2021 Midterm
Economic Report of the Governor

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The United States Economy

Nationally, 2019 proved to be a strong economic year even with some of the challenges that could have had a negative impact on the economy. According to the U.S. National Bureau of Economic Research, the Great Recession began in December 2007 and ended in June 2009. The economic expansion continues at 127 months as of January 2020—the longest expansion since the end of World War II. The nation's inflation-adjusted or real gross domestic product (GDP) grew by 0.5% going into the third quarter of 2019. Projections show that GDP from 2018 to 2019 may end with 2.3% growth. Job growth for the year totaled an estimated 2.1 million jobs whereas 2018 growth totaled 2.7 million jobs. The national unemployment rate in January of 2019 was 4.0% and dropped over the year to 3.5% in December 2019. The annual unemployment rate for 2019 was 3.7% which is the lowest annual rate since 1969 when the rate was 3.5%. Low unemployment rates contribute to wage growth, which have been minimal during this recovery so far. Wages and salaries have increased by 4.6% in quarter 3 of 2019 compared to quarter 3 of 2018. In comparison, inflation grew at an annual rate of 1.8% in 2019.

Although the economy has shown signs of continued recovery and expansion, the Federal Reserve cut benchmark interest rates in 2019. The rates were cut by 25 basis points in July, September, and October from a 2.25%-2.5% benchmark range to the current 1.5%-1.75% benchmark range. Prior to 2019, interest rates had not been cut in more than a decade. One concern that was raised after the Federal Reserve had confirmed cutting interest rates for a third time was the lack of room to cut rates again should the economy start to shrink and dip into a recession. The Federal Reserve expects that rates will remain unchanged through 2020 unless the inflation rate increases significantly. Additionally, in October 2019, the 10-year treasury rates fell below 2-year treasury rates for the first time since before the Great Recession causing an inverted yield curve. Historically, when the yield curve becomes inverted, a recession follows within the next couple of years.

Outside of interest rates, the stock market indices had notable performances in 2019. The S&P 500 index returned an annual rate of 28.5% through December 31, 2019. 2019 was the best year for the S&P 500 index since 2013 when the annual return was 29.6%. The Nasdaq-100 index also showed significant returns in 2019 as the annual return was about 35%. In comparison, the Dow Jones Industrial Average in 2019 was up 22% for the year.

In September 2019, there was an attack on oil production facilities in Saudi Arabia. This attack caused a very short-term spike of nearly 13% in oil prices. Almost immediately after the attack, the price for a barrel of oil jumped to approximately $62.90 compared to $54.85 per barrel the day before the attack. The increase in price did not last long as it had declined back to prior price levels just days after the attack indicating that the price increase was not sufficient enough to bring the economy into a recession like many people thought could have been a result. Comparatively, from 2011 to 2014, oil prices were above $100 per barrel and the economy continued to expand.

Although the economy performed well in 2019, federal policy generated some political and economic uncertainty that may have negative impacts on the economy over the next several years. In an effort to reduce the trade deficit, the Trump Administration issued dramatic increases to import tariffs. All while

trying to negotiate a trade deal with China, in May 2019, President Trump increased import taxes from 10% to 25% on about $200 billion worth of goods from China. China retaliated to this increase by also increasing tariffs on about $60 billion of American products. Negotiations for the trade deal stalled and President Trump threatened to increase import tariffs on another $300 billion worth of Chinese products, but both sides agreed to begin negotiating again shortly after the President's remarks. In September, new tariffs took effect on an estimated $112 billion of Chinese imports including clothing and household commodities. In response, China retaliated with tariffs on American goods including cars. Later in September, both the United States and China granted exemptions from tariffs to many product types such as cancer drugs, pet supplies, and plastic straws. Partial settlement of the trade dispute, referred to as phase-one of the trade deal with China, was close to coming to fruition in November but once again got delayed. By December, negotiations turned once again, however, and the first phase of the trade deal with China is expected to be signed by both sides in January 2020.

Political uncertainty continued with the vote by the U.S. House of Representatives on December 18, 2019 in favor to impeach President Trump. President Trump is only the third president to be impeached in the history of the United States. The impeachment process moved to trial in the U.S. Senate which will require a two-thirds vote in order to have the President removed from office. The outcome of the trial is uncertain which also results in uncertainty in the 2020 presidential election.

The Connecticut Economy

Similar to the national economy, 2019 was also a period of continued economic expansion in the state. Preliminary total nonfarm job growth picked up in 2019. The state gained 0.4% on an annual average basis in 2019, compared to 0.1% growth in 2018. This equates to 6,400 jobs added in 2019 compared to just 2,200 in 2018. Manufacturing, after decades of declines, grew 1.4% in 2017, 1.0% in 2018, and 0.6% in 2019. Financial activities turned positive from -1.4% growth in 2018 to 1.1% in 2019. As of December 2019, however, Connecticut has only regained 86.1% of the 120,300 jobs lost since the last employment peak of 1,717,100 jobs in March of 2008. The lack of full job recovery from the Great Recession is driven by the government sector in Connecticut; the private sector has gained back 107.1% of jobs lost as a result of the Great Recession. According to the household survey, which measures employment and unemployment for Connecticut residents, the number of employed residents in Connecticut is at its highest level ever at 1,855,687 as of December 2019. This is 4.2% above the pre-recession peak of 1,780,566 in February 2008. Connecticut's unemployment rate as of December 2019 is 3.7%, down from over 9.1% in 2010.

Real Gross State Product (GSP), a measure of all economic activity in the state, grew 3.3% from third quarter of 2018 to third quarter of 2019. Since the bottom of the recession in the first quarter of 2011 GSP has grown by 3.7% but remains 7.3% below its pre-recession peak of $269.1 billion in the first quarter of 2008. Preliminary data indicates that Connecticut is showing signs of improvement over 2018, with real GSP growing 1.2% in the third quarter over fourth quarter 2018.

Personal income continued to show growth in 2019, rising by 3.1% in quarter four 2019 from a year ago. This compares to a 0.7% growth in personal income for the United States over the same period. Since the recession low in quarter one of 2009 per capita personal income has grown substantially from $59,000 to just under $80,000 in quarter three of 2019.

As of the third quarter 2019, median housing prices for existing homes are 8.0% below their pre-recession peak of $318,214. Home sales have rebounded from there recession low, up 35% over first quarter of 2019. Since 2015 housing sales have remained relatively flat, averaging approximately 41,000 sales per quarter. Housing starts are up 2.4% from quarter three 2018 to quarter three 2019.

On December 2, 2019 General Dynamics' Electric Boat division, located in Groton Connecticut, was awarded $22.2 billion by the U.S. Navy for the construction of 9 new Virginia-class submarines. The contract also gives an option for the Navy to purchase a 10th submarine bringing the potential total contract to $24.1 billion. Electric Boat has a workforce of over 17,000 employees located in Groton and New London Connecticut, and Quonset Point in Rhode Island. This contract will provide a decade of continuous work for the most significant employer in one of Connecticut's slowest growing regions. Additionally, On October 2, 2019 United Technology's Pratt & Whitney division, located in East Hartford Connecticut, was awarded a $5.7 billion contract for F135 propulsion systems which power the F-35 Lightning II aircraft. These contracts are important as they make a bulk of the manufacturing employment in the state of Connecticut. In FY 2019 transportation equipment employment made up nearly 30% of total manufacturing employment.

In June United Technologies Corp. and Raytheon announced the two companies were merging and United Technologies Corp. would be moving its headquarters from Farmington Connecticut to the Boston metro area. The move will result in the loss of many high paying executives but would not impact the bulk of the employment at other United Technologies Corp. companies, such as Pratt & Whitney and Otis.

After a year of operation the Hartford Line has exceeded expectations with nearly 750,000 passengers over the original 667,000 target. Economic development around the line has been estimated to be $430 million, with 1,400 new residential units and an estimated 242,000 square feet of commercial and office space.

The craft brewing industry has taken off in Connecticut with a staggering increase in employment in the sector. The industry has grown from just 15 jobs in the first quarter of 2010 to nearly 800 jobs by 2019. Growth in this industry has helped ancillary industries and many craft breweries are frequently located in areas experiencing urban revitalization and growth.

The continued economic expansion has substantially improved the state's finances. In FY 2019 the state ended with a General Fund surplus of $370.6 million leading to a budget reserve fund of $2.5 billion, or 13.1% of total expenditures, a significant increase from just over $200 million in FY 2017. This spate of good financial news caused positive outlook changes by both S&P ratings in March 2019 and Kroll ratings in July 2019.

Economic Assumptions of the Governor's Budget

The U.S. economy is projected to grow 2.2% in FY 2021 and 1.9% in FY 2022, before slowing to 1.6% in the out-years. Inflation is expected to decline 1.5% in FY 2021 and grow 2.3% FY 2022, before reaching the 2.5% range in the out-years. The U.S. unemployment rate is projected to reach a low of 3.5% by FY 2021, before slightly climbing in the out-years. Growth in housing starts is expected to reach a high of 4.6% in FY 2021, but decline to 1.3% in FY 2023 and fall thereafter. U.S. new vehicle sales are expected to continually slow over the entire forecast period, with a slight uptick of 0.2% in FY 2024.

Economic Report of the Governor

The Connecticut economy is expected to grow at 1.7% in FY 2021 and 1.4% in FY 2022, then stabilize in the out-years around one percent. Overall, the state's economic output will remain below levels achieved in 2007. Personal income is projected to grow at the mid-to-high three percent range over the entire forecast period. Connecticut's employment growth is projected to peak at 0.4% growth in FY 2020, followed by 0.2% and then remain flat until FY 2024. This level of employment will be 1.5% below the previous peak in 2008. The state's unemployment rate is projected to remain slightly elevated compared to the national rate throughout the forecast period, but will remain at what is considered full employment.

TABLE A-1
U.S. AND CONNECTICUT ECONOMIC INDICATORS

	U.S. Real GDP (Billions of Dollars)		CT Real GSP (Millions of Dollars)		U.S. Housing Starts (Millions)		CT Housing Starts	
Fiscal Year	Value	Growth	Value	Growth	Value	Growth	Value	Growth
2019	18,866	2.6%	246.8	1.1%	1.2	-2.6%	4,765.2	1.6%
2020	19,255	2.1%	250.7	1.6%	1.3	8.0%	4,957.8	4.0%
2021	19,677	2.2%	254.9	1.7%	1.3	-2.0%	5,183.2	4.6%
2022	20,044	1.9%	258.4	1.4%	1.3	-0.7%	5,476.4	5.7%
2023	20,363	1.6%	261.4	1.2%	1.3	-0.8%	5,549.3	1.3%
2024	20,691	1.6%	264.7	1.3%	1.3	-1.4%	5,566.9	0.3%

	U.S. Employment (Millions)		CT Employment (Thousands)		U.S. Unemployment Rate		CT Unemployment Rate	
Fiscal Year	Value	Growth	Value	Growth	Value	Growth	Value	Growth
2019	150.3	1.7%	1,693.5	0.4%	3.8%	-0.1	3.8%	-0.1
2020	152.5	1.4%	1,700.9	0.4%	3.5%	-0.3	3.6%	-0.2
2021	153.9	0.9%	1,703.3	0.2%	3.5%	0.0	3.6%	0.0
2022	154.9	0.6%	1,703.3	0.0%	3.6%	0.1	3.7%	0.1
2023	155.2	0.2%	1,703.2	0.0%	4.0%	0.4	4.1%	0.4
2024	155.3	0.0%	1,703.1	0.0%	4.4%	0.4	4.4%	0.3

	Consumer Price Index		U.S. New Vehicle Sales (Millions)		CT Personal Income (Millions of Dollars)	
Fiscal Year	Value	Growth	Value	Growth	Value	Growth
2019	253.3	2.1%	17.1	-1.1%	278,823.8	5.1%
2020	258.4	2.0%	16.9	-1.3%	287,361.2	3.1%
2021	262.1	1.5%	16.6	-1.5%	297,301.6	3.5%
2022	268.2	2.3%	16.5	-0.7%	308,239.5	3.7%
2023	275.0	2.5%	16.4	-0.3%	319,162.3	3.5%
2024	282.0	2.5%	16.5	0.2%	331,189.5	3.8%

REVENUE FORECAST

TABLE A-2
STATE OF CONNECTICUT - GENERAL FUND REVENUES
(In Millions)

Taxes	Actual Revenue FY 2019	Projected Revenue Current Rates FY 2020	Proposed Revenue Changes FY 2020	Net Projected Revenue FY 2020
PIT - Withholding	$ 6,665.8	$ 6,910.5	$ -	$ 6,910.5
PIT – Estimates & Finals	2,974.4	2,462.5	-	2,462.5
Sales & Use Tax	4,338.1	4,490.9	-	4,490.9
Corporation Tax	1,060.9	1,099.8	-	1,099.8
Pass-Through Entity Tax	1,172.1	1,150.0	-	1,150.0
Public Service Tax	262.1	237.7	-	237.7
Inheritance & Estate Tax	225.2	180.8	-	180.8
Insurance Companies Tax	193.8	203.3	-	203.3
Cigarettes Tax	357.5	344.7	-	344.7
Real Estate Conveyance Tax	213.2	217.4	-	217.4
Alcoholic Beverages Tax	64.1	68.9	-	68.9
Admissions & Dues Tax	42.8	41.9	-	41.9
Health Provider Tax	1,082.2	1,040.1	-	1,040.1
Miscellaneous Tax	17.9	20.7	-	20.7
Total Taxes	$ 18,670.1	$ 18,469.2	$ -	$ 18,469.2
Less Refunds of Tax	(1,373.9)	(1,544.3)	-	(1,544.3)
Less Earned Income Tax Credit	(91.5)	(97.3)	-	(97.3)
Less R&D Credit Exchange	(5.4)	(8.6)	-	(8.6)
Total - Taxes Less Refunds	$ 17,199.4	$ 16,819.0	$ -	$ 16,819.0
Other Revenue				
Transfers-Special Revenue	$ 364.1	$ 368.0	$ -	$ 368.0
Indian Gaming Payments	255.2	236.0	-	236.0
Licenses, Permits, Fees	291.2	341.2	-	341.2
Sales of Commodities	27.1	30.2	-	30.2
Rents, Fines, Escheats	165.9	166.0	-	166.0
Investment Income	48.9	57.6	-	57.6
Miscellaneous	214.7	209.1	-	209.1
Less Refunds of Payments	(59.1)	(66.4)	-	(66.4)
Total - Other Revenue	$ 1,308.0	$ 1,341.7	$ -	$ 1,341.7
Other Sources				
Federal Grants	$ 2,083.8	$ 1,581.1	$ -	$ 1,581.1
Transfer From Tobacco Settlement	110.2	136.0	-	136.0
Transfers From/(To) Other Funds	(101.8)	(132.3)	-	(132.3)
Transfer to BRF – Volatility Cap	(949.7)	(318.3)	-	(318.3)
Total - Other Sources	$ 1,142.5	$ 1,266.5	$ -	$ 1,266.5
Total - General Fund Revenues	$ 19,649.9	$ 19,427.2	$ -	$ 19,427.2
Revenue Cap Deduction	-	-	-	-
Available Net General Fund Revenues	$ 19,649.9	$ 19,427.2	$ -	$ 19,427.2

Projected Revenue Current Rates FY 2021	Proposed Revenue Changes FY 2021	Net Projected Revenue FY 2021
$ 7,168.5	$ -	$ 7,168.5
2,532.9	-	2,532.9
4,639.4	12.8	4,652.2
1,059.2	28.2	1,087.4
1,150.0	-	1,150.0
244.7	5.6	250.3
161.7	-	161.7
205.8	7.5	213.3
324.9	0.6	325.5
230.6	-	230.6
69.7	-	69.7
41.5	-	41.5
1,033.6	(1.0)	1,032.6
21.5	-	21.5
$ 18,884.0	$ 53.7	$ 18,937.7
(1,378.9)	-	(1,378.9)
(100.6)	-	(100.6)
(7.2)	-	(7.2)
$ 17,397.3	$ 53.7	$ 17,451.0
$ 376.6	$ 1.5	$ 378.1
235.4	-	235.4
384.3	(49.3)	335.0
31.0	-	31.0
168.1	-	168.1
57.9	-	57.9
210.6	0.7	211.3
(67.7)	2.0	(65.7)
$ 1,396.2	$ (45.1)	$ 1,351.1
$ 1,575.3	$ (3.5)	$ 1,571.8
114.5	-	114.5
108.6	35.0	143.6
(274.6)	-	(274.6)
$ 1,523.8	$ 31.5	$ 1,555.3
$ 20,317.3	$ 40.1	$ 20,357.4
(152.4)	(13.2)	(152.7)
$ 20,164.9	$ 39.8	$ 20,204.7

Explanation of Changes

Sales & Use Tax
Eliminate the Regional Performance Incentive Transfer for one year.

Corporation Tax
Maintain the 10% corporate surcharge and delay phase-in of capital base reduction.

Insurance Companies Tax
Captive Insurers Initiative

Cigarettes Tax
Tax electronic cigarette liquids at 50% of wholesale price and ban flavored vaping products.

Public Service Tax
Eliminate certain exemption, cap tax credits to 50.01% of liability.

Health Provider Taxes
Implement recommendation of ambulatory surgical center tax study.

Rents, Fines, Escheats
Institute i-Lottery.

License, Permits, and Fees
Elimination of the $50 million fee increase, and various other fee increases.

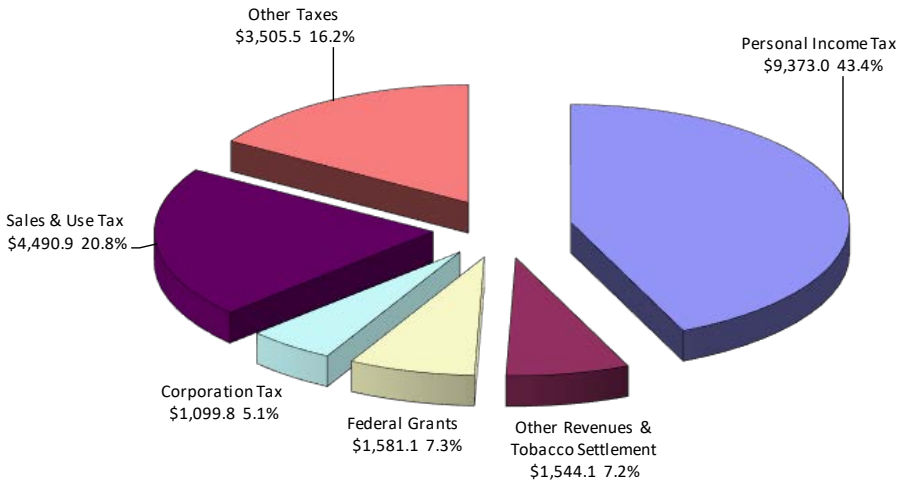
Miscellaneous Revenue
Office of Health Strategy hospital assessment.

Refunds of Payments
Impose a convenience fee for credit and debit card use.

Federal Grants
Revenue gain resulting from expenditure changes.

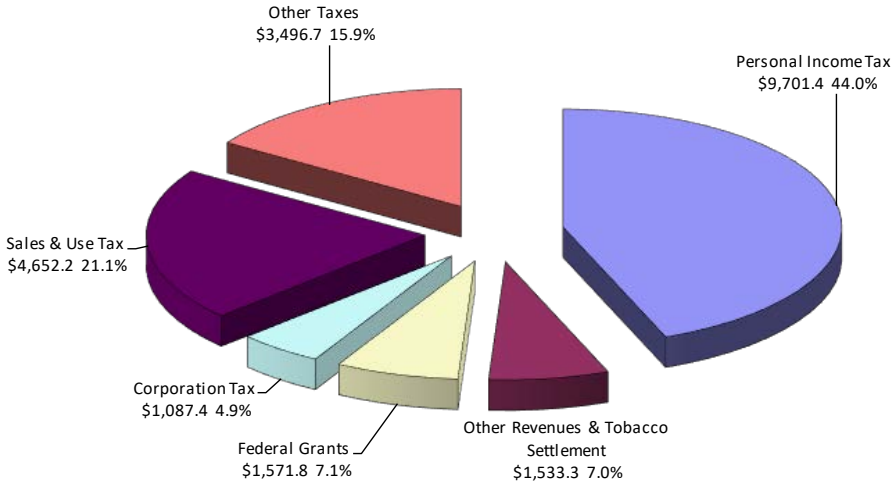
Transfers-Other Funds
Transfer GAAP payment savings into FY 2021, and match for the Philanthropic Match Account (Dalio).

GENERAL FUND REVENUES FY 2020
(In Millions)
TOTAL $ 19,427.2 MILLION*



* Refunds are estimated at $1,544.3 million in, R&D Credit Exchange is estimated at $8.6 million, Earned Income Tax Credit is estimated at $97.3 million, Refunds of Payments are estimated at $66.4 million, Transfers to Other Funds are estimated at $132.3 million, and Transfers to the Budget Reserve Fund are estimated to be $318.3 million.

GENERAL FUND REVENUES FY 2021
(In Millions)
TOTAL $ 20,357.4 MILLION*



* Refunds are estimated at $1,378.9 million, R&D Credit Exchange is estimated at $7.2 million, Earned Income Tax Credit is estimated at $100.6 million, Refunds of Payments are estimated at $67.7 million, and Transfers to the Budget Reserve Fund are estimated to be $274.6 million. This chart does not include the Revenue Cap deduction of $152.7 million.

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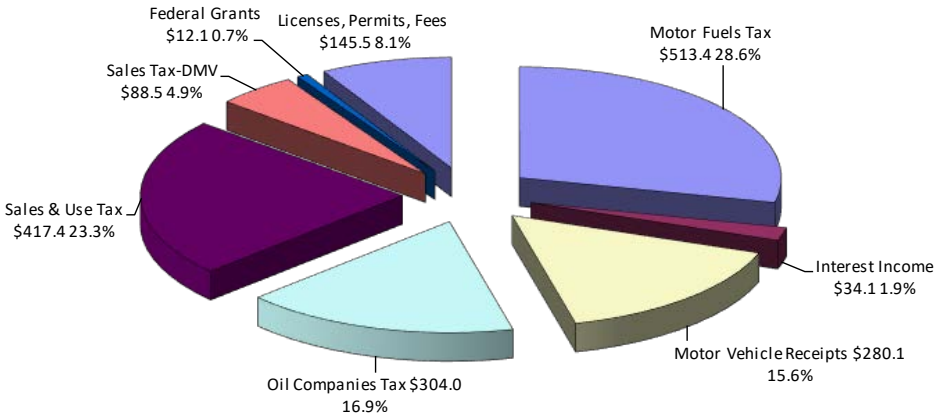
TABLE A-3

STATE OF CONNECTICUT
SPECIAL TRANSPORTATION FUND REVENUES
(In Millions)

	Actual Revenue FY 2019	Projected Revenue Current Rates FY 2020	Proposed Revenue Changes FY 2020	Net Projected Revenue FY 2020
Taxes				
Motor Fuels Tax	$ 509.7	$ 513.4	$ -	$ 513.4
Oil Companies Tax	313.1	304.0	-	304.0
Sales and Use Tax	370.6	417.4	-	417.4
Sales Tax - DMV	87.3	88.5	-	88.5
Total Taxes	$ 1,280.6	$ 1,323.3	$ -	$ 1,323.3
Less Refunds of Taxes	(32.1)	(24.3)	-	(24.3)
Total - Taxes Less Refunds	$ 1,248.4	$ 1,299.0	$ -	$ 1,299.0
Other Sources				
Motor Vehicle Receipts	$ 250.4	$ 280.1	$ -	$ 280.1
Licenses, Permits, Fees	150.1	145.5	-	145.5
Interest Income	37.4	34.1	-	34.1
Federal Grants	12.3	12.1	-	12.1
Transfers From Other Funds	(5.5)	(35.5)	-	(35.5)
Less Refunds of Payments	(4.9)	(5.0)	-	(5.0)
Total - Other Sources	$ 439.7	$ 431.3	$ -	$ 431.3
Total - STF Revenues	$ 1,688.1	$ 1,730.3	$ -	$ 1,730.3
Revenue Cap Deduction	-	-	-	-
Available Net STF Revenue	$ 1,688.1	$ 1,730.3	$ -	$ 1,730.3

FISCAL YEAR 2020 - TOTAL $1,730.3 MILLION*



* Refunds are estimated at $29.3 million and Transfers to Other Funds at $35.5 million.

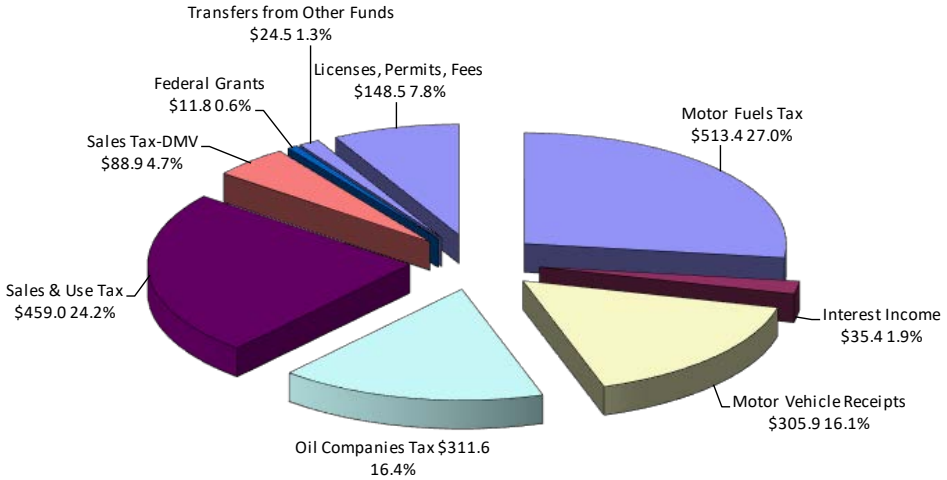
Projected Revenue Current Rates FY 2021	Proposed Revenue Changes FY 2021	Net Projected Revenue FY 2021
$ 513.4	$ -	$ 513.4
311.6	-	311.6
459.0	-	459.0
88.9	-	88.9
$ 1,372.9	$ -	$ 1,372.9
(15.0)	-	(15.0)
$ 1,357.9	$ -	$ 1,357.9
$ 305.9	$ -	$ 305.9
146.6	-	146.6
35.4	-	35.4
11.8	-	11.8
24.5	-	24.5
(5.2)	1.9	(3.3)
$ 519.0	$ 1.9	$ 520.9
$ 1,876.9	$ 1.9	$ 1,878.8
(14.1)	-	(14.1)
$ 1,862.8	$ 1.9	$ 1,864.7

Explanation of Changes

Refunds of Payments

Impose a convenience fee for credit and debit card use.

FISCAL YEAR 2021 - TOTAL $1,878.8 MILLION*



* Refunds are estimated at $20.2 million. This chart does not include the Revenue Cap deduction of $14.1 million.

IMPACT OF THE GOVERNOR'S BUDGET ON THE STATE'S ECONOMY

A government budget has three purposes: it outlines necessary and desirable public services, it estimates how much these services will cost, and it defines the resources that are required to provide these services. The budget is a fundamental policy document of every level of government. As proposed, enacted and implemented, it represents a consensus regarding what government realistically can and ought to do.

The economic implications of government budgets are significant. Government expenditures is an important dimension of the national economy, accounting for about 12.3% of gross domestic product. The Governor's revised budget will account for an estimated 7.4% of Connecticut's gross state product in FY 2021, and state government's expenditure and revenue actions will inevitably influence the state's economy.

Expenditure Actions

General Government

Climate and Environment

Governor Lamont is determined that Connecticut be a leader in environmental issues. To this point, the Governor is proposing several initiatives to address environmental and climate concerns.

To address the impacts of climate change on Connecticut, Governor Lamont is proposing to codify the goal of having zero percent greenhouse gas emission from electric generation by 2040. In addition, the Governor is proposing that the Department of Energy and Environmental Protection (DEEP) procure up to 300,000 MWh (equivalent to 1% of the load), of electricity from active demand response measures (e.g. controllable equipment that can be ramped up or down to control energy use during peak times), passive demand response measures (e.g. energy efficiency programs), and energy storage systems.

Governor Lamont is also proposing to have DEEP assess the energy, environmental and air quality impacts of adopting California's medium and heavy-duty vehicle standards in Connecticut and adopt regulations as necessary. The reduction of these emissions is necessary to meet Connecticut's greenhouse gas reduction targets and comply with national health-based air quality standards.

In addition, the Governor is proposing a waste and recycling infrastructure development program centered on competitive solicitations to support private sector innovation as well as municipal waste reduction programs. The Department of Energy and Environmental Protection, with the approval of the Office of Policy and Management, may seek proposals for new, improved, or expanded solid waste management facilities. The types of facilities may include but are not limited to, recycling facilities, waste conversion facilities, anaerobic digestion facilities, composting facilities, and resource recovery facilities.

According to the U.S. Department of Energy, buildings are responsible for approximately 40% of the energy use and greenhouse gas emissions in the United States. Ensuring that the buildings are constructed to be energy efficient has a significant impact on energy use and greenhouse gas emissions over the life of the building. Therefore, Governor Lamont is proposing a stretch code for high performance green building standards that DEEP will develop for residential and commercial buildings to reduce emissions, conserve water resources, provide for electric vehicle charging readiness and promote

sustainable and regenerative materials cycles and enhance resiliency. Once developed, municipalities may adopt these high performance green building standards in their community.

Efficiencies in State Government

On July 31, 2019, Governor Lamont issued Executive Order #2, directing the execution of a human resources centralization plan in order to provide state government with the highest quality human resources services at the lowest possible cost**.**

Under the proposed centralization plan, new capabilities and functionality available through technology will be employed to enable physical centralization and yield significant steady-state cost savings. Once fully implemented, the technology will include, but is not limited to, digitized records, automated work-flows, automated screening of job applications, and automated administration of leaves.

The Department of Administrative Services (DAS), in collaboration with the Office of Policy Management (OPM), began rolling out the centralization plan in October 2019.

Criminal Justice Reforms

Governor Lamont is introducing, with his proposed state budget, clean-slate legislation to clear certain criminal convictions automatically following a waiting period. The legislation encompasses several of Governor Lamont's priorities, including applying e-government solutions, strengthening the state's workforce, improving criminal justice system outcomes, and increasing access to stable housing.

Governor Lamont's clean-slate legislation would create an automated process spanning the Department of Emergency Services and Public Protection (which maintains the state's criminal record repository), the Judicial Branch, and other agencies to clear electronic records according to the eligible criminal convictions and waiting periods listed in legislation. Using electronic data-sharing technology, aided by the Criminal Justice Information System, would avoid the labor-intensive and time-consuming process of destroying paper.

By clearing certain records automatically, the clean-slate legislation will impact both the past, in rectifying an aspect of the criminal justice system's disproportionate impact, and the future, by helping people overcome barriers and contribute more fully to the Connecticut workforce and economy as well as their communities and households.

Education and Workforce Programs

Sustaining Municipal Aid

This budget provides municipalities with greater predictability over state support by:

- Honoring the state's Education Cost Sharing formula by fully funding the phase in of increases to towns as calculated by the formula; and
- Level funding appropriated statutory formula aid.

Office of Workforce Competitiveness

The workforce landscape of the 21st century is ever changing and requires states to be strategic in their approach to workforce development. In order to create a workforce development ecosystem that meets the needs of employers and bolsters a thriving economy for the state, Connecticut must invest in a system that strategically aligns education, training and the workforce into a pipeline which fosters economic growth.

The revitalization of the Governor's Workforce Council (GWC) demonstrates Governor Lamont's commitment to workforce development. Staffed with leaders in business, education, nonprofits and labor, the GWC serves as the principal advisor to the Governor on workforce development issues while coordinating the efforts of all state agencies and other entities as it promotes workforce development throughout the state.

To strengthen support for the GWC and to better align the existing state workforce system, Governor Lamont will reconstitute an empowered Office of Workforce Competitiveness (OWC) within the Office of Policy and Management to lead that charge. The office will be responsible for formulating state strategy and setting data-driven goals while coordinating the state's workforce development ecosystem and ensuring accountability. OWC will be led by an Executive Director and supported by three staff.

Debt Free Community College and Guided Pathways

Established by the Board of Regents pursuant to Public Act 19-117, the debt-free community college program entitled Pledge to Advance Connecticut (PACT) will provide grants to qualifying students to fully cover tuition and fees at Connecticut Community Colleges beginning in the Fall 2020 semester. As revised by the Governor's Recommended Midterm Adjustments, the program will provide grants to students with an Expected Family Contribution[1] up to $7,500 who graduated from Connecticut high schools in the past year and are enrolling in community college full-time. The grants will equal the greater amount of the following:

1) A student's remaining tuition & fee costs after all other available grants & scholarships are accepted; or
2) A minimum award of $250 per semester.

The Debt-Free Community College program will provide a valuable benefit to Connecticut students who may currently lack the financial means to continue their education beyond high school, opening doors for thousands of young adults to enter the state's workforce.

In addition to expanding students' access to community college, the Governor's Recommended Midterm Adjustments provide funding in FY 2021 to support the implementation of Guided Pathways in Connecticut Community Colleges, expanding critical student advisor services to assist students in completing their degrees. Supporting Guided Pathways will ensure that new and existing students will have the support they need to advance their educational aspirations.

[1]Calculated from the Free Application for Federal Student Aid, the Expected Family Contribution is a measure of each student's ability to pay for college and serves as the basis for determining eligibility for federal financial aid.

Health and Human Services

Governor Lamont's FY 2021 budget for Health and Human Services makes significant investments to improve the health and safety of Connecticut's citizenry – especially its most vulnerable residents – and to ensure access to quality health care provided more efficiently. These improvements will result from targeted investments in several key areas in the state's health and human services agencies.

Department of Mental Health and Addiction Services (DMHAS)

DMHAS will be hiring two additional Special Investigators to conduct compliance checks to enforce a proposed ban on flavored vaping products and monitor adherence to new sales restrictions on similar products having nicotine concentration levels greater than 35 milligrams per milliliter.

Department of Public Health (DPH)

The Governor is recommending additional resources in DPH to support increased oversight of licensed providers and improvements in public health and safety. The budget will implement recommendations of the per- and polyfluoroalkyl substances (PFAS) task force by enhancing capacity at the state public health laboratory through the purchase of equipment and supplies and the hiring of a chemist so that DPH can begin testing drinking water for PFAS. Two additional positions will enable DPH to update standards and action levels for drinking water and review laboratories for approval to do PFAS testing. Funding of $1.3 million is also recommended in DPH for grants that will support organizations that were prior recipients of federal Title X Family Planning funding to assure continued provision of reproductive health and prevention services.

Department of Children and Families (DCF)

DCF is receiving two new staff to conduct child abuse and neglect (CAN) registry checks of licensed youth camp staff (18 and older). This responsibility will be one component of new comprehensive background checks for workers at approximately 547 youth camps having over 16,400 seasonal workers. Funding has also been recommended to add seven nursing and clinical staff to ensure the delivery of safe and high-quality care to children served by the DCF's Solnit Children's Center, consistent with the proposed implementation of DPH licensure of the inpatient and Psychiatric Residential Treatment Facilities (PRTF) on the Center's north and south campuses. Licensure is expected to occur by Spring 2021.

Office of Health Strategy (OHS)

Almost $1 million in new personnel and contracting resources will allow OHS to carry out a January 2020 Executive Order requiring them to initiate Health Care Cost Growth Benchmarks. These annual benchmarks will address the average growth in health care expenditures across all public and private payers and populations for the state in order to enhance transparency and reduce the rate of growth of health care costs in Connecticut. Other states have seen significant reductions in growth trends through similar efforts.

Department of Developmental Services (DDS)

Several initiatives in DDS will result in net savings of almost $3.8 million in FY 2021 through efforts to serve individuals in less expensive settings and through more cost-effective means. A total of $1 million in net savings will be achieved by hiring approximately 100 new part-time direct care staff to fill vacancies in the system currently being covered by full-time staff being paid overtime wages at time-and-a-half or double time. Almost $800,000 is proposed to be reallocated from higher intensity Community Residential Services supports to the Rent Subsidy program to support approximately 160 individuals transitioning into residential placements. Rather than being placed into costlier group homes as had routinely been the practice, this will permit DDS to support individuals in more cost-effective settings like Continuous Residential Supports (CRS) or In-Home Supports (IHS). DDS anticipates net savings of over $1.0 million through this change. And lastly, the Governor is estimating savings of $1.75 million by implementing a reimbursement mechanism targeted at incentivizing providers to allow individuals to be served in less intensive settings. Providers will be reimbursed 80% of their payment for two years for individuals that transition to lower levels of care and these payments will not be subject to cost settlement rules.

Department of Social Services (DSS)

Additional recoveries in DSS are expected to reduce state Medicaid requirements by $2 million in FY 2021 as a result of legislative changes that require insurers to act in a timely manner on requests to reimburse for services covered under HUSKY Health for which they may be legally liable. This proposal is consistent with prompt payment standards that are common practice in the health insurance industry.

The Governor's budget also leverages federal dollars by billing for applicable services provided by residential care homes (RCHs) under Medicaid, resulting in net savings of $2.1 million in FY 2021 ($12.7 million in FY 2022 when fully annualized). A portion of the additional federal reimbursement for these services will be reinvested in RCHs.

Caseload needs for various entitlement and quasi-entitlement accounts in DSS and DCF are addressed and the Governor specifically recommends an additional $2 million in DMHAS to support community placements for individuals at Connecticut Valley Hospital who no longer meet inpatient level of care.

Funding was also provided to support increases in the minimum wage for private provider agencies supported by the various human services agencies.

The Governor ensures the resources necessary to support the FY 2021 costs of the recently approved hospital settlement agreement, which eliminates the threat of a $4 billion potential liability and provides relief to hospitals and some measure of predictability for the state budget over the 7-year term of the agreement.

Capital Proposals

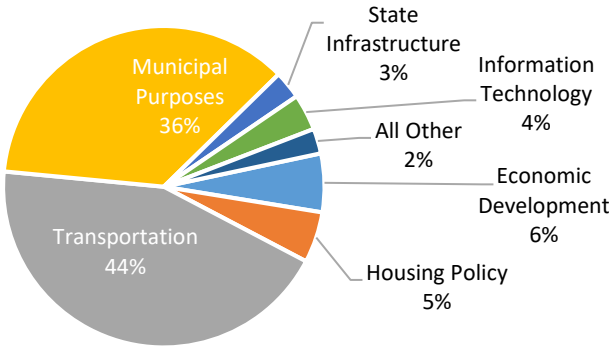
The adopted FY 2020-2021 budget for General Obligation (GO) bond debt service is based on Governor Lamont's plan to hold annual GO bond issuance to $1.6 billion, an over 15% reduction in debt issuance compared to the average of the last five years. Debt service is a large component of the growth in fixed costs. The Governor's plan is to reduce the growth in GO bond debt service to be more in line with revenue growth. In order to meet the GO bond issuance goal, the Governor is closely managing GO bond allocations through the State Bond Commission. In calendar year 2019, Governor Lamont reduced GO bond allocations by 45% compared to the average of the prior eight years. The Governor is prioritizing

bond allocations to areas he feels requires the most investment, which include, municipal aid, school construction, information technology improvements, and higher education.

A bond bill for FY 2020-2021 was not enacted in the 2019 legislative session. Therefore, the Governor's proposed midterm adjustments includes recommended new GO bond authorizations of $1.4 billion per year for the biennium which is 11% lower than the average annual recommendations over the last five years.

The Governor is also resubmitting his recommended authorizations for $776.6 million of Special Tax Obligation (STO) bonds in FY 2020 and $782.4 million in FY 2021, to keep our transportation infrastructure in a state of good repair.

Governor's Proposal
Average Annual New Authorizations
Fiscal Year 2020 and 2021



Revenue Proposals

For the 2021 Midterm Budget Adjustments, the Governor is proposing a relatively modest revenue package totaling $40.1 million in FY 2021. First and foremost, the Governor is rejecting the across the board increase to various fees that would have been required in last year's adopted budget. That budget expected the Secretary of OPM to recommend fee increases totaling not less then $50 million in FY 2021. As the Governor believes that many of these fees hit middle class citizens and that Connecticut already benchmarks high relative to other states in certain fees, such action would only make Connecticut's competitive position worse. Therefore, the Governor has proposed repealing those fee increases.

Corporation Tax Surcharge

Last year's budget proposal sought to defer or reschedule future tax reductions outside the biennium as Connecticut brought its fiscal house in order. This year is no different. The Governor is proposing to

extend the corporate surcharge permanently that was set to expire in income year 2021. The surcharge will remain at the current rate of 10 percent.

Capital Base Tax

The governor is also proposing an extension and delay to the Capital Base Tax phase-out schedule. The current schedule decreases the rate and sunsets the tax for income years beginning prior to January 1, 2024 whereas this proposal would eliminate the tax for income years beginning on or after January 1, 2026.

These two proposals do not include any additional taxes or rate increases compared to current law, but they allow the State of Connecticut to adapt to the reduction in revenue over the next several years.

Captive Insurance

In an effort to make Connecticut a more attractive state to do business, the Governor proposes an incentive to relocate a firm's captive insurer to the state. This proposal includes a 3-year look-back for the payment of taxes owed plus interest in addition to a waiver of penalties on outstanding liabilities for Connecticut insureds who establish a branch captive in the state or re-domicile a foreign or alien captive insurer to Connecticut before July 1, 2021.

Regional Performance Incentive Account

Oftentimes revenue intercepts are directed toward spending in certain areas. Unfortunately, these areas do not receive the benefit of the annual review and prioritization of the legislative appropriations process. In this year's budget proposal, the Governor is recommending that no transfers be made in FY 2021 to the Regional Performance Incentive Account in recognition of the fact that this year's funding is sufficient to accommodate funding needs in both FY 2020 and FY 2021.

Credit Card Service Fee

The Governor is proposing that a service fee be applied to credit and debit card transactions in order to cover the additional charges credit card companies place on all transactions. In FY 2019 alone the total cost to the state was $5.2 million across all state funds. This new fee will make-up for the costs associated with administering programs for which fees are charged and is expected to generate $2 million in the General Fund and $1.9 million in the Special Transportation Fund.

Dalio Philanthropic Foundation Contributions

The Governor's budget proposal continues the historic partnership with the Dalio Foundation by transferring a second $20.0 million in FY 2021 to the Philanthropic Match Account that was created last year. These resources will be dedicated to improving educational outcomes by focusing on programs that serve disconnected youth, public-private partnerships, and initiatives related to economic development.

