
FY 2020 – FY 2021 Biennium

Economic Report of the Governor

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Office of the Secretary

Melissa McCaw, Secretary

Budget and Financial Management Division

Paul E. Potamianos, Executive Budget Officer

Gregory Messner, Assistant Executive Budget Officer

Economics, Capital, and Revenue Forecasting

Thomas J. Fiore, Section Director

Steven Kitowicz, Principal Budget Specialist

Matthew Pellowski, Budget Specialist

Manisha Srivastava, Budget Specialist

Brian Tassinari, Budget Specialist

Misha Jethwa, Intern

Andrew Silva, Intern

For information on data or analysis provided in this document or any questions or comments, please contact the Budget and Financial Management Division at (860) 418-6265.

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Office of Policy and Management
450 Capitol Avenue
Hartford, Connecticut 06106

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ECONOMIC ASSUMPTIONS OF THE GOVERNOR'S BUDGET

The United States Economy

Nationally, 2018 was an economic success in many ways, but with signs of fissures as well. The nation's inflation-adjusted or real gross domestic product (GDP) grew at an annualized rate of 4.2% in the second quarter of 2018, growth the U.S. economy has not seen since 2014. Projections show the U.S. may end calendar year 2018 with 2.9% growth. The national unemployment rate was down to 3.9% in December 2018, a level last reached in 2000. The national unemployment rate was even lower at 3.7% between September to November 2018. Low unemployment rates are contributing to wage growth, which have been elusive this recovery so far. Wages and salaries grew 2.9% in the third quarter of 2018, the highest rate since 2008. Much of the wage growth, however, was negated by inflation which grew at an annual rate of 2.4%.

Based on strong signals from the economy, the Federal Reserve raised the benchmark interest rate four times in 2018, for a total of nine times since the end of 2015. The federal funds rate is currently in the 2.25 to 2.5 percent range. The Federal Reserve chairman indicated in early December that additional rate hikes were likely in 2019, but later in the month stated the central bank would take a "patient" approach to monetary policy moves. The chairman again reiterated this sentiment, and indeed interest rates remained unchanged at the January 2019 Federal Reserve meeting.

Rising domestic interest rates, relative to foreign nations, are driving a strengthening dollar. A weighted average of the foreign exchange value of the U.S. dollar against the currencies of major U.S. trading partners show a gain of 8.1% over 2018. A strong dollar makes U.S. goods relatively more expensive overseas, while driving down the cost of imported goods here at home. The trade balance in 2015, the first time the Fed raised interest rates since it was lowered to effectively zero from the Great Recession, was -\$498.5 billion. For the twelve month period ending October 2018, the trade balance was -\$603.6 billion, a 21.1% increase in the trade deficit since 2015.

The Trump administration, with a focus on reducing the U.S. trade deficit, enacted numerous tariffs over 2018. In January the President imposed tariffs between 20% to 50% on imported solar panel components and washing machines. In March 2018, the President added tariffs on imported steel (25%) and aluminum (10%) from every country with a few exceptions including Canada, Mexico, and the European Union. By June, the administration extended the steel and aluminum tariffs to the European Union, Canada and Mexico, countries from which it imports most of its steel. Foreign countries have responded in kind, imposing retaliatory tariffs on assorted U.S. metals and other goods. In September the U.S. imposed a 10% tariff on \$250 billion worth of Chinese products, and threatened tariffs on \$267 billion more. China retaliated with tariffs on \$110 billion worth of US goods. Both countries have agreed to a temporary halt of further tariffs until March 2019 while negotiations are ongoing.

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2018 was a volatile year for the stock markets. The S&P 500 index reached an all-time high of 2,930 on September 20, 2018, but since has officially entered a bear market defined as a 20% decline from recent highs. A bear market can last anywhere from several weeks to years. The S&P index ended the year down by 6%.

In January the U.S. temporarily ended its third federal government shutdown since the beginning of 2018. The first government was shutdown from January 20th to January 23rd of 2018, with differences between the parties driven by the inclusion of funding for Deferred Action for Childhood Arrivals. The second shutdown in February 2018 lasted about nine hours overnight and ended with President Trump signing the Bipartisan Budget Act of 2018. The third partial shutdown began December 22, 2018 over the issue of funding for a border wall, and lasted 35 days until January 25, 2019. The partial government shutdown led to approximately 380,000 federal workers on unpaid leave and about 420,000 “essential” personnel required to work without pay. Congress has until February 15, 2019, to reach a new compromise before funding runs out again.

The Connecticut Economy

In May 2018, then Governor Malloy announced Infosys, a global leader in consulting and technology, is planning to establish an innovation hub for insurance, health care and manufacturing technology in Hartford. The \$20.6 million project is anticipated to generate over 1,000 jobs in the state by 2022. The Connecticut Department of Economic and Community Development will provide up to \$12 million in grants after certain job creation milestones are met, and Infosys is eligible to receive up to \$2 million in training grants to support partnerships with local education organizations. Infosys has reached nearly a third of its employment goals by the end of January 2019, and has added several Fortune 200 companies to its client list since locating in Hartford.

On June 16, 2018 the Hartford Line, a commuter rail service between New Haven, Connecticut to Springfield, Massachusetts, launched. The new line links a region known as the Knowledge Corridor, home to over 2.7 million residents, 1.3 million workers, several academic institutions and financial firms. The Knowledge Corridor is denser and more populous than other comparably sized regions in the U.S., and is notable for residents’ higher levels of educational attainment. As of December 2018, the Hartford Line had served 336,511 riders, with a daily average of 2,033. In addition, the Hartford Line had generated over \$400 million of public and private investment in new mixed-use development around Hartford Line stations. Developments throughout the corridor include approximately 1,400 residential units and approximately 242,000 square feet of commercial/office space.

As of second quarter 2018, Connecticut’s real Gross State Product (GSP), a measure of all economic activity in the state, remains 10.4% below its pre-recession peak of \$269.1 billion in the first quarter of 2008. Preliminary data shows Connecticut had a strong start in 2018, with real

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GSP growing 0.5% over the first two quarters. As of the third quarter 2018, median housing prices for existing homes are 9.9% below their pre-recession peak of \$318,214, and home sales are 43.8% below their pre-recession peak of 81,200 sales.

Preliminary total nonfarm job growth picked up in 2018. The state gained 0.9% on an annual average basis in 2018, compared to 0.1% growth in 2017. Manufacturing, after decades of declines, grew 1.8% in 2017 and 2.6% in 2018, and financial activities turned positive from -1.2% growth in 2017 to 0.4% in 2018. As of December 2018, however, Connecticut has only regained 93.5% of the 119,100 jobs lost since the last employment peak of 1,713,300 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 117.7% 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 1,847,349 as of December 2018. This is 3.8% above the pre-recession peak of 1,780,566 in February 2008. Connecticut's unemployment rate as of December 2018 is 4.0%, down from over 9.1% in 2010.

Economic Assumptions of the Governor's Budget

The U.S. economy is projected to grow 2.2% in FY 2020 and 1.7% in FY 2021, before slowing to 1.5% in the out-years. Inflation is expected to remain at 2.4% in both FY 2020 and FY 2021, before reaching the low two percent range in the out-years. The U.S. unemployment rate is projected to reach a low of 3.6% by FY 2020, before slightly climbing in the out-years. Growth in housing starts is expected to reach a high of 7.0% in FY 2020, but decline to 1.6% in FY 2022 and fall thereafter. U.S. new vehicle sales are expected to continually slow over the entire forecast period, with a slight uptick of 0.3% in FY 2023.

The Connecticut economy is expected to grow at 1.5% in FY 2020 and 1.2% in FY 2021, 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 1.1% growth in FY 2019, followed by 0.4% and 0.2% growth in FY 2020 and FY 2021, respectively. Employment is then projected to stabilize around 1,715,400 jobs in the out-years. This level of employment will be 0.1% above 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.

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

<u>Fiscal Year</u>	U.S. Real GDP (Billions of Dollars)		CT Real GSP (Millions of Dollars)		U.S. Housing Starts (Millions)		CT Housing Starts	
	<u>Value</u>	<u>Growth</u>	<u>Value</u>	<u>Growth</u>	<u>Value</u>	<u>Growth</u>	<u>Value</u>	<u>Growth</u>
2018	18,295	2.6%	239.8	0.0%	1.3	4.3%	4,687.1	-3.7%
2019	18,828	2.9%	243.5	1.5%	1.2	-0.8%	4,636.2	-1.1%
2020	19,239	2.2%	247.0	1.5%	1.3	7.0%	5,617.5	21.2%
2021	19,558	1.7%	250.0	1.2%	1.4	6.4%	6,387.0	13.7%
2022	19,842	1.5%	252.5	1.0%	1.4	1.6%	6,667.0	4.4%
2023	20,132	1.5%	255.4	1.1%	1.4	-0.4%	6,839.0	2.6%

<u>Fiscal Year</u>	U.S. Employment (Millions)		CT Employment (Thousands)		U.S. Unemployment Rate		CT Unemployment Rate	
	<u>Value</u>	<u>Growth</u>	<u>Value</u>	<u>Growth</u>	<u>Value</u>	<u>Growth</u>	<u>Value</u>	<u>Growth</u>
2018	147.8	1.5%	1,686.2	0.3%	4.1%	-0.5	4.5%	-0.4
2019	150.1	1.6%	1,704.0	1.1%	3.7%	-0.5	4.2%	-0.4
2020	151.9	1.2%	1,711.1	0.4%	3.6%	-0.1	4.0%	-0.2
2021	152.9	0.7%	1,715.3	0.2%	3.8%	0.2	4.0%	0.0
2022	153.6	0.5%	1,715.4	0.0%	4.0%	0.2	4.1%	0.1
2023	154.2	0.4%	1,715.5	0.0%	4.2%	0.2	4.2%	0.1

<u>Fiscal Year</u>	Consumer Price Index		U.S. New Vehicle Sales (Millions)		CT Personal Income (Millions of Dollars)	
	<u>Value</u>	<u>Growth</u>	<u>Value</u>	<u>Growth</u>	<u>Value</u>	<u>Growth</u>
2018	248.1	2.2%	17.2	-0.3%	261,409.5	3.4%
2019	253.2	2.0%	17.0	-1.4%	269,469.3	3.1%
2020	259.4	2.4%	16.7	-2.0%	279,723.6	3.8%
2021	265.7	2.4%	16.5	-0.8%	289,680.4	3.6%
2022	272.2	2.5%	16.4	-0.7%	300,031.3	3.6%
2023	278.3	2.2%	16.5	0.3%	310,491.1	3.5%

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REVENUE FORECAST

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

	Actual Revenue FY 2018	Estimated Revenue FY 2019	Projected Revenue Current Rates FY 2020	Proposed Revenue Changes FY 2020	Net Projected Revenue FY 2020
<u>Taxes</u>					
PIT - Withholding	\$ 6,148.8	\$ 6,478.1	\$ 6,625.1	\$ 68.9	\$ 6,694.0
PIT – Estimates & Finals	4,621.3	3,244.8	2,972.7	-	2,972.7
Sales & Use Tax	4,202.2	4,290.9	4,299.1	371.0	4,670.1
Corporation Tax	920.7	1,009.6	967.8	83.4	1,051.2
Pass-Through Entity Tax	-	600.0	600.0	-	600.0
Public Service Tax	250.6	230.8	237.7	5.6	243.3
Inheritance & Estate Tax	223.8	196.2	155.8	(42.6)	113.2
Insurance Companies Tax	230.6	223.7	226.9	-	226.9
Cigarettes Tax	376.4	375.5	356.4	0.9	357.3
Real Estate Conveyance Tax	202.5	209.4	217.5	7.7	225.2
Alcoholic Beverages Tax	63.2	64.0	64.4	(0.1)	64.3
Admissions & Dues Tax	40.3	42.3	42.7	0.2	42.9
Health Provider Tax	1,041.0	1,049.2	534.0	515.1	1,049.1
Miscellaneous Tax	18.9	20.2	20.7	30.2	50.9
Total Taxes	\$ 18,340.6	\$ 18,034.7	\$ 17,320.8	\$ 1,040.3	\$ 18,361.1
Less Refunds of Tax	(1,179.6)	(1,327.3)	(1,412.3)	-	(1,412.3)
Less Earned Income Tax Credit	(90.1)	(94.2)	(97.3)	-	(97.3)
Less R&D Credit Exchange	(5.7)	(5.4)	(5.6)	-	(5.6)
Total - Taxes Less Refunds	\$ 17,065.3	\$ 1,607.8	\$ 15,805.6	\$ 1,040.3	\$ 16,845.9
<u>Other Revenue</u>					
Transfers-Special Revenue	\$ 339.5	\$ 352.7	\$ 360.2	\$ -	\$ 360.2
Indian Gaming Payments	273.0	248.6	223.7	-	223.7
Licenses, Permits, Fees	306.2	292.6	322.7	34.7	357.4
Sales of Commodities	33.2	29.1	30.2	-	30.2
Rents, Fines, Escheats	189.4	151.1	153.4	4.9	158.3
Investment Income	15.9	44.8	40.1	-	40.1
Miscellaneous	177.3	174.1	178.1	23.8	201.9
Less Refunds of Payments	(61.1)	(67.1)	(68.4)	-	(68.4)
Total - Other Revenue	\$ 1,273.5	\$ 1,225.9	\$ 1,240.0	\$ 63.4	\$ 1,303.4
<u>Other Sources</u>					
Federal Grants	\$ 1,143.1	\$ 2,098.8	\$ 1,338.9	\$ 126.0	\$ 1,464.9
Transfer From Tobacco Settlement	109.7	110.2	110.0	-	110.0
Transfers From/(To) Other Funds	78.4	78.3	(130.8)	51.8	(79.0)
Transfer to BRF – Volatility Cap	(1,471.3)	(648.0)	(280.2)	-	(280.2)
Total - Other Sources	\$ (140.2)	\$ 1,639.3	\$ 1,037.9	\$ 177.8	\$ 1,215.7
Total - General Fund Revenues	\$ 18,198.6	\$ 19,473.0	\$ 18,083.5	\$ 1,281.5	\$ 19,365.0
Revenue Cap Deduction	-	-	(90.4)	(6.4)	(96.8)
Available Net General Fund Revenues	\$ 18,198.6	\$ 19,473.0	\$ 17,993.1	\$ 1,275.1	\$ 19,268.2

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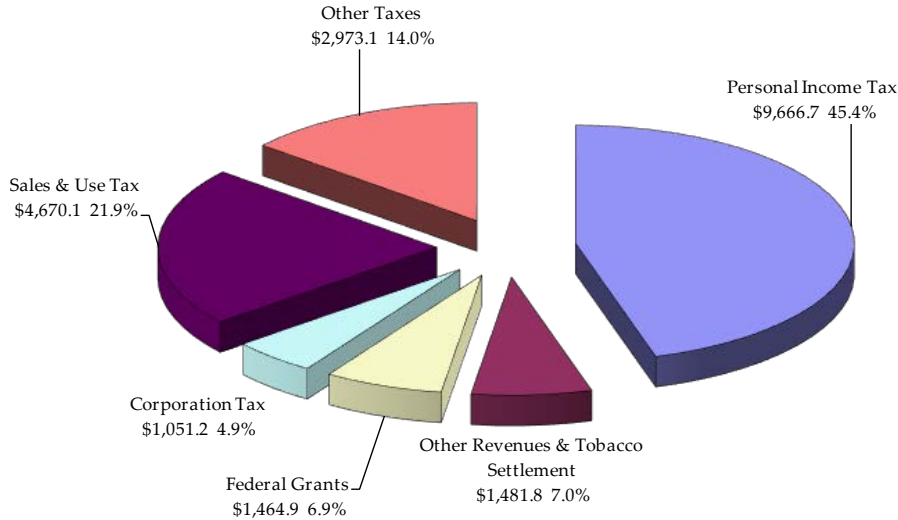
Projected Revenue Current Rates <u>FY 2021</u>	Proposed Revenue Changes <u>FY 2021</u>	Net Projected Revenue <u>FY 2021</u>	<u>Explanation of Changes</u>
\$ 6,746.0	\$ 74.4	\$ 6,820.4	<u>Personal Income Tax</u> Eliminate increased exemption for social security and pension income, eliminate STEM graduate tax credit, cap teachers' pension exemption at 25%.
3,051.8	-	3,051.8	<u>Sales Tax</u> Expand the sales and use tax base to include services (exempts business to business transactions), eliminate exemptions.
4,319.6	652.6	4,972.2	<u>Corporation Tax</u> Maintain current 10% surcharge, repeal business entity tax, reduce cap on R&D and URA tax credits, and repeal 7/7 program.
1,025.3	23.0	1,048.3	<u>Public Service Tax</u> Eliminate certain exemptions, cap tax credits to 50.01% of liability.
600.0	-	600.0	<u>Inheritance and Estate Tax</u> Repeal gift tax and delay estate filing from 6 to 9 months.
244.7	5.6	250.3	<u>Cigarettes Tax</u> Tax electronic cigarette liquids at 75% of wholesale price and raise the age for tobacco consumption to 21.
134.2	(9.0)	125.2	<u>Real Estate Conveyance Tax</u> Increase rate on residential real estate over \$800,000 from 1.25% to 1.5%.
229.7	-	229.7	<u>Alcoholic Beverages Tax</u> Reduce alcohol beverage tax at craft breweries by 50%.
338.8	4.2	343.0	<u>Health Provider Taxes</u> Maintain Hospital User Fee at FY 2019 levels and make modifications to the ambulatory surgical centers tax.
224.4	7.9	232.3	<u>Miscellaneous Tax</u> New 10 cent surcharge on plastic bags and a new 1.5 cent per ounce tax on sugar-sweetened beverages.
64.8	(0.1)	64.7	<u>License, Permits, and Fees</u> Various fee increases.
43.1	0.3	43.4	<u>Rents, Fines, Escheats</u> Add a 25 cent deposit on wine and liquor bottles and add a 5 cent deposit to liquor in a 50 ml container.
535.5	515.1	1,050.6	<u>Miscellaneous Revenue</u> Town reimbursement for a portion of the normal cost of the teachers' retirement fund.
21.2	189.9	211.1	<u>Federal Grants</u> Revenue gain resulting from expenditure changes.
\$ 17,579.1	\$ 1,463.9	\$ 19,043.0	<u>Transfers-Other Funds</u> Level fund Mashantucket Pequot and Mohegan Fund, gross budget Higher Education Alternative Retirement System.
(1,481.9)	-	(1,481.9)	
(100.6)	-	(100.6)	
(5.7)	-	(5.7)	
\$ 15,990.9	\$ 1,463.9	\$ 17,454.8	
\$ 368.2	\$ -	\$ 368.2	
223.1	-	223.1	
300.6	34.9	335.5	
31.0	-	31.0	
155.7	6.6	162.3	
40.7	-	40.7	
181.7	49.2	230.9	
(69.8)	-	(69.8)	
\$ 1,231.2	\$ 90.7	\$ 1,321.9	
\$ 1,346.1	\$ 154.3	\$ 1,500.4	
108.6	-	108.6	
(130.8)	51.5	(79.3)	
(269.1)	-	(269.1)	
\$ 1,054.8	\$ 205.8	\$ 1,260.6	
\$ 18,276.9	\$ 1,760.4	\$ 20,037.3	
(137.1)	(13.2)	(150.3)	
\$ 18,139.8	\$ 1,747.2	\$ 19,887.0	

