CONNECTICUT'S SHORT-TERM EMPLOYMENT OUTLOOK 2020-2022

Connecticut's Short-Term Employment Outlook: 2020-2022

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The Pandemic, The Recovery, and its Impact on Labor Markets

2020 is thankfully in the past, but its impact on society and the economy will be felt for many years to come. The pandemic isn't over, but we are in much better shape than a year ago. Over the past year, Connecticut unemployment claims have begun to subside from record highs, a majority of the state adult population is vaccinated, and covid-mitigation economic restrictions have been lifted. Additionally, 2020 decennial census showed that the state population is higher than it was in 2010. Though much of the economic, public health, and social uncertainty has improved over the year, we still face many obvious challenges and are certainly not out of the woods yet but are getting there.
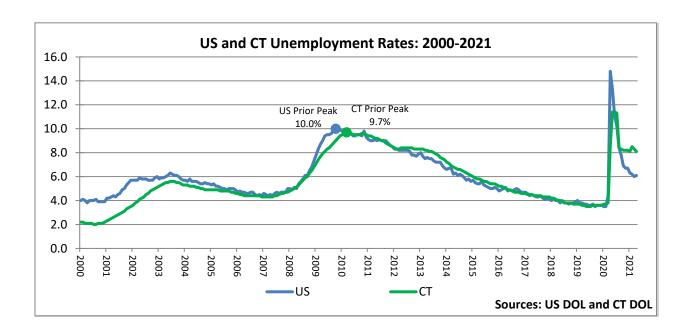
This annual outlook includes a review of various data sources to help contextualize the current state of our labor force demographics and recent economic trends. The concluding section contains short term employment projections through 2022 and help illustrate where we expect the state economy will add jobs during the recovery.

The Connecticut Labor Market

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. Connecticut's unemployment rate peaked at 9.7% shortly thereafter in March 2010. Up until early last year, the overall unemployment rates were at historic lows. Since then, beginning in March 2020, Covid-19 employment shutdowns resulted in unprecedented short-term unemployment increases. As the lockdowns commenced, US and State unemployment rates shifted from 4.4%(US) and 3.8% (CT) to respective peaks of 14.8% for the US in April 2020 and 11.4% in May and June for Connecticut. In the months since those peaks, the US has had sharper declines, down to 5.8% as of May 2021, while Connecticut persisted between 8.1 and 8.5% from August 2020 through April 2021. As of May 2021, the state dipped below 8 percent and was 7.7%.

Additional detail at the US level by demographics highlights how the labor market had drastically improved for many groups within the US economy through the peak month before the NBER-declared recession.[1] The total US unemployment rate fell by 6.5 points from its 2009 aforementioned high to 3.5 percent trough in February 2020, which corresponds with the start of the recession.

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[1] National Bureau of Economic Research (NBER) Business Cycle Expansions and Contractions
https://www.nber.org/cycles.html

In the year and a half since that low, the following table shows how unemployment rates for Females peaked higher and fell by more than males which aligns with the shutdown most heavily impacting industries with larger female employment shares.
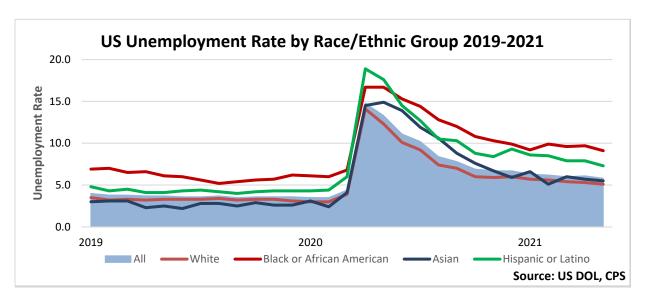
By age cohort, the under 25 age group had the largest percentage point increase, up 19.6 points. That increase equates to a rate 3.5 times higher than February 2020 levels. The 25-54 and over 54 cohorts had smaller percentage point changes, but due to them having much lower base levels, their rates respectively increased by 4.3 and 5.2 times their February 2020 levels. As of May 2021, the under 25 US population has an unemployment rate of 9.9%, and the two other cohorts have rates of 5.2 and 4.9 percent.

US Unemployment Rate Change - Trough, Peak, and Current Month					
				% Pt. Change	
Group	UR Trough Feb. 2020	UR Peak April 2020	Current Month May 2021	Feb.2020 to Peak	Peak to May 2021
All	3.5	14.8	5.8	11.3	-9.0
Male	3.5	13.6	6.0	10.1	-7.6
Female	3.4	16.1	5.5	12.7	-10.6
Age					
Under 25	7.8	27.4	9.9	19.6	-17.5
25-54	3.0	12.8	5.2	9.8	-7.6
Over 55	2.6	13.6	4.9	11.0	-8.7
Race/Ethnic Group					
White	3.0	14.1	5.1	11.1	-9.0
Black or African American	6.0	16.7	9.1	10.7	-7.6
Asian	2.4	14.5	5.5	12.1	-9.0
Hispanic or Latino	4.4	18.9	7.3	14.5	-11.6

Source: US DOL, CPS

By available race and ethnic group in the U.S., the Hispanic or Latino group had the highest peak unemployment rate of 18.9% and the largest percentage point drop, falling to 7.3% as of May 2021. The Black or African American population had a slightly lower peak rate of 16.7%, but has subsequently had the highest unemployment rate of demographic groups as of June 2020-May 2021, when it was 9.1 percent.

The Asian and White US populations had the lowest base month unemployment rates and peaked at 14.5 and 14.1 percent and were respectively 5.5% and 5.1% as of May 2021.

US Unemployment Rate by Race/Ethnic Group 2019-2021

Source: US DOL, CPS

Corresponding Connecticut unemployment rates by age and demographic groups are available annually through 2020 and are shown below. Statewide age cohort annual average unemployment rates show that workers over 54 experienced larger 2020 annual average unemployment rate increases than workers in the two other cohorts and had estimated annual average unemployment above peak 2010 levels.

The table also illustrates how unemployment rates for Black and Hispanic Populations fell dramatically through 2019 and how those two groups experienced differing rate change through 2020. Hispanic unemployment rates increased by 4.5 percentage points while the unemployment rate for Black/African Americans in Connecticut shifted slightly over the year from 7.3 percent to 7.4 percent. These demographic rates are derivative from the BLS LAUS expanded state demographic data series and are subject to possible state level sample size issues.[2]

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[2] BLS LAUS Expanded State Demographic Data available here: https://www.bls.gov/lau/ex14tables.htm
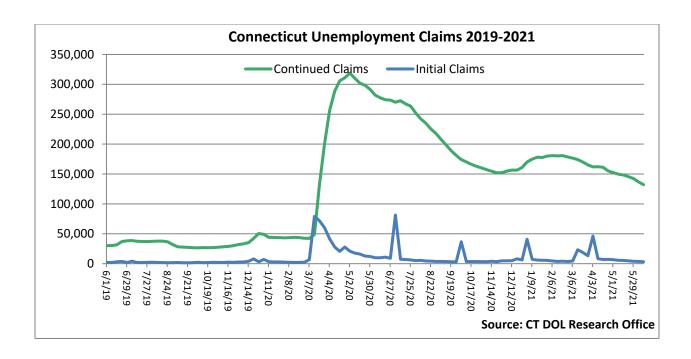and data notes: https://www.bls.gov/lau/notescps.htm

CT Annual Unemploy. Rate Change - Peak, Trough, and Recent Year

Group	UR Prior High 2010	UR Trough 2019	Recent Year 2020	10-19 % Pt Change	19-20 % Pt Change
Total	9.2	3.8	7.8	-5.4	4.0
Men	9.9	4.2	8.3	-5.7	4.1
Women	8.3	3.5	7.6	-4.8	4.1
Age Cohort					
Under 25	18.4	11.2	15.0	-7.3	3.9
25-54	8.2	2.7	6.4	-5.5	3.8
Over 54	6.6	3.2	7.3	-3.3	4.0
Race/Ethntic Group					
White	8.3	3.5	7.6	-4.8	4.1
Black or African American	17.2	7.3	7.4	-9.9	0.1
Asian	5.3	1.2	n/d	-4.1	n/d
Hispanic or Latino ethnicity	17.7	5.5	10.0	-12.2	4.5

n/d= no data   **Source: US DOL, LAUS**

Unemployment Claims

During the first half of 2020, unemployment claims due to the Covid-19 shutdown spiked to unprecedented levels. Initial claims in Connecticut went from 6,667 new claims during the week ending March 7th, 2020 to 79,046 a week later, nearly 12-fold increase. 62% of initial claims for the week ending March 14th involved workers who had annual prior earnings of $35,000 or less and only 7% of initial claims involved workers with prior earning over $75,000. During subsequent weeks, continued claims peaked at 318,846 as of 5/2/20, over 10x higher than levels a year prior. The graph below illustrates how continued claims steadily declined to half of peak levels through the end of 2020. After increasing to 180,851 by late February, continued claims have fallen in 13 of 14 subsequent weeks through late May with an average decline of -2,746 per week. During this time initial claims have fallen to levels below well below levels from a year ago. From April 10th, 2021 onward initial weekly claims have averaged about a third of corresponding levels a year ago.

Connecticut Unemployment Claims 2019-2021

Legend: Continued Claims, Initial Claims

Source: CT DOL Research Office

Industry Continued Claims

 As of the week of May 29th, 2021, there were 142,405 continued unemployment claims, down more than 51% from 291,626 a year earlier during the week ending March 30, 2020. Every industry had fewer claims than a year before, the three industries with the largest declines were those heavily impacted by the lockdowns which began to ease in late May 2020; Accommodation & Food Services (-31,625 claims or -61.8%), Health Care & Social Assistance (-19,975 claims or -52.7%), and Retail Trade (-19,355 claims or -58.6%) These three industries accounted for over 47% of over the year declines, with shares respectively of 21%, 13.4%, and 13.0%.