GAAP Amortization Adjustments

The adopted FY 2020 budget included a $75.7 million revenue transfer to the General Fund balance sheet in order to continue to pay-down the unassigned fund balance in the General Fund (the "GAAP deficit") by FY 2028 as required by Public Acts 13-239 and 15-1 of the December special session. While these transfers represented a prudent course of action at the time of adoption, the state's strong cash position and historic budget reserve fund balance allows the state to take a less aggressive approach to repayment. When viewed together, the state's cumulative GAAP deficit and Budget Reserve Fund are at an all-time high. Accordingly, the Governor's budget proposes that $55 million of the transfer instead be used to support FY 2021, and the remaining $20.7 million would be available to address balance in FY 2020.

The Governor's proposal does not rely on increases to the personal income tax rate or sales tax rate. Taken as a whole, this package upholds the Governor's commitment to promoting economic growth, alleviating unfair burdens, and creating a more equitable revenue system.

The Governor is not proposing any major revenue changes in the Special Transportation Fund. However, the Governor believes Transportation is essential for the long-term economic growth of the state. In December, the Governor presented his vision for financing critical transportation infrastructure projects through the application of user fees on large commercial tractor trailers and trucks. The revenues generated through these user fees, coupled with new federal loan programs previously not utilized in Connecticut, will help create the foundation for future transportation developments and will spur economic growth.

Conclusion

Governor Lamont is committed to a fiscally responsible state government which lives within the state's means and promotes Connecticut's quality of life. The Governor's proposed fiscal year 2021 revisions address the fiscal and economic realities facing the state. The Governor's budget is balanced, represents limited growth over prior years, and remains below the constitutional spending cap.

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E C O N O M I C R E P O R T
O F T H E G O V E R N O R

FY 2021 Midterm

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INTRODUCTION

This report fulfills the requirements of Section 4-74a of the General Statutes which stipulates that:

> "The budget document shall include the recommendations of the Governor concerning the economy and shall include an analysis of the impact of both proposed spending and proposed revenue programs on the employment, production and purchasing power of the people and industries within the state."

This report is also designed to provide a brief profile of the State of Connecticut, the economy of the state, revenues and economic assumptions that support the Governor's budget, and an analysis of the impact of both proposed spending and proposed revenue programs on the economy of the State of Connecticut.

The report focuses on eight areas including: (1) the general characteristics of the state; (2) the profile of employment in the state; (3) an in-depth analysis of important Connecticut sectors; (4) the performance indicators for the United States, the New England region, and Connecticut; (5) a discussion of the most important revenue sources; (6) the economic assumptions of the Governor's budget and a numerical comparison of some of the important indicators used in the preparation of the Governor's budget; (7) the revenue forecasts of the General Fund and the Special Transportation Fund; and (8) the expected impact of the Governor's budget on the economy of the State of Connecticut.

EXECUTIVE SUMMARY

Highlights included in this report are as follows:

Population

Between 2000 and 2010, Connecticut's population grew at a rate of 4.9%, faster than the 3.8% population growth in New England but trailing behind the 9.7% of the U.S. In FY 2019, Connecticut's population experienced a year over year decline of an estimated 4,600 residents. Connecticut continues to experience net outmigration, with a deficit of just under 60,000 between 2010 and 2019. Current Connecticut population estimates indicate that the relative share of Connecticut's elderly population (age 65+) exceeded the U.S., while its younger age cohorts, those under 45, trailed the nation as a whole. The proportion of residents holding a bachelor's degree in Connecticut is 9.0% higher than the nation, while the proportion of those holding a graduate or professional degree is 41.3% higher than the nation.

Housing

Connecticut's housing starts increased by 1.6% in FY 2019, an improvement over FY 2018's decline of 3.5%. Declines over the recent years have been driven by the multifamily segment of the housing market. Median existing home prices increased 2.2% in Connecticut in FY 2019, lower than the U.S. as a whole, which saw median home prices increase 4.2%. Thirty year mortgage rates increased to 4.4%, a 6.6% increase over the prior year. Nationally, homeowner equity as a percentage of home values improved to 63.9% in FY 2019, reaching their highest level since the housing collapse in FY 2008.

Employment

In FY 2019 Connecticut gained approximately 5,275 non-farm jobs, representing 0.3% growth over the prior year. During the recent financial crisis, Connecticut lost approximately 120,000 non-farm jobs, and as of FY 2019 had regained about 95,000 on a fiscal year basis. Manufacturing remains an important sector of Connecticut's economy, representing 9.5% of all non-farm jobs in FY 2019. Connecticut Manufacturing employment grew by 1,100, or 0.7%, in FY 2019, outpacing New England at 0.3% growth and lagging the United States at 1.9% growth. Nonmanufacturing employment gained approximately 5,000 jobs, or 0.3%, in FY 2019, trailing the U.S.'s growth of 1.7% and New England's growth of 0.6%. The largest growth in nonmanufacturing employment in Connecticut came in the service sector, which gained 4,900 jobs or a 0.06% increase over the prior year. In FY 2019, Connecticut's unemployment rate averaged 3.8%, slightly higher than the U.S. at 3.8% and New England at 3.3%.

Energy

In calendar year 2018, the United States was the world's largest supplier of oil at 16.2% of the world's total. In 2017 Connecticut consumed 3.0 thousand BTU's per 2012 chained dollar of GDP, making it one of the most energy efficient states relative to output. Overall, Connecticut is 32.3% below the nation's per capita energy consumption and ranks 6th in energy efficiency per capita among the fifty states and District of Columbia. Connecticut's energy efficiency is likely due in part to the high relative price of energy in the

state. In 2017 Connecticut's overall energy costs were 34% higher than the national average and its electricity prices were 67% higher than the national average.

Export Sector

Exports play a crucial role in the economy. The U.S. trade deficit in 2018 was $491.0 billion, up from $439.6 billion in 2017. Total trade exports grew 63.6% from 2009 to 2019, while trade imports have grown 58.9% over the same period. Connecticut exports totaled $17.4 billion and accounted for 6.3% of GSP in 2018. Over the past five years, Connecticut's exports have increased by an average of 2.2% per year. Transportation equipment, nonelectrical machinery and computer and electronic equipment are Connecticut's largest exporting industries and comprise 64.3% of exports in 2018.

Defense Industry

Prime defense contracts tend to be a leading indicator of Connecticut's economic activity. In federal fiscal year (FFY) 2018, Connecticut contractors were awarded $14.7 billion in defense related prime contracts, up 26.9% from the $11.6 billion awarded in FFY 2017. However, as defense contract awards normally take several years to complete, the 3-year moving average is a better reflection of actual production activities. In FFY 2018, this average was $13.5 billion.

Retail Trade

Connecticut's retail trade in FY 2019 totaled $60.1 billion, a 5.7% increase over FY 2018. Growth in durable sales outpaced growth in non-durable sales in FY 2019, at 8.7% and 4.4% respectively. U.S. E-commerce sales continued their rapid growth, increasing an estimated 12.6% compared to a 2.5% increase in traditional retail sales. Connecticut retail trade as a percentage of disposable income decreased to 25.3% in FY 2019 from 25.5% in FY 2018.

Nonfinancial Debt

Total nonfinancial debt grew 171.2% between 2000 and 2018, far outpacing GDP growth of 100.2%. Federal indebtedness grew 336.8%, state and local government debt grew 155.3%, business debts grew 123.7% and household debts grew 115.7%. Connecticut's state government debt outstanding at the end of FY 2017 was $38.8 billion, up from $37.0 billion in FY 2016 and $35.4 billion in FY 2015. Connecticut per capita state government debt was $10,844 in FY 2017, far above the fifty state average of $3,750 in FY 2017.

Gross State Product

In FY 2019, Connecticut's real GSP increased slightly over the prior year at $246.8 billion in 2012 dollars, falling behind the U.S. and New England which saw increases of 2.6% and 2.1% respectively. Per capita real GSP in Connecticut was 20.6% higher than that of the U.S.

Personal Income

In FY 2019, real personal income in Connecticut increased 2.9%, compared to 2.9% growth in the U.S. and 2.8% growth in New England. In FY 2019, Connecticut possessed the highest per capita personal income in the nation at $78,154, 40.5% higher than the national average.

Economic Forecast

Connecticut's personal income is expected to increase 3.5% in FY 2021 and 3.7% in FY 2022 to $297.3 and $308.2 billion, respectively. Connecticut is projected to add 2,500 jobs in FY 2021 and remain flat in FY 2022, or a respective 0.2% and 0.0% growth. The unemployment rate is projected to stay flat at 3.6% in FY 2020 and increase slightly to 3.7% in FY 2021.

GENERAL CHARACTERISTICS OF THE STATE OF CONNECTICUT

Connecticut is located in southern New England, bordered by Long Island Sound, New York, Massachusetts and Rhode Island. The state enjoys a favorable location within the region as rail, truck, air transport and ports provide easy access to local and regional markets in the United States, Canada, and even Europe and South America. About one quarter of the total population of the United States and more than 50% of the Canadian population live within a 500-mile radius of Connecticut.

Connecticut is highly urbanized with a population density of 738 persons for each of its 4,842.4 square miles of land, compared with 87 persons per square mile of land for the United States (3,531,905 square miles), based on 2010 census figures. Hartford, the capital, is a center for the insurance industry and a major service center for business and commerce. Industrial activity in the state is concentrated in two regions: the Naugatuck valley, extending from Bridgeport north, and a belt extending from Hartford west to New Britain and Bristol, and south to New Haven.

Demographics

The United States conducts a census every ten years as required by the Constitution. Since the 1970 census, growth in Connecticut and New England has been slower than the nation as a whole.

TABLE 1
CENSUS POPULATION COUNTS
(In Thousands)

	United States		New England		Connecticut	
Year	Number	% Growth	Number	% Growth	Number	% Growth
1930	123,203	16.3	8,166	10.3	1,607	16.3
1940	132,165	7.2	8,437	3.3	1,709	6.3
1950	151,326	14.5	9,314	10.3	2,007	17.4
1960	179,323	18.5	10,509	12.8	2,535	26.3
1970	203,302	13.4	11,847	12.6	3,032	19.6
1980	226,542	11.4	12,349	4.2	3,108	2.5
1990	248,710	9.8	13,207	6.9	3,287	5.8
2000	281,422	13.2	13,923	5.4	3,406	3.6
2010	308,746	9.7	14,445	3.8	3,574	4.9

Source: U.S. Bureau of the Census

Between 2000 and 2010, Connecticut's population grew by 4.9%. Growth in some of the state's smaller counties, including Middlesex, New London, Tolland, and Windham counties, outpaced the state as a whole.

TABLE 2
COUNTY POPULATION IN CONNECTICUT

County	2000 Census	2000 Percent	2010 Census	2010 Percent	Percent Change
Fairfield	882,567	25.9	916,829	25.7	3.9
Hartford	857,183	25.2	894,014	25.0	4.3
Litchfield	182,193	5.3	189,927	5.3	4.2
Middlesex	155,071	4.6	165,676	4.6	6.8
New Haven	824,008	24.2	862,477	24.1	4.7
New London	259,088	7.6	274,055	7.7	5.8
Tolland	136,364	4.0	152,691	4.3	12.0
Windham	109,091	3.2	118,428	3.3	8.6
TOTAL	3,405,565	100.0	3,574,097	100.0	4.9

Source: U.S. Bureau of the Census

In FY 2019, Connecticut's population decreased slightly (by about 4,600 people) over the prior year for the fifth consecutive fiscal year. By comparison, population grew modestly in both New England and the nation as a whole. The following table shows population for the last ten fiscal years for each of the three geographical areas.

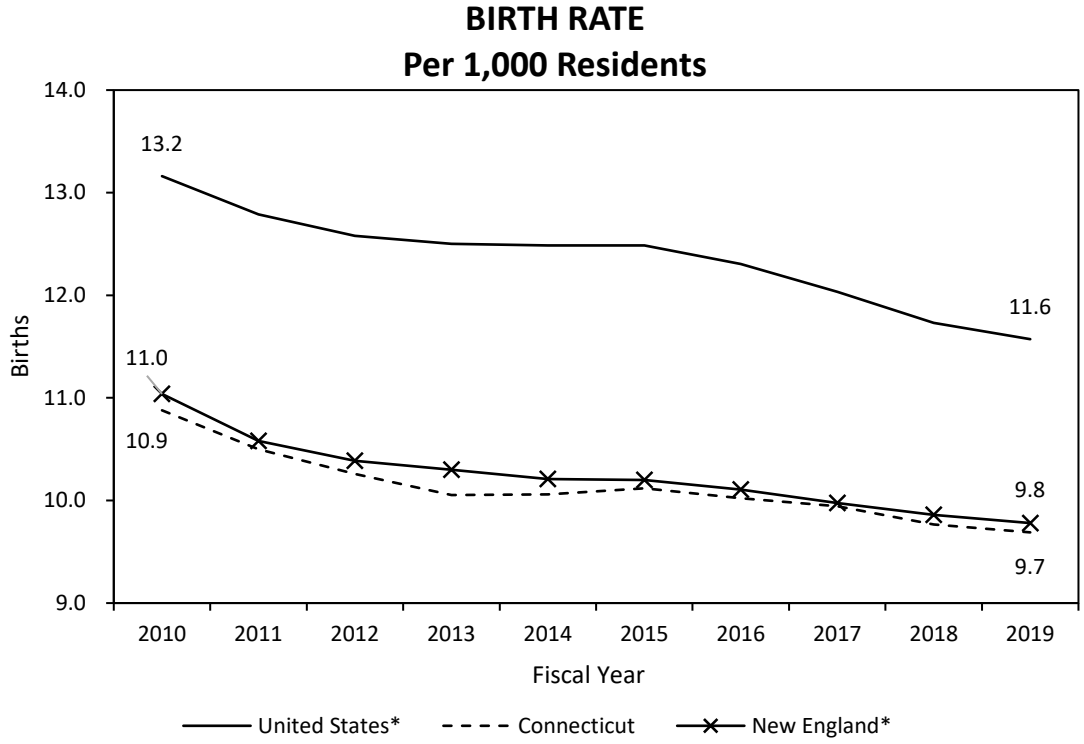
TABLE 3
POPULATION BY FISCAL YEAR
(In Thousands)

Fiscal	United States*		New England		Connecticut	
Year	Population	% Growth	Population	% Growth	Population	% Growth
2010	308,843.2	0.8	14,441.0	0.4	3,572.3	0.5
2011	311,198.5	0.8	14,508.0	0.5	3,584.8	0.4
2012	313,426.3	0.7	14,568.0	0.4	3,592.2	0.2
2013	315,605.1	0.7	14,623.9	0.4	3,594.7	0.1
2014	317,841.9	0.7	14,680.4	0.4	3,594.6	(0.0)
2015	320,165.7	0.7	14,717.8	0.3	3,589.9	(0.1)
2016	322,474.5	0.7	14,745.1	0.2	3,581.5	(0.2)
2017	324,646.8	0.7	14,781.2	0.2	3,575.1	(0.2)
2018	326,678.0	0.6	14,817.0	0.2	3,572.2	(0.1)
2019	328,874.4	0.7	14,839.2	0.1	3,567.6	(0.1)

* Includes armed forces overseas
Source: Bureau of the Census, IHS Economics

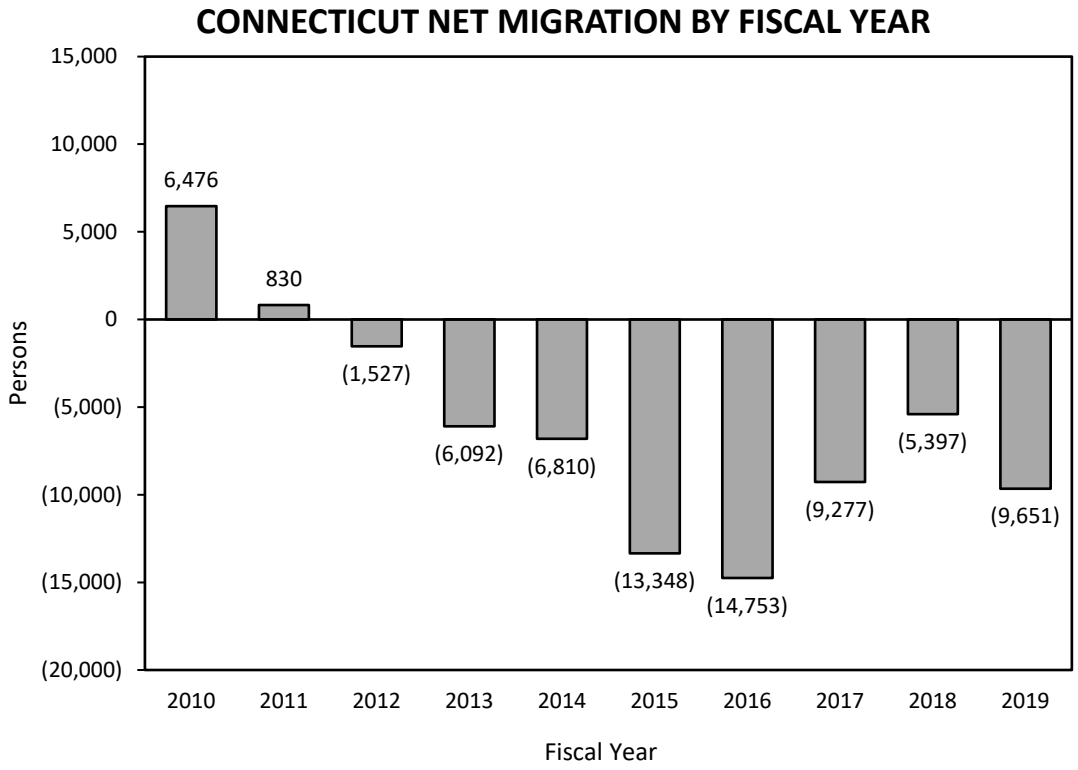
There are two drivers of change in a population. The first is natural change, calculated as births per 1,000 people less deaths per 1,000 people. The natural change in Connecticut was an estimated 1.0 per 1,000 people in FY 2019, down from 3.0 per 1,000 people in FY 2010. This represents a 68% decline in the natural change rate over that period. Births, in particular, have been reduced in the period following the Great

Recession. In Connecticut, there were 9.7 births per 1,000 people in FY 2019, down from 10.9 births per 1,000 people in FY 2010. This represents a 10.9% reduction in the birth rate in the state. The birth rate in Connecticut has been lower than both New England and the nation as a whole in every year since FY 2010. The following graph shows the rates of birth in the United States, New England, and Connecticut.



* Sum of states' totals
Source: Bureau of the Census, IHS

The second driver of population change is migration. Generally speaking, the domestic migratory pattern in the United States has been towards the South and West. At the same time, international migration has contributed to population growth in the nation. Over the past decade, Connecticut has experienced net outmigration. Over the prior five fiscal years, outmigration was sufficient to cancel out any population growth from births, resulting in population declines in those years. The following graph shows net outmigration for the state in each of the previous ten fiscal years.



Source: Bureau of the Census, IHS

Age Cohorts

Connecticut tends to be older than the nation as a whole. In 2018, the Bureau of the Census reported the median age in Connecticut was 41.1 years, compared to a national median age of 38.2 years. In comparison to the rest of the 50 states, Maine had the oldest median age in 2018 at 45.1 years and Utah had the youngest median age at 31.0 years. Connecticut ranks 6th in the nation for the oldest median age where Maine, New Hampshire, and Vermont are the only Northeastern states that have an older median age population than Connecticut. An older population in the state has implications both for private economic activity and for demand for state government services. The following table summarizes the estimated population by age cohort during calendar year 2018 for Connecticut and the United States. Cohorts age 45 and older represent a larger portion of the population in Connecticut compared to the United States, as does the age 15-24 cohort. The 0-14 and 25-34 age cohorts represent a smaller portion of the population in Connecticut than the nation as a whole. In Connecticut, there is a particularly large population in the age 45-54 cohort. As this cohort ages out of the workforce, there will be significant change, challenges, and opportunities in the Connecticut economy.

When comparing the median age among all 169 towns in Connecticut for 2017, the town with the oldest median age was Sharon at 58.9 years and the youngest median age was Mansfield at 21.1 years. In regards to Connecticut's major cities, they were among some of the youngest median ages of all the towns in the

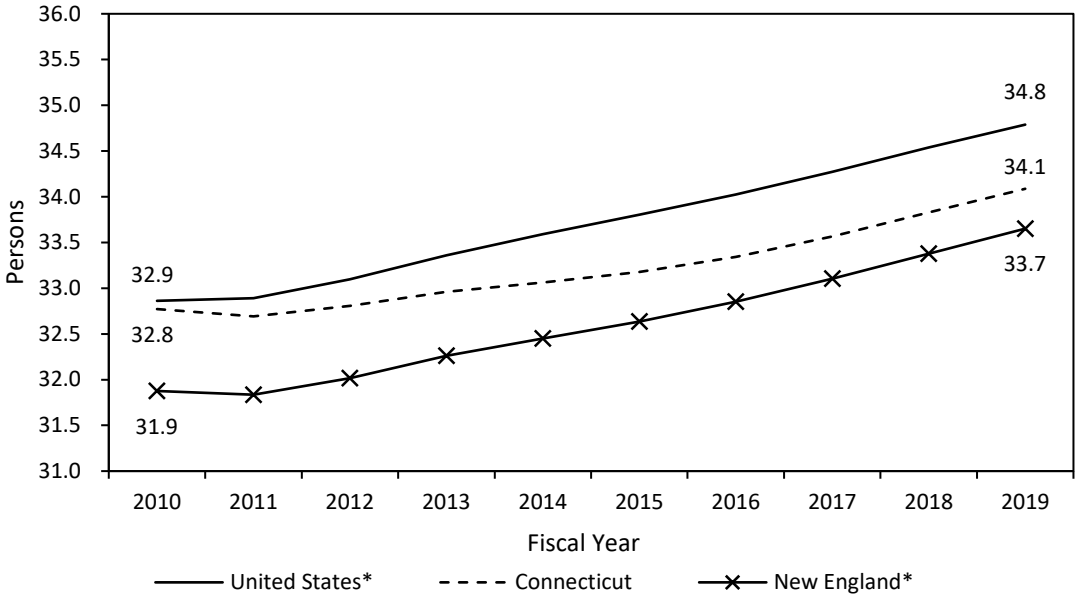
State. In 2017, New Haven had a median age of 30.7 years, Hartford at 30.9 years, Bridgeport at 33.8 years, and Waterbury and Stamford at 34.7 and 37.0 years, respectively.

TABLE 4
POPULATION BY AGE COHORT
Calendar Year 2018 Population Estimates Program by U.S. Census Bureau

	Connecticut		United States	
Age Cohort	Population	% of Total	Population	% of Total
0-14 Years	597,129	16.7	60,845,137	18.6
15-24 Years	482,140	13.5	43,163,455	13.2
25-34 Years	447,891	12.5	45,344,674	13.9
35-44 Years	424,573	11.9	41,498,453	12.7
45-54 Years	494,642	13.8	41,605,244	12.7
55-64 Years	513,143	14.4	42,287,362	12.9
65+ Years	613,147	17.2	52,423,114	16.0
Total	3,572,665	100.0	327,167,439	100.0

Source: Bureau of the Census

DEPENDENCY RATIO
(Number of Dependent Population per 100 Provider Population)



* Based on sum of states' population data
Source: Bureau of the Census, IHS

The previous graph shows the dependency ratio for Connecticut, New England, and the United States over the previous ten fiscal years. The dependency rate is calculated as the number of dependent population per 100 provider population. "Dependent population" means either those age 14 or younger and those

over the age of 65. “Provider population” means those aged 15 to 64. No consideration is made as to whether members of each group are currently participating in the labor force, a limit to this analysis. As the graph shows, the dependency rate in Connecticut has been below the nation each year since FY 2010. The dependency ratio in Connecticut was 34.1 persons per 100 provider population in FY 2019, compared to 34.8 in the United States and 33.7 in New England. The lower ratio in Connecticut is the result of a smaller proportion of those age 14 or younger in the state. While these individuals tend to consume many state services in the short run, they also represent the future provider population.

Educational Attainment

One of Connecticut’s greatest economic strengths is a highly educated and talented workforce. This workforce gives the state a competitive edge in areas such as professional services and advanced manufacturing. The following table summarizes the highest level of educational attainment during calendar year 2018 for Connecticut and the United States, according to the Bureau of the Census. Note that the proportion of those holding a bachelor’s degree in Connecticut is 9% higher than the nation, while the proportion of those holding a graduate or professional degree is 41.3% higher than the nation.

TABLE 5
HIGHEST EDUCATIONAL ATTAINMENT, POPULATION 25 YEARS AND OVER
Calendar Year 2018

	Connecticut*	United States*	Connecticut as a % of U.S.
Less than high school	9.1%	11.7%	77.8%
High school diploma or equivalent	26.9%	26.9%	100.0%
Some college, no degree	16.6%	20.3%	81.8%
Associate's degree	7.9%	8.6%	91.9%
Bachelor's degree	21.8%	20.0%	109.0%
Graduate or professional degree	17.8%	12.6%	141.3%

*Note: columns may not add to 100.0% due to rounding

Source: Bureau of the Census

Households

Demand for goods and services depends upon the level of household income and the total number of households. The number of households is a function of household size and population; for example, for a given population, as the size of the household declines, the number of households increases, which causes higher demand for housing and automobiles as well as household goods and services.

The number of households in Connecticut in FY 2019 was an estimated 1,389,167, up 0.5% from FY 2018. This is an acceleration over previous years when Connecticut's flat or declining population has weighed down growth. The uptick in growth may reflect the long-term trend toward smaller household size. Family households include a householder and one or more other persons living in the same household who are related by birth, marriage or adoption. Non-family households include a householder living alone or with non-relatives.

TABLE 6
HOUSEHOLDS
(In Thousands)

Fiscal	United States*		New England		Connecticut	
Year	Households	% Growth	Households	% Growth	Households	% Growth
2010	116,626.2	0.6	5,662.2	0.4	1,369.7	0.3
2011	117,108.6	0.4	5,682.2	0.4	1,366.1	(0.3)
2012	117,879.1	0.7	5,693.0	0.2	1,367.2	0.1
2013	118,446.6	0.5	5,680.0	(0.2)	1,358.3	(0.7)
2014	119,171.1	0.6	5,695.8	0.3	1,361.5	0.2
2015	120,126.7	0.8	5,702.4	0.1	1,359.9	(0.1)
2016	120,899.0	0.6	5,721.2	0.3	1,363.9	0.3
2017	121,898.6	0.8	5,761.3	0.7	1,368.6	0.3
2018	123,241.1	1.1	5,812.9	0.9	1,381.8	1.0
2019	124,592.4	1.1	5,864.8	0.9	1,399.8	1.3

*Sum of states' data
Source: Bureau of the Census, IHS Markit

Housing

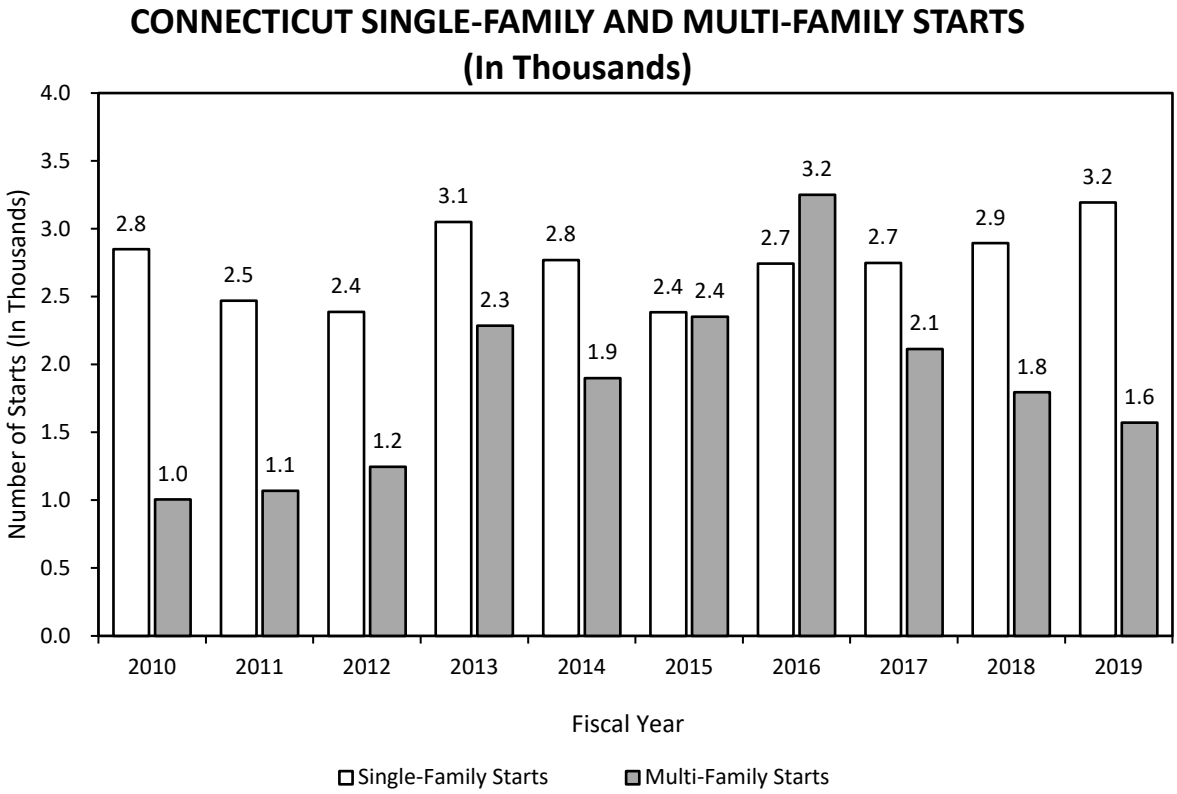
Housing plays an integral role in our nation's economy. According to analysis by the National Association of Home Builders, the housing sector was about 15% of national gross domestic product (GDP) in FY 2019. Housing starts, or the number of housing units on which construction has begun, reached a nadir in FY 2011. This dramatic decline in the aftermath of the Great Recession negatively impacted homebuilders and contributed to the high unemployment rate nationwide. While starts have rebounded in recent years, growth in New England and Connecticut have been slower and more uneven than the nation as a whole. Between 2011 and 2019, starts grew at an annual rate of 10.0% in the United States, versus 5.9% in New England and 3.8% in Connecticut. Starts have increased in Connecticut over the prior year in FY 2019 by 1.6% as starts in New England and the United State have decreased by 9.5% and 2.6%, respectively. The decreases in housing starts in Connecticut in FY 2017 and FY 2018, shown in the table below, were driven entirely by a decline in starts of multi-family units.

TABLE 7
HOUSING STARTS
(In Thousands)

Fiscal	United States		New England		Connecticut	
Year	Number	% Growth	Number	% Growth	Number	% Growth
2010	594.0	(8.1)	19.5	4.9	3.9	2.4
2011	569.7	(4.1)	18.7	(3.9)	3.5	(8.2)
2012	684.4	20.1	20.3	8.2	3.6	2.7
2013	877.4	28.2	24.4	20.7	5.3	46.9
2014	953.1	8.6	26.3	7.7	4.7	(12.5)
2015	1,054.4	10.6	26.6	1.1	4.7	1.4
2016	1,149.3	9.0	32.7	22.9	6.0	26.5
2017	1,201.3	4.5	32.2	(1.8)	4.9	(18.9)
2018	1,253.8	4.4	32.7	1.8	4.7	(3.5)
2019	1,221.7	(2.6)	29.6	(9.5)	4.8	1.6

Source: U.S. Department of Commerce, Bureau of the Census, IHS Markit

In Connecticut, the mix of starts has been significantly different than it was prior to the crisis in the housing market. In FY 2016, starts in multi-family housing units actually exceeded those for single-family units and reached a record high. Since then, multi-family starts have decreased year over year as single-family starts have increased. While starts of single-family homes increased in FY 2019, they remain well below their level prior to the Great Recession. This change may be driven by demographic changes and shifting preferences in the state. As the size of the average household has decreased and the Connecticut population has aged, demand for smaller and more affordable housing units has increased. The following graph shows both single- and multi-family housing starts in Connecticut by fiscal year.



Source: U.S. Department of Commerce, Bureau of the Census, IHS

Household Formations

Given that housing starts were low through the recent recession, it is no surprise that household formation has also been depressed. New households may be formed when children move out of their family's home, individuals live singly after previously sharing a residence, or couples separate. Households are reduced when young people move back home with their parents or individuals pass away. The number of households is also impacted by both in- and out-migration. Connecticut has been a net out-migration state in recent years. While the number of households in the United States has grown modestly over the last decade, the number of households in Connecticut has remained relatively flat until FY 2018 and FY 2019 when Connecticut household formations grew by 1.0% and 0.5%, respectively, surpassing the household formation growth in the United States in FY 2018 which saw a 0.9% increase, but not in FY 2019 which saw a 0.8% increase. Since FY 2010, household formations in Connecticut have grown by approximately thirty thousand. In comparison to the United States, the annual growth rate from FY 2010 to FY 2019 was 0.2% for Connecticut and 0.9% for the United States. The following table summarizes household formation data for both the United States and Connecticut.

TABLE 8
U.S. HOUSEHOLD FORMATIONS
(In Thousands)

Fiscal Year	United States Total Households	Change in Households from Previous Year	Connecticut Total Households	Percent Change in Households from Previous Year
2010	116,637	0.2%	1,370	0.3
2011	117,702	0.9%	1,366	(0.3)
2012	118,855	1.0%	1,367	0.1
2013	120,139	1.1%	1,358	(0.7)
2014	121,104	0.8%	1,362	0.2
2015	122,331	1.0%	1,360	(0.1)
2016	123,530	1.0%	1,364	0.3
2017	124,150	0.5%	1,369	0.3
2018	125,305	0.9%	1,382	1.0
2019	126,310	0.8%	1,389	0.5

Source: U.S. Bureau of the Census, IHS Markit

Median Sales Price of Housing

Median sales price is the midpoint price at which half of the sales are above and half below the price. In FY 2019, the median sales price for existing homes in the nation was 53.2% above its FY 2010 level, while in Connecticut the median sales price is above its FY 2010 level by 2.2%—the first time median sales price has registered growth for a ten-year time period since the housing crisis. Historically, the median price of an existing family home has been much higher in Connecticut than in the nation. That gap has closed considerably over the past decade. In FY 2019, the median price of a home in Connecticut was 8.1% higher than the national average. The following table summarizes data on the median sale price for existing single-family homes.

The U.S. housing affordability index decreased to 149.0 in FY 2019. To interpret the housing affordability index, a value of 100 means that a family with the median income has exactly enough income to qualify for a mortgage on a median-priced home, assuming a 20% down payment. A value above 100 signifies that a family earning the median income has more than enough income to qualify for a mortgage loan on a median-priced home. The affordability index continues to remain above the 100 benchmark. The following table summarizes the affordability index over the previous ten fiscal years.

TABLE 9
MEDIAN SALES PRICE OF EXISTING HOMES IN CONNECTICUT AND THE UNITED STATES
(By Fiscal Year)

Fiscal Year	Median Price U.S.	% Change	Median Price CT	% Change	CT as a % of U.S.	U.S. Affordability Index
2010	$172,775	(4.3)	$279,990	(4.2)	162.1	168.6
2011	$169,033	(2.2)	$270,366	(3.4)	159.9	178.1
2012	$167,975	(0.6)	$261,962	(3.1)	156.0	191.6
2013	$185,758	10.6	$262,112	0.1	141.1	193.7
2014	$201,750	8.6	$264,924	1.1	131.3	165.4
2015	$214,908	6.5	$265,844	0.3	123.7	167.3
2016	$227,267	5.8	$267,960	0.8	117.9	165.7
2017	$241,058	6.1	$271,631	1.4	112.7	163.4
2018	$253,967	5.4	$279,966	3.1	110.2	155.0
2019	$264,717	4.2	$286,225	2.2	108.1	149.0
'10-'19 Change	$91,942	53.2	$6,235	2.2		
'10-'19 CAGR*		4.9		0.2		

*Compound Annual Growth Rate
Source: National Association of Realtors, Federal Housing Finance Agency, IHS Economics

Housing Finance

In FY 2019, thirty-year fixed mortgage rates averaged 4.43%, up from 4.15% in FY 2018, and their highest level since FY 2011. Low interest rates and sluggish home sales have put downward pressure on mortgage rates during the housing market collapse and recent recovery.

TABLE 10
30 YEAR FIXED-RATE MORTGAGES

Fiscal Year	Average Rate	% Change	Fiscal Year	Average Rate	% Change
2010	5.00	(10.3)	2015	3.91	(9.7)
2011	4.59	(8.1)	2016	3.80	(3.0)
2012	4.01	(12.7)	2017	3.86	1.6
2013	3.53	(12.1)	2018	4.15	7.8
2014	4.33	22.9	2019	4.43	6.6

Source: Freddie Mac

Delinquency rates on mortgages have decreased in recent years, following a turbulent period in the aftermath of the 2007 housing bust. According to economic data from the Federal Reserve, the delinquency rate on single family residential mortgages was 2.8% in FY 2019, its lowest level since FY 2007.

Total Home Sales

Total home sales have not returned to levels experienced prior to the housing crisis, both in Connecticut and the nation. Causes may include deferred household formations, stricter lending standards, decreased speculation, and a trend toward renting instead of owning. The following table shows home sales for Connecticut, New England, and the United States by state fiscal year. Total home sales in Connecticut decreased in FY 2019 by 0.3%. Home sales in FY 2018 are Connecticut's highest level since FY 2007 at approximately 47,000 sales. Total home sales also decreased in both New England and the United States, by 4.4% and 4.0%, respectively in FY 2019.

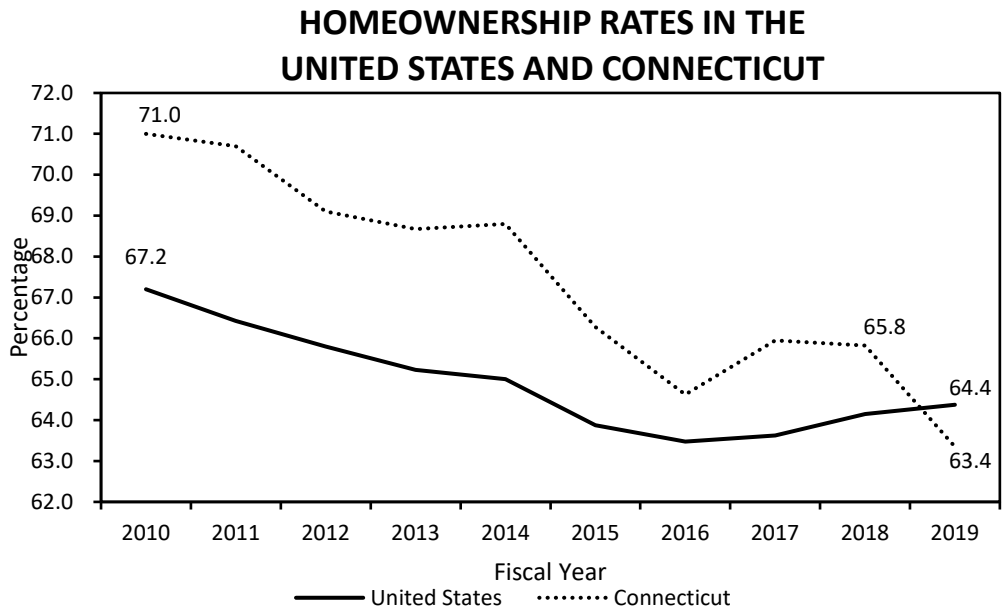
TABLE 11
TOTAL HOME SALES
(In Thousands)

Fiscal	United States*		New England		Connecticut	
Year	Number	% Change	Number	% Change	Number	% Change
2010	4,550.6	15.5	209.5	23.4	44.5	24.2
2011	3,920.1	(13.9)	171.4	(18.2)	35.7	(19.7)
2012	4,251.9	8.5	184.6	7.7	38.0	6.3
2013	4,708.3	10.7	207.6	12.4	44.0	15.8
2014	4,755.7	1.0	207.1	(0.2)	43.0	(2.3)
2015	4,882.0	2.7	207.2	0.1	42.1	(2.2)
2016	5,122.6	4.9	224.5	8.3	45.3	7.6
2017	5,263.3	2.7	229.5	2.2	46.3	2.3
2018	5,272.0	0.2	230.7	0.5	47.0	1.4
2019	5,061.7	(4.0)	220.5	(4.4)	46.8	(0.3)

* Sum of States' Home Sales
Source: National Association of Realtors, IHS

Homeownership and Home Equity

Homeownership experienced a long-term decline in the years following the housing crisis. This may be attributable to a number of factors, including weak economic growth, stricter lending standards, and millennials deferring their first home purchase. Since reaching a low in FY 2016, homeownership rates had been gradually rising for both Connecticut and the United States, with the exception of FY 2019 for Connecticut as homeownership registered another decline. The following graph shows homeownership rates in FY 2010 through FY 2019. Historically, Connecticut has had a higher homeownership rate than the national average. In FY 2019, the homeownership rate in Connecticut fell below the national homeownership rate. The United States saw a homeownership rate of 64.4% compared to 63.4% in Connecticut.



Source: U.S. Census Bureau

While the rate of homeownership has declined in the last decade, the home equity rate has increased. Nationally, owners' equity in their homes has increased from 46.3% in FY 2010 to 63.9% in FY 2019. Two factors have pushed owners' equity higher over the last decade. First, home values have nominally recovered from the housing bust. The Case-Shiller Home Price Index, which measures home values using data on sales prices of single-family homes, exceeded its previous peak in September of 2016. At the same time, the same economic and regulatory forces that have reduced homeownership have also reduced the overall indebtedness resulting from home mortgages. The following table summarizes owners' equity data from the Federal Reserve.

