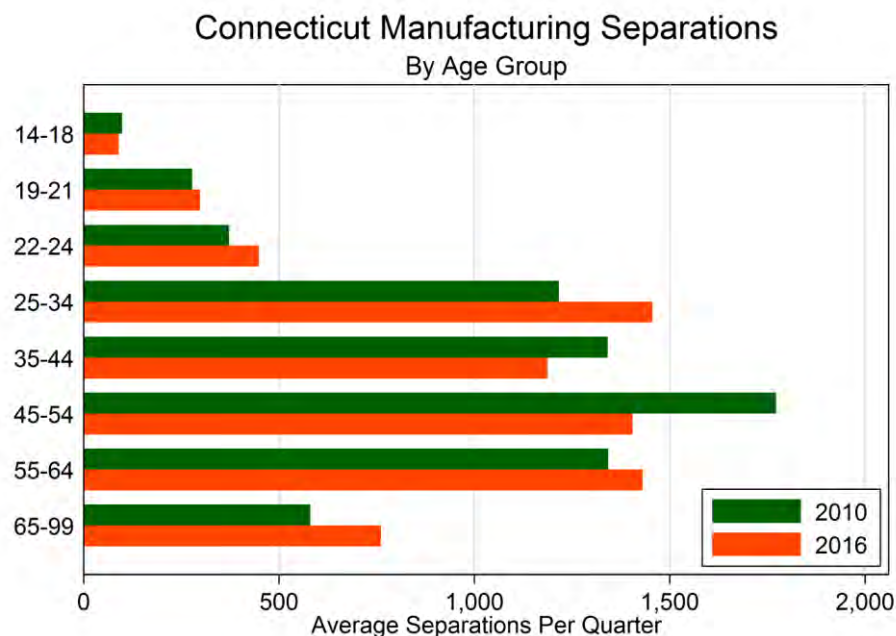
The pace of hires has almost doubled since the worst of the great recession. Most hires are to replace workers that have retired or moved on to other jobs. Approximately 6,000 workers per quarter started in a new job in manufacturing in Connecticut each quarter in the past year.



Hiring has picked up for every age group. The source of hires and separations data is the Quarterly Workforce Indicators (QWI). When we refer to “hires” in this document the concept is “stable hires”, meaning hires into a new job that lasts at least one full calendar quarter. “Separations” is separations from a job that had lasted at least one full calendar quarter.

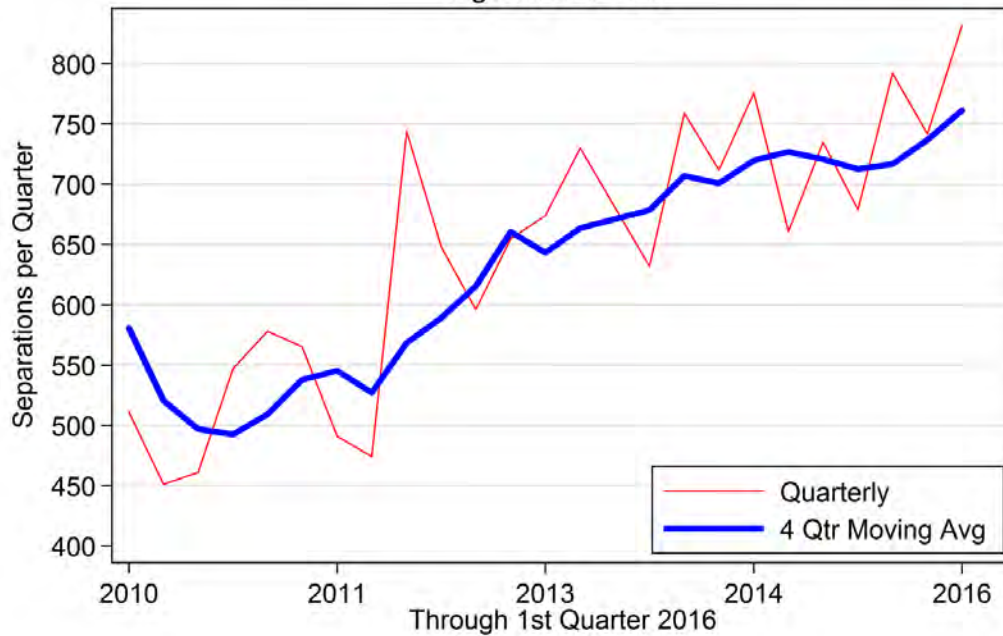


Separations have picked up for younger workers (who are more likely to switch jobs) and older workers (who may be separating into retirement). For prime-aged workers separations are down.

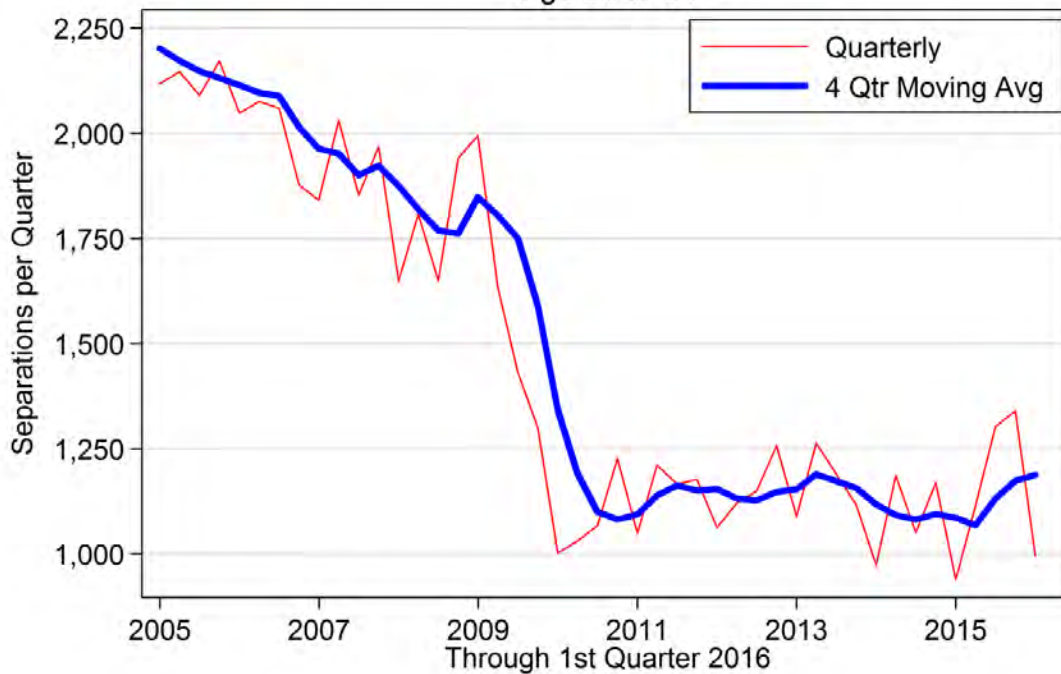


One issue in manufacturing is replacing that part of the workforce that is retiring. Separations have picked up among the oldest workers in contrast to those aged 35 to 44.

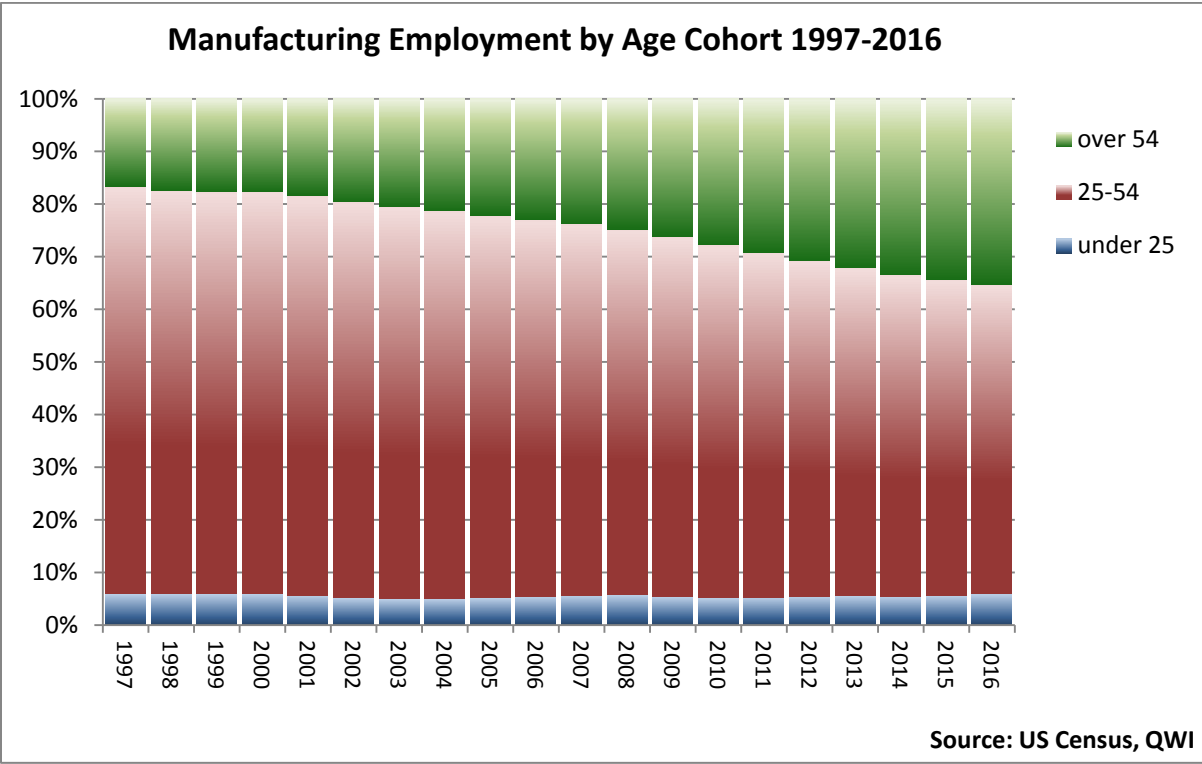
Connecticut Manufacturing Separations
Age 65 and Over