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GENERAL FUND REVENUES FY 2020

(In Millions)

TOTAL \$ 19,365.0 MILLION*

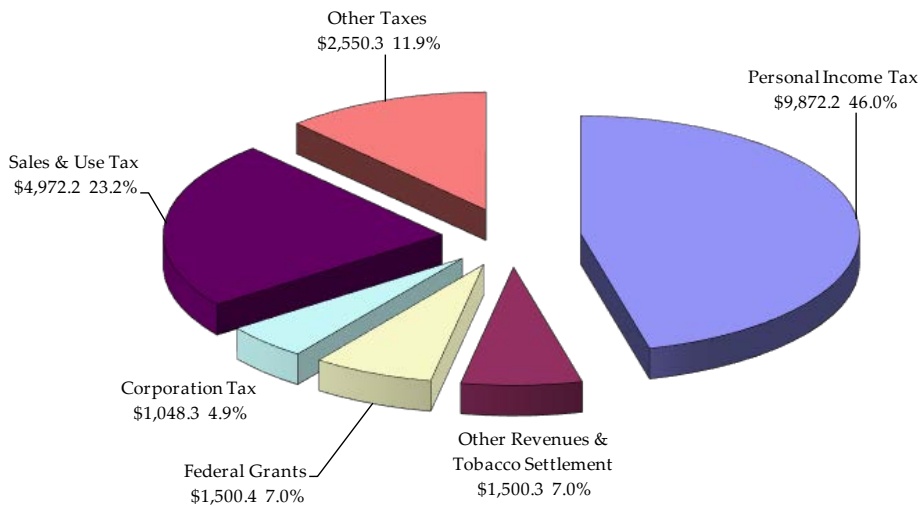


* Refunds are estimated at \$1,412.3 million in, R&D Credit Exchange is estimated at \$5.6 million, Earned Income Tax Credit is estimated at \$97.3 million, Refunds of Payments are estimated at \$68.4 million, Transfers to Other Funds are estimated at \$79.0 million, and Transfers to the Budget Reserve Fund are estimated to be \$280.2 million. This chart does not include the Revenue Cap deduction of \$96.8 million.

GENERAL FUND REVENUES FY 2021

(In Millions)

TOTAL \$ 20,037.3 MILLION*



* Refunds are estimated at \$1,481.9 million, R&D Credit Exchange is estimated at \$5.7 million, Earned Income Tax Credit is estimated at \$100.6 million, Refunds of Payments are estimated at \$69.8 million, Transfers to Other Funds are estimated at \$79.3 million, and Transfers to the Budget Reserve Fund are estimated to be \$269.1 million. This chart does not include the Revenue Cap deduction of \$150.3 million.

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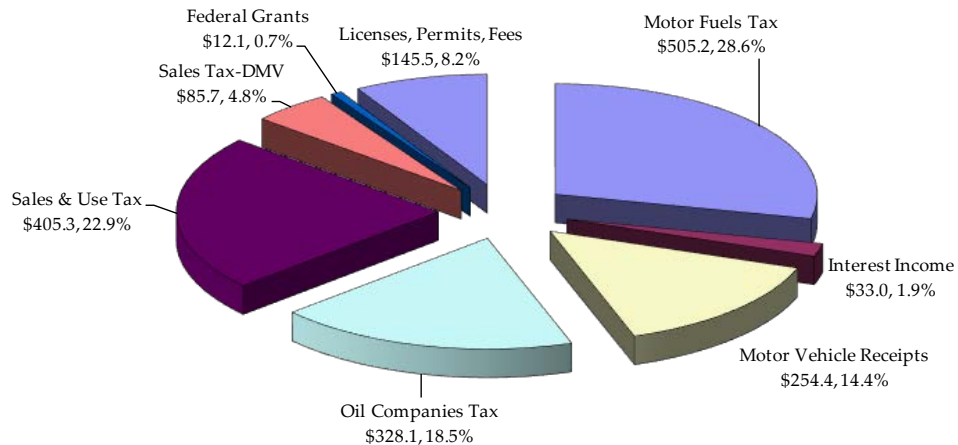
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TABLE A-3

STATE OF CONNECTICUT SPECIAL TRANSPORTATION FUND REVENUES (In Millions)

	Actual Revenue <u>FY 2018</u>	Estimated Revenue <u>FY 2019</u>	Projected Revenue Current Rates <u>FY 2020</u>	Proposed Revenue Changes <u>FY 2020</u>	Net Projected Revenue <u>FY 2020</u>
<u>Taxes</u>					
Motor Fuels Tax	\$ 499.8	\$ 505.1	\$ 505.2	\$ -	\$ 505.2
Oil Companies Tax	312.5	312.5	328.1	-	328.1
Sales and Use Tax	327.5	367.6	468.9	(63.6)	405.3
Sales Tax - DMV	85.9	85.2	85.7	-	85.7
Total Taxes	\$ 1,225.7	\$ 1,270.4	\$ 1,387.9	\$ (63.6)	\$ 1,324.3
Less Refunds of Taxes	(10.0)	(13.6)	(14.3)	-	(14.3)
Total - Taxes Less Refunds	\$ 1,215.7	\$ 1,256.8	\$ 1,373.6	\$ (63.6)	\$ 1,310.0
<u>Other Sources</u>					
Motor Vehicle Receipts	\$ 253.1	\$ 252.5	\$ 254.4	\$ -	\$ 254.4
Licenses, Permits, Fees	141.9	144.2	145.5	-	145.5
Interest Income	17.7	32.4	33.0	-	33.0
Federal Grants	12.2	12.1	12.1	-	12.1
Transfers From Other Funds	(5.5)	(5.5)	(5.5)	(20.0)	(25.5)
Less Refunds of Payments	(4.9)	(4.9)	(5.0)	-	(5.0)
Total - Other Sources	\$ 414.4	\$ 430.8	\$ 434.5	\$ (20.0)	\$ 414.5
Total - STF Revenues	\$ 1,630.1	\$ 1,687.6	\$ 1,808.1	\$ (83.6)	\$ 1,724.5
Revenue Cap Deduction	-	-	(9.0)	0.4	(8.6)
Available Net STF Revenue	\$ 1,630.1	\$ 1,687.6	\$ 1,799.1	\$ (83.2)	\$ 1,715.9

FISCAL YEAR 2020 - TOTAL \$1,724.5 MILLION*



* Refunds are estimated at \$19.3 million and Transfers to Other Funds at \$25.5 million. This chart does not include the Revenue Cap deduction of \$8.6 million.

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Explanation of Changes

Projected Revenue Current Rates <u>FY 2021</u>	Proposed Revenue Changes <u>FY 2021</u>	Net Projected Revenue <u>FY 2021</u>
\$ 503.1	\$ -	\$ 503.1
335.5	-	335.5
562.0	(131.5)	430.5
86.1	-	86.1
<u>\$ 1,486.7</u>	<u>\$ (131.5)</u>	<u>\$ 1,355.2</u>
(15.0)	-	(15.0)
<u>\$ 1,471.7</u>	<u>\$ (131.5)</u>	<u>\$ 1,340.2</u>

Sales and Use Tax

Freeze diversion of car sales tax from the General Fund at 8.0% and additional sales tax from sales tax expansion.

Motor Vehicle Receipts

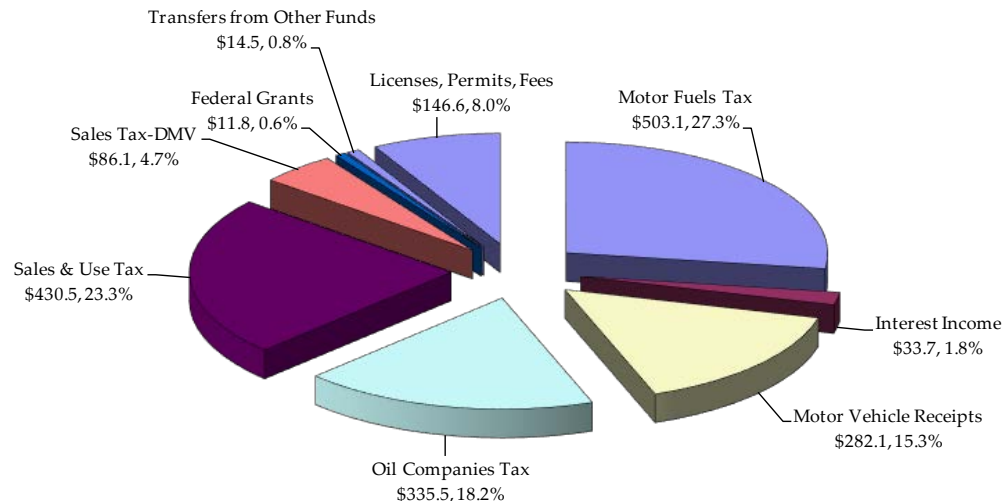
Increase operator license renewal from 6 to 8 years and increase operator registrations from 2 to 3 years.

Transfer From (To) Other Funds

Transfer FY 2020 revenue for use in FY 2021.

\$ 256.4	\$ 25.7	\$ 282.1
146.6	-	146.6
33.7	-	33.7
11.8	-	11.8
(5.5)	20.0	14.5
(5.2)	-	(5.2)
<u>\$ 437.8</u>	<u>\$ 45.7</u>	<u>\$ 483.5</u>
\$ 1,909.5	\$ (85.8)	\$ 1,823.7
(14.3)	0.6	(13.7)
<u>\$ 1,895.2</u>	<u>\$ (85.2)</u>	<u>\$ 1,810.0</u>

FISCAL YEAR 2021 - TOTAL \$1,823.7 MILLION*



* Refunds are estimated at \$20.2 million. This chart does not include the Revenue Cap deduction of \$13.7 million.

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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 and investment at the federal, state and local levels are an important dimension of the national economy, accounting for about 17% of gross domestic product. The Governor's revised budget will account for an estimated 7.2% of Connecticut's gross state product in FY 2019, and state government's expenditure and revenue actions will inevitably influence the state's economy.

Expenditure Actions

General Government

Connecticut Digital Service

Governor Lamont believes that Connecticut residents and businesses deserve seamless interactions with an efficient, evidence-based government. This budget invests in a new digital and performance agenda that will put Connecticut on a path to become one of the nation's most user-friendly, cost-effective, data-informed, results-driven states.

The Governor is creating a Connecticut Digital Service to work with agencies to move their interactions with businesses and residents to the cloud, as well as across agencies to provide a digital one-stop-shop for people starting a business, accessing support during a family crisis, or seeking stability through training and employment. In addition, he proposes to make government more efficient and responsive by supporting digital services, digital security, the implementation of the state data plan, and improved analytics capacity, thereby improving our ability to measure outcomes as well as inputs potentially achieving savings by reforming or eliminating ineffective efforts.

Criminal Justice Initiatives

Governor Lamont is including policies, investments, and strategies in his budget intended to further Connecticut's falling crime, arrest, and recidivism trends. To that end, the state will make its criminal justice system more equitable and more data-driven and effective for its residents. Pursuing that goal will help both victims recover from crime and people who have completed their sentences return to the community as full, taxpaying members of society.

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There are six areas in the Governor's budget highlighting his commitment to criminal justice:

1. Empowering the Department of Emergency Services and Public Protection to address attrition in the ranks of the Connecticut State Police by providing funds to recruit, train, and outfit a large trooper class in FY 2020;
2. Proposing resources for the Office of the Chief Public Defender to staff a pilot project to provide appointed counsel at parole violation hearings which will be critical in identifying factors contributing to parole violations.
3. Expanding medication-assisted treatment within our correctional facilities; a treatment which is shown to be clinically effective in fighting opioid withdrawal and helping reduce relapse.
4. Providing 60-day bus passes for people needing them during reentry and state identification cards for all people leaving prison. Having valid identification and reliable transportation will allow access to resources which will help ensure a more successful return to the community.
5. Continuing support for a case management system for prosecutors as well the Criminal Justice Information System which shares electronic information instantly, benefitting everyone in the criminal justice community.
6. Right-sizing Connecticut's prison capacity to meet current need which will allow the department to redeploy correctional staff to vacant posts that are covered with overtime, resulting in savings.

Develop a State-licensed Industrial Hemp Program

The 2018 federal farm bill legalized industrial hemp and allows states to submit a plan and apply for primary regulatory authority over the production of hemp in their state. Governor Lamont is providing support to the Department of Agriculture to develop and regulate a state industrial hemp program. This is an economic development opportunity for agricultural producers in Connecticut, a sector that represents \$4 billion in economic impact to the state each year, and employs about 22,000 people. Governor Lamont is demonstrating his commitment to economic development and agriculture by investing in this new opportunity.

Education and Workforce Programs

Partnering with Municipalities and Sustaining Municipal Aid

While this budget gives municipalities and local boards of education greater predictability in state aid, it also asks them to reduce their costs and provide citizens with local property tax relief. The budget establishes processes for municipal governments and local school boards to collaborate on shared services and includes penalties to state aid when they choose to continue providing services in inefficient and expensive ways. Additionally, the budget sets up a process to better identify financially struggling municipalities before they need intervention by the Municipal Accountability Review Board.

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

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- Honoring the state's Education Cost Sharing formula by fully funding the phase in of increases to towns as calculated by the formula; and
- Funding non-education statutory formula aid at FY 2019 levels and re-instating the statutory payment lists.

Investing in Connecticut's Workforce

Our society has built in inequities in families' ability to care for themselves and loved ones. Whereby middle- and upper-income individuals working for large employers are more likely to have access to paid family medical leave (PFML), only about 6 percent of low-income workers do. This budget proposes a framework for equalizing the ability of both men and women to take time to bond with a new child, and to care for themselves or a family member. In addition to improved health outcomes, PFML also makes business sense. Workers that have access to paid leave tend to return to work after a child's birth, reducing business turnover costs and in some instances costs to the state for public assistance. Businesses will be able to offer this benefit to their employees at no fiscal cost; Connecticut's PFML program will be funded via a payroll tax on employees of approximately 0.5%, which will raise an estimated \$400 million annually. The payroll tax will be effective FY 2021 to fund system development and ramp up operations, with benefit payments beginning in FY 2022.

Governor Lamont's budget also proposes recommendations made by the Connecticut Commission on Fiscal Stability and Economic Growth to phase-in an increase in the minimum wage to \$15 over four years. Doing so will help Connecticut's families gain the economic stability they need to rise up out of poverty and decrease their need for state assistance or subsidies. With many families working multiple jobs to provide for their families, increasing the minimum wage will allow them more time to spend with their loved ones. The minimum wage would increase from \$10.10 to \$11.25 in January 2020, followed by an increase of \$1.25 every year until it reaches \$15 per hour in 2023, the same year that Massachusetts reaches that threshold.

Health and Human Services

Governor Lamont's FY 2020 – FY 2021 recommended budget maintains important commitments to serve individuals who rely on the state for care and supports the providers of those services. A total of \$46.2 million in new funding over the biennium will support increased caseload needs in the Department of Developmental Services (DDS). \$9.9 million in the Department of Social Services supports residential placements for individuals with intellectual disabilities. Caseload growth was also funded in the Department of Mental Health and Addiction Services (DMHAS) and Department of Children and Families (DCF).

