

CONNECTICUT'S SHORT-TERM EMPLOYMENT OUTLOOK 2018-2020

*Connecticut
Department of Labor*

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***Connecticut's
Short-Term Employment Outlook:
2018-2020***

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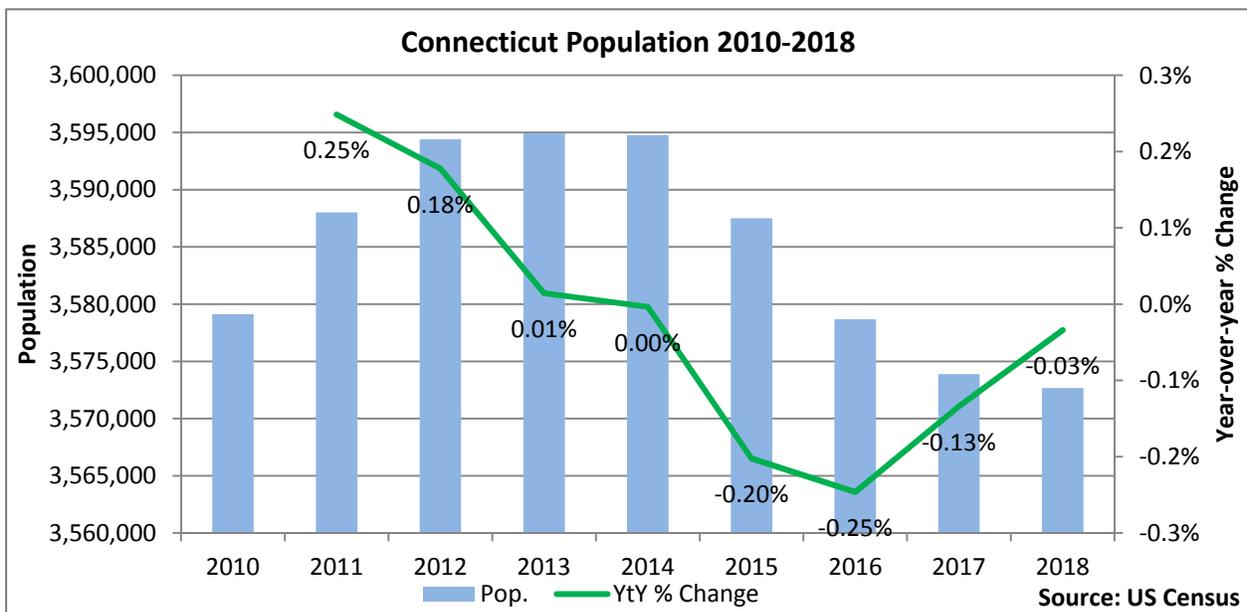
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The Connecticut Labor Market

POPULATION CHANGE 2010-2018

Population change since 2010 has been a challenge for Connecticut’s economic recovery. Since 2010, statewide population peaked in 2013 at 3.59 million and has fallen by 22,250 or 0.6% in the intervening five years through 2018. The figure below illustrates statewide population change over the period and additionally shows how year-over-year declines have slowed in recent years. During the past five years, the US has grown 3.5%. This growth has been driven by the South and West regions of the country respectively up 5.4% and 5.1%. The Midwest and Northeast grew by 1.1% and 0.4% respectively, indicating that slow or negative growth is characteristic of those regions of the country.



CONNECTICUT COMPARED TO OTHER STATES

During the past five years, Connecticut was one of six states with negative population growth and had the fourth largest losses after Illinois, New York, and West Virginia. The following table also shows 2017-18 change for those 5-year declining states which contextualizes Connecticut’s population decline-slowdown relative to other states that also lost population since Connecticut’s population peaked.

States with 5 Year Population Loss 2013-18

State	2013-18		2017-18	
	#	%	#	%
Illinois	-157,189	-1.2%	-45,116	-0.35%
New York	-85,834	-0.4%	-48,510	-0.25%
West Virginia	-48,041	-2.6%	-11,216	-0.62%
Connecticut	-22,250	-0.6%	-1,215	-0.03%
Wyoming	-4,386	-0.8%	-1,197	-0.21%
Mississippi	-2,267	-0.1%	-3,133	-0.10%

Source: US Census Bureau

CONNECTICUT POPULATION CHANGE BY DEMOGRAPHIC GROUP

Though the state population since 2013 has declined with slowing percent losses in recent years, that topline trend isn't uniform among every demographic group. Examining available data helps illustrate the continual change of the state population and contextualizes the labor market demographic shifts overviewed in subsequent sections of this outlook.

CT Race and Ethnic Group Change 2013-2018

Group	2013		2018		2013-2018 Change	
	#	%	#	%	#	%
Total All Groups Combined	3,596,080	100.0%	3,572,665	100.0%	-23,415	-0.65%
Non-Hispanic All Races	3,068,919	85.3%	2,982,856	83.5%	-86,063	-2.8%
White	2,530,638	70.4%	2,408,190	67.4%	-122,448	-4.8%
Black	370,212	10.3%	387,134	10.8%	16,922	4.6%
American Indian	9,383	0.3%	9,566	0.3%	183	2.0%
Asian or Pacific Islander	158,686	4.4%	177,966	5.0%	19,280	12.1%
Hispanic All Races	527,161	14.7%	589,809	16.5%	62,648	11.9%
White	442,825	12.3%	495,214	13.9%	52,389	11.8%
Black	64,098	1.8%	72,365	2.0%	8,267	12.9%
American Indian	12,505	0.3%	13,972	0.4%	1,467	11.7%
Asian or Pacific Islander	7,733	0.2%	8,258	0.2%	525	6.8%

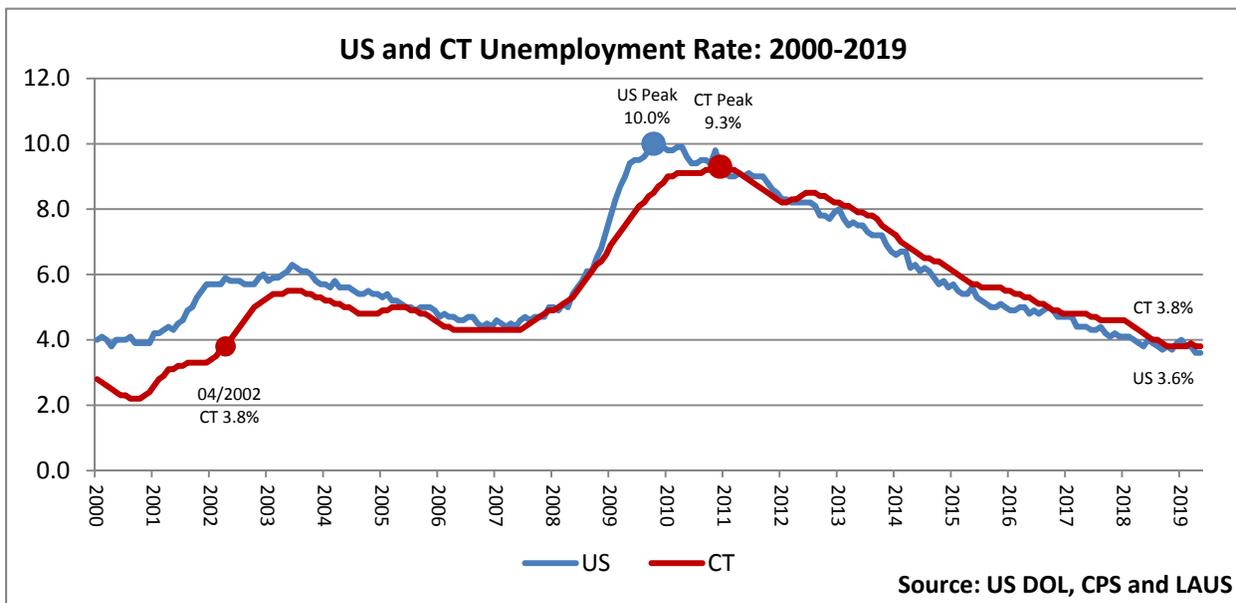
Source: CT Department of Public Health

From 2013 to 2018, Connecticut has had pronounced Hispanic and non-White population growth and declines in the Non-Hispanic White population. Note that the data-source is from the CT Department of Public Health and top-line estimates differ slightly from aforementioned US Census figures.

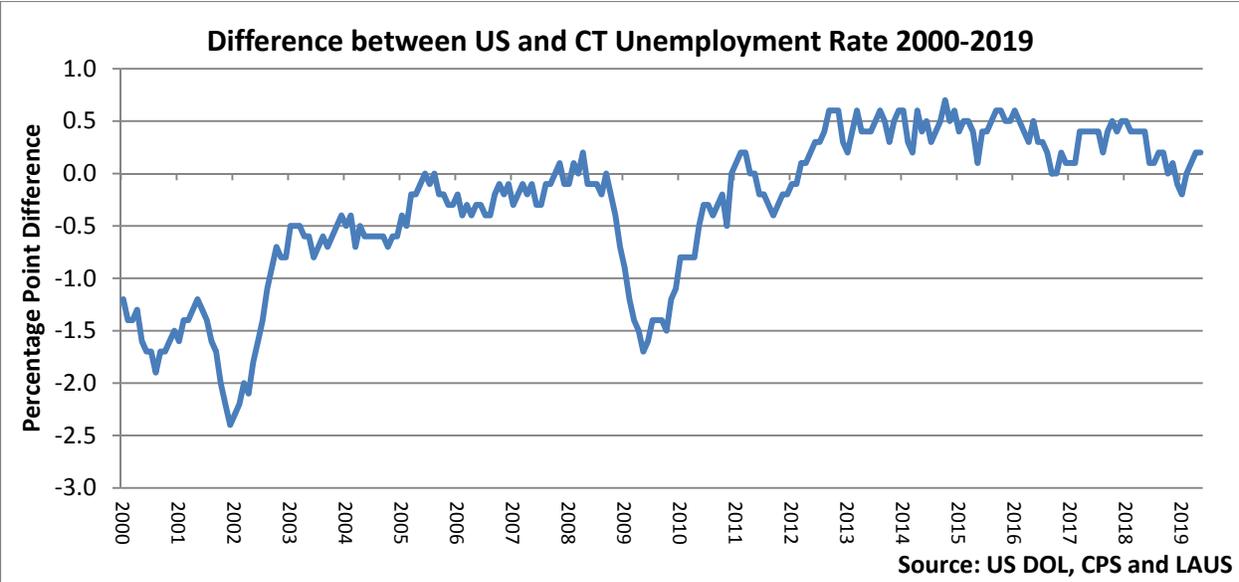
LABOR MARKET

Unemployment Rate

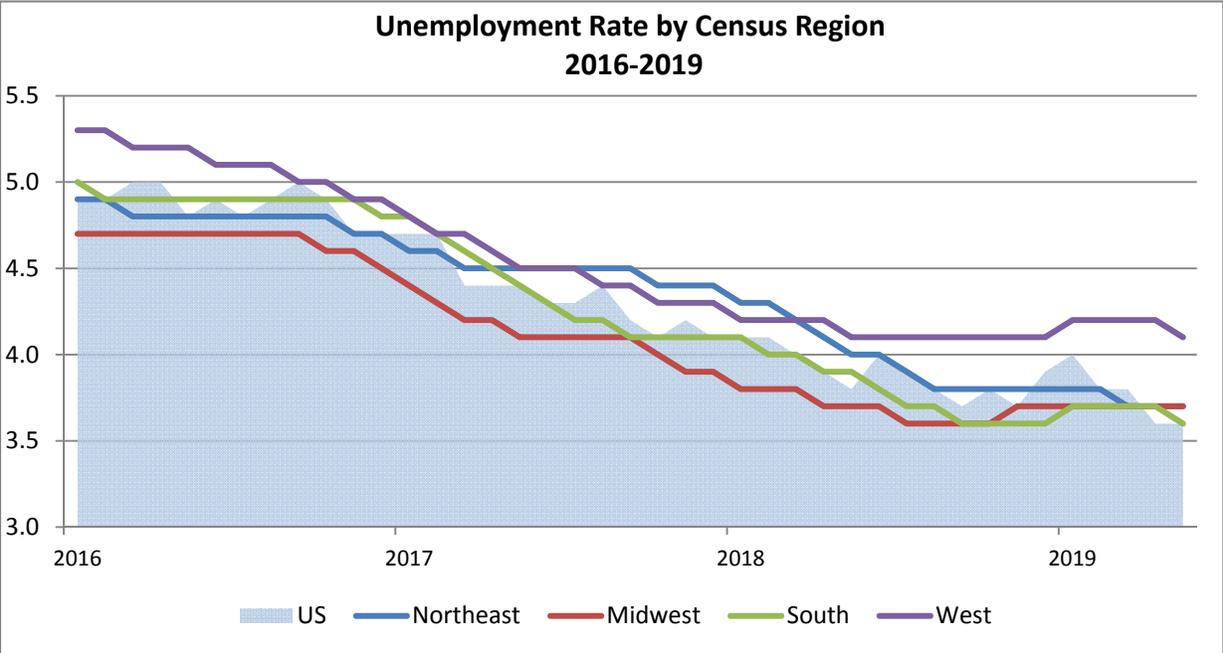
Unemployment rates are one of the most commonly reported measures of overall economic performance. The US unemployment rate climbed precipitously from levels below 5 percent in late 2007 to a peak of 10 percent in October 2009, the highest level since 1982. It has since fallen to 3.6 percent as of May 2019, a low last seen in 1969. Connecticut's unemployment rate peaked a year later in November 2010 at 9.3 percent and has since fallen to 3.8 percent as of May, 2019. Connecticut's unemployment rate is at its lowest level since early 2002.



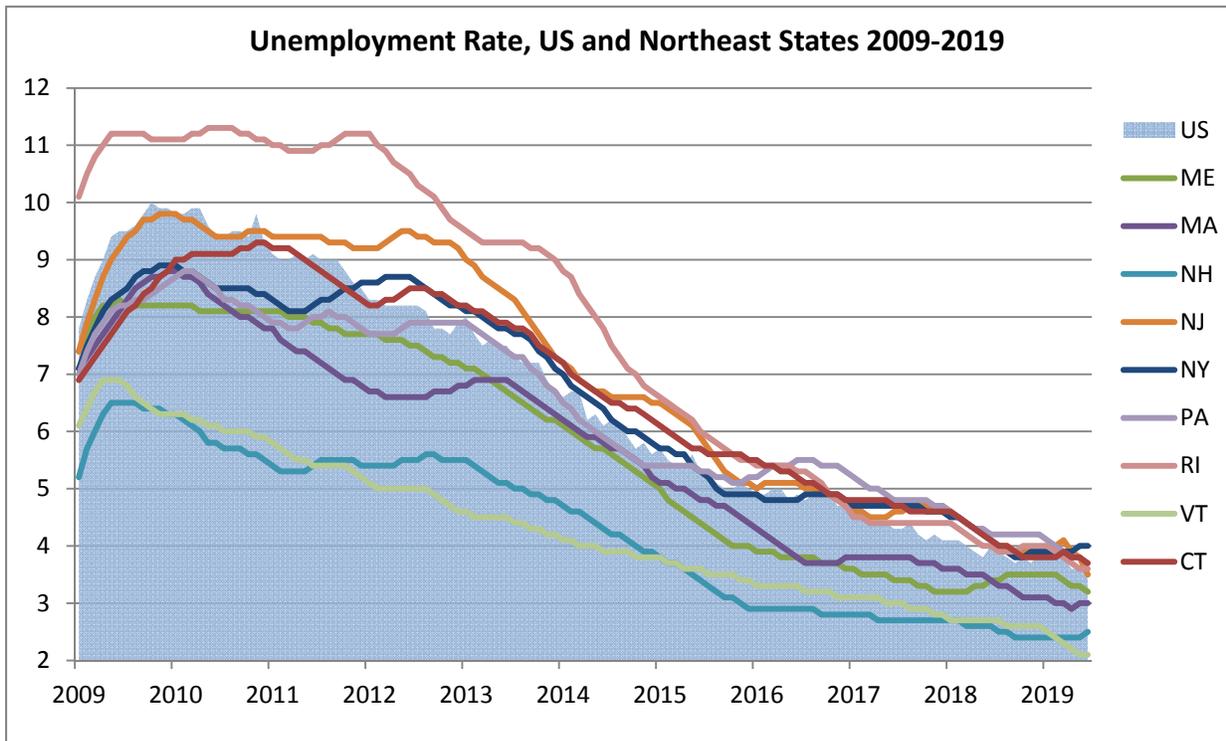
The Following graph shows the percentage point difference between the US and Connecticut unemployment rates from 2000-2019. Prior to 2011, Connecticut's unemployment rate was characteristically at or below national levels with large percentage point spreads occurring during the 2001 and 2007-09 recessions. The largest month difference was 2.4 percentage points in December 2001 (CT 3.3%, US 5.7%). From early 2011 through late 2018, Connecticut's unemployment rate remained persistently above US levels, with the largest spread being 0.7 percentage points in October 2014. During the first half of 2019, The US and Connecticut unemployment rates have converged and were 3.6 and 3.8 percent as of May, 2019.



The illustrated trends between the US and Connecticut unemployment rates are reflective of the varied impact of the recession and recovery across census regions. The graph below shows the unemployment rates for the US and its four US Census regions. Therein, the West has had the highest unemployment rate above US level for most of the past three and a half years, with the exception being a brief 2017-18 period when the Northeast was higher. Much like Connecticut, the Northeast typically had an unemployment rate below the US through 2011 and was below US monthly rates for 88% of the months from January 2000 through February 2011. Since then, the Northeast has typically had rates above US levels, and was below the US for only 24% of the 87 months from March 2011 through May 2019. As of 2019, the Northeast has followed a similar pattern to Connecticut and converged with US levels.



The northeast region is comprised of New England, New York, New Jersey, and Pennsylvania. The following graph displays the unemployment rates for these northeast states and shows the varied economic impact of the recovery across that region. Massachusetts and northern New England states have had unemployment rates much lower than the rest of the northeast or the US overall, currently ranging between 2.1 (VT) and 3.3 (ME). After lagging behind US level declines in 2018, the five southernmost states in that region (CT, NJ, NY, RI, and PA) all have rates within 0.2 percentage points of the US levels as of May, 2019.

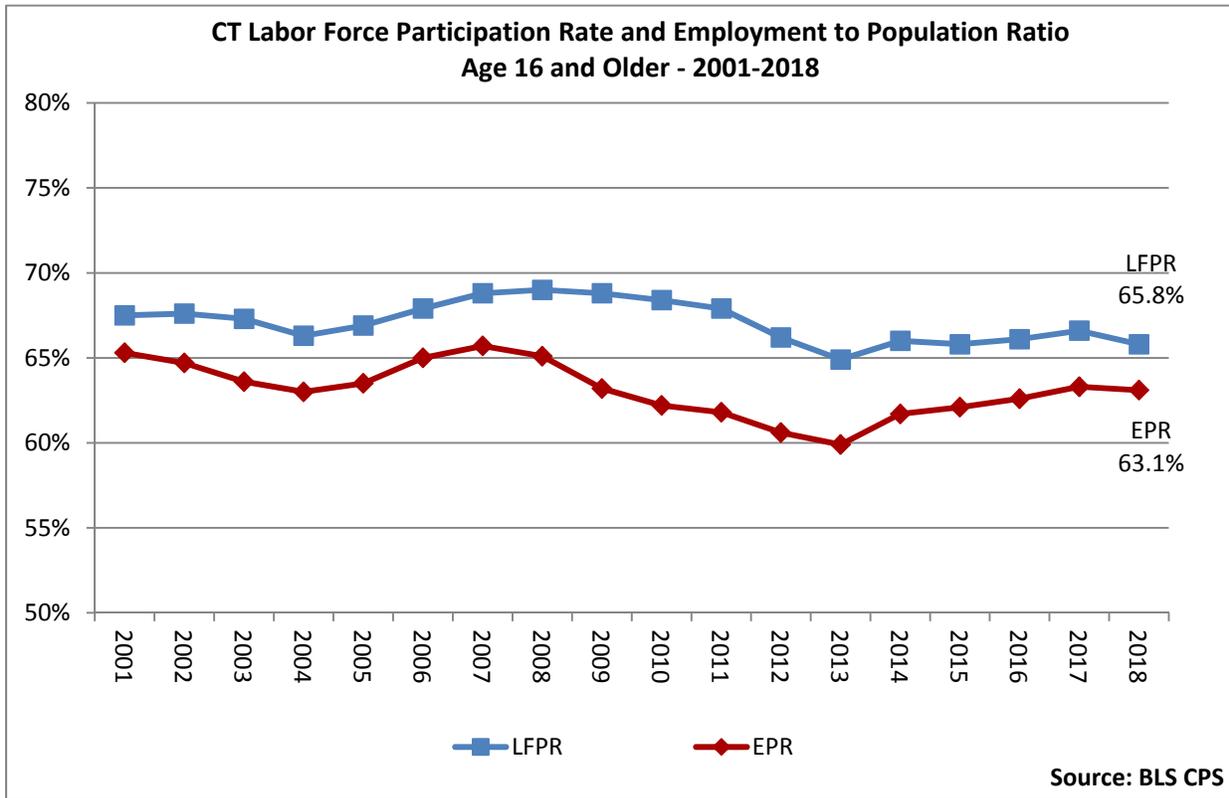


Labor Force Participation

Annual average labor force participation peaked in 2008 at 69 percent, a level not seen since the early 1990s. After reaching a low of 64.9 percent in 2013, it was 65.8% in 2018 after dropping from 66.6% in 2017. This drop corresponds with sharp declines in participation of the over 54 age cohort. That cohort is down 3.2 points since 2017 to 45.8%. That decline equates to an over age 54 drop of 22,000 since 2017 and mostly occurred in the age 55-64 segment of that group.