TABLE 12
OWNERS' EQUITY AS A PERCENTAGE OF HOUSEHOLD REAL ESTATE
(In Billions)

Fiscal Year	Home Values*	Home Mortgages*	Home Equity
2010	19,330.6	10,372.7	46.3%
2011	18,639.1	9,993.8	46.4%
2012	18,099.4	9,745.5	46.2%
2013	18,830.9	9,547.1	49.3%
2014	20,485.8	9,464.2	53.8%
2015	21,892.7	9,448.2	56.8%
2016	23,406.4	9,575.2	59.1%
2017	25,180.6	9,795.7	61.1%
2018	26,964.2	10,069.8	62.7%
2019	28,624.0	10,340.3	63.9%

Source: Federal Reserve "Flow of Funds" Table B.101
*In Nominal Dollars

EMPLOYMENT PROFILE

Employment Estimates

The employment estimates for most of the tables included in this section are from the U.S. Bureau of Labor Statistics and the Connecticut Labor Department. They are developed as part of the federal-state cooperative Current Employment Statistics (CES) Program. The estimates for the state and the labor market areas are based on the responses to surveys of 5,000 Connecticut employers registered with the Unemployment Insurance program. Companies are chosen to participate based on specifications from the U.S. Bureau of Labor Statistics. As a general rule, all large establishments are included in the survey as well as a sample of smaller employers. It should be noted, however, that this method of estimating employment may result in under-counting jobs created by agricultural and private household employees, self-employed individuals and unpaid family workers who are not included in the sample. The survey only counts total business payroll employment in the economy.

In an effort to provide a broader employment picture, the following table, based on residential employment, was developed. Total residential employment is estimated based on household surveys which include individuals excluded from establishment employment figures such as self-employed and workers in the agricultural sector. By this measure, residential employment in FY 2019 increased by 34,484 jobs. Likewise, the level of establishment employment based on the survey response increased by 6,158 jobs in FY 2019.

The following table provides a ten fiscal year historical profile of residential and establishment employment in Connecticut.

TABLE 13
CONNECTICUT SURVEY EMPLOYMENT COMPARISONS
(In Thousands)

Fiscal Year	Residential Employment	% Growth	Establishment Employment	% Growth
2010	1,733.1	(1.48)	1,609.9	(3.58)
2011	1,743.8	0.62	1,622.7	0.80
2012	1,742.6	(0.07)	1,635.5	0.79
2013	1,717.2	(1.46)	1,648.4	0.79
2014	1,736.7	1.14	1,659.5	0.67
2015	1,781.1	2.56	1,673.6	0.85
2016	1,780.5	(0.03)	1,682.0	0.50
2017	1,807.1	1.49	1,686.1	0.25
2018	1,807.0	(0.01)	1,687.3	0.07
2019	1,841.5	1.91	1,693.5	0.36

Source: U.S. Bureau of Labor Statistics, Connecticut Department of Labor, IHS Economics

Nonagricultural Employment

Nonagricultural employment includes all persons employed except federal military personnel, the self-employed, proprietors, unpaid family workers, farm and household domestic workers. Nonagricultural employment is comprised of the broad manufacturing sector and the nonmanufacturing sector. These two components of nonagricultural employment are discussed in detail in the following sections.

The following table shows a ten fiscal year historical profile of nonagricultural employment in the United States, the New England region, and Connecticut.

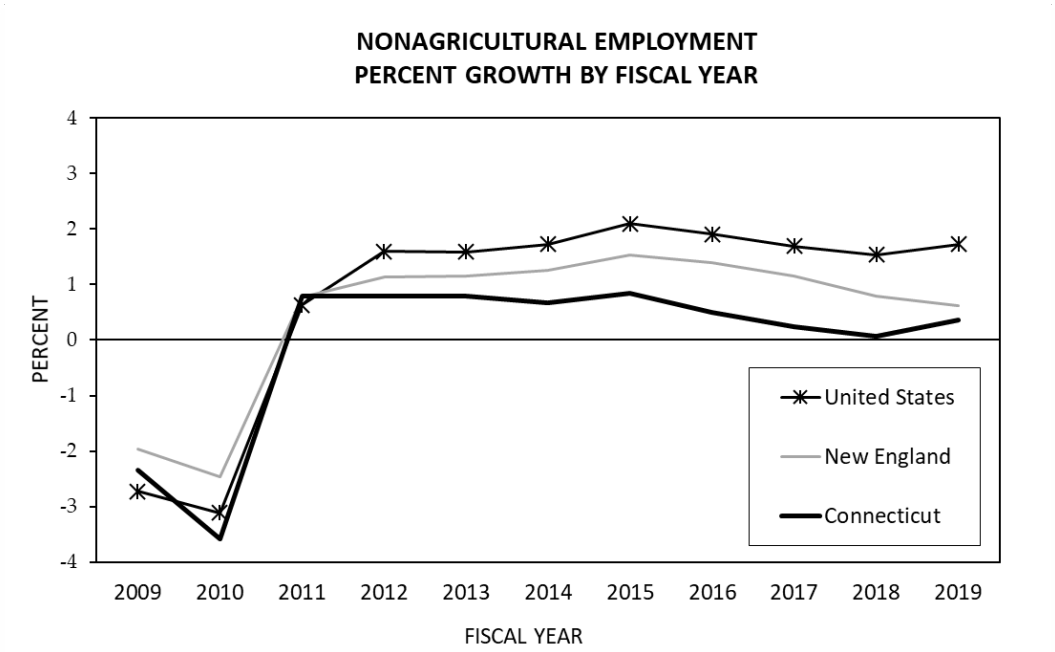
TABLE 14
NONAGRICULTURAL EMPLOYMENT
(In Thousands)

Fiscal	United States		New England		Connecticut	
Year	Number	% Growth	Number	% Growth	Number	% Growth
2010	130,177	(3.12)	6,784	(2.47)	1,610	(3.58)
2011	131,003	0.63	6,837	0.78	1,623	0.80
2012	133,094	1.60	6,915	1.14	1,636	0.79
2013	135,211	1.59	6,995	1.16	1,648	0.79
2014	137,553	1.73	7,083	1.26	1,659	0.67
2015	140,434	2.10	7,191	1.53	1,674	0.85
2016	143,111	1.91	7,292	1.40	1,682	0.50
2017	145,529	1.69	7,377	1.16	1,686	0.25
2018	147,766	1.54	7,435	0.79	1,687	0.07
2019	150,314	1.72	7,482	0.62	1,693	0.36

Source: U.S. Bureau of Labor Statistics, Connecticut Labor Department, IHS Economics

In Connecticut, approximately 44% of total personal income is derived from wages earned by workers classified in the nonagricultural employment sector. Thus, increases in employment in this sector lead to increases in personal income growth and consumer demand. In addition, nonagricultural employment can be used to compare similarities and differences between economies, whether state or regional, and to observe structural changes within economies. These factors make nonagricultural employment figures a valuable indicator of economic activity.

Connecticut experienced positive growth in nonagricultural employment from FY 2004 through FY 2008. After reaching a peak in FY 2008, Connecticut lost approximately 100,000 nonagricultural jobs due to the Great Recession. As of FY 2019 Connecticut had regained approximately 84,000 nonagricultural jobs. The following chart provides a graphic presentation of the growth rates in nonagricultural employment for the state, New England region and nation over a ten fiscal year period.



Source: U.S. Bureau of Labor Statistics, Connecticut Labor Department, IHS Economics

The following table shows employment growth rates for the United States and the State of Connecticut over six decades beginning in state FY 1950. This table highlights the robust growth of nonagricultural employment for Connecticut prior to 1990 juxtaposed against the modest 2.3% growth between 1990 and 2000 and the negative 4.5% growth during the 2000-2010 time period which was significantly impacted by the Great Recession. U.S. growth was negative in the 2000-2010 period for the first time in five decades with a 0.5% decline. Since 2010, employment growth has increased for both the United States and Connecticut by 15.4% and 5.1% respectively.

TABLE 15
NONAGRICULTURAL EMPLOYMENT
LONG-TERM GROWTH RATES
(Not Seasonally Adjusted)

	Growth Rates		Cumulative Growth Rates	
Fiscal Year	United States	Connecticut	United States	Connecticut
1950-1960	23.4%	24.6%	23.4%	24.6%
1960-1970	31.6%	31.9%	62.4%	64.4%
1970-1980	27.3%	17.8%	106.7%	93.6%
1980-1990	20.4%	16.3%	148.8%	125.2%
1990-2000	20.0%	2.3%	198.7%	130.3%
2000-2010	(0.5%)	(4.5%)	197.3%	119.9%
2010-2019	15.4%	5.1%	243.2%	131.1%

Source: U.S. Bureau of Labor Statistics

Throughout the last two decades, while manufacturing employment in Connecticut has been steadily declining, employment growth in nonmanufacturing industries has surged. Relatively rapid growth in the nonmanufacturing sector is a trend that is evident nationwide and reflects the increasing importance of

the service industry. This shift in employment provides for relatively more stable economic growth in the long run through the moderation of the peaks and troughs of economic cycles. In FY 2019, approximately 90% of the state's workforce was employed in nonmanufacturing jobs, up from roughly 50% in the early 1950s.

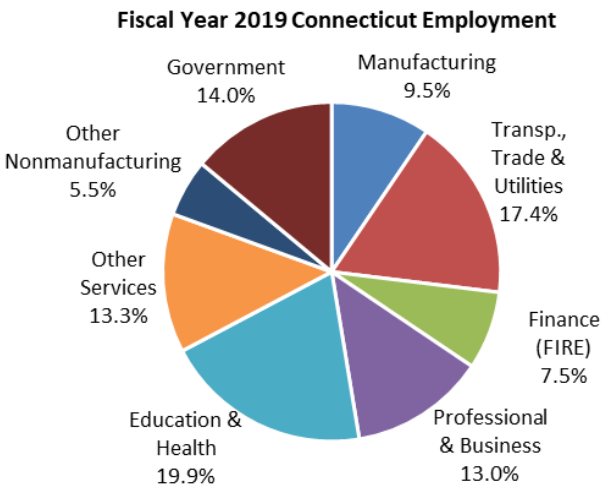
The following table depicts the decrease in the ratio of manufacturing employment to total employment in Connecticut over the last six decades.

TABLE 16
CONNECTICUT RATIO OF MANUFACTURING EMPLOYMENT TO TOTAL EMPLOYMENT
(In Thousands)

Fiscal Year	Total Employment	Manufacturing Employment	NonMfg. Employment	Mfg. Employment as a Percentage of Total Employment
1950	766.1	379.9	386.2	49.6
1955	874.7	423.2	451.6	48.4
1960	915.2	407.1	508.1	44.5
1965	1,033.0	436.2	596.8	42.2
1970	1,198.1	441.8	756.3	36.9
1975	1,224.6	389.8	834.8	31.8
1980	1,428.4	440.8	987.6	30.9
1985	1,558.2	408.0	1,150.2	26.2
1990	1,623.5	341.0	1,282.5	21.0
1995	1,561.3	250.6	1,310.7	16.0
2000	1,686.7	235.3	1,451.4	14.0
2005	1,663.1	194.3	1,468.7	11.7
2010	1,609.9	163.4	1,446.5	10.1
2019	1,693.5	160.8	1,532.7	9.5

Source: U.S. Bureau of Labor Statistics, Connecticut Labor Department

The chart on the right provides a breakdown of Connecticut employment in FY 2019. As is evident, Connecticut employment is highly concentrated in nonmanufacturing employment sectors with only 9.5% of Connecticut laborers employed in the manufacturing sector. The services sector, which includes the professional and business, education and health, government, finance, and leisure and hospitality segments (included in Other Services), is clearly the leading sector with 67.6% of those working employed in that classification.

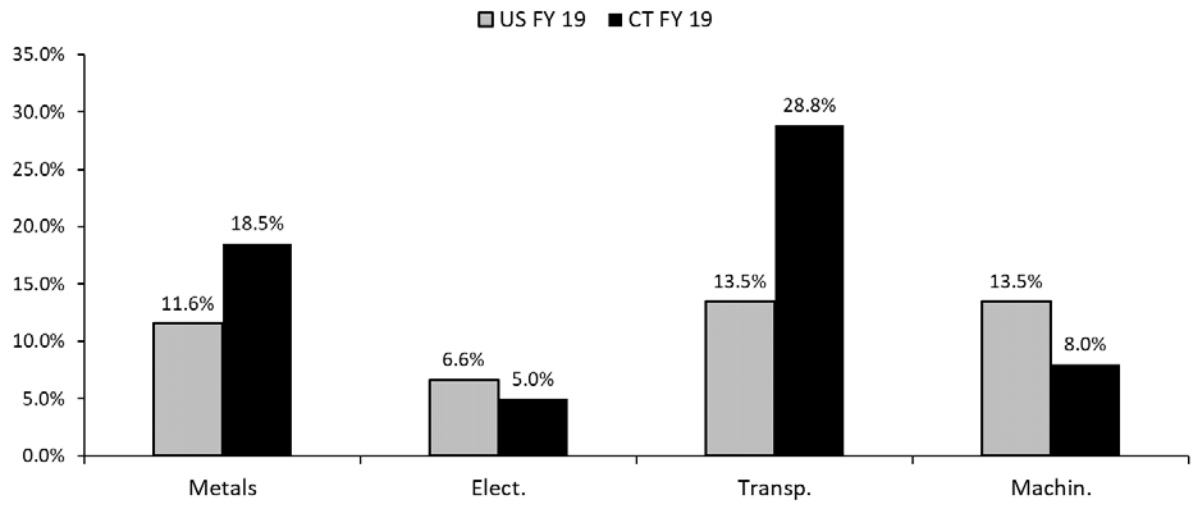


Manufacturing Employment

Even with declines in overall manufacturing employment, the ratio of manufacturing employment to total employment still defines Connecticut as one of the major manufacturing and industrial states in the country. Within this broad definition, the manufacturing sector can be further broken down into several major components.

Over the last decade the state's distribution of manufacturing employment has changed slightly. Defense expenditures have enhanced the transportation equipment sector as evidenced by the percentage of total state manufacturing employment in that sector at 26.0% in FY 2010 and 28.8% in FY 2019. Employment in the fabricated metals sector as a percent of total state manufacturing has remained stable over the past decade at approximately 17.3% in FY 2010 and 18.5% in FY 2019. The other major manufacturing sectors, industrial machinery, and electrical equipment and appliances make up approximately 8.0% and 5.0% of the total manufacturing sector respectively in FY 2019. The distribution of employment figures within the manufacturing sector highlights that Connecticut manufacturing is diversified, but has a greater reliance on the metals and transportation equipment sectors.

COMPARISON OF MANUFACTURING EMPLOYMENT IN CERTAIN SECTORS
(As A Percentage Of Total Manufacturing Employment)



Source: U.S. Bureau of Labor Statistics, Connecticut Labor Department, IHS Economics

In FY 2019, manufacturing employment in the state of Connecticut achieved its second annual increase and with a moderate acceleration in growth at 0.69% over FY 2018. The United States continued an upward trend also with an accelerated growth rate of 1.92%.

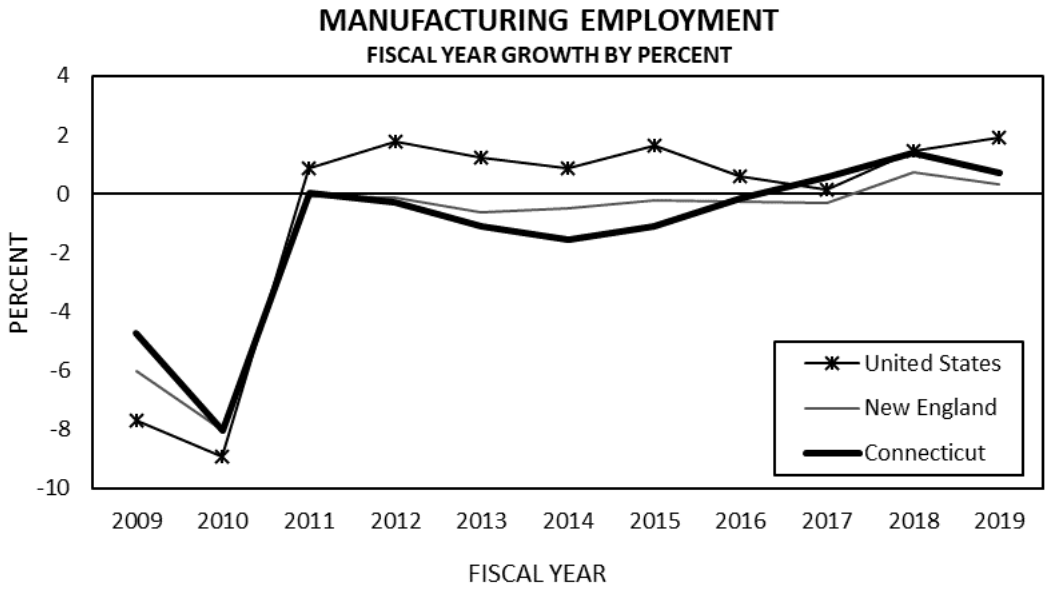
TABLE 17
MANUFACTURING EMPLOYMENT
(In Thousands)

Fiscal	United States		New England		Connecticut	
Year	Number	% Growth	Number	% Growth	Number	% Growth
2010	11,527.7	(8.91)	603.9	(8.02)	163.4	(8.03)
2011	11,626.1	0.85	603.6	(0.06)	163.4	0.01
2012	11,833.8	1.79	602.8	(0.12)	162.9	(0.28)
2013	11,977.6	1.21	599.1	(0.61)	161.1	(1.12)
2014	12,083.8	0.89	596.2	(0.49)	158.6	(1.56)
2015	12,279.7	1.62	594.9	(0.21)	156.9	(1.08)
2016	12,355.3	0.62	593.3	(0.27)	156.6	(0.17)
2017	12,372.9	0.14	591.3	(0.33)	157.5	0.56
2018	12,552.8	1.45	595.5	0.72	159.7	1.40
2019	12,793.5	1.92	597.5	0.33	160.8	0.69

Source: U.S. Bureau of Labor Statistics, Connecticut Labor Department

Historically, manufacturing employment closely parallels the business cycle, typically expanding when the economy is healthy and contracting during recessionary periods, as it did during the early 1980s. However, this relationship changed in the latter part of the 1980s, as contractions in manufacturing employment were not initially accompanied by a recession. Other factors, such as heightened foreign competition, smaller defense budgets, and improved productivity, played a significant role in affecting the overall level of manufacturing employment in Connecticut.

The erosion of the state's manufacturing base reflects the national trend away from traditional industries, both durable and nondurable. More of U.S. demand is being satisfied by foreign producers who can manufacture goods more cheaply. The upward trend of higher productivity has enabled Connecticut manufacturers to make more with fewer workers. Even with the structural change, manufacturing employment in Connecticut still accounts for 9.5% of all nonfarm payroll jobs, compared with 8.5% in the U.S. and 8.0% in New England through FY 2019. The following table provides a breakdown of the state's manufacturing employment by industry and indicates percentage changes for the year and for a ten year period for each of the manufacturing sectors.



Source: U.S. Bureau of Labor Statistics, Connecticut Labor Department

Manufacturing employment showed signs of improvement in FY 2019 over FY 2018. The largest growth was in transportation equipment at 3.0%, followed by fabricated metal production at 0.9%. Reductions in employment were seen in printing and related supported which dropped 3.7%, and industrial machinery which dropped 2.1% over the same period. The percent change from FY 2009 to 2018 demonstrates the overall decline in manufacturing employment over the last decade.

TABLE 18
CONNECTICUT MANUFACTURING EMPLOYMENT BY INDUSTRY
(In Thousands)

				Percent Change	
Industry	FY 2010	FY 2018	FY 2019	FY 2018 to FY 2019	FY 2010 to FY 2019
Transportation Equipment	42.4	45.0	46.4	3.0	9.2
Fabricated Metal Production	28.2	29.5	29.8	0.9	5.5
Electrical Equipment & Appl.	9.7	8.1	8.0	(1.1)	(17.3)
Chemicals	9.8	7.9	7.7	(1.6)	(21.3)
Printing & Related Support	5.8	5.3	5.1	(3.7)	(11.9)
Industrial Machinery	15.3	13.1	12.8	(2.1)	(16.3)
All Other	52.1	50.8	51.0	0.3	(2.1)
Total Mfg. Employment	163.4	159.7	160.8	0.7	(1.6)

Source: U.S. Bureau of Economic Analysis, Connecticut Labor Department, IHS Economics

Nonmanufacturing Employment

The nonmanufacturing sector is comprised of industries that provide a service. Services differ significantly from manufactured goods in that the output is generally intangible, it is produced and consumed concurrently, and it cannot be inventoried. Connecticut's nonmanufacturing sector consists of the industries listed in the following table. Over the last three decades, nonmanufacturing employment has risen in importance to the Connecticut economy, reflecting the overall national trend away from manufacturing.

Nonmanufacturing employment gained approximately 5,100 positions and increased by approximately 0.33% from FY 2018 to 2019. This growth was due in large part to an increase in the services sector which grew by 0.64% (4,900 additional employed). The transportation and trade sector also experienced the largest percentage growth from FY 2010 to 2019 with a 30.28% gain during that period.

Over the last ten years the state has seen significant shifts within nonmanufacturing employment. Finance and insurance, once a reliable growing employment sector, has declined approximately nine percent since FY 2010, a loss of 10,400 jobs, and shows no signs of improvement. The government sector also has experienced a significant contraction over the last ten years, losing more than 15,000 jobs over that period. Connecticut state and local employment includes casino employees who work for the state's two tribal governments. After adjusting for the decline in casino employment, the Connecticut Office of Policy and Management estimates that 10,000 jobs were lost in the government sector over the ten year period. On the opposite end of the spectrum, the educational and health services sector has experienced substantial growth with nearly 32,700 jobs added.

The following table provides detail on Connecticut's nonmanufacturing employment by industry and indicates percentage changes for the year and over a ten year period for each of the sectors.

TABLE 19
CONNECTICUT NONMANUFACTURING EMPLOYMENT BY INDUSTRY
(In Thousands)

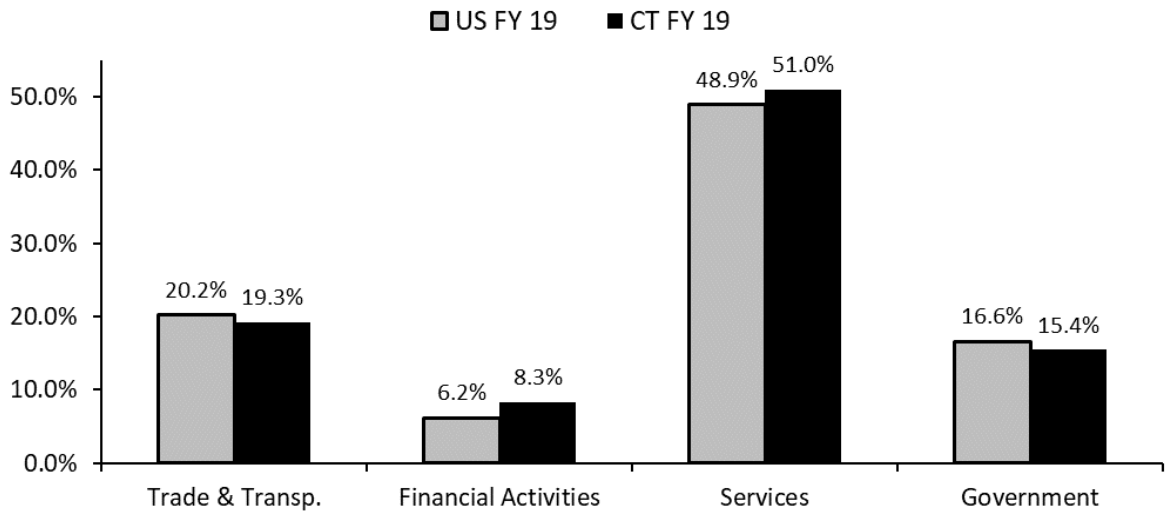
				Percent Change	
Industry	**FY 2010**	**FY 2018**	**FY 2019**	**FY 2018 to FY 2019**	**FY 2010 to FY 2019**
Construction & Mining	51.7	58.8	60.4	2.72	16.81
Information	32.5	31.6	32.4	2.61	(0.28)
Transp., Trade & Utilities	**284.6**	**297.1**	**295.4**	**(0.59)**	**3.78**
Transpo & Warehousing	38.5	48.0	50.1	4.35	30.28
Utilities	6.4	5.3	5.1	(2.97)	(19.77)
Wholesale	62.4	61.6	61.7	0.27	(0.98)
Retail	177.5	182.3	178.5	(2.11)	0.55
Finance (FIRE)	**135.5**	**126.7**	**126.6**	**(0.11)**	**(6.62)**
Finance & Insurance	116.6	106.8	106.2	(0.60)	(8.90)
Real Estate	19.0	19.9	20.4	2.52	7.43
Services	**690.2**	**776.3**	**781.2**	**0.64**	**13.19**
Professional & Business	192.7	220.3	219.6	(0.29)	13.96
Education & Health	304.2	333.7	336.9	0.96	10.75
Leisure & Hospitality	132.7	157.0	160.0	1.91	20.57
All Other Services	60.6	65.4	64.7	(0.96)	6.81
Government	**251.9**	**237.1**	**236.7**	**(0.18)**	**(6.04)**
Federal	19.8	18.1	18.2	0.83	(7.85)
State & Local	232.2	219.1	218.5	(0.26)	(5.88)
Total Nonmanufacturing	**1,446.5**	**1,527.6**	**1,532.7**	**0.33**	**5.96**

Note: Totals may not agree with detail due to rounding.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, IHS Economics

The following chart provides a comparison of select nonmanufacturing sectors in Connecticut to national results.

COMPARISON OF NONMANUFACTURING EMPLOYMENT IN CERTAIN SECTORS
(As A Percentage Of Total Non-Manufacturing Employment)



Source: U.S. Bureau of Labor Statistics, IHS Economics

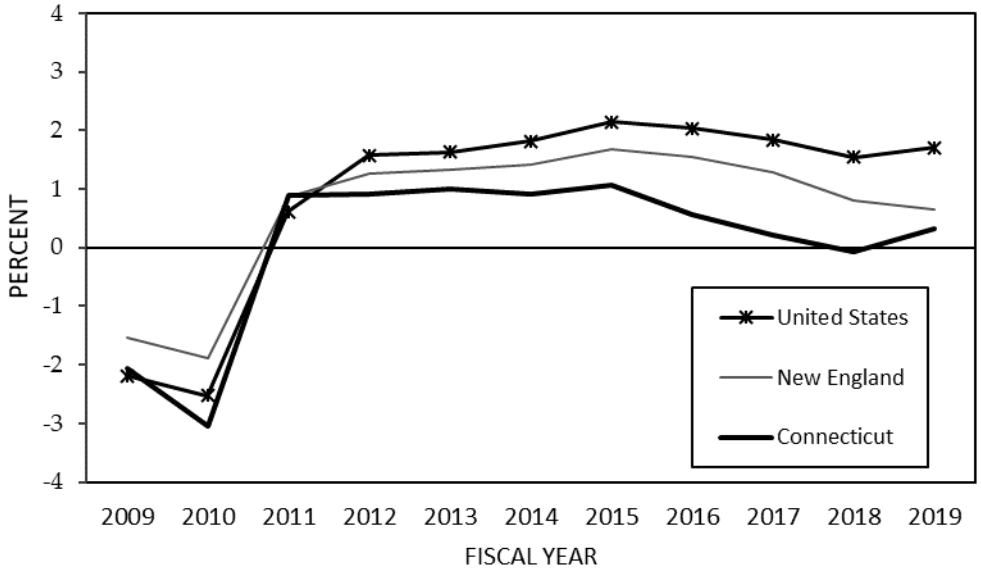
The following table and chart provide a ten fiscal year profile of nonmanufacturing employment in the United States, the New England region, and Connecticut.

TABLE 20
NONMANUFACTURING EMPLOYMENT
(In Thousands)

Fiscal	United States		New England		Connecticut	
Year	Number	% Growth	Number	% Growth	Number	% Growth
2010	118,650	(2.5)	6,180	(1.9)	1,446	(3.1)
2011	119,377	0.6	6,234	0.9	1,459	0.9
2012	121,260	1.6	6,312	1.3	1,473	0.9
2013	123,233	1.6	6,396	1.3	1,487	1.0
2014	125,469	1.8	6,487	1.4	1,501	0.9
2015	128,155	2.1	6,596	1.7	1,517	1.1
2016	130,756	2.0	6,699	1.6	1,525	0.6
2017	133,156	1.8	6,786	1.3	1,529	0.2
2018	135,213	1.5	6,840	0.8	1,528	(0.1)
2019	137,520	1.7	6,884	0.6	1,533	0.3

Source: U.S. Bureau of Labor Statistics, Connecticut Labor Department

NONMANUFACTING EMPLOYMENT
FISCAL YEAR GROWTH BY PERCENT



Source: U.S. Bureau of Labor Statistics, IHS Economics

Average annual salaries for Connecticut's nonmanufacturing industries are listed in the following table. The figures were derived by dividing total wage and salary disbursements by employment. Percent changes over the previous year and over the decade are also provided.

TABLE 21
AVERAGE CONNECTICUT NONMANUFACTURING ANNUAL SALARIES

				Percent Change	
	FY	FY	FY	FY 2018 to	FY 2010 to
Industry	2010	2018	2019	FY 2019	FY 2019
Construction	$ 60,696	$ 71,790	$ 72,962	1.6	20.2
Information	74,876	106,092	114,547	8.0	53.0
Transp., Trade & Utilities	46,119	51,448	52,510	2.1	13.9
Wholesale Trade	81,578	97,093	96,867	(0.2)	18.7
Retail Trade	31,279	34,329	35,508	3.4	13.5
Finance, Ins. & Real Estate	128,878	155,340	158,679	2.1	23.1
Professional & Business Services	73,876	88,383	90,658	2.6	22.7
Education & Health Services	47,917	54,200	55,697	2.8	16.2
Leisure & Hospitality Services	21,934	26,546	27,091	2.1	23.5
Government	53,090	61,642	62,895	2.0	18.5
Federal	95,858	105,850	105,460	(0.4)	10.0
State and Local	52,158	60,432	61,606	1.9	18.1

Source: U.S. Bureau of Economic Analysis, IHS Economics

Unemployment Rate

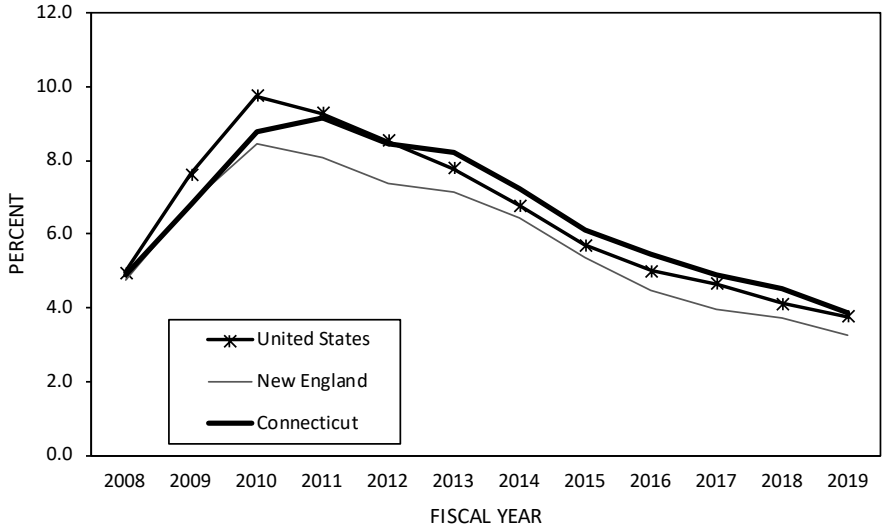
The unemployment rate is the proportion of persons in the civilian labor force who do not have jobs but are actively looking for work. The rate is based upon a monthly survey in which household members are asked a series of questions, one of which is whether a jobless person has looked for work at some time during the preceding four weeks. Those looking for work are considered in the labor force but unemployed. The following table shows the unemployment rate for the U.S., the New England region, and Connecticut over a ten year period. Unemployment rates have fallen considerably since the end of the recession, but remain elevated by historical standards. Connecticut's unemployment rate and the national average were both 3.8% for FY 2019.

TABLE 22
UNEMPLOYMENT RATES (%)

Fiscal Year	United States	New England	Connecticut
2010	9.8	8.4	8.8
2011	9.3	8.1	9.1
2012	8.5	7.4	8.4
2013	7.8	7.1	8.2
2014	6.8	6.4	7.2
2015	5.7	5.3	6.1
2016	5.0	4.5	5.5
2017	4.7	4.0	4.9
2018	4.1	3.7	4.5
2019	3.8	3.3	3.8

Source: U.S. Department of Commerce, Bureau of the Census, IHS Markit

UNEMPLOYMENT RATES
BY FISCAL YEAR



Source: U.S. Bureau of Labor Statistics, IHS Economics

SECTOR ANALYSIS

Energy

The cost of energy has an outsized impact on the economy. For most consumers, transportation and household energy are major expenses. Many improvements to energy efficiency, such as fuel efficient cars and replacement windows, require significant capital investment. Therefore, it is difficult for consumers to react to changes in energy prices in the short-term, often necessitating spending decisions in other areas. Just as increases in the price of oil can negatively impact consumers, price decreases can put money back into consumer's pockets.

The United States, like the rest of the industrialized world, relies heavily on three fossil fuels: crude oil, coal, and natural gas. The following three sections describe energy production and consumption for the world, the United States, and Connecticut.

Worldwide

World oil supply and demand among countries and regions continued to be significantly imbalanced in 2018. Both supply and demand increased slightly from 2017 levels. The following table illustrates the disparity between the world's suppliers of oil and its users. Members of the Organization of Petroleum Exporting Countries (OPEC) continued to supply more oil than they consumed. As an example, Saudi Arabia produced 12.29 million barrels per day (MBPD) while consuming 3.72 MBPD, generating an 8.57 MBPD surplus. The Organization for Economic Cooperation and Development (OECD), on the other hand, consumed more than it supplied. In 2018, the OECD consumed 47.47 MBPD, while supplying only 26.33 MBPD, registering a 21.14 MBPD deficit.

The United States had a 25.2% dependency rate on foreign oil supplies in 2018, down from 34.2% in 2017. This figure was significantly below the ten-year average of 48.9% for the period ending in 2017. The nation accounted for 20.5% of global demand and 16.2% of global supply. Similar deficits between supply and demand also exist in mature economies such as China, Japan, France, and Germany. The United States has become increasingly less reliant on foreign oil in recent years due to the development of new oil production technologies as well as increasing fuel efficiency. Prior to the Arab oil embargo of 1973, the United States was the largest oil producer in the world. After four decades, the U.S. became the largest producer again in 2014.

Demand in China and India, the world's two most populous countries, continued its upward trend, accounting for a combined 18.7% of the worldwide demand total in 2018, up from 5.6% in 1991. China, the world's second largest consumer, switched from a net exporter of oil in 1993, and began running an increasing oil deficit as its economy continued to grow at a brisk pace. In 2018, China consumed 13.53 MBPD while supplying 3.80 MBPD, registering an 9.73 MBPD deficit. China had a 71.9% dependence rate on foreign oil in 2018, significantly larger than the United States.

TABLE 23
WORLD OIL SUPPLY AND DEMAND
Calendar Year 2018

	Supply			Demand	
	Millions of Barrels Per Day	% of Total		Millions of Barrels Per Day	% of Total
Total OECD (a)	26.33	27.8%	Total OECD	47.47	47.5%
United States	15.31	16.2%	United States	20.46	20.5%
Canada	5.21	5.5%	Canada	2.45	2.5%
Mexico	2.07	2.2%	Mexico	1.81	1.8%
Other OECD	3.74	3.9%	Japan	3.85	3.9%
			Germany	2.32	2.3%
Total OPEC (c)	39.34	41.5%	France	1.61	1.6%
Saudi Arabia	12.29	13.0%	Italy	1.25	1.3%
United Arab Emirates	3.94	4.2%	United Kingdom	1.62	1.6%
Iran	4.72	5.0%	Other OECD	12.10	12.1%
Iraq	4.61	4.9%			
Other OPEC	13.78	14.5%	Total Non-OECD	52.38	52.5%
			Russia	3.23	3.2%
All Other	29.05	30.7%	China	13.53	13.6%
Russia	11.44	12.1%	India	5.16	5.2%
China	3.80	4.0%	Saudi Arabia	3.72	3.7%
Other	13.81	14.6%	Other	26.74	26.8%
Total 2018 Supply	94.72	100.0%	**Total 2018 Demand**	99.84	100.0%
Total 2017 Supply	92.50		**Total 2017 Demand**	98.41	
Change	2.22	2.4%	Change	1.43	1.5%

Note:
(a) The OECD includes the United States, Western and some Eastern European countries, some Latin American countries, Israel, Australia, Canada, Japan, and New Zealand.
(b) The OPEC includes Algeria, Gabon, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, the United Arab Emirates, and Venezuela.

Totals may not add due to rounding.

Source: 2019 BP Statistical Review of World Energy

United States

The U.S. has the largest demand for world oil. While the country contains 4.4% of the world population and produces 16.2% of world oil, it consumes 20.5% of world oil. The nation has long been a net energy importer, although America's energy dependence has decreased in recent years compared to the years prior to the Great Recession. Since 2013, America's dependence on net energy imports has remained fairly

steady. According to the Energy Information Administration's *Monthly Energy Review*, the U.S. consumed 101.2 quadrillion British Thermal Units (QBTU's) of energy in 2018, 80.2% of which were from fossil fuels.

National energy consumption rose steadily during the 1990s and 2000s before peaking in 2007. Changes in energy consumption are driven by overall economic conditions, the movement of prices, and increases in energy efficiency. The following table displays energy usage in the U.S. in 2018 by fuel type and by economic sector. Petroleum products are currently the most important energy source for the U.S. economy. The 36.9 quadrillion petroleum-generated BTU's accounted for 36.4% of U.S. energy consumption, followed by natural gas at 31.1 QBTU's and coal at 13.3 QBTU's.

TABLE 24
U.S. ENERGY CONSUMPTION IN 2018
(Quadrillion BTU's)

	Resi-dential	Com-mercial	In-dustrial	Trans-portation	Electric Generation	Total	% of Total
Fossil Fuels							
Natural Gas	5.2	3.6	10.4	0.9	10.9	31.1	30.7
Petroleum	1.0	0.9	8.8	26.0	0.3	36.9	36.4
Coal	-	-	1.2	-	12.1	13.3	13.1
Nuclear	-	-	-	-	8.4	8.4	8.3
Renewables							
Hydroelectric	-	-	-	-	2.7	2.7	2.6
Other*	0.8	0.3	2.6	1.4	3.7	8.7	8.6
Electricity	5.0	4.7	3.4	-	-	13.2	13.0
Electric Losses	9.5	8.9	6.5	0.1	(38.0)	(13.0)	(12.9)
Total Demand	21.4	18.5	32.9	28.5	0.0	101.2	100.0

Note: * Includes power generated from wood, biofuels, wind, waste, geothermal, tide, and solar/photovoltaic, as well as imported electricity.
Totals may not add due to rounding.
Source: U.S. Dept. of Energy, Energy Information Administration

The U.S. lags other developed countries in utilizing renewable energy. Hydroelectricity, for example, provided approximately 7.0% of electric generation in the U.S., versus approximately 59.2% in Canada. Capital investments in alternative renewable energy from solar, hydroelectric, wind, biofuels, and geothermal have increased dramatically in the U.S.; nonetheless, their share of power production remains relatively small. As of October 2019, the United States has 98 nuclear reactors in service. Nuclear generation accounted for about 20% of domestic electricity net generation in 2018. The U.S. is the world's largest nuclear power producer, accounting for more than 30% of worldwide nuclear electricity production.

There are five energy-use sectors: residential, commercial, industrial, transportation, and electric power generation. The first four sectors are end-users while the last one is an intermediate-user consisting of all utility and non-utility facilities and equipment used in the electricity industry. The industrial sector was

the largest end-user of energy, consuming 32.9 QBTU's in 2018, followed by transportation at 28.5 QBTU's, residential at 21.4 QBTU's, and commercial at 18.5 QBTU's.

In contrast to the relatively smooth trends in the other sectors, industrial consumption has shown the greatest fluctuation, dropping sharply in 1975, 1980-83, 2001-03, and 2008-09 in response to high oil prices and economic slowdowns. The electric power generation sector consumes and also produces energy. Energy losses occur throughout the entire electrical system beginning with utility generation in fossil-fired, nuclear or hydroelectric power plants all the way to the end-users. Energy losses are approximately two-thirds of total energy input during the conversion process of heat energy into mechanical energy for turning electric generators. Of the electricity generated, it is estimated that about 5% is lost in transmission and distribution.

Crude Oil Prices

Following the collapse of oil prices in the midst of the Great Recession, the refiner's acquisition cost rebounded, rising to around $100 per barrel in 2011 and hovered near that level through the first half of 2014. However, beginning in the fall of 2014, the cost of a barrel of oil began to decline significantly due to oversupply in the global market. In September 2015, the composite refiner acquisition cost was $44.38 a barrel; a more than 50% reduction from September 2014. Acquisition costs dropped another 16.8% from 2015 to 2016. Adjusted for inflation, 2011's annual price of $103.82 per barrel price in 2012 dollars was a modern high. In real terms, annual average refiner's acquisition costs dropped in each successive year following that peak through 2016, but experienced growth of 22.4% in 2017, 24% in 2018, but a decrease of 8.6% for the first three quarters of 2019 at $53.31 per barrel in 2012 dollars.

TABLE 25
CRUDE OIL PRICES AND U.S. CONSUMPTION
Refiners' Crude Oil Acquisition Costs* Per Barrel

Calendar Year	In Current Dollars	In 2012 Dollars
2010	76.69	79.79
2011	101.87	103.82
2012	100.93	100.93
2013	100.49	98.76
2014	92.02	88.79
2015	48.39	46.21
2016	40.66	38.43
2017	50.68	47.02
2018	64.38	58.30
2019**	59.77	53.31

Note: * Adjusted using implicit price deflator for gross domestic product.
** Average for the first three quarters.
Source: U.S. Department of Energy, Energy Information Administration, Bureau of Economic Analysis

Shale Energy

Oil producers in the United States are increasingly able to extract natural gas and petroleum from shale formations across the country. Increased production of these fuels is attributable to the development of horizontal drilling and hydraulic fracturing ("fracking") technology. In the process of fracking, producers pump a mixture of water, sand, and chemicals into shale wells to extract natural gas and petroleum. In conjunction with horizontal drilling, this technique has made the development of shale energy sources economically feasible. As a result, energy resources in the country have increased. The amount of proven natural gas reserves have grown dramatically since the introduction of this technology. The ability to use fracking technology to extract fossil fuels has reduced the United States' dependency on foreign energy.