The budget also annualizes FY 2019 cost of living adjustments (COLAs) for private providers and Medicaid rate increases. This included the minimum wage increases and 5% private provider COLAs required under Special Act 18-5 for employees in DDS private provider organizations at an annualized cost of approximately \$58 million and the annualization of 1% COLAs required

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under P.A. 18-81 for private providers in the DMHAS, DCF, Social Services (DSS), Rehabilitation Services (DORS), Correction (DOC), Public Health (DPH), and Housing (DOH), as well as the Office of Early Childhood (OEC) and the Judicial Department's Court Support Services Division (CSSD) at a value of approximately \$6 million. Additionally \$6 million in annualized funding is provided over the biennium to support the cost of anticipated increases in the state's minimum wage for employees in the state's private provider agencies.

An additional \$10.6 million in Medicaid funding (valued at over \$21.3 million for providers) is recommended to annualize FY 2019 Medicaid rate increases for nursing homes, intermediate care facilities for individuals with intellectual disabilities, waiver services and certain home health services. The Governor also provides \$5.9 million over the biennium to support collective bargaining increases for the Personal Care Attendants (PCAs), including annualization of FY 2019 wage increases and additional wage increases in FY 2020 and FY 2021 as well as new workers' compensation coverage and training and orientation programs.

The Governor is also supporting new initiatives to invest in the health of Connecticut's residents including \$4.5 million in FY 2020 and \$8.8 million in FY 2021 to expand the state's childhood vaccine program in order to provide additional nationally recommended vaccines - rotavirus and serogroup B meningococcal - at significantly reduced cost. And an expansion of the provision of influenza vaccine to children through age eighteen will commence in FY 2021. These changes allow the state to cover all sixteen vaccines currently recommended by the Centers for Disease Control and Prevention (CDC).

This budget leverages non-profit expertise by converting selected DMHAS state-run services to non-profit operations while honoring collective bargaining agreements and maintaining bed capacity. The initiative challenges the department's leadership to invest in high quality and efficient community solutions while achieving \$2.3 million in savings in FY 2020 and \$4.3 million in FY 2021.

Department of Social Services

Governor Lamont's budget maintains income eligibility for the Medicare Savings Program (MSP), which will remain the highest in the country. Recognizing that Connecticut is one of only eight states that does not have an asset test, the Governor is proposing to reinstitute the asset test similar to what was in place prior to FY 2010 effective July 1, 2020, anticipating reductions in state Medicaid expenditures in FY 2021 by \$10.5 million (\$21.0 million after factoring in the federal share).

Building off of Connecticut's successful managed fee-for-service framework, the Governor's budget reflects continued efforts to achieve cost savings under the Medicaid program. In conjunction with national consultants, a joint review of the Medicaid program identified additional areas for potential savings. Initiatives focused on utilization management, program integrity, rebalancing long-term services and supports, pharmacy rebate optimization, value-

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based payments, and linking payments to social determinants of health. Through these initiatives, the state's share of Medicaid expenditures is reduced by almost \$16.1 million in FY 2020 (\$40.8 million after factoring in the federal share of Medicaid expenditures) and \$38.7 million in FY 2021 (\$101.9 million after factoring in the federal share of Medicaid expenditures).

In addition, funds are provided in FY 2021 to begin efforts to expand PCMH+ to individuals who are eligible for both Medicare and Medicaid. By partnering with Medicare, this initiative will facilitate improvements in data sharing, synthesis of program rules and procedures, and better supports for this population, including connections between primary care providers and community-based organizations with the capacity to address social determinant needs, all of which will result in future savings.

Hospitals

Public Act 17-4, June Special Session, reduced the hospital user fee from \$900 million in FY 2019 to \$384 million beginning in FY 2020. Subsequently, Public Act 18-81 reduced hospital supplemental payments from \$496.3 million in FY 2019 to \$166.5 million in FY 2020. These changes, combined with maintaining the rate increase at FY 2019 levels, had a net negative General Fund impact of \$406.1 million under current law.

Under existing state statute, the hospitals are slated to have a net gain of \$186.2 million beginning in FY 2020 due to the fact that the reduction in the hospital user fee of \$516 million is only partially offset by the reduction in hospital supplemental payments of \$329.8 million. Given the state's current fiscal situation, Governor Lamont is proposing to essentially retain the structure that was in place in FY 2019, including maintaining the user fee at the current \$900 million level. The one caveat is that due to concerns with the federal upper payment limit (UPL), hospital supplemental payments are reduced by \$40 million to ensure hospital payments in the aggregate remain under the UPL. The federal UPL is the maximum reimbursement a state Medicaid program may pay a given provider type in the aggregate and can vary each year as it is based on what Medicare would have paid for the same services; payments in excess of the UPL are not eligible for federal reimbursement. In the absence of this reduction, hospital payments are expected to exceed the UPL by approximately \$40 million, which would result in additional costs incurred by the state, which is not viable. This proposal results in a net gain of approximately \$170 million for both the hospitals and the state when compared to the structure that was in place in FY 2017 – before the budget agreement that was negotiated between the hospitals, the administration and the legislature for the current biennium.

Capital Proposals

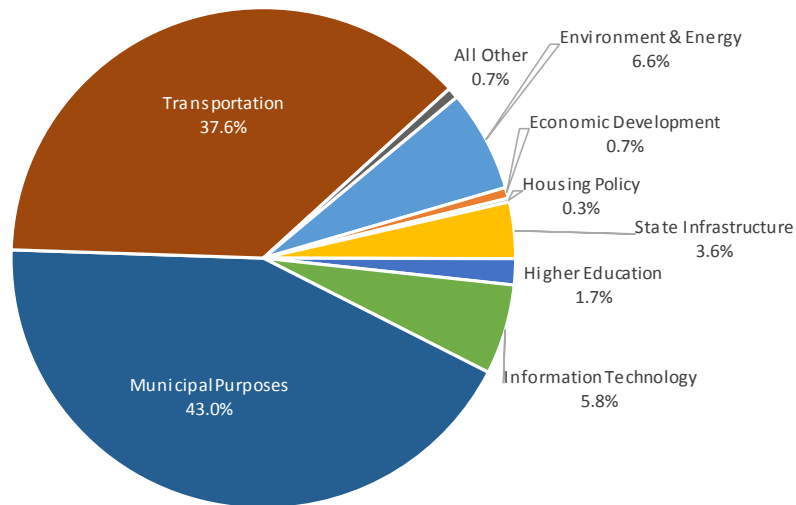
Governor Lamont is concerned with the state's rapidly growing long-term fixed costs, of which debt service is a large component. Without a change in direction, the projected ten year average annual growth in the state's debt service is over 4.0%. Meanwhile, state revenue is projected to grow at approximately 2.0%. Therefore, the Governor is proposing a "debt diet" to reduce the growth to be more in line with revenue growth.

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The Governor's proposed budget takes several steps to change the trajectory of General Obligation (GO) Bond debt service costs. First, is a 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. Second, recommended new GO bond authorizations of less than \$1 billion per year for the biennium will be nearly 40% lower than the \$1.6 billion average annual recommendations over the last five years. Given that there are approximately \$2 billion of prior year GO bond authorizations on the books, it is unnecessary for the state to continue to pile on additional debt authorizations when the state is facing structural holes. Finally, in order to meet the the GO bond issuance goal, the Governor will closely manage future GO bond allocations through the State Bond Commission. The Governor is prioritizing spending and new bond authorizations to areas he feels requires the most investment, which include, municipal aid, school construction, information technology improvements, and higher education.

The Governor is committed to continuing current levels of spending to ensure that the state's transportation infrastructure does not fall into a state of disrepair. The Governor's proposal authorizes an additional \$776.6 million of Special Tax Obligation (STO) bonds in FY 2020 and \$782.4 million in FY 2021, matching levels seen over the prior eight years.

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



Revenue Proposals

The Governor's budget contains General Fund revenue initiatives of \$1,281.5 million in FY 2020 and \$1,760.4 million in FY 2021. These revenue changes can be categorized in five different areas:

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1. Maintaining FY 2018-19 Biennial Budget Policy – These changes, totaling \$1,021.6 million in FY 2020 and \$1,095.7 million in FY 2021, do not reflect a change relative to the current biennial budget. Rather, these changes reflect a reversal of past promises which were not financed and would make Connecticut’s budget unsustainable. The most significant of these changes include the continuation of the current hospital user fee and federal reimbursement for increased hospital supplemental payments. A stable 10% surcharge on large companies with an excess of \$100 million in revenue will provide a more predictable environment for growth, compared to varying rates of 10 to 25% over the past few years.
2. Sales Tax Modernization – These changes total \$292.0 million in FY 2020 and \$505.0 million in FY 2021. In recent decades, growth in spending on services has outpaced growth in spending on goods. As a result, growth in Connecticut’s sales tax has been stagnant in recent years. Governor Lamont proposes expanding the sales tax to a larger portion of the service economy, thereby ensuring fairness and better reflecting a 21st century economy. In addition, the Governor proposes eliminating exemptions specified in current law. These exemptions, commonly referred to as tax expenditures, serve to distort economic decisions. Certain necessities, such as food, remain exempt from the sales tax.
3. Promoting Health and Wellness – These changes, which total \$0.5 million in FY 2020 and \$167.1 million in FY 2021, will promote health and wellness within the State of Connecticut, thereby having a positive impact on the state’s economy in the long term. The largest component includes a 1.5 cent per ounce tax on sugar sweetened beverages beginning in FY 2021. The Governor is also proposing to tax e-cigarettes at a rate comparable with traditional cigarettes and to raise the smoking age to 21.
4. Promoting a Better Environment – These changes, which total \$35.1 million in FY 2020 and \$33.4 million in FY 2021, are intended to change behavior and reduce litter in the state of Connecticut. These include a 10 cent surcharge on plastic bags, a 25 cent deposit on wine and liquor bottles, and a 5 cent deposit on “nip” bottles.
5. All Other Revenue Items – These items result in a net revenue loss of \$67.7 million in FY 2020 and \$40.8 million in FY 2021. The Governor proposes targeted tax relief in areas which will have a substantial impact on Connecticut’s economy, including elimination of the business entity tax, eliminating the gift tax, and extending the due date for estate tax filings from 6 to 9 months. The Governor also proposes reducing the alcohol beverage excise tax at craft breweries by 50%. These small businesses provide jobs and economic activity in many Connecticut municipalities, including many communities which have been economically distressed for decades. Outside the biennium, the Governor is proposing a new tax credit for property taxes paid for those who are most burdened by the property tax. Filers whose property taxes exceed 6.5% of their income will be eligible for a credit worth 1/3rd of their excess property taxes, up to a maximum of \$1,200 per filer.

Setting aside those revenue items which continue current revenue policy, new revenue initiatives total \$259.9 million in FY 2020 and \$664.7 million in FY 2021. 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

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upholds the Governor's commitment to promoting economic growth, alleviating unfair burdens, and creating a more equitable revenue system.

The Governor is proposing revenue changes which result in a net reduction of Special Transportation Fund revenue of \$83.6 million in FY 2020 and \$85.8 million. This decline is due primarily to freezing the car sales tax transfer to the Special Transportation Fund at the current 8% level to prevent a further drain on scarce General Fund resources. In the long term, the Governor is offering a congestion mitigation tolling option, the revenue from which will stabilize the long term finances of the fund. This new revenue stream will more equitably allocate the financial burden of our highways as out-of-state drivers and heavy trucks will finally pay their fair share to travel on Connecticut highways, while providing resources for investments in our aging yet critically important transportation infrastructure.

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 biennial budget addresses 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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**ECONOMIC REPORT
OF THE GOVERNOR**

FY 2020 – FY 2021 Biennium

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Economic Report of the Governor

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.

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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 2018, Connecticut's population experienced a year over year decline of an estimated 2,600 residents. Connecticut continues to experience net outmigration, with a deficit of more than 40,000 between 2009 and 2018. 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 12.6% higher than the nation, while the proportion of those holding a graduate or professional degree is 44.1% higher than the nation.

Housing

Connecticut's housing starts declined by 4.1% in FY 2018, less than the 19.3% decline in FY 2017. These declines are driven by the multifamily segment of the housing market. Median existing home prices increased 3.2% in Connecticut in FY 2018, lower than the U.S. as a whole, which saw median home prices increase 5.4%. Thirty year mortgage rates increased to 4.15%, a 7.8% increase over the prior year. Nationally, homeowner equity as a percentage of home values improved to 59.2% in FY 2018, reaching their highest level since the housing collapse in FY 2008.

Employment

In FY 2018 Connecticut gained approximately 5,400 non-farm jobs, representing 0.3% growth over the prior year. During the recent financial crisis, Connecticut lost approximately 100,000 non-farm jobs, and as of FY 2018 had regained about 80,000 on a fiscal year basis. Manufacturing remains an important sector of Connecticut's economy, representing 9.6% of all non-farm jobs in FY 2018. Connecticut Manufacturing employment grew by 4,300, or 2.72%, in FY 2018, outpacing both New England at 1.26% growth and the United States at 1.54% growth. Nonmanufacturing employment gained approximately 1,100 jobs, or less than 0.1%, in FY 2018, trailing the U.S.'s growth of 1.4% and New England's growth of 0.9%. The largest growth in nonmanufacturing employment in Connecticut came in the service sector, which gained 5,600 jobs or a 0.07% increase over the prior year. In FY 2018, Connecticut's unemployment rate averaged 4.5%, higher than the U.S. at 4.1% and New England at 3.7%.

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Energy

In calendar year 2017, the United States was the world's largest supplier of oil at 14.1% of the world's total. In 2016 Connecticut consumed 3.2 thousand BTU's per 2009 chained dollar of GDP, making it one of the most energy efficient states relative to output. Overall, Connecticut is 33% below the nation's per capita energy consumption and ranks 4th 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 2016 Connecticut's overall energy costs were 38% 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 2017 was \$449.1 billion, up from \$432.9 billion in 2016. Total trade exports grew 25.2% from 2008 to 2017, while trade imports have grown 13.4% over the same period. Connecticut exports totaled \$14.8 billion and accounted for 5.7% of GSP in 2017. Over the past five years, Connecticut's exports have decreased by an average of 2.6% per year. Transportation equipment, nonelectrical machinery and computer and electronic equipment are Connecticut's largest exporting industries and comprise 61.9% of exports in 2017.

Defense Industry

Prime defense contracts tend to be a leading indicator of Connecticut's economic activity. In federal fiscal year (FFY) 2017, Connecticut contractors were awarded \$11.6 billion in defense related prime contracts, down 18.0% from the \$14.1 billion awarded in FFY 2016. 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 2017, this average was \$12.6 billion.

Retail Trade

Connecticut's retail trade in FY 2018 totaled \$56.9 billion, a 1.5% increase over FY 2017. Growth in non-durable sales outpaced growth in durable sales in FY 2018, at 1.6% and 1.2% respectively. U.S. E-commerce sales continued their rapid growth, increasing an estimated 15.8% compared to a 4.3% increase in traditional retail sales. Connecticut retail trade as a percentage of disposable income decreased to 25.5% in FY 2018 from 25.8% in FY 2017.

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Nonfinancial Debt

Total nonfinancial debt grew 157.2% between 2000 and 2017, far outpacing GDP growth of 90.0%. Federal indebtedness grew 306.0%, state and local government debt grew 159.6%, business debts grew 116.8% and household debts grew 109.3%. Connecticut's state government debt outstanding at the end of FY 2016 was \$37.0 billion, up from \$35.4 billion in FY 2015 and \$33.2 billion in FY 2014. Connecticut per capita state government debt was \$10,319 in FY 2016, far above the fifty state average of \$3,739 in FY 2016.

Gross State Product

In FY 2018, Connecticut's real GSP was essentially flat over the prior year at \$239.8 billion in 2012 dollars, falling behind the U.S. and New England which saw increases of 2.6% and 1.9% respectively. Per capita real GSP in Connecticut was 20.1% higher than that of the U.S.

Personal Income

In FY 2018, real personal income in Connecticut increased 1.1%, compared to 2.2% growth in the U.S. and 1.8% growth in New England. In FY 2018, Connecticut possessed the highest per capita personal income in the nation at \$73,160, 39.3% higher than the national average.

Economic Forecast

Connecticut's personal income is expected to increase 3.8% in FY 2020 and 3.6% in FY 2021 to \$279.7 and \$289.7 billion, respectively. Connecticut is projected to add 7,100 jobs in FY 2020 and 4,200 jobs in FY 2021, or a respective 0.4% and 0.2% growth. The unemployment rate is projected to decline to 4.0% in FY 2020 and remain at 4.0% in FY 2021.

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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. Over 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)

Year	United States		New England		Connecticut	
	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.