The narrowing gap between labor force participation and employment to population ratios (EPR) corresponds with unemployment rate decreases in recent years. EPR peaked in 2007 at 65.7% a year

before the Labor Force Participation Rate (LFPR). Since toughing in 2013, it has an average year-over-year percentage point increase of 0.6 percentage points through 2018. From 2017 to 2018 it was down 0.2 points.



Labor Force Participation by Age Cohorts

State-level age cohort labor force participation rate annual average data is available from 2001 through 2018¹. Breaking down the overall labor force participation rate into three component age cohorts helps pinpoint contributing demographic trends.

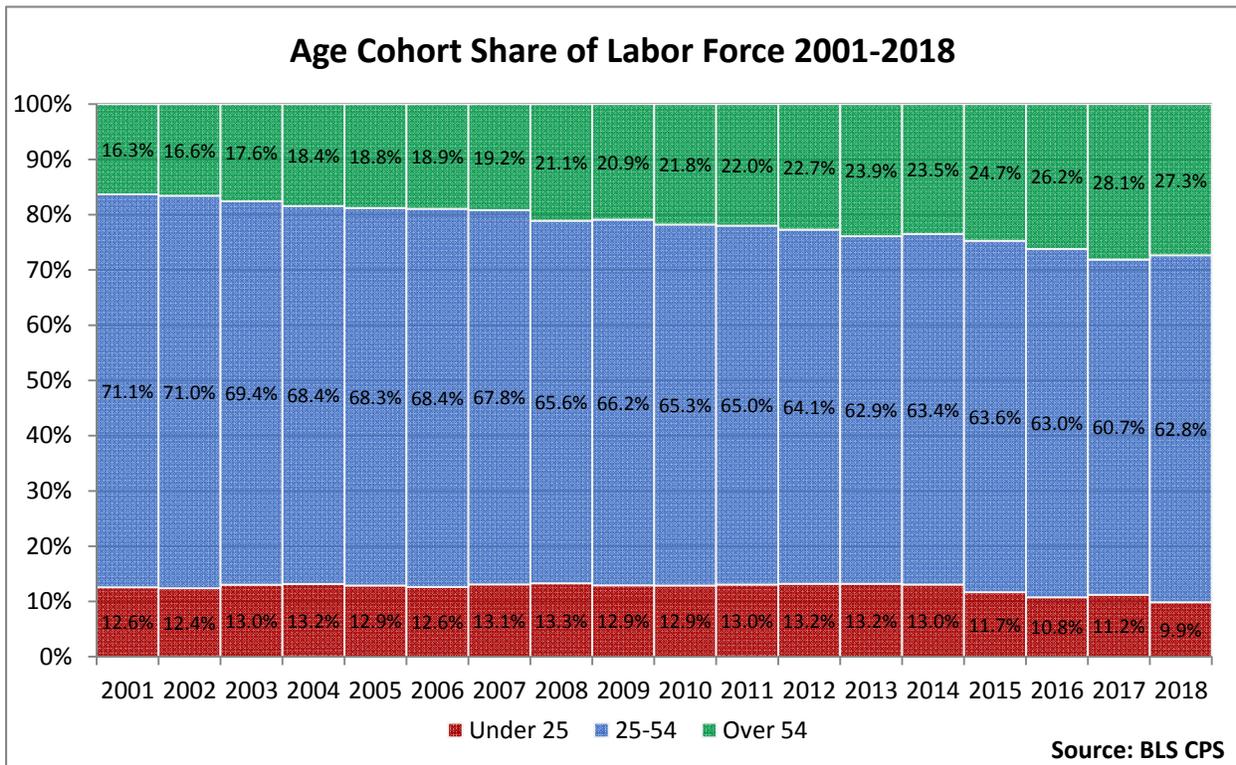
The overall working aged population (over age 16) decreased by 7,000 from 2017 to 2018, while the labor force fell by 26,000. This labor force decline was driven by unemployment declining by 15,000 while employment fell by 12,000. By age cohort, the working age population under 25 fell by 39,000, the prime age population grew 11,000 and the over 54 population was up 29,000.

This combined labor force decline of 26,000 was driven by losses in the under 25 (down 27,000) and Over 54 labor force (down 22,000). The prime age labor force grew by 25,000.

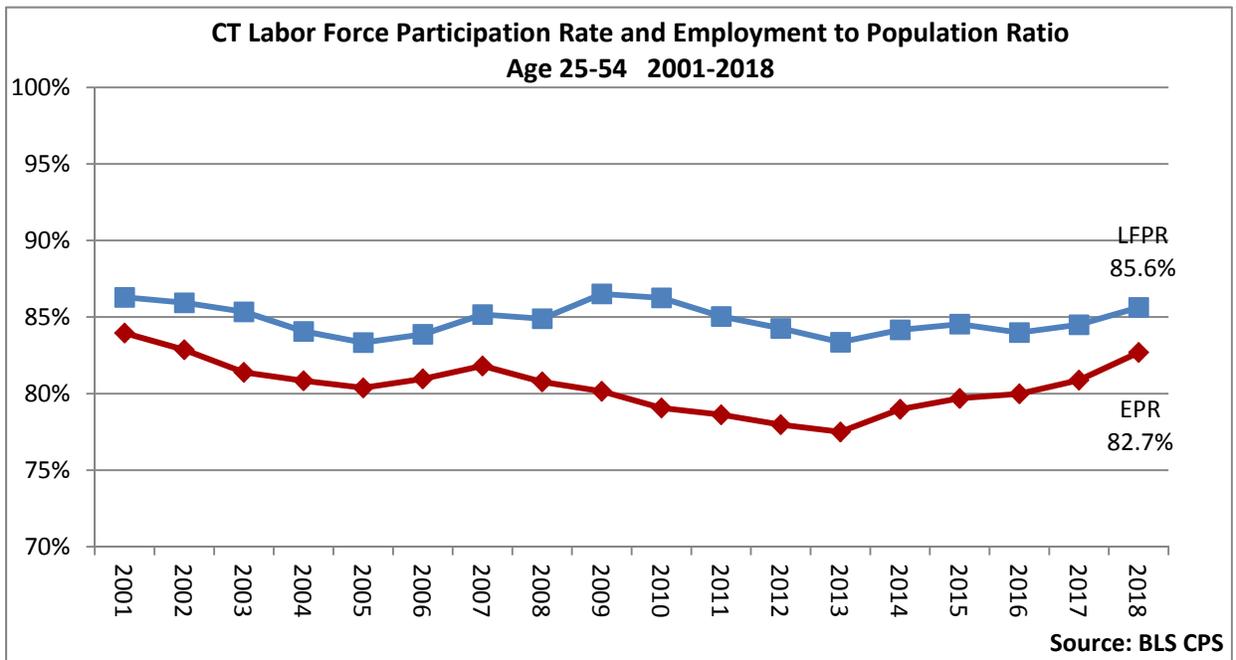
¹ Bureau of Labor Statistics. Expanded State Employment Status Demographic Data. <https://www.bls.gov/lau/ex14tables.htm>

Some takeaways from the year-over-year shifts in population and labor force participation indicate that the over 54 population is growing and leaving the labor force. Most of this population growth falls within the population 65 and over (up 26,000), while most of the combined labor force decline of 22,000 occurred within the 55-64 segment of that population (down 19,000). These short term shifts in labor force participation by age cohort are important considerations given longer term aging trends in the state.

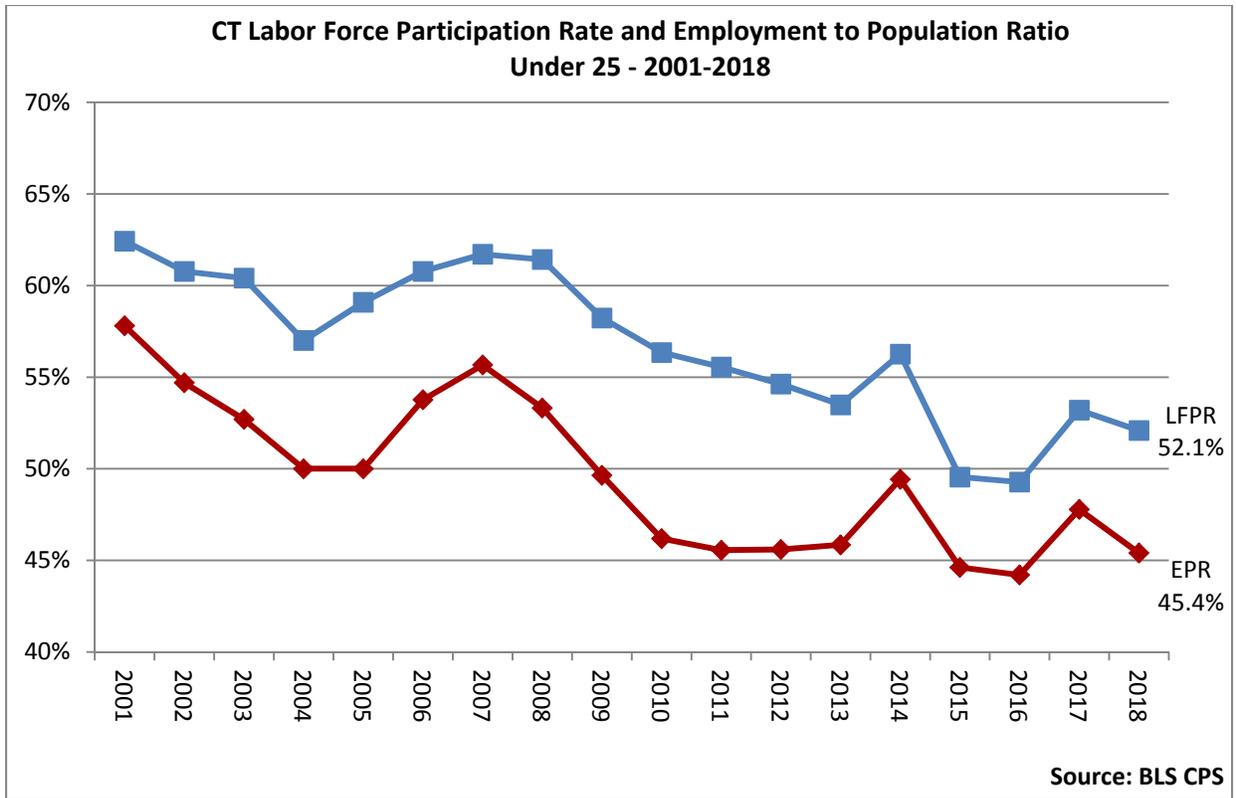
These age cohort changes are shown below as labor force shares and illustrate the declines in the older and younger cohorts.



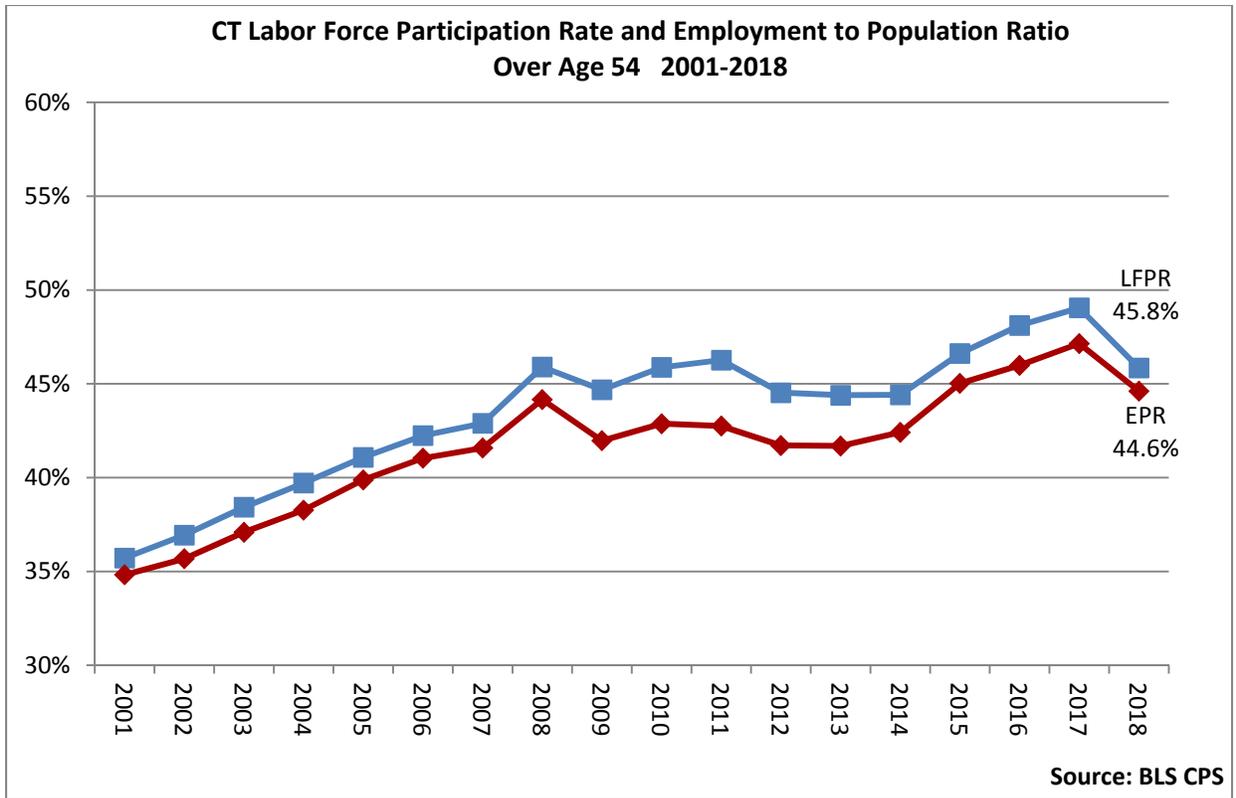
The following graph shows annual average LFPR and EPR for prime age workers in Connecticut from 2000 to 2018. Since reaching a 2013 trough of 83.4 percent in 2013, overall prime age LFPR has remained between 84.0 (2016) and 85.6 percent (2018). During this span, as unemployment decreased, the EPR posted strong gains, increasing from 77.5 percent to 82.7 percent, its highest level since 2003 and above 2007 peak levels of 81.8 percent. EPR is up 1.8 percentage points since 2017 and shows a narrowing gap below LFPR, indicative of declining unemployment in the state.



The younger 16 to 24 age cohort has LFPR below that of prime age workers due primarily to school enrollment. 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 49.3% 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 multi-year long term trend downward from its 2007 peak, with some years of fluctuation. In 2018, the under 25 population had a LFPR of 52.1% and an EPR of 45.4, both down from a year before. From 2017 to 2018, the under 25 population decreased by 47,000 with corresponding employment decrease of 31,000 and an unemployment increase of 2,000 for an overall labor force decline of 29,000.



As Connecticut’s labor force ages, the steady participation rate increase of the over 54 workforce from 2001-2017 had been positive labor market shift for the state. In 2018 that trend shifted with sharp LFPR and EPR drops of 3.2 percentage points and 2.5 percentage points respectively from 2017. These over 54 age cohort shifts correspond with one year labor force declines of 22,000 and Employment declines of 15,000. When looking at smaller age cohorts that comprise this over 54 group, most of the losses occurred in the 55-64 cohort, which had labor force declines of 19,000, of which 13,000 was due to employment decline from a year before. The narrowing spread between LFPR and EPR shown in the following graph illustrates how unemployment isn’t increasing as the labor force and employment declines, which indicates that overall declines are driven by demographic aging and people leaving the labor force.



Changing Demographic Composition of Connecticut’s Labor Force

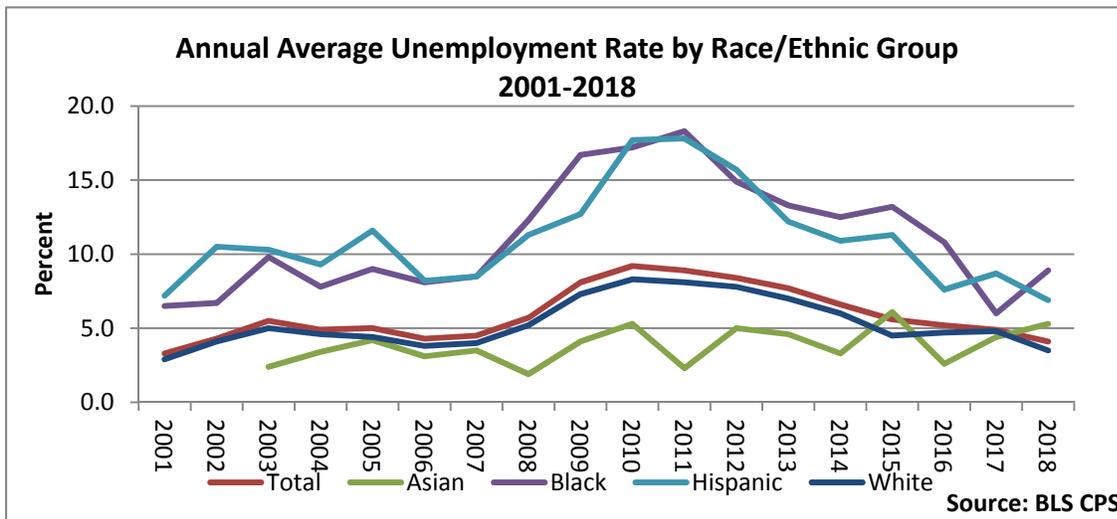
In addition to annual average age cohort labor market data, information by gender, race, and ethnicity is also available and shows some interesting shifts within the Connecticut labor market. Breaking down the four available race/ethnic cohorts into percent shares shows that the largest shift in Connecticut’s labor force during the past 10 years has been the growth of the Hispanic cohort, which rose from 10.2% to 14.2% through 2018.

Connecticut Labor Force Share by Race/Ethnic Group (# in Thousands)

Race/Ethnic Group	2008		2017		2018	
	#	%	#	%	#	%
White	1,603	85.1%	1,615	83.9%	1,568	82.6%
Black	180	9.6%	206	10.7%	208	11.0%
Asian	83	4.4%	73	3.8%	91	4.8%
Hispanic	193	10.2%	286	14.9%	270	14.2%

Source: BLS

The following graph shows annual average unemployment rates by race/ethnic group in Connecticut. The unemployment rate for the Asian labor force has consistently been below other rates but recently converged with statewide and White populations as their rates fell. The graph also shows the recent drop in rates for Black and Hispanic populations in Connecticut, though those groups trend above other cohorts.



Age Cohort Employment Share

The Quarterly Workforce Indicators (QWI) dataset allows for detailed analysis of industry employment by various demographic characteristics and employment measures.

Total employment peaked in 2008. At that time, 13% of the Connecticut labor force was under age 25, 66.8% were between 25 and 54 (also known as prime age), and 20.2% were over age 54. By 2018, the share below 25 fell to 11.5%, the prime age share dipped to 61.9%, and the share over 54 rose to 26.6%. To put it another way, in 2018 (the latest available from the QWI) overall employment is at 99.1% of the 2008 peak. The under 25 and prime age groups are, respectively, down 12.1% and 8.3% while the over 54 cohort is up 30.4%.

The demographic shifts over the past ten years continue trends that began even earlier. In 1998, the share of Connecticut employment for those three age cohorts was 12.6%, 73.5%, and 13.9%, respectively. This means the portion of the workforce in prime age is down 11.6 percentage points over 20 years while the portion over 54 has almost doubled.

Connecticut has a highly skilled and experienced workforce, 42% percent of which have at least a college degree compared to 37% nationally. However, the increasing portion of older workers also indicates that a large share of the workforce is approaching retirement age, heightening the need for replacement workers in coming years.

Age Composition of Connecticut Employment: 1998-2018

Year	Ann. Average Emp. By Age Cohort				Percent Share of Employment			
	All	Under 25	Prime	Over 54	All	Under 25	Prime	Over 54
20 years ago 1998	1,592,423	201,027	1,169,934	221,460	100.0%	12.6%	73.5%	13.9%
Peak Year 2008	1,661,263	215,417	1,109,898	335,946	100.0%	13.0%	66.8%	20.2%
Current 2018	1,645,611	189,306	1,018,152	438,150	100.0%	11.5%	61.9%	26.6%

Source: US Census Bureau, QWI

Age Cohort by Industry

The sectors with largest percentage of workers under 25 are Accommodation & Food Services, Arts, Entertainment & Recreation, and Retail Trade. Two of these sectors, Accommodation & Food Services and Retail Trade saw their share of youth employment fall by 6.6 and 4.7 percentage points from 2008-2018. Arts, Entertainment & Recreation youth employment share increased by 7.6 percentage points. The Manufacturing and the Transportation & Warehousing sectors also had youth employment share increases, up 0.8 and 0.5 percentage points.

Manufacturing also saw large increases in the over 54 age cohort, decreases in prime age employment, and overall industry growth in recent years. Transportation & Warehousing youth employment growth is driven by expansion of that industry. Employment is up 16.4% overall since 2008.

Prime age employment ranges from 49.9% to 69.4% of employment for sectors in Connecticut. Every sector except Accommodation & Food Services has seen a decline in prime age employment share over the past 10 years. The sectors with the largest concentrations of prime age workers are Finance & Insurance (69.4%), Professional, Scientific, & Technical Services (68.4%) and Information (67.6%).

While most sectors experienced declines in the share of under 25 and prime age employment over the past 10 years, every sector had share increases of its over 54 workforce. This ranged

between a 2.3 point increase in Arts, Entertainment and Rec. to an 11.1 point increase in Utilities. Large sectors with significant over 54 employment shares include Manufacturing, (35.4%) which had a 10.6 point increase in the past ten years and Educational Services (30.8%). These two sectors employ 25.1% of the over 54 workforce compared to 20.2% of the workforce overall. With more than 35% of its workforce over age 54, Manufacturing will need to hire many replacement workers in addition to filling the new jobs that are expected to be added in the short term. Educational Services growth has been hindered by the declining population of school-age children, but the large share of workers over 54 in that sector indicates that many replacement workers will be needed even amid overall employment declines.