Connecticut Manufacturing Separations
Age 35 to 44

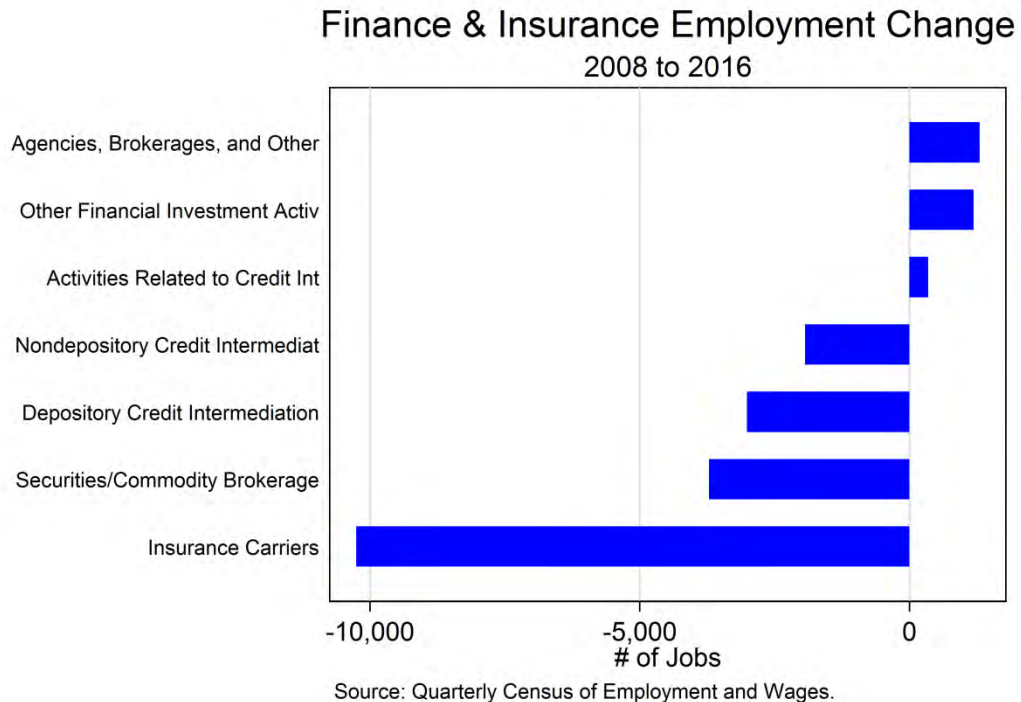
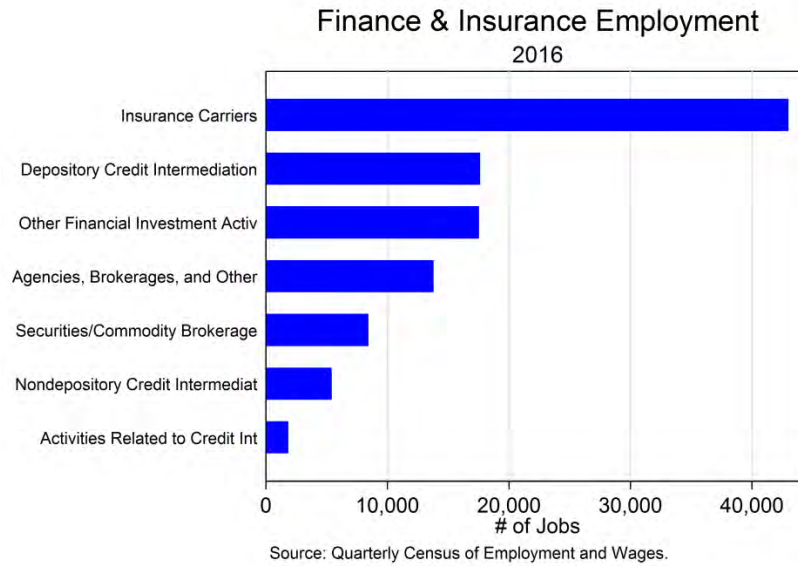


The portion of the manufacturing workforce over age 54 continues to increase suggesting that the need to replace retiring workers will only grow in coming years.

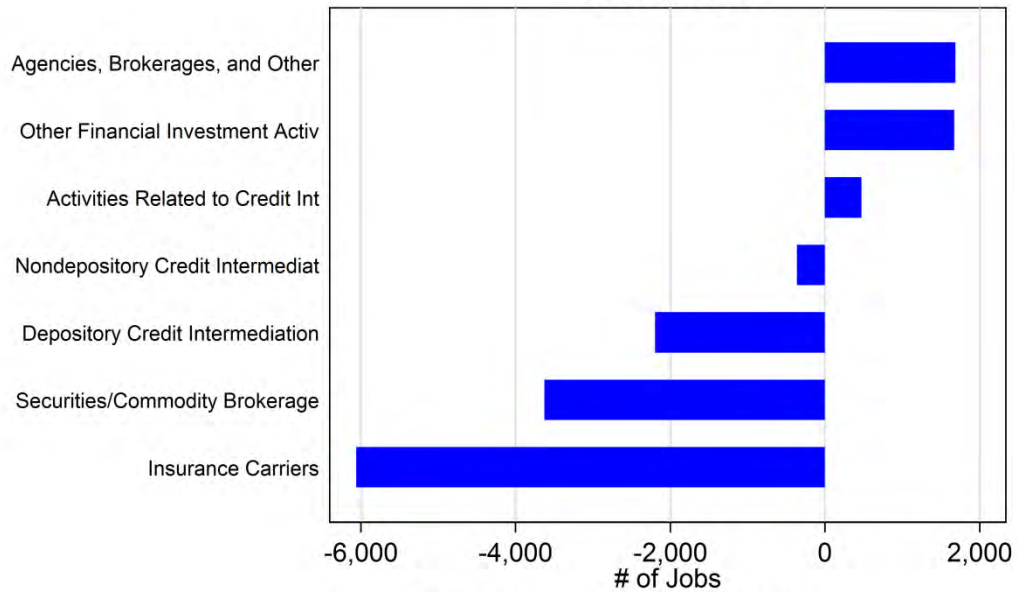


Finance & Insurance

Insurance carriers are by far the largest employers within the Finance & Insurance sector in Connecticut with more than 40,000 jobs. However, the industry has been shedding jobs in recent years, even after the end of the great recession. Other parts of the sector have added jobs since the recession ended. In the past year several industries related to securities, investments and brokerage have added employment.

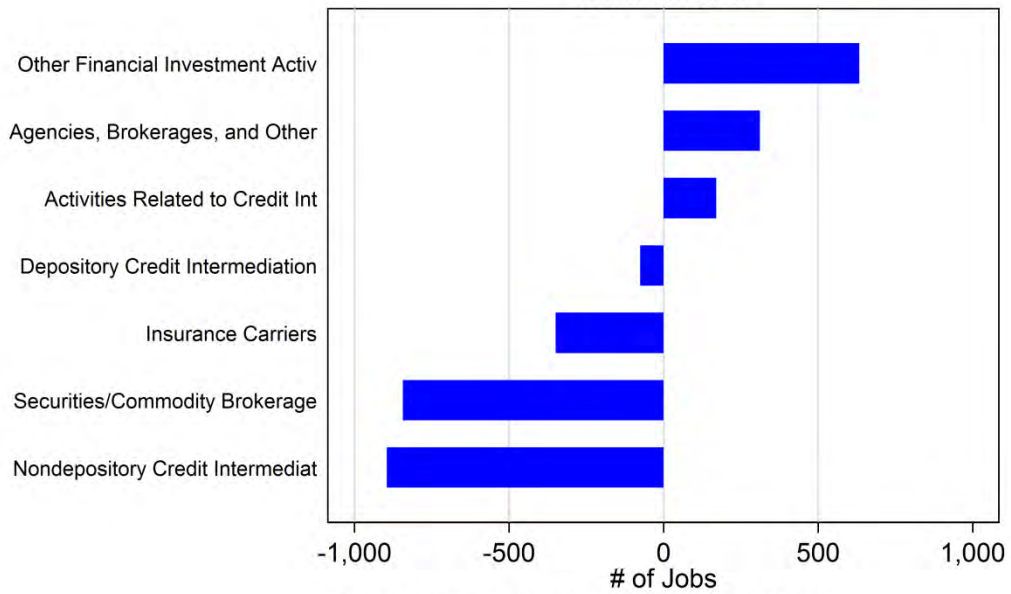


Finance & Insurance Employment Change 2010 to 2016



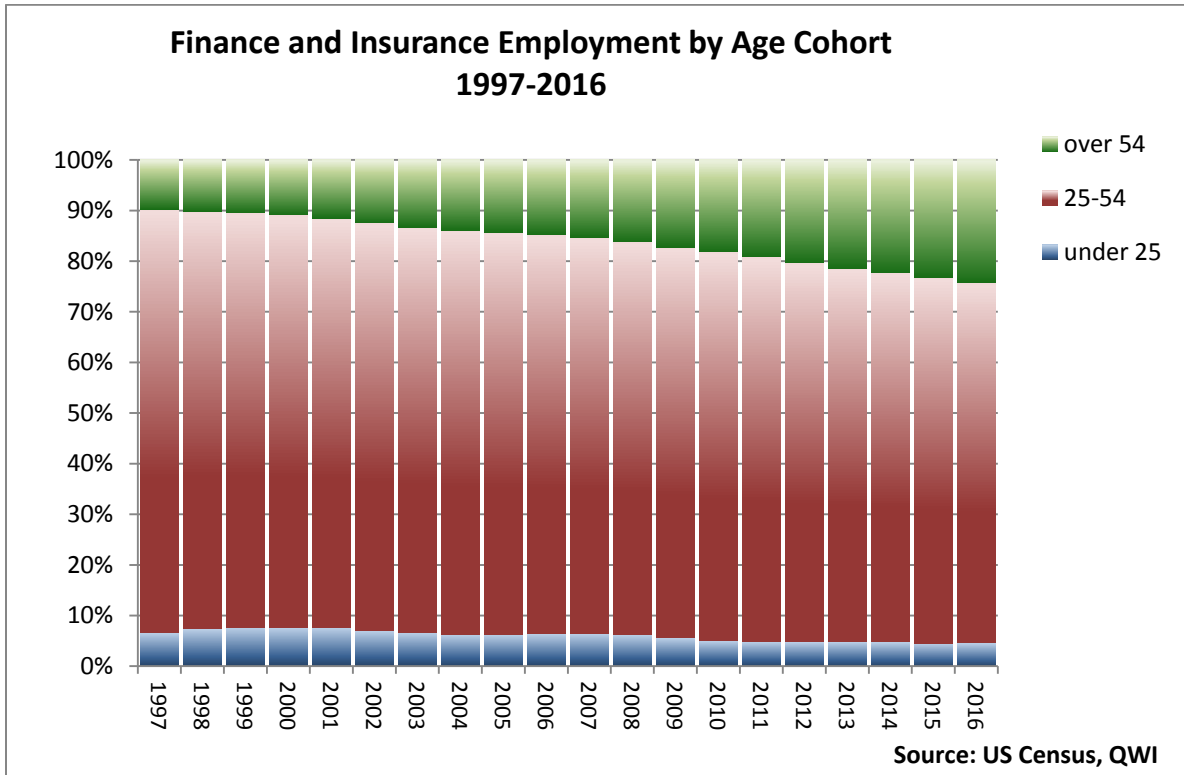
Source: Quarterly Census of Employment and Wages.