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TABLE 2
COUNTY POPULATION IN CONNECTICUT

<u>County</u>	2000	2000	2010	2010	Percent <u>Change</u>
	<u>Census</u>	<u>Percent</u>	<u>Census</u>	<u>Percent</u>	
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	<u>109,091</u>	<u>3.2</u>	<u>118,428</u>	<u>3.3</u>	<u>8.6</u>
TOTAL	3,405,565	100.0	3,574,097	100.0	4.9

Source: U.S. Bureau of the Census

In FY 2018, Connecticut's population decreased slightly over the prior year for the fourth 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)

<u>Fiscal Year</u>	<u>United States*</u>		<u>New England</u>		<u>Connecticut</u>	
	<u>Population</u>	<u>% Growth</u>	<u>Population</u>	<u>% Growth</u>	<u>Population</u>	<u>% Growth</u>
2009	306,280.4	0.9	14,379.8	0.4	3,555.7	0.5
2010	308,846.3	0.8	14,441.1	0.4	3,572.3	0.5
2011	311,243.3	0.8	14,507.2	0.5	3,584.7	0.3
2012	313,524.8	0.7	14,567.3	0.4	3,592.0	0.2
2013	315,760.2	0.7	14,624.2	0.4	3,594.7	0.1
2014	318,055.8	0.7	14,681.6	0.4	3,594.8	0.0
2015	320,440.0	0.7	14,719.8	0.3	3,590.2	(0.1)
2016	322,798.6	0.7	14,748.0	0.2	3,582.0	(0.2)
2017	325,118.1	0.7	14,786.5	0.3	3,575.7	(0.2)
2018	327,432.2	0.7	14,834.4	0.3	3,573.1	(0.1)

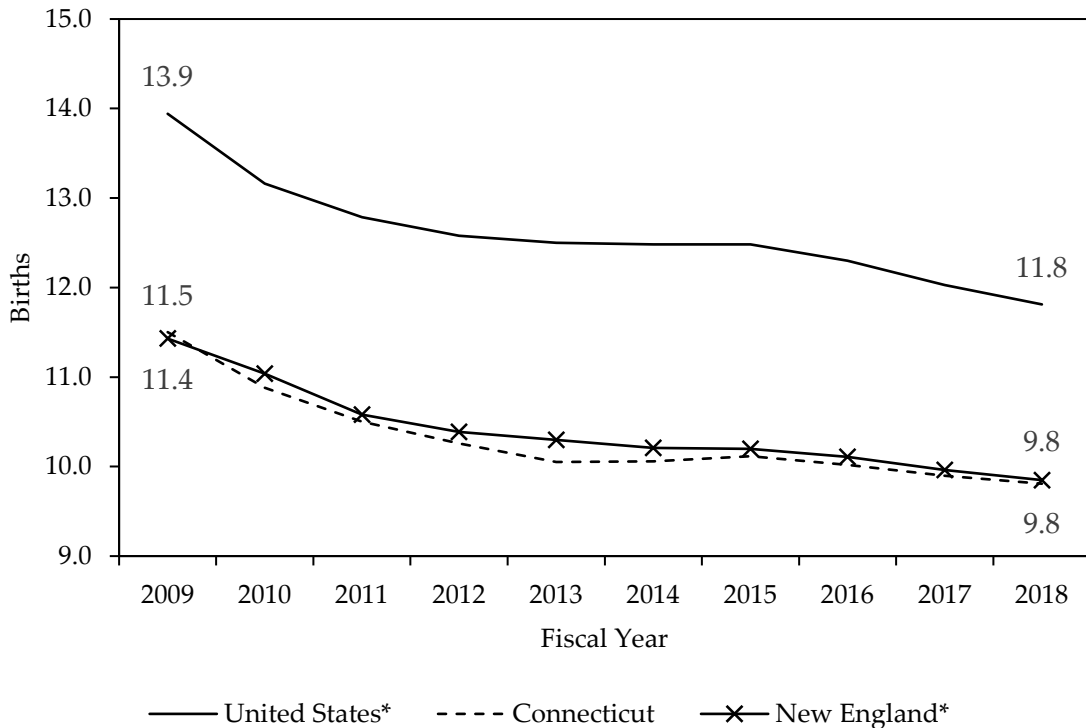
* Includes armed forces overseas

Source: Bureau of the Census, IHS

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There are two drivers of change in a population. The first is the 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 2018, down from 3.4 per 1,000 people in FY 2009. This represents a 69% 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 9.8 births per 1,000 people in FY 2018, down from 11.5 births per 1,000 people in FY 2009. This represents a 14.7% 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.

BIRTH RATE
Per 1,000 Residents

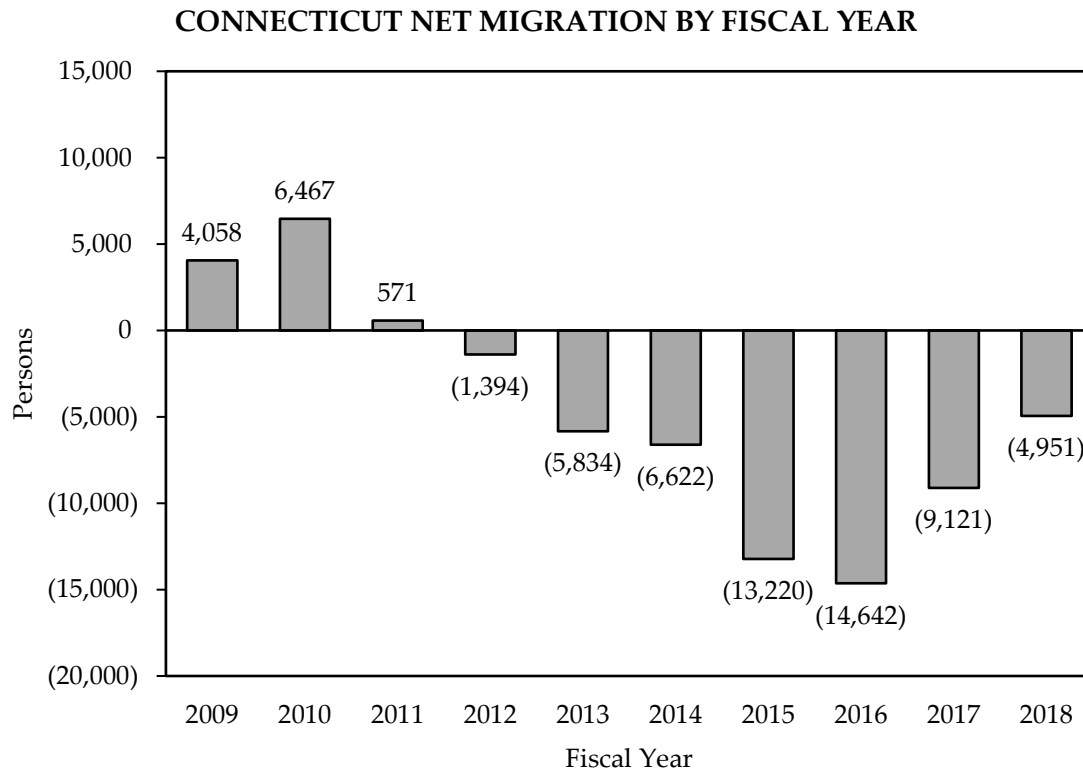


* Sum of states' totals

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. This pattern has resulted in population growth in the so-called "sunbelt states." 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 four 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.

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Source: Bureau of the Census, IHS

Age Cohorts

Connecticut tends to be older than the nation as a whole. In 2017, the Bureau of the Census reported the median age in Connecticut was 40.9 years, compared to a national median age of 38.0 years. 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 the period from 2013-2017 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.

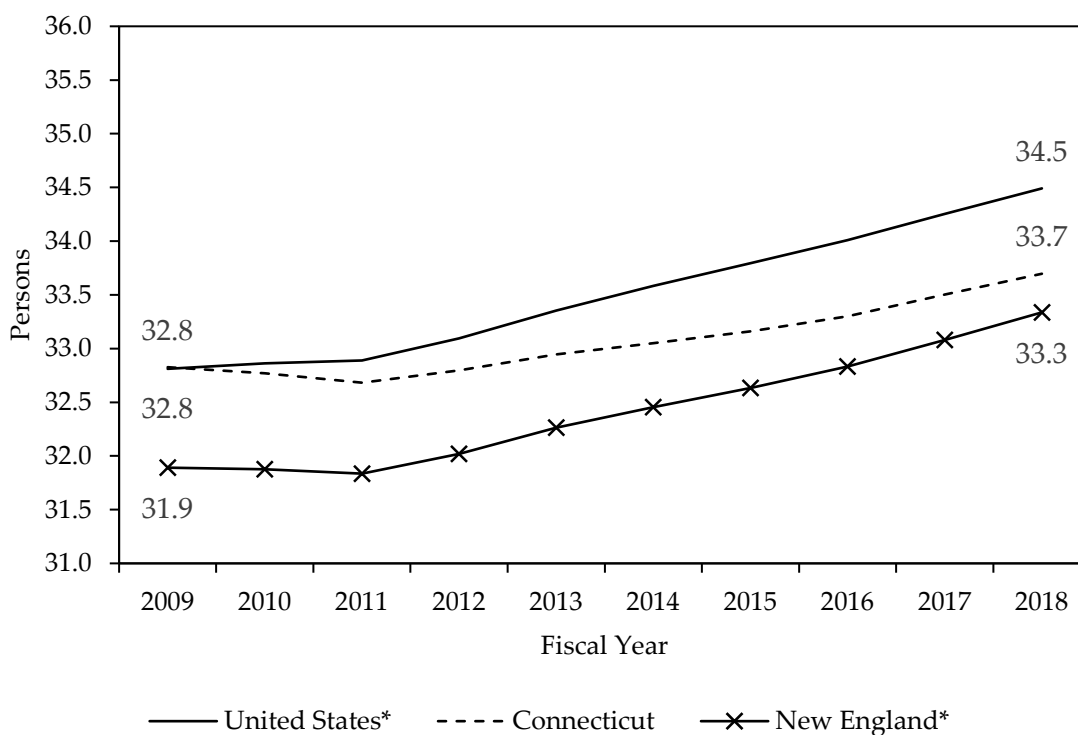
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**TABLE 4
POPULATION BY AGE COHORT
American Community Survey Five Year Estimates, 2013-2017**

Age Cohort	Connecticut		United States	
	Population	% of Total	Population	% of Total
0-14 Years	618,555	17.2	61,011,748	19.0
15-24 Years	495,626	13.8	43,721,015	13.6
25-34 Years	439,239	12.2	44,044,173	13.7
35-44 Years	433,401	12.1	40,656,419	12.7
45-54 Years	535,611	14.9	43,091,143	13.4
55-64 Years	496,289	13.8	40,747,520	12.7
65+ Years	<u>575,757</u>	<u>16.0</u>	<u>47,732,389</u>	<u>14.9</u>
Total	3,594,478	100.0	321,004,407	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

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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 33.7 persons per 100 provider population in FY 2018, compared to 34.5 in the United States and 33.3 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 the period from 2013-2017 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 12.6% higher than the nation, while the proportion of those holding a graduate or professional degree is 44.1% higher than the nation.

TABLE 5
EDUCATIONAL ATTAINMENT, PERCENT OF POPULATION 25 YEARS AND OVER
American Community Survey Five Year Estimates, 2013-2017

	<u>Connecticut</u>	<u>United States</u>	Connecticut as a % <u>of U.S.</u>
Less than high school	9.8%	12.6%	77.8%
High school diploma or equivalent	27.2%	27.3%	99.6%
Some college, no degree	17.0%	20.8%	81.7%
Associate's degree	7.6%	8.3%	91.6%
Bachelor's degree	21.5%	19.1%	112.6%
Graduate or professional degree	17.0%	11.8%	144.1%

*Note, columns may not add to 100.0% due to rounding
Source: Bureau of the Census

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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 2018 was an estimated 1,369,706, up slightly from FY 2017. This slow growth is the result of both Connecticut's flat or declining population over the last several years and a 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 Year	United States*		New England		Connecticut	
	Households	% Growth	Households	% Growth	Households	% Growth
2009	115,951.5	0.8	5,639.9	0.6	1,365.3	0.4
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	121,895.8	0.8	5,758.5	0.7	1,368.6	0.3
2018	123,077.8	1.0	5,796.5	0.7	1,369.7	0.1

*Sum of states' data

Source: Bureau of the Census, HIS

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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 fifteen percent of national gross domestic product (GDP) in FY 2018. 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 2018, starts grew at an annual rate of 14.0% in the United States, versus 9.0% in New England and 4.7% in Connecticut. Starts decreased in both New England and Connecticut over the prior year in FY 2018, by 1.5% and 4.1%, respectively. The decrease in housing starts in Connecticut in FY 2018, shown in the table below, was driven entirely by a decrease in starts of multi-family units.

TABLE 7
HOUSING STARTS
(In Thousands)

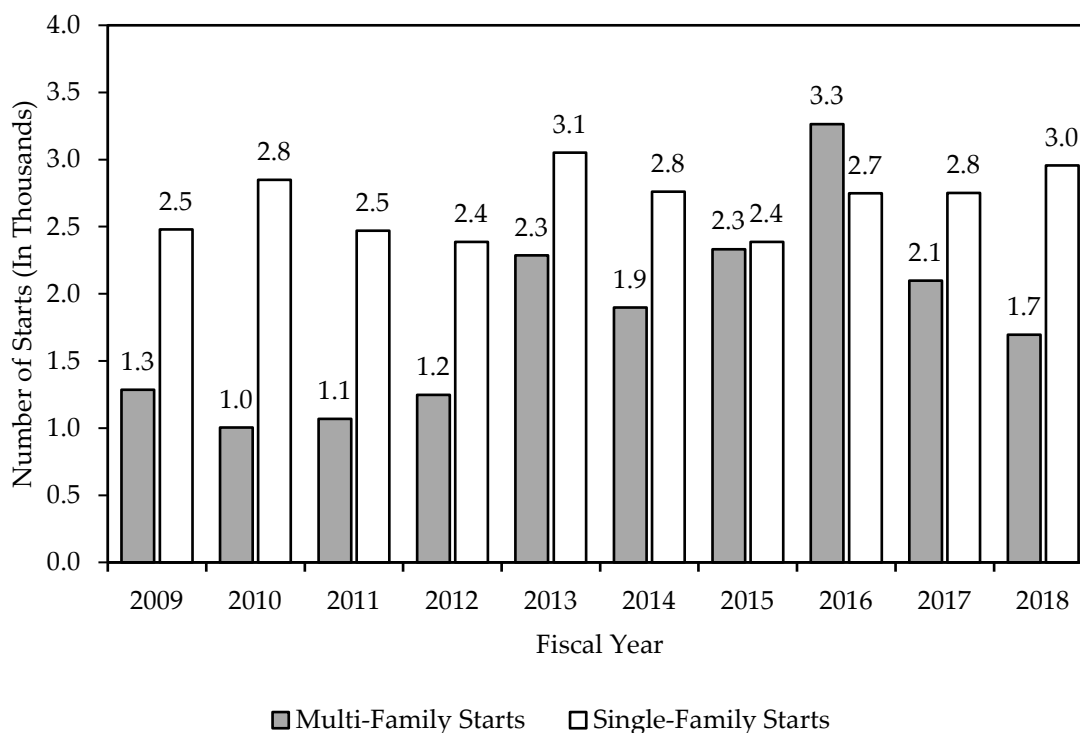
Fiscal Year	United States		New England		Connecticut	
	Number	% Growth	Number	% Growth	Number	% Growth
2009	646.3	(42.9)	18.6	(40.2)	3.8	(44.0)
2010	594.0	(8.1)	19.5	4.8	3.9	2.3
2011	569.7	(4.1)	18.7	(3.9)	3.5	(8.1)
2012	684.4	20.1	20.3	8.2	3.6	2.7
2013	877.4	28.2	24.4	20.7	5.3	46.9
2014	952.9	8.6	26.3	7.5	4.7	(12.7)
2015	1,053.6	10.6	26.5	1.0	4.7	1.2
2016	1,149.1	9.1	32.8	23.5	6.0	27.4
2017	1,201.1	4.5	31.9	(2.5)	4.8	(19.3)
2018	1,252.2	4.3	31.5	(1.5)	4.7	(4.1)

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

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. While starts of single-family homes increased in FY 2018, 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.

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CONNECTICUT SINGLE-FAMILY AND MULTI-FAMILY STARTS (In Thousands)



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, growing by only nine thousand from FY 2009 to FY 2018. The following table summarizes household formation data for both the United States and Connecticut.

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

<u>Fiscal Year</u>	<u>United States Total Households</u>	<u>Change in Households from Previous Year</u>	<u>Connecticut Total Households</u>	<u>Change in Households from Previous Year</u>
2009	116,405	0.3%	1,365	0.4%
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%	1,370	0.4%
2018	125,330	0.9%	1,374	0.3%

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

Median Sales Price of Housing

Median sales price is the midpoint at which half of the sales are above and half below the price. In FY 2018, the median sales price for existing homes in the nation was 40.7% above its 2009 level, while in Connecticut the median sales price remained 3.7% below its 2009 level. 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 2018, the median price of a home in Connecticut was 10.6% 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 153.3 in FY 2018. 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.

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TABLE 9
SALES PRICE OF EXISTING HOMES IN CONNECTICUT AND THE UNITED STATES

Fiscal <u>Year</u>	Median Price	% <u>Change</u>	Median Price	% <u>Change</u>	CT as a % <u>of U.S.</u>	U.S. Affordability <u>Index</u>
	<u>U.S.</u>		<u>CT</u>			
2009	\$180,500	(12.9)	\$291,838	(6.5)	161.7	160.2
2010	\$172,775	(4.3)	\$279,601	(4.2)	161.8	169.2
2011	\$169,033	(2.2)	\$269,998	(3.4)	159.7	179.5
2012	\$167,975	(0.6)	\$261,591	(3.1)	155.7	195.4
2013	\$185,758	10.6	\$262,093	0.2	141.1	195.6
2014	\$201,750	8.6	\$264,958	1.1	131.3	168.0
2015	\$214,908	6.5	\$266,214	0.5	123.9	168.9
2016	\$227,267	5.8	\$268,451	0.8	118.1	166.6
2017	\$241,058	6.1	\$272,284	1.4	113.0	163.5
2018	\$253,967	5.4	\$280,959	3.2	110.6	153.3
09-18 Change	\$73,467	40.7	(\$10,879)	(3.7)		
CAGR*		3.9		(0.4)		

*Compound Annual Growth Rate

Source: IHS

Housing Finance

In FY 2018, thirty-year fixed mortgage rates averaged 4.15%, up from 3.86% in FY 2017, and their highest level since FY 2014. 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 <u>Year</u>	Average <u>Rate</u>	% <u>Change</u>	Fiscal <u>Year</u>	Average <u>Rate</u>	% <u>Change</u>
2009	5.57	(10.1)	2014	4.33	22.9
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

Source: Freddie Mac

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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 3.5% in FY 2018, its lowest level since FY 2008.