Nationally, by 2026 the labor force participation rate for those over age 65 is expected to be nearly double its 1996 level. In addition to preparing to replace retiring workers, industries will need to make adjustments to accommodate older workers.

Healthcare and Social Assistance is the largest sector in the state overall, and employs the most workers over 54, with over 71,000. This sector has had the largest total increase of over 54 workers, up 20,000 since 2008. This growth dwarfs the corresponding growth for prime age workers, which increased 8,500 over 10 years. Employment for workers under 25 in this sector fell 1,600 since 2008.

Implications for the Connecticut Economy

Though the aging of Connecticut's workforce impacts every sector, some sectors have been more affected than others. The QWI dataset shows that Manufacturing, Utilities, and Public Administration have the largest shares of workers over 54, while Accommodations & Food Services, Retail Trade, and Arts, Entertainment & Recreation have the smallest. As this age cohort grows in Connecticut, knowing which industries have a large share of these highly experienced workers is important to ensure that their needs are met and that an adequate pipeline exists to help train incoming workers to replace those who will eventually retire.

Employment by Age Cohort, Annual Average and Industry Share

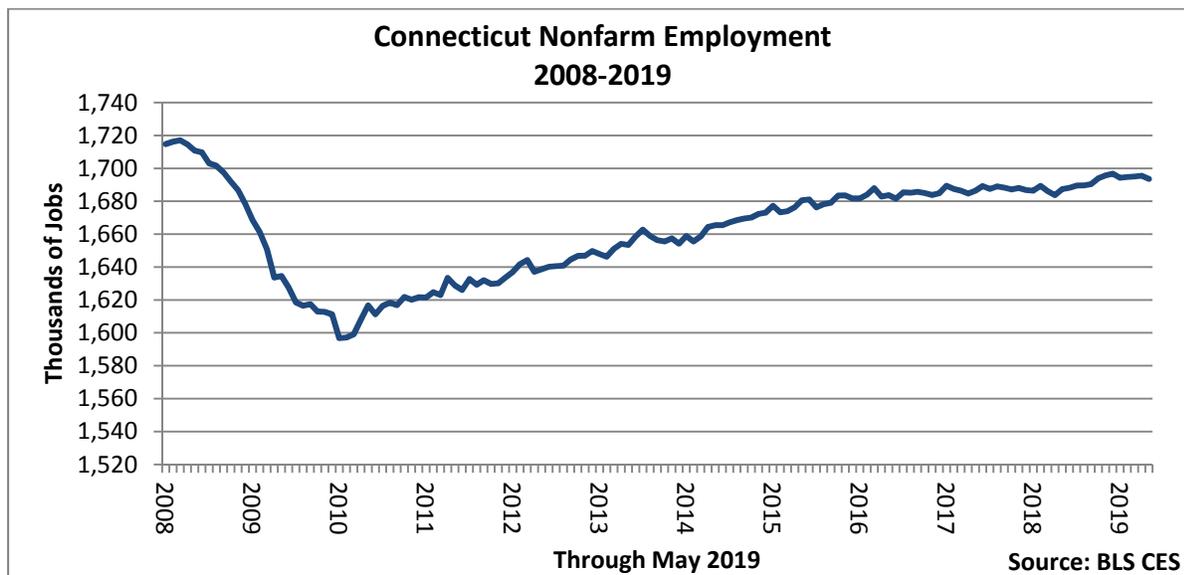
NAICS Sector	Industry Name	2018 Annual Average			2018 Industry Share		
		Under 25	Prime Age	Over 54	Under 25	Prime Age	Over 54
00	All Industry	189,307	1,018,153	438,150	11.5%	61.9%	26.6%
11	Agriculture	787	2,603	1,330	16.7%	55.1%	28.2%
21	Mining, Quarrying, & Extrac.	32	270	215	6.2%	52.2%	41.6%
33	Utilities	219	4,289	2,425	3.2%	61.9%	35.0%
23	Construction	5,451	39,985	16,210	8.8%	64.9%	26.3%
31-33	Manufacturing	10,793	96,079	58,531	6.5%	58.1%	35.4%
42	Wholesale Trade	3,251	40,005	18,508	5.3%	64.8%	30.0%
44-45	Retail Trade	43,899	96,673	40,892	24.2%	53.3%	22.5%
48-49	Transportation & Warehousing	4,660	31,324	12,734	9.6%	64.3%	26.1%
51	Information	2,827	24,148	8,727	7.9%	67.6%	24.4%
52	Finance and Insurance	4,839	73,592	27,556	4.6%	69.4%	26.0%
53	Real Estate and Rental and Leasing	1,418	12,530	6,452	7.0%	61.4%	31.6%
54	Pro., Sci., & Tech. Services	6,270	65,377	23,961	6.6%	68.4%	25.1%
55	Management	1,890	22,516	9,272	5.6%	66.9%	27.5%
56	Administrative and Support	10,485	58,786	23,288	11.3%	63.5%	25.2%
61	Educational Services	10,272	105,364	51,565	6.1%	63.0%	30.8%
62	Health Care and Social Assistance	21,921	179,073	71,522	8.0%	65.7%	26.2%
71	Arts, Entertainment, and Recreation	9,028	16,426	7,458	27.4%	49.9%	22.7%
72	Accommodation and Food Services	41,156	76,680	22,251	29.4%	54.7%	15.9%
81	Other Services (except Public Admin.)	7,808	38,784	18,182	12.1%	59.9%	28.1%
92	Public Administration	2,295	33,641	17,065	4.3%	63.5%	32.2%

Source: US Census Bureau, QWI

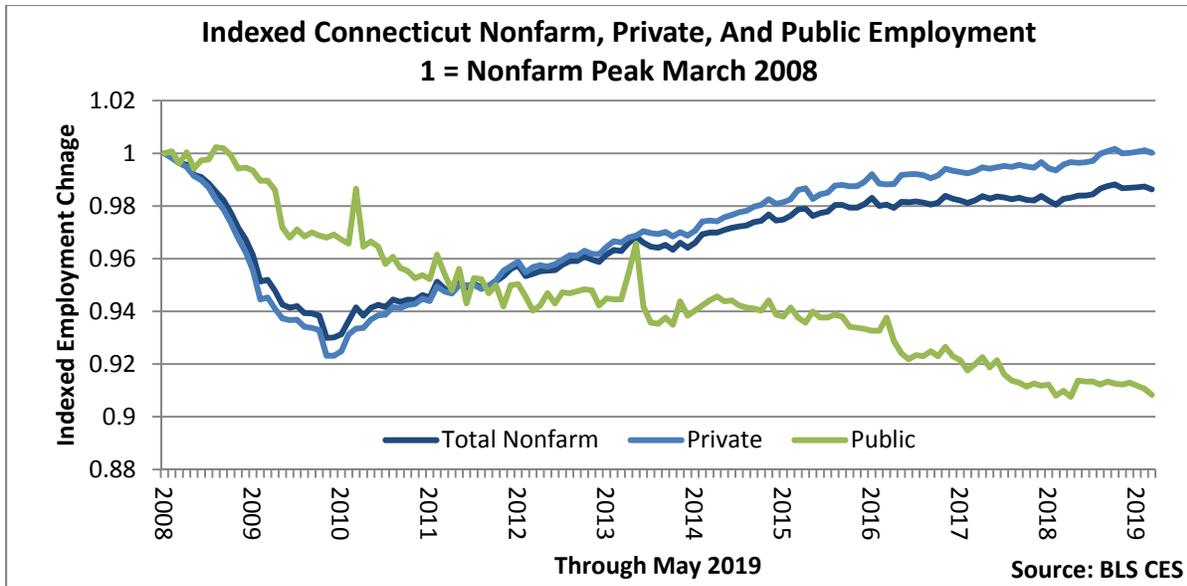
Connecticut Current Situation

Current Situation

The past year of employment growth in Connecticut has been strong. Nonfarm employment is up 6,200 jobs year-over-year. Private sector employment gained 6,600 jobs since May 2018 and the public sector is down 400. Total nonfarm employment is 1,693,600 as of May 2019, which is 1.4 percent below peak March 2008 employment. Pronounced year-over-year employment gains began during the third quarter of 2018 and have continued into 2019. The average monthly year-over-year Nonfarm employment change from May 2018 to May 2019 was 5,700 jobs per month, which is much larger than the preceding 12 month average of 1,900 jobs per month. As is shown in the indexed graph below, public sector job losses continue to dampen overall employment growth in Connecticut. As of January 2019, the private sector has recovered all jobs lost during the last recession and has continued to add jobs.



The following graph shows nonfarm, private, and public sector employment indexed to the prior nonfarm peak to help illustrate the varied impact of the recovery and expansion in Connecticut.



Connecticut Compared to Other States

Connecticut has recovered the number of private sector jobs lost during the previous recession. However, over the past six years, Connecticut’s total nonfarm job growth has been significantly dampened by public sector decline when compared to the nation and nearby states. The table below shows total nonfarm, private, and government employment from May 2013 to May 2019 for the US, Connecticut, and nearby states. Connecticut’s nonfarm employment is up 2.4 percent over this six-year period with the private sector up 49,600 jobs (3.5%) and government employment down -9,400 jobs or -3.8%. Connecticut public sector employment decline has curtailed in the past year, down only 400 jobs (-0.2%) amid public sector gains of 6,600 jobs (0.5%), which suggests that this drag on overall nonfarm growth may to lessen further in coming years.

Employment Change 2013-2019 by Sector Type - US, CT, and Selected States

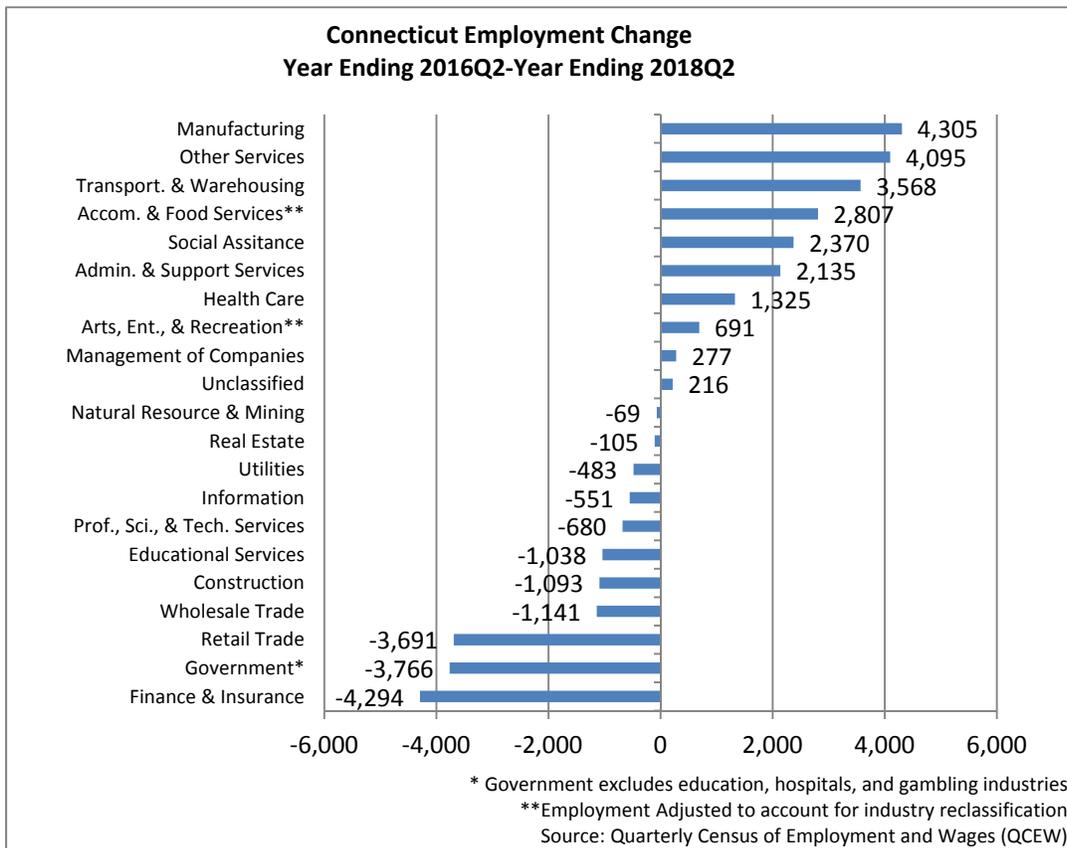
Area	Total Nonfarm				Private				Government			
	May 2013	May 2019	# Change	% Change	May 2013	May 2019	# Change	% Change	May 2013	May 2019	# Change	% Change
United States	136,114,000	151,074,000	14,960,000	11.0%	114,250,000	128,562,000	14,312,000	12.5%	21,864,000	22,512,000	648,000	3.0%
Connecticut	1,653,400	1,693,600	40,200	2.4%	1,408,100	1,457,700	49,600	3.5%	245,300	235,900	-9,400	-3.8%
Massachusetts	3,362,600	3,672,600	310,000	9.2%	2,919,000	3,214,600	295,600	10.1%	443,600	458,000	14,400	3.2%
Maine	601,600	631,700	30,100	5.0%	500,800	531,200	30,400	6.1%	100,800	100,500	-300	-0.3%
New Hampshire	638,800	689,600	50,800	8.0%	547,300	599,900	52,600	9.6%	91,500	89,700	-1,800	-2.0%
New York	8,937,000	9,773,400	836,400	9.4%	7,464,300	8,278,900	814,600	10.9%	1,472,700	1,494,500	21,800	1.5%
Rhode Island	469,600	499,400	29,800	6.3%	409,500	438,000	28,500	7.0%	60,100	61,400	1,300	2.2%
Vermont	306,000	318,300	12,300	4.0%	250,700	261,500	10,800	4.3%	55,300	56,800	1,500	2.7%

Connecticut Industry Overview

Sector Change 2016-2018

Each year, the Connecticut Department of Labor produces short term projections by industry and occupation. The most recent projections are for the two-year period 2018Q2 through 2020Q2. During the previous two-year period (2016Q2 to 2018Q2), Connecticut’s overall employment grew by 6,350 jobs, or 0.4%. The private sector increased 12,537 (0.9%), while the government sector declined 6,187 (-2.6%).

The three sectors with the largest two-year gains were Manufacturing, Other Services, and Transportation and Warehousing, which increased by 4,305, 4,095, and 3,568 jobs, respectively, from 2016 to 2018 shown in the figure below. The gains in Manufacturing and Transportation and Warehousing represent recent shifts in the Connecticut economy.



Transportation and Warehousing growth is due primarily to the increased number of internet retailer warehousing distribution centers in the state, which began adding Connecticut locations in late 2015.

Increased on-line shopping has driven employment growth in Transportation and Warehousing and to declines in Retail Trade, which was down 3,691 in the two years preceding the 2018Q2 projection base. Despite these declines, Retail Trade remains one of the largest sectors – it averaged 180,000 jobs in 2018Q2.

Finance and Insurance employment fell by 4,294 jobs during the two years ending 2018Q2, as banks and investment firms contracted. The insurance industry added nearly 800 jobs in this period.

Most of the decline in Government employment was at the state level. Education and Health each declined about 1,000 jobs, while Public Administration fell by over 2,000. Local Government also contracted.

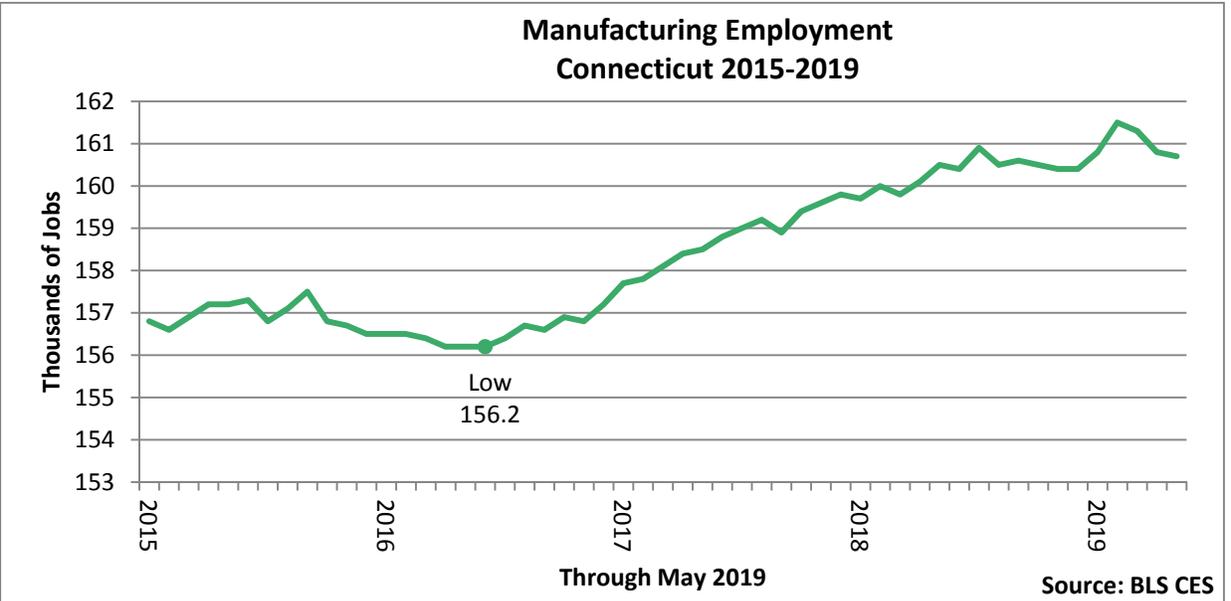
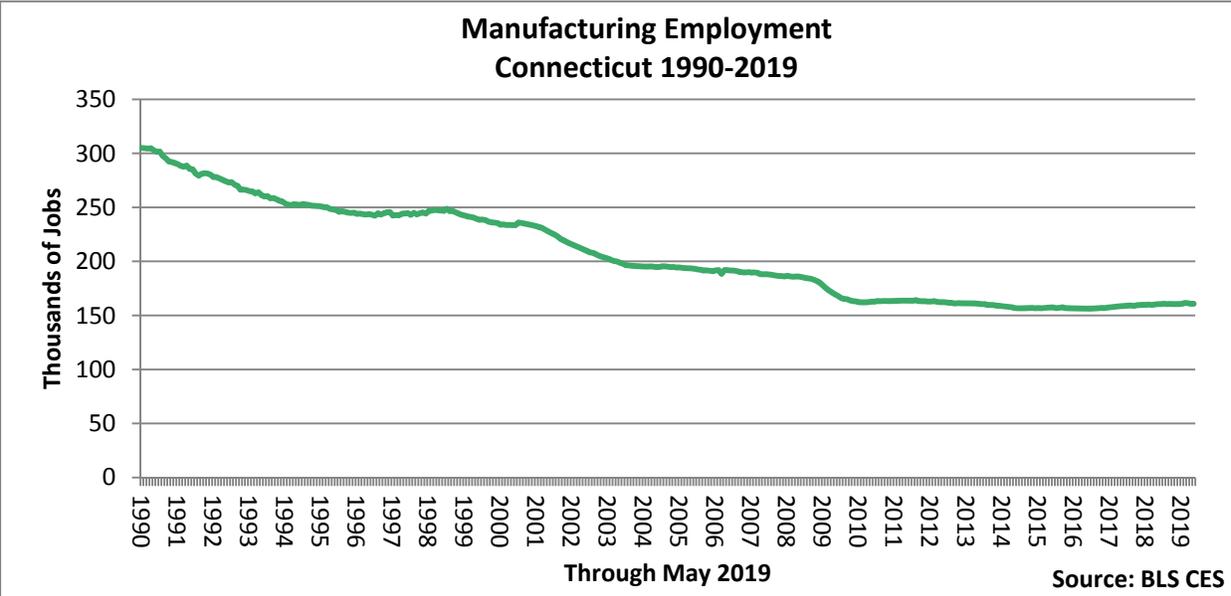
Other industries of note include Accommodations and Food Services, which continues to add jobs at a faster rate than the overall economy and Construction which was down over 1,000 jobs from 2016Q2 to 2018Q2, mostly due to a sluggish second quarter last year but which has since added jobs. As of March 2019 construction was up 2,500 jobs from the previous year.

Health Care and Social Assistance, the largest combined sector of the economy, continues to add jobs overall, driven by strong gains in Ambulatory Health Care and Social Assistance, up 4.9% and 3.8%, respectively, in the two years ending 2018Q2. These gains were tempered by losses in other components of the sector with Hospitals, down 1.5%, and Nursing and Residential Care Facilities, down 3.2%. Those two industries had respective employment peaks in 2012 and 2014.