Efficiency

Increasing efficiency has been a focal point of the nation's energy conservation policy. Energy regulatory agencies have been aggressively protecting the environment by promoting energy-efficient products over the past two decades. The National Appliance Energy Conservation Act of 1987 set minimum efficiency standards for 13 appliances and prohibited the sale if standards were not met. In 1992, the EPA embarked upon "*Energy Star*" as a voluntary labeling program to identify and promote energy-efficient products to reduce greenhouse gas emissions. *Energy Star* products use less energy and help protect the environment. The *Energy Star* label now covers product categories from small battery chargers to central air conditioners, and includes appliances, electronics, heating and cooling equipment, office equipment, lighting, commercial food services, and new buildings and plants with additional energy-saving features that are 20–30% more efficient than standard homes. To promote energy efficient buildings in the U.S., Leadership in Energy and Environmental Design (LEED), a non-profit organization under the U.S. Green Building Council (USGBC), provides green building rating standards for environmentally sustainable construction and design.

Aside from energy conservation, increased productivity also promotes energy efficiency. Productivity, a crucial ingredient in the economy's long-term vitality, is a measure of economic efficiency which relates to how effectively economic inputs are converted into output. Productivity is measured by comparing the amount of goods and services produced with the inputs that are used in production. A measure of efficiency is the amount of energy used to produce a dollar of Gross Domestic Product (GDP). The following table compares U.S. consumption of fuel sources and illustrates the nation's improvement in energy efficiency.

TABLE 26
U.S. PRIMARY ENERGY CONSUMPTION & ENERGY EFFICIENCY

	U.S. Energy Consumption		GDP	BTU	
Calendar	Total	Annualized	Billion	Per $1 GDP	Annualized
Year	Quadrillion BTU's	% Change*	(In 2012$)	(In 2012$)	% Change*
1990	84.4	2.0	9,365.5	9,015	(1.2)
1995	90.9	1.5	10,630.3	8,554	(1.0)
2000	98.7	1.7	13,131.0	7,517	(2.6)
2005	100.1	0.3	14,912.5	6,713	(2.2)
2010	97.5	(0.5)	15,598.8	6,252	(1.4)
2011	96.9	(0.7)	15,840.7	6,114	(2.2)
2012	94.4	(2.6)	16,197.0	5,827	(4.7)
2013	97.1	2.9	16,495.4	5,888	1.0
2014	98.3	1.2	16,912.0	5,811	(1.3)
2015	97.4	(0.9)	17,403.8	5,595	(3.7)
2016	97.3	(0.0)	17,688.9	5,503	(1.7)
2017	97.7	0.4	18,108.1	5,396	(1.9)
2018	101.2	3.6	18,638.2	5,429	0.6

*Annualized percent change calculated using a compound annualized growth rate formula

Source: U.S. Dept. of Energy, Energy Information Administration, Monthly Energy Review,
U.S. Dept. of Commerce, Bureau of Economic Analysis

Between 1990 and 2018, energy consumption per dollar of real GDP decreased at a compound annual rate of 1.8% per year. In 1990, 9,015 BTU's of energy were required to produce $1 of GDP measured in 2012 dollars. In 2018, that number was 5,429 BTU's, a 39.8% reduction. The long-term decline in energy consumption per dollar of GDP resulted from efficiency improvements and a structural shift from energy intensive industries to those that consume less energy but create more value added products, such as finance, banking, and professional services. However, improvements in energy efficiency vary from period to period, depending upon energy prices, consumers' consumption habits, and technology improvements. Efficiency tends to stagnate when fuel prices decline; as oil prices fall, the incentive to conserve energy diminishes.

Oil Stability Program

To protect against supply disruptions, the United States created a Strategic Petroleum Reserve (SPR) under the Energy Policy and Conservation Act of 1975 (EPCA). The SPR program was established as a 750 million barrel capacity crude oil reserve with the objective of achieving a maximum draw-down rate within 15 days of the notice to proceed, and currently has a design capacity of 727 million barrels. In Decemeber of 2009, the SPR reached a record inventory of 726.6 million barrels. Some of the major reductions in the inventory were a result of various hurricanes such as 5.4 million barrels of sweet crude oil sent to the Gulf of Mexico after Hurricane Ivan in 2004, another 11 million barrels that went to the Gulf of Mexico after Hurricane Katrina in 2005, and 5.2 million barrels delivered to the Gulf Coast in 2017 following Hurricane Harvey. As of December 2019, the reserve held 635.0 million barrels of crude oil, equivalent to an estimated 30 days of crude oil consumption.

Connecticut

Connecticut is one of the most energy efficient states in the nation. The state consumed 3.0 thousand BTU's per 2012 chained dollar of Gross State Product in 2017, the latest available data. Connecticut was one of the most efficient states based on this measure, behind only the District of Columbia, New York, and Massachusetts. Connecticut was 44% below the national average of 5.4 thousand BTU's. When comparing energy consumption in Connecticut and the United States among the end-use sectors on a per capita basis (end-use sectors include residential, commercial, industrial, and transportation sectors and excludes energy consumption needed for electric generation), Connecticut consumed 203.2 million BTU's per capita in 2017. This represents a ranking of 46th for Connecticut among the 50 states plus the District of Columbia leaving Rhode Island, New York, Hawaii, California, and Florida with per capita end-use energy consumption lower than Connecticut's per capita end-use consumption. Connecticut was 32.3% below the national figure of approximately 300.2 million BTU's per capita. The state has few local energy sources, and it must import nearly all the energy that it consumes. This situation affects Connecticut consumers' energy choices and results in prices that are higher than the national average. In 2017, Connecticut residents spent $23.24 per million BTU, compared to $17.30 for the nation.

TABLE 27
CONSUMER ENERGY PRICES IN THE UNITED STATES AND CONNECTICUT*
Nominal Dollars per Million BTU in 2017

	Natural Gas	Motor Gasoline	Distillate Fuel Oil*	All Petroleum	Retail Electricity	Total Energy
Connecticut	$7.14	$20.99	$18.36	$20.13	$51.44	$23.24
United States	$5.73	$20.26	$18.26	$17.88	$30.88	$17.30
CT as a % of the U.S.	125%	104%	101%	113%	167%	134%

Note: * Includes diesel fuels and fuel oils used for residential space heating.
** Includes motor gasoline, residential and distillate fuel oil, liquefied petroleum gases, and jet fuel, etc.

Source: U.S. Department of Energy, Energy Information Administration, State Energy Data 2017

The above table compares various prices to the national average for natural gas, motor gasoline, distillate fuel oil, residential electricity, and total average energy paid by consumers in 2017, the latest data available. Overall energy costs in Connecticut in 2017 were 34.3% higher than the national average, with retail electricity prices 66.6% higher than the national average.

TABLE 28
CONNECTICUT ENERGY CONSUMPTION IN 2017
(Trillion BTU's)

Fuels	Resi-dential	Com-mercial	In-dustrial	Trans-portation	Electric Generation	CT Total	% of CT Total	% of US Total
Natural Gas	49.8	54.0	25.3	5.6	111.7	246.4	33.9	28.8
Petroleum	54.1	14.8	18.8	221.8	1.6	311.1	42.8	38.3
Coal	-	-	-	-	2.5	2.5	0.3	14.2
Nuclear	-	-	-	-	172.6	172.6	23.8	8.6
Hydroelectric	-	-	-	-	3.1	3.1	0.4	2.8
Other*	8.8	2.4	4.5	-	13.6	29.3	4.0	7.1
Deliv. Elec.	42.2	42.1	11.1	0.6	1.8	97.8	13.5	13.2
Deliv. Losses	75.0	74.7	19.7	1.1	(306.8)	(136.3)	(18.8)	(13.0)
Total Demand	229.9	188.1	79.3	229.1	-	726.5	100.0	100.0
% of Total-CT	31.6	25.9	10.9	31.5	-	100.0		
% of Total-U.S.	20.3	18.3	32.7	28.7	-	100.0		

Note: * Other includes power generated from wood, biofuels, wind, waste, geothermal, tide, and solar/photovoltaic, as well as imported electricity.
** Totals may not add due to rounding.

Source: U.S. Department of Energy, Energy Information Administration, State Energy Data 2017

The preceding table displays the amount and percentage share of total energy consumed in Connecticut by fuel source and sector in 2017, the latest available data. Compared to the nation, petroleum and natural gas provide more of Connecticut's energy needs, while coal provides significantly less. Petroleum remains the main source of energy in Connecticut because it is easily transported and fuel oil is a significant source to heat homes. In 2017, 41.4% of Connecticut households used fuel oil for home heating, followed by natural gas at 35.2%, electricity at 16.2%, liquefied petroleum gases (propane/butane) at 4.1%, and others at 3.1%. The state's petroleum products are received at the ports in New Haven, New London, and Bridgeport, and shipped by barge on the Connecticut River to central Connecticut. Additionally, a pipeline runs from New Haven to Springfield, Massachusetts, supplying petroleum to Hartford and northern Connecticut.

Connecticut is also more reliant on nuclear energy and less reliant on coal for electric generation than the United States. In 2017, the latest data available, the state generated 34.6 million net megawatt hours of electricity, primarily from nuclear power. Retail sales within the state were at 28.1 million megawatt hours of electricity. This implies that Connecticut was more than 100% electricity self-sufficient, unlike 2000, when the state generated 56.8% of its own demand and relied on imports from other states and Canada for the balance of its need while certain nuclear reactors were shut down for servicing. The power grid that supplies electricity to the entire state is owned and operated by both private and municipal electric companies. Transmission lines connect Connecticut with New York, other New England states, and Canada. These interconnections allow the companies serving Connecticut to meet large or unexpected electric load requirements from resources located outside of Connecticut's borders.

All electric utilities in the state are members of the New England Power Pool and operate as part of the regional bulk power system. An independent system operator, ISO New England Inc., operates this regional system. In 2018, there were 1,661,837 electric consumers in Connecticut. Of these, 90.5% were residential customers, 9.3% were commercial customers, and 0.3% were industrial and transportation customers. Approximately 90% of the electricity was sold by two investor-owned companies: Eversource and United Illuminating.

Natural gas is delivered to Connecticut through pipelines that traverse the state. Natural gas pipeline supplies are generally shipped to Connecticut from Canada and the Gulf of Mexico area, although development of the Marcellus Shale Formation in New York and Pennsylvania could provide additional supply to the region. Connecticut also receives liquefied natural gas (LNG) through interstate pipelines from a terminal located in Boston, Massachusetts which is supplied by LNG tanker ships. Natural gas service is provided to parts of the state through one municipal and three private gas distribution companies. Since 1996, the state's Public Utilities Regulatory Authority (formerly DPUC) has allowed some competitive market forces to enter the natural gas industry in the state. Commercial and industrial gas consumers can choose non-regulated suppliers for their natural gas requirements. Natural gas is delivered to consumers using the local distribution company's mains and pipelines. Located at or near the end of pipelines, Connecticut's distribution companies have to pay higher transportation costs and outbid other buyers in order to gain access rights to the gas wellhead.

Gasoline Consumption and Automotive Fuel Economy

According to 2017 data, highway vehicles in the U.S. consumed approximately 94.8% of all gasoline, with about 5.2% used for other purposes such as agriculture, aviation, construction and boating. In 2017, the latest data available, gasoline consumption in the U.S. totaled 144.6 billion gallons, with Connecticut accounting for 1.5 billion gallons, 1.05% of the nation's consumption. The table below shows gasoline consumption for the U.S. and Connecticut since 1995.

In 2017, Connecticut residents consumed 423.6 gallons of gasoline per capita, versus 444.3 gallons per capita for the nation. Per capita consumption is attributable to several factors, including gas prices, income levels, traffic conditions, average weight of vehicles, distance residents drive to work or shop, and percentage of workers telecommuting or ride sharing. As one of the smallest and most densely populated states in the nation, Connecticut residents generally commute shorter distances to work and shop. Per capita consumption reached a peak in 2005, and has fallen faster in Connecticut than in the U.S. since then. Between 2005 and 2017, per capita consumption decreased by just under 8.0% in Connecticut, versus 6.3% for the nation. This has reduced Connecticut's per capita consumption to 95.3% of the U.S. amount in 2017.

As the highest per capita personal income state in the nation, Connecticut residents tend to own more automobiles. Connecticut residents owned 363 private and commercial automobiles per 1,000 residents in 2017, versus 337 for the nation. Also, Connecticut had 721 driver licenses per 1,000 residents in 2017, compared to 692 licenses for the nation. Connecticut residents trail the nation as a whole in the use of carpooling. The United States Census Bureau estimates that in 2017, of those commuting to work by car, 7.9% of Connecticut residents carpooled, versus 8.9% for the nation as a whole.

TABLE 29
GASOLINE CONSUMPTION IN THE UNITED STATES & CONNECTICUT

Calendar Year	U.S.* Total Gallons (000's)	Annualized % Change	CT Total Gallons (000's)	Annualized % Change	Gallons Per Capita U.S.*	CT	CT/U.S. (%)
1995	120,875,789	1.9%	1,302,750	0.0%	453.3	391.7	86.4%
2000	132,279,950	1.8%	1,476,340	2.5%	468.2	432.4	92.3%
2005	140,338,710	1.2%	1,614,697	1.8%	474.3	460.3	97.0%
2006	140,320,089	0.0%	1,566,875	-3.0%	469.7	445.3	94.8%
2007	140,436,133	0.1%	1,567,360	0.0%	465.7	444.0	95.4%
2008	136,499,418	-2.8%	1,494,164	-4.7%	448.4	421.2	93.9%
2009	136,877,949	0.3%	1,512,081	1.2%	445.7	424.3	95.2%
2010	137,592,937	0.5%	1,514,622	0.2%	444.4	423.1	95.2%
2011	135,204,475	-1.7%	1,467,953	-3.1%	433.5	409.1	94.4%
2012	134,998,800	-0.2%	1,449,384	-1.3%	429.7	403.3	93.8%
2013	135,595,239	0.4%	1,438,625	-0.7%	428.6	400.2	93.4%
2014	137,883,016	1.7%	1,434,867	-0.3%	432.7	399.3	92.3%
2015	141,757,545	2.8%	1,479,844	3.1%	441.6	412.6	93.4%
2016	144,885,278	2.2%	1,515,941	2.4%	448.1	423.6	94.5%
2017	144,575,062	-0.2%	1,514,021	-0.1%	444.3	423.6	95.3%
Average	**2012-2017**				437.5	410.4	93.8%

* Fifty states plus Washington, D.C.
** Annual growth calculated using compound annual growth rate formula

Source: U. S. Dept. of Transp., Federal Highway Administration, Office of Highway Policy Information, IHS

Corporate Average Fuel Economy (CAFE)

The United States Department of Transportation (DOT) is required to set corporate average fuel economy (CAFE) standards for automobile fuel efficiency. This responsibility is administered by the National Highway Traffic Safety Administration (NHTSA). The measurement of CAFE is performed by manufacturers and reported to the U.S. Environmental Protection Agency. Federal law imposes a civil penalty of $5.50 for each tenth of a MPG by which a manufacturer's CAFE level falls short of the standard, multiplied by the total number of passenger automobiles or light trucks produced by the manufacturer in that model year (MY). According to NHTSA data, total fleet performance in MY 2017 was 33.4 miles per gallon, while the fleet standard was 33.8 miles per gallon. This was a 35.8% improvement in the total fleet fuel efficiency since 2004, when the total fleet performance was 24.6 miles per gallon.

Fluctuations in Gasoline Prices

Short-term gasoline prices have long been known for their drastic volatility, often rising and dropping markedly during short periods of time. The average retail gasoline price for all grades in the U.S. in October of 2019 was $2.72 per gallon, compared to $2.94 in October of 2018 and $2.62 in October of 2017. The

average retail price for all grades hit an all-time high of $4.11 in July of 2008, before plummeting to $1.75 in December that same year. Changes in gasoline prices are determined by the cost of crude oil, supply and demand of fuel, any disruption of refinery operations, inventory levels, seasonality and weather conditions, the regulation of environmental standards, and geopolitical conditions.

The long run nominal price shows a relatively stable upward trend except for sharp upticks in the early 1980s and the most recent years. The following table shows the history of retail motor gasoline prices in the U.S. Prices averaged approximately 30 cents per gallon during the 1950s through the early 1970s. Prices began increasing after the Arab oil embargo in 1973. They rose to an average of $3.30 per gallon in 2008 before declining to an average of $2.41 per gallon in 2009. The annual average price has hovered around $3.50 through 2014, and has been closer to $2.50 in more recent years. The real prices listed are adjusted for inflation in 2012 dollars. In 2012, the average real price reached a high of $3.68 per gallon.

TABLE 30
RETAIL MOTOR GASOLINE PRICES
(Dollars per Gallon, Regular Gasoline)

Calendar Year	Nominal Price	Real Price*	Calendar Year	Nominal Price	Real Price*
1950	$0.27	$2.06	2009	$2.41	$2.53
1960	0.31	1.86	2010	2.84	2.95
1970	0.36	1.66	2011	3.58	3.64
1980	1.25	2.96	2012	3.68	3.68
1990	1.16	1.82	2013	3.58	3.51
2000	1.52	1.95	2014	3.44	3.32
2005	2.31	2.65	2015	2.52	2.41
2006	2.62	2.91	2016	2.25	2.13
2007	2.84	3.07	2017	2.53	2.35
2008	3.30	3.50	2018	2.81	2.55

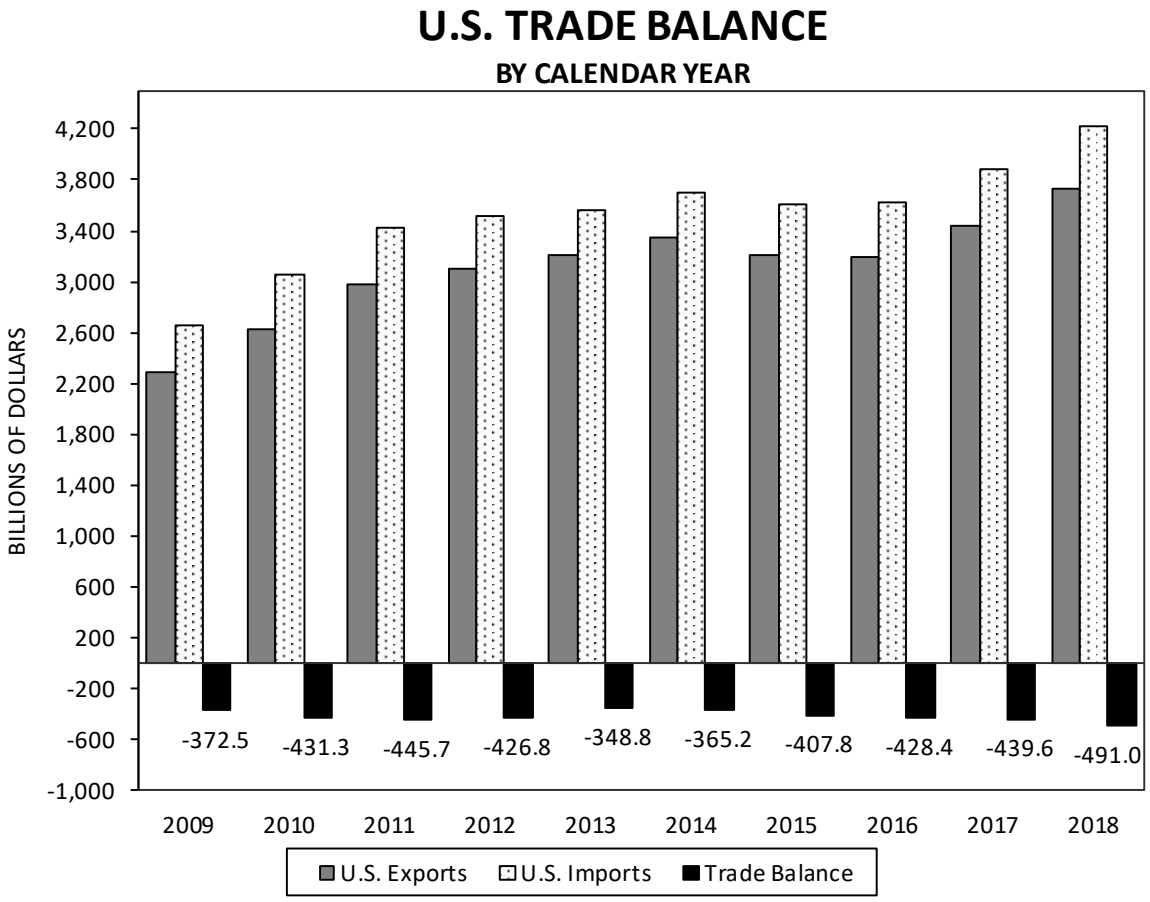
Note: Prices for 1950 to 1970 are leaded regular; 1980 and after are unleaded regular.
* Adjusted by GDP Price Deflator (2012=100)

Source: U.S. Dept. of Energy, Energy Information Administration, Bureau of Economic Analysis, IHS Economics

Export Sector

Trade has played an important role in the U.S. economy. Exports and a favorable balance of payments have traditionally been important to the growth of the U.S., affecting employment, production, and income. Real exports of goods and services have been significantly boosting economic growth over the past decades. Total trade exports have grown 63.6% from 2009 through 2018, while total trade imports have grown 59.2% over the same time period.

The following graph illustrates the United States' trade balance for the past ten years. In 2018, the trade deficit increased to $491.0 billion, up from $439.6 billion in 2017.



Source: U.S. Department of Commerce, Bureau of Economic Analysis

Consistent with recent history, the United States trade balances in the past decade generally improved during recession years and deteriorated during recovery and expansionary periods. Unlike previous expansionary cycles, since 2009 the U.S. trade balance has remained relatively stable with little net change year over year.

TABLE 31
U.S. TRADE DEFICIT BY CATEGORY
(In Billions of Dollars)

	2017			2018		
	Exports	Imports	Balance	Exports	Imports	Balance
Total Trade	**3,444.8**	**3,884.5**	**(439.6)**	**3,735.7**	**4,226.7**	**(491.0)**
Merchandise	**1,553.6**	**2,358.8**	**(805.2)**	**1,674.3**	**2,561.7**	**(887.3)**
Foods/Beverages	132.7	138.8	(6.1)	133.2	148.4	(15.2)
Industrial Supplies & Materials	456.2	511.4	(55.1)	534.6	583.3	(48.7)
Capital Goods, Excluding Autos	533.5	642.9	(109.4)	563.2	695.9	(132.8)
Autos	157.9	359.2	(201.3)	158.8	373.1	(214.3)
Consumer Goods	197.2	603.6	(406.4)	205.5	649.1	(443.6)
Others	76.1	103.0	(26.9)	79.0	111.8	(32.8)
Services	**799.0**	**543.9**	**255.1**	**827.0**	**567.3**	**259.7**
Travel & Transportation	299.5	236.6	62.9	307.5	252.7	54.9
Business Services	326.4	223.4	103.0	338.5	226.8	111.7
Royalties & License fees	126.5	53.4	73.1	128.7	56.1	72.6
Other Services	46.5	30.4	16.1	52.2	31.7	20.5
Investment Income	**1,092.3**	**981.8**	**110.5**	**1,234.4**	**1,097.7**	**136.7**
Direct Investment	509.8	205.8	304.0	574.5	244.2	330.3
Portfolio Investment Income	354.5	433.6	(79.1)	411.2	471.8	(60.6)
U.S. Gov't Receipts/Payments	159.0	274.3	(115.3)	150.2	267.5	(117.3)
Other Investment Income	69.1	68.1	0.9	98.5	114.2	(15.7)
			Net Change From Previous Year			
Total Trade	**256.3**	**267.6**	**(11.3)**	**290.9**	**342.2**	**(51.3)**
Merchandise	**96.2**	**151.6**	**(55.4)**	**120.7**	**202.9**	**(82.1)**
Foods/Beverages	2.2	7.8	(5.6)	0.4	9.6	(9.1)
Industrial Supplies & Materials	68.6	69.6	(0.9)	78.4	72.0	6.4
Capital Goods, Excluding Autos	13.5	49.3	(35.8)	29.7	53.1	(23.4)
Autos	7.5	8.3	(0.9)	1.0	13.9	(13.0)
Consumer Goods	3.9	18.7	(14.8)	8.3	45.5	(37.2)
Others	0.5	(2.1)	2.6	2.9	8.8	(5.9)
Services	**40.5**	**32.3**	**8.3**	**28.0**	**23.4**	**4.6**
Travel & Transportation	8.1	16.1	(8.0)	8.0	16.0	(8.0)
Business Services	27.7	9.5	18.1	12.1	3.5	8.6
Royalties & License fees	2.1	6.5	(4.3)	2.2	2.7	(0.5)
Other Services	2.6	0.2	2.4	5.7	1.2	4.4
Investment Income	**119.6**	**83.8**	**35.8**	**142.1**	**115.9**	**26.2**
Direct Investment	48.0	22.0	26.0	64.7	38.4	26.3
Portfolio Investment Income	28.1	26.0	2.2	56.7	38.2	18.5
U.S. Gov't Receipts/Payments	21.8	13.1	8.7	(8.8)	(6.8)	(2.0)
Other Investment Income	21.7	22.7	(1.0)	29.5	46.1	(16.6)

Note: Net changes were derived before rounding to billions.
Source: U.S. Bureau of Economic Analysis

Merchandise Trade

According to the U.S. Department of Commerce, international trade is classified into three categories: merchandise trade, service transactions, and investment income. There are six subcategories within merchandise trade including: foods and beverages; industrial supplies and materials; capital goods excluding autos; autos; consumer goods and others. The deficit in merchandise trade increased by $82.1 billion for a total deficit of $887.3 billion in 2018, up from $805.2 billion in 2017. This increase was attributable to increases in capital and consumer goods.

Of the total trade deficit of $491.0 billion, consumer goods accounted for the largest portion, reaching $443.6 billion in 2018. Consumer goods consist of durables and nondurables. Durable goods include household and kitchen appliances such as radio and stereo equipment, televisions and video receivers, bicycles, watches, toys and sporting goods. Nondurables include footwear, apparel, medical, dental and pharmaceutical preparations. The trade deficit in the consumer goods category increased in 2018 by $37.2 billion.

The second largest portion of the deficit occurred in autos. This category includes automotive vehicles, parts and engines. In 2018, the U.S. imported $373.1 billion worth of these goods compared to the $158.8 billion that the U.S. exported. The autos trade deficit at $214.3 billion represents a $13.0 billion increase from the deficit of $201.3 billion in 2017.

Service Transactions

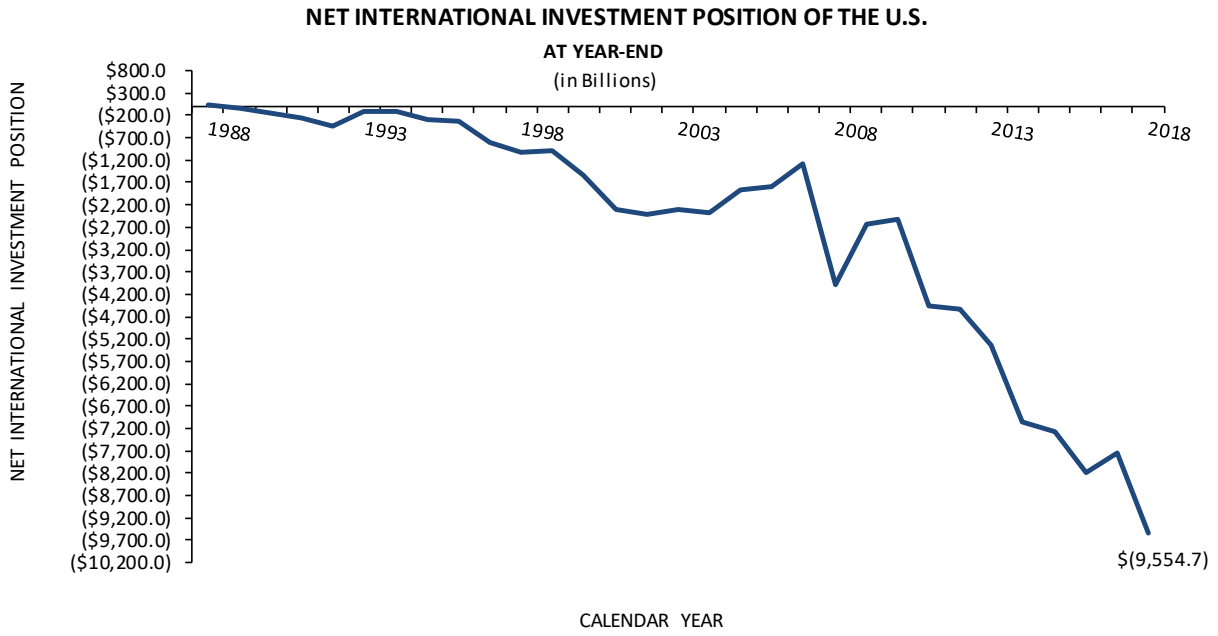
The United States is highly competitive in the delivery of services. The surplus in service transactions increased to $259.7 billion in 2018, from a surplus of $255.1 billion in 2017. Imports increased 4.3% to $567.3 billion while exports of services increased 3.5% to $827.0 billion. Of the $259.7 billion total surplus in 2018, $111.7 billion was attributable to business services.

Investment Income

The balance in investment income registered a surplus of $136.7 billion in 2018. Investment income contains two components: 1) receipts generated from U.S.-owned assets abroad including direct investments, other private securities such as U.S. government-owned securities, corporate bonds and stocks, and 2) compensation receipts of workers employed abroad in international organizations and foreign embassies stationed in the U.S., including wages, salaries, and benefits. Payments are the counterpart of U.S. receipts; they are paid on foreign-owned assets invested in the U.S. There are six major types of foreign assets in the United States, including U.S. government securities held by foreign governments and the private sector, direct investments, and liabilities captured by private bonds, corporate stocks and U.S. banks.

According to the U.S. Bureau of Economic Analysis, in calendar 2018 foreign assets in the U.S., measured at current cost, decreased by $719.9 billion, or 2.0%, to $34,796.2 billion, compared to a decrease of $2,531.4 billion to $25,241.5 billion for U.S. assets abroad. This placed U.S. international investment at a net negative $9,554.7 billion. Historically U.S. direct investment in assets abroad exceeded foreign direct investment in the U.S. However, this trend ended in the late 1980s and foreign direct investment began to grow rapidly over the last couple decades. In 2018 the U.S.'s direct investment abroad was $7,503.9 billion and foreign direct investment in the U.S. was $8,483.3 billion, registering -$979.4 billion in net

investment. Foreign assets in the United States are mostly in securities such as bonds and stocks issued by the U.S. Treasury and corporations. The significant growth in the net international investment position (NIIP) deficit should be a cause for concern as there has been no country that was able to maintain a large deficit. Adjustments, such as policies to significantly depreciate the U.S. dollar, would be required to bring the United States back into alignment.



Source: U.S. Bureau of Economic Analysis

Tariffs

Tariffs are taxes placed on the import of goods or services and are used to restrict imports by increasing the price of the goods or services purchased from a foreign state. This policy has been used throughout history primarily for protecting national industries from global competition and as a form of revenue generation. Tariffs can have unintended consquences as by design they reduce competition which can result in less efficient domestic industries. The United States is no stranger to tariffs and has been using them to protect domestic industries since the country's founding.

The Trump administration has introduced several new tariffs through the use of executive order and not an act of Congress in order to adjust the imbalance in the United States' trade deficit and protect certain industries believed to be negatively impacted by global trade policies. In January of 2018 the Trump administration imposed tariffs on solar panels and washing machines of 30% to 50%. In March of 2018 additional tariffs were added including a 25% tariff on raw steel and a 10% tariff on raw aluminum. Finally, in September of 2018 a 10% tariff was placed on various goods imported from China which increased to 25% for certain items throughout 2019. The Trump administration is currently working with the Chinese government to form a trade agreement.

Calculating the cost of these new tarrifs can be difficult given the relatively brief time that these tariffs have been in place. The Congressional Budget Office has estimated that the relative impact of the tarrifs and the associated retaliatory tarrifs will reduce US GDP by roughly 0.3% by 2020. As a result of this reduction the average real houselod income is expected to be reduced by $580 (in 2019 dollars). Over the longer term it is anticipated that the impact will level off as businesses and consumers will adjust their behavior.

Connecticut Exports

In Connecticut, the export sector has assumed an important role in the state's overall economic growth. State exports of goods for the past five years averaged 5.9% of Gross State Product (GSP).

According to figures published by the United States Department of Commerce, which were adjusted and enhanced by the World Institute for Social and Economic Research to capture a greater percent of indirect exports, Connecticut exports of commodities totaled $17,403.4 million in 2018, up 17.7% from 2017. The state's economy benefits from goods produced not only for direct shipment abroad but also from those that are ultimately exported from other states. These indirect exports are important in industries whose products require further processing such as primary metals, fabricated metal products and chemicals. In addition, indirect exports are important in industries whose products constitute components and parts for assembly into machinery, electrical equipment and transportation equipment.

Connecticut industries that rely most heavily on exports are Transportation Equipment (NAICS 336), Nonelectrical Machinery (NAICS 333) and Computer & Electronic Equipment (NAICS 334). The top three industries accounted for 64.3% of Connecticut's foreign sales in 2018. The following table shows the breakdown of major products by NAICS code for the past five years. In 2018, transportation equipment, which includes aircraft engines and spare parts, gas turbines, and helicopters and spacecraft accounted for 44.1% of total exports up from 41.0% of exports in 2017. In terms of average annual growth from 2014 to 2018, Plastics and Rubber posted the strongest growth at 6.3%, followed by Chemicals at 6.0%.

Overall growth in exports of commodities for the past five years averaged 2.2%. Exports of $17.4 billion are estimated to account for 6.3% of Connecticut Gross State Product (GSP) in 2018, which is higher than the 5.5% level in 2017.

TABLE 32
COMMODITY EXPORTS ORIGINATING IN CONNECTICUT BY PRODUCT
(In Millions of Dollars)

NAICS	Industry	2014	2015	2016	2017	2018	Percent of 2018 Total	Average Growth 14-18
322	Paper	142.7	131.2	137.0	152.2	157.7	0.9%	2.5%
325	Chemicals	971.0	1,039.5	865.0	954.5	1,224.7	7.0%	6.0%
326	Plastics and Rubber	233.5	230.3	224.9	269.9	297.7	1.7%	6.3%
331	Primary Metal	637.8	675.1	505.1	410.4	323.9	1.9%	-15.6%
332	Fabricated Metal	733.6	706.7	790.3	829.5	907.8	5.2%	5.5%
333	Machinery, exc. Elec.	2,072.8	1,666.6	1,769.7	1,945.7	2,259.8	13.0%	2.2%
334	Comp. & Electronic	1,270.6	1,191.0	1,108.7	1,132.4	1,260.6	7.2%	-0.2%
335	Electrical Equipment	1,002.9	1,032.9	958.9	983.6	919.5	5.3%	-2.1%
336	Transportation Equip.	7,318.6	7,012.5	6,216.3	6,066.4	7,670.2	44.1%	1.2%
339	Misc. MFG	330.7	326.2	327.3	312.6	339.4	2.0%	0.6%
	Other	1,248.6	1,229.7	1,490.9	1,734.1	2,042.1	11.7%	13.1%
Total Commodity Exports		15,962.8	15,241.8	14,394.0	14,791.2	17,403.4		2.2%
	% Growth	-2.8%	-4.5%	-5.6%	2.8%	17.7%		
Gross State Product ($M)		248,865.2	260,072.6	263,696.4	268,310.6	275,726.9		2.6 %
	% Growth	3.9%	4.5%	1.4%	1.7%	2.8%		
Exports as a % of GSP		6.4%	5.9%	5.5%	5.5%	6.3%		5.9%

Source: World Institute for Strategic Economic Research (WISERTrade.org)

The bulk of Connecticut's exports are shipped by air from Bradley International Airport and by sea from the port of New Haven. In 2018, exports originating from Connecticut totaled $17.4 billion, with 70.7% of the total being shipped by air, 11.4% being delivered by sea, and the remaining 18.0% being transported inland by railroad or truck to Canada, Mexico or other states for further shipment to other countries. This compares with 55.4% by air, 17.6% by sea, and 27.5% by land for exports totaling $4.5 billion in 1990. This reflects the demand for meeting just-in-time inventory requirements, with the majority of goods transported by air as that mode of transportation provides more frequent departures and faster transit times.

The following table shows the ten major foreign countries to which state firms export their products. France is again the largest destination country in 2018 at 18.3% of total exports, followed by Germany, Canada, United Kingdom, and Mexico. These five countries accounted for 56.9% of total state exports in 2018. Exports to the United Kingdom have grown the fastest in the past five years at an average growth rate of 19.8%.

TABLE 33
COMMODITY EXPORTS ORIGINATING IN CONNECTICUT BY COUNTRY
(In Millions of Dollars)

Destination	2018 Rank	2014	2015	2016	2017	2018	Percent of 2018 Total	2014-2018 Average Growth Rate
France	1	2,213.3	1,942.9	1,954.6	2,114.1	3,177.8	18.3%	9.5%
Germany	2	1,715.6	1,654.2	1,641.7	1,823.8	2,332.3	13.4%	8.0%
Canada	3	1,939.3	1,623.1	1,634.8	1,907.3	1,962.6	11.3%	0.3%
United Kingdom	4	721.4	885.4	893.2	1,300.1	1,484.4	8.5%	19.8%
Mexico	5	1,280.7	1,318.7	1,061.2	1,036.5	947.7	5.4%	-7.3%
China	6	907.3	1,028.9	798.3	795.0	942.5	5.4%	1.0%
Netherlands	7	490.2	476.6	499.1	619.4	769.5	4.4%	11.9%
Japan	8	540.8	526.6	525.4	546.7	627.5	3.6%	3.8%
Singapore	9	335.8	278.5	333.7	399.5	623.3	3.6%	16.7%
South Korea	10	659.9	457.5	364.7	539.3	422.6	2.4%	-10.5%
Other Areas		5,158.4	5,049.4	4,687.4	3,709.6	4,113.3	23.6%	-5.5%
Total		15,962.8	15,241.8	14,394.0	14,791.2	17,403.4	100.0%	2.2%

Source: World Institute for Strategic Economic Research (WISERTrade.org)

In an effort to create jobs and investment, the Connecticut Department of Economic and Community Development has continued to work with a number of foreign companies to establish branches in Connecticut. As a result of this work, foreign countries continually invest and own firms in the state. This foreign investment is an important stimulus for Connecticut's economic growth and future productivity as 7.1% of the state's total private industry employment in 2017 was a result of foreign investment. In 2014, 103,600 Connecticut workers were employed by foreign-controlled companies, an increase of 3,400 since 2012. Major sources of foreign investment in Connecticut in 2017 included the Netherlands, the United Kingdom, Germany, and France.

Connecticut's Defense Industry

The defense industry is an integral part of Connecticut's manufacturing sector and has been since the inception of the United States as a nation. The state's economy is still affected by the volume of defense contracts awarded or subcontracted to Connecticut firms.

In federal fiscal year (FFY) 2018, contractors in the state were awarded $14.7 billion worth of defense-related prime contracts, with the heaviest concentration in the state's transportation equipment sector. This was up 26.9% from the $11.6 billion received in awards in FFY 2017. Of the total awarded, the following five companies were the top contractors in the state, primarily for the described areas of work:

1.	Sikorsky Aircraft Corp.	Aircraft
2.	General Dynamics Corp.	Submarines
3.	United Technologies Corp.	Aircraft, Engines & Turbines
4.	Gartner, Inc.	Information Technology
5.	Sonalysts, Inc.	Software Developer

The following table shows the distribution of prime defense contracts in the state by program or type of work, with a heavy reliance on submarines and rotary wing aircraft, which is very different from the national distribution of all contracts awarded. This concentration in large weapon programs play a role in the volatility of state awards.

TABLE 34
VALUE OF PRIME CONTRACT AWARDS BY PROGRAM IN FFY 2018
(In Millions)

Connecticut Program	Value	Percent	United States Program	Value	Percent
Combat Ships and Landing Vessels	$ 5,004	34.0%	Aircraft Fixed Wing	$ 32,184	9.6%
Gas Turbines and Jet Engines	4,237	28.8%	Engineering & Tech Support Services	15,902	4.7%
Aircraft, Rotary Wing	1,456	9.9%	Combat Ships and Landing Vessels	14,488	4.3%
Maintenance and Repair of Equipment	976	6.6%	General Healthcare Services	12,008	3.6%
Helicopter Rotor Blades, Components	531	3.6%	Guided Missiles	10,950	3.3%
Other	2,496	17.0%	Other	250,636	74.6%
Total	$ 14,700	100.0%	Total	$ 336,168	100.0%

Source: Federal Procurement Data System (FPDS.gov)

The following table displays the geographic distribution of prime defense contracts within the state, with the majority of the work in Fairfield, New London and Hartford Counties.

TABLE 35
GEOGRAPHIC DISTRIBUTION OF CONNECTICUT PRIME AWARDS
(And Total Awards in Thousands of Dollars)

	FFY 2014	FFY 2015	FFY 2016	FFY 2017	FFY 2018
Fairfield	26.2%	27.6%	28.1%	30.8%	20.1%
Hartford	18.9%	28.7%	33.0%	21.8%	39.3%
Litchfield	0.2%	0.3%	0.2%	0.3%	0.3%
Middlesex	0.1%	0.1%	0.1%	0.2%	0.1%
New Haven	0.7%	0.5%	0.6%	0.7%	0.6%
New London	53.8%	42.6%	37.8%	46.2%	39.3%
Tolland	0.1%	0.1%	0.1%	0.1%	0.1%
Windham	0.1%	0.1%	0.0%	0.1%	0.1%
State Total	100.0%	100.0%	100.0%	100.0%	100.0%
State Total	$13,207,996	$12,148,167	$14,134,319	$11,623,106	$14,699,901

Source: Federal Procurement Data System

Prime defense contracts have tended to be "leading" indicators of the state's economic activity. This means that changes in defense contract awards precede changes in employment. However, new defense contract awards cannot be directly converted into anticipated employment gains or losses because: a) contracts have different terms and different completion dates; b) subcontracting on prime awards may be done by firms in different states; c) research and development contracts are usually capital intensive rather than labor intensive; d) there often exists a time lag between contract award and funding availability; and e) as productivity improvements are achieved over time by manufacturers, the same (or greater) amount of work can be done by fewer employees. Nearly all defense related employment within Connecticut falls under the Bureau of Labor Statistics' Transportation Equipment category.