Industry	Most recent week 5/29/2021	1 year ago 5/30/2020	Total claims peak 5/2/2020	Pre-Shutdown 3/14/2020	1 Year Change #	1 Year Change %	recent week to peak change #	recent week to peak change %	Recent Week to Pre-Shutdown Change #	Recent Week to Pre-Shutdown Change %	Share of Total Claims 5/29/21	Share of Total Claims 5/30/20
Total	**142,405**	**291,626**	**318,846**	**48,658**	**-149,221**	**-51.2%**	**-176,441**	**-55.3%**	**93,747**	**193%**	**100%**	**100%**
Agric., Forestry, Fishing & Hunting	362	438	515	354	-76	-17.4%	-153	-29.7%	8	2%	0%	0%
Mining/Quarrying	29	52	62	48	-23	-44.2%	-33	-53.2%	-19	-40%	0%	0%
Utilities	89	103	105	46	-14	-13.6%	-16	-15.2%	43	93%	0%	0%
Construction	7,285	11,329	15,072	7,531	-4,044	-35.7%	-7,787	-51.7%	-246	-3%	5%	4%
Manufacturing	10,855	17,101	19,060	3,604	-6,246	-36.5%	-8,205	-43.0%	7,251	201%	8%	6%
Wholesale Trade	4,681	8,868	9,772	1,541	-4,187	-47.2%	-5,091	-52.1%	3,140	204%	3%	3%
Retail Trade	17,607	36,962	42,494	3,762	-19,355	-52.4%	-24,887	-58.6%	13,845	368%	12%	13%
Transp. & Warehousing	6,549	12,959	13,592	3,549	-6,410	-49.5%	-7,043	-51.8%	3,000	85%	5%	4%
Information	1,977	3,425	3,115	647	-1,448	-42.3%	-1,138	-36.5%	1,330	206%	1%	1%
Finance & Insurance	3,174	3,681	3,620	1,250	-507	-13.8%	-446	-12.3%	1,924	154%	2%	1%
Real Estate	1,938	3,109	3,076	749	-1,171	-37.7%	-1,138	-37.0%	1,189	159%	1%	1%
Prof. & Tech. Services	5,378	8,913	9,395	1,391	-3,535	-39.7%	-4,017	-42.8%	3,987	287%	4%	3%
Management of Companies	911	2,373	2,421	309	-1,462	-61.6%	-1,510	-62.4%	602	195%	1%	1%
Admin. & Support Svces.	12,979	18,889	18,706	6,632	-5,910	-31.3%	-5,727	-30.6%	6,347	96%	9%	6%
Educational Services	5,977	15,187	14,718	1,712	-9,210	-60.6%	-8,741	-59.4%	4,265	249%	4%	5%
Health Care & Soc Assistance	17,938	37,913	43,405	3,682	-19,975	-52.7%	-25,467	-58.7%	14,256	387%	13%	13%
Arts, Ent., & Recreation	2,929	8,705	9,211	1,487	-5,776	-66.4%	-6,282	-68.2%	1,442	97%	2%	3%
Accommodation & Food Services	20,798	52,194	54,423	4,803	-31,396	-60.2%	-33,625	-61.8%	15,995	333%	15%	18%
Other Services	7,848	18,576	20,559	1,607	-10,728	-57.8%	-12,711	-61.8%	6,241	388%	6%	6%
Self Employed	1,288	7,826	12,135	192	-6,538	-83.5%	-10,847	-89.4%	1,096	571%	1%	3%
Public Administration	2,084	4,116	3,905	632	-2,032	-49.4%	-1,821	-46.6%	1,452	230%	1%	1%
Other/Unknown	9,729	18,907	19,485	3,130	-9,178	-48.5%	-9,756	-50.1%	6,599	211%	7%	6%

Source: CT DOL Research Office

The following graph illustrates the five industries with the highest peak UI continued claims from March 14th, 2020 through May 29, 2021. Four of the displayed sectors peaked on May 2nd, Manufacturing peaked two months later during the week ending July 11th, 2020. All five of the industries had gradual declines through the fourth quarter of 2020 and flattened out with some increase during the first half of 2021. Accommodations & Food Services had a comparatively large early 2021 increase which mirrors the continued claims total across all industries.

Major Industries with High Continued Claims

Source: CT DOL Research Office

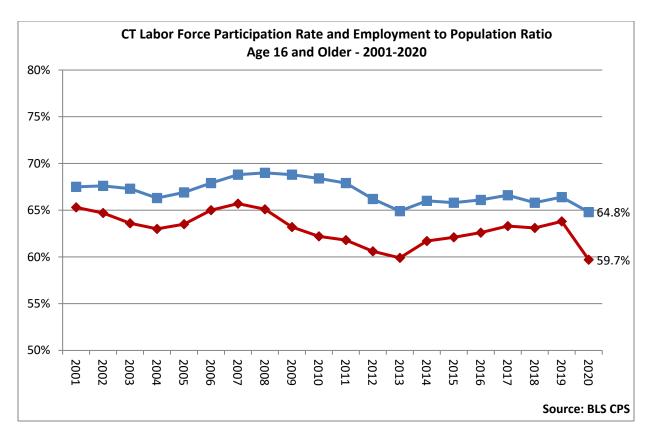Many major industries with the smallest level of recent continued claims are those that had peak claims of only a few thousand. These industries were those that were better able to adapt to lockdown protocols and/or were deemed essential. The following graph illustrates these industries which comprised a combined 17 percent of 2021Q1 Current Employment Survey (CES) employment but 8.4% of first quarter continued claims.

Major Industries with Low Continued Claims 2020-2021

Legend: Information, Finance & Insurance, Real Estate, Prof. & Tech. Services, Management of Companies

Source: CT DOL Research Office

Labor Force Participation

Connecticut's annual average labor force participation rate (LFPR) 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 66.4 in 2019, up from 65.8 percent in 2018. The graph below shows the impact of the pandemic of labor force participation. In 2020, the LFPR fell to 64.8, as unemployment rose and the employment to population ratio tumbled from 63.8% in 2019 to 59.7% last year.

CT Labor Force Participation Rate and Employment to Population Ratio
Age 16 and Older - 2001-2020

Source: BLS CPS

As the overall LFPR fell in the state, the over 54 and under 25 age cohorts saw labor force percent share increases, indicating that the 25-54 age cohort had larger LFPR drops than those smaller groups. From 2019 to 2020, the overall labor force decreased by 44,000. Under 25 and Over 54 age cohorts respectively increased by 9,000 and 11,000 while the 25-54 cohort was down 64,000.
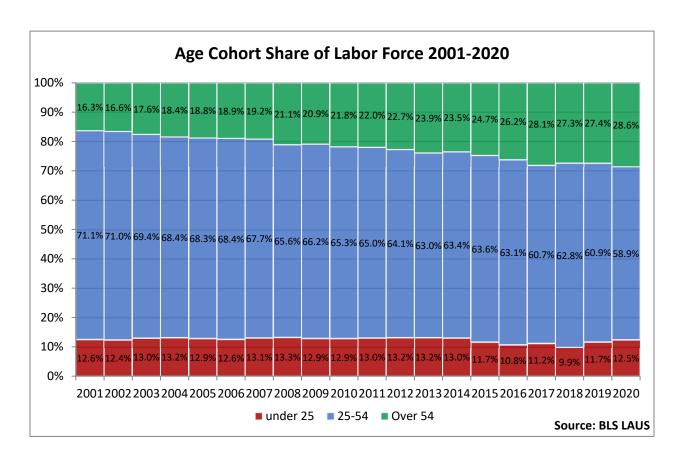
Labor Force Participation by Age Cohorts

State-level annual average age cohort labor force participation rate data is available from 2001 through 2020[3]. 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) was up 3,000 from 2019 to 20, while the labor force fell by 44,000. The under 25 population grew by 21,000, the 25-54 cohort fell by 45,000 and the over 54 cohort population was up 27,000. This aging of the labor force will impact the Connecticut recovery, as older age cohorts have lower labor force participation rates. This demographic shift isn't exclusive to Connecticut and has recently been cited as a potential variable influencing dual-mandate policies of the

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[3] Bureau of Labor Statistics. Expanded State Employment Status Demographic Data.
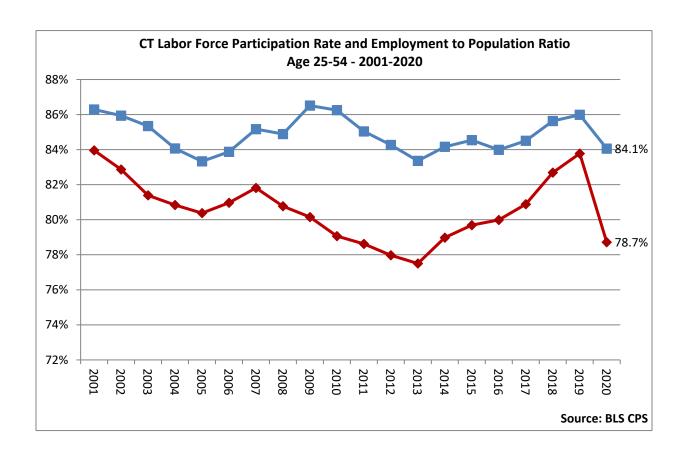https://www.bls.gov/lau/ex14tables.htm

Federal Reserve.[4] This overall labor force decline was due to employment falling by 117,000 and Unemployment growing by 72,000. By age cohort, the under 25 cohort labor force grew by 9,000 and the over 54 cohort grew by 11,000. The prime age labor force was down 64,000 over the year. The percent share of these broad age cohorts is shown below, which highlights the increasing importance of the over 54 workforce in Connecticut. Over the past 10 years that cohort has increased from 20.9% of the labor force to 28.6% as of 2020.

Age Cohort Share of Labor Force 2001-2020

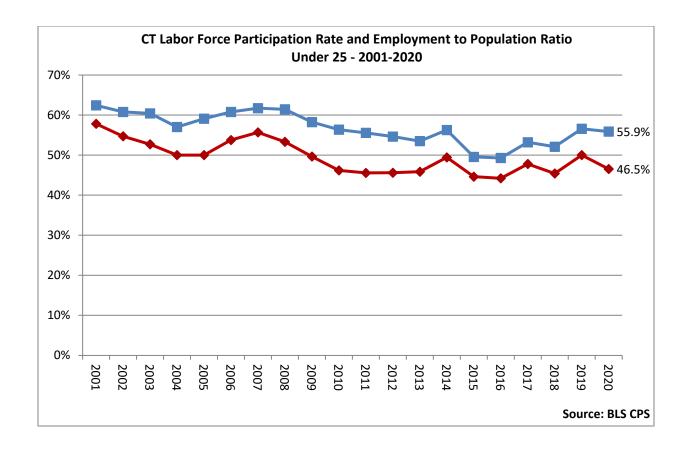| Year	Over 54	25-54	under 25
2001	16.3%	71.1%	12.6%
2002	16.6%	71.0%	12.4%
2003	17.6%	69.4%	13.0%
2004	18.4%	68.4%	13.2%
2005	18.8%	68.3%	12.9%
2006	18.9%	68.4%	12.6%
2007	19.2%	67.7%	13.1%
2008	21.1%	65.6%	13.3%
2009	20.9%	66.2%	12.9%
2010	21.8%	65.3%	12.9%
2011	22.0%	65.0%	13.0%
2012	22.7%	64.1%	13.2%
2013	23.9%	63.0%	13.2%
2014	23.5%	63.4%	13.0%
2015	24.7%	63.6%	11.7%
2016	26.2%	63.1%	10.8%
2017	28.1%	60.7%	11.2%
2018	27.3%	62.8%	9.9%
2019	27.4%	60.9%	11.7%
2020	28.6%	58.9%	12.5%