Finance & Insurance Employment Change 2015 to 2016



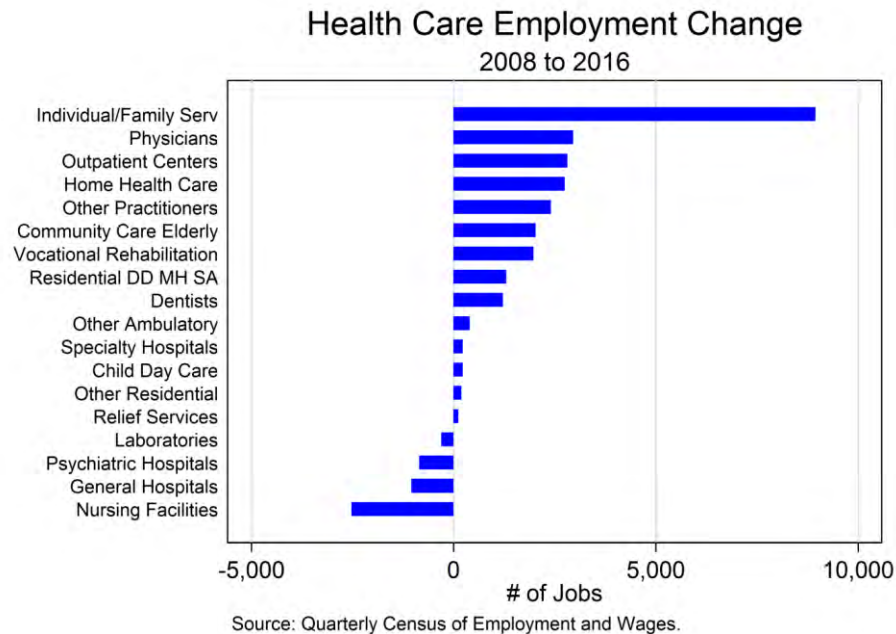
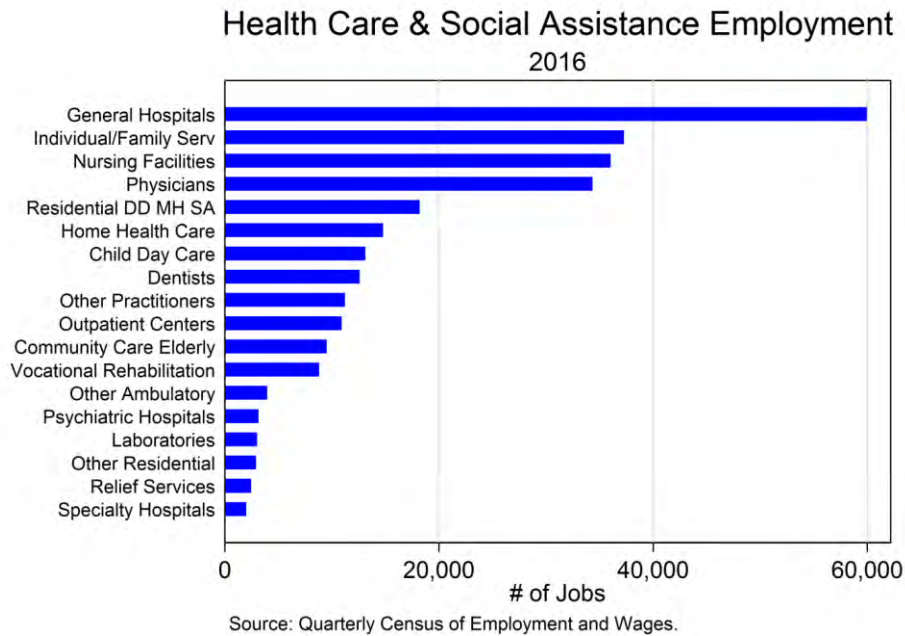
Source: Quarterly Census of Employment and Wages.

Connecticut's workforce is aging and that is reflected in the makeup of Finance and Insurance employment. While the portion of those over age 54 is smaller than in manufacturing, that group is an increasing share of Finance and Insurance Employment.

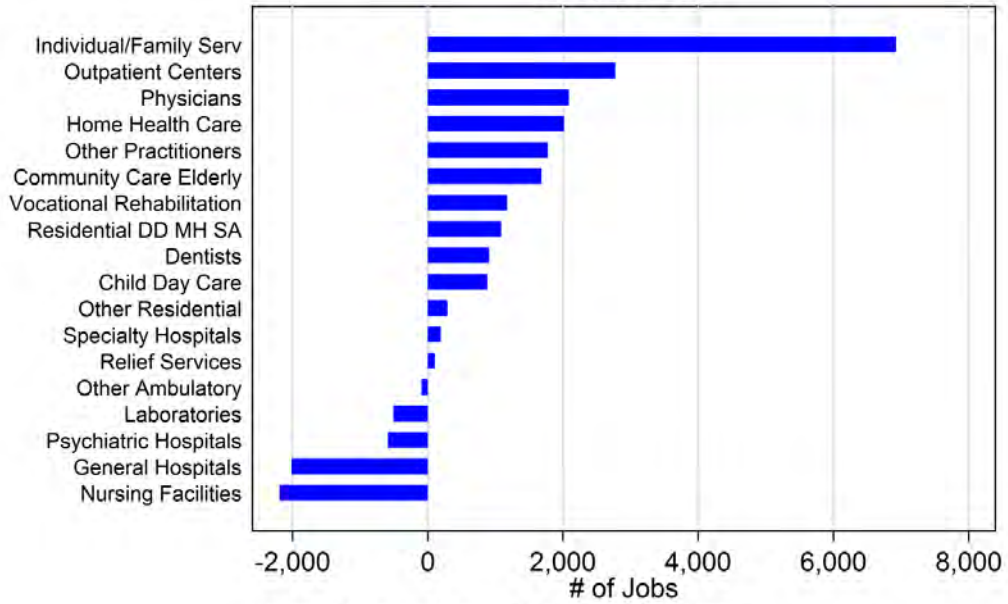


Healthcare & Social Assistance

Employment in the Health Care and Social Assistance Sector, the largest sector in the economy, has been growing before, during, and after the recession. However, the structure of the employment is changing as the large institutions (hospitals and nursing homes) have declined as some care has shifted to ambulatory and home settings. Individual and Family Services have added the most jobs since the end of the great recession in this sector.

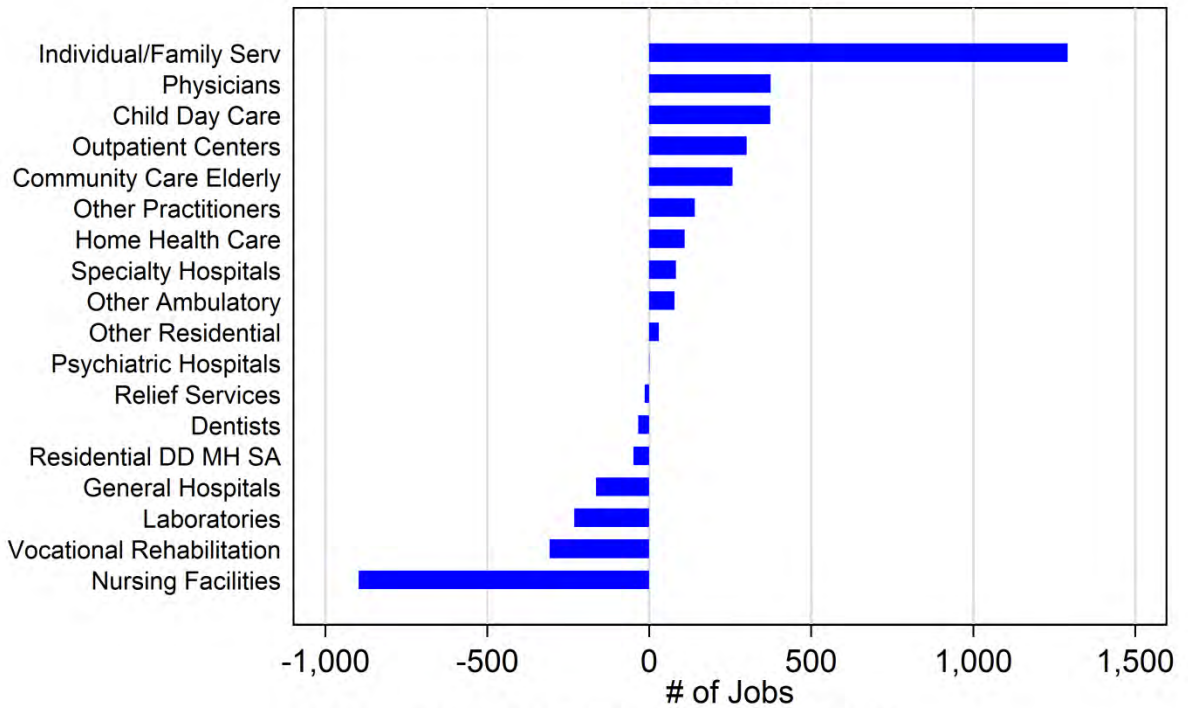


Health Care Employment Change 2010 to 2016



Source: Quarterly Census of Employment and Wages.

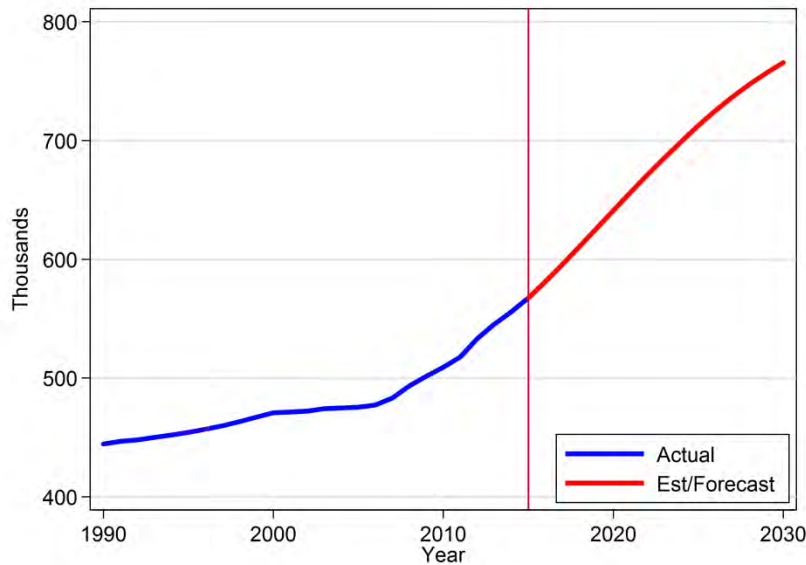
Health Care Employment Change 2015 to 2016



Source: Quarterly Census of Employment and Wages.