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 increased in FY 2018 by 1.2%, to their highest level since FY 2007. Total home sales grew by 0.3% in New England and were essentially flat in the United States in FY 2018.

TABLE 11
Total Home Sales
(In Thousands)

Fiscal <u>Year</u>	United States		New England*		Connecticut	
	<u>Number</u>	<u>% Change</u>	<u>Number</u>	<u>% Change</u>	<u>Number</u>	<u>% Change</u>
2009	3,941.0	(9.8)	169.8	(15.6)	35.8	(23.4)
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	4,252.0	8.5	184.6	7.7	38.0	6.3
2013	4,708.5	10.7	207.6	12.4	44.0	15.8
2014	4,755.6	1.0	207.0	(0.3)	43.0	(2.3)
2015	4,882.3	2.7	207.2	0.1	42.1	(2.1)
2016	5,125.0	5.0	224.7	8.4	45.3	7.7
2017	5,272.1	2.9	229.8	2.3	46.4	2.4
2018	5,273.5	0.0	230.6	0.3	46.9	1.2

Source: National Association of Retailers, IHS

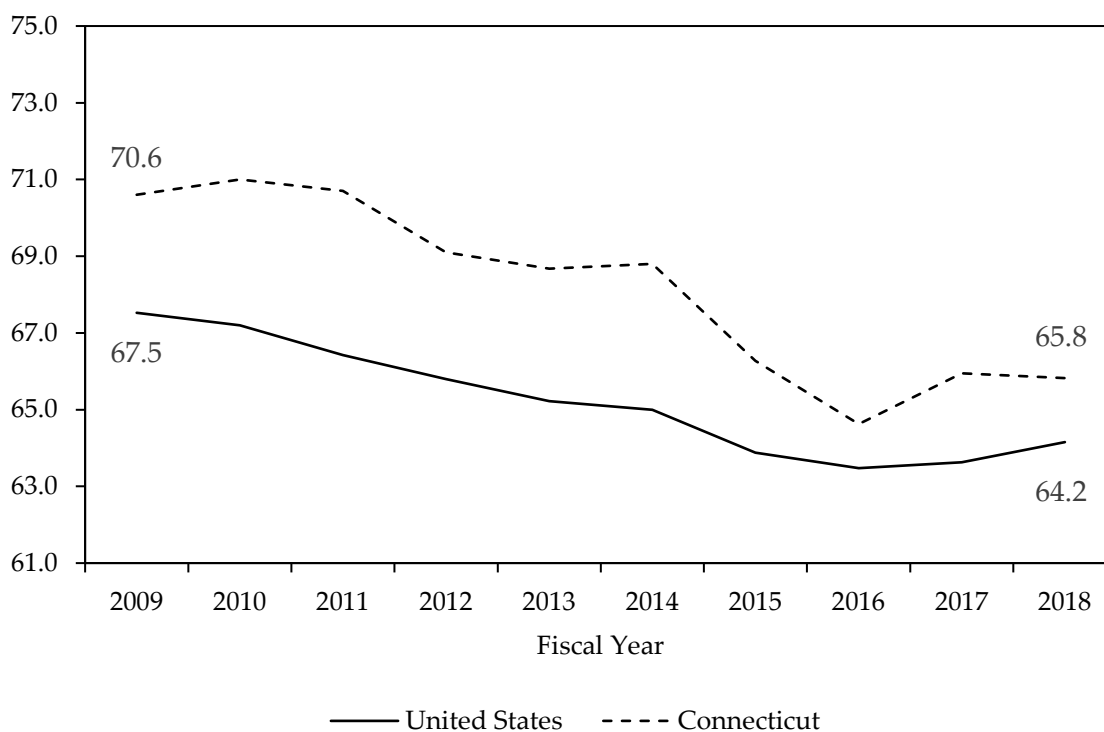
* Sum of States' Home Sales

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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. In recent years, that trend has reversed itself slightly, as homeownership rates in both Connecticut and the United States have remained above their FY 2016 nadir. The following graph shows homeownership rates in FY 2009 through FY 2018. Historically, Connecticut has had a higher homeownership rate than the national average. In FY 2018, the homeownership rate was 65.8% in Connecticut and 64.2% in the nation.

HOMEOWNERSHIP RATES IN THE UNITED STATES AND 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 37.8% in FY 2010 to 59.2% in FY 2018. 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

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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)

<u>Fiscal</u> <u>Year</u>	<u>Home</u> <u>Values*</u>	<u>Home</u> <u>Mortgages*</u>	<u>Home</u> <u>Equity</u>
2007	22,402.1	10,058.9	55.1%
2008	20,156.1	10,655.2	47.1%
2009	17,124.2	10,626.4	37.9%
2010	16,736.2	10,405.0	37.8%
2011	16,158.9	10,001.5	38.1%
2012	16,287.1	9,745.7	40.2%
2013	17,657.8	9,547.3	45.9%
2014	19,308.9	9,468.0	51.0%
2015	20,439.1	9,456.5	53.7%
2016	21,726.8	9,583.8	55.9%
2017	23,153.5	9,814.7	57.6%
2018	24,733.6	10,093.5	59.2%

Source: Federal Reserve "Flow of Funds" Table B.101

* In Nominal Dollars

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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 undercounting 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 2018 increased by 1,947 jobs. Likewise, the level of establishment employment based on the survey response increased by 5,425 jobs in FY 2018.

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)

<u>Fiscal</u> <u>Year</u>	<u>Residential</u> <u>Employment</u>	<u>% Growth</u>	<u>Establishment</u> <u>Employment</u>	<u>% Growth</u>
2009	1,759.3	(1.05)	1,664.8	(2.44)
2010	1,733.1	(1.48)	1,606.1	(3.52)
2011	1,743.8	0.62	1,618.5	0.77
2012	1,742.6	(0.07)	1,630.8	0.76
2013	1,717.2	(1.46)	1,643.9	0.80
2014	1,738.5	1.24	1,654.6	0.65
2015	1,787.5	2.82	1,668.7	0.86
2016	1,788.8	0.07	1,677.4	0.52
2017	1,824.8	2.01	1,680.8	0.20
2018	1,826.8	0.11	1,686.2	0.32

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

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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)

<u>Fiscal</u> <u>Year</u>	<u>United States</u>		<u>New England</u>		<u>Connecticut</u>	
	<u>Number</u>	<u>% Growth</u>	<u>Number</u>	<u>% Growth</u>	<u>Number</u>	<u>% Growth</u>
2009	134,377	(2.73)	6,950	(2.00)	1,665	(2.44)
2010	130,173	(3.13)	6,780	(2.45)	1,606	(3.52)
2011	131,002	0.64	6,833	0.78	1,618	0.77
2012	133,094	1.60	6,910	1.14	1,631	0.76
2013	135,209	1.59	6,990	1.15	1,644	0.80
2014	137,551	1.73	7,077	1.25	1,655	0.65
2015	140,428	2.09	7,186	1.53	1,669	0.86
2016	143,101	1.90	7,288	1.42	1,677	0.52
2017	145,538	1.70	7,370	1.13	1,681	0.20
2018	147,772	1.54	7,437	0.91	1,686	0.32

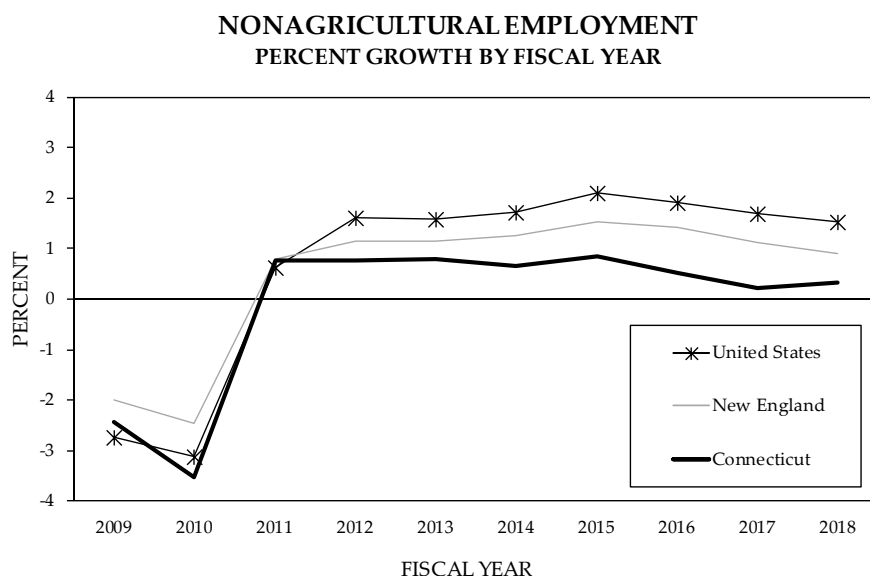
Source: U.S. Bureau of Labor Statistics, Connecticut Labor Department, IHS Economics

In Connecticut, approximately 45% 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. 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 2018 Connecticut had regained approximately 80,000 nonagricultural jobs. The following chart provides a graphic presentation

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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 2.2% 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 13.5% and 4.9% respectively.

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

<u>Fiscal Year</u>	<u>Growth Rates</u>		<u>Cumulative Growth Rates</u>	
	<u>United States</u>	<u>Connecticut</u>	<u>United States</u>	<u>Connecticut</u>
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%	16.1%	148.8%	124.8%
1990-2000	20.0%	2.2%	198.7%	129.7%
2000-2010	(0.5%)	(4.5%)	197.1%	119.3%
2010-2018	13.5%	4.9%	237.4%	130.1%

Source: U.S. Bureau of Labor Statistics

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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 increased 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 2018, 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.

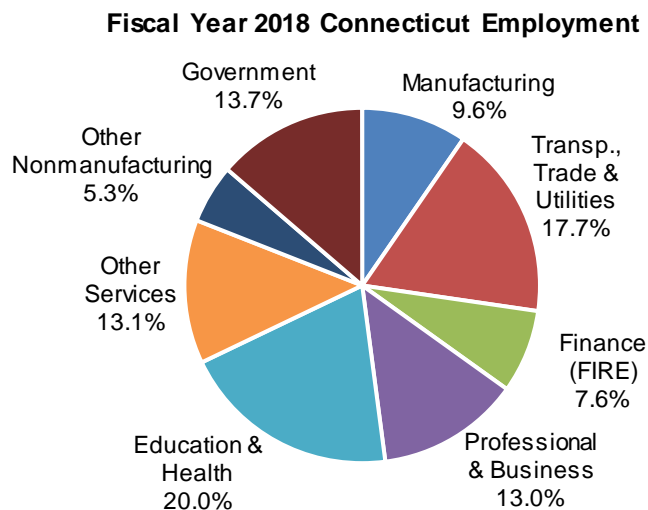
TABLE 16
CONNECTICUT RATIO OF MANUFACTURING EMPLOYMENT
TO TOTAL EMPLOYMENT
(In Thousands)

<u>Fiscal</u> <u>Year</u>	<u>Total</u> <u>Employment</u>	<u>Manufacturing</u> <u>Employment</u>	<u>NonMfg.</u> <u>Employment</u>	<u>Mfg. Employment</u> <u>as a Percentage of</u> <u>Total Employment</u>
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	1,556.4	250.5	1,306.0	16.1
2000	1,682.3	235.3	1,447.0	14.0
2005	1,657.1	194.4	1,462.8	11.7
2010	1,606.1	163.4	1,442.7	10.2
2018	1,686.2	161.8	1,524.4	9.6

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

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The chart on the right provides a breakdown of Connecticut employment in FY 2018. As is evident, Connecticut employment is highly concentrated in nonmanufacturing employment sectors with only 9.6% 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 67.4% of those working employed in that classification.



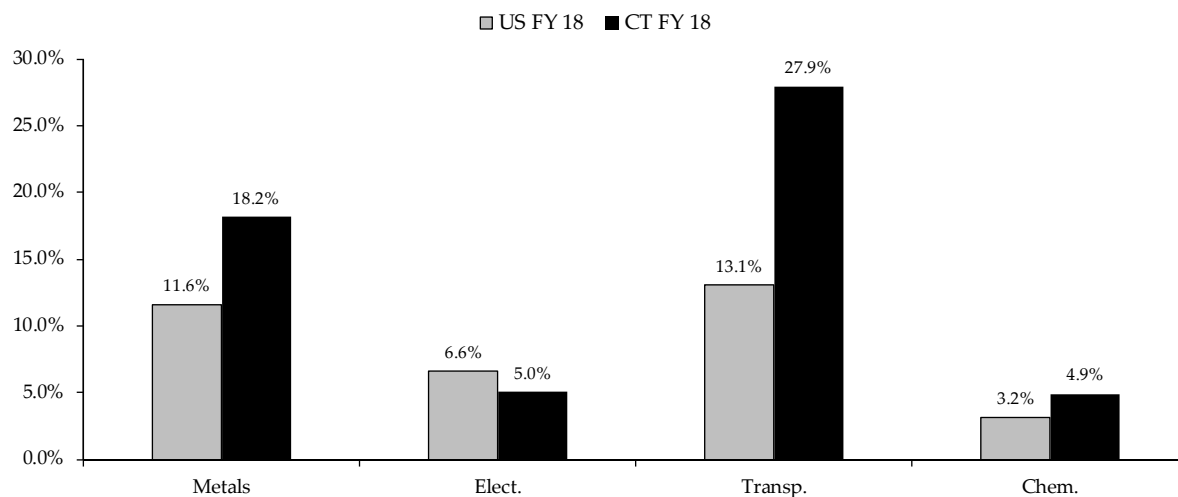
Manufacturing Employment

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 24.7% in FY 2009 and 27.9% in FY 2018. Employment in the fabricated metals sector as a percent of total state manufacturing has remained stable over the past decade at approximately 17.8% in FY 2009 and 18.2% in FY 2018. The other major manufacturing sectors, industrial machinery, and electrical equipment and appliances, make up approximately 8.3% and 5.0% of the total manufacturing sector respectively in FY 2018. 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.

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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 2018, manufacturing employment in the state of Connecticut achieved its second annual increase and with a significant acceleration in growth at 2.72% over FY 2017. The United States continued an upward trend also with an accelerated growth rate of 1.54%.

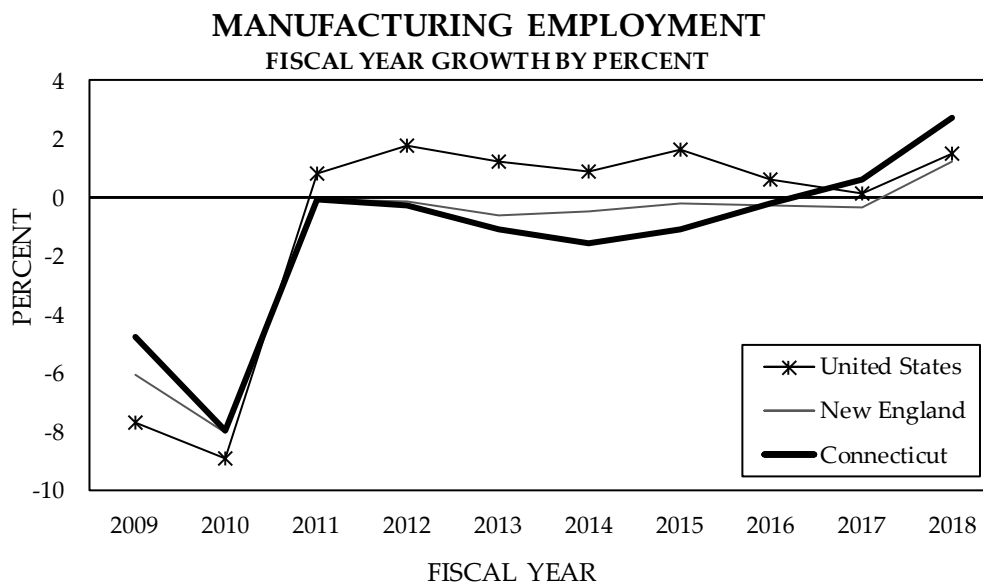
TABLE 17
MANUFACTURING EMPLOYMENT
(In Thousands)

Fiscal Year	United States		New England		Connecticut	
	Number	% Growth	Number	% Growth	Number	% Growth
2009	12,655.1	(7.70)	656.5	(6.04)	177.6	(4.73)
2010	11,527.7	(8.91)	604.0	(8.00)	163.4	(7.99)
2011	11,626.1	0.85	603.5	(0.08)	163.3	(0.04)
2012	11,833.8	1.79	602.9	(0.10)	162.9	(0.27)
2013	11,977.6	1.21	599.4	(0.58)	161.1	(1.11)
2014	12,084.1	0.89	596.5	(0.49)	158.6	(1.57)
2015	12,279.4	1.62	595.2	(0.21)	156.9	(1.07)
2016	12,355.3	0.62	593.7	(0.25)	156.6	(0.18)
2017	12,374.7	0.16	591.7	(0.34)	157.5	0.61
2018	12,565.0	1.54	599.1	1.26	161.8	2.72

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

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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.