Source: BLS LAUS

The following graph shows annual average LFPR and EPR for prime age workers in Connecticut from 2000 to 2020. Since reaching a 2013 trough of 83.4 percent in 2013, overall prime age LFPR has remained between 84.0 (2016) and 86 percent (2019). In 2020 it fell to 84.1%, just above 2016 levels. During this span, as unemployment increased, the employment to population ratio for this cohort tumbled to 78.7%.
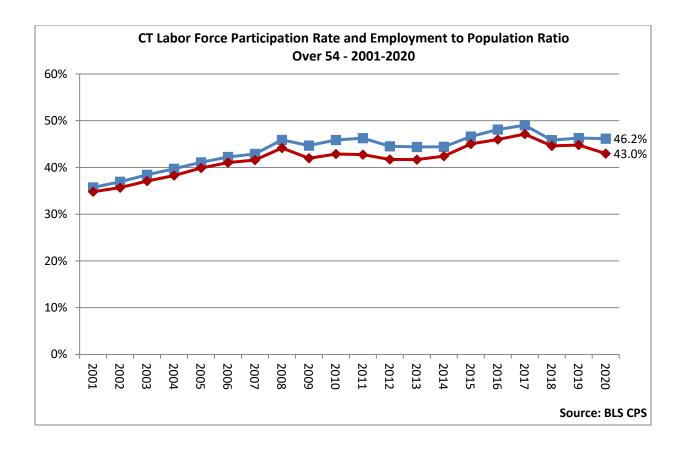
**CT Labor Force Participation Rate and Employment to Population Ratio
Age 25-54 - 2001-2020**

Source: BLS CPS

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 2007 recession, the cohort has gradually fallen from a 2007 peak of 61.7% to a low of 49.3% in 2016. Since that series low, the under 25 LFPR had trended upward, rising to a 2019 level of 56.6%. In 2020 overall LFPR for this cohort fell slightly, and the employment to population ratio fell from 50.0% in 2019 to 46.5% in 2020.

CT Labor Force Participation Rate and Employment to Population Ratio
Under 25 - 2001-2020

55.9%

46.5%

Source: BLS CPS

For the over 54 cohort, LFPR reached a high of 49% in 2017 and fell to the mid-40s during the three subsequent years through 2020. It remained relatively flat in 2020 as the employment to population ratio fell from 44.8% in 2019 to 43.0%. From 2019-2020, The over 54 population and labor force grew by 27,000 and 11,000 respectively. Most of the overall population growth (24,000) was in the 65 and over component cohort while the labor force growth was more evenly split between the 55-64 cohort (+6,000) and the 65 and over cohort (+5,000).

CT Labor Force Participation Rate and Employment to Population Ratio Over 54 - 2001-2020

Source: BLS CPS

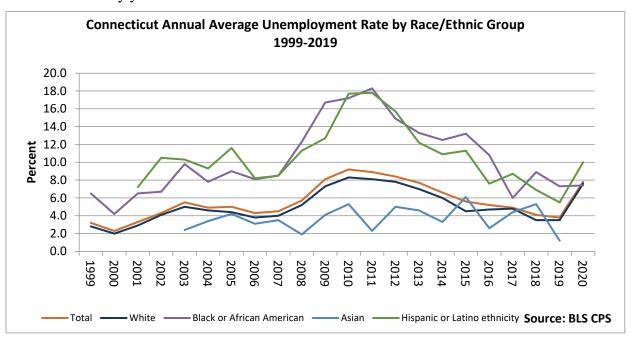**Changing Demographic Composition of Connecticut's Labor Force**

Annual average age cohort labor market data information by race and ethnicity helps contextualize the employment changes in this article and illustrate shifts within the overall 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 14.9% through 2020. During this time, White labor force share fell from 84.8% to 77.6% and the Black/African American labor force share increased from 9.5% to 12.5%. 2020 data for the Asian race/ethnic group isn't available, but from 2010 to 2019 it increased from 4.4% to 5.3%.

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

Race Ethnic Group	2000		2010		2019		2020	
	#	%	#	%	#	%	#	%
Total	1,746	100.0%	1,892	100.0%	1,914	100.0%	1,870	100.0%
White	1,493	85.5%	1,605	84.8%	1,549	80.9%	1,452	77.6%
Black/African American	201	11.5%	180	9.5%	216	11.3%	234	12.5%
Asian	n/d	n/d	83	4.4%	102	5.3%	n/d	n/d
Hispanic	n/d	n/d	193	10.2%	285	14.9%	279	14.9%

n/d = no data   Source: BLS, LAUS

The following graph shows annual average unemployment rates by race/ethnic group in Connecticut. In 2020, all demographic groups with available data had unemployment rate increases. Prior to this, most demographic groups had sustained decreases from 2010-2019, the most pronounced occurring within the Black and Hispanic populations in Connecticut. Note that unemployment rates for the Asian and Hispanic or Latino Ethnicity demographic groups aren't available for every year in the series.

Examining the Changing Demographics of Connecticut Employment: 1999-2019

The Quarterly Workforce Indicators (QWI) dataset allows for detailed analysis of industry employment by various demographic characteristics and employment measures. Given the recent business cycle shift from expansion to recession, a review of the demographic trends from 1999 through the 2019 business cycle peak can give insight as to what we can expect in a post-pandemic economy.

Long Term Trends: 1999-2019

The racial and ethnic composition of Connecticut employment has made some notable shifts over the past two decades. The U.S. Census Bureau's Quarterly Workforce Indicators (QWI) dataset allows for a detailed view of the composition of employment in the state.[5] The table below illustrates how the

[5] See: CT Economic Digest. A Look at the Age Composition of Connecticut's Industries. July 2019. https:// https://www1.ctdol.state.ct.us/lmi/digest/pdfs/cedjul19.pdf And

demographic composition of Connecticut's employment has changed over the past 20 years. Total employment is up 1.2% over the period, falling by 2.3% or 37,213 through 2009 and increasing by 3.5% or 18,872 from 2009-2019. The overall 20- year growth is driven by non-White and Hispanic employment gains, which increased between 31.6% (Black or African American) and 100.5% (Asian). White and Non-Hispanic employment are down 6.7% and 5.5% respectively over the period. Hispanic employment is up 76.4%. These 10-year periods illustrate the differing demographic trends of specific groups in the state. Of groups that saw the largest growth over the period, many had significantly more growth during the recent 10-year period than the prior one. African American employment grew by 52,932 or 33% over the past 20 years, with 84% of that growth occurring in the past decade. Other groups with larger increases during the 2009-19 period than the preceding 99-09 period include Hispanic employment, which grew 27% through 2009 and 39% from 2009-19. Apart from Asian and Native Hawaiian employment, every non-white demographic group had larger gains during the past ten years than the 99-09 period. Asian employment grew by 63% through 2009 and by 23% over the past 10 years.

Connecticut Employment by Race and Ethnic Group 1999-2019

Race/Ethnic Group	Employment			Employment Share			Percent Change		
	1999	2009	2019	1999	2009	2019	99-09	09-19	99-19
All	1,621,853	1,584,640	1,640,725	100.0%	100.0%	100.0%	-2.3%	3.5%	1.2%
White	1,394,848	1,317,170	1,301,459	86.0%	83.1%	79.3%	-5.6%	-1.2%	-6.7%
Black or African American	160,527	168,896	213,459	9.9%	10.7%	13.0%	5.2%	26.4%	33.0%
Asian	42,092	68,628	84,396	2.6%	4.3%	5.1%	63.0%	23.0%	100.5%
American Indian or Alaska Native	5,893	6,536	8,643	0.4%	0.4%	0.5%	10.9%	32.2%	46.7%
Native Hawaiian or Other P.I.	1,356	1,905	2,545	0.1%	0.1%	0.2%	40.5%	33.6%	87.7%
Two or More Race Groups	17,136	21,505	30,221	1.1%	1.4%	1.8%	25.5%	40.5%	76.4%
Hispanic or Latino	132,017	167,827	232,889	8.1%	10.6%	14.2%	27.1%	38.8%	76.4%
Not Hispanic or Latino	1,489,836	1,416,813	1,407,835	91.9%	89.4%	85.8%	-4.9%	-0.6%	-5.5%

Source: US Census Bureau, QWI

The table above illustrates broad long-term trends of specific demographic groups, but does not fully capture the impact of business cycle cyclicality on overall change. The 1999-2009 span encompasses the years leading up to the tech bubble and the immediate years after the 2007 peak, while the 2009-2019 period includes the year before the Great Recession's trough through the year ending 2019, immediately before the 2020Q1 start of the pandemic-induced recession.

2007-10 Recession Peak and Trough Employment

	All	White	Black or African American	Asian	Amer. Indian or Alaska Native	Native Hawaiian or Other P.I.	Two or More Race Groups	Not Hispanic or Latino	Hispanic or Latino
Peak Quarter	2007 Q4	2007 Q4	2007 Q4	2008 Q4	2007 Q4	2008 Q4	2008 Q4	2007 Q4	2008 Q4
Peak Employment	1,680,308	1,399,620	181,650	70,771	6,925	2,012	22,562	1,503,254	177,816
Trough Quarter	2010 Q1	2010 Q1	2010 Q1	2010 Q1	2010 Q1	2010 Q1	2010 Q1	2010 Q1	2010 Q1
Trough Employment	1,521,991	1,263,517	162,723	66,967	6,243	1,802	20,738	1,361,003	160,988
Peak/Trough # loss	-158,317	-136,103	-18,927	-3,804	-682	-210	-1,824	-142,251	-16,828
Peak/Trough % loss	-9.4%	-9.7%	-10.4%	-5.4%	-9.8%	-10.4%	-8.1%	-9.5%	-9.5%

Source: US Census Bureau, QWI

Cyclical Employment Change

In the fourth quarter of 2000, employment peaked for total employment and every available demographic group, marking the peak of the tech bubble business cycle in Connecticut. For some demographic groups, this recession was a momentary blip in overall employment growth. Groups that reached an employment trough quickly include the Asian, Native Hawaiian, and Hispanic demographic groups, which all had their post-peak employment trough during the next quarter in 2001Q1. By 2002Q3, those three demographic groups had overall employment that exceeded their prerecession peak.