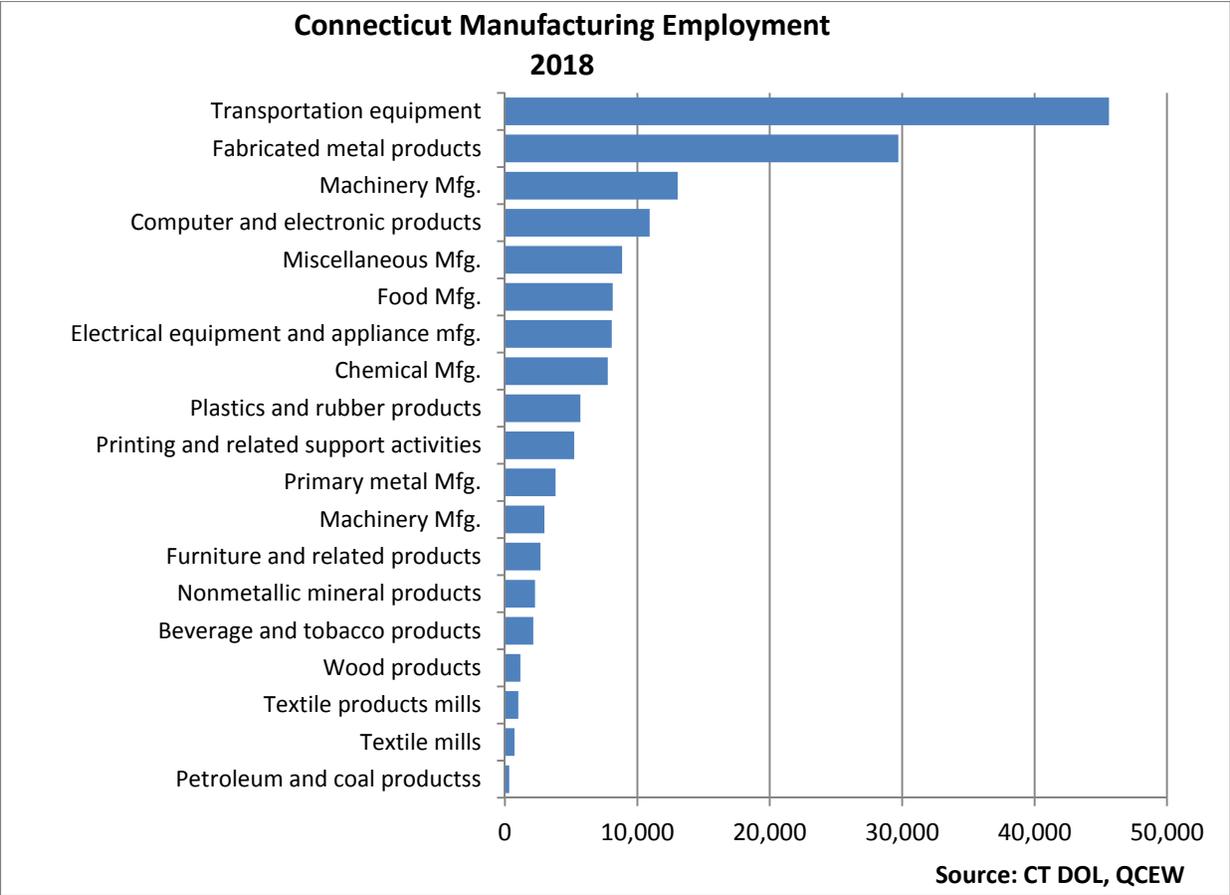
Manufacturing

Connecticut manufacturing continues to maintain strong employment growth that began in the first quarter of 2016. This growth is unique to the region. Our 2.8% growth during the two years that precede the short term projection period (2016Q2-2018Q2) compares favorably to the neighboring states of Massachusetts and New York, which were down 0.7% and 1.5%.

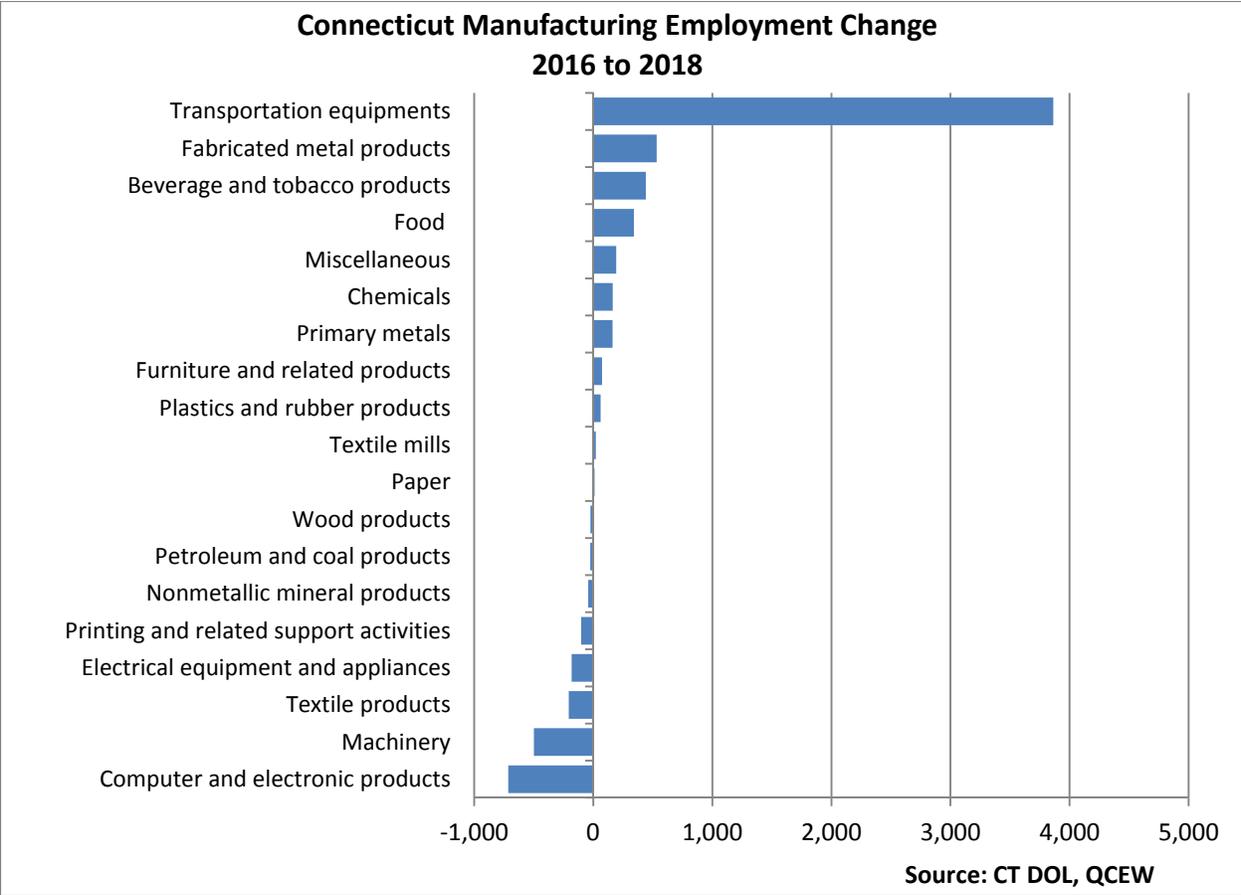
Connecticut's two-year Manufacturing growth outpaces the national average of 2.6% and is driven by strong gains in transportation equipment manufacturing. Announcements from major employers suggest that growth in this sector will continue for the foreseeable future.



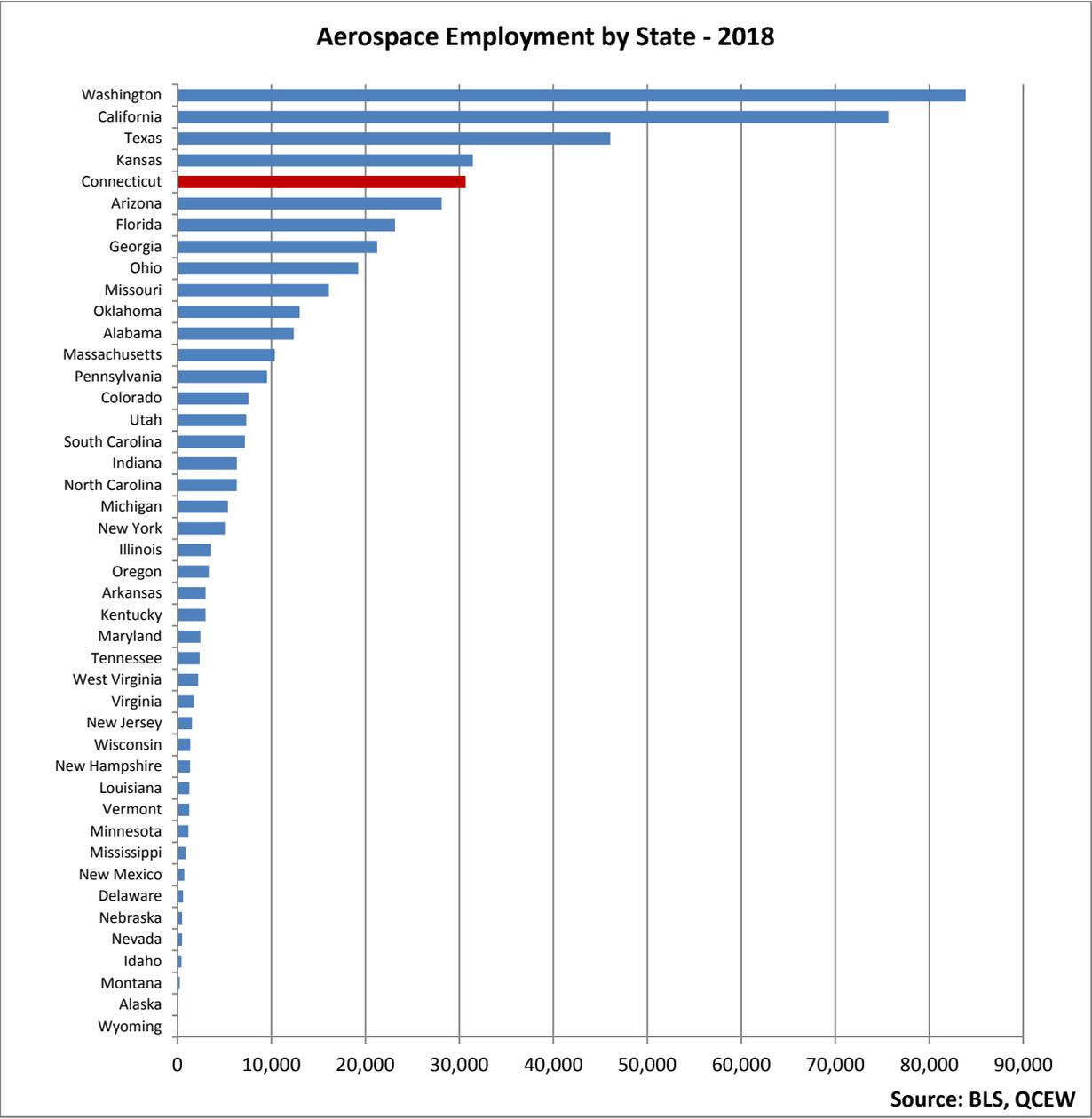
Transportation equipment is Connecticut’s largest manufacturing industry, which includes both aerospace and shipbuilding and encompasses about 28 percent of manufacturing employment in the state.



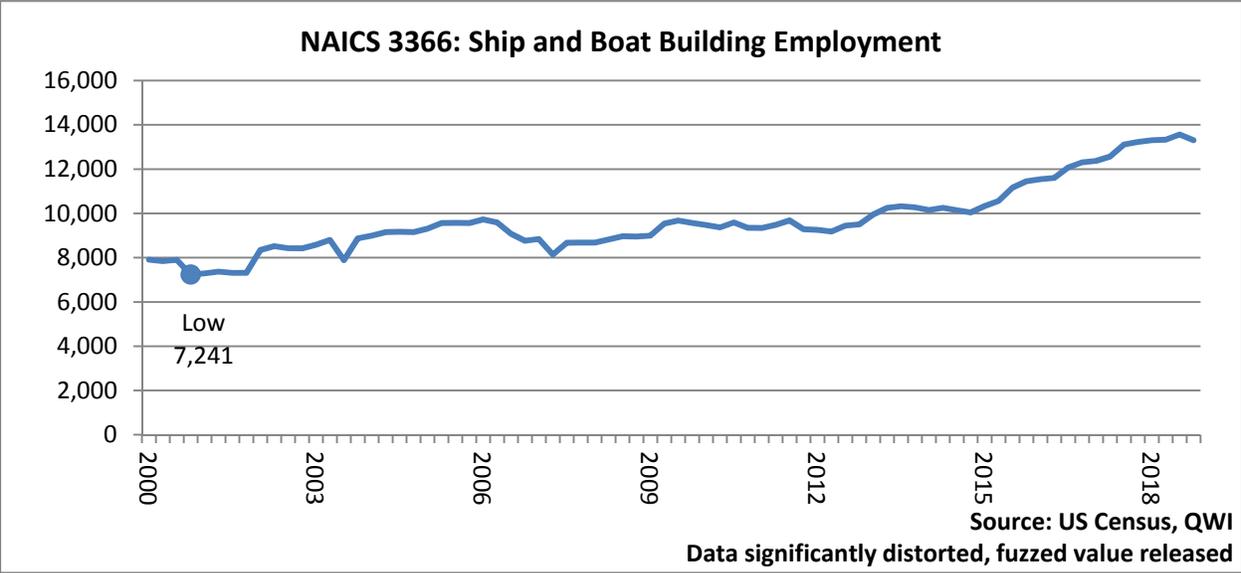
Over the past two years, overall manufacturing growth was heavily concentrated in transportation equipment, accelerating a multi-year trend. In total, 11 out of 19 3-digit NIACS manufacturing industries added a combined 5,867 jobs over these growing sectors. Two year manufacturing declines occurred in 8 industries and amounted to losses of 1,790 jobs. The largest two year declines occurred in Computer and Electronic Products (-713) and Machinery Manufacturing (-498).



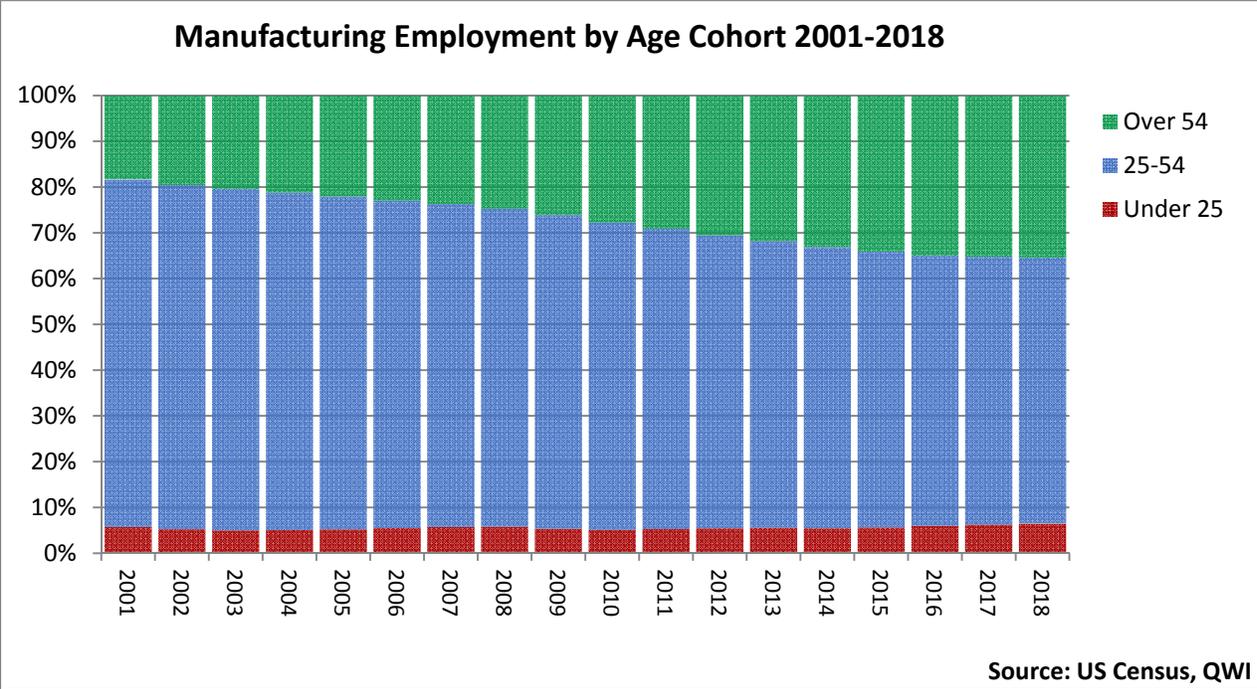
Aerospace products and parts manufacturing is a component industry of transportation equipment. In 2018, Connecticut’s Aerospace employment was the fifth highest in the country. This sector employs 2.1 percent of total private Connecticut employment, which is the third highest share in the country after Washington (3.0%) and Kansas (2.8%).



Shipbuilding represents about 28 percent of transportation equipment manufacturing employment, and has continued to consistently add jobs, though growth has slowed in recent quarters. Unlike other manufacturing areas, shipbuilding has shown very little cyclicity since 2000. This differs significantly from shipbuilding employment nationally, which peaked in 2007 at 161,952, lost 24.7% of its employment by early 2011 and was just over 86.4% of peak levels by the end of 2018.

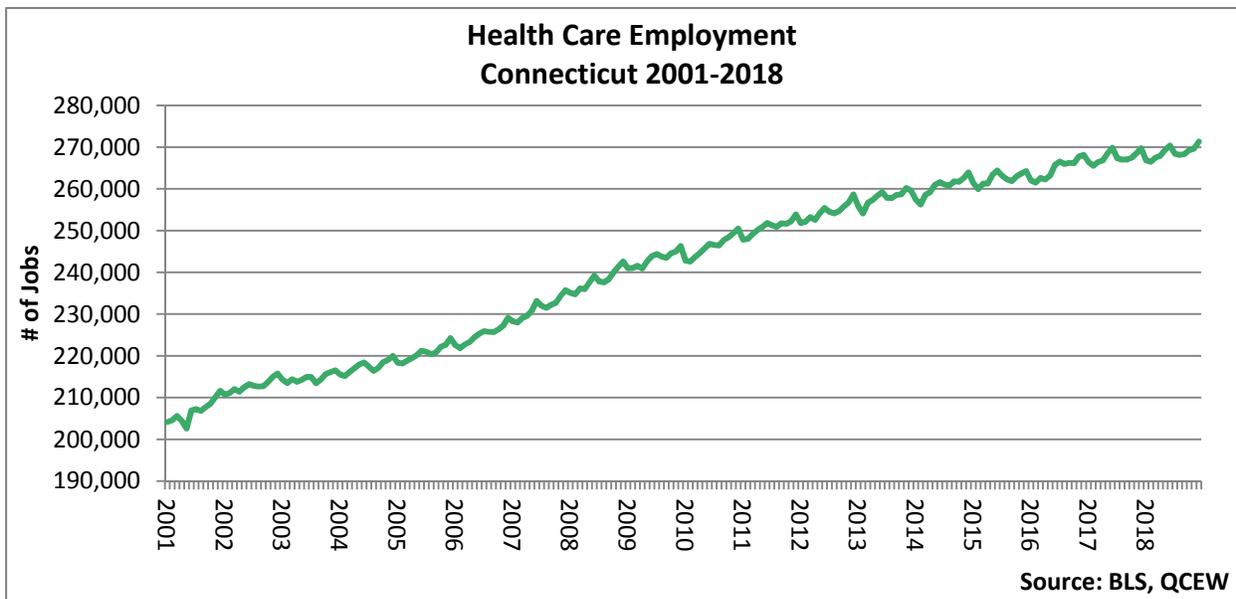


The portion of the manufacturing workforce over age 54 continues to increase suggesting that the need to replace retiring workers will only grow in coming years. Over the past 10 years, the share of manufacturing workers over 54 has had one of the largest industry increases, up 11.0 percentage points to 35.4% in 2018. With more than a third of its workforce over age 54, manufacturing will need to hire many replacement workers in addition to filling the new jobs that are expected to be added in the short term.