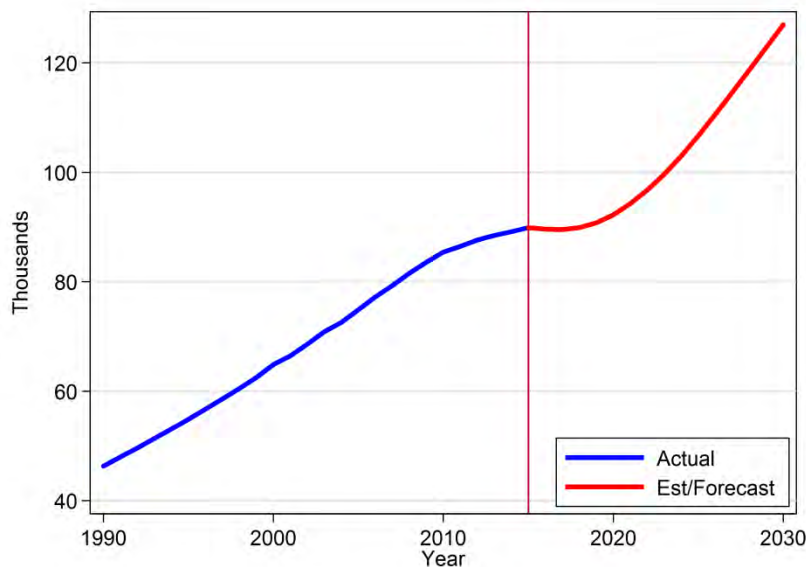
Even as the large institutions have shed jobs, the prospects for continued growth are strong given the projections for increasing elderly population, with the population age 85 and expected to grow particularly rapidly.

Connecticut Population Age 65 and over



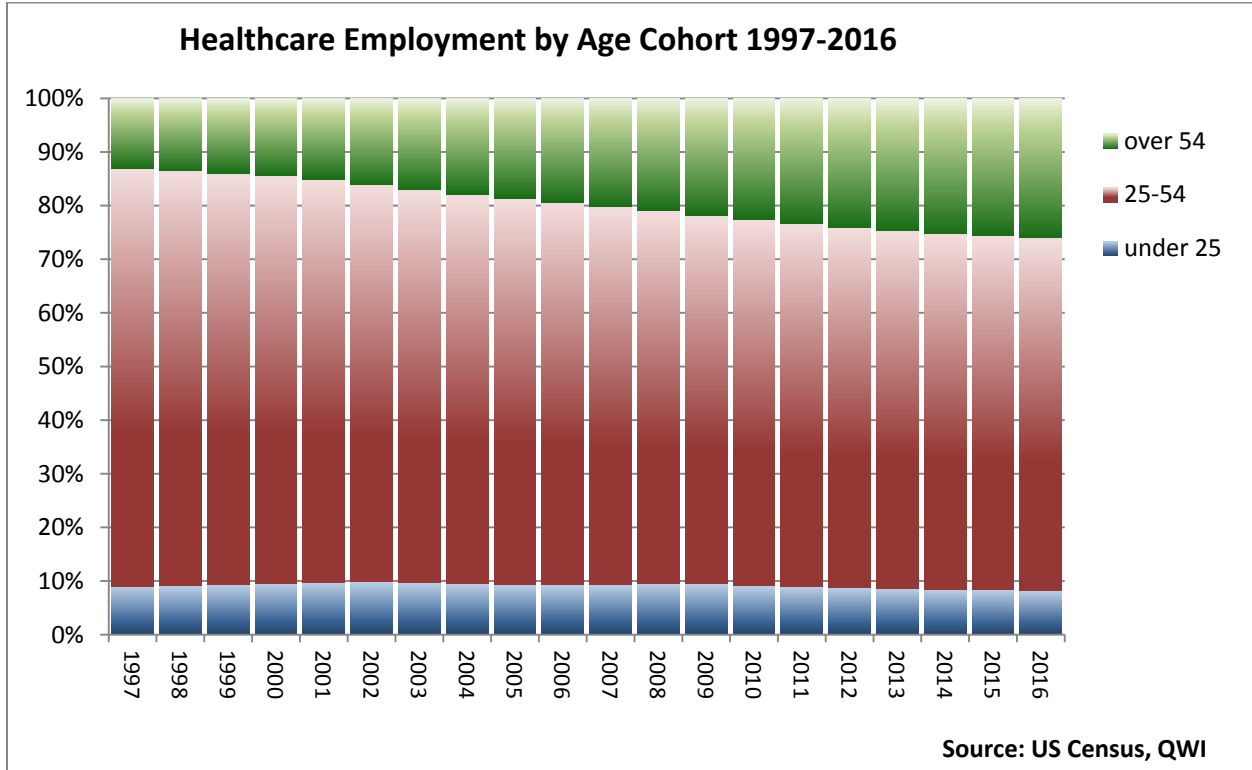
Forecast: IHS Global Insight

Connecticut Population Age 85 and over



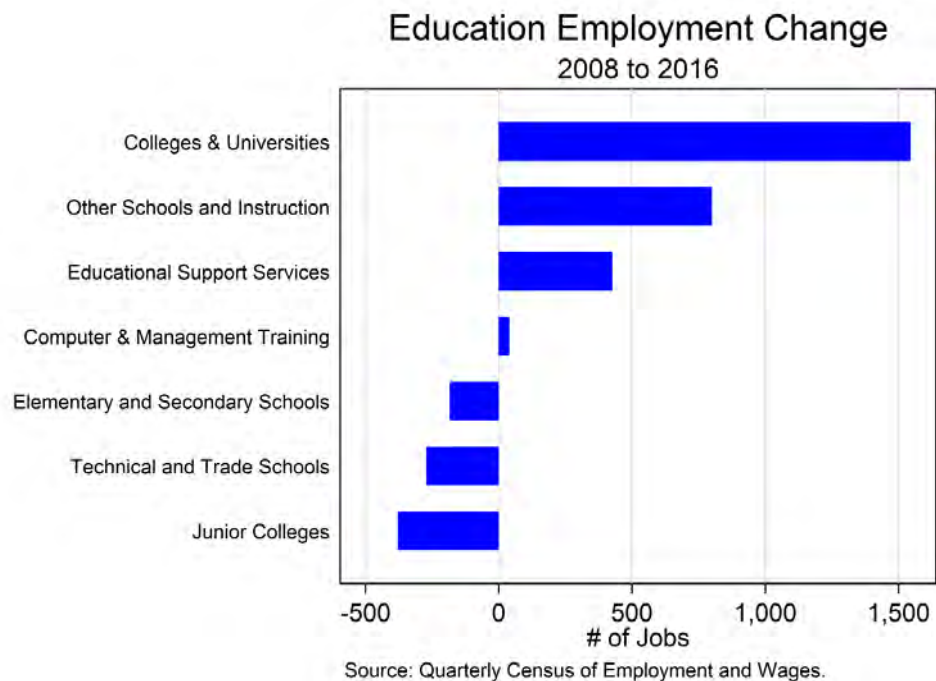
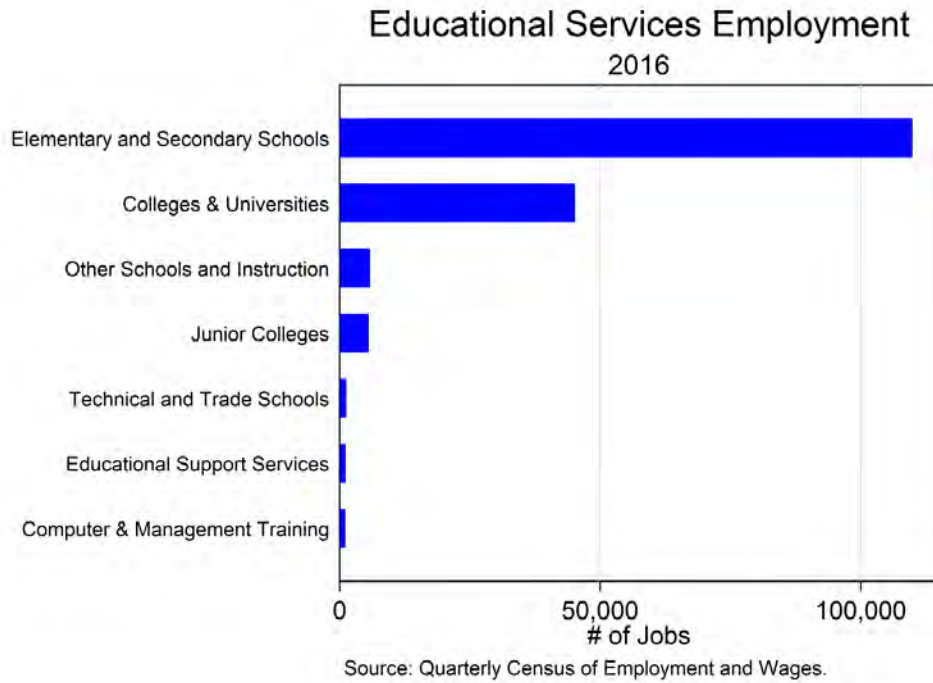
Forecast: IHS Global Insight

As with other sectors in the economy, the portion of the healthcare workforce aged 55 and over is increasing.

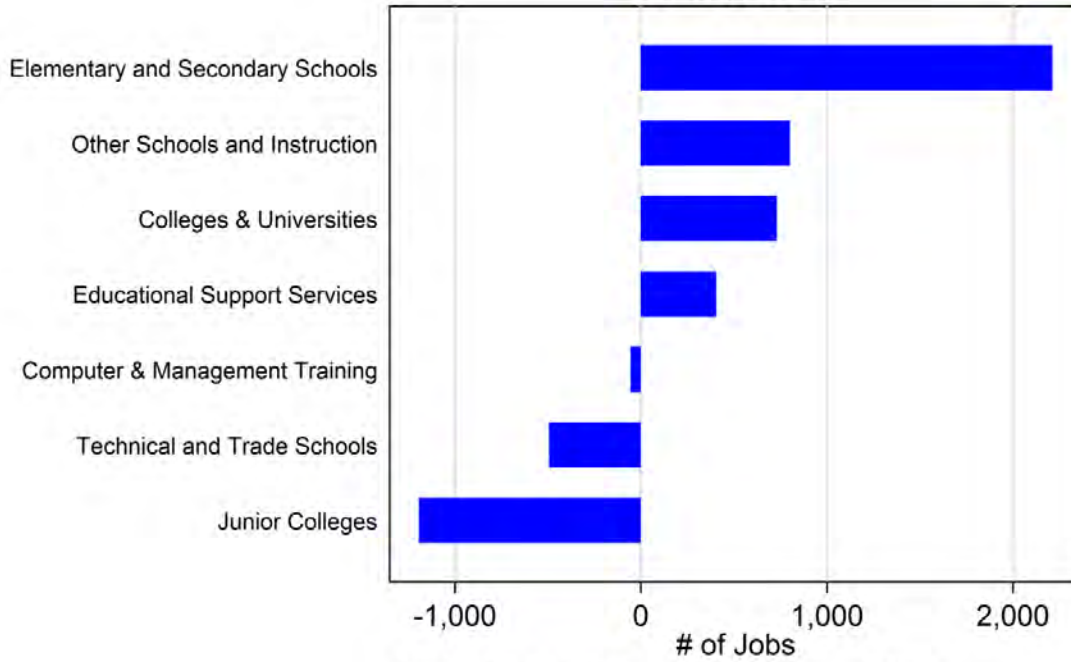


Education

Education has been a leading sector in the past few years, but demographic changes are may soon drive change. The school-aged population is declining which could lead to further decreases in employment in the education sector- in addition to those that occurred in 2016.