INDUSTRY EMPLOYMENT % CHANGE 2010-2019

NAICS Sector	Industry	All	White	Black or African American	Asian	American Indian or Alaska Native	Native Hawaiian or Other Pacific Islander	Two or More Race Groups	Hispanic or Latino
00	All Industries	5.1%	0.5%	28.0%	21.5%	32.9%	35.5%	40.6%	39.3%
11	Agriculture	2.8%	5.6%	8.4%	-33.3%	-27.1%	-33.3%	-18.3%	-8.8%
21	Mining and Extraction	-8.5%	-7.8%	-21.4%	-33.3%	-100.0%	S	0.0%	-10.7%
22	Utilities	-17.2%	-18.1%	-12.6%	4.4%	4.2%	0.0%	5.3%	13.3%
23	Construction	19.4%	16.8%	55.5%	35.9%	40.6%	65.5%	51.3%	68.7%
31-33	Manufacturing	-1.5%	-3.7%	13.8%	2.5%	25.3%	41.1%	36.6%	28.6%
42	Wholesale Trade	-4.4%	-7.4%	28.0%	-0.8%	24.5%	23.6%	28.0%	30.6%
44-45	Retail Trade	1.3%	-3.4%	22.4%	16.4%	38.4%	23.0%	42.0%	37.5%
48-49	Transp. and Warehousing	36.0%	20.5%	95.2%	92.9%	75.7%	105.1%	117.3%	105.0%
51	Information	0.1%	-2.1%	-6.0%	70.3%	13.4%	47.8%	27.6%	13.3%
52	Finance and Insurance	-11.8%	-13.5%	-10.9%	8.6%	9.3%	45.2%	11.8%	9.4%
53	Real Estate	4.6%	1.1%	21.7%	32.1%	51.3%	23.5%	43.2%	35.2%
54	Pro., Sci., & Tech. Services	12.9%	8.6%	39.6%	32.5%	52.3%	126.2%	50.9%	54.4%
55	Management	13.0%	8.5%	40.5%	15.5%	69.8%	94.4%	77.0%	45.8%
56	Administrative and Support	17.7%	12.9%	41.0%	12.1%	29.2%	12.2%	29.3%	39.8%
61	Educational Services	-1.1%	-4.5%	12.5%	45.7%	32.8%	41.6%	39.9%	33.6%
62	Health Care and Social Assist.	7.3%	0.2%	27.7%	30.9%	38.9%	57.8%	43.9%	42.7%
71	Arts, Ent., and Rec.*	-25.4%	-19.6%	-13.7%	-82.9%	-62.9%	-24.1%	-14.3%	-9.2%
72	Accom. and Food Services*	29.4%	21.2%	63.7%	52.4%	80.2%	21.8%	62.6%	52.6%
81	Other Services	18.7%	9.7%	53.4%	96.2%	51.8%	42.0%	49.3%	47.0%
92	Public Administration	-6.2%	-8.5%	1.8%	25.5%	8.0%	21.9%	14.3%	20.7%

S = Suppressed   Source: US Census Bureau, QWI

*Employment change is partially due to employer reclassification from NAICS 71 to NAICS 72

NAICS Sector	Industry	All	White	Black or African American	Asian	American Indian or Alaska Native	Native Hawaiian or Other Pacific Islander	Two or More Race Groups	Hispanic or Latino
00	All Industries	1,640,725	1,301,459	213,459	84,396	8,643	2,545	30,221	232,889
11	Agriculture	4,720	4,121	311	144	43	14	85	1,083
21	Mining and Extraction	508	485	11	2	S	S	7	25
22	Utilities	7,107	6,321	555	119	25	5	80	512
23	Construction	63,171	57,027	4,026	867	308	91	849	7,794
31-33	Manufacturing	165,784	138,883	13,260	10,079	812	268	2,480	24,054
42	Wholesale Trade	60,040	51,761	5,346	1,828	249	68	787	7,294
44-45	Retail Trade	176,440	139,047	24,324	7,670	1,100	315	3,982	30,409
48-49	Transp. and Warehousing	51,947	36,607	12,412	1,279	369	121	1,158	11,550
51	Information	35,882	30,153	3,199	1,802	110	34	582	2,946
52	Finance and Insurance	103,658	87,821	7,356	6,900	212	90	1,277	7,426
53	Real Estate	20,449	16,911	2,548	482	118	42	345	3,860
54	Pro., Sci., & Tech. Services	95,493	77,473	5,038	11,422	262	95	1,200	6,565
55	Management	32,515	25,943	4,085	1,858	107	35	485	3,302
56	Administrative and Support	91,717	68,177	17,259	3,273	779	257	1,970	24,360
61	Educational Services	167,285	142,505	14,507	7,169	457	126	2,519	13,371
62	Health Care and Social Assist	271,369	191,666	61,553	11,096	1,320	396	5,337	39,468
71	Arts, Ent., and Rec.	33,697	29,291	2,779	727	161	41	695	3,806
72	Accom. and Food Services	140,427	103,592	18,979	11,785	1,438	385	4,247	28,781
81	Other Services	66,539	51,336	8,562	4,898	387	115	1,239	10,799
92	Public Administration	51,969	42,330	7,341	990	378	39	888	5,479

S = Suppressed   Source: US Census Bureau, QWI

For other demographic groups and overall employment, the early 2000s recession resulted in more pronounced employment losses and a slower recovery. By 2004Q1, employment troughed for overall employment and the White, African American, and American Indian demographic groups. By 2007Q4, employment for these demographic groups and employment overall again peaked, marking the start of the great recession. Employment for the Asian, Native Hawaiian, and Hispanic populations continued to gain jobs until finally peaking in 2008Q4.

The QWI data series indicates that 2010Q1 was the trough employment quarter for every race and ethnic group in Connecticut. The table shows the peak quarter of employment for those groups, trough employment, and change. The recession resulted in overall employment loss of 9.4%. Demographic groups had losses ranging between -5.4% and -10.4%. Unlike the 2001 recession, the 2007 recession had more uniformly pronounced employment losses across groups, most were within 1.3 percentage points of the 9.4% loss experience by the overall Connecticut economy.
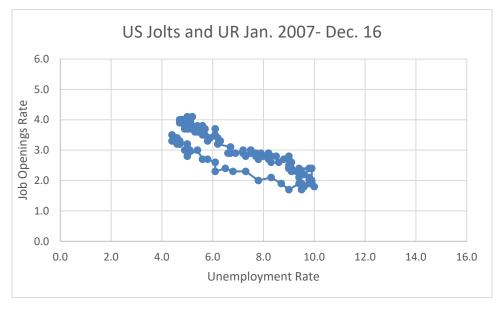
In the 9 years since that early 2010 employment trough, overall employment increased 5.1%, driven by

large increases in Accommodations & Food Services, Health Care & Social Assistance, Administration, and Transportation & Warehousing. Among the 12 sectors that added jobs since 2010, those four sectors accounted for 67% of combined employment growth. By demographic group, White employment lagged overall growth and was down in these four sectors that added the most jobs. The other demographic groups saw large employment percent growth overall, up between 21.5% (Asian) and 40.6% (Two or More Race Groups). At the industry level, those populations typically had rate increases well above the industry overall. These changes illustrate how Connecticut employment has diversified in the past decade.

Among industries with the largest overall percent increase, Transportation & Warehousing growth of 36% is driven by the growth of online retail. This industry saw employment gains for many demographic groups. A caveat to the 2010-19 industry table is that the large shifts in NAICS 71 and 72 are partially the result of reclassification of major employers in the state from the former to the latter in early 2018.
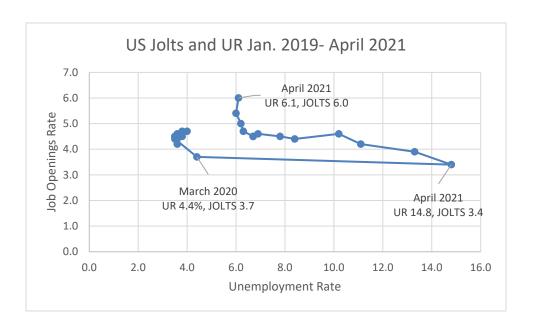
LABOR DEMAND – A LOOK AT JOLTS

A differentiating component of the current recession is how employment shifts were impacted in large part due to the covid mitigation and not the cyclical flows that typify "normal" recessions. The following Beveridge curve illustrates the relationship between unemployment rates and the JOLTS job opening rate from early 2007-late 2016. Therein a distinct relationship is evident, where job openings decline as unemployment rates increase during a cyclical downturn, only to gradually recede back as openings increase and unemployment rates decline.

US Jolts and UR Jan. 2007- Dec. 16

The Since 2019, this relationship has been heavily distorted relative to longer term norms, as the

unemployment rate jumped precipitously from early 2020 to an April 2020 high of 14.8%. In subsequent months JOLTS increased to under 5.0 while the unemployment rate fell form 14.8 to around 6 percent. In recent months unemployment has remained flat at or above 6 percent as the JOLTS vacancy rate edges upward to 6 percent as of April, 2021, the highest rate in the data series. Some of the reasons for the difference between the past 2 years and earlier cyclical cycles has been the added health variable of returning to work and possible covid exposure. In prior recessions, returning to work wasn't complicated by the added health variables of the past year. As vacancy rates increase, a further shift to the left for the Beveridge curve is expected.
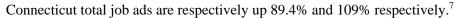
The Bureau of Labor Statistics expects to begin publishing official state-level monthly JOLTS data in October 2021.[6]
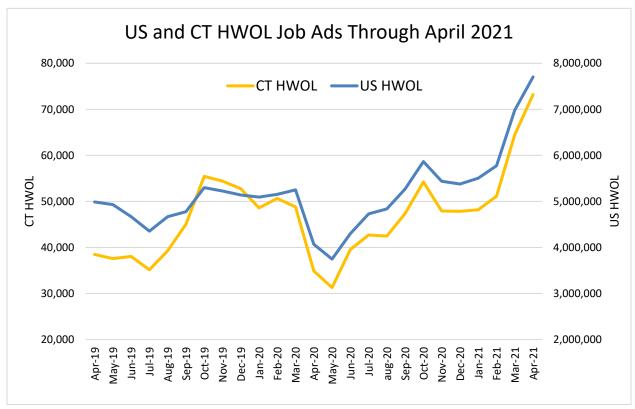
US Jolts and UR Jan. 2019- April 2021

A scatter plot titled "US Jolts and UR Jan. 2019- April 2021" with y-axis "Job Openings Rate" (0.0 to 7.0) and x-axis "Unemployment Rate" (0.0 to 16.0). Annotations read "April 2021 UR 6.1, JOLTS 6.0", "March 2020 UR 4.4%, JOLTS 3.7", and "April 2021 UR 14.8, JOLTS 3.4".