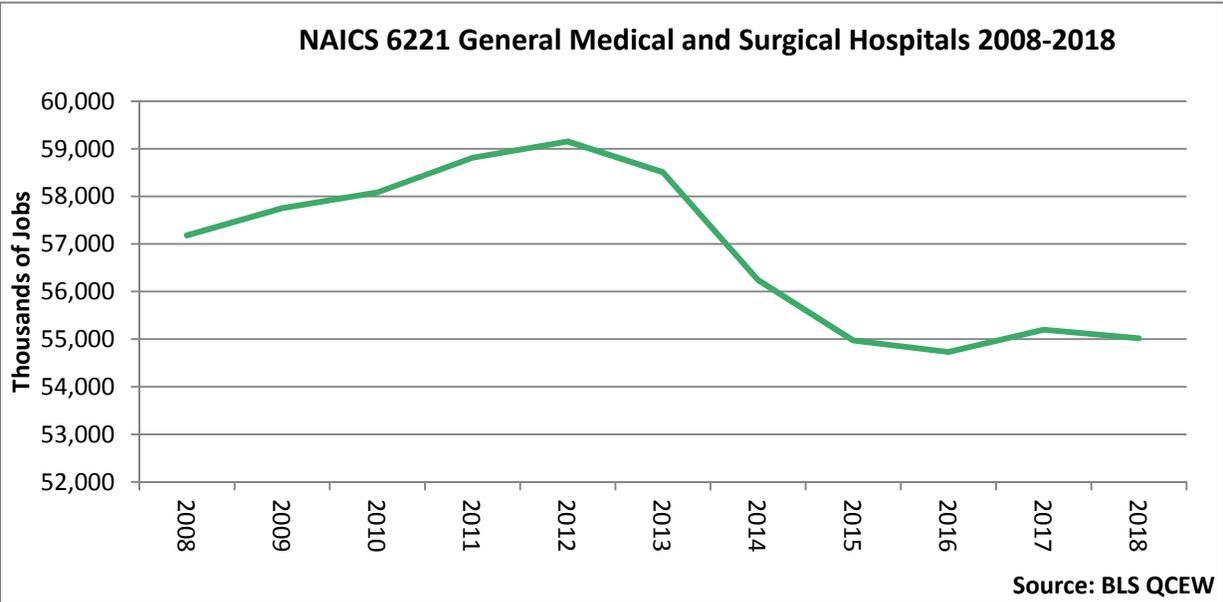
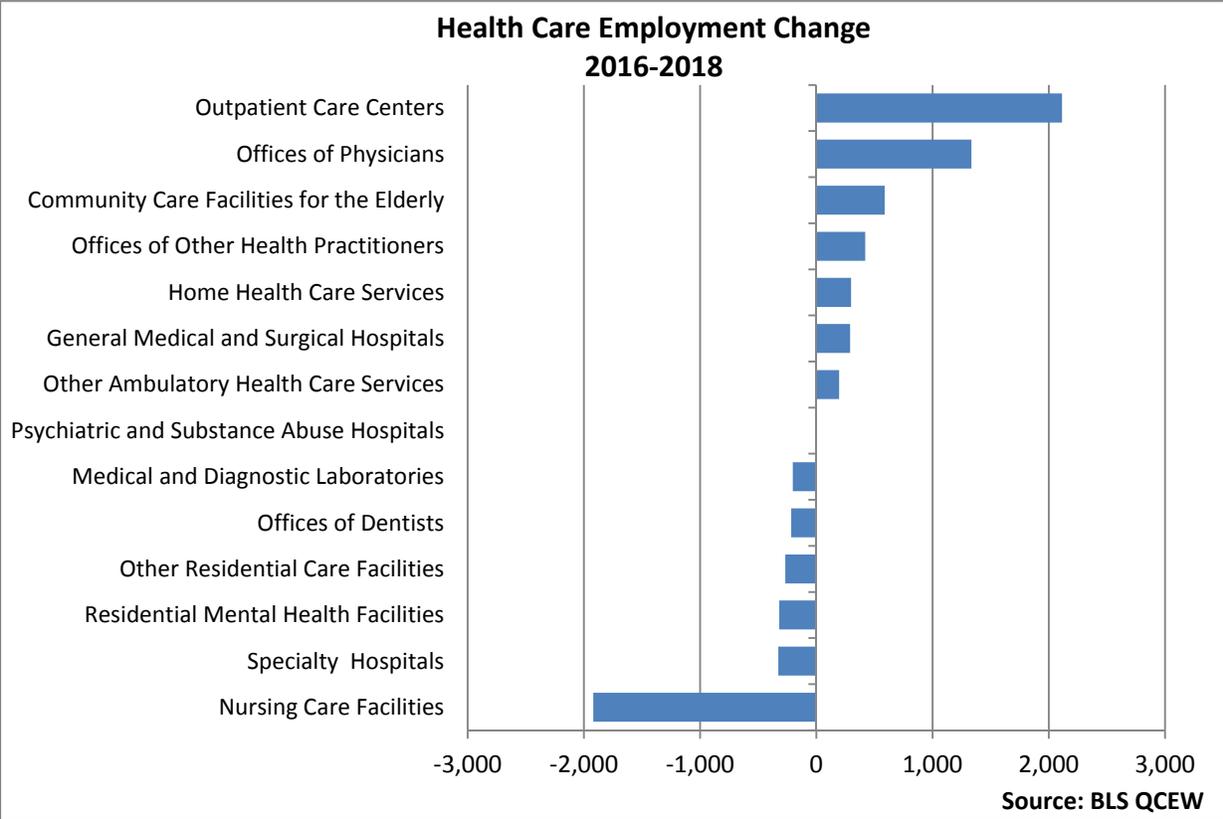


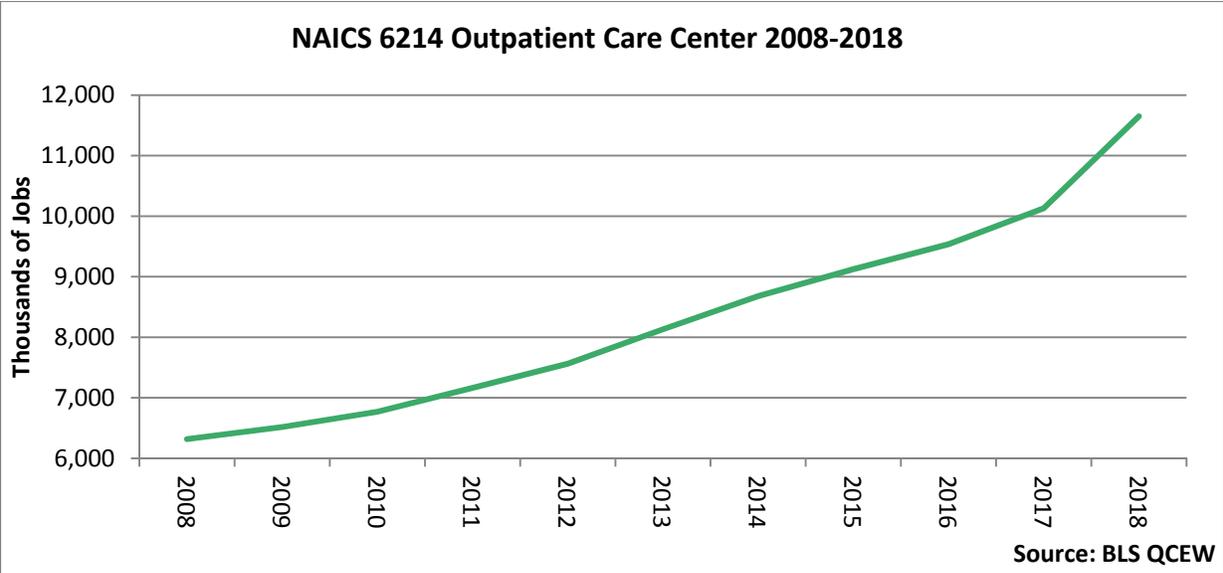
Health Care

Consistent with the aging population, employment in Connecticut's health care sector has continued to expand. However there are structural changes within the sector which has implications for the outlook. Ambulatory care settings, such as Offices of Physicians, Home Health Care Services, and Outpatient Care Centers have been adding jobs while residential facilities such as nursing homes have been contracting. Employment at general hospitals increased in 2017, but declined slightly in 2018.

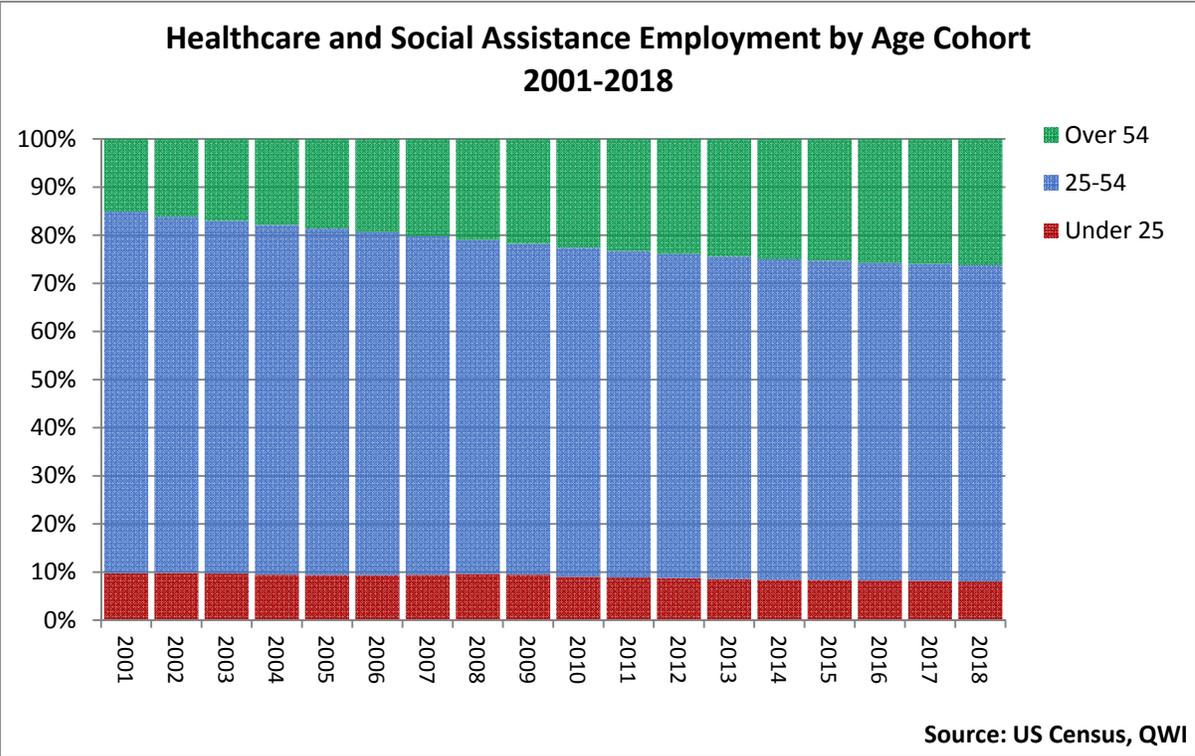


Outpatient Care Centers have experienced large growth in the short term. From 2016 to 2018 that industry grew by 22.2%. In the past ten years it has nearly doubled, up 84.4% from 6,318 in 2008 to 11,650 in 2018.



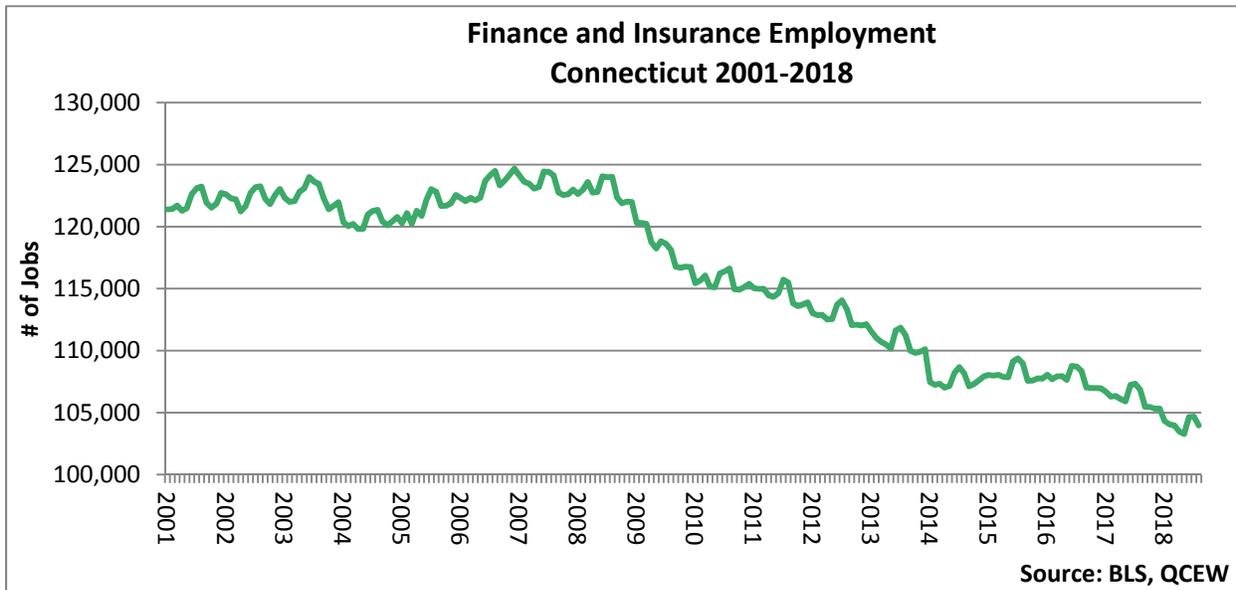


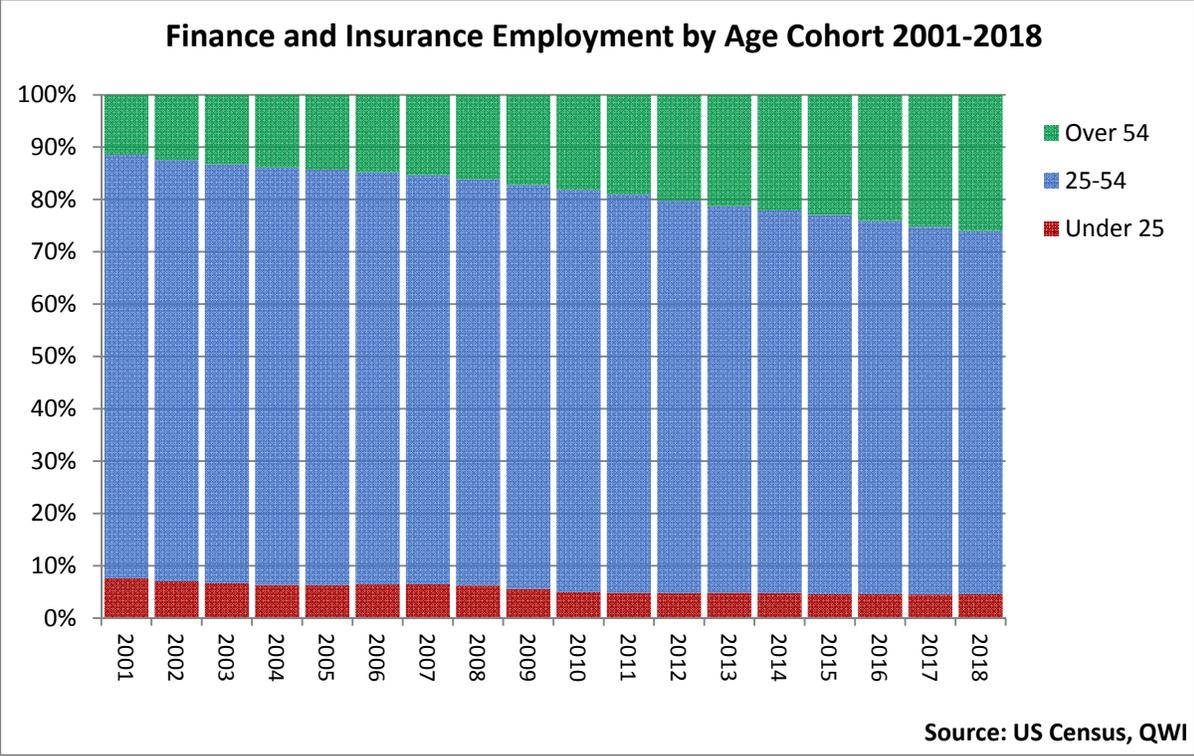
As with other sectors in the economy, the portion of the Healthcare and Social assistance workforce aged 55 and over is increasing. Since 2001 the sector has seen its over 54 workforce increase from 15.1% to 26.2% in 2018, levels slightly below the over 54 share for all industries.



Finance and Insurance

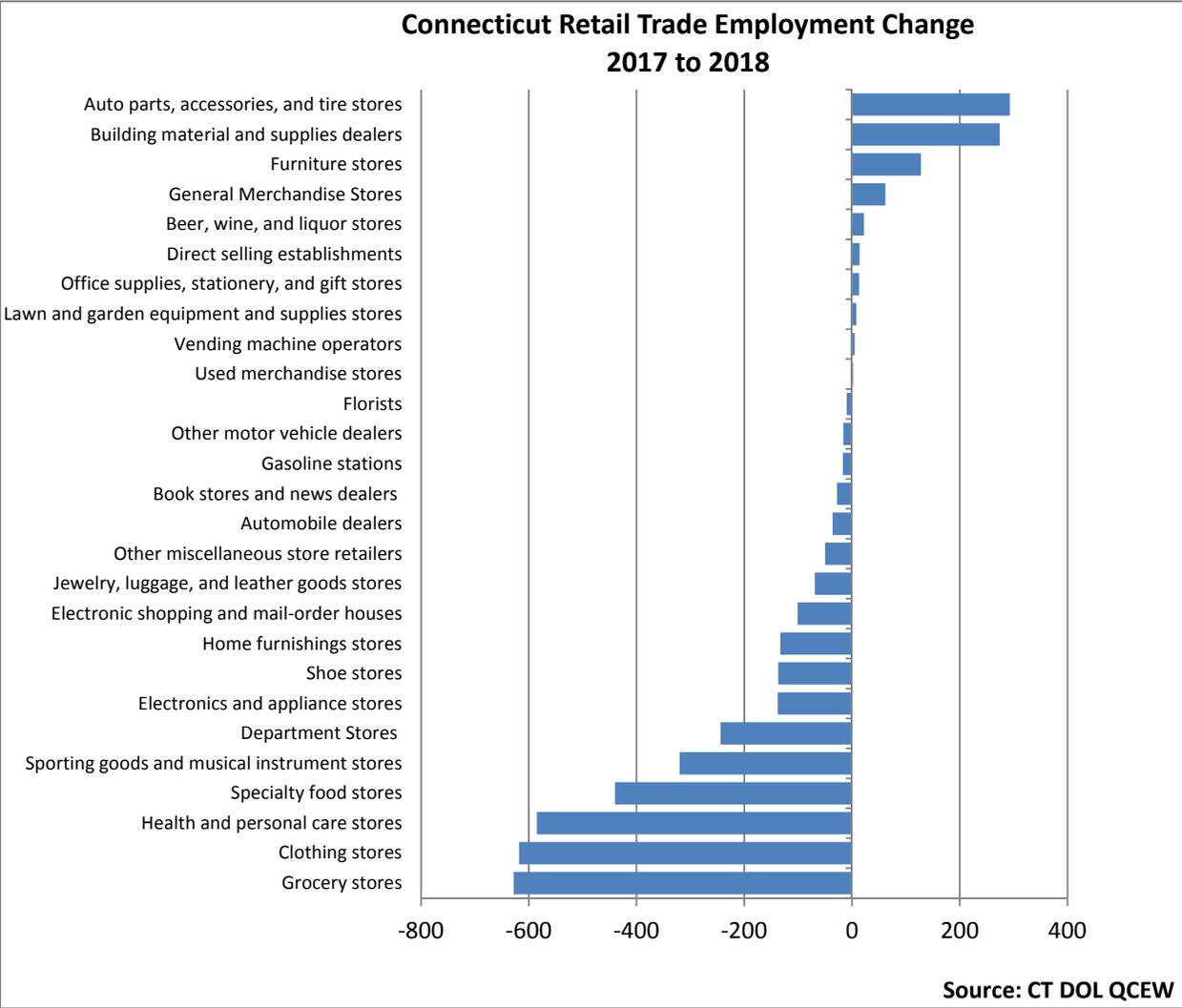
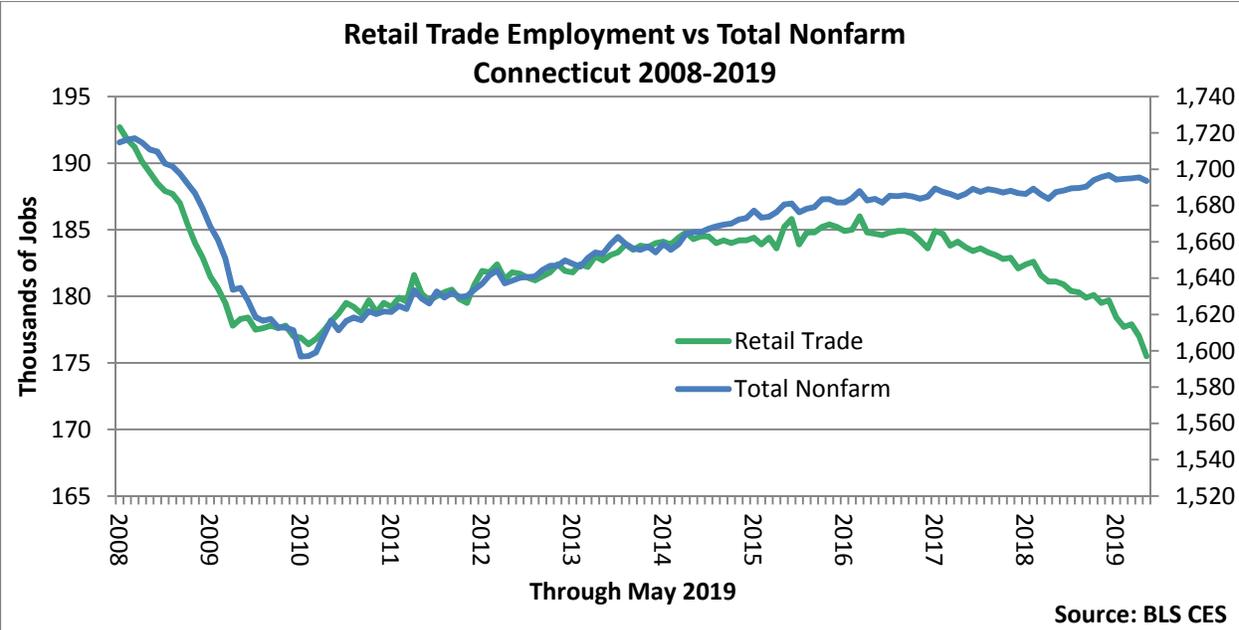
The Finance and Insurance sector of the economy has shed jobs during the past 10 years, down 19,259 since 2008. Most of this decline occurred within the Insurance Carriers (-8,109 or 12.4%) and Credit Intermediation (-6,134 or 20.1%). This sector employs proportionally fewer younger and older workers than the overall economy.