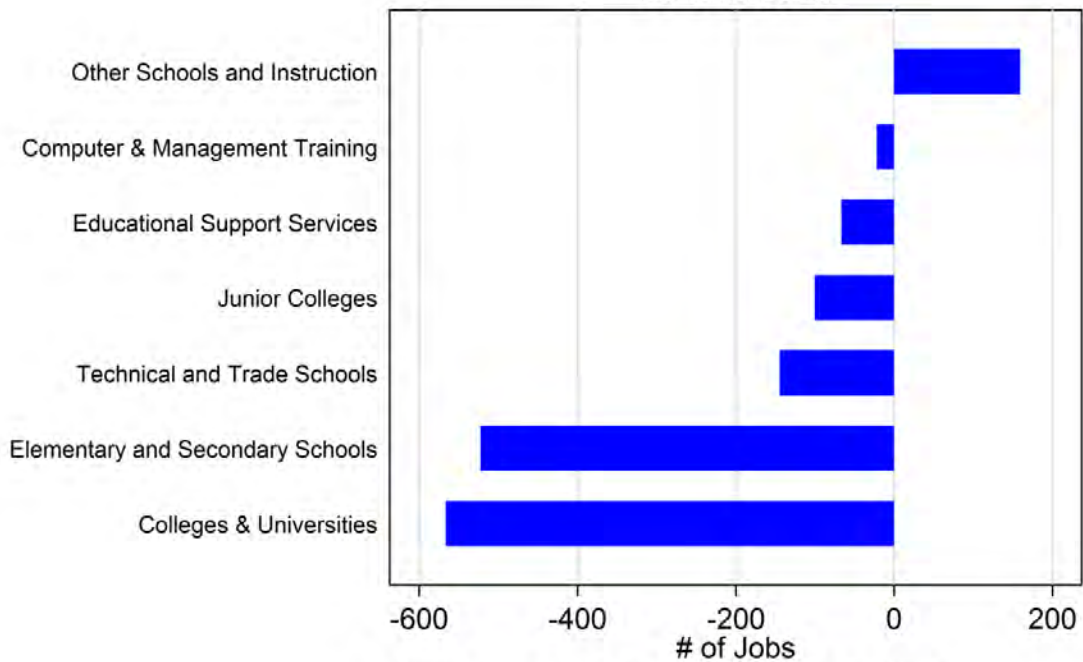


Education Employment Change 2010 to 2016



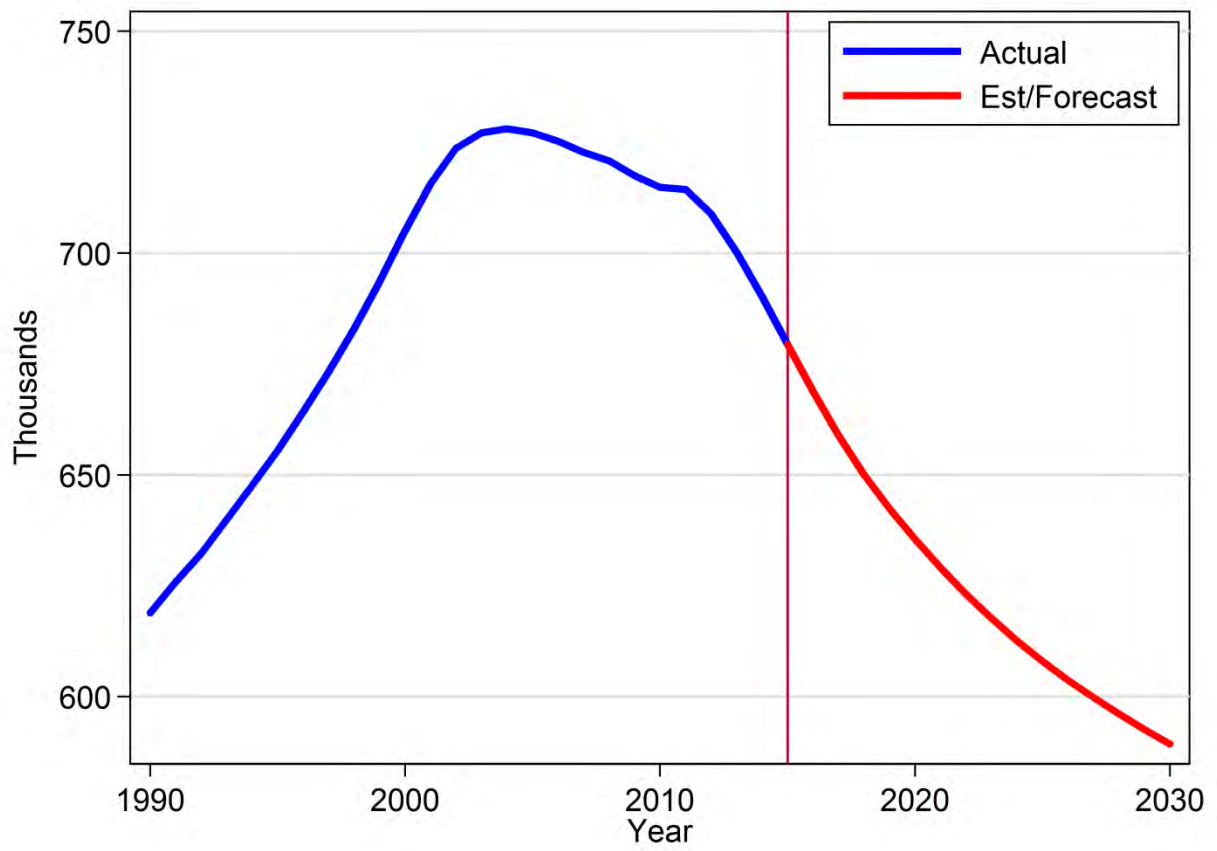
Source: Quarterly Census of Employment and Wages.

Education Employment Change 2015 to 2016



Source: Quarterly Census of Employment and Wages.

Connecticut Population Age 5 to 19



Forecast: IHS Global Insight

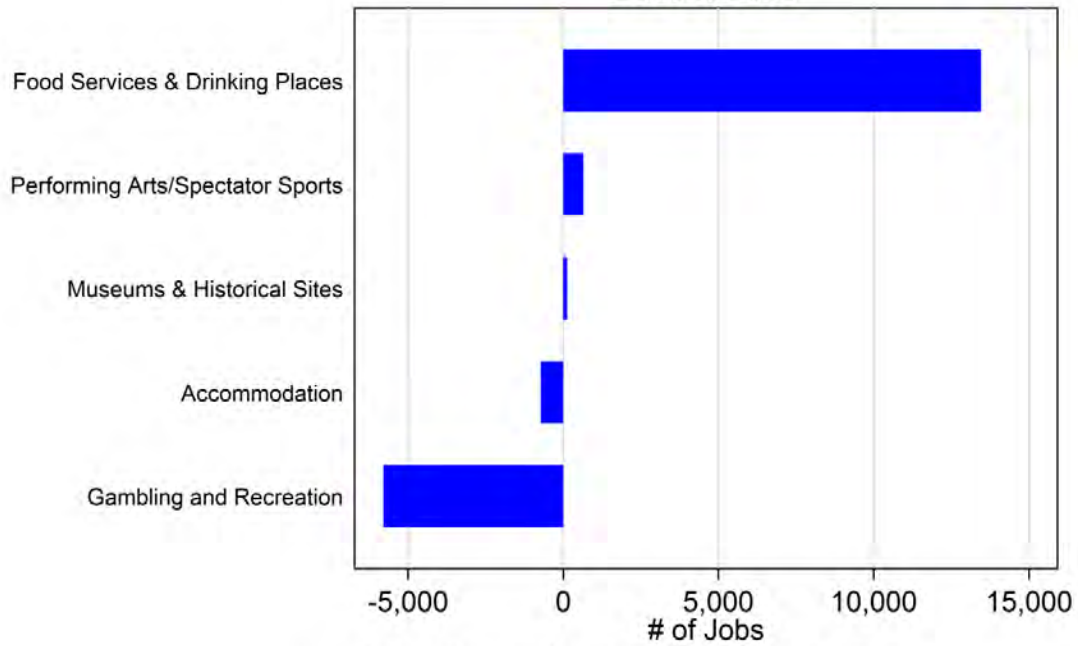
Leisure and Hospitality

Food Services and Drinking Places, mostly restaurants, are the largest industry within this sector and have added a large number of jobs. Employment is well above the pre-recession peak. Growth has been particularly strong since the end of the great recession and added 2,000 jobs in 2016 alone.

On the other hand Gambling and Recreation employment is well below its 2008 level as Connecticut's two casinos have shed jobs even though the most recent year saw a slight uptick.