HELP WANTED ONLINE JOB ADS

A consequence of the current increase in job vacancies has been an increase in the number of job postings captured within the Help Wanted Online (HWOL) data series. It is important to make the distinction that HWOL job postings don't necessarily equate to a job opening, as employers could post ads for a variety of reasons other than filling a hire. The following graph illustrates the increase in job ads that has occurred in the past year at both the State and US levels. From April 2020 to April 2021, US and

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[6] Bureau of Labor Statistics. JOLTS Experimental State Estimates. https://www.bls.gov/jlt/jlt_statedata.htm

Connecticut total job ads are respectively up 89.4% and 109% respectively.[7]
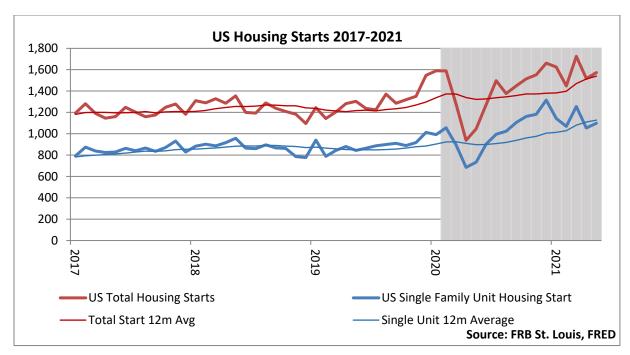
US and CT HWOL Job Ads Through April 2021

HOUSING

A consequence of the pandemic has been renewed interest in less dense housing of the type that comprises a large share of housing stock in Connecticut. People leaving urban areas added additional demand to already tight markets and drove housing booms throughout the country, with Connecticut being no exception. Since, the start of the pandemic, vacancy rates and inventory have fallen while building permits and prices have increased.

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[7] Additional monthly HWOL data is available on the CT DOL Website:
https://www1.ctdol.state.ct.us/lmi/hwol.asp

US Housing Starts 2017-2021

Source: FRB St. Louis, FRED

Legend:
- US Total Housing Starts
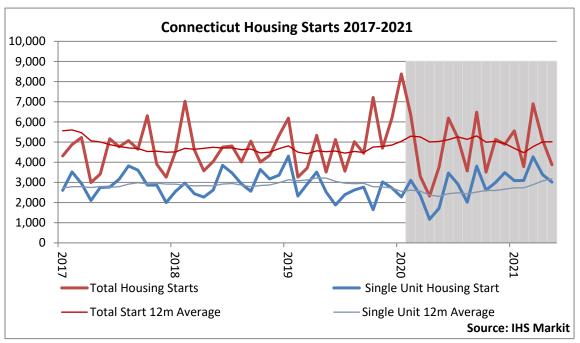- US Single Family Unit Housing Start
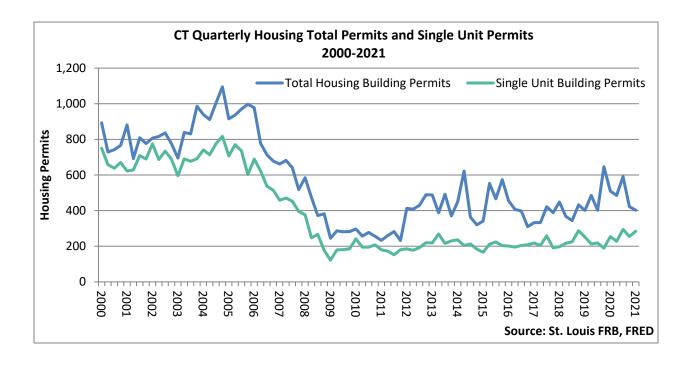- Total Start 12m Avg
- Single Unit 12m Average

Nationally, total housing starts tumbled by -40% from February to April of last year and quickly rebounded. As of May 2021, total starts are within a few points of pre-recession peak levels and single family starts have rebounded to above pre-recession levels during 8 of the past 9 months. 12 month moving averages of each variable illustrate the upward trend. Equivalent data for the Northeast shows that total starts in the region fell from a January 2020 peak of 207,000 starts to 50,000 by April 2020 with single unit starts down 67% from 63,000 to 23,000. 12 month moving averages for total and single units in the northeast show are flatter than for the US overall and illustrate that other census regions are experiencing larger growth. Variance in the degree of covid-mitigation lockdown policies across the country is a likely contributor to the flatter Northeast trends, in addition to longer-term variables such as having an older more densely built housing stock with less developable land than other areas such as the south or west regions.

Northeast Region Housing Starts 2017-2021

Source: FRB St. Louis, FRED

Available housing starts data from IHS Markit Show that Connecticut experienced shifts similar to the Northeast region in some ways and different in others. Total starts fell from January to April 2020 by 72% and single unit starts fell by 48%, corresponding Northeast Regional data from the St. Louis FED fell by 75.8% and 63.5% respectively. Connecticut's single unit starts have rebounded since that April 2020 low and are currently up 188% as of April 2021, from 1,173 to 3387 starts. Single unit starts in 2021 have rebounded to pre-recession levels and correspond with low inventories and increasing median home prices in the state as builders seek to meet increasing housing demand.

Connecticut Housing Starts 2017-2021

Source: IHS Markit

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.

CT Quarterly Housing Total Permits and Single Unit Permits 2000-2021

Source: St. Louis FRB, FRED

Annual Homeownership Rates: 2000-2020

Source: FRB St. Louis, FRED

Homeownership rates in Connecticut, the Northeast, and United States had all followed cyclically similar trajectories from the early 2000s until respective troughs in 2016. Connecticut's rate had been consistently above the US and peaked a year before it in 2003 vs. 2004. Its homeownership rate persisted above 70 percent until 2011while the US and Northeast both had more pronounced decreases from 2007 onward. All three regions troughed in 2016. In the years since, Connecticut's homeownership rate growth lagged the US and Northeast leading up to the recession. In 2019 the US rate exceeded that of the state slightly at 64.6% vs 64.3%. The sluggish homeownership rate growth from 2016 onward corresponds with the increased share of Multi-unit housing from 2012 onward. In 2020, all three regions had sharp homeownership rate increases as the US and Connecticut converged, the US up 3.2 points to 66.6%, Connecticut up 4 points to 66.9%, and the Northeast up 1.8 points to 62.6%. The comparatively low rate for the Northeast region is due in large part to the share of its population within major Metropolitan areas such as New York City and Boston, areas with population density largely absent within the state.

**CT Housing Inventory
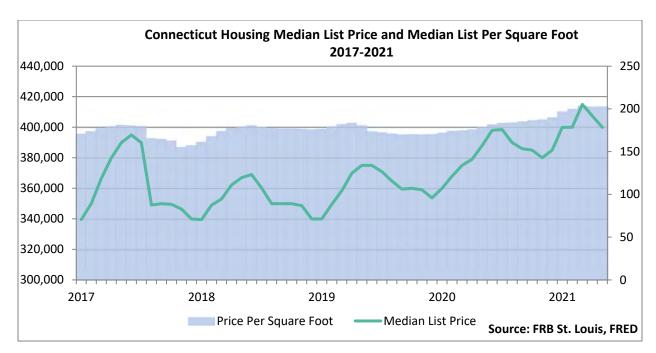2017-2021**

Source: FRB St. Louis, FRED

A consequence of heightened demand for housing has been the noticeable depletion of inventory throughout Connecticut. The recent housing market has been typified by sellers getting multiple offers over asking within days of listing a home. As a result of this, the number of price reduced listings in the state fell to a series low of 768 in February 2021, down from 2,624 a year before.[8] All of this has had significant impact on housing inventories, which peaked at around 24-25,000 in 2017, 2018, and 2019. As the pandemic struck, mid-year inventory seasonal increase stalled as buyers frantically bought up listings through the fall, when the typical fourth quarter listing dip commenced. By the beginning of 2021, total inventory was about a third below early 2020 levels but has increased through May of this year.

Amid inventory declines, median home prices in Connecticut ballooned. The following graph shows median listing price and median listing price per square foot in the state. From 2017 up until the pandemic recession, cost per square foot remained mostly below $180/sq. ft and median list prices typically ranged between 340,000-380,000 and reaching a recent low of 353,688 (169.83 per square foot) in December 2019. As the pandemic recession commenced, median 2020 prices far surpassed the 2019 high of 375,000, cresting at almost 400,000 by July 2020. During the start of 2021, median prices peaked at 414,950 in march but have subsequently fallen to just under 400,000 as of May.

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[8] Realtor.com, Housing Inventory: Price Reduced Count in Connecticut [PRIREDCOUCT], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/PRIREDCOUCT, June 25, 2021.

Connecticut Housing Median List Price and Median List Per Square Foot 2017-2021

Source: FRB St. Louis, FRED

An interesting additional note on the above home price graph is that average listed home size peaked in June 2020 at 2,169 sq./ft. and has trended downward as prices increased. Since March 2021, the median price per square foot has been over $202, the highest level in the series. As of May 2021, the median home price in Connecticut as $399,900 and 1,996 sq/ft, a cost of $202.37 per square foot.

Quarterly Home Price Index: 2000-2021

Note: Home price index values are indexed to Q1 1980 (Q1 1980=100), not seasonally adjusted.
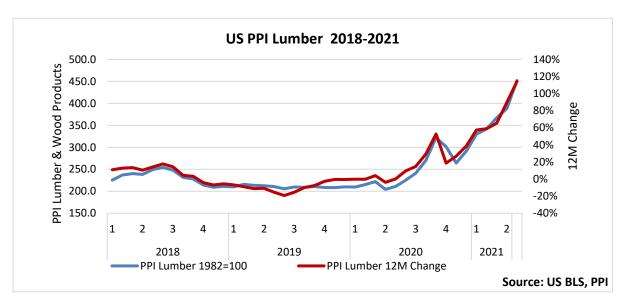
Source: St. Louis FRB, FRED

Connecticut's short-term home price increase in 2020 and 2021 can also be seen in the above quarterly home price index graph. Therein it illustrates how Connecticut prices had been comparatively flat from

2010 onward relative to neighboring states, New England, and the United States overall. Though still lagging those other areas, the state's slope in recent years has better aligned itself with the other areas.

Lumber Prices

A widely reported consequent of the shutdown, pandemic, and housing demand increase has been the huge over the year increase in lumber prices. During February 2020, prices were down 0.2% over the year, but started to increase significantly during the second half of the year through into 2021. As of May 2021, preliminary estimates indicate that prices for Lumber and Wood Products are 114.3% higher than a year ago. Fortunately, early indicators suggest that the runup in prices have begun to readjust. As of late June, the "the cash price per thousand board feet of lumber fell $211 to $1,113, according to industry trade publication Random Lengths. That's down 27% from its $1,515 all-time high on May 28".[9] Identified variables contributing to this price correction include increased production and softening demand though elevated prices could last years.