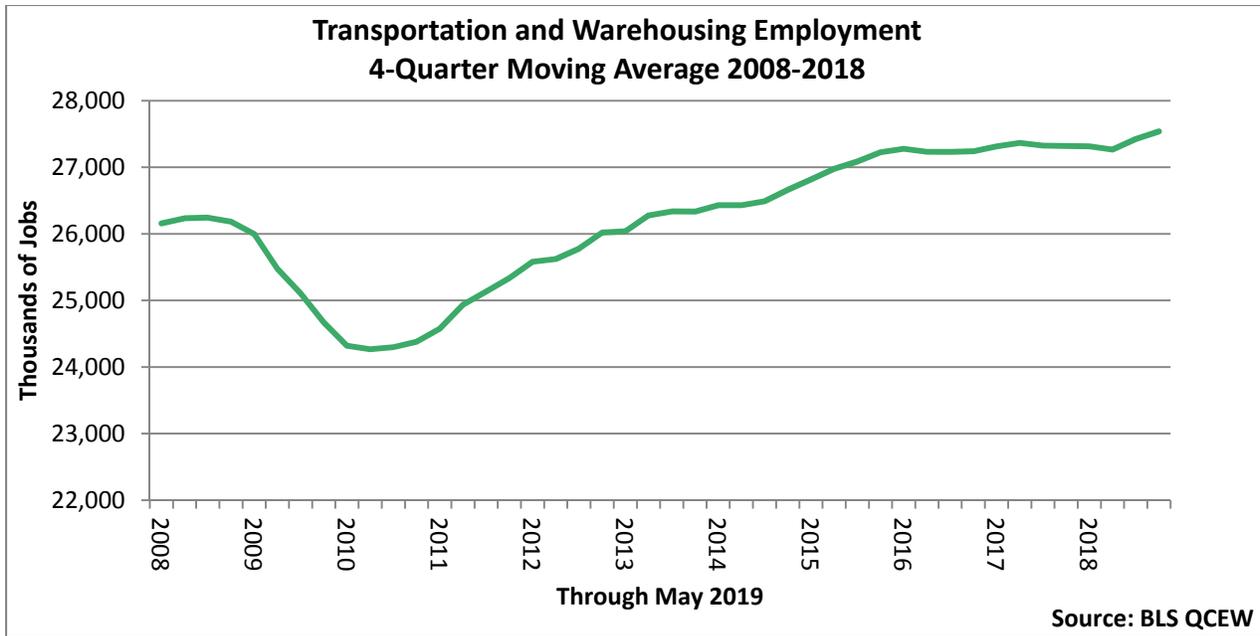




The Retail Trade and The Transportation & Warehousing Sectors

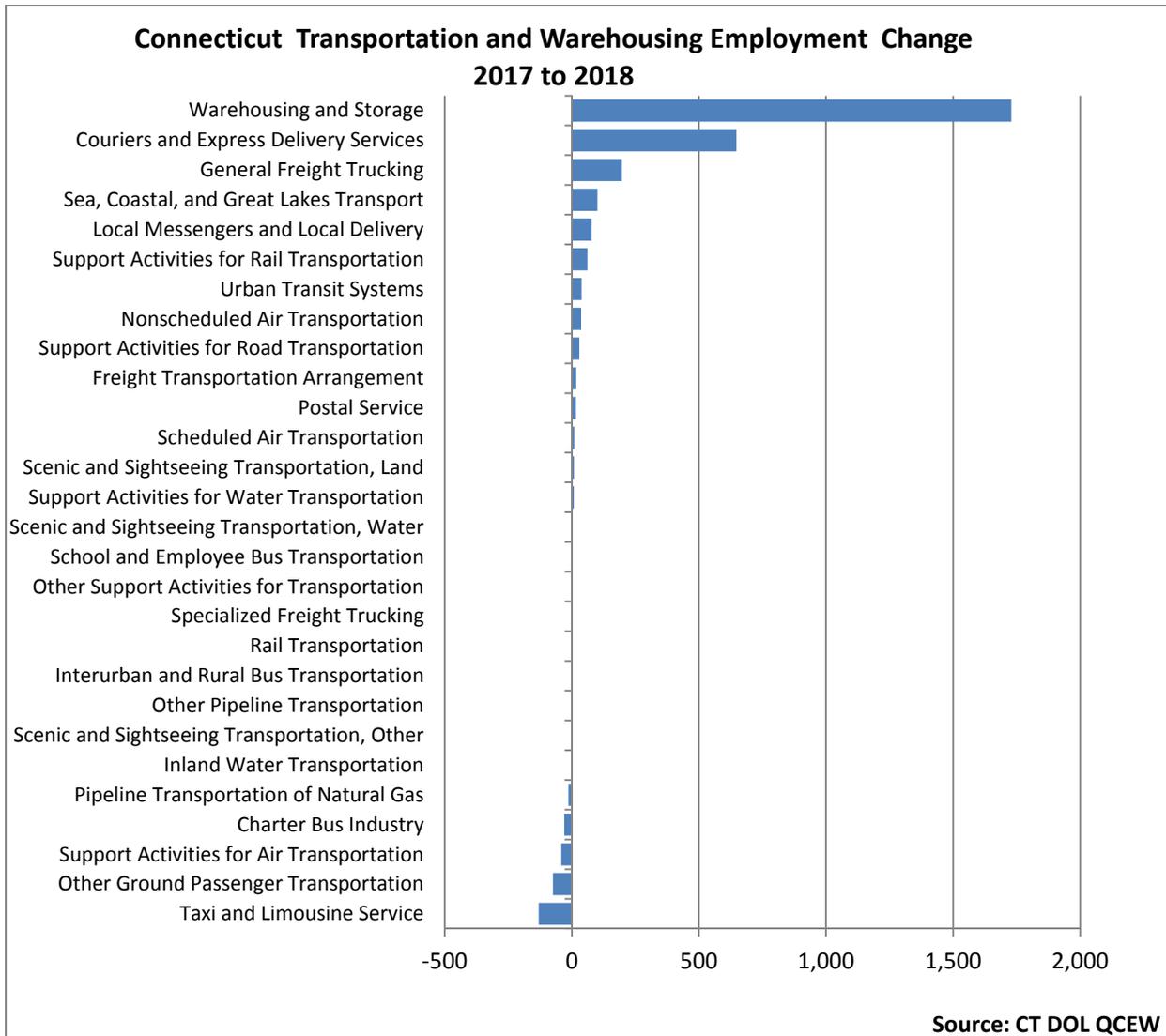
Retail Trade employment has been declining in recent years. Annual average declines began in 2015 down 0.1% from a year before. Prior to this period the industry seemed to track overall nonfarm employment change. From 2016-17 it fell 0.6% and accelerated its decline falling by 1.5% from 2017-18. As of May 2019, retail employment levels of 175,500 are just below the previous low of 176,400 reached in February 2008. The largest declines were seen in Grocery stores (-1.7%), Clothing stores (-4.7%), and Health & Personal Care stores (-4.3%), which all declined by over 580 jobs. Despite this challenging landscape for retail trade, Auto Parts, Accessories, and Tire Stores (+293 jobs, +6.3%), Building Material & Supplies dealers (+274 jobs, +2.1%), Furniture Stores (+128, +4.9%) and seven other detailed industries added jobs over the year. The overall trend for retail is the result of changes in consumer preferences derivative of online shopping and evident throughout the country.





This reduced retail demand has increased demand for workers in the transportation and warehousing industry, which has been adding jobs since 2010.

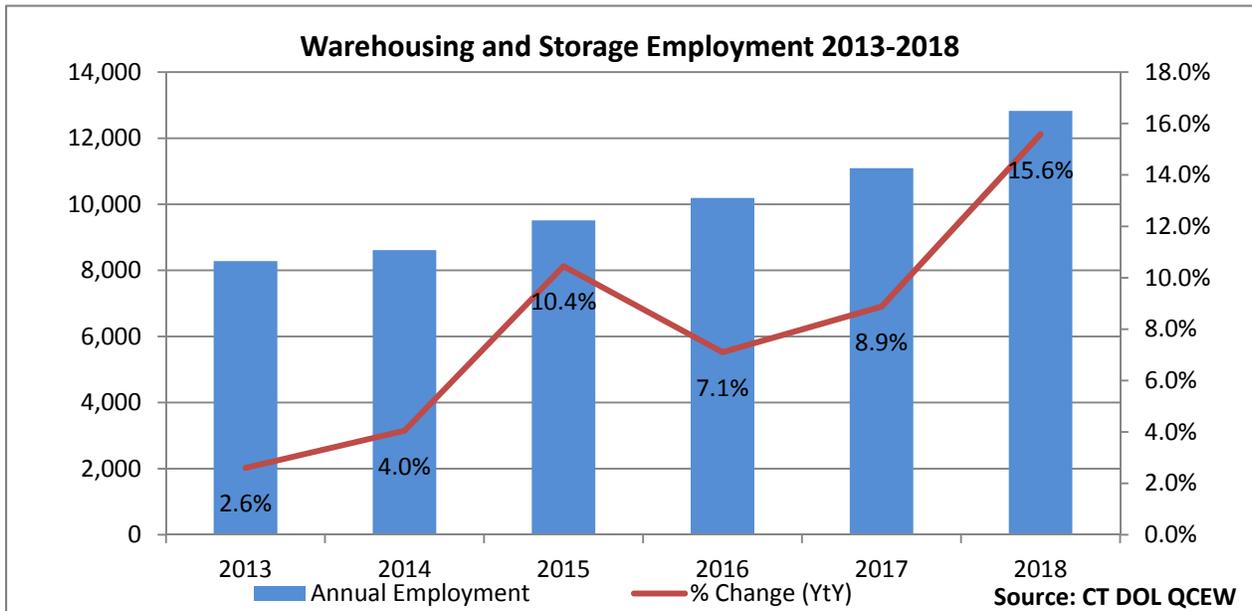
A vast majority of job growth in Transportation and Warehousing has been driven by the Warehousing and Storage segment of the sector, which is up 1,729 jobs over the year. Other internet commerce-related industries such as Courier & Express Delivery Services (+647 jobs), and General Freight Trucking (+196 jobs) added jobs in continuance of multi-year trends. Taxi & Limousine Service and Other Ground Passenger Transportation were down a combined 204 jobs, which is likely impacted by the growing popularity of ridesharing services.



The strong gains in Warehousing and Storage employment began in 2013 and have added 4,544 jobs through 2018, an overall increase of 55%. The 1,729 increase from 2017-18 alone is a 15.6% expansion, some of this increase may be attributed to the 2018 opening of a FedEx distribution center in Middletown which was noted to add between 500-1,000 jobs². Other media announcements indicate that additional warehouses and distribution centers are expected to open in coming years.³ Additional sources suggest that the nationwide shortage of truck drivers is contributing to warehousing expansion in Connecticut because that industry is shifting

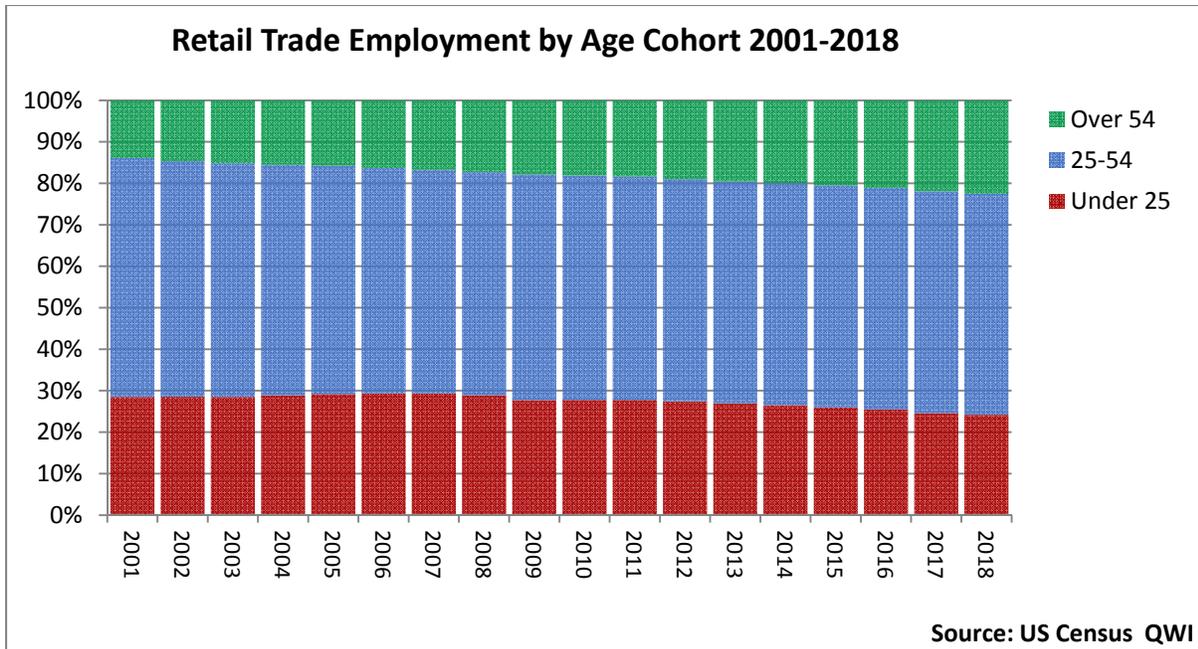
² Mill, J. (2018, Sept. 23). FedEx Facility Welcomed in Middletown, *The Middletown Press*, <https://www.middletownpress.com/middletown/article/FedEx-facility-welcomed-to-Middletown-13248732.php>
³ McDermott, G. (2019, March 20). Raymour & Flanigan Distribution Center Expansion Approved. *Journal Inquirer*, https://www.journalinquirer.com/business/raymour-flanigan-distribution-center-expansion-approved/article_912f212a-4b27-11e9-bf40-ef9b46e4a461.html

from long haul routes to shorter trips, and locations in the state can distribute to both New York and Boston.⁴

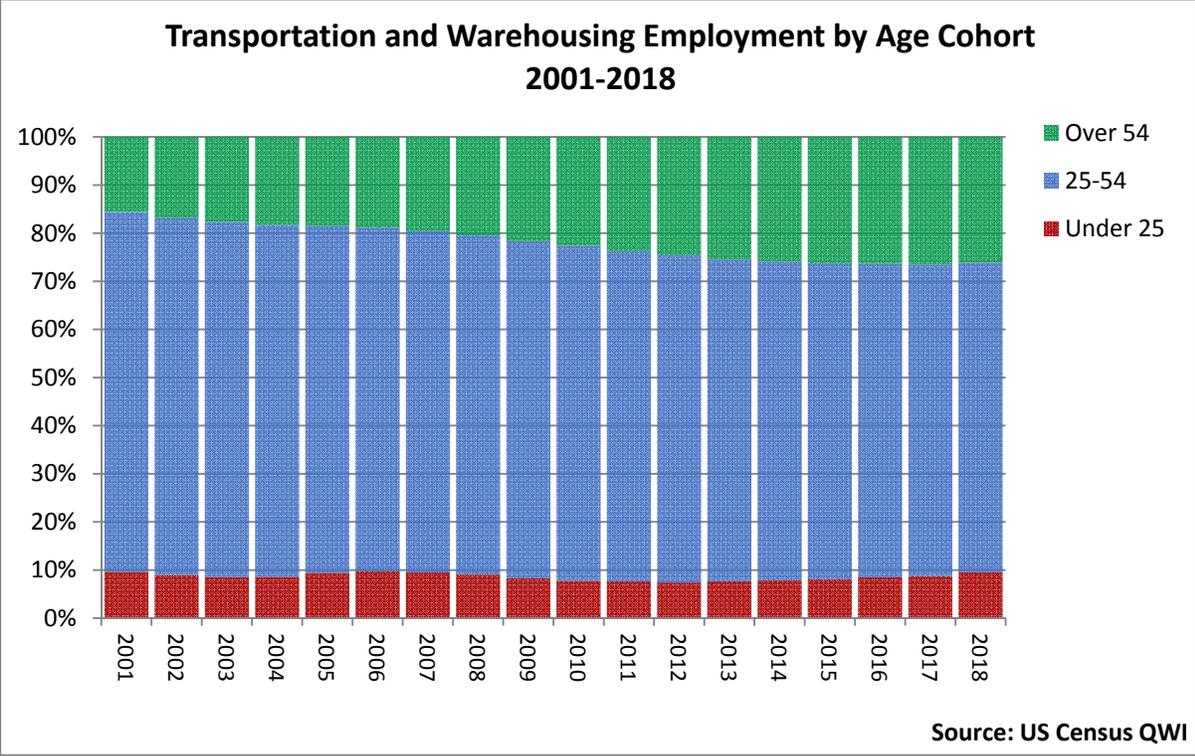


The workforce age distribution of the Retail Trade and Transportation & Warehousing industries differ in some ways from each other and from the overall Connecticut labor force. Retail Trade has a much larger share of its workforce under age 25 than the overall economy, 24 and 12 percent respectively. As that sector declined, its under 25 workforce has fallen 18% over the past 10 years, from 53,737 to 43,899 in 2018. Its prime age workforce is down 3.2% while its over 54 workforce has increased over 10 years by 8,748 or 27.2% to 40,892 in 2018.

⁴ Turmelle, L. (2019, March 6). E-commerce is Changing the Way CT Does Business. *New Haven Register*, <https://www.nhregister.com/business/article/E-commerce-is-changing-the-way-CT-does-business-13659253.php>



Over the past ten years, Transportation and Warehousing grew 16.4%. By age cohort, The over 54 cohort is up 48.6%, -prime age is up 6.2%, and the under 25 cohort is up 23%. This differs significantly from the overall economy, which was down 0.9% overall with the over 54 cohort up 30.4% and the prime and under 25 cohorts down -8.3 and -12.1% respectively. From 2017 to 2018, the industry experience a large uptick in under age 25 employment, in 2017 they were 8.7% of the labor force but accounted for 25.5% of growth through 2018.



INDUSTRY SECTOR WAGE CHANGE 2016-2018

Total annual wages by industry is an important measure of the overall impact of major sectors on the Connecticut economy. In 2018, total annual wages statewide amounted to \$113.4 billion dollars, an increase of 3.3% from 2016. The largest 2 year increases in total industry annual wages were Manufacturing (+\$822.1 mill.), Healthcare & Social Assistance (+\$691.1 mill.), and Professional & Technical Services (+\$341 mill.). The three declining net change industries were Mining (-\$458,642), Real Estate (-7.0 mill.) and Management (-286.9 mill.).

Total Annual Wages by Industry 2016-2018

NAICS	Industry	Annual Average		2016-18 Change	
		2016	2018	#	%
00	Statewide Total	\$109,776,347,186	\$113,393,824,796	\$3,617,477,610	3.3%
	Total Private	\$95,577,475,278	\$98,974,915,290	\$3,397,440,012	3.6%
11	Agriculture, forestry, fishing and hunting	\$163,528,517	\$171,615,765	\$8,087,248	4.9%
21	Mining	\$39,998,710	\$39,540,068	-\$458,642	-1.1%
22	Utilities	\$630,064,683	\$679,062,237	\$48,997,554	7.8%
23	Construction	\$3,933,426,072	\$4,097,782,714	\$164,356,642	4.2%
31-33	Manufacturing	\$12,430,260,117	\$13,252,375,680	\$822,115,563	6.6%
42	Wholesale trade	\$5,856,142,892	\$5,859,815,166	\$3,672,274	0.1%
44-45	Retail trade	\$6,134,431,003	\$6,249,786,562	\$115,355,559	1.9%
48-49	Transportation and warehousing	\$2,129,690,961	\$2,328,294,286	\$198,603,325	9.3%
51	Information	\$3,308,533,176	\$3,511,051,668	\$202,518,492	6.1%
52	Finance and insurance	\$17,808,098,874	\$17,814,256,486	\$6,157,612	0.0%
53	Real estate and rental and leasing	\$1,412,809,117	\$1,405,764,831	-\$7,044,286	-0.5%
54	Professional and technical services	\$9,813,555,806	\$10,154,562,658	\$341,006,852	3.5%
55	Management of companies and enterprises	\$5,377,299,210	\$5,090,324,661	-\$286,974,549	-5.3%
56	Administrative and Support	\$3,888,321,903	\$4,196,244,968	\$307,923,065	7.9%
61	Educational services	\$3,572,043,109	\$3,885,196,007	\$313,152,898	8.8%
62	Health care and social assistance	\$13,520,405,228	\$14,211,528,357	\$691,123,129	5.1%
71	Arts, entertainment, and recreation	\$770,506,589	\$841,849,556	\$71,342,967	9.3%
72	Accommodation and food services	\$2,693,203,976	\$2,896,646,074	\$203,442,098	7.6%
81	Other services, except public admin.	\$2,068,266,869	\$2,249,289,375	\$181,022,506	8.8%
92	Total Government	\$14,198,871,908	\$14,418,909,507	\$220,037,599	1.5%
92	Federal Government	\$1,306,743,147	\$1,395,392,011	\$88,648,864	6.8%
92	State Government	\$4,479,014,633	\$4,366,806,978	-\$112,207,655	-2.5%
92	Local Government	\$8,413,114,128	\$8,656,710,518	\$243,596,390	2.9%
99	Nonclassifiable establishments	\$26,888,465	\$39,928,172	\$13,039,707	48.5%

Source: CT DOL, QCEW

From 2016-2018, total nonfarm annual average wages increased by \$1,875 (+2.8%) to \$67,744. This is the fourth highest in the country, after New York, Massachusetts, and California. In terms of nominal change, it's the third slowest in the country after South Carolina and Mississippi. Given the high base-year and low nominal growth, its percent wage increase of 2.8% is the lowest in the country.

The Industries with the largest 2 year wage increase were the high earning Utilities (+\$19,303), Information (+\$8,325), and Finance & Insurance (+\$6,575) sectors. The two industries with declining annual average wages were Real Estate (-\$297) and Management (-\$11,962).

Annual Average Wage Change by Industry 2016-2018

NAICS	Industry	Annual Average Wage		2016-18 Change	
		2016	2018	#	%
00	Statewide Total	\$65,869	\$67,744	\$1,875	2.8%
	Total Private	\$66,579	\$68,305	\$1,726	2.6%
22	Utilities	\$111,987	\$131,290	\$19,303	17.2%
51	Information	\$102,317	\$110,642	\$8,325	8.1%
52	Finance and insurance	\$165,271	\$171,846	\$6,575	4.0%
54	Professional and technical services	\$101,263	\$105,402	\$4,139	4.1%
61	Educational services	\$62,765	\$66,724	\$3,959	6.3%
21	Mining	\$71,940	\$75,470	\$3,530	4.9%
23	Construction	\$66,552	\$69,727	\$3,175	4.8%
31-33	Manufacturing	\$79,462	\$82,569	\$3,107	3.9%
92	Total Government	\$61,458	\$64,126	\$2,668	4.3%
56	Administrative and Support	\$44,010	\$46,079	\$2,069	4.7%
62	Health care and social assistance	\$51,053	\$52,913	\$1,860	3.6%
11	Agriculture, forestry, fishing and hunting	\$34,514	\$36,145	\$1,631	4.7%
42	Wholesale trade	\$93,658	\$95,109	\$1,451	1.5%
71	Arts, entertainment, and recreation	\$28,179	\$29,550	\$1,371	4.9%
44-45	Retail trade	\$33,228	\$34,587	\$1,359	4.1%
72	Accommodation and food services	\$21,284	\$22,416	\$1,132	5.3%
81	Other services, except public admin.	\$32,808	\$33,618	\$810	2.5%
48-49	Transportation and warehousing	\$47,677	\$47,815	\$138	0.3%
53	Real estate and rental and leasing	\$70,617	\$70,320	-\$297	-0.4%
55	Management of companies and enterprises	\$163,372	\$151,410	-\$11,962	-7.3%
92	Federal Government	\$73,242	\$77,106	\$3,864	5.3%
92	State Government	\$69,953	\$71,595	\$1,642	2.3%
92	Local Government	\$56,402	\$59,390	\$2,988	5.3%
99	Nonclassifiable establishments	\$78,070	\$87,626	\$9,556	12.2%

Source: CT DOL, QCEW

DEMOGRAPHICS OF EMPLOYMENT BY FIRM SIZE

Annual employment change from 1997-2017 by educational attainment and demographics across all private firms is shown in the table below.