To compare the relative volatility of contract awards with defense related employment, the coefficient of variation is used: the larger the number, the greater the volatility. It is derived by dividing the standard deviation of a variable by its mean. The coefficient of variation for the state's defense contract awards over the past decade was 0.111 compared with 0.036 for transportation equipment employment. This implies that the fluctuations in transportation employment are milder than the fluctuations in defense contract awards. Because most defense contract awards are long-term projects, there is usually a backlog of unfinished orders in the pipeline, allowing continued employment even if new contracts are not received.

From $11.9 billion in FFY 2009, real defense contract awards—the value of contracts after accounting for inflation—increased to $12.6 billion in FFY 2018. This represents an annual percentage growth rate of 0.7% per year from FFY 2009 to FFY 2018.

TABLE 36
CONNECTICUT DEFENSE CONTRACT AWARDS AND RELATED EMPLOYMENT

Federal Fiscal Year	Defense Contract Awards ($ 000's)	% Growth	Connecticut Transportation Equipment Employment ($ 000's)	% Growth	Defense Contract Awards in 2009 Dollars ($ 000's)	% Growth
2009	11,851,941	(3.1)	43.49	(1.5)	11,851,941	(2.8)
2010	11,238,753	(5.2)	42.29	(2.8)	11,050,608	(6.8)
2011	12,491,324	11.1	42.15	(0.3)	11,969,658	8.3
2012	12,750,298	2.1	42.19	0.1	11,928,036	(0.3)
2013	10,032,845	(21.3)	41.58	(1.4)	9,234,373	(22.6)
2014	13,207,996	31.6	40.30	(3.1)	11,962,130	29.5
2015	12,148,167	(8.0)	40.44	0.3	10,968,881	(8.3)
2016	14,134,319	16.3	41.41	2.4	12,645,654	15.3
2017	11,623,106	(17.8)	43.38	4.8	10,189,026	(19.4)
2018	14,699,901	26.5	45.38	4.6	12,583,003	23.5
Coefficient of Variation	0.111		0.036		0.095	

Sources: U.S. Department of Defense, Bureau of Labor Statistics; Federal Procurement Data System, IHS

TABLE 37
COMPARISON OF U.S. AND CONNECTICUT DEFENSE CONTRACT AWARDS

	Connecticut				United States			
Federal Fiscal Year	Defense Contract Awards ($ Millions)	% Growth	3-Year Moving Average ($ Millions)	% Growth	Defense Contract Awards ($ Millions)	% Growth	3-Year Moving Average ($ Millions)	% Growth
2009	11,852	(3.1)	10,898	14.7	331,116	(6.7)	328,344	7.5
2010	11,239	(5.2)	11,772	8.0	323,252	(2.4)	336,463	2.5
2011	12,491	11.1	11,861	0.8	329,490	1.9	327,953	(2.5)
2012	12,750	2.1	12,160	2.5	319,356	(3.1)	324,033	(1.2)
2013	10,033	(21.3)	11,758	(3.3)	268,847	(15.8)	305,898	(5.6)
2014	13,208	31.6	11,997	2.0	260,720	(3.0)	282,974	(7.5)
2015	12,148	(8.0)	11,796	(1.7)	253,370	(2.8)	260,979	(7.8)
2016	14,134	16.3	13,163	11.6	279,026	10.1	264,372	1.3
2017	11,623	(17.8)	12,635	(4.0)	300,634	7.7	277,676	5.0
2018	14,700	26.5	13,486	6.7	336,167	11.8	305,276	9.9
Coefficient of Variation	0.111				0.106			

Source: U.S. Department of Defense, Federal Procurement Data System

The coefficient of variation for Connecticut's defense contract awards over the past decade was 0.111, compared to 0.106 for the U.S., reflecting a pattern of fluctuations in the state's annual levels of defense contract awards which is relatively close to that of awards nationally.

As defense contract awards normally take several years to complete, the three-year moving average is a better reflection of actual production activities. Overall changes in defense funding and expansions in Connecticut have historically been more severe and more volatile than the national average. Both of these factors have negative implications for the state's economy. Volatility imposes difficulties for the industry in terms of long term planning, making future capital investment less likely and decreasing the dollars devoted to research and development.

Connecticut's total defense awards, based on a three-year moving average, increased at an annual growth rate of 2.4% during the nine-year period from 2009 to 2018, compared to a growth rate of -0.8% for the nation.

The relative share of defense-related production activity, measured by the size of the moving average of defense contract awards compared to Gross State Product (GSP), was at or below 2.0% in the late 1990s and has generally hovered around 4.0% to 5.0% since then. In comparison, this share was 9.8% in 1982. The following table provides a ten year history of U.S. and Connecticut defense awards and the proportion of state GSP such awards represent.

In FFY 2018, while Connecticut ranked sixth in total defense contracts awarded, it ranked second in per capita defense dollars awarded with a figure of $4,114. This figure was about four times the national average of $1,027. In 2017, Connecticut ranked seventh in total defense contracts awarded and second in per capita defense dollars awarded with a figure of $3,230. This was 3.5 times the national average of $922 for that year.

The wars in Afghanistan and Iraq and the war on terrorism created a need for replacements for lost equipment and systems, spare parts, and new features on existing systems as new needs were identified in the ever-changing environment. Since the wind down of those wars, recent national defense spending has shown slow but steady declines as less of those services is needed.

In December 2019, President Trump approved a spending bill with approximately $738 billion in federal funding for military and defense projects in FFY 2020. Some of the funding from the spending bill would result in increased spending for Connecticut's defense industry. One of the projects includes over $5 billion for two Virginia Class submarines to be partly manufactured by Electric Boat. There is over $13 billion for the production of F-35 jets and another $3 billion for research and development of the B-21 Raider. Pratt & Whitney manufactures the engines for the F-35 jets and will be the manufacturer of the engine for the B-21 Raider. Lastly, approximately $3 billion is planned for the production of helicopters consisting of Black Hawks, CH-53K heavy lift helicopters, and combat rescue helicopters—all produced by Sikorsky Aircraft Corporation.

TABLE 38
CONNECTICUT DEFENSE CONTRACT AWARDS AND GSP

Federal Fiscal Year	Connecticut Defense Contract Awards ($ Millions)	U.S. Defense Contract Awards ($ Millions)	CT as % of U.S.	CT GSP Current Dollars ($ Millions)	3-year Average CT Awards ($ Millions)	CT Awards as % of CT GSP
2009	11,852	331,116	3.6%	235,288	10,898	5.0%
2010	11,239	323,252	3.5%	237,571	11,772	4.7%
2011	12,491	329,490	3.8%	236,268	11,861	5.3%
2012	12,750	319,356	4.0%	241,879	12,160	5.3%
2013	10,033	268,847	3.7%	246,265	11,758	4.1%
2014	13,208	260,720	5.1%	247,466	11,997	5.3%
2015	12,148	253,370	4.8%	257,833	11,796	4.7%
2016	14,134	279,026	5.1%	262,324	13,163	5.4%
2017	11,623	300,634	3.9%	264,591	12,635	4.4%
2018	14,700	336,167	4.4%	271,194	13,486	5.4%

Source: Federal Procurement Data System, Bureau of Economic Analysis, IHS Markit

Some of the primary defense systems of interest to Connecticut include:

1. CH-53K Heavy Lift Helicopter
2. UH-60 Utility Helicopter (Black Hawk)
3. S-70i Black Hawk Helicopter
4. CH-148 Cyclone Helicopter
5. HH-60W Combat Rescue Helicopter (Pave Hawk)
6. C-17 Globemaster Aircraft
7. F-15 Aircraft
8. F-16 Aircraft
9. F-35 Lightning Aircraft
10. H-92 Super Hawk Helicopter
11. KC-46A Pegasus Aircraft
12. Virginia Class Submarine

TABLE 39
COMPARISON OF STATE PRIME CONTRACT AWARDS
Federal Fiscal Year 2018

State	Prime Contract Awards ($ 000's)	Rank	$ Per Capita Prime Contract Awards	Rank	State	Prime Contract Awards ($ 000's)	Rank	$ Per Capita Prime Contract Awards	Rank
Virginia	36,097,649	3	4,241	1	New Jersey	5,432,962	19	610	26
Connecticut	**14,699,901**	**6**	**4,114**	**2**	Illinois	7,410,121	14	581	27
Maryland	15,301,268	5	2,533	3	Rhode Island	601,916	41	569	28
Mississippi	7,014,477	15	2,348	4	Iowa	1,680,258	34	533	29
Alaska	1,726,102	33	2,340	5	Utah	1,587,552	35	503	30
Missouri	13,827,235	7	2,258	6	Indiana	3,151,051	25	471	31
Alabama	10,685,078	11	2,187	7	Wisconsin	2,705,549	26	466	32
Kentucky	8,256,074	13	1,848	8	Ohio	5,326,263	20	456	33
Massachusetts	12,482,804	10	1,810	9	Michigan	4,479,356	21	448	34
Arizona	12,607,250	9	1,762	10	Minnesota	2,198,324	27	392	35
New Hampshire	1,958,784	31	1,445	11	Louisiana	1,769,657	32	380	36
Hawaii	2,032,284	28	1,430	12	North Carolina	3,705,984	22	357	37
Texas	40,166,684	1	1,402	13	New York	6,659,545	17	341	38
Washington	9,453,066	12	1,257	14	Nebraska	628,008	40	326	39
Colorado	5,645,678	18	993	15	South Dakota	286,101	44	325	40
Pennsylvania	12,651,791	8	988	16	Tennessee	2,011,272	29	297	41
California	36,229,389	2	916	17	Kansas	854,241	38	293	42
Maine	1,190,259	37	890	18	Wyoming	146,190	49	253	43
Oklahoma	3,254,168	24	826	19	Montana	224,764	45	212	44
Vermont	463,587	42	740	20	North Dakota	154,523	47	203	45
Florida	15,424,957	4	726	21	Oregon	703,224	39	168	46
New Mexico	1,514,726	36	723	22	Delaware	126,254	50	131	47
South Carolina	3,403,078	23	670	23	Idaho	200,507	46	115	48
Nevada	1,973,671	30	652	24	Arkansas	304,755	43	101	49
Georgia	6,675,259	16	635	25	West Virginia	147,736	48	82	50
U.S. Total	336,167,236		1,027						

Source: Federal Procurement Data System, Bureau of the Census, IHS Markit Economics

Retail Trade in Connecticut

Consumer spending on goods and services, ranging from pencils to refrigerators to haircuts to electricity, accounted for approximately 68% of the nation's gross domestic product (GDP) in FY 2019. During the last decade, variations in retail trade closely matched variations in GDP growth, making retail trade an important barometer of economic health.

The North American Industry Classification System (NAICS) includes establishments that engage in selling merchandise for personal or household consumption and rendering services incidental to the sale of the goods in the retail trade industry. The NAICS codes for retail trade are from NAICS 44 to NAICS 45. In general, retail establishments are classified via these codes according to the principal lines of commodities sold (e.g., apparel, groceries) or the usual trade designation (e.g., liquor store, drug store).

The following table shows the major group in each NAICS code as well as the state's retail trade history for the past two fiscal years. Retail sales reflect the pulse of economic conditions: they perform strongly as the economy expands and perform poorly during a recession. Connecticut retail trade in FY 2019 totaled $60.1 billion, a 5.7% increase over FY 2018 and the ninth straight year of increased total trade.

TABLE 40
RETAIL TRADE IN CONNECTICUT
(In Millions)

NAICS	Industry	FY 2018	% of Total	FY 2019	% of Total	% Change
441	Motor Vehicle and Parts Dealers	$10,141	17.8%	$11,435	19.0%	12.8
442	Furniture and Home Furnishings Stores	2,004	3.5	2,043	3.4	2.0
443	Electronics and Appliance Stores	1,634	2.9	1,630	2.7	-0.2
444	Building Material and Garden Supply Stores	3,187	5.6	3,331	5.5	4.5
445	Food and Beverage Stores	10,588	18.6	10,873	18.1	2.7
446	Health and Personal Care Stores	4,291	7.5	4,124	6.9	-3.9
447	Gasoline Stations	3,729	6.6	3,792	6.3	1.7
448	Clothing and Clothing Accessories Stores	3,084	5.4	3,083	5.1	0.0
451	Sporting Goods, Hobby, Book and Music Stores	1,048	1.8	936	1.6	-10.6
452	General Merchandise Stores	5,523	9.7	5,465	9.1	-1.1
453	Miscellaneous Store Retailers	6,989	12.3	7,917	13.2	13.3
454	Nonstore Retailers	4,642	8.2	5451.4	9.1	17.4
	Total	56,861	100.0%	60,082	100.0%	5.7%
Durables (NAICS 441,442, 443, 444)		$16,966	29.8%	$18,439	30.7%	8.7%
Nondurables (All Other NAICS)		$39,895	70.2%	$41,643	69.3%	4.4%

Source: Connecticut Department of Revenue Services

Retail trade can be broken down into two major categories; durable and nondurable goods. Durable goods are items that are expected to last three years or more and include items such as automobiles, furniture, and appliances. Durable goods are normally big-ticket items that are sensitive to the overall economic

climate. Purchases of such goods increase when interest rates decrease or when consumers' incomes grow, and consumer confidence increases. Essentially, these transactions occur primarily when consumers feel the economy is on the right track and when more disposable income is being spent as the result of the price of borrowing going down or when consumers' earnings go up. This was the case in FY 2019 when durable goods sales grew by 8.7%. Nondurable goods have a shorter life span and include items such as food, gas, apparel, and other miscellaneous products. Sales of nondurable goods are typically less volatile as most items are deemed "necessities" and consumption is relatively insensitive to price variations. The previous table shows that Connecticut sales of nondurable goods grew by 4.4% in FY 2019.

In addition to the traditional transactions occurring in Connecticut-based "bricks and mortar" establishments, a significant amount of retail activity is also taking place over the internet. According to the U.S. Department of Commerce, in FY 2019 national retail e-commerce sales are estimated at $554.6 billion, accounting for 10.3% of total retail sales of $5,362.3 billion. Retail transactions through the internet in general have increased much faster than traditional brick and mortar sales. Estimated e-commerce retail sales rose by 12.6% in FY 2019 compared to a 2.5% increase for traditional retail sales. The estimate of e-commerce sales does not include travel agencies, financial services, manufacturers, and wholesalers.

Historically, the U.S. Supreme Court forbade states from forcing retailers to collect sales tax unless the seller had a physical presence in the state where the purchase was made (physical nexus). The U.S. Supreme Court overturned the prior ruling in June 2018 in *South Dakota v. Wayfair, Inc.*, where it ruled that vendors with more than 200 transactions or sales over $100,000 to residents of South Dakota constituted an economic nexus. In anticipation of the *Wayfair* decision, Public Act 18-152 made remote sellers that make at least $250,000 in sales and more than 200 retail transactions to Connecticut residents liable to collect sales tax effective December 1, 2018. The recently enacted Public Act 19-117, effective July 1, 2019, lowered the threshold for the sales tax physical nexus and broadened its application. The new law lowers the threshold to 200 transactions and $100,000 in sales. It also expanded its coverage to include sellers making retail sales of services.

The exact amount of the sales tax gap in Connecticut from online sales is difficult to determine as many retailers that have established internet sales channels have physical nexus in Connecticut. Moreover, one key online retailer, Amazon, began collecting sales tax in Connecticut on November 1, 2013, after it reached an agreement with the state that involved constructing a $50 million distribution center in Windsor. The *Wayfair* ruling, in conjunction with Public Act 19-117, is expected to enable Connecticut to close a significant portion of any remaining sales tax gap from online sales.

Currently, state and local governments as well as the private sector have undertaken a joint effort referred to as the Streamlined Sales Tax Project (SSTP). The project's aim is to fundamentally restructure the national sales tax system by creating a uniform taxable base, thereby simplifying tax administration among the states. The Streamlined Sales and Use Tax Agreement went into effect in October of 2005. As of December 2019, 23 of the 44 states who have authorized participation in SSTP have enacted legislation to fully comply with the agreement to become full-member states, including New Jersey, Rhode Island, and Vermont. Connecticut is currently one of the 44 states referred to as a participant state, as it has not enacted legislation to modify its sales tax.

Retail trade as a percentage of disposable income in Connecticut remained relatively flat over FY 2019 and FY 2018 at 25.3%. The state's per capita disposable income of $66,509 in FY 2019 was 35.9% above the national average of $48,956. In FY 2019, Connecticut per capita retail trade was estimated at $16,819.

TABLE 41

RETAIL SALES IN CONNECTICUT BY EMPLOYEES AND ESTABLISHMENTS

	Sales ($M)	Number of Employees	Per Employee Sales ($ 000's)	Per Number of Establish.	Employees Per Establish.	Annual Payroll ($M)
2007	52,165.5	196,133	266.0	13,807	14.2	5,160.4
2012	51,632.5	182,528	282.9	12,597	14.5	4,974.5
Growth (%)	(1.0)	(6.9)	6.3	(8.8)	2.0	(3.6)

Source: U.S. Department of Commerce, 2007 and 2012 Economic Census

According to the 2012 economic census on retail sales, a survey that is done once every five years by the U.S. Department of Commerce, Connecticut had $51.6 billion of retail sales, down from $52.2 billion in 2007. Although the retail trade sector is one of the major sources of jobs in the Connecticut economy, the number of establishments and employment within the sector has declined. In 2012, the sector had 12,597 establishments with 182,528 employees, down from 13,807 establishments and 196,133 employees in 2007.

Nonfinancial Debt

For many years, national attention has been focused on the issue of the federal budget and trade deficits, as well as the level of indebtedness of domestic nonfinancial entities. Domestic Nonfinancial Debt (DNFD) is the aggregate net indebtedness of all nonfinancial borrowers in the United States. It includes the borrowings of all levels of government, business and households. It excludes the debt of foreigners and the liabilities of financial intermediaries such as commercial banks, thrift institutions and finance companies.

The following table shows the 28-year history from 1990 to 2018 for total DNFD and each of its four components – households, businesses, federal government, and state and local governments. In 2018, the year-end total domestic nonfinancial debt outstanding was $51,858.2 billion, approximately 2.5 times GDP. Total non-financial debt between 2000 and 2018 has grown 171.2%, outpacing the growth in GDP of 100.2%.

By 2018, of the total $51.9 trillion nonfinancial debt outstanding, the federal government accounted for 34.4%, followed by households at 30.1%, nonfinancial business at 29.5%, and state and local governments at 5.9%. However, debt outstanding in the private sector accounted for 59.7% of the total in 2018, down from 72.3% in 2000. Due to the financial crisis, deficit spending has led the federal government to overtake the household sector in total outstanding nonfinancial debt.

Household Borrowing

Household borrowing, which includes home mortgages, consumer credit, and other miscellaneous items, totaled $15.6 trillion by the end of 2018. Of this sum, home mortgage loans accounted for $10.3 trillion, or 66.2% of household borrowing, followed by consumer credit at $4.0 trillion, or 25.7%, and the remainder in other miscellaneous items.

TABLE 42
DOMESTIC NON-FINANCIAL DEBT (DNFD) OUTSTANDING BY SECTOR IN THE U.S.
In Billions of Dollars at Yearend

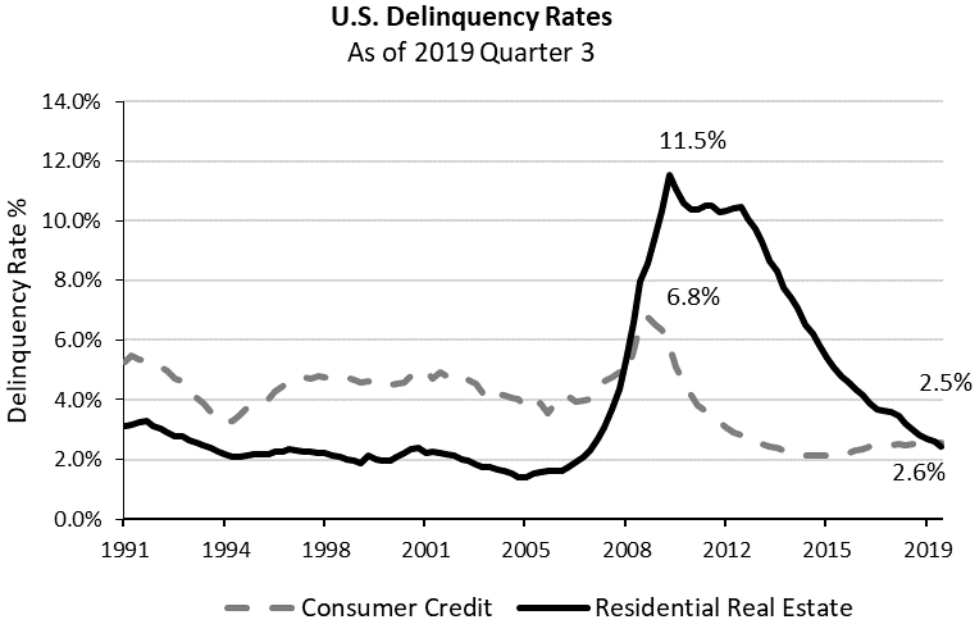
Private Sector	1990	2000	2010	2018	2018 % of Total	Growth (1990 to 2000)	Growth (2000 to 2018)
Households							
Home Mortgages	$2,489.3	$4,816.8	$9,993.5	$10,331.2	19.9%	93.5%	114.5%
Consumer Credit	824.4	1,741.3	2,646.8	4,008.9	7.7%	111.2%	130.2%
Other	310.4	681.6	1,096.9	1,272.5	2.5%	119.6%	86.7%
Total - Households	$3,624.0	$7,239.7	$13,737.2	$15,612.6	30.1%	99.8%	115.7%
Business							
Mortgages	$1,213.0	$1,737.0	$3,528.7	$4,618.1	8.9%	43.2%	165.9%
Corporate Bonds	1,008.2	2,288.3	3,380.5	5,524.8	10.7%	127.0%	141.4%
Other	1,554.7	2,565.6	3,113.6	5,179.2	10.0%	65.0%	101.9%
Total - Business	$3,775.9	$6,591.0	$10,022.9	$15,322.2	29.5%	74.6%	132.5%
Total - Private Sector	$7,399.9	$13,830.7	$23,760.0	$30,934.8	59.7%	86.9%	123.7%
Public Sector							
Federal Government*	$2,830.8	$4,090.0	$10,528.6	$17,865.0	34.4%	44.5%	336.8%
State & Local Gov't	987.4	1,197.9	3,200.0	3,058.4	5.9%	21.3%	155.3%
Total - Public Sector	$3,818.2	$5,287.9	$13,728.6	$20,923.5	40.3%	38.5%	295.7%
Total DNFD	$11,218.1	$19,118.6	$37,488.6	$51,858.2	100.0%	70.4%	171.2%
GDP, 4th Quarter	$6,004.7	$10,439.0	$15,240.8	$20,897.8		73.8%	100.2%
DNFD as a % of GDP	186.8%	183.1%	246.0%	248.2%			

*Excludes intra-governmental holdings of Treasury securities
Source: Board of Governors of the Federal Reserve System, IHS Economics

As shown in the following chart, delinquency rates on all residential real estate loans increased after the onset of the Great Recession as a correction related to sub-prime and Alt-A mortgages (mortgages that are riskier than prime, but less risky than subprime mortgages) engulfed consumers. From an average rate of 2.3% from 1991 to mid-2008, delinquency rates reached a high of 11.5% in the first quarter of 2010. The increase was due to plunging housing prices coupled with reset provisions on certain mortgages and a slowdown in the economy. By the third quarter of 2019, this figure fell to 2.5% as the national expansion from the Great Recession continued.

Consumer credit, not secured by real estate, is comprised of non-revolving credit (such as automobile and personal loans) and revolving credit (which includes credit card debt and store charges). Over the years, consumer credit has helped finance a large expansion in spending for consumer non-durables as more

consumers rely on credit cards for making purchases online. After averaging 4.4% from 1991 to mid-2008, delinquency rates on credit card loans have improved to 2.6% in the third quarter 2019 from 6.8% in mid-2009.



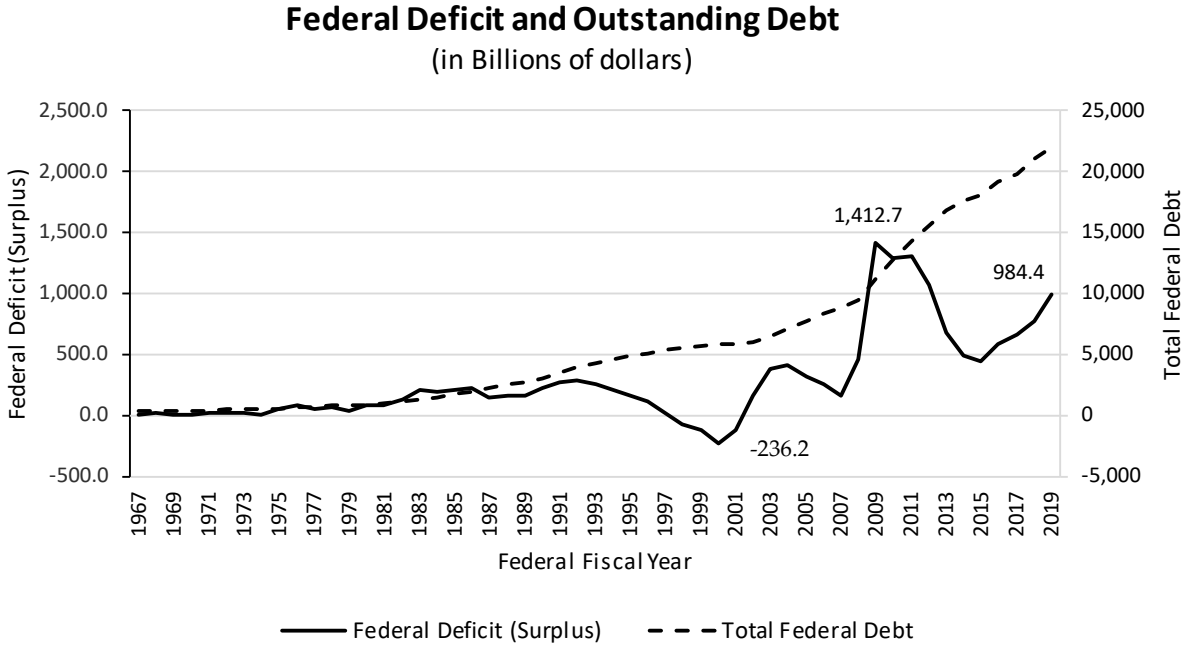
Source: Federal Reserve Bank of St. Louis

Business Borrowing

Business borrowings include debts owed by corporations, nonfarm corporations and farms. Total borrowings were $15.3 trillion at the end of 2018. Borrowing instruments include corporate bonds, commercial paper, municipal securities, bank loans, and mortgages. Mortgages, corporate bonds, and others were divided almost evenly among the total. Prior to the Great Recession, growth in business borrowings were driven by mortgages which grew 109.1% between 2000 to 2007, compared to 27.1% since 2007. After the Great Recession, growth in business borrowings
has been led by corporate bonds, which grew 92.5% between 2007 to 2016, compared to 25.4% between 2000 to 2007.

Government Borrowing

The U.S. federal budget has long been operating under deficits. The federal deficit started surging in the early 1980s from expansionary fiscal policy and tax cuts, intending to sacrifice a short-term loss in revenue for a long-term gain through more rapid economic growth. This expectation, however, was not fully realized and deficits persisted into the late 1990s.



Note: For the purposes of the above graph, federal deficits are expressed as positive numbers.
Source: Federal Reserve Board of St. Louis

As shown in the graph above, after registering deficits in most of the 1990s, the federal budget on a unified basis, which includes all operating and trust funds such as Social Security and Medicare programs, turned to a surplus in 1998 and peaked at $236.2 billion in federal fiscal year (FFY) 2000. Federal operations turned to deficits again in FFY 2002 reaching a high of $412.7 billion in FFY 2004 before slightly recovering. The onset of the Great Recession boosted federal spending for FFY 2009 through FFY 2012. Contributing factors included the $700 billion financial bailout known as the Troubled Asset Relief Program (TARP), and the $787 billion economic stimulus program, per the American Recovery and Reinvestment Act (ARRA), along with increases in Medicare, Medicaid, unemployment insurance, Social Security, and defense spending. At the same time, tax receipts declined due to the effects of the recession and tax cuts from the ARRA program. The federal deficit reached a high of $1,412.7 billion in FFY 2009 before dropping dramatically in FFY 2015 to $438.5 billion. Unfortunately, the 2017 Tax Cuts and Jobs Act did not sufficiently stimulate economic growth nor reduce federal expenditures to match federal revenues thereby exacerbating the federal deficit. The federal government in FFY 2019 spent an estimated $1.34 for every dollar it took in, an increase of 11.5% from $1.20 in FFY 2018. The federal deficit rose to $984.4 billion as of the end of FFY 2019. A rising federal deficit during a period of sustained economic expansion could limit the role of fiscal policy to stabilize the economy should an economic contraction occur.

As the federal operating budget continued to post a deficit, the national debt also increased. By the end of FFY 2019, gross debt outstanding registered $22.0 trillion, up 4.4% from FFY 2018. The U.S.'s deficit of 9.8% of GDP in FFY 2009 was a record high since WWII, declining to 2.4% in FFY 2015 but then increasing and currently standing at 4.6% in FFY 2019.

According to the U.S. Census Bureau's "State Government Finances," state government debt outstanding in Connecticut at the end of FY 2017, the latest available year, was $38.8 billion, compared to $37.0 billion in 2016 and $35.4 billion in 2015. Connecticut per capita state government debt has increased over the past three years, from $9,857 in FY 2015 to $10,844 in FY 2017. The fifty-state average increased from $3,742 in FY 2016 to $3,750 in FY 2017.

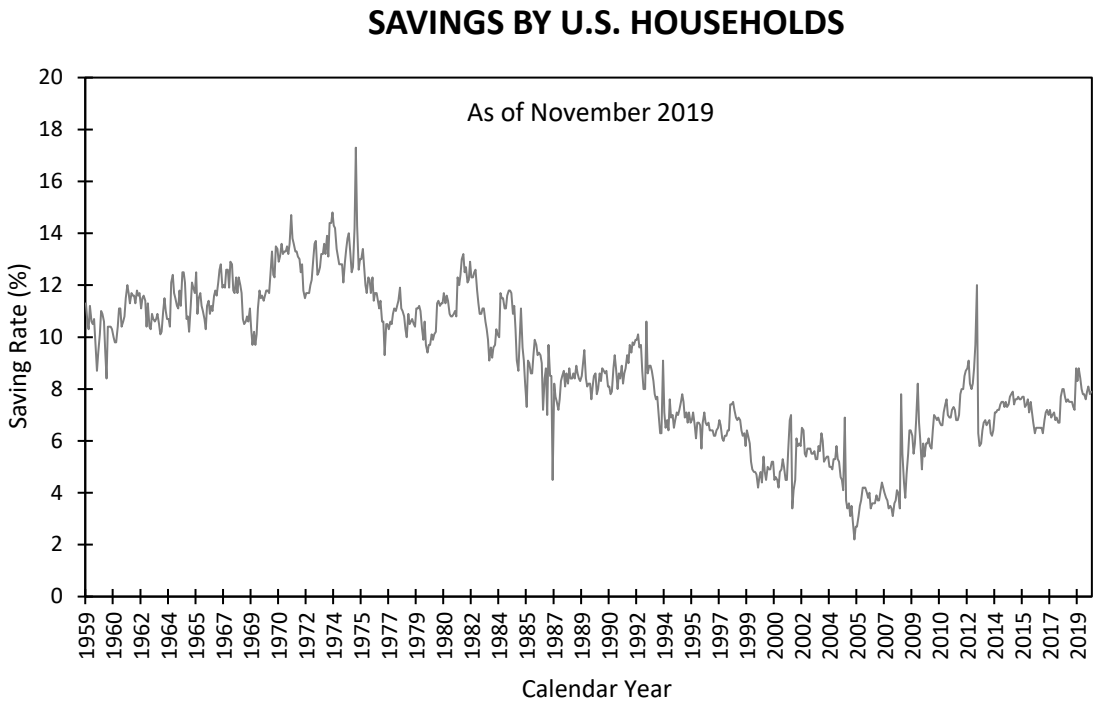
Connecticut's overall credit rating is determined by four major rating agencies: Moody's Investors Service, Standard & Poor's Corporation, Fitch Investors Service, Inc., and Kroll Bond Ratings. The table below shows how Connecticut's General Obligation bonds are rated as of December 2019. The rating process provides information for investors about risk. High ratings generally result in lower borrowing costs.

Agency	Rating	Outlook
Moody's Investors Service	A1	Stable
Standard & Poor's Corporation	A	Positive
Fitch Investors Service	A+	Stable
Kroll Bond Ratings	AA-	Stable

Note: Ratings as of December 2019

Savings by U.S. Households

The chart below shows the national savings rate (personal income less personal outlays and personal current taxes) for U.S. consumers from 1959 through November 2019. After remaining at an average of 11.6% between 1959 and 1980, the U.S. savings rate began trending down from a high of 13.2% in late 1981 to a low of 2.2% in mid-2005. The savings rate then climbed back up to 12.0% by December 2012 before falling to the current level of 7.9% in November 2019. The average savings rate for the past five years is 7.4%.



Source: U.S. Bureau of Economic Analysis, Federal Reserve Bank of St. Louis

Household Balance Sheet

The Federal Reserve Bank's "Flow of Funds Accounts" maintains statistics on the assets, liabilities, and net worth for the household sector. The table below shows these three components that comprise a balance sheet for 1970, 2007, and 2019, to evaluate the financial position of the nation's households.

TABLE 43
Balance Sheet of Households and Non-profit Organizations
In Billions of Dollars

	1970 In Real $*	% of Total	2007 In Real $*	% of Total	2019 Q3	% of Total	Average Growth**
Assets							
Real Estate	6,756.3	23.6%	31,758.6	30.3%	32,862.0	25.2%	3.3%
Stock related	9,066.0	31.6%	37,727.3	35.9%	54,433.1	41.8%	3.7%
Other	12,860.3	44.8%	35,484.5	33.8%	42,923.1	33.0%	2.5%
Time & Saving Deposits	3,574.6	12.5%	10,112.1	9.6%	13,358.6	10.3%	2.7%
Corporate Bonds	196.4	0.7%	1,473.5	1.4%	975.0	0.7%	3.3%
Gov't Securities***	963.0	3.4%	2,913.1	2.8%	4,524.4	3.5%	3.2%
Total	28,682.6	100.0%	104,970.4	100.0%	130,218.2	100.0%	3.1%
Liabilities							
Home Mortgages	1,884.9	59.7%	13,106.8	73.3%	10,517.4	64.2%	3.6%
Consumer Credit	880.8	27.9%	3,218.7	18.0%	4,129.5	25.2%	3.2%
Other	389.3	12.3%	1,565.0	8.7%	1,738.8	10.6%	3.1%
Total	3,155.0	100.0%	17,890.5	100.0%	16,385.8	100.0%	3.4%
Net Worth	25,527.6		85,159.3		113,832.4		3.1%
Net Home Equity	4,871.4		18,240.4		22,344.5		3.2%
As a % of Net Worth	19.1%		21.4%		19.6%		
Per Capita Net Worth ($)	123,706.2		280,747.4		344,585.7		2.1%
As a % of Total Assets							
Home Mortgages	6.6%		12.5%		8.1%		
Liabilities	11.0%		17.0%		12.6%		
Net worth	89.0%		83.0%		87.4%		

Note:
* Real dollar is calculated by using the estimated CPI-U for 2019
** Compound annual growth rate from 1970 through 2019 Q3
*** Includes Treasury and Municipal securities

Source: Board of Governors of the Federal Reserve System

Assets

Total assets can be categorized into three components: real estate assets, stock related assets, and other assets (including bank deposits, bonds, money market fund shares, and consumer durable goods). In the third quarter of 2019, household assets totaled $130.2 trillion with real estate comprising 25.2% of total assets, stocks 41.8%, and the remaining 33.0% in other assets. In 1970, real estate comprised 23.6% of

total assets, stocks 31.6%, and all other assets 44.8%. This reflects that stock related assets rose in importance over the past four and a half decades relative to real estate and other assets.

From 1955 to 1970, total assets grew at a compound annual growth rate of 3.7%. Total asset growth then slowed slightly in 1970 with a compound annual growth rate of 3.6% through 2007 when real assets reached a peak of $105.0 trillion just prior to the onset of the Great Recession. During that recession total real assets declined sharply falling to $88.8 trillion before recovering to $130.2 trillion by 2019 Q3.

Liabilities

Household liabilities totaled $16.4 trillion in the third quarter of 2019. Home mortgages accounted for 64.2% of the total with consumer credit at 25.2% and other liabilities at 10.6%. This compared to 59.7%, 27.9%, and 12.3%, respectively, in 1970, reflecting a much faster growth in home mortgage borrowings. From 1970 to 2007 total liabilities grew at a compound annual growth rate of 4.8%, as financial vehicles such as home equity loans and credit cards became popular. Between 2002 and 2007, the compound annual growth rate in home mortgages, supported by extraordinarily favorable mortgage rates and an aggressive mortgage lending strategy, was 8.9%, outpacing growth in consumer credit (2.5%) and driving growth in total liabilities (7.4%). Consumer credit primarily includes auto loans, personal loans, and credit card balances. Since the Great Recession annual growth in total liabilities declined to -0.8%.

Net Worth

Net worth (assets less liabilities) measures the resulting financial condition of consumers, which affects the overall economy through its wealth impact on consumers' spending and business activities. Net worth totaled $113.8 trillion in the third quarter of 2019. When measured in 2019 dollars, real net worth grew from $25.5 trillion in 1970 to a pre-recession peak of $87.1 trillion in 2007, before declining to $73.1 trillion in 2008. Per capita real net worth increased from $123,706 in 1970 to $344,586 in 2019, with an annual growth rate of 2.1%.

Over time, the growth in household net worth has coincided with the additional burden of greater liabilities. In 1970 liabilities accounted for 11.0% of total assets, yet by 2019 they had risen to 12.6% of assets. The primary driver of this change was an increase in home mortgage liability. Indeed, the ratio of home mortgages to total assets grew from 6.6% in 1970, to 12.5% in 2007, before falling to 8.1% in 2019. The increasing use of debt to finance American lifestyles has also increased the proportion of income that must be devoted to repaying that debt. Debt service, which consists of the required payments on outstanding mortgage and consumer debt, as a percentage of disposable personal income has gradually risen from 10.6% in 1980, the earliest available data, to 13.2% in the fourth quarter of 2007. Debt service has since declined to 9.7% as of second quarter 2019, a result of lower interest rates due to the onset of the Great Recession and the expansionary monetary policy implemented by the Federal Reserve.

PERFORMANCE INDICATORS

This section examines trends in various economic performance indicators for the United States, the New England region and Connecticut. Statistics are provided demonstrating the economic performance of these areas and showing their strengths and weaknesses.

Gross Product

Gross Domestic Product (GDP) is a measure of domestic production produced by the Bureau of Economic Analysis (BEA). GDP is "the market value of the final goods and services produced by labor and property in the United States." GDP is comprised of:

- personal consumption expenditures;
- government consumption expenditures and gross investment;
- gross private domestic investment; and
- net exports of goods and services.

While GDP measures economic activity in a geographical area, Gross National Product (GNP) measures the economic activity produced by residents of that area. Unlike Gross Domestic Product, GNP adjusts for income derived from domestic investments in foreign companies and foreign investments in domestic companies. GDP measures all economic activity within a territory and is consistent with other economic indicators such as employment and shipments of manufactured goods.

Because prices of goods and services change over time, nominal GDP will change even if there is no difference in physical output. To measure changes in real output, GDP is adjusted by an index of the general price level and expressed in constant dollars. The Bureau of Economic Analysis uses a chained dollars inflation index to provide an "apples-to-apples" comparison between years, currently based on calendar year 2012.

A state's economic activity is measured using Gross State Product (GSP). Like GDP, GSP is the current market value of all final goods and services produced by labor and property in a state. In FY 2019, the State of Connecticut produced an estimated $280.5 billion in goods and services - $246.8 billion in calendar year 2012 dollars. This was an estimated increase of 3.2% in current dollars and an approximate 1.0% increase in real dollars over FY 2018. Overall growth in Connecticut GSP lagged both the region and the nation. Since FY 2009, the nadir of the most recent recession, nominal gross product has increased 18.6% in Connecticut, 37.5% in New England, and 44.6% in the nation through FY 2019. In real terms, Connecticut's GSP was 1.5% below its FY 2009 level in FY 2019, as growth in the state has been insufficient to keep up with inflation. The following table provides data on the recent ten year history of gross state product for the three regions.

TABLE 44
GROSS PRODUCT

Millions of Current Dollars

Fiscal	United States*		New England*		Connecticut	
Year	Dollars	% Growth	Dollars	% Growth	Dollars	% Growth
2010	14,673,945	1.0	825,296	2.1	236,684	0.0
2011	15,275,694	4.1	849,084	2.9	236,701	0.0
2012	15,890,081	4.0	874,643	3.0	240,138	1.5
2013	16,455,883	3.6	897,542	2.6	245,412	2.2
2014	17,117,337	4.0	916,036	2.1	246,558	0.5
2015	17,943,788	4.8	963,380	5.2	255,747	3.7
2016	18,439,269	2.8	997,329	3.5	262,158	2.5
2017	19,086,427	3.5	1,024,747	2.7	265,246	1.2
2018	20,050,988	5.1	1,066,363	4.1	271,815	2.5
2019	21,021,663	4.8	1,111,623	4.2	280,546	3.2
% Increase ('10 to '19)		43.3		34.7		18.5

Constant Dollars**

Fiscal	United States*		New England*		Connecticut	
Year	Dollars	% Growth	Dollars	% Growth	Dollars	% Growth
2010	15,379,426	0.4	860,329	1.0	247,514	(1.2)
2011	15,740,111	2.3	875,612	1.8	244,716	(1.1)
2012	16,038,258	1.9	884,389	1.0	242,883	(0.7)
2013	16,311,487	1.7	888,181	0.4	242,763	(0.0)
2014	16,663,337	2.2	886,994	(0.1)	238,199	(1.9)
2015	17,218,346	3.3	911,935	2.8	241,408	1.3
2016	17,532,095	1.8	926,481	1.6	243,089	0.7
2017	17,876,402	2.0	938,080	1.3	242,626	(0.2)
2018	18,380,603	2.8	958,570	2.2	244,228	0.7
2019	18,866,352	2.6	978,376	2.1	246,788	1.0
% Increase ('10 to '19)		22.7		13.7		(0.3)

* Sum of States' Gross State Products.