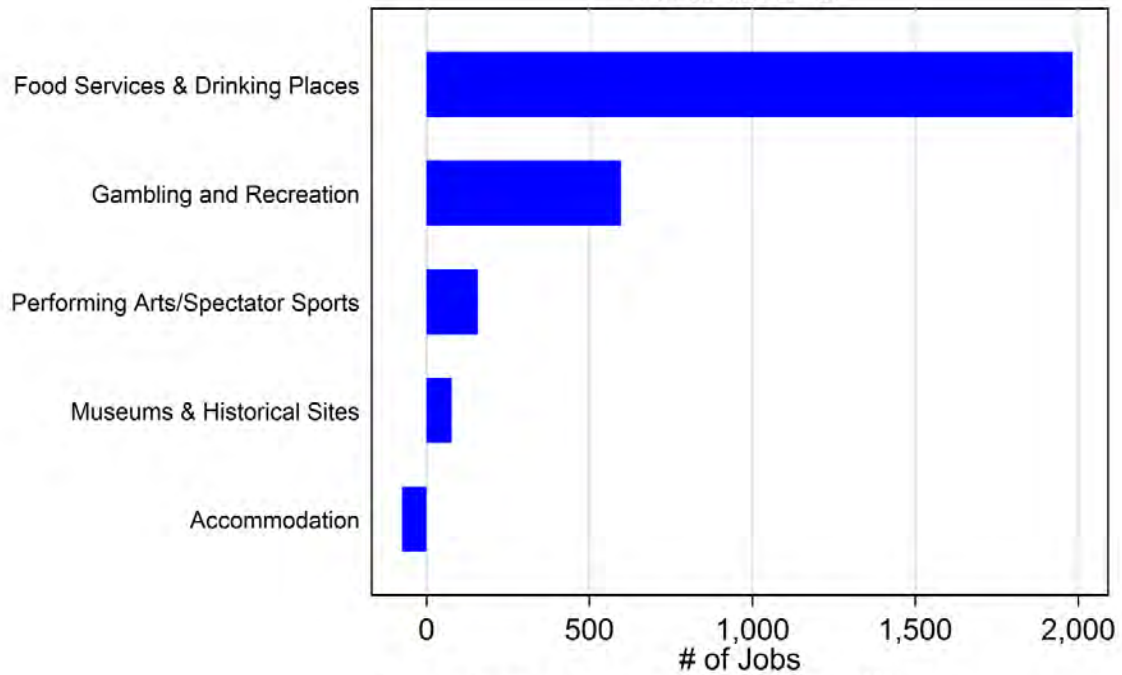


Leisure & Hosp. Employment Change 2008 to 2016



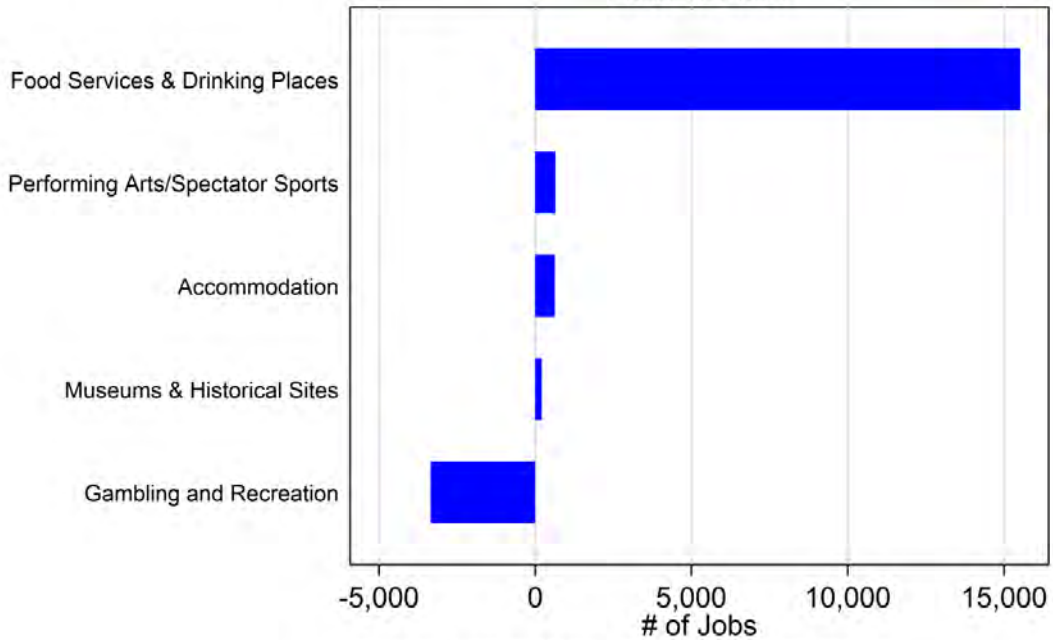
Source: Quarterly Census of Employment and Wages.

Leisure & Hosp. Employment Change 2015 to 2016



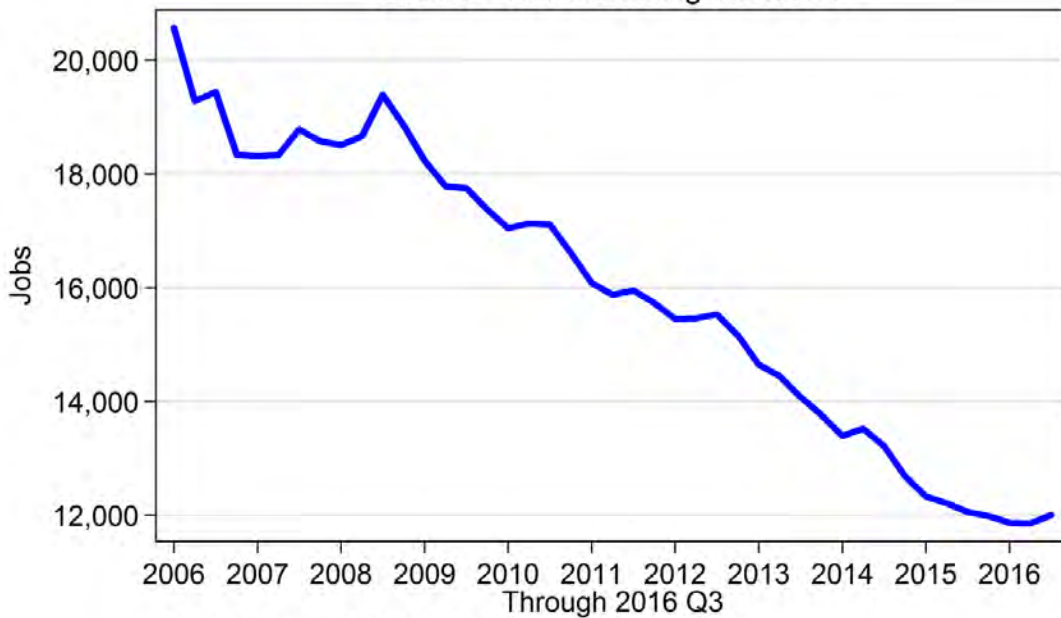
Source: Quarterly Census of Employment and Wages.

Leisure & Hosp. Employment Change 2010 to 2016



Source: Quarterly Census of Employment and Wages.

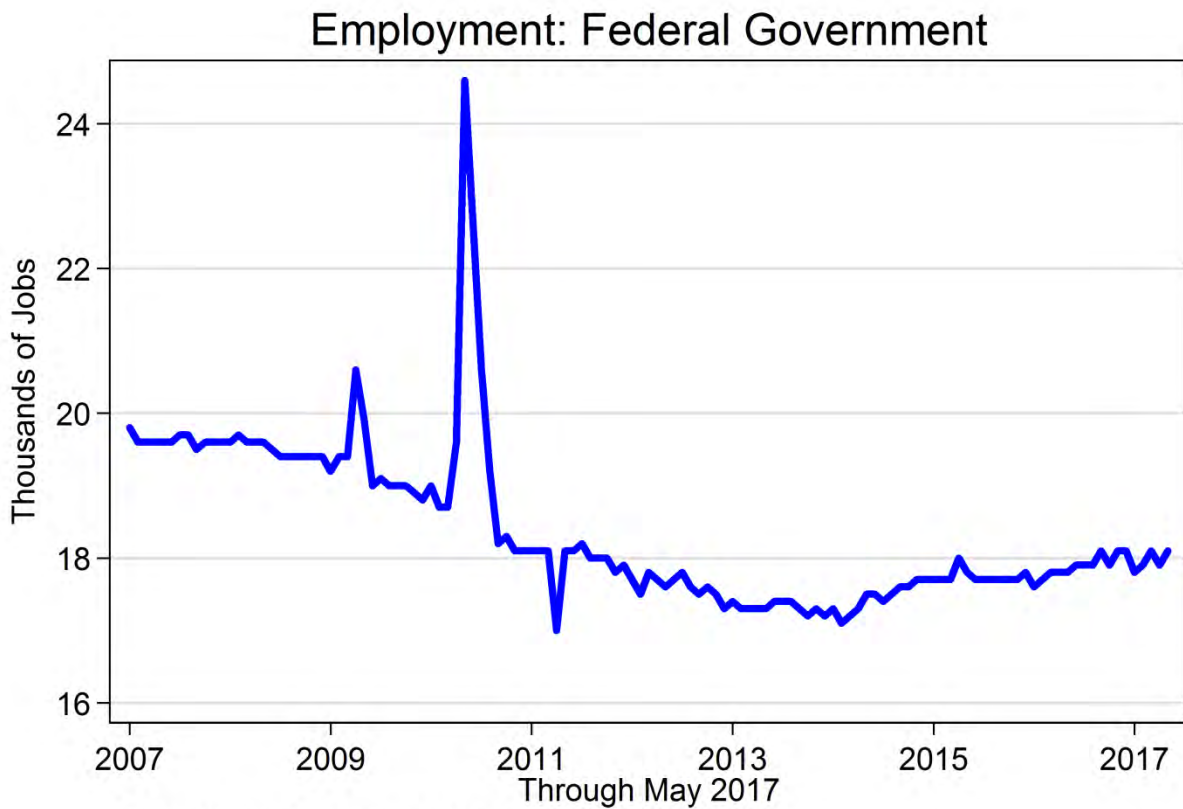
Connecticut Employment NAICS 7132: Gambling Industries



Source: Quarterly Workforce Indicators
Data significantly distorted, fuzzed value released

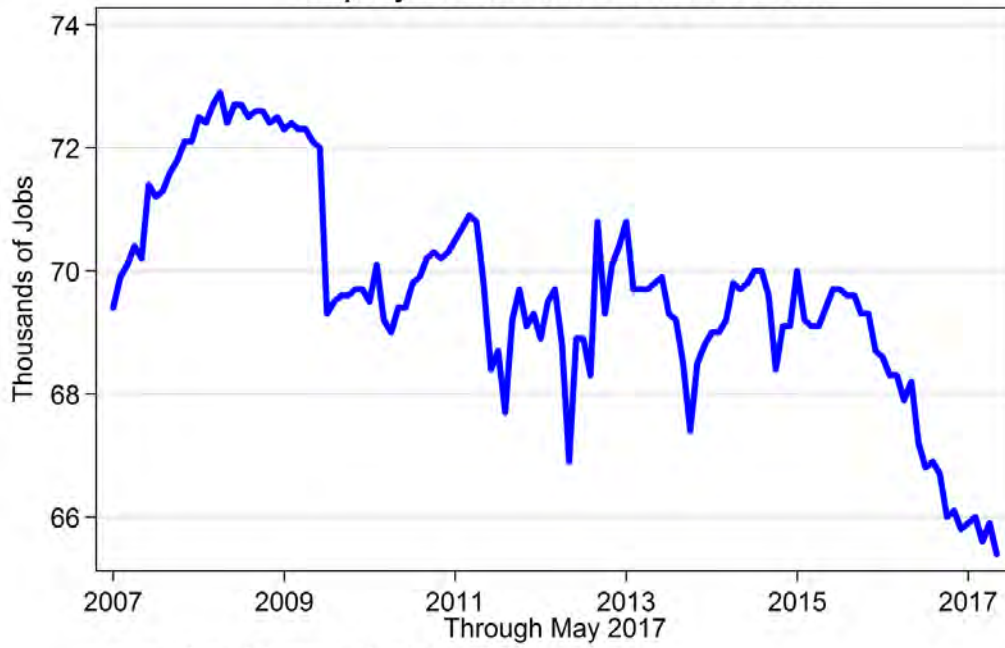
Government

Fiscal challenges have put pressure on Government employment at all levels. In the previous analysis of health care and education, no distinction was made between private and public sector. But looking at the public sector as a whole (including education, hospitals and Native American tribal government employment which includes the casinos) we see that federal government employment has remained stable while state and local government employment has been declining in recent years.