When examining change from 2007-2017, employment at private firms in Connecticut has gotten older, less male, and less white. The share of workers with a bachelor's degree or more is down 2.8 percentage points. Beginning in 2016, the private sector workforce went majority female and has increased by 0.7 percentage points over the ten years of available data through 2017.

Nonwhite employment growth in Connecticut has resulted in increases between 0.1 (Asian) and 2.0 (Black/African American) percentage points from 2007 to 2017 while the total share of white employment fell by 3.6 percentage points.

	Connecticut Demographics of All Firms			Percentage Pt. Change	
	1997	2007	2017	97-07	07-17
Total All workers	1,388,101	1,433,266	1,440,336	--	--
By Age					
Under 25	13.6%	14.3%	12.5%	0.7	-1.8
25-54	73.6%	67.2%	62.2%	-6.4	-5.0
Over 54	12.8%	18.5%	25.3%	5.7	6.8
By Sex					
Male	51.3%	50.5%	49.8%	-0.8	-0.7
Female	48.7%	49.5%	50.2%	0.8	0.7
By Education					
Less than High School	8.9%	9.0%	11.1%	0.1	2.1
High School	22.9%	21.5%	21.9%	-1.4	0.4
Some College	25.6%	25.7%	26.0%	0.1	0.3
Bachelor's degree or higher	29.1%	29.5%	28.5%	0.4	-1.0
Education not available (age 24 or less)	13.6%	14.3%	12.5%	0.7	-1.8
By Race					
White	86.8%	83.1%	79.5%	-3.7	-3.6
Black	9.3%	10.9%	12.9%	1.6	2.0
American Indian or Alaska Native Indian	0.4%	0.4%	0.5%	0.0	0.1
Asian	2.5%	4.2%	5.2%	1.7	1.0
Native Hawaiian or Pacific Islander	0.1%	0.1%	0.2%	0.0	0.1
2 or more	1.0%	1.3%	1.8%	0.3	0.5
By Ethnicity					
Not Hispanic or Latino	92.5%	89.1%	86.0%	-3.4	-3.1
Hispanic or Latino	7.5%	10.9%	14.0%	3.4	3.1

Source: US Census Bureau, Quarterly Workforce Indicators

The table below illustrates the varied demographic distribution of employment by firm size in Connecticut during 2017 (the most recent year of available data).

When compared to all firms, smaller firms employ proportionally more young, male, and white workers. Smaller firms also are more likely to employ people with lower educational attainment and more workers over 54. In total, 30.2% of private sector employment works at small firms.

Firms with 50-499 employees have age distribution more aligned with statewide totals and employ more females than average. These mid-sized firms also employ more non-white and Hispanic workers. The educational attainment of workers at mid-sized firms includes more workers with at least some college. 21.9% of private sector workers are employed by mid-sized firms.

Large firms, those that employ over 499 workers employ 47.9% of private sector employment across all industries. They employ more prime age workers and have the lowest share of younger and older workers when compared to the other firm size groups. Their gender distribution is roughly aligned with the private sector total. Their workforce is much more likely to have a Bachelor's Degree or higher when compared to other firm sizes and they're the most ethnically diverse.

Connecticut Demographics of Workforce at Small vs Large Firms - 2017

	All Firms	<50 Employees	50-499 Employees	>499 Employees
Total All workers	100.0%	30.2%	21.9%	47.9%
By Age				
Under 25	12.5%	14.3%	12.3%	11.5%
25-54	62.2%	59.5%	62.2%	63.8%
Over 54	25.3%	26.2%	25.4%	24.7%
By Sex				
Male	49.8%	51.3%	48.2%	49.6%
Female	50.2%	48.7%	51.8%	50.4%
By Education				
Less than High School	11.1%	11.5%	12.1%	10.3%
High School	21.9%	22.8%	22.8%	20.9%
Some College	26.0%	25.8%	26.5%	26.0%
Bachelor's degree or higher	28.5%	25.5%	26.3%	31.4%
Education not available (age 24 or less)	12.5%	14.3%	12.3%	11.5%
By Race				
White	79.5%	84.3%	78.3%	77.0%
Black	12.9%	8.1%	15.3%	14.8%
American Indian or Alaska Native Indian	0.5%	0.5%	0.6%	0.4%
Asian Alone	5.2%	5.4%	3.9%	5.8%
Native Hawaiian or Pacific Islander	0.2%	0.2%	0.2%	0.1%
2 or more	1.8%	1.7%	1.9%	1.8%
By Ethnicity				
Not Hispanic or Latino	86.0%	86.7%	84.0%	86.6%
Hispanic or Latino	14.0%	13.3%	16.0%	13.4%

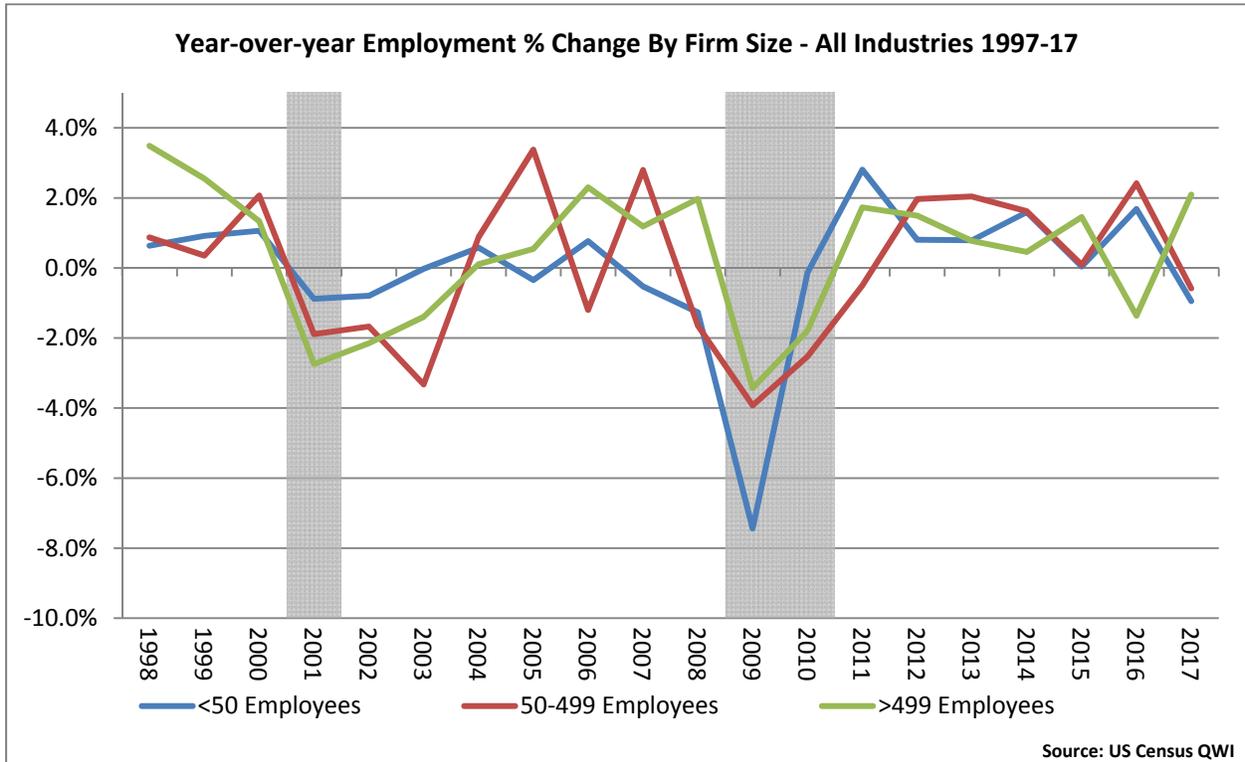
Source: US Census Bureau, Quarterly Workforce Indicators

The following graph shows total year-over-year change in employment by firm size. The size cohorts aren't longitudinal; they don't track specific firms that might migrate from one cohort to another. What is shown is that small firms begin adding jobs after downturns before medium and large firms. Existing research on cyclicalities and firm size has shown that larger firms shrink faster during downturns and expand more slowly after recessions. They are also create more jobs later on during expansions.⁵

The Connecticut data shown below illustrates some of those dynamics. In the late 1990s Large Firms had large year-over-year employment gains before the 2001 recession; they also shed jobs during the

⁵ Moscarini, G. and Postel-Vinay, F. (2015, February) Did the Job Ladder Fail After the Great Recession? NBER.

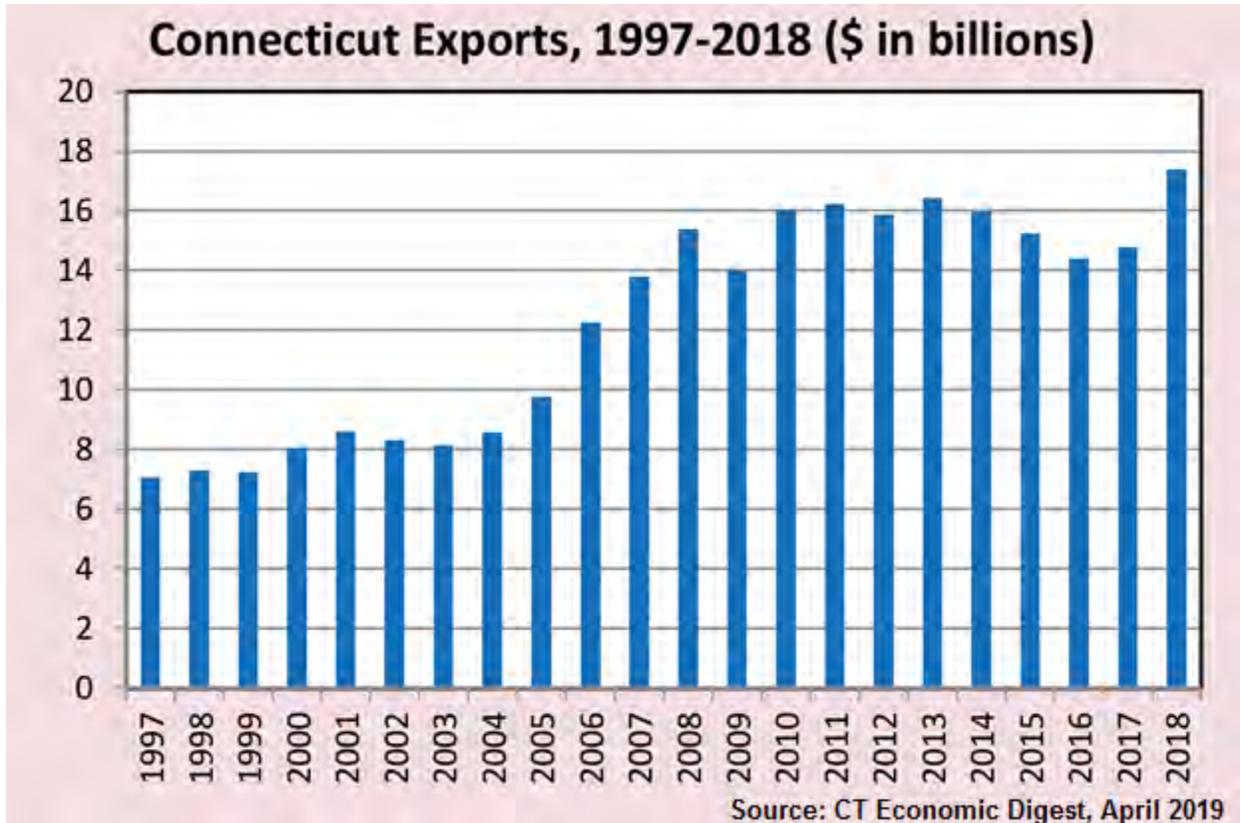
downturn at a larger rate during the recession and began adding jobs more slowly when compared to smaller firm size cohorts. The behavior of firm size cohorts in Connecticut during the 2007-2009 recession shows that smaller firms shed jobs before large firms with steeper losses during the state recession but added jobs soon, which corresponds with some of the findings of Moscarini and Postel-Vinay (2015).



CONNECTICUT EXPORTS

Connecticut Annual Exports

In 2018, Connecticut's commodity exports totaled 17.4 billion, a 17.7% increase from the 14.8 billion total from a year before. This year-over-year growth is much larger than corresponding growth at the New England or US level. Those regions were up 4.7% and 7.6% respectively. This one year increase of 2.6 billion is much larger than any other one-year change shown in the graph below.



The breakout of total exports by type is shown below. Commensurate with Connecticut's large aerospace manufacturing sector, the state's top export commodity is "Aircraft, Spacecraft, and Parts Thereof", which represents 41.2% of total exports and increased by 26.4% from 2017-18. This commodity export represented 41.2% of total exports in 2018, but accounted for 57.3% of the 2.6 billion increases from 2017-2018

Connecticut Exports by Commodity

Rank	Description	ANNUAL 2017	ANNUAL 2018	%2017- 2018
	TOTAL ALL COMMODITIES	14,783,749,496	17,399,913,482	17.7
1	Aircraft, Spacecraft, And Parts Thereof	5,677,098,480	7,176,873,817	26.42
2	Industrial Machinery, Including Computers	2,596,056,075	3,011,107,504	15.99
3	Optic, Photo Etc, Medic Or Surgical Instrments Etc	1,217,588,294	1,397,749,651	14.8
4	Electric Machinery Etc; Sound Equip; Tv Equip; Pts	1,138,116,536	1,073,359,983	-5.69
5	Special Classification Provisions, Nesoi	796,158,412	934,877,936	17.42
6	Plastics And Articles Thereof	404,177,316	440,377,224	8.96
7	Pharmaceutical Products	35,554,520	271,737,699	664.28
8	Inorg Chem; Prec & Rare-Earth Met & Radioact Compd	227,274,056	223,758,725	-1.55
9	Miscellaneous Chemical Products	153,592,403	197,874,383	28.83
10	Vehicles, Except Railway Or Tramway, And Parts Etc	123,401,739	158,089,563	28.11

Source: CT Economic Digest, April 2019

State Export Partners

Connecticut's top ten export destination countries include major European, North American, and Asian countries. The countries with the largest percentage increases from 2017-2018 were Singapore (56.02%), France (50.34%) and Germany (27.8%). These three countries alone comprise 41.4% percent of the 17.7% increase in total Connecticut exports to all countries from 2017-2018.

CT Exports by Country

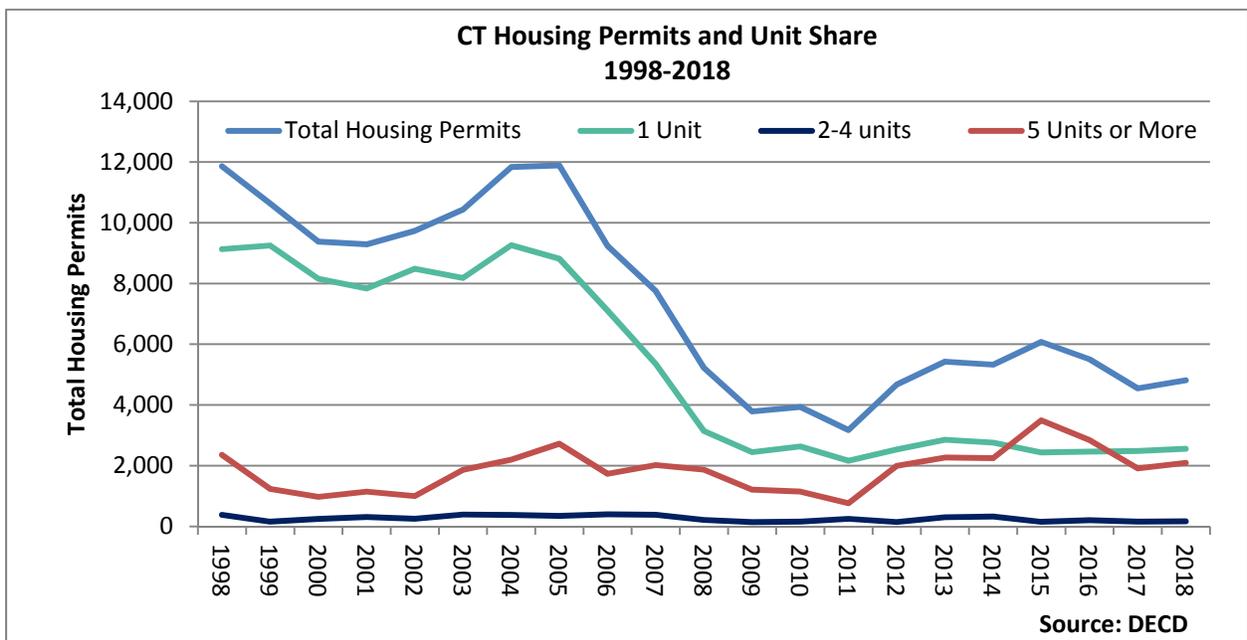
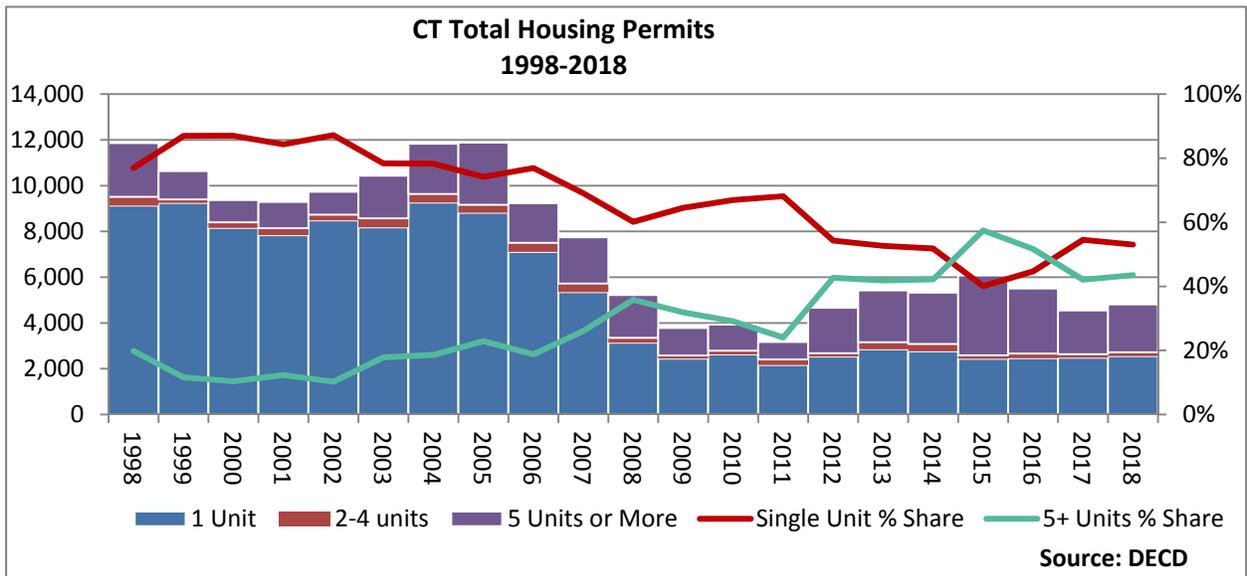
Rank	Description	ANNUAL 2017	ANNUAL 2018	%2017- 2018
	TOTAL ALL PARTNER COUNTRIES	14,783,749,496	17,399,913,482	17.7
1	France	2,114,066,967	3,178,215,217	50.34
2	Germany	1,824,686,109	2,332,009,685	27.8
3	Canada	1,906,951,049	1,952,280,492	2.38
4	United Kingdom	1,300,057,528	1,485,638,498	14.27
5	Mexico	1,036,231,921	948,479,594	-8.47
6	China	795,096,015	943,670,037	18.69
7	Netherlands	619,400,713	771,225,904	24.51
8	Japan	546,683,110	629,046,651	15.07
9	Singapore	399,476,163	623,280,855	56.02
10	Korea, Republic Of	539,062,782	422,934,953	-21.54

Source: CT Economic Digest, April 2019

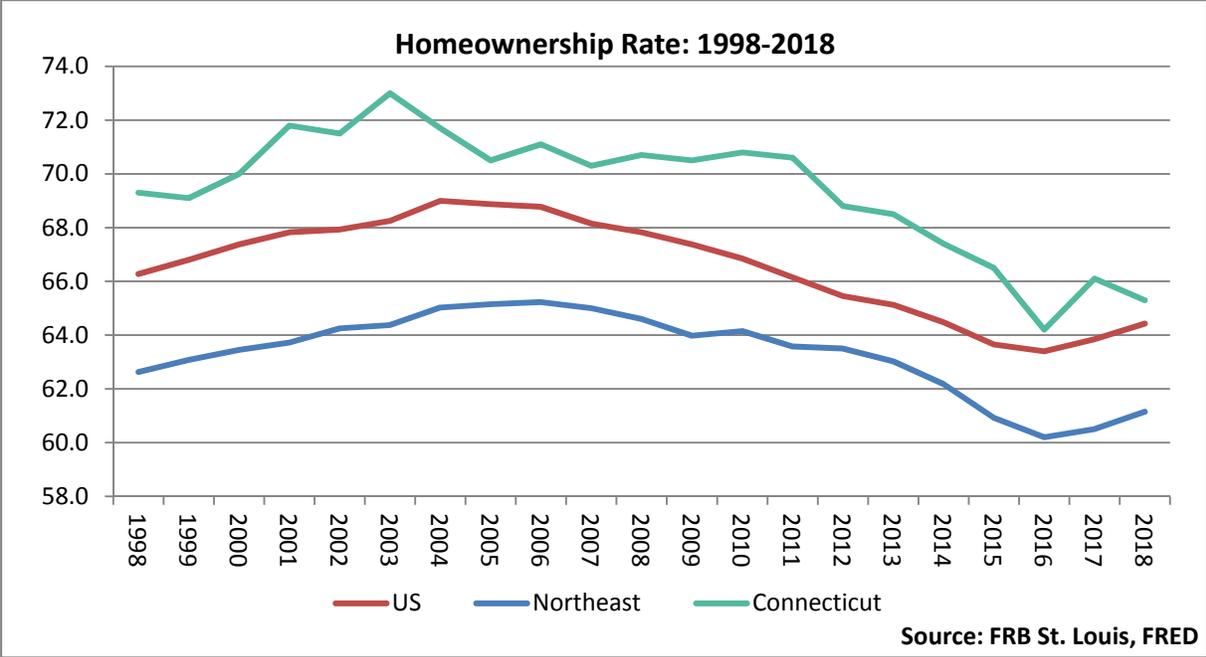
Two of Connecticut's top ten export destinations had year-over-year percent declines, the Republic of Korea (-21.54%) and Mexico (-8.47%).