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

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 9.6% of all nonfarm payroll jobs, compared with 8.5% in the U.S. and 8.1% in New England through FY 2018. 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.

Manufacturing employment showed signs of improvement in FY 2018 over FY 2017. The largest growth was in transportation equipment at 5.6%, followed by chemicals at 3.8%. Reductions in employment were seen in printing and related supported which dropped 1.4%, and industrial machinery which dropped 0.7% over the same period. The percent change from FY 2009 to 2018 demonstrates the overall decline in manufacturing employment over the last decade.

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TABLE 18
CONNECTICUT MANUFACTURING EMPLOYMENT BY INDUSTRY
(In Thousands)

<u>Industry</u>	FY <u>2009</u>	FY <u>2017</u>	FY <u>2018</u>	<u>Percent Change</u>	
				FY 2017 to FY 2018	FY 2009 to FY 2018
Transportation Equipment	43.9	42.8	45.2	5.6	2.8
Fabricated Metal Production	31.6	29.3	29.4	0.2	(7.0)
Electrical Equipment & Appl.	10.6	8.1	8.1	0.8	(23.1)
Chemicals	11.0	7.7	8.0	3.8	(27.7)
Printing & Related Support	6.6	5.4	5.3	(1.4)	(19.8)
Industrial Machinery	17.0	13.5	13.4	(0.7)	(21.5)
All Other	56.8	50.8	52.5	3.3	(7.5)
Total Mfg. Employment	177.6	157.5	161.8	2.7	(8.9)

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 1,100 positions and increased by approximately 0.07% from FY 2017 to 2018. This growth was due in large part to an increase in the services sector which grew by 0.72% (5,600 additional employed). The transportation and trade sector also experienced the largest percentage growth from FY 2009 to 2018 with a 18.01% 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 over ten percent since FY 2009, a loss of 18,700 jobs, and shows no signs of improvement. The government sector also has experienced a significant contraction over the last ten years, losing more than 23,000 jobs over that period. Connecticut state and local employment does include casino employees who work for the state's two tribal governments. After adjusting for the decline in casino employment, the Office of Policy and Management estimates that 15,000 jobs were lost in the government sector over the ten year period. On the opposite end of the spectrum, the educational and health services

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sector has experienced substantial growth with nearly 36,900 jobs added over the past ten years.

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)

<u>Industry</u>	<u>FY</u> <u>2009</u>	<u>FY</u> <u>2017</u>	<u>FY</u> <u>2018</u>	<u>Percent Change</u>	
				<u>FY 2017 to</u> <u>FY 2018</u>	<u>FY 2009 to</u> <u>FY 2018</u>
Construction & Mining	60.3	59.2	59.3	0.17	(1.66)
Information	36.4	32.1	30.9	(3.61)	(14.97)
Transp., Trade & Utilities	297.3	298.0	298.7	0.25	0.48
Transp., & Warehousing	40.6	45.6	48.0	5.14	18.01
Utilities	6.8	5.5	5.2	(5.65)	(23.14)
Wholesale	67.3	62.6	62.9	0.63	(6.52)
Retail	182.6	184.3	182.6	(0.91)	0.04
Finance (FIRE)	140.9	128.6	127.9	(0.53)	(9.23)
Finance & Insurance	121.0	108.8	107.9	(0.83)	(10.87)
Real Estate	19.9	19.8	20.0	1.14	0.75
Services	699.3	772.0	777.6	0.72	11.20
Professional & Business	201.5	218.4	219.6	0.56	8.98
Education & Health	299.9	332.6	336.8	1.26	12.33
Leisure & Hospitality	135.2	155.6	155.5	(0.02)	15.07
All Other Services	62.1	64.9	65.1	0.31	4.83
Government	253.8	234.1	230.6	(1.48)	(9.16)
Federal	19.5	18.0	18.1	0.79	(7.14)
State & Local	234.4	216.1	212.5	(1.67)	(9.32)
Total Nonmanufacturing Employment	1,487.2	1,523.3	1,524.4	0.07	2.50

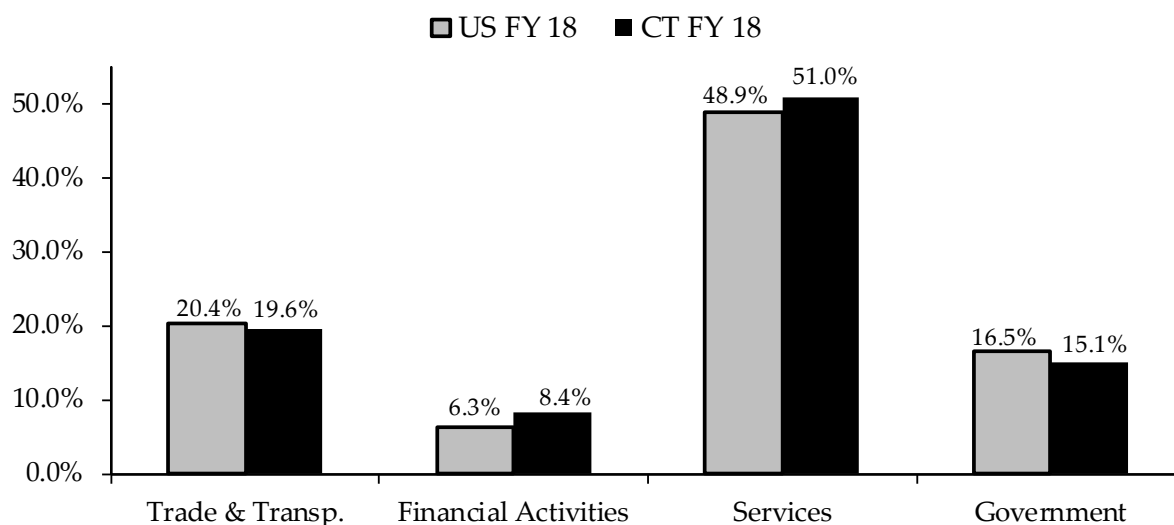
Note: Totals may not agree with detail due to rounding.

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.

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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.

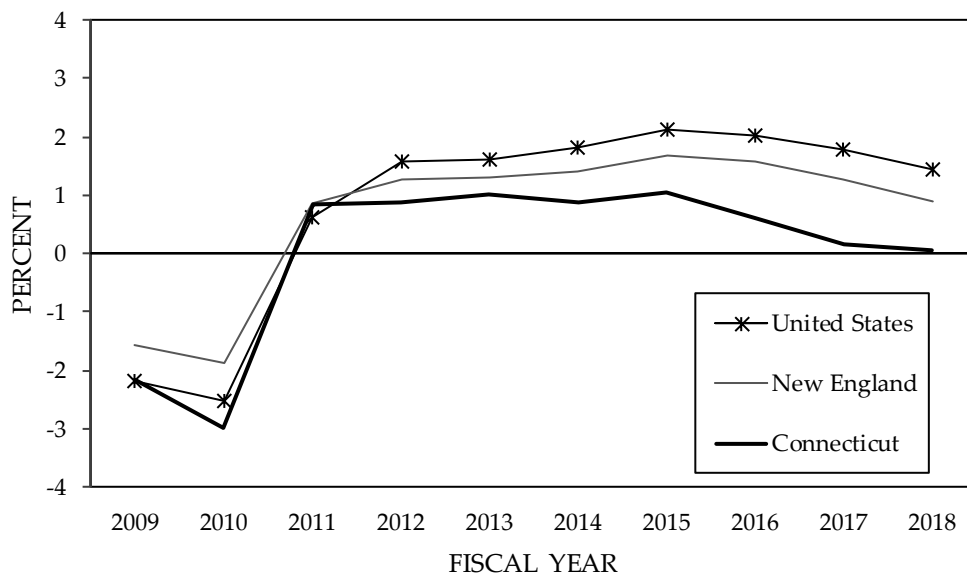
TABLE 20
NONMANUFACTURING EMPLOYMENT
(In Thousands)

Fiscal Year	United States		New England		Connecticut	
	Number	% Growth	Number	% Growth	Number	% Growth
2009	121,719	(2.2)	6,294	(1.6)	1,487	(2.2)
2010	118,646	(2.5)	6,176	(1.9)	1,443	(3.0)
2011	119,377	0.6	6,229	0.9	1,455	0.9
2012	121,260	1.6	6,307	1.3	1,468	0.9
2013	123,231	1.6	6,391	1.3	1,483	1.0
2014	125,474	1.8	6,481	1.4	1,496	0.9
2015	128,144	2.1	6,590	1.7	1,512	1.1
2016	130,737	2.0	6,694	1.6	1,521	0.6
2017	133,070	1.8	6,778	1.3	1,523	0.2
2018	134,969	1.4	6,838	0.9	1,524	0.1

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

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NONMANUFACTURING 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

<u>Industry</u>	<u>FY 2009</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>Percent Change</u>	
				<u>FY 2017 to FY 2018</u>	<u>FY 2009 to FY 2018</u>
Construction	\$59,327	\$68,439	\$70,828	3.5	19.4
Information	69,116	103,275	107,611	4.2	55.7
Transp., Trade & Utilities	46,093	50,250	51,059	1.6	10.8
Wholesale Trade	80,249	94,397	94,519	0.1	17.8
Retail Trade	30,563	33,447	34,205	2.3	11.9
Finance, Ins. & Real Estate	123,148	152,123	153,371	0.8	24.5
Professional & Business Services	73,647	87,108	88,028	1.1	19.5
Education & Health Services	47,115	53,117	53,730	1.2	14.0
Leisure & Hospitality Services	21,648	25,819	26,581	3.0	22.8
Government	53,567	62,328	63,005	1.1	17.6
Federal	94,181	104,457	106,243	1.7	12.8
State and Local	52,722	61,342	61,917	0.9	17.4

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

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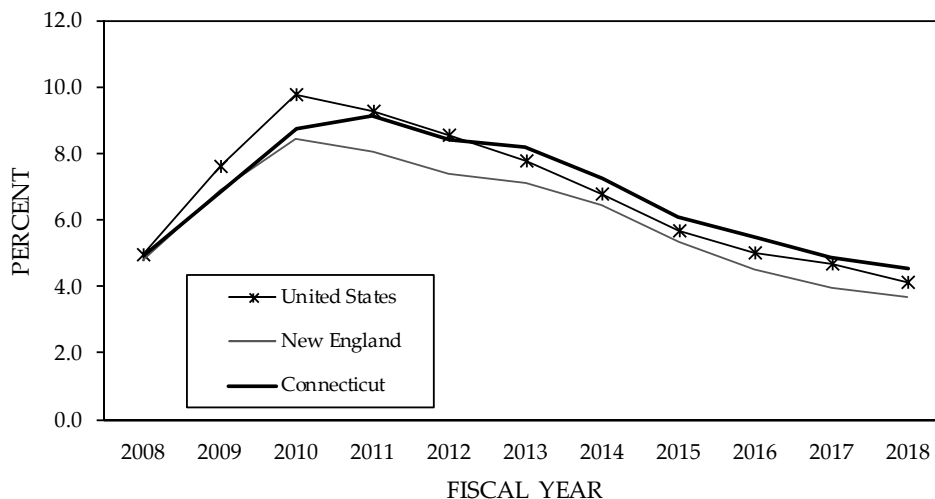
Unemployment Rate

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 for FY 2018 was 4.5% compared to a national average of 4.1%.

TABLE 22
UNEMPLOYMENT RATES (%)

<u>Fiscal Year</u>	<u>United States</u>	<u>New England</u>	<u>Connecticut</u>
2009	7.6	6.9	6.8
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

**UNEMPLOYMENT RATES
BY FISCAL YEAR**



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

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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 2017. Both supply and demand increased slightly from 2016 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 11.59 million barrels per day (MBPD) while consuming 3.92 MBPD, generating an 7.67 MBPD surplus. The Organization for Economic Cooperation and Development (OECD), on the other hand, consumed more than it supplied. In 2017, the OECD consumed 47.03 MBPD, while supplying only 23.90 MBPD, registering a 23.13 MBPD deficit.

The United States had a 34.3% dependency rate on foreign oil supplies in 2017, down from 37.2% in 2016. This figure was significantly below the ten year average of 52.1% for the period ending in 2016. The nation accounted for 20.2% of global demand and 14.1% 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 17.8% of the worldwide demand total in 2017, 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 2017 China consumed 12.80 MBPD while supplying 3.85 MBPD, registering an 8.95 MBPD deficit. China had a 70% dependence rate on foreign oil in 2017, significantly larger than the United States.

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TABLE 23
WORLD OIL SUPPLY AND DEMAND
Calendar Year 2017

	Supply			Demand	
	Millions	% of		Millions	% of
	of Barrels	Total		of Barrels	Total
	Per Day		Per Day		
Total OECD (a)	23.90	25.8%	Total OECD	47.03	47.9%
United States	13.06	14.1%	United States	19.88	20.2%
Canada	4.83	5.2%	Canada	2.43	2.5%
Mexico	2.22	2.4%	Mexico	1.91	1.9%
Other OECD	3.79	4.1%	Japan	3.99	4.1%
			Germany	2.45	2.5%
Total OPEC (c)	39.44	42.6%	France	1.62	1.6%
Saudi Arabia	11.59	12.5%	Italy	1.25	1.3%
United Arab Emirates	3.94	4.3%	United Kingdom	1.60	1.6%
Iran	4.98	5.4%	Other OPEC	11.90	12.1%
Iraq	4.52	4.9%			
Other OPEC	14.41	15.6%	Total Non-OECD	51.15	52.1%
			Russia	3.22	3.3%
All Other	29.31	31.6%	China	12.80	13.0%
Russia	11.26	12.2%	India	4.69	4.8%
China	3.85	4.2%	Saudi Arabia	3.92	4.0%
Other	14.20	15.3%	Other	26.52	27.0%
Total 2017 Supply	92.65	100.0%	Total 2017 Demand	98.19	100.0%
Total 2016 Supply	92.15		Total 2016 Demand	96.56	
Change	0.50	0.5%	Change	1.63	1.7%

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: 2018 BP Statistical Review of World Energy

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United States

The U.S. has the largest demand for world oil. While the country contains 4.4% of the world population and produces 14.1% of world oil, it consumes 20.2% of world oil. The nation has long been a net energy importer, although America’s energy dependence has decreased in recent years. According to the Energy Information Administration’s *Monthly Energy Review*, the U.S. consumed 97.9 quadrillion British Thermal Units (QBTU’s) of energy in 2017, 80% 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 2017 by fuel type and by economic sector. Petroleum products are currently the most important energy source for the U.S. economy. The 36.3 quadrillion petroleum-generated BTU’s accounted for 37.1% of U.S. energy consumption, followed by natural gas at 28.0 QBTU’s and coal at 13.8 QBTU’s.

TABLE 24
U.S. ENERGY CONSUMPTION IN 2017
(Quadrillion BTU's)

	<u>Resi- dential</u>	<u>Com- mercial</u>	<u>In- dustrial</u>	<u>Trans- portation</u>	<u>Electric Generation</u>	<u>Total</u>	<u>% of Total</u>
Fossil Fuels							
Natural Gas	4.6	3.3	9.8	0.8	9.6	28.0	28.6
Petroleum	0.9	0.8	8.5	25.9	0.2	36.3	37.1
Coal	-	-	1.2	-	12.6	13.8	14.1
Nuclear	-	-	-	-	8.4	8.4	8.6
Renewables							
Hydroelectric	-	-	-	-	2.8	2.8	2.8
Other*	0.6	0.3	2.6	1.4	3.7	8.5	8.7
Electricity	4.7	4.6	3.4	0.0	0.0	12.7	13.0
Electric Losses	9.1	8.9	6.5	0.1	(37.2)	(12.7)	(13.0)
Total Demand	19.8	17.9	32.0	28.2	-	97.9	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

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The U.S. lags other developed countries in utilizing renewable energy. Hydroelectricity, for example, provided approximately 7.5% of electric generation in the U.S., versus approximately 60% 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 2018, the United States had 99 nuclear reactors in service. Nuclear generation accounted for 23% of domestic electricity net generation in 2017. 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 32.0 QBTU's in 2017, followed by transportation at 28.2 QBTU's, residential at 19.8 QBTU's, and commercial at 17.9 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 7% 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 \$45.53 a barrel; a more than 50% reduction from September 2014. Acquisition costs dropped another 20% 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 22.3% in 2017 and 27.8% for the first three quarters of 2018.

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

<u>Year</u>	<u>In Current Dollars</u>	<u>In 2012 Dollars</u>
2009	\$59.29	\$62.41
2010	76.69	79.79
2011	101.87	103.82
2012	100.93	100.93
2013	100.49	98.76
2014	92.02	88.75
2015	48.39	46.18
2016	40.66	38.38
2017	50.68	46.95
2018**	66.05	60.00

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

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

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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

Calendar Year	U.S. Energy Consumption		GDP	BTU	Annualized % Change*
	Total Quadrillion BTU's	Annualized % Change*	Billion (In 2012\$)	Per \$1 GDP (In 2012\$)	
1990	84.5	2.0	9,365.5	9,021	(1.3)
1995	91.0	1.5	10,630.3	8,560	(1.0)
2000	98.8	1.7	13,131.0	7,522	(2.6)
2005	100.2	0.3	14,912.5	6,717	(2.2)
2010	97.5	(0.5)	15,598.8	6,253	(1.4)
2011	97.0	(0.6)	15,840.7	6,121	(2.1)
2012	94.5	(2.5)	16,197.0	5,836	(4.6)
2013	97.3	3.0	16,495.4	5,901	1.1
2014	98.5	1.2	16,899.8	5,828	(1.2)
2015	97.5	(1.0)	17,386.7	5,609	(3.8)
2016	97.5	0.0	17,659.2	5,523	(1.5)
2017	97.9	0.4	18,050.7	5,423	(1.8)

*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 2017, energy consumption per dollar of real GDP decreased at a compound annual rate of 1.9% per year. In 1990, 9,021 BTU's of energy were required to produce \$1 of GDP measured in 2012 dollars. In 2017, that number was 5,423 BTU's, a 40% reduction. The long-term

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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. As of October 2018, the reserve held 654.9 million barrels of crude oil, equivalent to 30 days of crude oil consumption.