** Reported in calendar year 2012 chained dollars

Source: Bureau of Economic Analysis

As growth in some sectors in the economy will outpace other sectors, the composition of gross product will change over time. This is true of both the nation as well as Connecticut. Between FY 2010 and FY 2019, the contribution to Connecticut's GSP from construction & mining; transportation, trade and utilities; information; professional and business services; and healthcare and education; leisure & hospitality; government; and other services increased, while agriculture, forest & fisheries; manufacturing and FIRE (Finance, Insurance, and Real Estate) fell. The FIRE and manufacturing sectors have historically played an outsized role in Connecticut's economy. However, in FY 2019, professional and business services and transportation, trade, and utilities exceeded the manufacturing sector's contribution to Connecticut's GSP. Manufacturing's contribution to national gross domestic product also decreased between FY 2010 and FY 2019. Connecticut GSP as a portion of national GDP decreased between FY 2010 and FY 2019, from 1.6 to 1.3 percent.

TABLE 45
GROSS PRODUCT BY SOURCE
(In Billions of Current Dollars)

	FY 2010				FY 2019			
Industry	U.S.	%	CT	%	U.S.	%	CT	%
Agriculture, Forest & Fisheries	137.0	0.9	0.4	0.1	162.8	0.8	0.3	0.1
Construction & Mining	824.8	5.6	6.9	2.9	1,205.0	5.7	8.7	3.1
Manufacturing	1,745.5	11.9	28.3	12.0	2,348.6	11.2	30.1	10.7
Transportation, Trade & Utilities	2,374.8	16.2	33.4	14.1	3,401.0	16.2	41.8	14.9
Information	733.1	5.0	10.5	4.4	1,096.2	5.2	14.4	5.1
Finance, Insurance & Real Estate	2,917.2	19.9	74.2	31.3	4,399.1	20.9	78.3	27.9
Professional & Business Services	1,707.8	11.6	25.5	10.8	2,657.7	12.6	34.5	12.3
Health Care & Education	1,287.6	8.8	22.9	9.7	1,835.9	8.7	29.3	10.4
Leisure & Hospitality	541.4	3.7	6.8	2.9	880.6	4.2	9.6	3.4
Other Services	325.2	2.2	4.3	1.8	447.5	2.1	5.5	2.0
Government	2,079.5	14.2	23.5	9.9	2,587.2	12.3	28.1	10.0
Total	14,673.9	100.0	236.7	100.0	21,021.7	100.0	280.5	100.0
Broadly Defined Services*		51.2		60.9		53.8		61.1
CT as a % of U.S. Total GDP			1.6				1.3	

Source: Bureau of Economic Analysis

Broadly defined services in the private sector, which include information, professional and technical services, health care and education, FIRE, leisure and hospitality, and other services, increased only slightly to 61.1% of total GSP in FY 2019, up from from 60.9% in FY 2010. During this period, the contribution to GDP from services for the nation also increased to 53.8% of GDP in FY 2019 from 51.2% in FY 2010. Theoretically, Connecticut and the nation's increasingly service-based economies should smooth the business cycle, resulting in longer and shallower recessions and expansions. Activities in service sectors are less susceptible to pent-up demand, less subject to inventory-induced swings, less intensive in capital requirements, and somewhat less vulnerable to foreign competition than the manufacturing sector. Connecticut began moving toward services sooner than the nation as a whole.

Productivity

Gains in gross product may or may not fully reflect a change in the livelihoods of a territory's residents. While gross product may rise, population growth may consume those gains. Therefore, real per capita gross product, which takes into account both increases in population and inflation, provides a better measure of the standard of living among differing economies and the productivity of their residents. The following table shows real per capita gross product, in chained 2012 dollars, for the United States, New England, and Connecticut. In FY 2019, Connecticut's productivity as measured by GSP per capita was 20.6% higher than the United States as a whole. This level was significantly below where it was at the beginning of the recession and continues to register a somewhat steady decrease in the difference of real GSP per capita between Connecticut and the nation; Connecticut was 41.7% higher than the nation as a whole in FY 2007 and 39.1% higher in FY 2010. Connecticut's decline in real GSP per capita from FY 2010 to 2019 is likely tied to the reduction of two high value-added sectors, manufacturing and finance, insurance, and real estate, as a share of the entire state economy during that period.

TABLE 46
REAL PER CAPITA GROSS PRODUCT
(In Chained 2012 Dollars)

	United States		New England		Connecticut		
Fiscal Year	Real GSP Per Capita	% Change	Real GSP Per Capita	% Change	Real GSP Per Capita	% Change	As a % of the U.S.
2010	$49,796.9	(0.5)	$59,575.3	0.6	$69,287.0	(1.7)	139.1%
2011	$50,579.0	1.6	$60,353.6	1.3	$68,264.0	(1.5)	135.0%
2012	$51,170.7	1.2	$60,707.5	0.6	$67,613.9	(1.0)	132.1%
2013	$51,683.2	1.0	$60,735.0	0.0	$67,532.9	(0.1)	130.7%
2014	$52,426.5	1.4	$60,420.5	(0.5)	$66,265.1	(1.9)	126.4%
2015	$53,779.5	2.6	$61,961.2	2.6	$67,246.4	1.5	125.0%
2016	$54,367.4	1.1	$62,833.2	1.4	$67,873.4	0.9	124.8%
2017	$55,064.2	1.3	$63,464.2	1.0	$67,865.3	0.0	123.2%
2018	$56,265.2	2.2	$64,693.9	1.9	$68,369.2	0.7	121.5%
2019	$57,366.4	2.0	$65,932.1	1.9	$69,174.4	1.2	120.6%

Source: Bureau of Economic Analysis, IHS

Total Personal Income

Total personal income, defined as current income received by persons from all sources including public and private transfer payments but excluding transfers among persons, is a reliable measure of economic performance. Total personal income captures the manufacturing sector through manufacturing wages; the nonmanufacturing sector through wages in such areas as government, wholesale/retail trade, utilities, transportation, mining, and personal services; the private sector through proprietors' income; and a part of agricultural activity via farm properties' income. Personal income is approximately 87% of Gross Domestic Product; hence, the two are well correlated.

The U.S. Department of Commerce defines the various sources of personal income as the following:

Wages and Salaries - the monetary remuneration of employees, including the compensation of corporate officers; commissions, tips and bonuses; and receipts in kind that represent income to the recipient. Wages and salaries are measured before deductions such as social security contributions and union dues.

Other Labor Income - consists primarily of employer contributions for employee pension and insurance funds and employer contributions for government social insurance.

Property Income - income from dividends, interest and rents.

Dividends are payments in cash or other assets, excluding stock, by corporations organized for profit, to non-corporate stockholders who are U.S. residents.

Interest is the monetary and imputed interest income of persons from all sources. Imputed interest represents the income received by financial intermediaries from funds entrusted to them by persons reduced by the original amount of funds that are disbursed back to persons. Part of imputed interest reflects the value of financial services rendered without charge to persons by depository institutions. The remainder is property income held by life insurance companies and private non-insured pension funds on behalf of persons; one example is the additions to policyholder reserves held by life insurance companies.

Rental income is the monetary income of persons (except those primarily engaged in the real estate business) from the rental of real property (including mobile homes); the imputed net rental income of owner-occupants of nonfarm dwellings; and the royalties received by persons from patents, copyrights, and rights to natural resources.

Proprietors' Income - the income, including income-in-kind, of sole proprietorships and partnerships and of tax-exempt cooperatives. The imputed net rental income of owner occupants of farm dwellings with certain adjustments is included.

Transfer Payments - income payments to persons, generally in monetary form, for which they do not render current services. These include payments by the government and business to individuals and nonprofit institutions.

Personal Contributions to Social Insurance - contributions made by individuals under the various social insurance programs. Payments by employees and the self-employed (farm and nonfarm) are included as well as contributions that are sometimes made by employers on behalf of their employees (i.e., those customarily paid by the employee but, under special arrangement, paid by the employer).

According to data recorded by the U.S. Bureau of Economic Analysis, personal income for Connecticut residents during FY 2019 was $278.8 billion, a 5.1% increase over FY 2018. Total personal income in Connecticut increased 28.2% from FY 2010 to FY 2019. For the United States, total personal income increased 49.0%, and in the New England region, the increase for the same period was 40.2%.

The following table shows personal income for the United States, the New England region, and Connecticut.

TABLE 47
PERSONAL INCOME
(In Millions)

Fiscal	United States		New England		Connecticut	
Year	Dollars	% Growth	Dollars	% Growth	Dollars	% Growth
2010	12,233,031	0.10	735,667	1.70	217,449	1.63
2011	12,965,849	5.99	772,227	4.97	226,072	3.97
2012	13,653,513	5.30	799,069	3.48	231,022	2.19
2013	14,111,069	3.35	813,386	1.79	231,005	(0.01)
2014	14,529,557	2.97	827,207	1.70	232,674	0.72
2015	15,400,087	5.99	874,152	5.68	242,769	4.34
2016	15,918,524	3.37	905,575	3.59	247,847	2.09
2017	16,467,944	3.45	933,829	3.12	252,838	2.01
2018	17,356,711	5.40	982,753	5.24	265,373	4.96
2019	18,230,663	5.04	1,031,537	4.96	278,824	5.07

Source: Bureau of Economic Analysis, IHS

Connecticut's sources of personal income vary slightly from those of the United States, with wages and employee salaries accounting for approximately 48.7% of total personal income compared to 49.9% for the nation in FY 2019. The following table shows the sources of personal income for the United States and Connecticut over a ten fiscal year period. The table indicates a shift from manufacturing wages to other sources of income including property income and transfer payments.

TABLE 48
SOURCES OF PERSONAL INCOME
(In Billions of Dollars)

	Fiscal Year 2010				Fiscal Year 2019			
	U.S.	%	CT	%	U.S.	%	CT	%
Manufacturing Salaries & Wages	657.7	5.4	13.0	6.0	898.6	4.9	15.5	5.5
Nonmanufacturing Salaries & Wages	5,619.4	45.9	92.6	42.6	8,205.7	45.0	120.3	43.2
Proprietors Income	1,024.6	8.4	36.5	16.8	1,617.1	8.9	32.5	11.7
Property Income	2,129.9	17.4	38.0	17.5	3,751.2	20.6	63.2	22.7
Other Labor Income	1,528.0	12.5	24.4	11.2	2,082.0	11.4	31.0	11.1
Transfer Payments (Less Social Insurance)	1,273.5	10.4	13.0	6.0	1,676.1	9.2	16.3	5.9
Total	12,233.0	100.0	217.4	100.0	18,230.7	100.0	278.8	100.0

Note: Totals may not agree with detail due to rounding.
Source: Bureau of Economic Analysis, IHS

Per Capita Personal Income

One of the more important single indicators of a state's performance is the growth in per capita personal income. Per capita income is total personal income divided by the population. On a per capita basis, personal income growth in Connecticut increased 28.4% from FY 2010 to FY 2019, compared to a national increase of 40.3% and a New England region increase of 36.5%.

Per capita personal income in Connecticut for the most recent fiscal year was 12.4% higher than for the New England region and 40.5% higher than for the United States. Connecticut's per capita personal income continues to be at a higher level than that of the nation and New England due to the concentration of relatively high paying manufacturing industries, major corporate headquarters within the state, and the financial services sector.

The following table shows the growth in per capita personal income for ten fiscal years for the United States, the New England region and Connecticut.

TABLE 49
PER CAPITA PERSONAL INCOME

Fiscal	United States		New England		Connecticut	
Year	Dollars	% Growth	Dollars	% Growth	Dollars	% Growth
2010	39,636	(0.78)	50,943	1.27	60,871	1.16
2011	41,698	5.20	53,228	4.48	63,063	3.60
2012	43,593	4.54	54,851	3.05	64,312	1.98
2013	44,734	2.62	55,620	1.40	64,262	(0.08)
2014	45,750	2.27	56,348	1.31	64,728	0.73
2015	48,132	5.21	59,394	5.41	67,625	4.48
2016	49,401	2.64	61,415	3.40	69,202	2.33
2017	50,768	2.77	63,177	2.87	70,722	2.20
2018	53,208	4.81	66,326	4.98	74,289	5.04
2019	55,619	4.53	69,515	4.81	78,154	5.20

Source: Bureau of Economic Analysis, U.S. Census Bureau, IHS

The following table shows per capita income for each of the fifty states with their corresponding ranking for FY 2019. In 2019, Connecticut ranked number one in the nation based on per capita personal income. Connecticut's figure of $78,154 for per capita personal income is approximately 40.5% higher than the national average.

TABLE 50
PER CAPITA PERSONAL INCOME BY STATE
(Fiscal 2019)

State	Per Capita Income	Rank	State	Per Capita Income	Rank
Connecticut	**$78,154**	**1**	Iowa	$51,411	26
Massachusetts	73,567	2	Texas	51,393	27
New York	70,113	3	Florida	51,113	28
New Jersey	69,798	4	Nevada	50,068	29
California	65,348	5	Maine	49,894	30
Maryland	64,595	6	Ohio	49,728	31
Washington	63,476	7	Michigan	49,363	32
New Hampshire	62,748	8	Missouri	48,633	33
Wyoming	61,957	9	Montana	48,207	34
Alaska	61,007	10	Indiana	47,857	35
Colorado	59,894	11	Tennessee	47,837	36
Virginia	59,026	12	Georgia	47,372	37
Minnesota	58,600	13	Utah	47,324	38
Illinois	57,955	14	Louisiana	47,260	39
Pennsylvania	57,650	15	Oklahoma	47,182	40
Hawaii	56,484	16	North Carolina	46,969	41
North Dakota	56,484	17	Arizona	45,203	42
Rhode Island	55,784	18	Idaho	44,636	43
Vermont	55,608	19	South Carolina	44,476	44
Nebraska	53,899	20	Arkansas	44,077	45
Delaware	53,363	21	Kentucky	43,223	46
South Dakota	53,019	22	Alabama	43,046	47
Wisconsin	52,669	23	New Mexico	42,772	48
Kansas	52,341	24	West Virginia	41,889	49
Oregon	51,991	25	Mississippi	38,625	50
U.S. Average	55,639				

Source: Bureau of Economic Analysis, U.S. Census Bureau, IHS

Inflation and Its Effect on Personal Income

Inflation is defined as a rise in the general price level (or average level of prices) of all goods and services, or equivalently a decline in the purchasing power of a unit of money. The general price level varies inversely with the purchasing power of a unit of money. Hence, when prices increase purchasing power declines.

To take into account the erosion of purchasing power due to increasing prices, income is deflated by a consumer price index. The Consumer Price Index (CPI) is a measure of the average change in prices over time for a fixed market basket of goods and services. The Bureau of Labor Statistics publishes CPI's for two population groups: a CPI for All Urban Consumers (CPI-U) which covers approximately 80 percent of the total population; and a CPI for Urban Wage Earners and Clerical Workers (CPI-W) which covers 32 percent of the total population and is a subset of the CPI-U population. The CPI-U includes, in addition to wage earners and clerical workers, groups such as professional, managerial and technical workers, the self-employed, short-term workers, the unemployed, retirees and others not in the labor force.

The following table shows the Consumer Price Index for All Urban Consumers and its growth over a ten fiscal year period.

TABLE 51
THE U.S. CONSUMER PRICE INDEX
(1982-84=100)

Fiscal Year	CPI	% Growth
2010	216.8	0.98
2011	221.1	1.98
2012	227.6	2.94
2013	231.4	1.69
2014	235.0	1.56
2015	236.7	0.71
2016	238.2	0.67
2017	242.7	1.85
2018	248.1	2.25
2019	253.3	2.07

Source: U.S. Bureau of Labor Statistics, IHS Economics

The CPI is a weighted index that is based on prices of food (13.6%), apparel (3.0%), housing (33.9%), transportation (15.6%), medical care (8.5%), education (6.1%), and the other goods that people buy for day-to-day living (19.3%). In addition, all taxes directly associated with the purchase and use of items and services are included in the index. In calculating the index, price changes for the various items in 85 urban areas across the country are averaged together with weights which represent their importance in the spending of the appropriate population group. Local data is then combined to obtain a U.S. city average. Movements of the indexes from one month to another are usually expressed as percentage changes rather than changes in index points, because index point changes are affected by the level of the index in relation to its base period while percentage changes are not.

Real Personal Income

Real personal income is total personal income deflated by the Consumer Price Index, a measure of personal income that usually includes adjustments for changes in prices. The following table shows real personal income growth for the United States, the New England region, and Connecticut since the base period of 1982-84. These figures, because they take into account the effects of inflation, provide a better perspective on overall gains in personal income.

TABLE 52
REAL PERSONAL INCOME
(In Millions)

Fiscal	United States		New England		Connecticut	
Year	Dollars	% Growth	Dollars	% Growth	Dollars	% Growth
2010	5,643,549	(0.88)	339,390	0.71	100,317	0.64
2011	5,865,272	3.93	349,327	2.93	102,267	1.94
2012	6,000,133	2.30	351,157	0.52	101,524	(0.73)
2013	6,098,427	1.64	351,524	0.10	99,834	(1.66)
2014	6,183,080	1.39	352,019	0.14	99,015	(0.82)
2015	6,507,370	5.24	369,376	4.93	102,583	3.60
2016	6,681,439	2.67	380,095	2.90	104,028	1.41
2017	6,786,287	1.57	384,822	1.24	104,192	0.16
2018	6,995,355	3.08	396,083	2.93	106,955	2.65
2019	7,198,410	2.90	407,304	2.83	110,094	2.94

Source: Bureau of Economic Analysis, U.S. Bureau of Labor Statistics, IHS Economics

It is important to note that there are regional differences in prices. Local area CPI indexes are by-products of the national CPI program. Because each local index is a small subset of the national index, it has a smaller sample size and is therefore subject to substantially more sampling and other measurement error than the national index. For that reason, local area indexes show greater volatility than the national index in the short run, although their long-term trends are quite similar. Therefore, the national Consumer Price Index was utilized in the table above to provide the comparison among the United States, the New England region and Connecticut.

Real Per Capita Personal Income

Real per capita personal income is per capita personal income deflated by the Consumer Price Index and shows how individuals in a geographical entity have fared after adjusting for the effects of inflation. A comparison of the growth rates measures the relative economic performance of each entity as it adjusts personal income growth by population changes.

TABLE 53
REAL PER CAPITA PERSONAL INCOME

Fiscal	United States		New England		Connecticut	
Year	Dollars	% Growth	Dollars	% Growth	Dollars	% Growth
2010	18,299	(1.72)	23,502	0.28	28,082	0.18
2011	18,876	3.15	24,078	2.45	28,528	1.59
2012	19,171	1.56	24,105	0.11	28,262	(0.93)
2013	19,349	0.93	24,038	(0.28)	27,772	(1.73)
2014	19,478	0.67	23,979	(0.24)	27,545	(0.82)
2015	20,351	4.48	25,097	4.66	28,575	3.74
2016	20,745	1.94	25,778	2.71	29,046	1.65
2017	20,931	0.90	26,035	1.00	29,144	0.34
2018	21,455	2.50	26,732	2.68	29,941	2.74
2019	21,969	2.40	27,448	2.68	30,859	3.07

Source: U.S. Bureau of Labor Statistics, Bureau of Economic Analysis, IHS Economics

All figures derived by: $\frac{\text{Total Real Personal Income}}{\text{Population}}$

The previous table shows the growth in real per capita personal income for the United States, the New England region, and Connecticut.

TABLE 54
GROWTH IN REAL PER CAPITA PERSONAL INCOME
(Base Year: 1982-1984)

Fiscal	% Growth		% Cumulative Growth	
Year	United States	Connecticut	United States	Connecticut
1950-1960	30.5%	30.0%	30.5%	30.0%
1960-1970	37.7%	39.9%	79.7%	81.9%
1970-1980	15.7%	12.0%	107.9%	103.7%
1980-1990	21.1%	37.7%	151.8%	180.6%
1990-2000	16.0%	18.8%	192.2%	233.4%
2000-2010	4.5%	14.9%	205.5%	283.1%
2010-2019	20.1%	9.9%	266.9%	321.0%

Source: Bureau of Labor Statistics, Bureau of Economic Analysis, Census Bureau, IHS

The prior table highlights the cumulative growth in real per capita personal income over the past 69 years. During this 69-year period, Connecticut's cumulative growth in real per capita personal income exceeded that of the United States by 51.4 percentage points. However, since the global financial crisis in 2008, Connecticut's real personal income growth has been weak. Over the most current decade, Connecticut's real personal income growth has lagged behind the United States at only 9.9%. Even though job growth in the state has lagged that of the nation, Connecticut residents' income growth has out-performed that of the nation's over the long-term, but the gap between Connecticut and the nation is narrowing.

Cost of Living Index

Statistics regarding inflation and the cost of living for Connecticut are frequently requested by the public. The two indicators are not the same. An inflation index such as the CPI-U is used to measure purchasing power relative to its historical performance, while the cost of living index is used to measure purchasing power relative to one's geographical peers. In other words, the cost of living index is produced to measure the price level of consumer goods and services for a specific area relative to other jurisdictions at a given time.

A widely used index to measure cost of living differences among urban areas is the *ACCRA Cost of Living Index,* which is produced by The Council for Community and Economic Research (C2ER). This report includes indices for approximately 255 Metropolitan Statistical Areas (MSAs), Metropolitan Statistical Divisions, and Micropolitan Statistical Areas as defined by the U.S. Office of Management and Budget. In Connecticut, the C2ER survey includes the three urban areas from the following MSAs: Stamford in the Bridgeport-Stamford-Norwalk MSA, Hartford in the Hartford-West Hartford-East Hartford MSA, and New Haven in the New Haven-Milford MSA.

The following table shows the cost of living comparison for three neighboring cities: Boston in the Boston-Quincy MTD, Hartford in the Hartford-West Hartford-East Hartford MTA, and New York (Manhattan) in the New York-White Plains-Wayne NY-NJ MTD.

TABLE 55
COMPARISON OF COST OF LIVING

2019 Qtr. 2 Data MTA / MTD	Composite Index	Grocery Items	Housing	Utilities	Trans-portation	Health Care	Misc.*
Hartford, CT	119.3	106.4	124.6	125.0	113.5	104.5	121.8
Boston, MA	151.2	108.4	223.2	125.0	110.2	115.1	129.0
New York**, NY	242.5	138.4	506.9	125.6	128.5	110.9	136.2
Index Weights	100.00%	13.40%	29.34%	8.94%	9.22%	4.26%	34.84%

Note: * Denotes miscellaneous goods and services
** Manhattan

Source: The Council for Community and Economic Research (C2ER), *"ACCRA Cost of Living Index,"* Data for Quarter 2, 2019

The Cost of Living Composite Index is weighted by a "market basket" of approximately 57 goods and services for the typical professional and executive household. It is further broken down into six categories including grocery items, housing, utilities, transportation, health care, and miscellaneous goods and services to reflect the different categories of consumer expenditures. The index for the Hartford area, for example, was 119.3 according to data for the second quarter of 2019. Compared to the national index of 100, this shows that the overall living cost in the Hartford area was higher than the national average by 19.3% according to second quarter data for 2019. Among the six categories, the cost of utilities in the Hartford area was the most expensive item at 25.0% higher than the national average, followed by

housing at 24.6%, miscellaneous items at 21.8%, transportation at 13.5%, grocery items at 6.4%, and healthcare at 4.5%. The index, updated quarterly with an annual report published in January of the succeeding year, does not account for differences in state and local government taxes.

Based on second quarter data for 2019, many cities had a relatively higher cost of living than the Hartford area. These include, for example, New York City (Manhattan) at 242.5; San Francisco, California at 201.7; and Washington, D.C. at 163.4. Living costs in most cities in the southern and mountain west states are relatively low; for example, Pueblo, Colorado at 94.5; Meridian, Mississippi at 89.6; and San Antonio, Texas at 88.7. The cost of living in the Hartford area was comparable to other cities in the northeast such as Philadelphia, Pennsylvania; Newark, New Jersey; and Providence, Rhode Island, which registered at 110.2, 126.8, and 118.7, respectively. The cost of living index can provide useful information for relocation decisions. Individuals contemplating a job offer in a certain area may use this index as a guide to evaluate the financial merits of the move. For example, Hartford residents considering a move to New York City (Manhattan) would need a 103.3% increase in after-tax income to maintain their current lifestyle. On the other hand, New York City residents contemplating a move to Hartford could have a 50.8% reduction in after-tax income and still maintain their current standard of living.

The cost of living for metropolitan statistical areas within Connecticut also varies. According to quarter 2 data for 2019, the ACCRA cost of living index was 140.4 in the Stamford area, 119.3 in the Hartford area, and 121.3 in the New Haven area. These three statistical areas accounted for more than 80% of the state's total population. The following table demonstrates the relative index of the components for these three Connecticut regions.

TABLE 56
COMPARISON OF COST OF LIVING IN CONNECTICUT
Hartford, New Haven, and Stamford MTAs

2019 Qtr. 2 Data MSA	Composite Index	Grocery Items	Housing	Utilities	Trans-portation	Health Care	Misc.*
Hartford	119.3	106.4	124.6	125.0	113.5	104.5	121.8
New Haven	121.3	107.9	127.4	134.7	109.7	116.1	121.5
Stamford	140.4	108.7	183.8	139.2	123.3	111.1	124.4

Source: The Council for Community and Economic Research (C2ER), "*ACCRA Cost of Living Index,"* Data for Quarter 2, 2019

THE MAJOR REVENUE RAISING TAXES IN THE STATE OF CONNECTICUT

In FY 2018, Connecticut's General Fund derived 94 percent of its revenue from the collection of taxes. To provide an analysis of the overall tax burden on the individuals of each state, the following table was prepared for federal FY 2017. The table shows overall state tax collections as a percentage of personal income. In the table, note that Connecticut ranks 18th, signifying that in seventeen other states, a greater percentage of an individual's income is collected in state taxes than in Connecticut.

TABLE 57
STATE TAX COLLECTIONS AS A PERCENTAGE OF PERSONAL INCOME
FFY 2018*

State	Percentage	Rank	State	Percentage	Rank
North Dakota	9.98%	1	Montana	5.83%	26
Hawaii	9.80%	2	New Jersey	5.82%	27
Vermont	9.68%	3	North Carolina	5.82%	28
Delaware	8.31%	4	Washington	5.69%	29
Minnesota	8.27%	5	Pennsylvania	5.65%	30
Arkansas	7.55%	6	Illinois	5.50%	31
West Virginia	7.34%	7	Utah	5.49%	32
Connecticut	**6.99%**	**8**	Alabama	5.35%	33
Mississippi	6.98%	9	Louisiana	5.27%	34
California	6.96%	10	Wyoming	5.27%	35
Maine	6.74%	11	Nebraska	5.25%	36
New York	6.60%	12	Oklahoma	5.25%	37
New Mexico	6.51%	13	Arizona	5.13%	38
Iowa	6.38%	14	Ohio	5.11%	39
Kansas	6.37%	15	Georgia	4.83%	40
Kentucky	6.36%	16	Virginia	4.77%	41
Michigan	6.30%	17	South Carolina	4.75%	42
Idaho	6.30%	18	Tennessee	4.49%	43
Wisconsin	6.25%	19	Missouri	4.45%	44
Indiana	6.15%	20	Colorado	4.45%	45
Nevada	6.14%	21	Florida	4.31%	46
Rhode Island	6.01%	22	Texas	4.17%	47
Massachusetts	5.99%	23	South Dakota	4.16%	48
Oregon	5.93%	24	Alaska	3.75%	49
Maryland	5.86%	25	New Hampshire	3.51%	50
U.S. Average	5.79%				

*Based on federal fiscal year from October 2017 through September 2018.
Source: U.S. Census Bureau, "Annual Survey of State Government Tax Collections, 2019"; IHS Economics

Following is a discussion of the major taxes in the State of Connecticut.

Personal Income Tax

For income years commencing on or after January 1, 1991, a personal income tax has been imposed upon income of residents of the state (including resident trusts and estates), part-year residents and certain non-residents who have taxable income derived from or connected with sources within Connecticut. For tax years commencing on or after January 1, 1991, and prior to January 1, 1992, the tax was imposed at the rate of 1.5% on Connecticut taxable income. For tax years commencing on or after January 1, 1992, the separate tax on capital gains, dividends and interest was repealed, and the tax was imposed at the rate of 4.5% of Connecticut taxable income. Beginning with tax years commencing on or after January 1, 1996, a second, lower tax rate of 3% was introduced for a certain portion of taxable income. Beginning with tax years commencing January 1, 2003 the 4.5% rate was increased to 5.0%. Beginning with tax years commencing January 1, 2009, a third higher bracket of 6.5% was introduced on incomes in excess of $500,000 for single filers and $1,000,000 for joint filers. Beginning with tax years commencing January 1, 2011, five new tax brackets replaced all previous brackets greater than the lowest rate. The lowest bracket remained unchanged while the highest bracket imposes a 6.7% tax on incomes in excess of $250,000 for single filers and $500,000 for joint filers. Beginning with tax year commencing January 1, 2015, the 6.7% rate was increased to 6.9% and a new seventh tax bracket was added at a 6.99% rate for incomes in excess of $500,000 for single filers and $1,000,000 for joint filers. The amount of taxable income subject to the lower tax rate has been expanded as set forth in the table below. Depending on federal income tax filing status and Connecticut adjusted gross income, personal exemptions ranging from $15,000 to $24,000 are available to taxpayers, with such exemptions phased out at certain higher income levels. Legislation enacted in 1999 increased the exemption amount for single filers over a certain number of years from $12,000 to $15,000. In addition, tax credits ranging from 75% to 1% of a taxpayer's Connecticut tax liability are also available, again dependent upon federal income tax filing status and Connecticut adjusted gross income (See Table 60 for more details). Neither the personal exemption nor the tax credit is available to a trust or an estate. Also commencing in income year 1996, personal income taxpayers have been eligible for credit for property taxes paid on their primary residence or on their motor vehicle. The personal income tax generated $9,640.2 million in FY 2019, and $10,770.2 million in FY 2018. In FY 2019, this tax accounted for 49.1% of total General Fund revenue.

TABLE 58
TAXABLE INCOME AMOUNTS SUBJECT TO THE LOWER RATE
WITH THE REMAINDER SUBJECT TO THE HIGHER RATE

			Amount At Low Rate By Filing Status		
Income Year	Low Rate	High Rate	Single	Joint	Head of Household
1996	3.0%	4.5%	$ 2,250	$ 4,500	$ 3,500
1997	3.0%	4.5%	$ 6,250	$12,500	$10,000
1998	3.0%	4.5%	$ 7,500	$15,000	$12,000
1999 - 2002	3.0%	4.5%	$10,000	$20,000	$16,000
2003 - 2008	3.0%	5.0%	$10,000	$20,000	$16,000
2009-2010	3.0%	5.0%-6.5%	$10,000	$20,000	$16,000
2011-2014	3.0%	5.0%-6.7%	$10,000	$20,000	$16,000
2015-Present	3.0%	5.0%-6.99%	$10,000	$20,000	$16,000

The following table compares personal income tax collections as a percentage of personal income for the fifty states for FY 2018.

TABLE 59
STATE INCOME TAX COLLECTIONS AS A PERCENTAGE OF PERSONAL INCOME
FFY 2018*

State	Percentage	Rank	State	Percentage	Rank
Oregon	4.54%	1	Georgia	2.59%	23
California	4.28%	2	Kansas	2.57%	24
New York	4.20%	3	Arkansas	2.50%	25
Minnesota	4.10%	4	Rhode Island	2.50%	26
Connecticut	**3.85%**	**5**	Illinois	2.47%	27
Massachusetts	3.78%	6	Colorado	2.45%	28
Delaware	3.76%	7	Michigan	2.34%	29
Hawaii	3.27%	8	Missouri	2.34%	30
Virginia	3.04%	9	South Carolina	2.19%	31
Wisconsin	3.02%	10	Alabama	2.17%	32
Utah	3.00%	11	Pennsylvania	2.12%	33
Montana	2.92%	12	Indiana	2.06%	34
New Jersey	2.84%	13	Oklahoma	2.05%	35
West Virginia	2.79%	14	Mississippi	2.03%	36
North Carolina	2.79%	15	Louisiana	1.67%	37
Maryland	2.75%	16	Arizona	1.55%	38
Iowa	2.74%	17	New Mexico	1.54%	39
Vermont	2.74%	18	Ohio	1.53%	40
Maine	2.74%	19	North Dakota	1.13%	41
Idaho	2.70%	20	New Hampshire	1.08%	42
Kentucky	2.64%	21	Tennessee	0.60%	43
Nebraska	2.60%	22			
U.S. Average	2.47%				

Notes:
* Based on federal fiscal year from October 2017 through September 2018.
** The following states do not levy an income tax and are not included in the U.S. Average: Alaska, Florida, Nevada, South Dakota, Texas, Washington, and Wyoming.

Source: IHS Economics: Bureau of Economic Analysis; U.S. Census Bureau, "2018 Annual Survey of State Government Tax Collections"

The following table shows: A) Connecticut personal income tax exemptions; B) phase out of those exemptions; and C) tax credits available depending on adjusted gross income.

TABLE 60
CONNECTICUT PERSONAL INCOME TAX EXEMPTIONS & CREDITS
Income Year 2019

Single			Married Filing jointly			Head of Household		
Exemption: $15,000			Exemption: $24,000			Exemption: $19,000		
Phase Out: $1K of exemption for each $1K from $30.0K to $45.0K			Phase Out: $1K of exemption for each $1K from $48K to $72K			Phase Out: $1K of exemption for each $1K from $38K to $57K		
AGI From	AGI To	% of Tax	AGI From	AGI To	% of Tax	AGI From	AGI To	% of Tax
$15,000	$18,800	75%	$24,000	$30,000	75%	$19,000	$24,000	75%
$18,800	$19,300	70%	$30,000	$30,500	70%	$24,000	$24,500	70%
$19,300	$19,800	65%	$30,500	$31,000	65%	$24,500	$25,000	65%
$19,800	$20,300	60%	$31,000	$31,500	60%	$25,000	$25,500	60%
$20,300	$20,800	55%	$31,500	$32,000	55%	$25,500	$26,000	55%
$20,800	$21,300	50%	$32,000	$32,500	50%	$26,000	$26,500	50%
$21,300	$21,800	45%	$32,500	$33,000	45%	$26,500	$27,000	45%
$21,800	$22,300	40%	$33,000	$33,500	40%	$27,000	$27,500	40%
$22,300	$25,000	35%	$33,500	$40,000	35%	$27,500	$34,000	35%
$25,000	$25,500	30%	$40,000	$40,500	30%	$34,000	$34,500	30%
$25,500	$26,000	25%	$40,500	$41,000	25%	$34,500	$35,000	25%
$26,000	$26,500	20%	$41,000	$41,500	20%	$35,000	$35,500	20%
$26,500	$31,300	15%	$41,500	$50,000	15%	$35,500	$44,000	15%
$31,300	$31,800	14%	$50,000	$50,500	14%	$44,000	$44,500	14%
$31,800	$32,300	13%	$50,500	$51,000	13%	$44,500	$45,000	13%
$32,300	$32,800	12%	$51,000	$51,500	12%	$45,000	$45,500	12%
$32,800	$33,300	11%	$51,500	$52,000	11%	$45,500	$46,000	11%
$33,300	$60,000	10%	$52,000	$96,000	10%	$46,000	$74,000	10%
$60,000	$60,500	9%	$96,000	$96,500	9%	$74,000	$74,500	9%
$60,500	$61,000	8%	$96,500	$97,000	8%	$74,500	$75,000	8%
$61,000	$61,500	7%	$97,000	$97,500	7%	$75,000	$75,500	7%
$61,500	$62,000	6%	$97,500	$98,000	6%	$75,500	$76,000	6%
$62,000	$62,500	5%	$98,000	$98,500	5%	$76,000	$76,500	5%
$62,500	$63,000	4%	$98,500	$99,000	4%	$76,500	$77,000	4%
$63,000	$63,500	3%	$99,000	$99,500	3%	$77,000	$77,500	3%
$63,500	$64,000	2%	$99,500	$100,000	2%	$77,500	$78,000	2%
$64,000	$64,500	1%	$100,000	$100,500	1%	$78,000	$78,500	1%

Source: General Statutes of the State of Connecticut

The following table shows whether state and local governmental obligations are included in the definition of state income for tax purposes.

TABLE 61
STATE AND LOCAL GOVERNMENT OBLIGATIONS EXEMPTIONS
FOR DETERMINING INDIVIDUAL'S STATE INCOME

State	Own Securities	Other State's Securities	State	Own Securities	Other State's Securities
Alabama	E	T	Montana	E	T
Alaska (no tax)			Nebraska	E	T
Arizona	E	T	Nevada (no tax)		
Arkansas	E	T	New Hampshire	E	T
California	E	T	New Jersey	E	T
Colorado	E	T	New Mexico	E	T
Connecticut	E	T	New York	E	T
Delaware	E	T	North Carolina	E	T
Florida (no tax)			North Dakota	E	E
Georgia	E	T	Ohio	E	T
Hawaii	E	T	Oklahoma	T (1)	T
Idaho	E	T	Oregon	E	T
Illinois	T (1)	T	Pennsylvania	E	T
Indiana	E	T (2)	Rhode Island	E	T
Iowa	T (1)	T	South Carolina	E	T
Kansas	E	T	South Dakota (no tax)		
Kentucky	E	T	Tennessee	E	T
Louisiana	E	T	Texas (no tax)		
Maine	E	T	Utah	E	T(3)
Maryland	E	T	Vermont	E	T
Massachusetts	E	T	Virginia	E	T
Michigan	E	T	Washington (no tax)		
Minnesota	E	T	West Virginia	E	T
Mississippi	E	T	Wisconsin	T (1)	T
Missouri	E	T	Wyoming (no tax)		

T = Taxable / E = Exempt

(1) Interest earned from some qualified obligations is exempt from the tax.

(2) Taxable for bonds acquired after 2011, bonds acquired before 2012 are exempt.

(3) Taxable for bonds acquired after 2002 if the other state or locality imposes an income-based tax on Utah bonds.

Source: State Taxation of Municipal Bonds for Individuals

The following table compares the personal income tax rates and bases for the fifty states and the District of Columbia.

TABLE 62
PERSONAL INCOME TAX BY STATE

	Low Bracket		High Bracket			Low Bracket		High Bracket	
State	% Rate	To Net Income $	% Rate	From Net Income $	State	% Rate	To Net Income $	% Rate	From Net Income $
Alabama (3)	2.00	1,000	5.00	6,001	Missouri (1)	1.50	1,053	5.40	8,425
Arizona (1)	2.59	22,092	4.54	331,347	Montana (1,c)	1.00	3,100	6.90	18,401
Arkansas (3,c)	0.90	4,500	6.90	37,201	Nebraska (1)	2.46	6,570	6.84	63,551
California (1,c)	1.00	17,088	13.30	1,145,961	New Hampshire	(b)			
Colorado (2)	4.63	All			New Jersey (3)	1.40	20,000	10.75	5,000,001
Connecticut (1)	**3.00**	**20,000**	**6.99**	**1,000,001**	New Mexico (1)	1.70	8,000	4.90	24,001
Delaware (1)	2.20	5,000	6.60	60,001	New York (1,c)	4.00	17,150	8.82	2,155,351
Georgia (1)	1.00	1,000	6.00	10,001	N. Carolina (1)	5.25	All		
Hawaii (1)	1.40	4,800	11.00	400,001	N. Dakota (2,c)	1.10	65,900	2.90	433,201
Idaho (1,c)	1.13	3,081	6.93	23,109	Ohio (1)	1.98	16,300	5.00	217,401
Illinois (1,d)	4.95	All			Oklahoma (1)	0.50	2,000	5.00	12,201
Indiana (1)	3.23	All			Oregon (2,c)	5.00	7,100	9.9	250,001
Iowa (1,c)	0.33	1,638	8.53	73,711	Pennsylvania (3)	3.07	All		
Kansas (1)	3.10	30,000	5.70	60,001	Rhode Island(1,c)	3.75	64,050	5.99	145,601
Kentucky (1)	5.00	All			S. Carolina (2,c)	1.10	2,450	7.00	12,251
Louisiana (1)	2.00	25,000	6.00	100,001	Tennessee	(b)			
Maine (1,c)	5.80	43,700	7.15	103,401	Utah (1)	4.95	All		
Maryland (1)	2.00	1,000	5.75	300,001	Vermont (2,c)	3.35	66,150	8.75	243,651
Massachusetts (1)	5.05	All	(a)		Virginia (1)	2.00	3,000	5.75	17,001
Michigan (1)	4.25	All			W. Virginia (1)	3.00	10,000	6.5	60,001
Minnesota (2,c)	5.35	38,770	9.85	273,151	Wisconsin (1,c)	4.00	15,680	7.65	345,271
Mississippi (3)	3.00	5,000	5.00	10,001	Dist. of Col. (2)	4.00	10,000	8.95	1,000,001

The following states do not levy an income tax: Alaska, Florida, Nevada, South Dakota, Texas, Washington & Wyoming.

Note: Tax rates are for married filers filing joint returns and do not include income taxes levied at the local level.

Base: (1) – Modified Federal Adjusted Gross Income
(2) – Modified Federal Taxable Income
(3) – State's Individual Definition of Taxable Income

(a) The rate is 12% for short-term capital gains and 5.10% for interests and dividends.
(b) Income taxes are limited to interest and dividends: 5.0% in NH and 2.0% in Tenn.
(c) Brackets are indexed for inflation annually. Oregon brackets $125,000 and over are not indexed for inflation.
(d) Flat rate in Illinois is scheduled to decrease to 3.25% in income year 2024.
Source: Tax Foundation

Sales and Use Tax

The sales tax is imposed, subject to certain limitations, on the gross receipts from certain transactions within the state of persons engaged in business in the state including: 1) retail sales of tangible personal property; 2) the sale of certain services; 3) the leasing or rental of tangible personal property; 4) the producing, fabricating, processing, printing, or imprinting of tangible personal property to special order or with material furnished by the consumer; 5) the furnishing, preparing or serving of food, meals or drinks; and 6) the occupancy of hotels or lodging house rooms for a period not exceeding thirty consecutive calendar days.

The use tax is imposed on the consideration paid for certain services, purchases or rentals of tangible personal property used within the state and not subject to the sales tax.

Both the sales and use taxes are levied at a rate of 6.35%. Various exemptions from the tax are provided, based on the nature, use, or price of the property or services involved or the identity of the purchaser. Certain items are taxed at reduced rates. Hotel rooms are taxed at 15%.