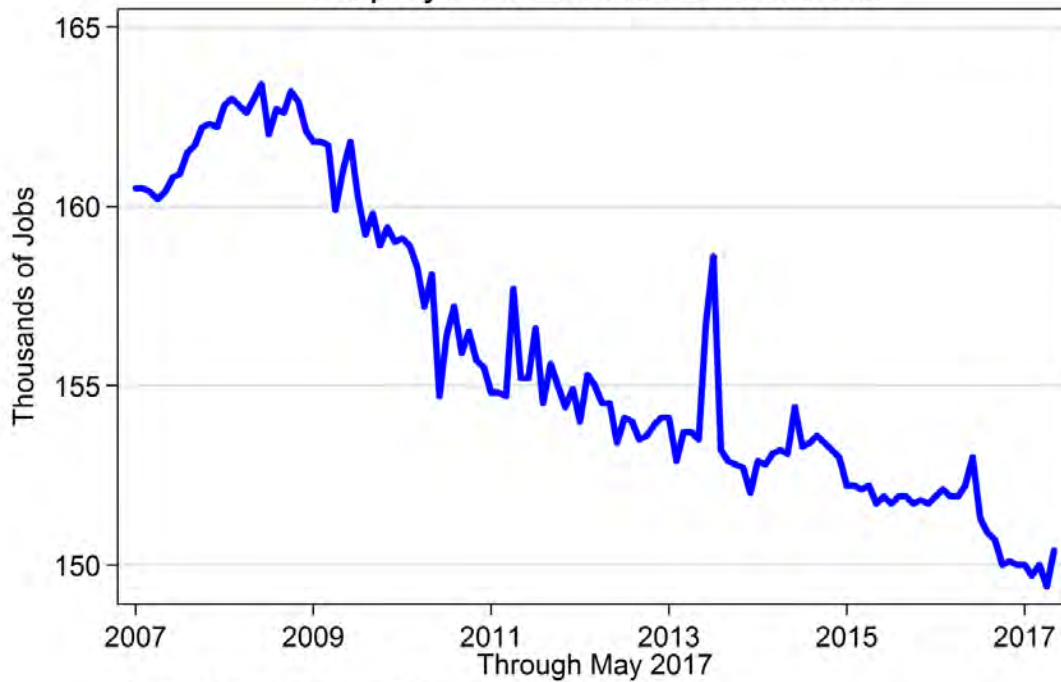
Source: Current Employment Statistics (CES)

Employment: State Government



Source: Current Employment Statistics (CES)

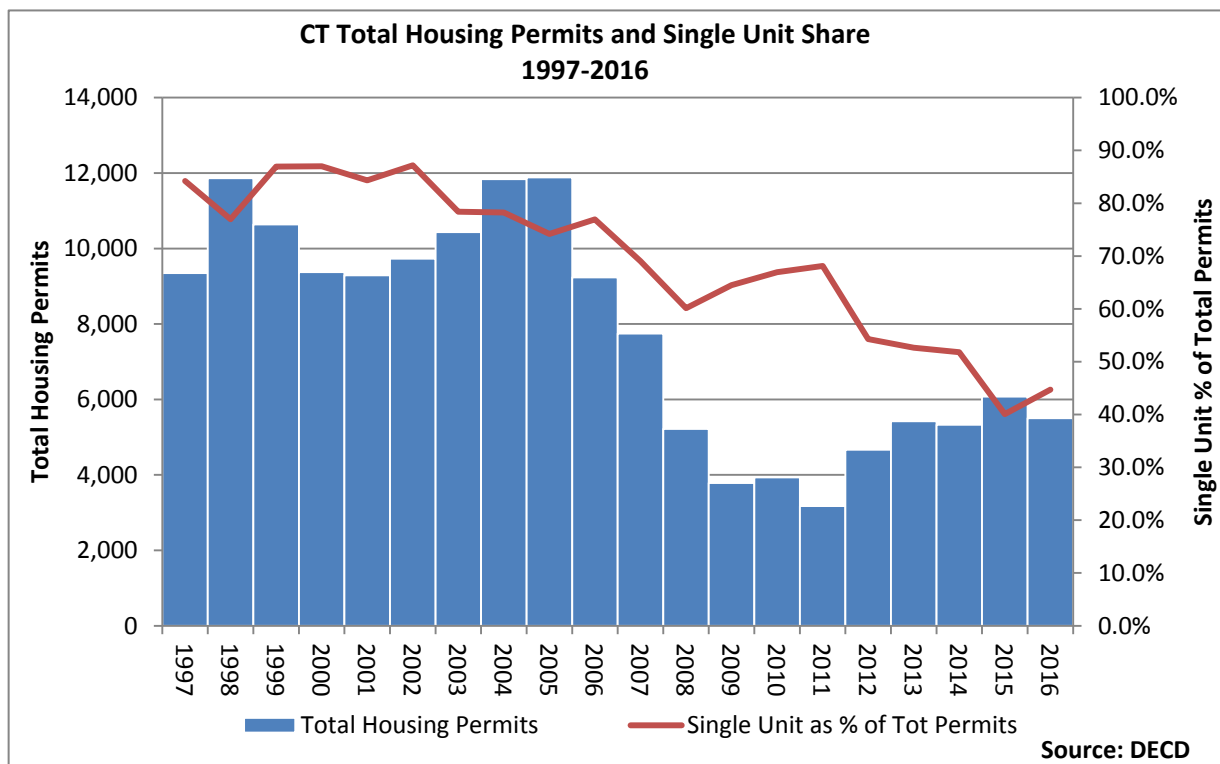
Employment: Local Government



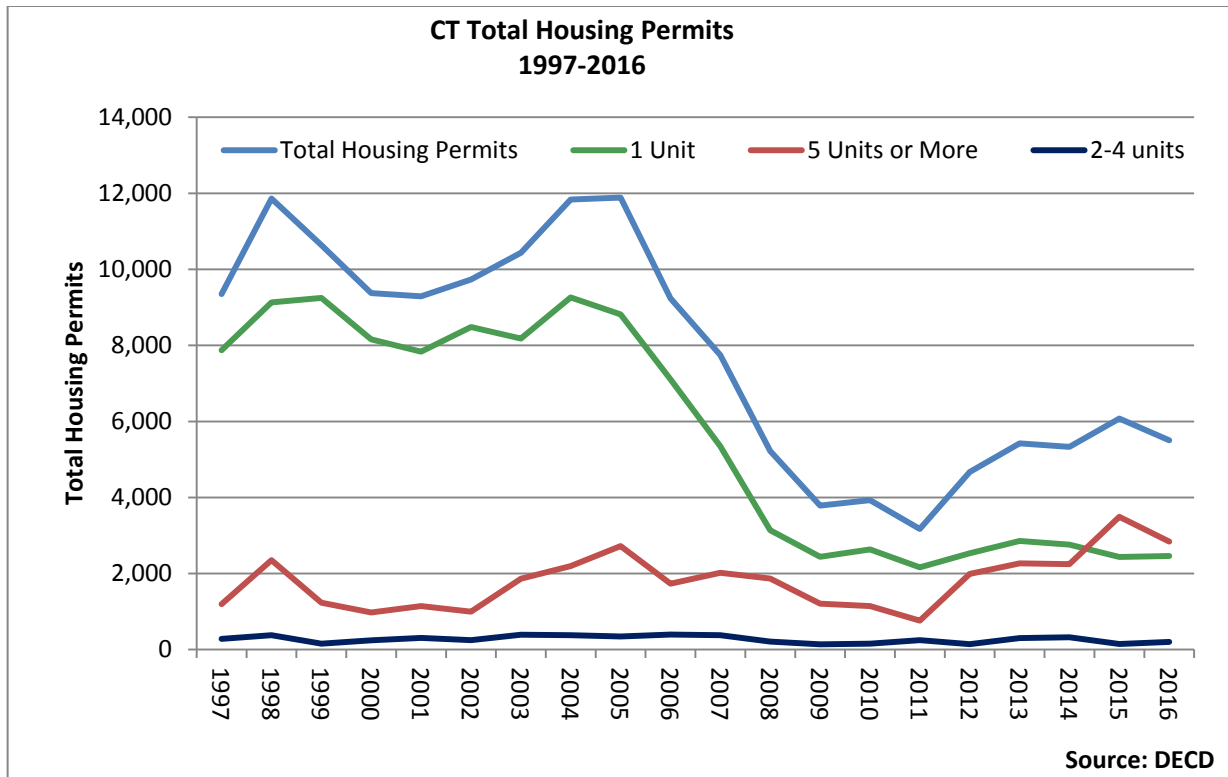
Source: Current Employment Statistics (CES)