HOUSING

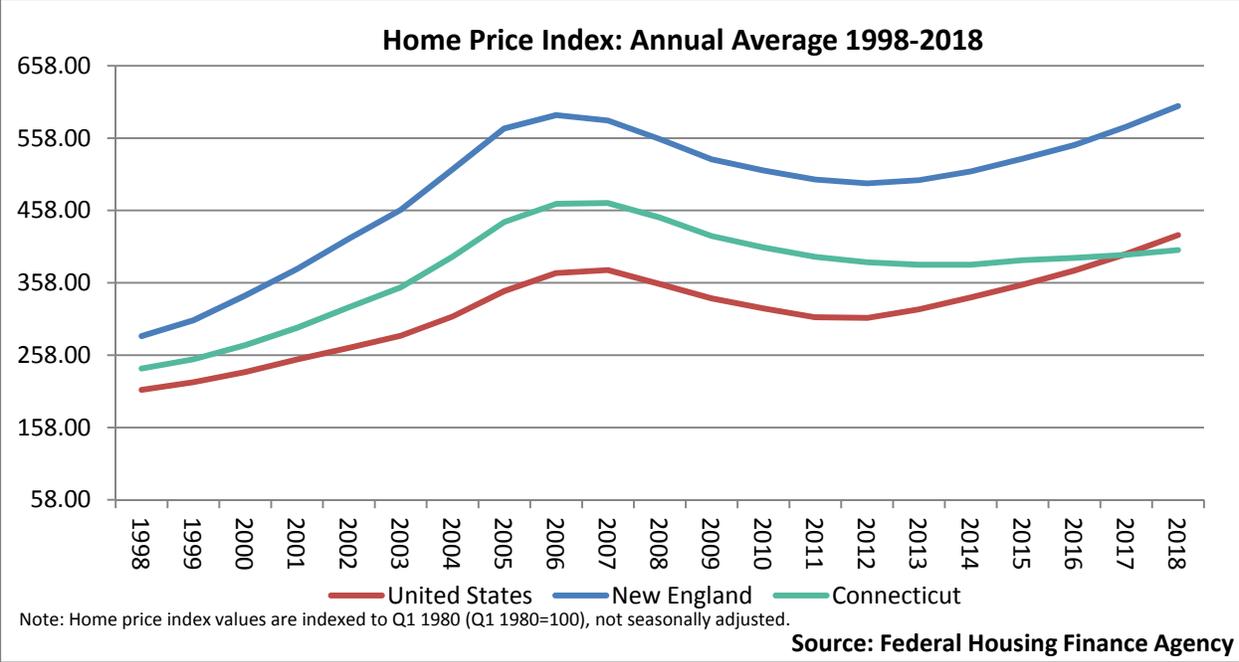
In 2018, there were 4,815 total housing permits in Connecticut, an increase 268 from a year before but still below 2015 post-recession peak of 6,077. That peak was driven by an uptick in multi-unit permits, which exceeded corresponding single unit share in 2015 and 2016. In subsequent years, single unit permits have steadily increased from 2015 lows of 2,436 to 2,553 in 2018. The following tables illustrate the shifts in total housing permits and shows how total permit change was heavily influenced by multi-units. Large permits with 5 or more units are shown below to have fallen from 2015 highs of 3,493 to 2,095 in 2018.



Homeownership rates in Connecticut, the Northeast, and United States have all followed cyclically-similar trajectories over the past 20 years. Connecticut’s rate is consistently above the US and peaked a year before it in 2003 vs. 2004. It’s homeownership rate persisted above 70 percent until 2011 while the US and Northeast both had more pronounced decreases from 2007 onward. All three regions troughed in 2016. The US and Northeast have had consistent slow increases in the subsequent two years, while Connecticut has decreased to 65.3 in the past year.



The Federal Housing Finance Agency home price indexes shown below illustrate how Connecticut’s real estate market growth has diverging from National and regional trends. It troughed in 2013 a year after New England and the United States and has since experienced much slower growth.



Connecticut Projections Through 2020

CONNECTICUT SHORT-TERM PROJECTIONS

Overall Change

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 2018 to the second quarter of 2020.

During this period, overall Connecticut employment projected to increase 1.1% from 1,900,570 to 1,920,595. This rate increase matches the rate from last year's short term projection.

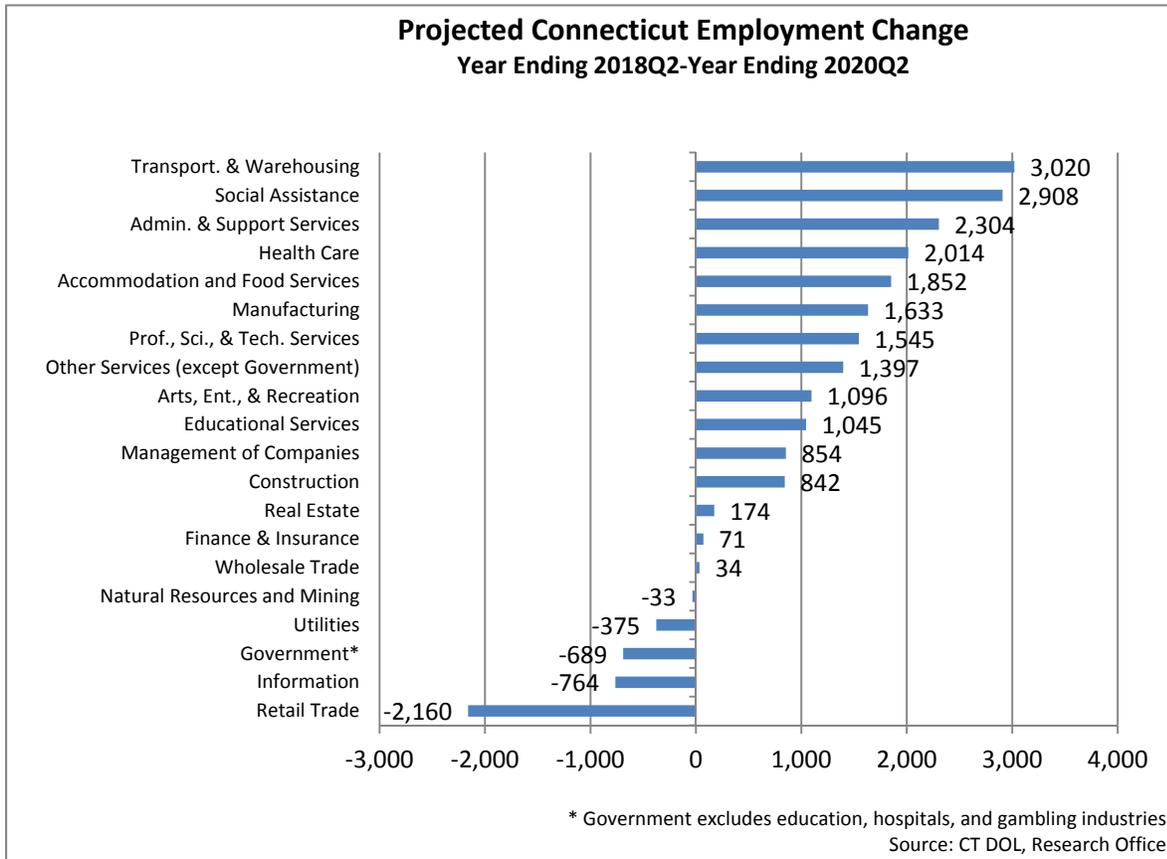
Projections by Major Sector

The goods producing sector is expected to grow at 1.1% during the two year projection period. This growth amounts to an employment increase of 2,442 jobs, with the largest share coming from Manufacturing (up 1,633 jobs), while the much smaller industry of Construction is expected to grow by 842 over the period. Overall growth for the goods producing sector is dampened by slight declines in Natural Resources and Mining, the third industry component of that sector. The projected Manufacturing growth follows a notable 2 year increase of 4,305 jobs, the most of any industry in Connecticut. This Manufacturing turnaround began in 2016 and most of this growth has occurred in Hartford and New London Counties. Goods producing sector growth in previous years was driven by employment change in Construction, which posted strong growth from 2010-2016, but has been flat in subsequent years.

The service providing sector of the economy equates to more than three quarters of the overall employment and is projected to grow by 14,326 jobs through 2020Q2, with a growth rate of 1.0%, slightly below the rate of total employment in Connecticut. This service providing projection is comprised of growth in all but four industries. Growth is driven by increases in the Transportation & Warehousing, Social Assistance, and the Administrative & Support sectors, which equate to 57.5% of service providing industry growth. This share for the three largest

gaining service industries is much lower than the 76.2% projected for the 17Q2-19Q2 projection, indicating that the Connecticut economy is expected to experience broader employment growth than in previous years. The four industries expected to contract equate to 3,988 jobs, with Retail Trade comprising 54.2% of job losses within those contracting industries.

Projections by Industry



The industries that are projected to add the most jobs through 2020 are Transportation and Warehousing, Social Assistance, Administrative and Support Services, and Health Care.

Transportation and Warehousing sector growth is driven by consumer demand shifts to online shopping. Warehouse distribution centers have been built throughout the state in recent years and 83% of projected gains are in the Warehousing component of that sector. Strong social assistance growth is due to demographic aging in the state, as 80% of that sector growth is in Individual and Family Services, which provides services to the elderly and other groups. Growth in Administrative and Support Services is due to an increase in services to buildings and dwellings

such as janitorial, landscaping, and cleaning services. The same demographic trends increasing demand for Social Assistance are also increasing demand for Health Care, although there is a shift in that industry away from large institutions toward ambulatory, outpatient, and home care.

Other growing sectors include Manufacturing which is expected to add over 1,600 jobs in the two year period. While growth in manufacturing is a huge turnaround after decades of decline, this projection may prove to be pessimistic as Connecticut has seen an increase of 1,700 manufacturing jobs in one year alone (year ending March 2019).

Professional, Scientific, and Technical Services are projected to grow on the strength of Computer Systems Design and Related Services. This industry includes a wide range of Information Technology (I.T.) businesses.

While not a specific “industry” the number of self-employed workers is expected to increase by 3,257 over the two-year period, just slightly faster than payroll employment jobs.

Major sectors that show decreases include Utilities, Government, Information, and Retail Trade with projected declines of 375, 689, 764, and 2,160, respectively. The Utilities sector has shed employment since at least the early 1990s, down roughly 50% over that 28-year period through 2018. The projected declines in the Information sector are driven by Newspapers, a component industry that has gradually contracted since 2000. Government is projected to decline at the federal, state and local levels. While we know the U.S. Census will be in full swing in the 2020Q2 with a large number of (temporary) federal jobs, they are not included in these projections. The Retail Trade downturn that began in the fourth quarter of 2016 has continued through 2018, driven by aforementioned shifts in consumer preferences, and is projected to continue into 2020. The decline of more than 2,000 jobs over a two-year period will still leave Retail as one of the largest sectors.

Employment Projections by Industry

Industry	2018 Q2 History	2020 Q2 Projections	Emp Change	% Change
Total All Industries	1,900,570	1,920,595	20,025	1.1%
Self Employed and Unpaid Family Workers, All Jobs	186,039	189,296	3,257	1.8%
Goods Producing	225,385	227,827	2,442	1.1%
Natural Resources and Mining	5,622	5,589	-33	-0.6%
Construction	59,279	60,121	842	1.4%
Manufacturing	160,484	162,117	1,633	1.0%
Services Providing	1,489,146	1,503,472	14,326	1.0%
Wholesale Trade	61,714	61,748	34	0.1%
Retail Trade	179,919	177,759	-2,160	-1.2%
Transportation and Warehousing	51,099	54,119	3,020	5.9%
Utilities	5,179	4,804	-375	-7.2%
Information	31,685	30,921	-764	-2.4%
Finance and Insurance	105,636	105,707	71	0.1%
Real Estate and Rental and Leasing	19,978	20,152	174	0.9%
Professional, Scientific, and Technical Services	96,321	97,866	1,545	1.6%
Management of Companies and Enterprises	33,689	34,543	854	2.5%
Administrative and Support and Waste Management	91,783	94,087	2,304	2.5%
Educational Services	185,973	187,018	1,045	0.6%
Health Care	223,494	225,508	2,014	0.9%
Social Assistance	65,039	67,947	2,908	4.5%
Arts, Entertainment, and Recreation	29,819	30,915	1,096	3.7%
Accommodation and Food Services	143,678	145,530	1,852	1.3%
Other Services (except Government)	81,783	83,180	1,397	1.7%
Government*	82,357	81,668	-689	-0.8%

*Government excludes education, hospitals, and gambling industries

Projections by Occupation

As is noted above, the 1.1 percent projected growth for the overall economy corresponds to an employment increase of 20,025 during the two-year period ending on 2020 Q2. The occupational groups expected to increase the most are Personal Care and Service Occupations, up 3,002 jobs, Food Preparation and Serving Related, up 2,720 jobs, Transportation and Materials Moving Occupations, up 2,488 jobs, and Management Occupations, up 2,298 jobs. The top three occupational groups were also the top groups for the 2017-2019 projections.

Two major occupational groups with projected declines over the two-year period are Sales and Related, down 1,280, and Office and Administrative Support, down 1,164 jobs. The changes in occupational employment are driven by the industry changes discussed in the previous section. For example, the strong growth in Personal Care and Service Occupations is driven by Social Assistance Industry growth.

Employment Projections by Occupational Group

Occupational Group	2018 Q2 History	2020 Q2 Projections	Emp Change	% Change
Total, All Occupations	1,900,570	1,920,595	20,025	1.1%
Architecture and Engineering	36,340	37,545	1,205	3.3%
Personal Care and Service	95,787	98,789	3,002	3.1%
Transportation and Material Moving	100,630	103,118	2,488	2.5%
Computer and Mathematical	51,464	52,646	1,182	2.3%
Building and Grounds Cleaning and Maintenance	85,423	87,072	1,649	1.9%
Food Preparation and Serving Related	143,089	145,809	2,720	1.9%
Life, Physical, and Social Science	14,033	14,278	245	1.8%
Healthcare Support	53,599	54,521	922	1.7%
Community and Social Service	42,313	43,022	709	1.7%
Management	146,999	149,297	2,298	1.6%
Construction and Extraction	73,035	74,141	1,106	1.5%
Healthcare Practitioners and Technical	114,186	115,807	1,621	1.4%
Business and Financial Operations	103,022	104,447	1,425	1.4%
Education, Training, and Library	130,828	132,192	1,364	1.0%
Arts, Design, Entertainment, Sports, and Media	39,596	39,919	323	0.8%
Legal	18,782	18,898	116	0.6%
Installation, Maintenance, and Repair	57,847	58,194	347	0.6%
Farming, Fishing, and Forestry	4,420	4,415	-5	-0.1%
Protective Service	33,404	33,347	-57	-0.2%
Production	101,993	101,802	-191	-0.2%
Office and Administrative Support	275,318	274,154	-1,164	-0.4%
Sales and Related	178,462	177,182	-1,280	-0.7%

Connecticut's Projections Compared to Other States

Looking at other states in our region, Personal Care and Service occupations are also expected to add the most jobs in Massachusetts and Vermont. However, New Hampshire and Rhode Island are expected to see the most jobs added in Food Preparation and Serving occupations. Maine is expected to add the most jobs in Office and Administrative Support occupations, an occupational

group where Connecticut is projected to see declines. New York is expected to see an astonishing 11.1% growth in Health Care Support occupations – 46,300 additional jobs in just two years. This includes a projected increase of 39,630 home health aides, nearly 9% growth per year in this occupation.

Statewide Projections

State	2018	2020	# Change	% Change	Avg Ann Openings
Connecticut	1,900,570	1,922,990	22,420	1.2%	214,620
Maine	678,820	682,670	3,850	0.6%	76,250
Massachusetts	3,826,710	3,930,020	103,310	2.7%	460,030
New Hampshire	710,280	720,540	10,260	1.4%	83,090
New York	10,318,840	10,563,880	245,040	2.4%	1,245,820
Rhode Island	532,480	539,610	7,130	1.3%	61,660
Vermont	355,740	359,070	3,330	0.9%	40,270

Connecticut's projected 2018-2020 job growth of 1.1% is similar to many states in the Northeast and the Midwest.

The South and West regions of the country are projected to grow by 3.2% and 3.6%, respectively, through 2020, while the Midwest and Northeast have increases of 1.6% and 2.0%, respectively. Closer to home, New England's combined projected growth rate of 1.9% is driven by the 2.7% expected growth in Massachusetts, a state that accounts for 48% of overall New England employment. The remaining New England states are all projected to increase by between 1.3% (Rhode Island) and 0.6% (Maine).

The state with the fastest projected growth is Arizona (+5.5%), with Delaware the slowest (+0.5%). There are 18 states with projected growth between 0.4% faster or 0.4% slower than Connecticut (a difference of 0.2% faster or slower per year). States with similar growth rates include Midwest states, such as Wisconsin, Illinois, Minnesota, Kansas, and Iowa.

Occupation Group Projected to Add the Most Jobs 2018 to 2020

State	Occupation Sector	2018	2020	# Change	% Change	Avg Ann Openings
Connecticut	Personal Care and Service	93,960	96,900	2,940	3.1%	14,960
Maine	Office and Admin. Support	95,290	95,900	610	0.6%	10,450
Massachusetts	Personal Care and Service	188,790	199,650	10,860	5.8%	33,110
New Hampshire	Food Prep. And Serving Related	59,850	61,270	1,420	2.4%	10,950
New York	Healthcare Support	415,440	461,740	46,300	11.1%	72,040
Rhode Island	Food Prep. And Serving Related	52,840	54,400	1,560	3.0%	9,920
Vermont	Personal Care and Service	16,670	17,220	550	3.3%	2,710

Occupational Projections by Wage

In 2018, the median wage in Connecticut for all occupations was \$46,900. All wages are adjusted for full-time/full-year work. Growth is projected in occupations with a wide range of wages with 31% of growth in occupations with a median wage less than \$30,000 per year, such as personal care aides and food prep & serving workers. Occupations with wages between \$30,000 and \$60,000, including Warehouse and Landscaping Workers, Medical Assistants, and Tractor-Trailer Truck Drivers, will make up 27% of the two-year projected increase. Registered Nurses, Mechanical Engineers, and Accountants & Auditors will have the largest increases among occupations with median wages between \$60,000 and \$90,000 per year (17% of total job growth will be in occupations in this category). Occupations with median wages between \$90,000 and \$120,000 will make up 16% of job growth, with the largest increases in software developers, management analysts, and aerospace engineers. Finally, there will be an increase of 1,848 (just under 10% of the total increase) in jobs with a median wage above \$120,000, including financial managers, computer and information systems managers, lawyers, and dentists.

There are over 700 occupations in the economy, and this outlook has touched on those expected to show the greatest increases over the next two years. There will be openings in virtually every occupation – even those that are contracting – as workers retire or move on to other jobs and need to be replaced. Detailed information about every occupation in the Connecticut economy, including projections, wages, and required skills, is available on the Connecticut Department of Labor Office of Research website.

Conclusion

Connecticut's short-term projections show that the growth experienced in the recent past is expected to continue through 2020. Trends that started or persisted in recent years, such as growth in Manufacturing, Social Assistance, and Transportation and Warehousing, are likely to continue. Overall labor market measures, such as a low unemployment rate and high employment to population ratio, suggest that demographics and slow population growth are the largest challenges Connecticut faces as it attempts to accelerate job growth.

These projections were produced with the best available information as of February 2019. There are upside and downside risks to these projections. The national business cycle is currently breaking records with the longest string of positive monthly job changes ever recorded, and these projections were produced under the assumption that this will continue. However, there are a few signs that the national economy may be slowing. A national recession would harm Connecticut.

On the other hand, the recent growth in manufacturing has been significantly faster than we projected a few years ago. That sector, which had seemed to be in perpetual decline, has been adding jobs faster than expected. Other industries may exceed expectations in the coming years.

Data Limitations

The projections in this report have been carefully prepared to ensure accuracy, but by nature are subject to error. For more detail on the short-term occupational projections, visit: www.projectionscentral.com/Projections/ShortTerm.