The sales and use tax is an important source of revenue for the State of Connecticut. On an all funds basis, the tax generated $4,806.4 million in FY 2019, $4,615.6 million in FY 2018, $4,465.5 million in FY 2017, and $4,422.2 million in FY 2016. In FY 2019, sales and use taxes accounted for 22.1% of the total revenue in the general fund, compared to 23.1% in FY 2018 and 23.7% in FY 2017.

When analyzing sales taxes, a simple comparison of rates is not an effective way to measure the tax burden imposed. An analysis of the tax base must be undertaken to provide a more meaningful comparison.

To provide a relevant comparison of sales tax burden, two studies are presented. The first study shows sales tax collections as a percentage of personal income. The larger the percentage of personal income going to sales tax collections, the heavier the burden of that tax. The table on the following page shows sales tax collections as a percentage of personal income and the corresponding ranking of the states. Note that Connecticut's tax burden is less than 29 other states. The comparison is based on FY 2018 data. From FY 1991 to FY 2018, Connecticut's sales tax collections as a percentage of personal income dropped from 3.15% with a rank of ninth to 1.68% with a rank of 30th and compared to the national average of 1.80%. This change was primarily due to the reduction in Connecticut's sales tax rate from 8% to 6.35% and an expansion of the exemptions on certain services and goods.

The second study provides an analysis of major sales tax exemptions by state. Connecticut excludes from its sales tax such major items as food products for human consumption, drugs and medicines used by humans, machinery, professional services, residential utilities and motor fuels. Table 64 shows the comparison for major sales tax exemptions.

TABLE 63
SALES TAX COLLECTIONS AS A PERCENTAGE OF PERSONAL INCOME
Fiscal 2018

State	Tax Rate (%)	Percentage	Rank	State	Tax Rate (%)	Percentage	Rank
Hawaii	4.000**	4.53%	1	Wisconsin	5.000**	1.85%	24
Nevada	6.850**	3.48%	2	Minnesota	6.875**	1.83%	25
Washington	6.500**	3.40%	3	Rhode Island	7.000**	1.83%	26
Mississippi	7.000**	3.18%	4	West Virginia	6.000**	1.80%	27
Florida	6.000**	2.81%	5	New Jersey	6.625**	1.74%	28
Arkansas	6.500	2.72%	6	North Carolina	4.750**	1.70%	29
Texas	6.250**	2.53%	7	**Connecticut**	**6.350**	**1.68%**	**30**
Indiana	7.000**	2.50%	8	Illinois	6.250	1.58%	31
Arizona	5.600**	2.45%	9	Utah	6.100	1.56%	32
South Dakota	4.500**	2.45%	10	Pennsylvania	6.000**	1.54%	33
New Mexico	5.125**	2.41%	11	Oklahoma	4.500**	1.52%	34
Tennessee	7.000**	2.38%	12	South Carolina	6.000**	1.51%	35
Maine	5.500	2.36%	13	California	7.250	1.46%	36
Idaho	6.000**	2.36%	14	Alabama	4.000**	1.36%	37
Kansas	6.500**	2.24%	15	Massachusetts	6.250**	1.33%	38
North Dakota	5.000**	2.21%	16	Missouri	4.225**	1.27%	39
Ohio	5.750	2.16%	17	Maryland	6.000	1.25%	40
Iowa	6.000**	2.11%	18	Georgia	4.000**	1.23%	41
Michigan	6.000**	2.06%	19	Vermont	6.000**	1.19%	42
Wyoming	4.000**	2.01%	20	New York	4.000**	1.11%	43
Louisiana	4.450**	2.00%	21	Colorado	2.900**	0.98%	44
Kentucky	6.000**	1.91%	22	Virginia	5.300**	0.84%	45
Nebraska	5.500**	1.88%	23				
U.S. Average**		1.80%					

Notes:
* Based on federal fiscal year from October 2017 through September 2018.
** Local tax rates are additional
*** The following states do not levy a sales tax and are not included in the U.S. Average: Alaska, Delaware, Montana, New Hampshire, and Oregon
Tax rates are effective as of January 1, 2019
Source: Bureau of Economic Analysis, U.S. Census Bureau, "Annual Survey of State Government Tax Collections, 2018"; IHS Economics

TABLE 64
MAJOR SALES TAX EXEMPTIONS BY STATE

State	Food	Prescription Drugs	Motor Fuels	Clothes
Alabama	T	E	E	T
Arizona	E	E	E	T
Arkansas	T (1)	E	E	T
California	E	E	T	T
Colorado	E	E	E	T
Connecticut	E	E	E	T
Florida	E	E	E (6)	T
Georgia	E	E	T (1)	T
Hawaii	T	E	T	T
Idaho	T	E	E	T
Illinois	T (1)	T (1)	T (5)	T
Indiana	E	E	T	T
Iowa	E	E	E	T
Kansas	T	E	E	T
Kentucky	E	E	E	T
Louisiana	E	E	E	T
Maine	E	E	E	T
Maryland	E	E	E	T
Massachusetts	E	E	E	E (2)
Michigan	E	E	T	T
Minnesota	E	E	E	E
Mississippi	T	E	E	T
Missouri	T (1)	E	E	T
Nebraska	E	E	E	T
Nevada	E	E	E	T
New Jersey	E	E	E	E
New Mexico	E	E	E	T
New York	E	E	T	E (3)
North Carolina	E	E	E	T
North Dakota	E	E	E	T
Ohio	E	E	E	T
Oklahoma	T	E	E	T
Pennsylvania	E	E	E	E
Rhode Island	E	E	E	E (4)
South Carolina	E	E	E	T
South Dakota	T	E	E	T
Tennessee	T (1)	E	E	T
Texas	E	E	E	T
Utah	T (1)	E	E	T
Vermont	E	E	E	E
Virginia	T (1)	E	E	T
Washington	E	E	E	T
West Virginia	E	E	T	T
Wisconsin	E	E	E	T
Wyoming	E	E	E	T
Total Taxable	13	1	8	38

Note: These states do not levy a sales tax: Alaska, Delaware, Montana, New Hampshire & Oregon.
T = Taxable under the sales tax, E = Exempt from the sales tax (1) Taxed at a reduced rate. (2) Up to a sales price of $175 per item. (3) Up to a sales price of $110 per item. (4) Up to a sales price of $250 per item. (5) Sales of majority blended ethanol fuel are exempt. (6) Unless used by railroad locomotives or vessels to transport persons or property in interstate or foreign commerce.
Source: Federation of Tax Administrators

Corporation Business Tax

The Corporation Business Tax is imposed on any corporation, joint stock company or association or fiduciary of any of the foregoing which carries on or has the right to carry on business within the state or owns or leases property or maintains an office within the state. Corporations must calculate their liability under three methods: the net income base method, the capital base method, and a minimum tax of $250. The taxpayer's liability is the greatest among these three methods. The corporation business tax generated $1,060.9 million in FY 2019, $920.7 million in FY 2018, and $1,037.6 million in FY 2017. In FY 2019, this tax accounted for 5.4% of total General Fund revenue, compared to 5.1% in FY 2018.

The first method, under which most corporation business tax revenue is derived, is the net income base. Net income means federal gross income (with limited variations) less certain deductions, most of which correspond to the deductions allowed under the Internal Revenue Code of 1986, as amended from time to time. If a corporation is taxable solely within the state, the tax is based upon its entire net income. If a corporation is taxable in another state in which it conducts business, the net income is apportioned to the state based on the percentage of the company's sales within the state. Currently, the income base method is levied at the rate of 7.5%. Public Act 15-244 maintained an existing 20% surcharge for income year 2016 and 2017, declining to 10% in income year 2018. Public Act 19-117 extended the 10% surcharge through income year 2020, but will be elminated for income year 2021 and each year thereafter. The surcharge does not apply to companies with less than $100 million in annual gross revenue or whose tax liability does not exceed the minimum tax of $250. The surcharge is calculated prior to the application of any credits.

Corporations must also compute their tax under the capital base method. The capital base is the total value of the taxpayer's capital stock, surplus and undivided profits, and surplus reserves, less deficits and stockholdings in private corporations. If a taxpayer is also taxable in another state in which it conducts business, the defined base is apportioned to the state of Connecticut based on the company's economic activity. The capital base is currently taxed at a rate of 3.1 mils ($0.0031) per dollar and will be phased-out completely by income year 2024.

Numerous tax credits are also available to corporations including, but not limited to, research and development credits of 1% to 6%, credits for property taxes paid on electronic and data processing equipment, and a 5% credit for investments in fixed and human capital.

The table on the following page provides a comparison of the assessed rates for the corporation business tax for the fifty states and the District of Columbia.

TABLE 65
CORPORATION TAX BY STATE
FOR TAX YEAR 2019

	Low Bracket		High Bracket			Low Bracket		High Bracket	
	%	To Net	%	From Net		%	To Net	%	From Net
State	Rate	Income $	Rate	Income $	State	Rate	Income $	Rate	Income $
Alabama	6.50	All			Missouri	6.25	All		
Alaska	0.00	25,000	9.40	222,000	Montana	6.75	All		
Arizona	4.90	All			Nebraska	5.58	100,000	7.81	100,001
Arkansas	1.00	3,000	6.50	100,001	Nevada (7)				
California (1)	8.84	All			New Hampshire	7.70	All		
Colorado	4.63	All			New Jersey (8)	9.00	All		
Connecticut (2)	**7.50**	**All**			New Mexico	4.80	500,000	5.90	500,001
Delaware	8.70	All			New York (9)	6.50	All		
Florida (3)	5.50	All			North Carolina	2.50	All		
Georgia	5.75	All			North Dakota	1.41	25,000	4.31	50,001
Hawaii	4.40	25,000	6.40	100,001	Ohio (10)				
Idaho	6.925	All			Oklahoma	6.00	All		
Illinois (4)	9.50	All			Oregon	6.60	1.0M	7.60	1.0M+
Indiana (5)	5.75	All			Pennsylvania	9.99	All		
Iowa	6.00	25,000	12.00	250,001	Rhode Island	7.00	All		
Kansas (6)	4.00	All			South Carolina	5.00	All		
Kentucky	5.00	All			Tennessee	6.50	+All		
Louisiana	4.00	25,000	8.00	200,001	Texas (11)				
Maine	3.50	350,000	8.93	3,500,000	Utah	4.95	All		
Maryland	8.25	All			Vermont	6.00	10,000	8.50	25,000
Massachusetts	8.00	All			Virginia	6.00	All		
Michigan	6.00	All			West Virginia	6.50	All		
Minnesota	9.80	All			Wisconsin	7.90	All		
Mississippi	0.00	2,000	5.00	10,001	District of Col.	8.25	All		

Note: The table does not include corporate income taxes levied at the local level. These states do not levy a corporate income tax: South Dakota, Washington & Wyoming. The following states require a minimum tax: AZ $50; CA $800; CT $250; ID $20; MA $456; MT $50; NJ $500; NY $25; OR $150; RI $400; UT $100; VT $300; District of Columbia $250

(1) Banks and financial corporations (except financial S-corporations) are subject to a 10.84% tax.
(2) Corporate tax liability is the greater of the 7.5% tax on net income, 3.1 mills per dollar tax rate on capital base (phasing out completely by income year 2024), or the minimum tax of $250. A 10% surcharge is imposed for tax years 2018 – 2020 on companies with more than $100 million in annual gross revenue. The surcharge phases out completely in income year 2021.
(3) An alternative minimum tax imposed 3.3%, an exemption of $50,000 is allowed.
(4) Sum of corporation income tax rate of 7.00% and a replacement tax of 2.5%.
(5) Rate reduced to 5.50% on July 1, 2019 and phasing down to 4.90% after June 30, 2021.
(6) A surtax of 3.0% is imposed on income over $50,000.
(7) Commerce Tax based on gross receipts. Rates vary from 0.051%-0.331%, depending on industry.
(8) A surtax of 2.5% imposed on income over $1M in 2019. Surtax reduced to 1.5% in 2020 and 2021. Rate of 7.5% on income less than $100,000 and 6.5% on income less than $50,000.
(9) Rate of 0.0% for qualified manufactures and certain corporations may be subject to a capital stocks tax that is being phased out through 2021.
(10) Commercial Activity Tax based on a tiered AMT and 0.26% on gross receipts over $1 million
(11) A franchise tax of 0.75% (0.375% for qualifying wholesalers and retailers) is imposed on entities with $1,130,000 of total revenues.

Source: Federation of Tax Administrators. Rates as of January 2019.

Motor Fuels Tax

The state imposes a tax, subject to certain limitations, on (1) gasoline and certain other liquids which are prepared, advertised, offered for sale, sold for use as, or commonly and commercially used as, a fuel in internal combustion engines ("gasoline" or "gasohol"), and (2) all combustible gases and liquids which are suitable and used for generation of power to propel motor vehicles (primarily diesel fuel which is referred to as "special fuels"). The distributors liable for these taxes are those entities which distribute fuel within the state, import fuel into the state for distribution within the state, or produce or refine fuels within the state.

The Gasoline Tax is imposed on each gallon of gasoline or gasohol sold (other than to another distributor) or used within the state by a distributor. The tax on special fuels (the "Special Fuel Tax") is assessed on each gallon of special fuels used within the state in a motor vehicle licensed, or required to be licensed, to operate upon the public highways of the state.

The Special Fuels Tax is paid by vehicle users, and is generally collected by retail dealers of special fuels (primarily diesel fuel). Various exemptions from both taxes are provided, among which are sales to, or use by, the United States, the state of Connecticut, and its municipalities.

The Motor Carrier Road Tax is imposed upon gallons of fuel (primarily diesel fuel) used by business entities ("motor carriers") which operate any of the following vehicles in the state: (1) passenger vehicles seating more than nine persons; (2) road tractors or tractor trucks; or (3) trucks having a registered gross weight in excess of eighteen thousand pounds. Such motor carriers pay the tax on the gallons of fuel which they use while operating such vehicles in the state. The number of gallons subject to the tax is determined by multiplying the total number of gallons of fuel used by the motor carrier during each year by a fraction, the numerator of which is the total number of miles traveled by the motor carrier's vehicles within the state during the year, and the denominator of which is the total number of miles traveled by the motor carrier's vehicles both within and outside the state during the year.

The Gasoline Tax is 25 cents per gallon. Effective July 1, 2019, the Special Fuels and Motor Carrier Taxes increased by 2.6 cents per gallon from 43.9 cents per gallon in FY 19 to 46.5 cents per gallon in FY 20. The 1983 session of the General Assembly enacted a Special Transportation Fund for highway construction and maintenance and 1 cent per gallon of the motor fuels tax was dedicated to this fund. Beginning July 1, 1984, the Special Transportation Fund was expanded to include all collections from the motor fuels tax.

The table on the following page shows the comparative rates for motor fuel taxes for the 50 states.

TABLE 66
MOTOR FUEL TAXES BY STATE

State	Excise Tax	Sales Tax Rate %	Total Tax*	State	Excise Tax	Sales Tax Rate %	Total Tax*
Alabama	24.00¢	-	24.00¢	Montana	32.00¢	-	32.00¢
Alaska	8.95	-	8.95	Nebraska (a,f)	29.70	-	29.70
Arizona	18.00	-	18.00	Nevada (b)	23.00	-	23.00
Arkansas (a)	24.50	-	27.50	New Hampshire	22.20	-	22.20
California (b)	47.30	2.25	53.11	New Jersey	10.50	-	10.50
Colorado	22.00	-	22.00	New Mexico	17.00	-	17.00
Connecticut (c)	**25.00**	**-**	**25.00**	New York (b,c)	8.05	-	8.05
Delaware	23.00	-	23.00	North Carolina	36.20	-	36.20
Florida (b)	4.00	13.7 cpg	17.70	North Dakota	23.00	-	23.00
Georgia (b)	27.50	-	27.50	Ohio	38.50	-	38.50
Hawaii (b)	16.00	4.00	26.32	Oklahoma	19.00	-	19.00
Idaho	32.00	-	32.00	Oregon (b)	34.00	-	34.00
Illinois (b)	38.00	6.25	54.13	Pennsylvania (g)	-	-	57.60
Indiana	30.00	-	30.00	Rhode Island	34.00	-	34.00
Iowa	30.50	-	30.50	South Carolina	22.00	-	22.00
Kansas (a)	24.00	-	24.00	South Dakota	28.00	-	28.00
Kentucky (d)	24.60	-	24.60	Tennessee (c)	26.00	-	26.00
Louisiana	20.00	-	20.00	Texas	20.00	-	20.00
Maine	30.00	-	30.00	Utah	30.00	-	30.00
Maryland (e)	26.20	10.5 cpg	36.70	Vermont	12.10	-	12.10
Massachusetts	24.00	-	24.00	Virginia (a)	16.20	-	16.20
Michigan	26.30	14.8 cpg	41.10	Washington	49.40	-	49.40
Minnesota	28.50	-	28.50	West Virginia (a,h)	20.50	-	20.50
Mississippi	18.00	-	18.00	Wisconsin	30.90	-	30.90
Missouri (b)	17.00	-	17.00	Wyoming	23.00	-	23.00

* The total column in the above table is the sum of per gallon state tax and sales taxes or additional taxes where applicable. The price used to estimate the effect of the sales tax, which excludes state taxes, was $2.58 per gallon—the national average. CPG = Cents per Gallon

(a) States with wholesale tax: AR-1.6%; KS-2.1%; NE-9.7 cpg (included in excise tax rate); VA-7.6 cpg (western VA only); WV-11.7%

(b) States with county/local sales tax: CA-plus applicable district taxes; FL-local option taxes 1-11 cpg; GA-local sales tax; HI-plus add'l county taxes; IL-local sales tax that varies as a percentage or cpg; MO-select counties have a municipality tax of 1-2 cpg; NV-individual county taxes; NY-avg. state sales tax rate & county sales taxes; OR-optional city (1-5 cpg) or county (1-3 cpg) taxes.

(c) States with a petroleum tax: CT-petroleum gross receipts tax of 8.1%; NY-Petroleum business tax of 17.7 cpg; TN-Special petroleum tax of 1 cpg.

(d) Commercial carriers pay a variable surtax that is adjusted quarterly.

(e) Excise tax is indexed to annual change of CPI.

(f) Rate is variable, adjust every 6 months.

(g) No fixed excise tax, the rate is variable and is currently at 57.6 cpg.

(h) Plus an additional 5% of the average wholesale price of gasoline.

Source: American Petroleum Institute; Rates effective 10/1/2019

Other Sources

The following tables show the most recent comparative rates or exemptions for some of the other taxes and fees collected by the states.

TABLE 67

CIGARETTE TAXES BY STATE

State	Rate	State	Rate
Alabama (a)	$0.675	Montana	$1.70
Alaska	$2.00	Nebraska	$0.64
Arizona	$2.00	Nevada	$1.80
Arkansas	$1.15	New Hampshire	$1.78
California	$2.87	New Jersey	$2.70
Colorado	$0.84	New Mexico	$1.66
Connecticut	**$4.35**	New York (a)	$4.35
Delaware	$2.10	North Carolina	$0.45
Florida (b)	$1.339	North Dakota	$0.44
Georgia	$0.37	Ohio	$1.60
Hawaii	$3.20	Oklahoma	$2.03
Idaho	$0.57	Oregon	$1.33
Illinois (a)	$1.98	Pennsylvania	$2.60
Indiana	$0.995	Rhode Island	$4.25
Iowa	$1.36	South Carolina	$0.57
Kansas	$1.29	South Dakota	$1.53
Kentucky	$1.10	Tennessee (a)	$0.62
Louisiana	$1.08	Texas	$1.41
Maine	$2.00	Utah	$1.70
Maryland	$2.00	Vermont	$3.08
Massachusetts	$3.51	Virginia (a)	$0.30
Michigan	$2.00	Washington	$3.025
Minnesota	$3.04	West Virginia	$1.20
Mississippi	$0.68	Wisconsin	$2.52
Missouri (a)	$0.17	Wyoming	$0.60

Note: The tax is based on a pack of 20 cigarettes.

(a) Optional county and city sales tax per pack: AL-$0.01-$0.25; IL-$0.10-$4.18; MO-$0.04-$0.07; NYC-$1.50; TN-$0.01; VA-$0.02-$0.15

(b) Includes surcharge of $1 per pack

Source: Federation of Tax Administrators, rates as of January 1, 2019.

TABLE 68
INSURANCE COMPANIES TAX BY STATE

State	Domestic Tax Rate % (1)	Foreign Tax Rate % (1)	State	Domestic Tax Rate % (1)	Foreign Tax Rate % (1)
Alabama	0.50-6.00	0.50-6.00	Montana (3)	2.75	2.75
Alaska	0.75-6.00	0.75-6.00	Nebraska (3)	0.25-3.00	0.25-3.00
Arizona (2)	0.66-3.00	0.66-3.00	Nevada	3.50	2.00-3.50
Arkansas	0.75-4.00	0.75-4.00	New Hampshire (4)	1.25-4.00	1.25-4.00
California	0.50-5.00	0.50-5.00	New Jersey	1.05-5.25	1.05-5.25
Colorado	1.00-3.00	1.00-3.00	New Mexico	3.003-4.003	3.003-4.003
Connecticut	**1.50-4.00**	**1.50-4.00**	New York (3,9)	0.70-3.60	0.70-3.60
Delaware (2)	1.75-5.00	1.75-5.00	North Carolina	1.90-5.00	1.90-5.00
Florida (3)	0.75-5.00	0.75-5.00	North Dakota (4)	1.75-2.00	1.75-2.00
Georgia (3)	2.25-4.00	2.25-4.00	Ohio (3,4)	1.00-5.00	1.00-5.00
Hawaii	0.8775-4.68	0.8775-4.68	Oklahoma (3)	2.25-6.00	2.25-6.00
Idaho	1.50	1.50	Oregon (3)	(6)	(6)
Illinois (3)	0.40-3.50	0.40-3.50	Pennsylvania	1.25-5.00	2.00-5.00
Indiana	1.30-2.50	1.30-2.50	Rhode Island	2.00-4.00	2.00-4.00
Iowa	1.00-6.50	1.00-6.50	South Carolina (3)	0.75-6.00	0.75-6.00
Kansas (3)	2.00-6.00	2.00-6.00	South Dakota (3)	1.25-2.50	1.25-2.50
Kentucky (3)	1.50-3.00	1.50-3.00	Tennessee (3,4)	1.75-6.00	1.75-6.00
Louisiana (3)	(5)	(5)	Texas	0.875-4.85	0.875-4.85
Maine (3)	1.00-3.00	1.00-3.00	Utah	0.45-4.25	0.45-4.25
Maryland	2.00-3.00	2.00-3.00	Vermont	2.00-3.00	2.00-3.00
Massachusetts	2.00-5.70	2.00-5.70	Virginia (3,8)	1.00-2.70	1.00-2.70
Michigan (7)	1.25-2.00	1.25-2.00	Washington	0.95-2.00	0.95-2.00
Minnesota (3)	1.00-3.00	1.00-3.00	West Virginia (3)	1.00-4.00	1.00-4.00
Mississippi (3)	3.00-4.00	3.00-4.00	Wisconsin (3)	2.00-3.50	2.00-3.00
Missouri	1.00-5.00	1.00-5.00	Wyoming	0.75-3.00	0.75-3.00

Note: The tax is based on the net premiums of authorized insurers, including surplus line rates, captive rates, and marine underwriting profits.

(1) Depending upon the type of insurance issued or the type of organization formed.
(2) Plus a surtax of 0.4312% on vehicles in AZ and 0.25% in DE.
(3) Plus a fire marshal's tax not to exceed 1%; 0.3125% in OK; 0.50% in IN, MN, SD, WV; 0.75% in KY, OH, TN; 1.15% in OR; 1.4% in ME; 1.25% & 2% in KS; 2% in WI (foreign only), NY (foreign only), & LA; 2.35% in SC; 2.5% in MO; and 0.375% (Domestic) & 0.75% (Foreign) in NE.
(4) With minimum tax of $150 in TN; $200 in NH & ND; $250 in OH; and $300 in VA.
(5) Life, health, accident, or service insurers—premiums of $7,000 or less, $140; over $7,000, $140 plus $225 per each add'l $10,000 over $7,000; fire, marine, transportation, casualty, surety, workers' comp.–$6,000 or less, $185; over $6,000, $185 plus $300 per each add'l $10,000 over $6,000.
(6) After 2001, foreign and alien insurers are no longer subject to gross premium tax but are subject to the corporate excise tax.
(7) Rate is the greater of single business tax, income tax, or retaliatory tax.
(8) With minimum tax of $100 on fire, misc. property, marine, homeowners, & farm owners.
(9) 17% MTA surcharge applies in a metropolitan commuter transportation district.

Source: National Association of Insurance Commissioners & The Center for Insurance Policy and Research, Retaliation Guide December 2019

TABLE 69

ALCOHOLIC BEVERAGE EXCISE TAXES BY STATE

(Dollars per Gallon)

State	Distilled Spirits	Wine 14% or Less	Wine 14% to 21%	Beer	State	Distilled Spirits	Wine 14% or Less	Wine 14% to 21%	Beer
Alabama (2)	(1)	1.70	9.16	0.53	Montana	(1)	1.02	(1)	0.14
Alaska	12.80	2.50	2.50	1.07	Nebraska	3.75	0.95	1.35	0.31
Arizona	3.00	0.84	0.84	0.16	Nevada	3.60	0.70	1.30	0.16
Arkansas	2.50	0.75	0.75	0.23	New Hampshire	(1)	0.30	0.30	0.30
California	3.30	0.20	0.20	0.20	New Jersey	5.50	0.88	0.88	0.12
Colorado	2.28	0.28	0.28	0.08	New Mexico	6.06	1.70	1.70	0.41
Connecticut	**5.40**	**0.72**	**0.72**	**0.24**	New York (2)	6.44	0.30	0.30	0.14
Delaware	4.50	1.63	1.63	0.26	North Carolina	(1)	1.00	1.11	0.62
Florida	6.50	2.25	3.00	0.48	North Dakota	2.50	0.50	0.60	0.16
Georgia (2)	3.79	1.51	2.54	0.32	Ohio	(1)	0.32	1.00	0.18
Hawaii	5.98	1.38	1.38	0.93	Oklahoma	5.56	0.72	0.72	0.40
Idaho	(1)	0.45	0.45	0.15	Oregon	(1)	0.67	0.77	0.08
Illinois (2)	8.55	1.39	1.39	0.23	Pennsylvania	(1)	(1)	(1)	0.08
Indiana	2.68	0.47	0.47	0.12	Rhode Island	5.40	1.40	1.40	0.11
Iowa	(1)	1.75	1.75	0.19	South Carolina (3)	2.72	1.08	1.08	0.77
Kansas	2.50	0.30	0.75	0.18	South Dakota	3.93	0.93	1.45	0.27
Kentucky	1.92	0.50	0.50	0.08	Tennessee	4.40	1.21	1.21	1.29
Louisiana (2)	3.03	0.76	1.32	0.40	Texas	2.40	0.20	0.41	0.19
Maine	(1)	0.60	(1)	0.35	Utah	(1)	(1)	(1)	0.41
Maryland	1.50	0.40	0.40	0.09	Vermont	(1)	0.55	(1)	0.27
Massachusetts	4.05	0.55	0.55	0.11	Virginia	(1)	1.51	(1)	0.26
Michigan	(1)	0.51	0.76	0.20	Washington	14.27	0.87	1.75	0.26
Minnesota	5.03	0.30	0.95	0.15	West Virginia	(1)	1.00	1.00	0.18
Mississippi	(1)	0.35	0.35	0.43	Wisconsin (4)	3.25	0.25	0.45	0.06
Missouri	2.00	0.42	0.42	0.06	Wyoming	(1)	(1)	(1)	0.02

(1) Government directly controls sales, revenue generates through markup, store profits, and additional taxes & fees.
(2) Plus additional excise taxes on beer at the local level. Additional local taxes in NYC.
(3) Rates include surtax of $0.18 per gallon for wine.
(4) Distilled spirits rate includes additional $0.03 per gallon for administrative fees.

Source: Federation of Tax Administrators, rates as of January 1, 2019.

TABLE 70
GENERAL FUND REVENUES

TAXES ($K)	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Personal Income	$9,151,037	$9,181,648	$8,988,667	$10,770,150	$9,640,164
Sales and Use	4,205,051	4,181,852	4,192,203	4,202,246	4,338,061
Corporation	814,805	880,449	1,037,565	920,746	1,060,877
Pass-through Entity Tax	-	-	-	-	1,172,080
Public Service Corporation	276,833	289,894	271,504	250,631	262,141
Inheritance & Estate	176,750	221,821	218,660	223,839	225,230
Insurance Companies	220,629	238,843	222,804	230,605	193,803
Cigarettes	358,704	373,518	381,455	376,448	357,494
Real Estate Conveyance	185,955	196,498	209,982	202,526	213,224
Oil Companies	-	170	-	-	-
Alcoholic Beverages	61,651	63,113	63,155	63,211	64,145
Admissions, Dues, Cabaret	38,436	39,331	39,509	40,272	42,834
Miscellaneous	474,009	718,850	699,331	1,059,928	1,100,087
Total - Taxes	$15,963,866	$16,385,988	$16,324,835	$18,340,602	$18,670,140
Less Refunds of Taxes	(1,163,639)	(1,223,198)	(1,263,824)	(1,269,667)	(1,465,368)
Less Refunds of R&D Credit	(7,878)	(7,623)	(5,485)	(5,664)	(5,370)
Total - Taxes Less Refunds	$14,792,350	$15,155,167	$15,055,526	$17,065,271	$17,199,401
OTHER REVENUE					
Transfer-Special Revenue	$323,315	$339,961	$328,716	$339,512	$364,082
Indian Gaming Payments	267,986	265,907	269,906	272,957	255,239
Licenses, Permits & Fees	257,444	296,502	275,386	306,165	291,171
Sales of Commodities & Services	35,813	43,454	39,143	33,238	27,105
Rents, Fines & Escheats	168,679	141,741	151,402	189,428	165,875
Investment Income	943	910	2,371	15,911	48,950
Miscellaneous	185,014	179,820	330,388	177,307	214,700
Less Refunds of Payments	(64,281)	(64,281)	(44,199)	(61,058)	(59,139)
Total - Other Revenue	$1,174,912	$1,207,958	$1,353,113	$1,273,461	$1,307,982
OTHER SOURCES					
Federal Grants	$1,241,244	$1,301,532	$1,325,237	1,143,075	2,083,774
Transfer from Tobacco Fund	97,367	110,600	118,299	109,700	110,200
Transfer From/(To) Other Funds	(23,834)	5,565	(149,207)	78,376	(101,814)
Transfers to BRF – Volatility Adjustment	-	-	-	(1,471,333)	(949,681)
Total - Other Sources	$1,314,777	$1,417,697	$1,294,328	$(140,182)	$1,142,479
GRAND TOTAL	$17,282,038	$17,780,822	$17,702,968	$18,198,550	$19,649,862
TAXES	% of Total	% of Total	% of Total	% of Total	% of Total
Personal Income	52.95	51.64	50.77	59.18	49.1
Sales and Use	24.33	23.52	23.68	23.09	22.1
Corporation	4.71	4.95	5.86	5.06	5.4
Pass-through Entity Tax					6.0
Public Service Corporation	1.60	1.63	1.53	1.38	1.3
Inheritance & Estate	1.02	1.25	1.24	1.23	1.1
Insurance Companies	1.28	1.34	1.26	1.27	1.0
Cigarettes	2.08	2.10	2.15	2.07	1.8
Real Estate Conveyance	1.08	1.11	1.19	1.11	1.1
Oil Companies	-	-	-	-	-
Alcoholic Beverages	0.36	0.35	0.36	0.35	0.3
Admissions, Dues, Cabaret	0.22	0.22	0.22	0.22	0.2
Miscellaneous	2.74	4.04	3.95	5.82	5.6
Total - Taxes	92.37	92.16	92.22	100.78	95.0
Less Refunds of Taxes	(6.73)	(6.88)	(7.14)	(6.98)	-7.5
Less Refunds of R&D Credit	(0.05)	(0.04)	(0.03)	(0.03)	0.0
Total – Taxes Less Refunds	85.59	85.23	85.05	93.77	87.5
OTHER REVENUE					
Transfer-Special Revenue	1.87	1.91	1.86	1.87	1.9
Indian Gaming Payments	1.55	1.50	1.52	1.50	1.3
Licenses, Permits & Fees	1.49	1.67	1.56	1.68	1.5
Sales of Commodities & Services	0.21	0.24	0.22	0.18	0.1
Rents, Fines & Escheats	0.98	0.80	0.86	1.04	0.8
Investment Income	0.01	0.01	0.01	0.09	0.2
Miscellaneous	1.07	1.01	1.87	0.97	1.1
Less Refunds of Payments	(0.37)	(0.36)	(0.25)	(0.34)	-0.3
Total - Other Revenue	6.80	6.79	7.64	7.00	6.7
OTHER SOURCES					
Federal Grants	7.18	7.32	7.49	6.28	10.6
Transfer from Tobacco Fund	0.56	0.62	0.67	0.60	0.6
Transfer From/(To) Other Funds	(0.14)	0.03	(0.84)	0.43	-0.5
Transfers to BRF – Volatility Adjustment	-	-	-	(8.08)	-4.8
Total - Other Sources	7.61	7.97	7.31	(0.77)	5.8
GRAND TOTAL	100.00	100.00	100.00	100.00	100.0

TABLE 71
SPECIAL TRANSPORTATION FUND REVENUES

TAXES ($K)	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Motor Fuels	$516,581	$518,230	$498,455	$499,833	$509,701
Oil Companies	337,903	250,000	238,354	312,506	313,050
Sales and Use Tax	-	109,002	188,380	327,458	370,580
DMV Sales	83,868	87,161	84,951	85,906	87,263
Less Refunds of Taxes	(7,236)	(17,409)	(13,236)	(10,050)	(32,149)
Total – Taxes Less Refunds	$931,116	$946,984	$996,904	$1,215,653	$1,248,446
OTHER REVENUE					
Motor Vehicle Receipts	$249,479	$251,506	$242,912	$253,074	$250,361
Licenses, Permits & Fees	145,429	143,867	144,028	141,866	150,144
Interest Income	6,946	8,159	8,995	17,673	37,375
Federal Grants	12,115	12,181	12,168	12,196	12,259
Transfer from Other Funds	41,197	-	-	-	-
Transfer to Other Funds	(6,500)	(6,500)	(6,500)	(5,500)	(5,500)
Transfer to TSB	(15,000)	-	-	-	-
Less Refunds of Payments	(3,871)	(3,384)	(4,103)	(4,891)	(4,941)
Total – Other Revenue	$429,795	$405,829	$397,499	$414,418	$439,698
GRAND TOTAL	$1,360,911	$1,352,813	$1,394,403	$1,630,071	$1,688,144

TAXES	% of Total	% of Total	% of Total	% of Total	% of Total
Motor Fuels	37.96	38.31	35.75	30.66	30.19
Oil Companies	24.83	18.48	17.09	19.17	18.54
Sales and Use Tax	-	8.06	13.51	20.09	21.95
DMV Sales	6.16	6.44	6.09	5.27	5.17
Less Refunds of Taxes	(0.53)	(1.29)	(0.95)	-0.62	(1.90)
Total – Taxes Less Refunds	68.42	70.00	71.49	74.58	73.95
OTHER REVENUE					
Motor Vehicle Receipts	18.33	18.59	17.42	15.53	14.83
Licenses, Permits & Fees	10.69	10.63	10.33	8.70	8.89
Interest Income	0.51	0.60	0.65	1.08	2.21
Federal Grants	0.89	0.90	0.87	0.75	0.73
Transfer from Other Funds	3.03	-	-	-	
Transfer to Other Funds	(0.48)	(0.48)	(0.47)	(0.34)	(0.33)
Transfer to TSB	(1.1)	-	-	-	
Less Refunds of Payments	(0.28)	(0.25)	(0.29)	(0.30)	(0.29)
Total - Other Revenue	31.58	30.00	28.51	25.42	26.05
GRAND TOTAL	100.00	100.00	100.00	100.00	100.00

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A P P E N D I X

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Connecticut Resident Population Census Counts

	Population 2000	Rank	Population 2010	Rank	2000-2010 Change	% Change	2018 DPH* Est.
Total	3,405,565		3,574,097		168,532	4.9	3,572,665
Andover	3,036	147	3,303	147	267	8.8	3,231
Ansonia	18,554	57	19,249	60	695	3.7	18,721
Ashford	4,098	135	4,317	136	219	5.3	4,261
Avon	15,832	68	18,098	65	2,266	14.3	18,302
Barkhamsted	3,494	143	3,799	141	305	8.7	3,624
Beacon Falls	5,246	125	6,049	123	803	15.3	6,182
Berlin	18,215	59	19,866	54	1,651	9.1	20,432
Bethany	5,040	126	5,563	126	523	10.4	5,479
Bethel	18,067	61	18,584	62	517	2.9	19,714
Bethlehem	3,422	144	3,607	143	185	5.4	3,422
Bloomfield	19,587	52	20,486	52	899	4.6	21,301
Bolton	5,017	127	4,980	131	-37	-0.7	4,890
Bozrah	2,357	153	2,627	152	270	11.5	2,537
Branford	28,683	32	28,026	37	-657	-2.3	28,005
Bridgeport	139,529	1	144,229	1	4,700	3.4	144,900
Bridgewater	1,824	160	1,727	162	-97	-5.3	1,641
Bristol	60,062	11	60,477	13	415	0.7	60,032
Brookfield	15,664	69	16,452	71	788	5.0	17,002
Brooklyn	7,173	113	8,210	110	1,037	14.5	8,280
Burlington	8,190	108	9,301	104	1,111	13.6	9,665
Canaan	1,081	168	1,234	168	153	14.2	1,055
Canterbury	4,692	131	5,132	130	440	9.4	5,100
Canton	8,840	101	10,292	95	1,452	16.4	10,270
Chaplin	2,250	155	2,305	156	55	2.4	2,256
Cheshire	28,543	33	29,261	32	718	2.5	29,179
Chester	3,743	141	3,994	139	251	6.7	4,229
Clinton	13,094	81	13,260	82	166	1.3	12,950
Colchester	14,551	74	16,068	72	1,517	10.4	15,936
Colebrook	1,471	165	1,485	165	14	1.0	1,405
Columbia	4,971	129	5,485	127	514	10.3	5,385
Cornwall	1,434	166	1,420	167	-14	-1.0	1,368
Coventry	11,504	87	12,435	87	931	8.1	12,414
Cromwell	12,871	83	14,005	79	1,134	8.8	13,905
Danbury	74,848	7	80,893	7	6,045	8.1	84,730
Darien	19,607	51	20,732	51	1,125	5.7	21,753
Deep River	4,610	133	4,629	133	19	0.4	4,463
Derby	12,391	84	12,902	84	511	4.1	12,515
Durham	6,627	116	7,388	116	761	11.5	7,195
East Granby	4,745	130	5,148	129	403	8.5	5,147
East Haddam	8,333	105	9,126	106	793	9.5	8,988
East Hampton	13,352	78	12,959	83	-393	-2.9	12,854
East Hartford	49,575	19	51,252	19	1,677	3.4	49,998
East Haven	28,189	35	29,257	33	1,068	3.8	28,699

Connecticut Resident Population Census Counts

	Population 2000	Rank	Population 2010	Rank	2000-2010 Change	% Change	2018 DPH* Est.
East Lyme	18,118	60	19,159	61	1,041	5.7	18,645
East Windsor	9,818	96	11,162	94	1,344	13.7	11,375
Eastford	1,618	163	1,749	161	131	8.1	1,790
Easton	7,272	111	7,490	115	218	3.0	7,517
Ellington	12,921	82	15,602	74	2,681	20.7	16,299
Enfield	45,212	20	44,654	22	-558	-1.2	44,466
Essex	6,505	117	6,683	120	178	2.7	6,674
Fairfield	57,340	13	59,404	14	2,064	3.6	61,952
Farmington	23,641	44	25,340	44	1,699	7.2	25,506
Franklin	1,835	159	1,922	159	87	4.7	1,933
Glastonbury	31,876	29	34,427	29	2,551	8.0	34,491
Goshen	2,697	151	2,976	150	279	10.3	2,879
Granby	10,347	93	11,282	92	935	9.0	11,375
Greenwich	61,101	10	61,171	10	70	0.1	62,727
Griswold	10,807	89	11,951	90	1,144	10.6	11,591
Groton	39,907	23	40,115	25	208	0.5	38,692
Guilford	21,398	49	22,375	50	977	4.6	22,216
Haddam	7,157	114	8,346	109	1,189	16.6	8,222
Hamden	56,913	14	60,960	11	4,047	7.1	60,940
Hampton	1,758	161	1,863	160	105	6.0	1,853
Hartford	121,578	3	124,775	3	3,197	2.6	122,587
Hartland	2,012	158	2,114	158	102	5.1	2,120
Harwinton	5,283	124	5,642	125	359	6.8	5,430
Hebron	8,610	104	9,686	99	1,076	12.5	9,482
Kent	2,858	150	2,979	149	121	4.2	2,785
Killingly	16,472	67	17,370	68	898	5.5	17,287
Killingworth	6,018	121	6,525	121	507	8.4	6,370
Lebanon	6,907	115	7,308	117	401	5.8	7,207
Ledyard	14,687	72	15,051	77	364	2.5	14,736
Lisbon	4,069	136	4,338	135	269	6.6	4,248
Litchfield	8,316	106	8,466	108	150	1.8	8,127
Lyme	2,016	157	2,406	154	390	19.3	2,338
Madison	17,858	64	18,269	64	411	2.3	18,106
Manchester	54,740	15	58,241	15	3,501	6.4	57,699
Mansfield	20,720	50	26,543	41	5,823	28.1	25,817
Marlborough	5,709	123	6,404	122	695	12.2	6,358
Meriden	58,244	12	60,868	12	2,624	4.5	59,540
Middlebury	6,451	118	7,575	114	1,124	17.4	7,731
Middlefield	4,203	134	4,425	134	222	5.3	4,380
Middletown	43,167	21	47,648	20	4,481	10.4	46,146
Milford	52,305	17	52,759	17	454	0.9	54,661
Monroe	19,247	54	19,479	59	232	1.2	19,470
Montville	18,546	58	19,571	57	1,025	5.5	18,716
Morris	2,301	154	2,388	155	87	3.8	2,262