US PPI Lumber 2018-2021

Source: US BLS, PPI

The short term runup in prices had cause some worry about inflation as it relates to pandemic and recession mitigation policies, but the lumber price correction reflects a feeling that "many of the extreme price spikes we've seen in recent months are likely to reverse for Econ 101 reasons," according to Jan Hatzius, the chief economist at Goldman Sachs.[10] The increased lumber production may also correct an oversupply of southern pine that has persisted for years due to overplanting 20-30 years ago.[11]

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[9] Lambert, Lance. The Lumber Bubble Burst. Here's What Comes Next. Fortune Magazine. June 22, 2021.
[10] Phillips, Matt. As Lumber Prices Fall, The Threat of Inflation Loses Its Bite. New York Times. June 21, 2021.
[11] Dezember, Ryan. Thousands of Southerners Planted Trees for Retirement. It Didn't Work. Wall Street Journal. October 9, 2018.

Connecticut Current Situation

Current Situation

The past year is certainly one that won't be forgotten. The economy fell from record highs to record lows over the course of two months. From February to April 2020, the US and Connecticut economies fell respectively by 14.7 and 17.2 percent. In the 14 months since, both have respectively recovered 65.9% and 63.3% of the jobs lost from the February US employment peak to the April employment trough. The table below shows the impact of COVID-19 on northeast states through May 2021. When compared to other states, Connecticut's employment recovery rate (April 2020 to May 2021) has been larger than the adjacent states of New York and Massachusetts but lower than Rhode Island and Northern New England states.
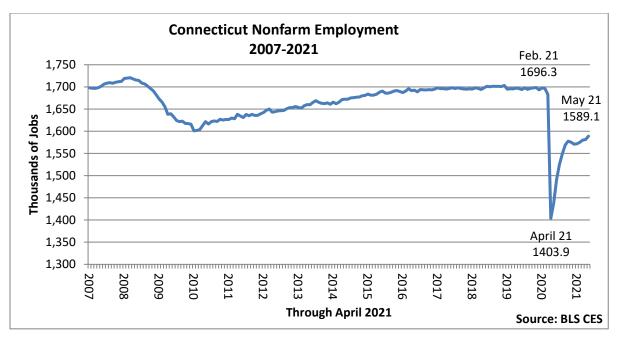
Jobs Lost and Recovered Over The Past 12 Months in the U.S., CT, and Nearby States (in Thousands)

Area	US Peak Feb. 2020	US Trough Apr. 2020	Peak/Trough Change #	Peak/Trough Change %	Current Month May 2021	Peak to Current Month Change #	Peak to Current Month Change %	Recovery Rate
United States	**152,523**	**130,161**	**-22,362**	**-14.7%**	**144,894**	**-7,629**	**-5.0%**	**65.9%**
Connecticut	1,696	1,404	-292	-17.2%	1,589	-107	-6.3%	63.3%
Maine	640	545	-95	-14.8%	611	-29	-4.6%	68.9%
Massachusetts	3,733	3,042	-692	-18.5%	3,448	-285	-7.6%	58.8%
New Hampshire	689	573	-116	-16.9%	657	-32	-4.6%	72.6%
New Jersey	4,230	3,512	-717	-17.0%	3,915	-314	-7.4%	56.2%
New York	9,835	7,852	-1,983	-20.2%	8,894	-941	-9.6%	52.5%
Pennsylvania	6,093	4,963	-1,130	-18.5%	5,684	-408	-6.7%	63.8%
Rhode Island	507	399	-108	-21.3%	468	-39	-7.7%	64.0%
Vermont	315	251	-64	-20.2%	293	-21	-6.7%	66.8%

Source: CT Dept. of Labor & BLS Current Employment Statistics

In the months leading up to the Covid-derived recession, the Connecticut economy began to send mixed signals as the state and US economies experienced the longest business cycle expansion in history. The state posted its first year of total nonfarm employment decline in 2019 after eight years of increases while the overall unemployment rate continued to fall. Additional indicators added to the mixed messaging, Connecticut real personal income had its 6th year consecutive year of increase and an annual diffusion index of 58 state economic indicators dropped to its lowest level since 2010, indicative of slowing but still positive growth.[12] The table below shows total nonfarm employment in Connecticut from 2007-2021.

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[12] Joo, Jungmin Charles. (2020, March) Connecticut's Overall Economy Sends Mixed Signals in 2019. Connecticut Economic Digest.

Connecticut Nonfarm Employment 2007-2021

Connecticut Nonfarm Employment 2007-2021

Feb. 21
1696.3

May 21
1589.1

April 21
1403.9

Through April 2021

Source: BLS CES

By May of this year, total nonfarm in the state was up 13.2% from its April 2020 employment trough. Industries that had the largest increases include those heavily impacted by Covid, including Accommodations & Food Services, Arts, Entertainment & Recreation, and Other Services. From April 2020 through preliminary May 2021 data, those industries were respectively up 93.3, 69.7 and 38.9 percent.

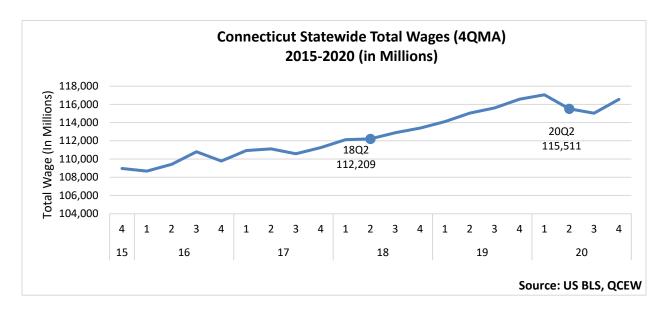**Connecticut Employment by Industry (in thousands)**

NAICS	Industry	CT Peak Emp. Nov. 19	US Peak Emp. Feb. 2020	Emp. Trough April 20	May 20	April 21	May 21	12 Month Change April 21	12 Month Change May 21	April 21-May 21 Change
0	Total Nonfarm	1698.5	1696.3	1403.9	1437.5	1581.3	1589.1	12.6%	10.5%	0.5%
0	Total Private	1462.3	1460.5	1190.7	1226.2	1358.6	1367.2	14.1%	11.5%	0.6%
21	Mining and Logging	0.5	0.6	0.5	0.5	0.5	0.5	0.0%	0.0%	0.0%
23	Construction	59.9	59.3	49.5	53.3	58.2	57.6	17.6%	8.1%	-1.0%
31-33	Manufacturing	161.6	160.9	148.2	150.6	151.6	152.3	2.3%	1.1%	0.5%
42	Wholesale Trade	59.2	58.9	53.3	53.5	54	54.2	1.3%	1.3%	0.4%
44	Retail Trade	174.2	173.7	134.3	138.3	165.8	164.4	23.5%	18.9%	-0.8%
48 & 22	Transportation, Warehousing, and Utilities	60.8	60.6	50.8	55.1	66.5	67.6	30.9%	22.7%	1.7%
51	Information	31.5	31.4	28.6	28.4	28	27.9	-2.1%	-1.8%	-0.4%
52	Finance and Insurance	103.1	102.6	101.3	101.1	100.4	100.2	-0.9%	-0.9%	-0.2%
53	Real Estate and Rental and Leasing	20.2	20.2	18.1	17.9	18.1	17.9	0.0%	0.0%	-1.1%
54	Prof., Sci., & Tech. Services	96.2	96.2	90.2	91.6	93.8	94.4	4.0%	3.1%	0.6%
55	Management	33.1	33.2	31.1	31.1	32.3	32.3	3.9%	3.9%	0.0%
56	Administrative and Support	89.1	87.4	74.5	75.7	80.2	81.8	7.7%	8.1%	2.0%
61	Educational Services	67.5	67.5	61	59.8	62.5	66	2.5%	10.4%	5.6%
62	Health Care and Social Assistance	283.5	284.1	239.5	247.1	262	263.8	9.4%	6.8%	0.7%
71	Arts, Ent., and Rec.	28.2	28.1	12.2	11.9	20.8	20.7	70.5%	73.9%	-0.5%
72	Accommodation and Food Services	128.5	130.1	55.2	64.5	104.7	106.7	89.7%	65.4%	1.9%
81	Other Services	65.2	65.7	42.4	45.8	59.2	58.9	39.6%	28.6%	-0.5%
92	Government	236.2	235.8	213.2	211.3	222.7	221.9	4.5%	5.0%	-0.4%

Source: BLS, CES

Industries that have current employment levels below April 2020 levels include Information, Real Estate, and Finance & Insurance, all of which have May 2021 employment below April 2020 levels.

INDUSTRY WAGE CHANGE 2018-2020

Total wages by industry is an important measure of the overall impact of major sectors on the Connecticut economy. In 2020, the impact of the shutdown recession on total wages can be seen in the graph below. Four quarter total wages peaked in the first quarter of 2021 at 117.1 billion dollars, dipped to 115.5 billion in the second quarter (the base for CT DOL employment projections), reached a third quarter trough of 115.1 billion, and rebounded to 116.5 billion during the four quarters ending 2020.

Comparing industry four quarter total wages ending 2018Q2 and 2020Q2 helps illustrate how the state economy was performing in the two years leading up to our 2020-2022 projections. The largest 2-year increases occurred in Health Care and Social Assistance (+988 mill. or +7.1%), Construction (+893 mill. or +22.1%), and Information (+573 mill. or +17.2%). Of the nine sectors that had declines, the largest three were some of the industries heavily impacted by the covid-lockdowns, including Accommodation and Food Services (-186.2 mill. or -6.6%), Wholesale Trade (-121.2 mill. or -2.1%), and Retail Trade (-86.4 mill. or -1.4%). During this two-year span, overall total wages for the state economy increased from 112.2 billion to 115.5 billion, an increase of 3.3 billion or +2.9%.