Connecticut

Connecticut is one of the most energy efficient states in the nation. The state consumed 3.2 thousand BTU's per 2009 chained dollar of Gross State Product in 2016, the latest available data. Connecticut was one of the most efficient states based on this measure, behind only the District of Columbia and New York. Connecticut was 45% below the national average of 5.8 thousand BTU's. When compared to the national per person consumption, Connecticut residents are moderate energy users. Connecticut consumed 202 million BTU's per capita in 2016, ranking 47th among the 50 states plus the District of Columbia, behind New York, Rhode Island, California, and Hawaii, as well as tying with Florida. Connecticut was 33% below the national figure of approximately 301 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 2016, Connecticut residents spent \$21.92 per million BTU, compared to \$15.93 for the nation.

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TABLE 27
CONSUMER ENERGY PRICES IN THE UNITED STATES AND CONNECTICUT*
Nominal Dollars per Million BTU in 2016

	Natural <u>Gas</u>	Motor <u>Gasoline</u>	Distillate <u>Fuel Oil*</u>	All <u>Petroleum**</u>	Retail <u>Electricity</u>	Total <u>Energy</u>
Connecticut	\$6.54	\$18.67	\$16.29	\$17.95	\$50.54	\$21.92
United States	\$5.09	\$18.03	\$15.79	\$15.62	\$30.26	\$15.93
CT as a % of the U.S.	128%	104%	103%	115%	167%	138%

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 Data 2016

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 2016, the latest data available. Overall energy costs in Connecticut in 2016 were 38% higher than the national average, with retail electricity prices 67% higher than the national average.

TABLE 28
CONNECTICUT ENERGY CONSUMPTION IN 2016
(Trillion BTU's)

<u>Fuels</u>	Resi- <u>dential</u>	Com- <u>mercial</u>	In- <u>dustrial</u>	Trans- <u>portation</u>	Electric <u>Generation</u>	CT <u>Total</u>	% of CT <u>Total</u>	% of US <u>Total</u>
Natural Gas	47.3	51.7	24.9	4.5	126.2	254.5	35.2	29.2
Petroleum	52.4	16.6	18.2	223.3	0.9	311.4	43.0	37.1
Coal	-	-	-	-	2.3	2.3	0.3	14.6
Nuclear	-	-	-	-	173.4	173.4	24.0	8.7
Hydroelectric	-	-	-	-	2.1	2.1	0.3	2.5
Other	6.6	2.1	4.4	-	16.2	29.3	4.0	7.9
Deliv. Elec.	43.3	43.3	11.5	0.6	1.9	100.6	13.9	13.2
Deliv. Losses	<u>75.8</u>	<u>76.0</u>	<u>20.2</u>	<u>1.1</u>	<u>(323.0)</u>	<u>(150.0)</u>	<u>(20.7)</u>	<u>(13.2)</u>
Total Demand	225.5	189.6	79.3	229.5	-	723.6	100.0	100.0
% of Total-CT	31.2	26.2	11.0	31.7	-	100.0		
% of Total-U.S.	20.6	18.5	32.3	28.6	-	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 2016

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The preceding table displays the amount and percentage share of total energy consumed in Connecticut by fuel source and sector in 2016, 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 2016, 41.4% of Connecticut households used fuel oil for home heating, followed by natural gas at 35.2%, electricity at 16.2%, others at 3.1%, and liquefied petroleum gases at 4.1%. 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 2016, the latest data available, the state generated 36.4 million net megawatt hours of electricity, primarily from nuclear power. Retail sales within the state were at 28.9 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 2017, there were 1,652,869 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,

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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

In the U.S., highway vehicles consume approximately 98% of all gasoline, with about 2% used for other purposes such as agriculture, aviation, construction and boating. In 2016, the latest data available, gasoline consumption in the U.S. totaled 144.9 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 2016, Connecticut residents consumed 423.9 gallons of gasoline per capita, versus 448.2 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 2016, per capita consumption decreased more than 8.0% in Connecticut, versus 5.5% for the nation. This has reduced Connecticut's per capita consumption to 94.5% of the U.S. amount in 2016.

As the highest per capita personal income state in the nation, Connecticut residents tend to own more automobiles. Connecticut residents owned 378 private and commercial automobiles per 1,000 residents in 2016, versus 345 for the nation. Also, Connecticut had 730 driver licenses per 1,000 residents in 2016, compared to 686 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 2013, of those commuting to work by car, 9.6% of Connecticut residents carpooled, versus 10.9% for the nation as a whole.

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TABLE 29
GASOLINE CONSUMPTION IN THE UNITED STATES & CONNECTICUT

Calendar Year	U.S.* Total	Annual**	CT Total	Annual**	Gallons Per Capita		
	Gallons (000's)	% Change	Gallons (000's)	% Change	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	95.3%
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	409.0	94.3%
2012	134,998,800	-0.2%	1,449,384	-1.3%	429.7	403.5	93.9%
2013	135,595,239	0.4%	1,438,625	-0.7%	428.5	400.0	93.3%
2014	137,883,016	1.7%	1,434,867	-0.3%	432.4	398.9	92.3%
2015	141,757,545	2.8%	1,479,844	3.1%	439.2	412.1	93.8%
2016	144,885,278	2.2%	1,515,941	2.4%	448.2	423.9	94.5%
Average 2011-2016					435.3	407.9	93.7%

* Fifty states plus Washington, D.C.

** Annual growth calculated using compound annual growth rate formula

Source: U. S. Dept. of Transp., Office of Highway Information Management, *Highway Statistics*

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. According to NHTSA data, total fleet performance in MY 2016 was 32.2 miles per gallon, while the fleet standard was 32.7 miles per gallon. This was a 31% improvement in the total fleet fuel efficiency since 2004, when the total fleet performance was 24.6 miles per gallon.

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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 2018 was \$2.94 per gallon, compared to \$2.62 in October of 2017 and \$2.36 in October of 2016. 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 \$2.40 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	Nominal	Real	Calendar	Nominal	Real
<u>Year</u>	<u>Price</u>	<u>Price*</u>	<u>Year</u>	<u>Price</u>	<u>Price*</u>
1950	\$0.27	\$2.06	2008	\$3.30	\$3.50
1960	0.31	1.86	2009	2.41	2.53
1970	0.36	1.66	2010	2.84	2.95
1980	1.25	2.96	2011	3.58	3.64
1990	1.16	1.82	2012	3.68	3.68
2000	1.52	1.95	2013	3.58	3.51
2005	2.31	2.65	2014	3.44	3.32
2006	2.62	2.91	2015	2.52	2.40
2007	2.84	3.07	2016	2.25	2.12
			2017	2.50	2.34

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

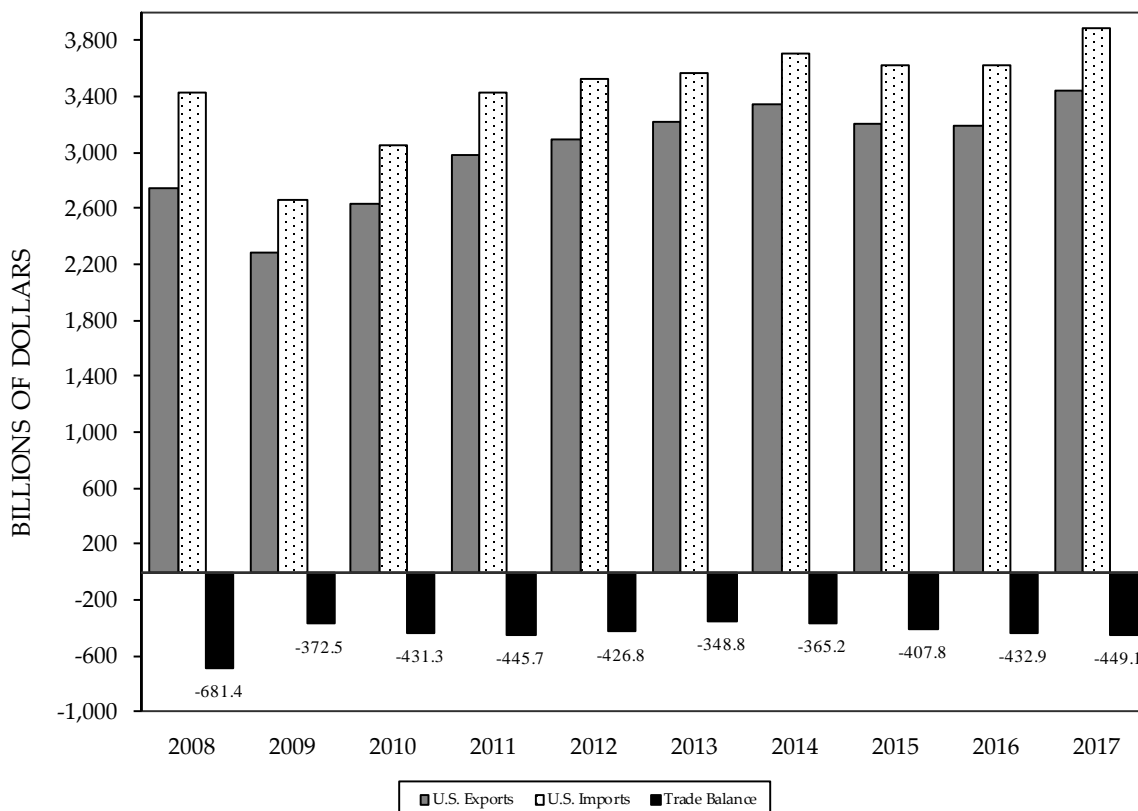
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Export Sector

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 25.2% from 2008 through 2017, while total trade imports have grown 13.4% over the same time period.

The following graph illustrates the United States' trade balance for the past ten years. In 2017, the deficit increased to \$449.1 billion, up from \$432.9 billion in 2016.

U.S. TRADE BALANCE BY CALENDAR YEAR



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. Since 2008 the U.S. trade balance has improved compared to the early 2000s and has remained relatively stable over the past five years.

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

	2016			2017		
	Exports	Imports	Balance	Exports	Imports	Balance
Total Trade	3,183.8	3,616.7	(432.9)	3,433.2	3,882.4	(449.1)
Merchandise	1,457.0	2,208.0	(751.1)	1,553.4	2,360.9	(807.5)
Foods/Beverages	130.5	131.0	(0.5)	132.7	138.8	(6.1)
Industrial Supplies & Materials	387.4	441.8	(54.5)	456.2	511.6	(55.4)
Capital Goods, Excluding Autos	519.9	593.9	(74.0)	533.6	643.6	(110.0)
Autos	150.3	351.1	(200.7)	157.6	359.8	(202.2)
Consumer Goods	193.3	585.2	(391.9)	197.1	603.9	(406.8)
Others	75.6	105.0	(29.4)	76.1	103.1	(27.0)
Services	758.9	509.8	249.1	797.7	542.5	255.2
Travel & Transportation	291.6	220.5	71.1	299.3	236.8	62.6
Business Services	298.8	212.5	86.2	324.2	224.0	100.2
Royalties & License fees	124.7	46.6	78.2	128.4	51.3	77.1
Other Services	43.8	30.2	13.6	45.8	30.4	15.4
Investment Income	967.9	898.8	69.1	1,082.2	979.0	103.1
Direct Investment	456.4	183.8	272.6	504.4	206.0	298.4
Portfolio Investment Income	326.3	407.6	(81.3)	354.4	432.5	(78.1)
U.S. Gov't Receipts/Payments	137.8	261.7	(123.9)	154.0	272.6	(118.6)
Other Investment Income	47.4	45.7	1.7	69.3	67.9	1.4
			<u>Net Change From Previous Year</u>			
Total Trade	(23.5)	1.6	(25.1)	249.5	265.7	(16.3)
Merchandise	(54.4)	(65.2)	10.8	96.4	152.9	(56.4)
Foods/Beverages	2.8	2.3	0.5	2.2	7.8	(5.6)
Industrial Supplies & Materials	(30.8)	(50.6)	19.8	68.8	69.7	(0.9)
Capital Goods, Excluding Autos	(19.9)	(13.3)	(6.6)	13.7	49.8	(36.1)
Autos	(1.6)	1.0	(2.6)	7.3	8.8	(1.5)
Consumer Goods	(4.1)	(11.2)	7.2	3.9	18.7	(14.9)
Others	(0.9)	6.7	(7.5)	0.5	(1.9)	2.4
Services	3.6	17.9	(14.3)	38.8	32.6	6.2
Travel & Transportation	(3.1)	9.0	(12.0)	7.8	16.3	(8.5)
Business Services	6.4	3.3	3.1	25.5	11.5	13.9
Royalties & License fees	(0.0)	6.0	(6.0)	3.6	4.7	(1.1)
Other Services	0.3	(0.3)	0.6	2.0	0.1	1.8
Investment Income	27.3	49.0	(21.6)	114.2	80.2	34.0
Direct Investment	(3.5)	8.6	(12.0)	48.0	22.2	25.8
Portfolio Investment Income	14.3	9.0	5.3	28.1	24.9	3.2
U.S. Gov't Receipts/Payments	7.2	18.3	(11.0)	16.3	11.0	5.3
Other Investment Income	9.3	13.1	(3.8)	21.9	22.2	(0.3)

Note: Net changes were derived before rounding to billions.

Source: U.S. Bureau of Economic Analysis

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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 \$56.4 billion for a total deficit of \$807.5 billion in 2017, up from \$751.1 billion in 2016. This increase was largely the result of increases in capital and consumer goods.

Of the total trade deficit of \$449.1 billion, consumer goods accounted for the largest portions of the deficit, reaching \$406.8 billion in 2017. 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 2017 by \$14.9 billion.

The second largest portion of the deficit occurred in autos. This category includes automotive vehicles, parts and engines. In 2017, the U.S. imported \$359.8 billion worth of these goods compared to the \$157.6 billion that the U.S. exported. The autos trade deficit at \$202.2 billion represents a \$1.5 billion increase from the deficit of \$200.7 billion in 2016.

Service Transactions

The United States is highly competitive in the delivery of services. The surplus in service transactions increased to \$255.2 billion in 2017, from a surplus of \$249.1 billion in 2016. Imports increased 6.4% to \$542.5 billion while exports of services increased 5.1% to \$797.7 billion. Of the \$255.2 billion total surplus in 2017, \$100.2 billion was attributable to business services.

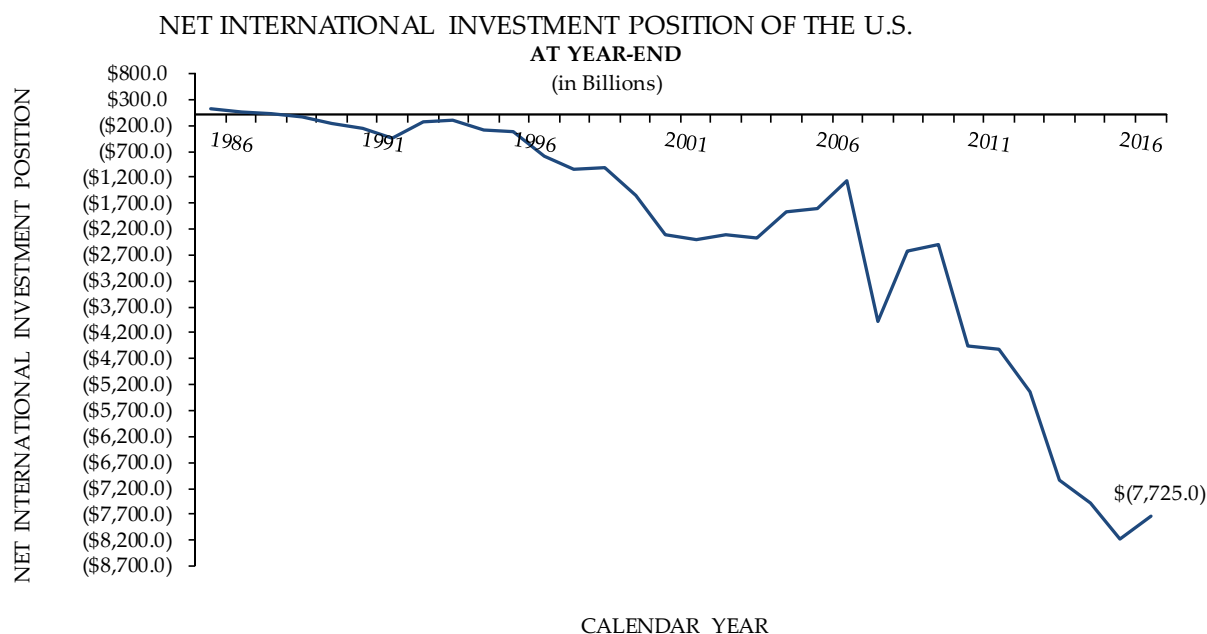
Investment Income

The balance in investment income registered a surplus of \$103.1 billion in 2017. 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 2017 foreign assets in the U.S., measured at current cost, increased by \$3,281.9 billion, or 10.2%, to \$35,524.1 billion, compared to

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an increase of \$3,738.5 billion to \$27,799.1 billion for U.S. assets abroad. This placed U.S. international investment at a net negative \$7,725.0 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 2017 the U.S.'s direct investment abroad was \$8,910.0 billion and foreign direct investment in the U.S. was \$8,925.5 billion, registering -\$15.5 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 throughout history primarily for protecting national industries from global competition and as a form of revenue generation. Tariffs can have unintended consequences as by design they reduce competition which could lead to less efficient domestic industries. The United States is no stranger to tariffs and has been using them throughout its history.