HOUSING

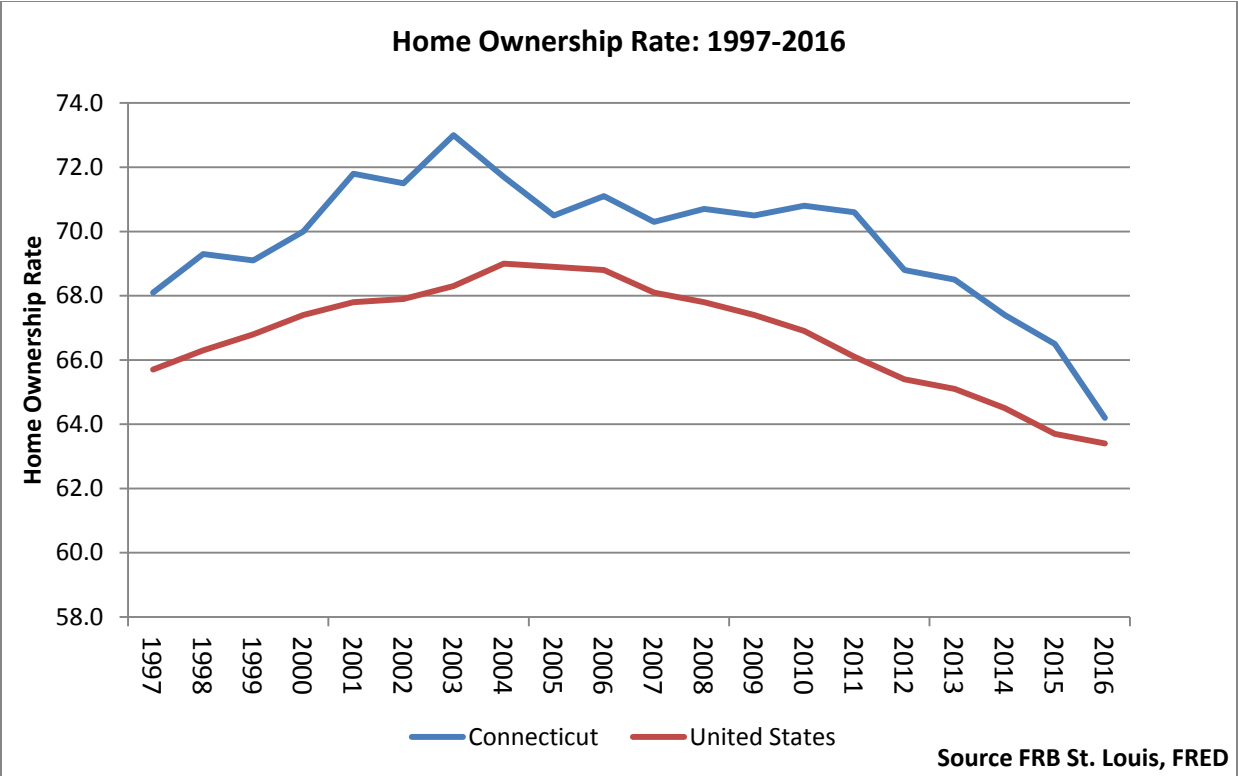
A recent shift in the type and number of housing permits has occurred in Connecticut. The state averaged about 10,500 total housing permits per year from 1997 through the peak year of 2005. During that time single unit permits were between 74 and 87 percent of total permits issued in the state. From 2006 through a 2011 trough, total permits fell to 3,173, while single unit share maintained above 60 percent. Since 2011, single unit share has fallen to a low of 48%, down from a 2002 peak of 87 percent during the height of the housing bubble.



The total number of housing permits has increased in recent years, averaging about 5,400 annually, or roughly half of what they were before the 2005 peak. The recent increase in total permits is due mostly to the increase of multi-unit housing permits, shown above to have increased significantly, up from 763 to a 2015 peak of 3,493. Corresponding single unit permits have been relatively flat, remaining under 3,000 units since 2011. In prior years, single unit permits moved largely in concert with overall levels. This shift is significant for Connecticut and is commiserate with the rising popularity of urban and mixed use development in recent years. It also has implications for consumer spending, as multi-unit housing results in less consumption than single unit housing.



This increase in the number of multi-unit housing permits in the state corresponds with a decrease in home ownership in Connecticut. Home ownership peaked in 2003 at 73 percent, significantly above the 2004 US peak of 69 percent and well above corresponding levels of neighboring New York and Massachusetts levels, due to population concentrations in their large metro areas. It has since fallen to 64.2 percent as of 2016 in Connecticut.



Connecticut Projections Through 2018

The following is an outlook on where Connecticut is headed over the next two years. The Connecticut Department of Labor’s Office of Research produces a yearly short-term employment forecast to provide insight on labor market activity. The industry and occupational forecasts are derived using data obtained from the Quarterly Census of Employment and Wages (QCEW) and the Occupational Employment Statistics (OES) programs. The current analysis covers the second quarter of 2016 to the second quarter of 2018.

During this period, overall Connecticut employment is projected to increase by 0.8% from 1,880,450 to 1,895,489 as is shown in Table X. This expected growth rate is slightly faster than the 2015-2017 rate projected last year. Although 2017 employment data isn’t yet available, early indications are that Connecticut will meet or exceed the growth projected during the previous projections cycle.

Employment Projections by Industry

Industry	2016 Q2 History	2018 Q2 Projections	Emp Change	% Change
Total All Industries	1,880,450	1,895,489	15,039	0.8%
Self Employed and Unpaid Family Workers, All Jobs	171,000	173,260	2,260	1.3%
Goods Producing	222,243	224,148	1,905	0.9%
Natural Resources and Mining	5,689	5,880	191	3.4%
Construction	60,374	61,906	1,532	2.5%
Manufacturing	156,180	156,362	182	0.1%
Service Providing	1,487,207	1,498,081	10,874	0.7%
Trade, Transportation, and Utilities	299,937	300,292	355	0.1%
Information	32,236	31,963	-273	-0.8%
Financial Activities	130,020	130,348	328	0.3%
Professional and Business Services	220,008	224,033	4,025	1.8%
Education and Health Services	471,486	477,071	5,585	1.2%
Leisure and Hospitality	169,873	170,404	531	0.3%
Other Services (except Government)	77,687	79,263	1,576	2.0%
Government	85,960	84,707	-1,253	-1.5%

Projections by Major Industry Sector

The goods producing sector is expected to increase by 0.9% through 2018Q2, slightly above the rate of the overall economy. Construction comprises about 80% of this goods producing growth forecast, with employment gains of 2.5% over the projection period. This expected growth continues the gains in construction made in recent years, and is the largest expected percent change of major industries in the state. Manufacturing is the largest goods producing industry. It is projected to experience slight employment gains, which after decades of shedding jobs represents a notable trend shift for

Connecticut.

Service providing industries represent 79% of employment in the state and are expected to increase by 0.7% through 2018Q2. The largest growth industries are Professional and Business Services and Education and Health Services which together comprise about 88 percent of service providing sector growth. Industries that are expected to shed jobs through 2018Q2 are Government (-1,253 employment, -1.5%) and Information (-328 employment, -0.8%).

Projections by Industry

The largest major sectors that show significant rate increases are Construction, Other Services, and Professional and Business Services, which we project to grow 2.5%, 2.0%, and 1.8% compared to 0.8% for total employment. After significant losses from the 2008-10 period, Construction is expected to continue the growth it has experienced in recent years. Other Services and Professional and Business Services both currently have employment levels above those experienced in 2008 and are expected to continue to add jobs.

Major industries that are projected to have negative annual average growth rates are Government, down 1.5 percent, and Information, down 0.9 percent over two years. The expected losses in Government and Information employment continue previous declines.

Though slower than the economy overall, the increases projected for Manufacturing and Trade, Transportation, and Utilities represent positive turns for sectors that sustained large losses during the last recession.

Education and Health Services, the largest combined industry sector in the economy, is expected to continue growth that has persisted throughout the business cycle. However, there are some warning signs that some industries within this sector are facing challenging times. As shown in Figure 5, Education employment is expected to dip slightly as demographic and fiscal challenges put pressure on public and private education at all levels. At the same time, the largest institutions providing health care (hospitals and residential nursing facilities) are projected to grow at or below the rate of the overall economy – a major change from the years when health care far outstripped overall economic growth.

Projections by Occupation

As noted above, overall employment is projected to grow by 15,039 from 2016Q2 through 2018Q2. The major categories with the largest employment change are Personal Care and Service (+2,206), Healthcare Practitioners and Technical (+1,967), and Management (+1,563). The four occupational groups that are projected to decline over the two year projections period are Office and Administrative Support (-1,111), Production (-343), Sales and Related (-80), and Education, Training, and Library (-77) occupations. The expected slowdown in Education, Training, and Library occupations is the result of population declines in the school-aged population.

Occupational Group	2016 Q2 History	2018 Q2 Projections	Emp Change	% Change
Total, All Occupations	1,880,450	1,895,489	15,039	0.8%
Management	144,084	145,647	1,563	1.1%
Business and Financial Operations	104,139	105,461	1,322	1.3%
Computer and Mathematical	48,782	50,067	1,285	2.6%
Architecture and Engineering	36,231	36,712	481	1.3%
Life, Physical, and Social Science	14,615	14,824	209	1.4%
Community and Social Service	41,159	41,960	801	1.9%
Legal	20,948	20,997	49	0.2%
Education, Training, and Library	135,782	135,705	-77	-0.1%
Arts, Design, Entertainment, Sports, and Media	38,677	38,943	266	0.7%
Healthcare Practitioners and Technical	111,092	113,059	1,967	1.8%
Healthcare Support	53,709	54,781	1,072	2.0%
Protective Service	34,251	34,320	69	0.2%
Food Preparation and Serving Related	138,546	139,678	1,132	0.8%
Building and Grounds Cleaning and Maintenance	79,420	80,754	1,334	1.7%
Personal Care and Service	94,812	97,018	2,206	2.3%
Sales and Related	185,618	185,538	-80	0.0%
Office and Administrative Support	270,748	269,637	-1,111	-0.4%
Farming, Fishing, and Forestry	4,052	4,130	78	1.9%
Construction and Extraction	74,551	75,932	1,381	1.9%
Installation, Maintenance, and Repair	56,172	56,522	350	0.6%
Production	96,810	96,467	-343	-0.4%
Transportation and Material Moving	96,252	97,337	1,085	1.1%

Level of Educational Attainment	2016 Q2 History	2018 Q2 Projections	Emp Change	% Change
Total All Industries	1,880,450	1,895,489	15,039	0.8%
No formal educational credential	455,895	460,129	4,234	0.9%
High school diploma or equivalent	648,054	650,708	2,654	0.4%
Postsecondary non-degree award	113,881	115,292	1,411	1.2%
Some college, no degree	51,300	50,971	-329	-0.6%
Associate's degree	43,841	44,548	707	1.6%
Bachelor's degree	466,561	471,439	4,878	1.0%
Master's degree	38,311	38,944	633	1.7%
Doctoral or professional degree	62,393	63,241	848	1.4%

Each occupation is assigned an education value based on the minimum education necessary to enter an occupation. Figure 6 shows the breakdown of occupational projections by education value. Over the two years that span the projections period, 56% of job growth will be in occupations that require a credential or degree beyond high school with the largest increase in occupations that require at least a bachelor's degree to enter the occupation. Occupations requiring a master's, doctorate, or professional degree are expected to increase significantly faster than overall employment.

Conclusion

Seven years after the end of the "Great Recession", Connecticut's employment is still growing and is projected to grow over the next two years. The outlined population and demographic trends will require policy and organizational adjustments to mitigate these labor force changes. These labor force trends will continue to have a significant impact on growth in the state, which remains slower than the national average and in our neighboring states. The mix of growth is also changing. Health and Education, which have been major sources of job creation in recent years are slowing or even contracting. On the other hand, manufacturing is projected to add jobs after decades of decline. While there will be opportunities at all educational levels there will continue to be demand for educated workers.

Data Limitations

The forecasts presented in this report have been carefully prepared to ensure accuracy, but by nature are subject to error. Therefore, the information is best used as an indicator of employment trends, rather than an exact count of employment. The projections are made by assuming a full-employment economy and cannot predict unforeseen events or actions.

Additional information on labor market information is available on the Office of Research website: <http://www1.ctdol.state.ct.us/lmi/index.asp>. For more detail on the short-term industry and occupational projections, visit: <https://www.projectionscentral.com/Projections/ShortTerm>.