Total Annual Wages By Industry in (Four Quarter Average)

| NAICS | Industry | Four Quarter Ending | | 18Q2-20Q2 Change | |
		2018Q2	2020Q2	#	%
00	Total, all industries	$112,208,672,000	$115,511,183,000	$3,302,511,000	2.9%
00	Private	$97,955,995,000	$100,940,647,000	$2,984,652,000	3.0%
11	Agriculture, forestry, fishing and hunting	$171,585,000	$181,793,000	$10,208,000	5.9%
21	Mining, quarrying, and oil and gas extraction	$40,270,000	$38,068,000	-$2,202,000	-5.5%
22	Utilities	$681,996,000	$682,690,000	$694,000	0.1%
23	Construction	$4,052,895,000	$4,946,746,000	$893,851,000	22.1%
31-33	Manufacturing	$13,221,993,000	$13,612,693,000	$390,700,000	3.0%
42	Wholesale trade	$5,884,292,000	$5,763,084,000	-$121,208,000	-2.1%
44-45	Retail trade	$6,201,952,000	$6,115,558,000	-$86,394,000	-1.4%
48-49	Transportation and warehousing	$2,243,057,000	$2,559,468,000	$316,411,000	14.1%
51	Information	$3,337,083,000	$3,910,874,000	$573,791,000	17.2%
52	Finance and insurance	$17,708,801,000	$17,678,070,000	-$30,731,000	-0.2%
53	Real estate and rental and leasing	$1,362,514,000	$1,469,225,000	$106,711,000	7.8%
54	Professional and technical services	$10,058,219,000	$10,576,290,000	$518,071,000	5.2%
55	Management of companies and enterprises	$5,141,406,000	$5,087,535,000	-$53,871,000	-1.0%
56	Administrative and waste services	$4,135,124,000	$4,219,183,000	$84,059,000	2.0%
61	Educational services	$3,814,187,000	$4,197,329,000	$383,142,000	10.0%
62	Health care and social assistance	$14,011,997,000	$15,000,928,000	$988,931,000	7.1%
71	Arts, entertainment, and recreation	$819,362,000	$795,254,000	-$24,108,000	-2.9%
72	Accommodation and food services	$2,839,278,000	$2,653,050,000	-$186,228,000	-6.6%
81	Other services, except public administration	$2,189,780,000	$2,154,940,000	-$34,840,000	-1.6%
99	Unclassified	$40,202,000	$32,984,000	-$7,218,000	-18.0%
92	Fed Government	$1,365,284,000	$1,433,398,000	$68,114,000	5.0%
92	State Government	$4,297,791,000	$4,443,379,000	$145,588,000	3.4%
92	Local Government	$8,589,601,000	$8,693,759,000	$104,158,000	1.2%

From four quarter ending 2018Q2 to the four quarter ending 2020Q2, total nonfarm wages increased by $4,855 (+7.2%) to $71,954. The industries with the largest 2 year average wage increase were Information (+$21,494), Finance and Insurance (+$7,600), and Professional and Technical Services (+$7,203). The only industry with a two year average wage decline was Mining, Quarrying, and Extraction (-$1,010).

Average Wages By Industry (Four Quarter Average)

NAICS	Industry	Four Quarter Ending		18Q2-20Q2 Change	
		2018Q2	2020Q2	#	%
00	Statewide Total	$67,099	$71,954	$4,855	7.2%
	Total Private	$67,759	$72,792	$5,033	7.4%
11	Agriculture, Forestry, Fishing and Hunting	$36,316	$38,808	$2,492	6.9%
21	Mining, Quarrying, and Oil and Gas Extraction	$75,850	$74,840	-$1,010	-1.3%
22	Utilities	$130,508	$135,059	$4,551	3.5%
23	Construction	$69,561	$72,647	$3,086	4.4%
31-33	Manufacturing	$82,771	$85,733	$2,962	3.6%
42	Wholesale Trade	$94,972	$99,384	$4,412	4.6%
44-45	Retail Trade	$34,057	$36,914	$2,857	8.4%
48-49	Transportation and Warehousing	$47,366	$48,536	$1,170	2.5%
51	Information	$105,796	$127,290	$21,494	20.3%
52	Finance and Insurance	$167,922	$175,522	$7,600	4.5%
53	Real Estate and Rental and Leasing	$69,071	$74,801	$5,730	8.3%
54	Professional and Technical Services	$104,344	$111,547	$7,203	6.9%
55	Management of Companies and Enterprises	$153,982	$156,723	$2,741	1.8%
56	Administrative and Waste Services	$46,082	$49,230	$3,148	6.8%
61	Educational Services	$65,814	$72,171	$6,357	9.7%
62	Health Care and Social Assistance	$52,195	$56,523	$4,328	8.3%
71	Arts, Entertainment, and Recreation	$29,071	$34,143	$5,072	17.4%
72	Accommodation and Food Services	$22,046	$23,632	$1,586	7.2%
81	Other Services, Except Public Administration	$33,412	$37,601	$4,189	12.5%
99	Unclassified	$94,971	$95,338	$367	0.4%
92	Fed Government	$75,594	$78,014	$2,420	3.2%
92	State Government	$70,163	$72,137	$1,974	2.8%
92	Local Government	$58,362	$62,815	$4,453	7.6%

Source: CT DOL, QCEW

INDUSTRY EMPLOYMENT CHANGE 2018-2020

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 2020Q2 through 2022Q2. During the previous two-year period (2018Q2 to 2020Q2), Connecticut's overall employment fell by 253,000 jobs, or -15%. The two-year employment change illustrated below represents the available data used to produce the 2020-2022 employment projections during the first months of 2021.

The three sectors with the largest two-year losses were Accommodation & Food Services, Retail Trade, and Other Services from 2018Q2 to 2020Q2 shown in the figure below. Every sector other than Transportation and Warehousing had losses over that two-year period. The lone industry gains in that sector represent longer term growth trends and an increase in demand for delivery services as home-bound consumers ordered more goods online.

Connecticut Employment Change
2018Q2-2020Q2

Industry	Value
Transportation & Warehousing	280
Utilities	-60
Unspecified	-73
Natural Resources and Mining	-214
Real Estate & Rental & Leasing	-1,951
Management	-2,778
Information	-3,219
Government	-3,723
Soc. Assistance	-4,440
Finance & Insurance	-4,656
Construction	-5,156
Prof, Sci., & Tech. Services	-5,258
Wholesale Trade	-7,576
Manufacturing	-9,763
Educational Services	-14,786
Administrative & Support	-14,829
Arts, Entertainment, & Recreation	-16,248
Health Care	-19,429
Other Services (ex: Public Admin.)	-28,323
Retail Trade	-39,322
Accom. & Food Services	-72,454

* Government excludes education, hospitals, and gambling industries
Source: Quarterly Census of Employment and Wages (QCEW)

Connecticut Projections
Through 2022

CONNECTICUT SHORT-TERM PROJECTIONS

Overall and Major Sector 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 short-term employment projections every February to provide insight on labor market activity. The industry and occupational projections 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 2020 to the second quarter of 2022. This base quarter coincides with the April 2020 employment trough and illustrates where we project employment to be two years after the start of the pandemic. Through 2022Q2, we project overall employment in Connecticut to increase by 13.5% from 1,541,793 to 1,750,039, as is shown in the industry table. This projected growth suggests that the state will rebound through 2022Q2 and recover most of the employment lost during the pandemic.

Projections by Industry

Projections by Industry The largest major sectors that show significant projected employment increases are Accommodations & Food Services (+96,111 projected), Other Services (+22,522 projected), Transportation & Warehousing (+18,052 projected), and Arts, Entertainment, & Recreation (+15,830 projected). Two of the industries with the largest increases are also among the hardest hit by the pandemic, Accommodations & Food Services and Arts, Entertainment, & Recreation. They are projected to rebound to above their pre-pandemic levels and have total employment within 4 percentage points of their corresponding 2019Q2 levels. The Transportation & Warehousing gains reflect a continuation of long-term trends coupled with increased short-term demand as online commerce grew due to social distancing.

The four largest sectors, Health Care, Educational Services, Manufacturing, and Retail Trade are all projected to add jobs through 2022Q2. These four sectors comprise about 40% of Connecticut employment but are projected to contribute less than 20% of projected total employment change. This reflects the varied impact of COVID-19 on industry employment, as essential industries such as Manufacturing and Educational Services had more muted losses than industries such as Accommodation & Food Services or Retail Trade, which were more impacted by pandemic mitigation efforts and had larger 19Q2 to 20Q2 employment declines.

Health Care is expected to grow by 7.1%, driven by gains in its Ambulatory Health Care Services

Industry (+17,000 jobs or +21.6%) and dampened by declines in its Nursing & Residential Care Facilities industry (-4,300 jobs or -7.3%).

Educational Services is projected to increase by 2.1% to within a thousand of its 2019Q2 employment, a year before the pandemic. Long-term demographic trends that have challenged this sector in recent years were heightened in the short term by the pandemic, which caused more parents to homeschool their children or delay pre-K enrollment.1 Conversely, the pandemic-induced inflow into the state from major metropolitan areas might bolster the school-aged population in coming years.

Industry	2020 Q2 History	2022 Q2 Projections	Emp Change	% Change
Total All Industries	1,541,793	1,750,039	208,246	13.5%
Self Employed and Unpaid Family Workers, All Jobs	82,419	96,335	13,916	16.9%
Goods Producing	210,255	214,511	4,256	2.0%
Natural Resources and Mining	5,404	5,494	90	1.7%
Construction	54,124	54,896	772	1.4%
Manufacturing	150,727	154,121	3,394	2.3%
Services Providing	1,249,119	1,439,193	190,074	15.2%
Wholesale Trade	54,140	54,784	644	1.2%
Retail Trade	140,596	152,722	12,126	8.6%
Transportation and Warehousing	51,385	69,437	18,052	35.1%
Utilities	5,119	4,877	-242	-4.7%
Information	28,466	28,431	-35	-0.1%
Finance and Insurance	100,980	96,569	-4,411	-4.4%
Real Estate and Rental and Leasing	18,028	18,459	431	2.4%
Professional, Scientific, and Technical Services	91,063	96,898	5,835	6.4%
Management of Companies and Enterprises	30,912	31,349	437	1.4%
Administrative and Support and Waste Management	76,953	92,077	15,124	19.7%
Educational Services	171,186	174,766	3,580	2.1%
Health Care	204,064	218,480	14,416	7.1%
Social Assistance	60,719	72,276	11,557	19.0%
Arts, Entertainment, and Recreation	13,570	29,400	15,830	116.7%
Accommodation and Food Services	71,223	140,334	69,111	97.0%
Other Services (except Government)	52,104	74,626	22,522	43.2%
Government*	78,611	83,708	5,097	6.5%

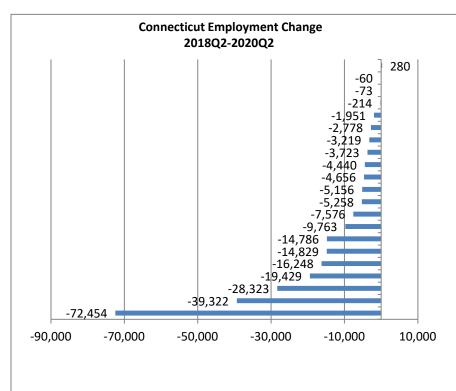*Government excludes education, hospitals, and gambling industries

Manufacturing is the third largest sector in the state. As with other industries deemed essential, the sector had lower year-over-year losses than other major sectors but was nonetheless impacted by the pandemic. It was down 7.1% during the second quarter of 2020 year over year and was still down 6.3% year over
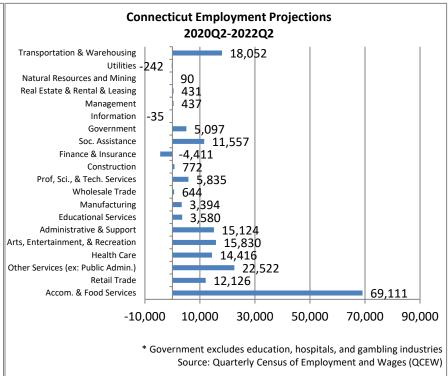
year during the third quarter of 2020. Projections are for employment gains through 2021, but still below industry peak levels. Of the various types of manufacturing that comprise that sector, the Transportation Equipment Manufacturing component industry is driving sector gains, comprising 30% of 2020Q2 employment and 52% of overall sector change.