Connecticut Resident Population Census Counts

	Population 2000	Rank	Population 2010	Rank	2000-2010 Change	% Change	2018 DPH* Est.
Naugatuck	30,989	30	31,862	30	873	2.8	31,288
New Britain	71,538	8	73,206	8	1,668	2.3	72,453
New Canaan	19,395	53	19,738	55	343	1.8	20,213
New Fairfield	13,953	75	13,881	81	-72	-0.5	13,877
New Hartford	6,088	120	6,970	118	882	14.5	6,685
New Haven	123,626	2	129,779	2	6,153	5.0	130,418
New London	25,671	40	27,620	38	1,949	7.6	26,939
New Milford	27,121	37	28,142	36	1,021	3.8	26,974
Newington	29,306	31	30,562	31	1,256	4.3	30,112
Newtown	25,031	41	27,560	39	2,529	10.1	27,774
Norfolk	1,660	162	1,709	164	49	3.0	1,640
North Branford	13,906	76	14,407	78	501	3.6	14,158
North Canaan	3,350	145	3,315	146	-35	-1.0	3,254
North Haven	23,035	46	24,093	47	1,058	4.6	23,691
North Stonington	4,991	128	5,297	128	306	6.1	5,243
Norwalk	82,951	6	85,603	6	2,652	3.2	89,047
Norwich	36,117	26	40,493	24	4,376	12.1	39,136
Old Lyme	7,406	110	7,603	113	197	2.7	7,366
Old Saybrook	10,367	92	10,242	96	-125	-1.2	10,087
Orange	13,233	79	13,956	80	723	5.5	13,949
Oxford	9,821	95	12,683	85	2,862	29.1	13,226
Plainfield	14,619	73	15,405	75	786	5.4	15,173
Plainville	17,328	66	17,716	67	388	2.2	17,623
Plymouth	11,634	86	12,243	88	609	5.2	11,645
Pomfret	3,798	140	4,247	137	449	11.8	4,204
Portland	8,732	102	9,508	101	776	8.9	9,305
Preston	4,688	132	4,726	132	38	0.8	4,638
Prospect	8,707	103	9,405	103	698	8.0	9,790
Putnam	9,002	98	9,584	100	582	6.5	9,395
Redding	8,270	107	9,158	105	888	10.7	9,125
Ridgefield	23,643	43	24,638	46	995	4.2	25,008
Rocky Hill	17,966	62	19,709	56	1,743	9.7	20,145
Roxbury	2,136	156	2,262	157	126	5.9	2,160
Salem	3,858	138	4,151	138	293	7.6	4,123
Salisbury	3,977	137	3,741	142	-236	-5.9	3,598
Scotland	1,556	164	1,726	163	170	10.9	1,685
Seymour	15,454	70	16,540	70	1,086	7.0	16,509
Sharon	2,968	149	2,782	151	-186	-6.3	2,703
Shelton	38,101	25	39,559	26	1,458	3.8	41,097
Sherman	3,827	139	3,581	144	-246	-6.4	3,614
Simsbury	23,234	45	23,511	48	277	1.2	24,979
Somers	10,417	91	11,444	91	1,027	9.9	10,834
South Windsor	24,412	42	25,709	43	1,297	5.3	26,054
Southbury	18,567	56	19,904	53	1,337	7.2	19,656

Connecticut Resident Population Census Counts

	Population 2000	Rank	Population 2010	Rank	2000-2010 Change	% Change	2018 DPH* Est.
Southington	39,728	24	43,069	23	3,341	8.4	43,807
Sprague	2,971	148	2,984	148	13	0.4	2,889
Stafford	11,307	88	12,087	89	780	6.9	11,884
Stamford	117,083	4	122,643	4	5,560	4.7	129,775
Sterling	3,099	146	3,830	140	731	23.6	3,780
Stonington	17,906	63	18,545	63	639	3.6	18,449
Stratford	49,976	18	51,384	18	1,408	2.8	51,967
Suffield	13,552	77	15,735	73	2,183	16.1	15,743
Thomaston	7,503	109	7,887	112	384	5.1	7,560
Thompson	8,878	100	9,458	102	580	6.5	9,395
Tolland	13,146	80	15,052	76	1,906	14.5	14,655
Torrington	35,202	27	36,383	27	1,181	3.4	34,228
Trumbull	34,243	28	36,018	28	1,775	5.2	35,802
Union	693	169	854	169	161	23.2	840
Vernon	28,063	36	29,179	34	1,116	4.0	29,303
Voluntown	2,528	152	2,603	153	75	3.0	2,535
Wallingford	43,026	22	45,135	21	2,109	4.9	44,535
Warren	1,254	167	1,461	166	207	16.5	1,399
Washington	3,596	142	3,578	145	-18	-0.5	3,434
Waterbury	107,271	5	110,366	5	3,095	2.9	108,093
Waterford	19,152	55	19,517	58	365	1.9	18,887
Watertown	21,661	48	22,514	49	853	3.9	21,641
West Hartford	63,589	9	63,268	9	-321	-0.5	62,939
West Haven	52,360	16	55,564	16	3,204	6.1	54,879
Westbrook	6,292	119	6,938	119	646	10.3	6,914
Weston	10,037	94	10,179	97	142	1.4	10,247
Westport	25,749	39	26,391	42	642	2.5	28,115
Wethersfield	26,271	38	26,668	40	397	1.5	26,082
Willington	5,959	122	6,041	124	82	1.4	5,887
Wilton	17,633	65	18,062	66	429	2.4	18,397
Winchester	10,664	90	11,242	93	578	5.4	10,655
Windham	22,857	47	25,268	45	2,411	10.5	24,706
Windsor	28,237	34	29,044	35	807	2.9	28,760
Windsor Locks	12,043	85	12,498	86	455	3.8	12,876
Wolcott	15,215	71	16,680	69	1,465	9.6	16,649
Woodbridge	8,983	99	8,990	107	7	0.1	8,805
Woodbury	9,198	97	9,975	98	777	8.4	9,537
Woodstock	7,221	112	7,964	111	743	10.3	7,862

* Connecticut Department of Public Health

Source: U.S. Bureau of the Census, April 1, 2000 & 2010
Department of Public Health, "Est. Population in Connecticut as of July 1, 2018"

MAJOR U.S. ECONOMIC INDICATORS - FISCAL YEAR BASIS

TABLE 1
U.S. ECONOMIC VARIABLES

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Gross Domestic Product ($B)	14,673.9	15,275.7	15,890.1	16,455.9	17,117.3	17,943.8	18,439.3	19,086.4	20,051.0	21,021.7
Percent Change	1.0%	4.1%	4.0%	3.6%	4.0%	4.8%	2.8%	3.5%	5.1%	4.8%
Real GDP (2012=100)	15,379.4	15,740.1	16,038.3	16,311.5	16,663.3	17,218.3	17,532.1	17,876.4	18,380.6	18,866.4
Percent Change	0.4%	3.0%	1.9%	1.7%	2.2%	3.3%	1.8%	2.0%	2.8%	2.6%
GDP Deflator (2012=100)	95.4	97.0	99.1	100.9	102.7	104.2	105.2	106.8	109.1	111.4
Percent Change	0.6%	1.7%	2.1%	1.8%	1.8%	1.4%	0.9%	1.5%	2.2%	2.1%
Housing Starts (K)	594.0	569.7	684.4	877.4	953.1	1,054.4	1,149.3	1,201.3	1,253.8	1,221.7
Percent Change	-8.1%	-4.1%	20.1%	28.2%	8.6%	10.6%	9.0%	4.5%	4.4%	-2.6%
Unemployment Rate	9.8%	9.3%	8.5%	7.8%	6.8%	5.7%	5.0%	4.7%	4.1%	3.8%
New Vehicle Sales (M)	11.2	12.2	13.6	15.1	15.9	16.9	17.5	17.3	17.2	17.1
Percent Change	5.3%	9.3%	11.4%	10.6%	5.5%	6.0%	3.9%	-1.4%	-0.2%	-1.0%
Consumer Price Index ('82-'84=100)	216.8	221.1	227.6	231.4	235.0	236.7	238.2	242.7	248.1	253.3
Percent Change	1.0%	2.0%	2.9%	1.7%	1.6%	0.7%	0.7%	1.9%	2.2%	2.1%
Industrial Production Index ('07=100)	91.3	95.7	98.8	100.9	103.4	105.4	102.7	103.0	106.2	109.6
Percent Change	-2.1%	4.8%	3.3%	2.1%	2.5%	1.9%	-2.6%	0.3%	3.2%	3.2%
Personal Income ($B)	12,233.0	12,965.8	13,653.5	14,111.1	14,529.6	15,400.1	15,918.5	16,467.9	17,356.7	18,230.7
Percent Change	0.1%	6.0%	5.3%	3.4%	3.0%	6.0%	3.4%	3.5%	5.4%	5.0%
Real Personal Income ($B in 2012=100)	12,866.0	13,398.1	13,766.4	14,015.6	14,224.6	14,962.5	15,387.6	15,679.1	16,214.2	16,740.7
Percent Change	-1.0%	4.1%	2.7%	1.8%	1.5%	5.2%	2.8%	1.9%	3.4%	3.2%
Disposable Personal Income ($B)	11,063.1	11,611.8	12,179.5	12,508.0	12,811.0	13,530.5	13,975.1	14,474.3	15,278.7	16,100.4
Percent Change	1.5%	5.0%	4.9%	2.7%	2.4%	5.6%	3.3%	3.6%	5.6%	5.4%
Disposable Personal Income ($B in 2012=100)	11,635.8	11,999.7	12,280.3	12,423.8	12,542.4	13,146.3	13,509.4	13,781.5	14,273.3	14,785.2
Percent Change	0.3%	3.1%	2.3%	1.2%	1.0%	4.8%	2.8%	2.0%	3.6%	3.6%

MAJOR U.S. ECONOMIC INDICATORS - FISCAL YEAR BASIS

TABLE 2
U.S. PERSONAL INCOME
(BILLIONS OF DOLLARS)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Personal Income	12,233.0	12,965.9	13,653.5	14,111.1	14,529.6	15,400.1	15,918.5	16,468.0	17,356.7	18,230.7
Percent Change	0.1%	6.0%	5.3%	3.4%	3.0%	6.0%	3.4%	3.5%	5.4%	5.0%
Wages & Salaries	6,277.1	6,520.1	6,757.4	7,036.0	7,268.3	7,677.6	7,966.6	8,256.9	8,690.4	9,104.3
Percent Change	-1.7%	3.9%	3.6%	4.1%	3.3%	5.6%	3.8%	3.6%	5.3%	4.8%
Manufacturing Income	657.7	695.3	719.3	739.0	761.5	796.1	809.1	828.1	866.2	898.6
Percent Change	-5.9%	5.7%	3.5%	2.7%	3.0%	4.5%	1.6%	2.4%	4.6%	3.7%
Nonmanufacturing Inc.	5,619.4	5,824.8	6,038.1	6,297.0	6,506.8	6,881.5	7,157.6	7,428.8	7,824.2	8,205.7
Percent Change	-1.2%	3.7%	3.7%	4.3%	3.3%	5.8%	4.0%	3.8%	5.3%	4.9%
Other Labor Income	1,528.0	1,579.6	1,614.2	1,678.5	1,749.4	1,808.0	1,859.8	1,908.1	1,996.3	2,082.0
Percent Change	0.8%	3.4%	2.2%	4.0%	4.2%	3.4%	2.9%	2.6%	4.6%	4.3%
Proprietor's Income	1,024.6	1,166.8	1,300.8	1,377.5	1,420.1	1,441.0	1,418.8	1,469.1	1,551.7	1,617.1
Percent Change	10.0%	13.9%	11.5%	5.9%	3.1%	1.5%	-1.5%	3.6%	5.6%	4.2%
Farm Income	32.7	54.3	62.9	78.3	77.8	60.4	47.3	38.6	30.4	24.3
Percent Change	13.6%	66.1%	15.8%	24.5%	-0.6%	-22.3%	-21.7%	-18.4%	-21.3%	-19.9%
Nonfarm Income	991.9	1,112.5	1,238.0	1,299.3	1,342.2	1,380.6	1,371.5	1,430.6	1,521.3	1,592.8
Percent Change	9.8%	12.2%	11.3%	5.0%	3.3%	2.9%	-0.7%	4.3%	6.3%	4.7%
Rental Income	361.8	435.5	504.3	533.2	581.9	625.4	667.9	698.3	739.0	768.4
Percent Change	22.3%	20.4%	15.8%	5.7%	9.1%	7.5%	6.8%	4.5%	5.8%	4.0%
Personal Dividend Inc.	503.2	611.1	742.9	834.0	863.8	1,016.3	1,039.9	1,093.8	1,174.5	1,258.8
Percent Change	-27.0%	21.4%	21.6%	12.3%	3.6%	17.7%	2.3%	5.2%	7.4%	7.2%
Personal Interest Income	1,265.0	1,251.2	1,311.7	1,287.4	1,303.5	1,389.8	1,457.1	1,500.6	1,625.4	1,724.1
Percent Change	-6.8%	-1.1%	4.8%	-1.9%	1.2%	6.6%	4.8%	3.0%	8.3%	6.1%
Transfer Payments	2,245.7	2,352.4	2,353.7	2,392.2	2,469.7	2,621.8	2,730.1	2,809.8	2,909.8	3,064.8
Percent Change	11.1%	4.8%	0.1%	1.6%	3.2%	6.2%	4.1%	2.9%	3.6%	5.3%

MAJOR U.S. ECONOMIC INDICATORS - FISCAL YEAR BASIS

TABLE 3
U.S. PERSONAL INCOME AND ITS DISPOSITION
(BILLIONS OF DOLLARS)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Less:										
Contributions to										
Social Insurance	972.3	950.8	931.3	1,027.7	1,127.0	1,180.0	1,221.6	1,268.5	1,330.3	1,388.8
Percent Change	-0.5%	-2.2%	-2.0%	10.3%	9.7%	4.7%	3.5%	3.8%	4.9%	4.4%
Equals:										
Personal Income	12,233.0	12,965.9	13,653.5	14,111.1	14,529.6	15,400.1	15,918.5	16,468.0	17,356.7	18,230.7
Percent Change	0.1%	6.0%	5.3%	3.4%	3.0%	6.0%	3.4%	3.5%	5.4%	5.0%
Less:										
Personal Taxes	1,170.0	1,354.1	1,474.1	1,603.0	1,718.6	1,869.6	1,943.4	1,993.6	2,078.1	2,130.2
Percent Change	-11.3%	15.7%	8.9%	8.7%	7.2%	8.8%	3.9%	2.6%	4.2%	2.5%
Equals:										
Disposable Income ($B)	11,063.1	11,611.8	12,179.5	12,508.0	12,811.0	13,530.5	13,975.1	14,474.3	15,278.7	16,100.4
Percent Change	1.5%	5.0%	4.9%	2.7%	2.4%	5.6%	3.3%	3.6%	5.6%	5.4%
Less:										
Personal Outlays	10,400.2	10,800.5	11,224.2	11,536.5	11,930.7	12,506.6	12,955.4	13,496.4	14,160.8	14,827.4
Percent Change	1.3%	3.8%	3.9%	2.8%	3.4%	4.8%	3.6%	4.2%	4.9%	4.7%
Equals:										
Personal Savings	662.9	811.3	955.3	971.5	880.3	1,023.9	1,019.7	977.9	1,117.9	1,273.1
Percent Change	3.5%	22.4%	17.7%	1.7%	-9.4%	16.3%	-0.4%	-4.1%	14.3%	13.9%
Personal Savings Rate	6.0%	7.0%	7.8%	7.8%	6.9%	7.6%	7.3%	6.8%	7.3%	7.9%

MAJOR U.S. ECONOMIC INDICATORS - FISCAL YEAR BASIS

TABLE 4
U.S. EMPLOYMENT AND THE LABOR FORCE
(MILLIONS OF JOBS)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Establishment Employ.	130.2	131.0	133.1	135.2	137.6	140.4	143.1	145.5	147.8	150.3
Percent Change	-3.1%	0.6%	1.6%	1.6%	1.7%	2.1%	1.9%	1.7%	1.5%	1.7%
Manufacturing	11.5	11.6	11.8	12.0	12.1	12.3	12.4	12.4	12.6	12.8
Percent Change	-8.9%	0.9%	1.8%	1.2%	0.9%	1.6%	0.6%	0.1%	1.5%	1.9%
Nonmanufacturing	118.6	119.4	121.3	123.2	125.5	128.2	130.8	133.2	135.2	137.5
Percent Change	-2.5%	0.6%	1.6%	1.6%	1.8%	2.1%	2.0%	1.8%	1.5%	1.7%
Construction & Mining	6.3	6.2	6.4	6.6	6.9	7.2	7.3	7.5	7.8	8.2
Percent Change	-14.0%	-1.5%	3.2%	2.4%	4.1%	4.7%	2.1%	2.2%	4.3%	4.4%
Information	2.7	2.7	2.7	2.7	2.7	2.7	2.8	2.8	2.8	2.8
Percent Change	-5.4%	-2.0%	-0.5%	0.4%	1.2%	0.7%	1.1%	1.5%	0.3%	0.1%
Public Utility, Trade & Transportation	24.6	24.8	25.2	25.6	26.0	26.6	27.0	27.3	27.5	27.8
Percent Change	-3.8%	0.8%	1.9%	1.3%	1.9%	2.1%	1.6%	1.2%	0.7%	0.9%
Finance, Insurance & Real Estate	7.7	7.7	7.7	7.8	7.9	8.0	8.2	8.4	8.5	8.6
Percent Change	-3.6%	-0.7%	0.7%	1.3%	1.1%	1.6%	1.9%	2.1%	1.6%	1.3%
Services	54.7	55.7	57.2	58.7	60.1	61.6	63.3	64.8	66.2	67.6
Percent Change	-1.1%	1.9%	2.7%	2.5%	2.4%	2.6%	2.7%	2.4%	2.1%	2.2%
Professional & Business	16.6	17.1	17.7	18.3	18.8	19.4	19.9	20.3	20.7	21.3
Percent Change	-3.6%	3.1%	3.6%	3.3%	3.1%	3.0%	2.6%	1.9%	2.1%	2.5%
Education & Health	19.8	20.1	20.6	20.9	21.2	21.7	22.3	22.9	23.4	23.9
Percent Change	1.8%	1.7%	2.1%	1.8%	1.4%	2.3%	2.8%	2.7%	2.1%	2.2%
Leisure & Hospitality	13.0	13.2	13.6	14.0	14.5	14.9	15.4	15.9	16.2	16.6
Percent Change	-1.9%	1.5%	2.9%	3.2%	3.4%	2.9%	3.4%	2.9%	2.1%	2.2%
Other Services	5.3	5.3	5.4	5.5	5.5	5.6	5.7	5.7	5.8	5.9
Percent Change	-2.0%	0.1%	1.2%	1.0%	1.4%	1.2%	1.0%	1.4%	1.4%	1.4%
Government	22.6	22.3	22.0	21.9	21.8	21.9	22.1	22.3	22.4	22.5
Percent Change	0.0%	-1.3%	-1.4%	-0.4%	-0.2%	0.5%	0.8%	0.9%	0.4%	0.5%
Civilian Labor Force	153.9	153.6	154.3	155.3	155.5	156.6	158.0	159.8	161.2	162.7
Percent Change	-0.4%	-0.2%	0.4%	0.7%	0.1%	0.7%	0.9%	1.1%	0.9%	0.9%
Unemployment Rate	9.8%	9.3%	8.5%	7.8%	6.8%	5.7%	5.0%	4.7%	4.1%	3.8%

MAJOR U.S. ECONOMIC INDICATORS - FISCAL YEAR BASIS

TABLE 5
PRICE INDICES FOR URBAN CONSUMERS
(1982-1984 = 100)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
All Items	216.8	221.1	227.6	231.4	235.0	236.7	238.2	242.7	248.1	253.3
Percent Change	1.0%	2.0%	2.9%	1.7%	1.6%	0.7%	0.7%	1.9%	2.2%	2.1%
Food & Beverages	218.6	223.0	231.5	235.4	239.1	245.1	247.7	248.2	251.6	255.7
Percent Change	0.2%	2.0%	3.8%	1.7%	1.6%	2.5%	1.1%	0.2%	1.3%	1.6%
Housing	216.5	217.2	221.0	224.9	230.2	235.6	240.7	247.7	254.8	262.2
Percent Change	-0.5%	0.3%	1.8%	1.8%	2.4%	2.3%	2.1%	2.9%	2.9%	2.9%
Energy	206.4	227.9	245.8	246.0	246.7	221.1	192.5	197.8	213.3	217.6
Percent Change	-0.9%	10.4%	7.9%	0.1%	0.3%	-10.4%	-12.9%	2.8%	7.8%	2.0%
Commodities	173.2	178.7	186.3	187.9	188.1	184.5	180.2	180.2	183.0	184.9
Percent Change	1.3%	3.2%	4.3%	0.8%	0.1%	-1.9%	-2.3%	0.0%	1.5%	1.0%
Apparel	120.1	119.8	124.9	127.0	127.6	126.8	125.9	126.1	125.9	124.6
Percent Change	0.6%	-0.3%	4.3%	1.7%	0.5%	-0.6%	-0.7%	0.2%	-0.2%	-1.0%
Transportation	189.0	202.9	215.4	217.9	217.9	206.1	196.0	198.4	206.2	210.5
Percent Change	3.5%	7.4%	6.2%	1.2%	0.0%	-5.4%	-4.9%	1.2%	3.9%	2.1%
Services	260.1	263.2	268.5	274.6	281.5	288.3	295.6	304.2	312.3	320.7
Percent Change	0.8%	1.2%	2.0%	2.3%	2.5%	2.4%	2.5%	2.9%	2.7%	2.7%
Medical Care	382.2	394.0	407.4	420.6	430.2	440.9	453.9	471.0	480.4	489.3
Percent Change	3.5%	3.1%	3.4%	3.3%	2.3%	2.5%	2.9%	3.8%	2.0%	1.9%
Other Goods & Services	377.1	384.6	390.7	397.8	404.7	411.2	418.9	427.7	437.8	446.2
Percent Change	6.1%	2.0%	1.6%	1.8%	1.7%	1.6%	1.9%	2.1%	2.3%	1.9%

MAJOR CONNECTICUT ECONOMIC INDICATORS - FISCAL YEAR BASIS

TABLE 6
PERSONAL INCOME
(BILLIONS OF DOLLARS)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Personal Income	217.45	226.07	231.02	231.01	232.67	242.77	247.85	252.84	265.37	278.82
Percent Change	1.6%	4.0%	2.2%	0.0%	0.7%	4.3%	2.1%	2.0%	5.0%	5.1%
Disposable Personal Income	191.02	195.99	198.81	196.09	195.59	203.82	209.02	213.81	224.52	237.22
Percent Change	3.6%	2.6%	1.4%	-1.4%	-0.3%	4.2%	2.6%	2.3%	5.0%	5.7%
Total Wages	105.57	110.72	113.25	117.01	118.83	123.00	125.26	126.16	130.96	135.78
Percent Change	-2.1%	4.9%	2.3%	3.3%	1.6%	3.5%	1.8%	0.7%	3.8%	3.7%
Manufacturing Wages	13.01	14.01	14.31	14.69	14.67	14.36	13.90	14.11	14.94	15.46
Percent Change	-5.9%	7.7%	2.1%	2.6%	-0.1%	-2.1%	-3.2%	1.5%	5.9%	3.5%
Nonmanufacturing Wages	92.56	96.71	98.95	102.32	104.16	108.64	111.37	112.05	116.02	120.33
Percent Change	-1.6%	4.5%	2.3%	3.4%	1.8%	4.3%	2.5%	0.6%	3.5%	3.7%
Other Labor Income	24.44	25.44	25.47	26.05	26.51	27.17	27.66	28.02	29.69	30.97
Percent Change	0.0%	4.1%	0.1%	2.3%	1.8%	2.5%	1.8%	1.3%	6.0%	4.3%
Proprietor's Income	36.48	34.85	32.84	28.10	26.60	27.06	27.29	28.86	30.96	32.53
Percent Change	22.2%	-4.4%	-5.8%	-14.4%	-5.3%	1.7%	0.8%	5.8%	7.3%	5.1%
Property Income	37.96	40.76	44.69	46.14	48.05	52.07	53.63	55.65	59.27	63.21
Percent Change	-8.7%	7.4%	9.6%	3.2%	4.2%	8.4%	3.0%	3.8%	6.5%	6.6%
Transfer Payments Less Social Insurance	13.01	14.30	14.77	13.70	12.67	13.46	14.00	14.15	14.49	16.33
Percent Change	27.1%	10.0%	3.3%	-7.2%	-7.5%	6.2%	4.0%	1.1%	2.4%	12.7%
Transfer Payments	28.28	29.24	29.24	29.74	30.08	31.39	32.39	32.92	34.15	36.78
Percent Change	10.1%	3.4%	0.0%	1.7%	1.2%	4.3%	3.2%	1.6%	3.7%	7.7%
Social Insurance	15.28	14.94	14.47	16.03	17.41	17.93	18.39	18.76	19.66	20.45
Percent Change	-1.2%	-2.2%	-3.1%	10.8%	8.6%	3.0%	2.6%	2.0%	4.8%	4.1%
Residence Adjustment	9.95	11.09	12.17	12.90	12.70	13.10	13.02	13.66	16.25	17.96
Percent Change	-1.0%	11.5%	9.7%	6.0%	-1.5%	3.1%	-0.6%	4.9%	18.9%	10.5%

MAJOR CONNECTICUT ECONOMIC INDICATORS - FISCAL YEAR BASIS

TABLE 7
DEFLATED PERSONAL INCOME
(BILLIONS OF DOLLARS)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Personal Income	228.71	233.63	232.95	229.44	227.81	235.87	239.58	240.74	247.92	256.04
Percent Change	0.5%	2.2%	-0.3%	-1.5%	-0.7%	3.5%	1.6%	0.5%	3.0%	3.3%
Disposable Personal Income	200.91	202.54	200.47	194.76	191.50	198.02	202.05	203.57	209.75	217.84
Percent Change	2.4%	0.8%	-1.0%	-2.8%	-1.7%	3.4%	2.0%	0.8%	3.0%	3.9%
Total Wages	111.04	114.42	114.20	116.22	116.35	119.50	121.09	120.12	122.35	124.69
Percent Change	-3.2%	3.0%	-0.2%	1.8%	0.1%	2.7%	1.3%	-0.8%	1.9%	1.9%
Manufacturing Wages	13.68	14.48	14.43	14.59	14.36	13.95	13.43	13.44	13.96	14.20
Percent Change	-6.9%	5.8%	-0.4%	1.1%	-1.5%	-2.9%	-3.7%	0.0%	3.9%	1.7%
Nonmanufacturing Wages	97.35	99.94	99.77	101.63	101.98	105.56	107.65	106.68	108.39	110.50
Percent Change	-2.7%	2.7%	-0.2%	1.9%	0.3%	3.5%	2.0%	-0.9%	1.6%	1.9%
Other Labor Income	25.70	26.29	25.68	25.88	25.96	26.40	26.74	26.68	27.74	28.44
Percent Change	-1.1%	2.3%	-2.3%	0.8%	0.3%	1.7%	1.3%	-0.2%	4.0%	2.5%
Proprietor's Income	38.36	36.02	33.11	27.91	26.05	26.29	26.38	27.48	28.92	29.87
Percent Change	20.9%	-6.1%	-8.1%	-15.7%	-6.7%	1.0%	0.3%	4.2%	5.3%	3.3%
Property Income	39.93	42.12	45.06	45.83	47.05	50.59	51.84	52.99	55.37	58.05
Percent Change	-9.7%	5.5%	7.0%	1.7%	2.7%	7.5%	2.5%	2.2%	4.5%	4.8%
Transfer Payments Less Social Insurance	13.68	14.78	14.89	13.61	12.41	13.08	13.53	13.48	13.54	14.99
Percent Change	25.7%	8.0%	0.8%	-8.6%	-8.8%	5.4%	3.5%	-0.4%	0.5%	10.8%
Transfer Payments	29.75	30.22	29.48	29.54	29.45	30.50	31.31	31.34	31.90	33.78
Percent Change	8.9%	1.6%	-2.4%	0.2%	-0.3%	3.5%	2.7%	0.1%	1.8%	5.9%
Social Insurance	16.07	15.44	14.59	15.92	17.04	17.42	17.77	17.86	18.36	18.78
Percent Change	-2.3%	-3.9%	-5.5%	9.1%	7.0%	2.2%	2.0%	0.5%	2.8%	2.3%
Residence Adjustment	10.46	11.46	12.27	12.81	12.44	12.72	12.59	13.01	15.18	16.49
Percent Change	-2.1%	9.5%	7.0%	4.5%	-2.9%	2.3%	-1.1%	3.3%	16.7%	8.7%

Note: All categories are deflated by consumer price index, 2012=100

MAJOR CONNECTICUT ECONOMIC INDICATORS - FISCAL YEAR BASIS

TABLE 8
MANUFACTURING EMPLOYMENT
(THOUSANDS -Seasonally Adjusted)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Manufacturing	163.38	163.39	162.93	161.11	158.60	156.88	156.62	157.49	159.70	160.80
Percent Change	-8.0%	0.0%	-0.3%	-1.1%	-1.6%	-1.1%	-0.2%	0.6%	1.4%	0.7%
Transportation Equip.	42.41	42.12	42.31	41.76	40.63	40.18	41.14	42.78	45.02	46.36
Percent Change	-3.5%	-0.7%	0.5%	-1.3%	-2.7%	-1.1%	2.4%	4.0%	5.3%	3.0%
Fabricated Metals	28.19	28.40	28.80	29.65	30.05	29.38	29.15	29.33	29.47	29.75
Percent Change	-10.8%	0.7%	1.4%	3.0%	1.4%	-2.3%	-0.8%	0.6%	0.5%	1.0%
Electrical Equip. & Appl.	9.70	9.89	9.86	9.71	9.29	8.79	8.42	8.07	8.11	7.99
Percent Change	-8.4%	2.0%	-0.3%	-1.4%	-4.4%	-5.4%	-4.2%	-4.1%	0.5%	-1.4%
Chemicals	9.84	9.63	8.77	8.05	7.94	7.83	7.66	7.67	7.87	7.74
Percent Change	-10.7%	-2.1%	-8.9%	-8.2%	-1.3%	-1.5%	-2.1%	0.1%	2.6%	-1.6%
Printing & Support	5.82	5.68	5.58	5.26	5.10	5.12	5.21	5.39	5.32	5.15
Percent Change	-12.2%	-2.4%	-1.7%	-5.7%	-3.0%	0.2%	1.9%	3.3%	-1.3%	-3.1%
Industrial Machinery	15.33	14.88	14.70	14.27	13.99	14.13	13.84	13.45	13.11	12.83
Percent Change	-10.0%	-2.9%	-1.2%	-2.9%	-2.0%	1.0%	-2.1%	-2.8%	-2.5%	-2.1%
All Other	52.09	52.80	52.91	52.40	51.59	51.46	51.19	50.81	50.80	50.97
Percent Change	-8.3%	1.4%	0.2%	-1.0%	-1.5%	-0.3%	-0.5%	-0.7%	0.0%	0.3%

MAJOR CONNECTICUT ECONOMIC INDICATORS - FISCAL YEAR BASIS

TABLE 9
NONMANUFACTURING EMPLOYMENT
(THOUSANDS -Seasonally Adjusted)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Nonmanufacturing	1,446.5	1,459.3	1,472.6	1,487.3	1,500.9	1,516.7	1,525.4	1,528.6	1,527.6	1,532.7
Percent Change	-3.1%	0.9%	0.9%	1.0%	0.9%	1.1%	0.6%	0.2%	-0.1%	0.3%
Construction & Mining	51.7	51.4	52.3	52.8	54.7	57.6	59.7	59.2	58.8	60.4
Percent Change	-14.4%	-0.7%	1.8%	1.1%	3.5%	5.2%	3.7%	-0.8%	-0.7%	2.7%
Information	32.5	31.7	31.3	31.8	32.1	32.3	32.5	32.2	31.6	32.4
Percent Change	-10.8%	-2.5%	-1.3%	1.7%	1.0%	0.6%	0.5%	-0.9%	-1.7%	2.6%
Utilities	6.4	6.2	6.0	6.0	6.0	5.7	5.6	5.5	5.3	5.1
Percent Change	-5.9%	-1.6%	-3.8%	-0.3%	0.3%	-4.9%	-1.3%	-2.6%	-4.5%	-3.0%
Transportation	38.5	39.3	40.0	41.3	42.3	43.5	45.2	45.7	48.0	50.1
Percent Change	-5.4%	2.2%	1.6%	3.4%	2.3%	3.0%	3.9%	1.1%	5.1%	4.4%
Wholesale Trade	62.4	62.1	62.2	62.1	62.0	61.8	61.4	61.6	61.6	61.7
Percent Change	-6.2%	-0.4%	0.2%	-0.2%	-0.1%	-0.4%	-0.6%	0.2%	0.0%	0.3%
Retail Trade	177.5	179.6	181.0	182.1	184.0	184.4	184.9	184.3	182.3	178.5
Percent Change	-2.8%	1.2%	0.8%	0.6%	1.0%	0.2%	0.3%	-0.3%	-1.1%	-2.1%
Finance & Insurance	116.6	116.7	115.3	113.2	110.1	110.0	110.1	108.8	106.8	106.2
Percent Change	-3.7%	0.1%	-1.2%	-1.8%	-2.7%	-0.1%	0.2%	-1.2%	-1.8%	-0.6%
Real Estate	19.0	18.8	18.7	18.9	19.0	19.5	19.9	19.8	19.9	20.4
Percent Change	-4.7%	-0.7%	-0.8%	1.1%	0.8%	2.7%	2.0%	-0.5%	0.2%	2.5%
Professional & Business	192.7	198.2	204.4	208.2	213.0	217.5	219.1	219.1	220.3	219.6
Percent Change	-4.7%	2.8%	3.1%	1.9%	2.3%	2.1%	0.7%	0.0%	0.5%	-0.3%
Education & Health	304.2	310.8	314.8	318.8	321.9	326.0	327.5	332.4	333.7	336.9
Percent Change	1.4%	2.2%	1.3%	1.3%	1.0%	1.3%	0.5%	1.5%	0.4%	1.0%
Leisure & Hospitality	132.7	135.3	140.1	144.3	148.8	150.7	152.2	155.5	157.0	160.0
Percent Change	-1.9%	2.0%	3.5%	3.0%	3.1%	1.3%	1.0%	2.2%	0.9%	1.9%
Other Services	60.6	60.6	60.6	62.0	62.2	63.5	64.4	64.9	65.4	64.7
Percent Change	-2.4%	-0.1%	0.0%	2.3%	0.4%	2.0%	1.4%	0.8%	0.7%	-1.0%
Federal Government	19.8	18.3	17.8	17.4	17.3	17.6	17.7	17.9	18.1	18.2
Percent Change	1.3%	-7.2%	-2.8%	-2.2%	-0.8%	1.9%	0.5%	1.3%	0.6%	0.8%
State & Local Gov't.	232.2	230.2	228.3	228.4	227.4	226.7	225.2	221.7	219.1	218.5
Percent Change	-2.8%	-0.8%	-0.8%	0.1%	-0.4%	-0.3%	-0.6%	-1.6%	-1.2%	-0.3%

MAJOR CONNECTICUT ECONOMIC INDICATORS - FISCAL YEAR BASIS

TABLE 10
LABOR FORCE & OTHER ECONOMIC INDICATORS
(THOUSANDS -Seasonally Adjusted)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Labor Force	1,899.4	1,919.3	1,903.0	1,870.7	1,872.0	1,897.2	1,883.4	1,899.9	1,892.0	1,916.5
Percent Change	0.6%	1.0%	-0.8%	-1.7%	0.1%	1.3%	-0.7%	0.9%	-0.4%	1.3%
Nonfarm Employment	1,609.9	1,622.7	1,635.5	1,648.4	1,659.5	1,673.6	1,682.0	1,686.1	1,687.3	1,693.5
Percent Change	-3.6%	0.8%	0.8%	0.8%	0.7%	0.9%	0.5%	0.2%	0.1%	0.4%
Residential Employment	1,733.1	1,743.8	1,742.6	1,717.2	1,736.7	1,781.1	1,780.5	1,807.1	1,807.0	1,841.5
Percent Change	-1.5%	0.6%	-0.1%	-1.5%	1.1%	2.6%	0.0%	1.5%	0.0%	1.9%
Unemployed	166.3	175.4	160.4	153.5	135.3	116.1	102.9	92.8	85.0	73.6
Percent Change	29.6%	5.5%	-8.5%	-4.3%	-11.9%	-14.2%	-11.4%	-9.8%	-8.3%	-13.4%
Unemployment Rate	8.8%	9.1%	8.4%	8.2%	7.2%	6.1%	5.5%	4.9%	4.5%	3.8%
Households	1,369.7	1,366.1	1,367.2	1,358.3	1,361.5	1,359.9	1,363.9	1,368.6	1,381.8	1,389.2
Percent Change	0.3%	-0.3%	0.1%	-0.7%	0.2%	-0.1%	0.3%	0.3%	1.0%	0.5%
Housing Starts	3,853.1	3,539.1	3,634.2	5,336.9	4,670.5	4,735.6	5,992.7	4,863.0	4,691.0	4,765.2
Percent Change	2.4%	-8.2%	2.7%	46.9%	-12.5%	1.4%	26.5%	-18.9%	-3.5%	1.6%
Single Family	2,848.5	2,469.8	2,387.3	3,050.7	2,770.1	2,384.5	2,743.5	2,749.1	2,894.2	3,193.2
Percent Change	14.9%	-13.3%	-3.3%	27.8%	-9.2%	-13.9%	15.1%	0.2%	5.3%	10.3%
Multi Family	1,004.7	1,069.3	1,246.9	2,286.2	1,900.4	2,351.1	3,249.3	2,113.8	1,796.8	1,572.0
Percent Change	-21.9%	6.4%	16.6%	83.3%	-16.9%	23.7%	38.2%	-34.9%	-15.0%	-12.5%
New Car Registrations	133.3	148.1	152.1	161.8	175.1	176.3	182.5	179.2	173.4	169.0
Percent Change	3.4%	11.0%	2.7%	6.4%	8.2%	0.7%	3.5%	-1.8%	-3.2%	-2.5%

Note: Housing starts are expressed in whole numbers, not thousands

MAJOR CONNECTICUT ECONOMIC INDICATORS - FISCAL YEAR BASIS

TABLE 11
ANALYTICS

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Wages/Total Income	48.5%	49.0%	49.0%	50.7%	51.1%	50.7%	50.5%	49.9%	49.3%	48.7%
Other Labor Income /Total Income	11.2%	11.3%	11.0%	11.3%	11.4%	11.2%	11.2%	11.1%	11.2%	11.1%
Social Insurance /Total Income	7.0%	6.6%	6.3%	6.9%	7.5%	7.4%	7.4%	7.4%	7.4%	7.3%
Transfer Payments /Total Income	13.0%	12.9%	12.7%	12.9%	12.9%	12.9%	13.1%	13.0%	12.9%	13.2%
Proprietor's Income /Total Income	16.8%	15.4%	14.2%	12.2%	11.4%	11.1%	11.0%	11.4%	11.7%	11.7%
Property Income /Total Income	17.5%	18.0%	19.3%	20.0%	20.7%	21.4%	21.6%	22.0%	22.3%	22.7%
Average Wages (Thousands)	65.06	67.73	68.75	70.46	71.11	73.03	74.02	74.36	77.15	79.70
Average Mfg. Wages (Thousands)	79.63	85.76	87.81	91.16	92.50	91.52	88.74	89.61	93.55	96.14
Manufacturing Share of Nonfarm Employment	10.1%	10.1%	10.0%	9.8%	9.6%	9.4%	9.3%	9.3%	9.5%	9.5%
Residential Employment /Total Nonfarm Employment	1.077	1.075	1.065	1.042	1.047	1.064	1.059	1.072	1.071	1.088

MAJOR CONNECTICUT REGIONAL ECONOMIC INDICATORS - CALENDAR YEAR BASIS

TABLE 12
PERSONAL INCOME (MILLIONS-Seasonally Adjusted Annual Rate)

BRIDGEPORT-STAMFORD-NORWALK

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Personal Income	89,504.1	95,357.6	96,568.8	96,923.7	91,393.9	96,896.3	98,687.5	101,296.1	106,392.5	113,854.5
Percent Change	-1.1%	6.5%	1.3%	0.4%	-5.7%	6.0%	1.8%	2.6%	5.0%	7.0%
Total Wages	32,774.2	33,937.3	35,507.9	36,230.9	36,293.0	37,405.7	38,616.2	38,726.7	38,315.5	38,804.2
Percent Change	-8.4%	3.5%	4.6%	2.0%	0.2%	3.1%	3.2%	0.3%	-1.1%	1.3%

HARTFORD-WEST HARTFORD-EAST HARTFORD

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Personal Income	59,996.3	61,475.1	64,204.4	66,187.7	66,619.0	69,424.3	71,460.4	72,390.6	74,172.1	77,612.7
Percent Change	-1.1%	2.5%	4.4%	3.1%	0.7%	4.2%	2.9%	1.3%	2.5%	4.6%
Total Wages	34,358.5	34,739.8	36,201.6	37,426.9	38,180.5	39,789.4	41,112.2	41,277.0	42,298.0	43,498.7
Percent Change	-3.7%	1.1%	4.2%	3.4%	2.0%	4.2%	3.3%	0.4%	2.5%	2.8%

NEW HAVEN-MILFORD

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Personal Income	37,945.2	38,786.5	40,417.6	41,578.9	41,923.6	43,399.2	44,576.4	45,149.5	45,978.6	48,580.3
Percent Change	-2.6%	2.2%	4.2%	2.9%	0.8%	3.5%	2.7%	1.3%	1.8%	5.7%
Total Wages	18,255.0	18,389.2	18,868.8	19,491.9	19,857.4	20,420.5	21,047.1	21,400.2	21,896.9	22,284.7
Percent Change	-3.7%	0.7%	2.6%	3.3%	1.9%	2.8%	3.1%	1.7%	2.3%	1.8%

NEW LONDON-NORWICH, CT-RI

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Personal Income	12,571.6	12,716.6	13,226.9	13,546.1	13,505.5	13,900.5	14,479.9	14,721.3	15,144.0	15,810.4
Percent Change	-0.6%	1.2%	4.0%	2.4%	-0.3%	2.9%	4.2%	1.7%	2.9%	4.4%
Total Wages	6,704.9	6,652.6	6,736.9	6,793.2	6,755.4	6,882.1	6,968.3	7,156.7	7,410.4	7,604.4
Percent Change	-2.2%	-0.8%	1.3%	0.8%	-0.6%	1.9%	1.3%	2.7%	3.5%	2.6%