The employment swings experienced over the past year by Retail Trade have been the largest among the four largest sectors. It was down 34,000 or 19.3% from 19Q2 to 20Q2. The only sector to fall more was Accommodation & Food Services, which fell by 72,000 from 19Q2 to 20Q2. Although longer term trends in Retail Trade employment are down, the 2022Q2 projection of 152,722 (+8.6%) may understate gains in that sector. Monthly employment reports show strong growth in this sector in the first three months of 2021.

Over the two-year projections period, all but three sectors are projected to add jobs. Utilities and Information are projected to decline by 242 and 35 respectively, while Finance & Insurance is expected to decline by 4,411 jobs or 4.4%. Employment in that sector held relatively flat during the 2020Q2 lockdown quarter, down 2.4% from a year before. This projected decline continues longer-term trends, the sector has declined since its 2007 employment peak. The Insurance Carriers & Related Activities industry accounts for 57% of Finance & Insurance employment and 49% of projected declines, indicating that the smaller Finance component industries are projected to have larger proportional losses.

The tables below illustrate how some of many of the industries with the largest 2018Q2-2020Q2 employment loss are projected to rebound and add the most jobs through 2022Q2

Connecticut Employment Change
2018Q2-2020Q2

Value
280
-60
-73
-214
-1,951
-2,778
-3,219
-3,723
-4,440
-4,656
-5,156
-5,258
-7,576
-9,763
-14,786
-14,829
-16,248
-19,429
-28,323
-39,322
-72,454

x-axis: -90,000   -70,000   -50,000   -30,000   -10,000   10,000

Connecticut Employment Projections
2020Q2-2022Q2

Industry	Value
Transportation & Warehousing	18,052
Utilities	-242
Natural Resources and Mining	90
Real Estate & Rental & Leasing	431
Management	437
Information	-35
Government	5,097
Soc. Assistance	11,557
Finance & Insurance	-4,411
Construction	772
Prof, Sci., & Tech. Services	5,835
Wholesale Trade	644
Manufacturing	3,394
Educational Services	3,580
Administrative & Support	15,124
Arts, Entertainment, & Recreation	15,830
Health Care	14,416
Other Services (ex: Public Admin.)	22,522
Retail Trade	12,126
Accom. & Food Services	69,111

x-axis: -10,000   10,000   30,000   50,000   70,000   90,000

* Government excludes education, hospitals, and gambling industries
Source: Quarterly Census of Employment and Wages (QCEW)

Projections by Occupation

As noted above, overall employment is projected to grow by 208,246 or +13.5% from 2020Q2 through 2022Q2. Every occupational group is projected to add jobs through 2022Q2, with growth ranging between 2.9% for Architecture & Engineering Occupations to 71.2% for Food Preparation & Serving Related. The four occupational groups with the largest gains are Food Preparation & Serving Related (+57,200 or +71.2%), Transportation & Material Moving (+22,000 or +19.5%), Personal Care & Service (+21,600 or +58.4%), and Sales & Related Occupations (+16,600 or +12.5%). These four major occupational employment increases echo the aforementioned industry projections, and they represent a combined 24% of base quarter employment and 56% of projected growth as they were hardest hit by the pandemic.

Occupational Group	2020 Q2 History	2022 Q2 Projections	Emp Change	% Change
Total, All Occupations	**1,541,793**	**1,750,039**	**208,246**	**13.5%**
Food Preparation and Serving Related	80,274	137,457	57,183	71.2%
Personal Care and Service	36,945	58,511	21,566	58.4%
Building and Grounds Cleaning and Maintenance	56,220	70,530	14,310	25.5%
Transportation and Material Moving	112,946	134,951	22,005	19.5%
Arts, Design, Entertainment, Sports, and Media	25,901	30,048	4,147	16.0%
Sales and Related	132,744	149,381	16,637	12.5%
Protective Service	30,428	33,958	3,530	11.6%
Healthcare Support	81,509	89,133	7,624	9.4%
Installation, Maintenance, and Repair	49,952	54,228	4,276	8.6%
Healthcare Practitioners and Technical	100,444	108,058	7,614	7.6%
Management	129,820	139,432	9,612	7.4%
Computer and Mathematical	48,338	51,646	3,308	6.8%
Office and Administrative Support	207,428	221,588	14,160	6.8%
Production	85,503	90,804	5,301	6.2%
Life, Physical, and Social Science	12,620	13,354	734	5.8%
Construction and Extraction	51,939	54,859	2,920	5.6%
Education, Training, and Library	114,414	120,767	6,353	5.6%
Farming, Fishing, and Forestry	3,947	4,140	193	4.9%
Community and Social Service	38,324	39,927	1,603	4.2%
Business and Financial Operations	93,215	96,958	3,743	4.0%
Legal	14,398	14,840	442	3.1%
Architecture and Engineering	34,484	35,469	985	2.9%

Other large occupational groups, all with employment of 100,000 or more had much more muted growth. Office & Administrative Support is projected to grow by 6.8% to 221,600, Management is up 7.4% to 139,400, and Education, Training, & Library Occupations is up 5.6% to 120,800.

Each occupation is assigned an education value based on the minimum education necessary to enter an occupation. The table above shows the breakdown of occupational projections by education value and the specific occupation by educational level with the largest employment change. Over the two years that span the projections period, 23% of job growth will be in occupations that require a credential or degree beyond high school. This share of occupational growth is half what it has been in recent years and reflects the impact of the pandemic on base-quarter employment and subsequent growth — industries and occupations that have lower levels of required educational attainment fell the most due to the pandemic and therefore have a stronger rebound. A shift of employment growth to higher levels of educational attainment can be expected in future rounds of short-term projections as the economy recovers from the pandemic.

Level of Educational Attainment	2020Q2	2022Q2	Emp. Change	% Change
Total, All Occupations	**1,541,793**	**1,750,039**	**208,246**	**13.5%**
No formal educational credential	284,194	383,053	98,859	34.8%
High school diploma or equivalent	575,304	637,758	62,454	10.9%
Postsecondary non-degree award	95,809	106,722	10,913	11.4%
Some college, no degree	46,998	50,136	3,138	6.7%
Associate's degree	34,370	40,832	6,462	18.8%
Bachelor's degree	420,641	440,758	20,117	4.8%
Master's degree	31,884	34,462	2,578	8.1%
Doctoral or professional degree	52,593	56,318	3,725	7.1%

Ed. Attain Level	Largest Occupation in Ed. Level	2020Q2	2022Q2	Emp. Change	% Change
No formal educational credential	Waiters and Waitresses	16,823	31,438	14,615	86.9%
High school diploma or equivalent	Childcare Workers	9,537	16,134	6,597	69.2%
Postsecondary non-degree award	Dental Assistants	2,325	4,183	1,858	79.9%
Some college, no degree	Teaching Assistants	20,145	21,270	1,125	5.6%
Associate's degree	Preschool Teachers	5,127	7,826	2,699	52.6%
Bachelor's degree	General and Operations Managers	27,700	29,938	2,238	8.1%
Master's degree	Nurse Practitioners	2,651	3,111	460	17.4%
Doctoral or professional degree	Physicians, All Other; and Ophthalmologists	5,972	6,560	588	9.8%

Connecticut's Projections Compared to Other States

Connecticut's projected 2020-2022 job growth is projected to grow at a higher rate than Massachusetts but slightly below the rate of New York. The two-year projected growth rates vary in accordance with percent employment declines in the preceding two-year period. From 2018Q2 to 2020Q2, New York, Connecticut, Massachusetts, and New Hampshire had employment change of -16.9%, -15.1%, -14.8%, and -12.4% respectively.

The table also includes average annual openings to help illustrate how total net change doesn't fully capture the amount of churn in the labor market. The projections methodology used by all 50 states and territories calculates openings due to separations (people leaving the labor market), transfers (leaving one job for another), and expansions (total employment growth).2 The total annual opening figures included in the table are the sum of those three annualized variables to highlight that the labor market will have hundreds of thousands of job openings in the coming year.

Conclusions

The past year has been memorable, for reasons we all hope to forget. The employment projections noted in this article reflect the unprecedented economic conditions that were derived from a pandemic that quickly and drastically altered social and economic foundations. Due to this, there are numerous known and unknown "risks to the projections" that may impact their accuracy. These include COVID-related variables such as vaccination rates and virus mutations, both of which have the potential to drastically shift how the economy functions. The significant economic stimulus policies conducted last year and currently underway will likely continue to avoid the prolonged economic downturn that was feared a year ago. Other behavioral shifts such as permanent widespread adoption of remote work could

alter many areas of the economy. At the U.S. level, the highest GDP projections in almost 40 years and concerns of possible inflation could additionally impact the state labor market over the short term in currently unforeseen ways. An upside of many of these risks is that, unlike last year, it seems more likely that they would positively impact the labor market than function as drags on the recovery

Connecticut's short term projections show that the state is well on its way to rebound from the economic downturn that began early last year. The highest growth industries and occupations are those that were most impacted by shutdown orders and other COVID-mitigation policies. As the recovery continues, we expect that future rounds of employment growth projections in the state will realign to more proportional growth with less drastic industry variance. Key takeaways are that the hardest hit industries and occupations are recovering, and we project total statewide employment will rebound through 2022Q2 and recover most of the employment lost during the pandemic.

Data Limitations

The Department of Labor's short-term 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/Short-term