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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 will increase to 25% in early 2019. Given the relatively brief time that these tariffs have been in place the full economic impact has not been fully felt but it is anticipated that consumers will begin to see rising prices on certain goods.

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 6.1% 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 \$14,783.7 million in 2017, up 2.7% from 2016. 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 61.8% of Connecticut's foreign sales in 2017. The following table shows the breakdown of major products by NAICS code for the past five years. In 2017, transportation equipment, which includes aircraft engines and spare parts, gas turbines, and helicopters and spacecraft accounted for 41.0% of total exports down from 43.2% of exports in 2016. In terms of average annual growth from 2013 to 2017, Fabricated Metal posted the strongest growth at 3.6%, followed by Plastics and Rubber at 3.0%.

Overall growth in exports of commodities for the past five years averaged -2.6%. Exports of \$14.8 billion are estimated to account for 5.7% of Connecticut Gross State Product (GSP) in 2017, which is higher than the 5.6% level in 2016.

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

<u>NAICS</u>	<u>Industry</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>Percent of 2017 Total</u>	<u>Average Growth 13-17</u>
322	Paper	141.1	142.7	131.2	137.0	152.3	1.0%	1.9%
325	Chemicals	992.6	971.0	1,039.5	864.9	955.0	6.5%	-1.0%
326	Plastics and Rubber	239.8	233.5	230.3	224.9	269.8	1.8%	3.0%
331	Primary Metal	648.2	637.8	675.1	505.1	410.4	2.8%	-10.8%
332	Fabricated Metal	720.2	733.6	706.7	790.3	828.9	5.6%	3.6%
333	Machinery, exc. Elec.	1,758.8	2,072.8	1,666.6	1,769.7	1,945.3	13.2%	2.6%
334	Comp. & Electronic	1,237.0	1,270.6	1,191.0	1,108.7	1,131.2	7.7%	-2.2%
335	Electrical Equipment	900.1	1,002.9	1,032.9	958.9	982.0	6.6%	2.2%
336	Transportation	8,004.8	7,318.6	7,012.5	6,216.2	6,062.8	41.0%	-6.7%
339	Misc. MFG	307.8	330.7	326.2	327.3	312.6	2.1%	0.4%
	Other	<u>1,476.3</u>	<u>1,248.6</u>	<u>1,229.7</u>	<u>1,490.9</u>	<u>1,733.5</u>	11.7%	4.1%
Total Commodity Exports		16,426.7	15,962.8	15,241.8	14,393.8	14,783.7		-2.6%
	% Growth	3.5%	-2.8%	-4.5%	-5.6%	2.7%		
Gross State Product (\$M)		240,975.5	244,611.8	253,467.3	257,038.5	260,826.8		
	% Growth	0.6%	1.5%	3.6%	1.4%	1.5%		2.0%
Exports as a % of GSP		6.8%	6.5%	6.0%	5.6%	5.7%		6.1%

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 2017, exports originating from Connecticut totaled \$14.8 billion, with 65.2% of the total being shipped by air, 13.2% being delivered by sea, and the remaining 21.6% 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 2017 at 14.3% of total exports, followed by Canada, Germany, United Kingdom, and Mexico. These five countries accounted for 55.3% of total state exports in 2017. Exports to the United Kingdom have grown the fastest in the past five years at an average growth rate of 17.0%.

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

<u>Destination</u>	<u>2017</u> <u>Rank</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	Percent of 2017 <u>Total</u>	2013-2017 Average Growth <u>Rate</u>
France	1	2,425.3	2,213.3	1,942.9	1,954.6	2,114.1	14.3%	-3.4%
Canada	2	1,909.7	1,939.3	1,623.1	1,634.8	1,907.0	12.9%	0.0%
Germany	3	1,397.2	1,715.6	1,654.2	1,641.7	1,824.7	12.3%	6.9%
United Kingdom	4	693.8	721.4	885.4	893.2	1,300.1	8.8%	17.0%
Mexico	5	1,213.3	1,280.7	1,318.7	1,061.1	1,036.2	7.0%	-3.9%
China	6	912.5	907.3	1,028.9	798.3	795.1	5.4%	-3.4%
Netherlands	7	486.7	490.2	476.6	499.1	619.4	4.2%	6.2%
South Korea	8	569.3	659.9	457.5	364.7	539.1	3.6%	-1.4%
Japan	9	527.6	540.8	526.6	525.4	546.7	3.7%	0.9%
Singapore	10	538.4	335.8	278.5	333.7	399.5	2.7%	-7.2%
Other Areas		<u>5,753.0</u>	<u>5,158.4</u>	<u>5,049.4</u>	<u>4,687.3</u>	<u>3,702.0</u>	25.0%	-10.4%
Total		16,426.7	15,962.8	15,241.8	14,393.8	14,783.7	100.0%	-2.6%

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.

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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) 2017, contractors in the state were awarded \$11.6 billion worth of defense-related prime contracts, with the heaviest concentration in the state's transportation equipment sector. This was down 18.0% from the \$14.1 billion received in awards in FFY 2016. Of the total awarded, the following five companies were the top contractors in the state, primarily for the described areas of work:

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

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 2017
(In Millions)

<u>Connecticut Program</u>	<u>Value</u>	<u>Percent</u>	<u>United States Program</u>	<u>Value</u>	<u>Percent</u>
Combat Ships and Landing Vessels	\$ 4,737	40.9%	Aircraft Fixed Wing	\$ 36,727	12.2%
Aircraft, Rotary Wing	2,341	20.2%	Engineering & Tech Support Services	14,213	4.7%
Gas Turbines and Jet Engines	1,221	10.5%	Combat Ships and Landing Vessels	13,271	4.4%
Maintenance and Repair of Equipment	717	6.2%	General Healthcare Services	11,914	4.0%
Helicopter Rotor Blades, Components	501	4.3%	Support Services	6,534	2.2%
Other	<u>2,071</u>	<u>17.9%</u>	Other	<u>217,294</u>	<u>72.4%</u>
Total	\$11,588	100.0%	Total	\$299,954	100.0%

Source: Federal Procurement Data System (FPDS.gov)

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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)

	<u>FFY 2013</u>	<u>FFY 2014</u>	<u>FFY 2015</u>	<u>FFY 2016</u>	<u>FFY 2017</u>
Fairfield	29.5%	26.2%	27.6%	28.1%	30.8%
Hartford	26.4%	18.9%	28.7%	33.0%	21.7%
Litchfield	0.3%	0.2%	0.3%	0.2%	0.3%
Middlesex	0.1%	0.1%	0.1%	0.1%	0.2%
New Haven	0.6%	0.7%	0.5%	0.6%	0.7%
New London	42.8%	53.8%	42.6%	37.9%	46.3%
Tolland	0.2%	0.1%	0.1%	0.1%	0.1%
Windham	<u>0.0%</u>	<u>0.1%</u>	<u>0.1%</u>	<u>0.0%</u>	<u>0.1%</u>
State Total	100.0%	100.0%	100.0%	100.0%	100.0%
State Total	\$10,032,845	\$13,207,949	\$12,147,321	\$14,131,753	\$11,591,210

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 0.092 compared with 0.030 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.

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From \$11.4 billion in FFY 2008, real defense contract awards—the value of contracts after accounting for inflation—decreased to \$9.3 billion in FFY 2017. This represents a negative annual percentage growth rate of 2.3% per year from FFY 2008 to FFY 2017.

TABLE 36
CONNECTICUT DEFENSE CONTRACT AWARDS AND RELATED EMPLOYMENT

Federal Fiscal Year	Defense Contract Awards	% Growth	Connecticut Transportation Equipment Employment	% Growth	Defense Contract Awards in 2006 Dollars	% Growth
	(\$ 000's)		(\$ 000's)		(\$ 000's)	
2008	12,225,659	41.9	44.14	1.5	11,447,246	36.6
2009	11,851,941	(3.1)	43.49	(1.5)	11,139,042	(2.7)
2010	11,238,753	(5.2)	42.29	(2.8)	10,387,018	(6.8)
2011	12,491,324	11.1	42.15	(0.3)	11,192,943	7.8
2012	12,750,298	2.1	42.19	0.1	11,194,292	0.0
2013	10,032,845	(21.3)	41.58	(1.4)	8,678,932	(22.5)
2014	13,207,950	31.6	40.30	(3.1)	11,240,808	29.5
2015	12,147,231	(8.0)	40.44	0.3	10,139,667	(9.8)
2016	14,131,754	16.3	41.40	2.4	11,554,991	14.0
2017	11,591,211	(18.0)	43.40	4.8	9,272,968	(19.7)
Coefficient of Variation	0.092		0.030		0.093	

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

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

Federal Fiscal Year	Connecticut			U.S.				
	Defense Contract Awards (\$ Millions)	% Growth	3-Year Moving Average (\$ Millions)	% Growth	Defense Contract Awards (\$ Millions)	% Growth	3-Year Moving Average (\$ Millions)	% Growth
2008	12,226	41.9	9,502	12.8	354,973	18.8	305,333	14.4
2009	11,852	(3.1)	10,898	14.7	331,120	(6.7)	328,329	7.5
2010	11,239	(5.2)	11,772	8.0	323,100	(2.4)	336,398	2.5
2011	12,491	11.1	11,861	0.8	329,434	2.0	327,885	(2.5)
2012	12,750	2.1	12,160	2.5	319,170	(3.1)	323,901	(1.2)
2013	10,033	(21.3)	11,758	(3.3)	268,753	(15.8)	305,786	(5.6)
2014	13,208	31.6	11,997	2.0	260,613	(3.0)	282,845	(7.5)
2015	12,147	(8.0)	11,796	(1.7)	253,288	(2.8)	260,885	(7.8)
2016	14,139	16.4	13,165	11.6	278,791	10.1	264,231	1.3
2017	11,591	(18.0)	12,626	(4.1)	299,954	7.6	277,344	5.0
Coefficient of Variation	0.092			0.115				

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 0.092, compared to 0.115 for the U.S., reflecting a pattern of fluctuations in the state's annual levels of defense contract awards which is slightly lower than but not inconsistent with 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 defense changes 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 3.2% during the nine-year period from 2008 to 2017, compared to a growth rate of -1.1% 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.

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In FFY 2017, while Connecticut ranked seventh in total defense contracts awarded, it ranked second in per capita defense dollars awarded with a figure of \$3,230. This figure was 3.5 times the national average of \$922. In 2016, Connecticut ranked fourth in total defense contracts awarded and first in per capita defense dollars awarded with a figure of \$3,952. This was 4.6 times the national average of \$863 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 are needed.

**TABLE 38
CONNECTICUT DEFENSE CONTRACT AWARDS AND GSP**

Federal Fiscal Year	Connecticut	U.S.	CT as % of U.S.	Cal. Year	3-year	CT Awards as % of CT GSP
	Defense Contract Awards (\$ Millions)	Defense Contract Awards (\$ Millions)		CT GSP Current Dollars (\$ Millions)	Average CT Awards (\$ Millions)	
2008	12,226	354,973	3.4%	240,959	9,502	3.9%
2009	11,852	331,120	3.6%	231,310	10,898	4.7%
2010	11,239	323,100	3.5%	234,196	11,772	5.0%
2011	12,491	329,434	3.8%	234,706	11,861	5.1%
2012	12,750	319,170	4.0%	237,795	12,160	5.1%
2013	10,033	268,753	3.7%	240,329	11,758	4.9%
2014	13,208	260,613	5.1%	243,425	11,997	4.9%
2015	12,147	253,288	4.8%	253,685	11,796	4.6%
2016	14,139	278,791	5.1%	261,776	13,165	5.0%
2017	11,591	299,954	3.9%	269,584	12,623	4.7%

Source: Bureau of Economic Analysis, IHS Economics

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

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TABLE 39
COMPARISON OF STATE PRIME CONTRACT AWARDS
Federal Fiscal Year 2017

<u>State</u>	Prime Contract Awards (\$ 000's)	<u>Rank</u>	\$ Per Capita Prime Contract		<u>State</u>	Prime Contract Awards (\$ 000's)	<u>Rank</u>	\$ Per Capita Prime Contract	
			<u>Awards</u>	<u>Rank</u>				<u>Awards</u>	<u>Rank</u>
Virginia	32,960,199	3	3,888	1	New Mexico	1,109,123	37	531	26
Connecticut	11,591,211	7	3,230	2	South Carolina	2,536,732	27	504	27
Maryland	13,165,995	5	2,174	3	Rhode Island	524,296	41	494	28
Alaska	1,595,201	32	2,156	4	Illinois	6,230,966	13	486	29
Maine	2,666,094	26	1,995	5	Indiana	3,239,454	22	485	30
Mississippi	5,069,121	18	1,699	6	Iowa	1,399,493	34	444	31
Alabama	8,238,548	11	1,378	7	Utah	1,357,116	36	436	32
Texas	45,104,443	1	1,591	8	Wisconsin	2,387,981	28	411	33
Arizona	10,692,605	8	1,521	9	Nebraska	735,691	39	382	34
Massachusetts	10,096,006	9	1,471	10	Ohio	4,272,186	20	366	35
Missouri	8,466,150	11	1,384	11	New York	6,087,695	14	306	36
Kentucky	5,967,913	16	1,339	12	Michigan	3,019,616	23	303	37
New Hampshire	1,745,067	30	1,299	13	Louisiana	1,376,306	35	293	38
Hawaii	1,799,114	29	1,260	14	Kansas	823,273	38	282	39
Washington	8,512,031	10	1,147	15	North Carolina	2,829,526	25	275	40
Colorado	5,572,727	17	992	16	North Dakota	200,712	46	265	41
Pennsylvania	11,718,969	6	915	17	South Dakota	225,056	45	258	42
California	33,386,180	2	844	18	Tennessee	1,550,560	33	230	43
Oklahoma	3,001,543	24	763	19	Delaware	196,830	47	204	44
Vermont	455,115	42	730	20	Wyoming	104,736	50	180	45
Florida	14,625,343	4	695	21	Oregon	648,112	40	156	46
Minnesota	3,876,541	21	694	22	West Virginia	250,807	43	138	47
Georgia	5,977,191	15	572	23	Montana	120,580	49	114	48
New Jersey	4,934,978	19	548	24	Idaho	195,487	48	113	49
Nevada	1,637,029	31	545	25	Arkansas	235,689	44	78	50
U.S. Total	299,953,827		922						

Source: Federal Procurement Data System, Bureau of the Census

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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 2018. 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 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 North American Industry Classification System (NAICS) codes for retail trade are from NAICS 44 to NAICS 45. In general, retail establishments are classified in 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 2018 totaled \$56.9 billion, a 1.5% increase over FY 2017 and the eighth straight year of increased total trade.

TABLE 40
RETAIL TRADE IN CONNECTICUT
(In Millions)

<u>NAICS</u>	<u>Industry</u>	<u>FY</u> <u>2017</u>	<u>% of</u> <u>Total</u>	<u>FY</u> <u>2018</u>	<u>% of</u> <u>Total</u>	<u>%</u> <u>Change</u>
441	Motor Vehicle and Parts Dealers	\$10,072	18.0%	\$10,141	17.8%	0.7
442	Furniture and Home Furnishings Stores	2,009	3.6	2,004	3.5	-0.3
443	Electronics and Appliance Stores	1,657	3.0	1,634	2.9	-1.4
444	Building Material and Garden Supply Stores	3,021	5.4	3,187	5.6	5.5
445	Food and Beverage Stores	11,046	19.7	10,588	18.6	-4.1
446	Health and Personal Care Stores	5,275	9.4	4,291	7.5	-18.6
447	Gasoline Stations	3,298	5.9	3,729	6.6	13.1
448	Clothing and Clothing Accessories Stores	3,036	5.4	3,084	5.4	1.6
451	Sporting Goods, Hobby, Book and Music Stores	1,125	2.0	1,048	1.8	-6.9
452	General Merchandise Stores	5,419	9.7	5,523	9.7	1.9
453	Miscellaneous Store Retailers	5,978	10.7	6,989	12.3	16.9
454	Nonstore Retailers	<u>4,096</u>	<u>7.3</u>	<u>4,642</u>	<u>8.2</u>	<u>13.3</u>
	Total	56,030	100.0%	56,861	100.0%	1.5%
	Durables (NAICS 441,442, 443, 444)	\$16,759	29.9%	\$16,966	29.8%	1.2%
	Nondurables (All Other NAICS)	\$39,271	70.1%	\$39,895	70.2%	1.6%

Source: Connecticut Department of Revenue Services

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Retail trade can be broken down into two major categories; durable and nondurable goods. Durable goods are items that presumably 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' income grows and consumer confidence increases. This was the case in FY 2018 when durable goods sales grew by 1.2%. 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 1.6% in FY 2018.

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 2018 national retail e-commerce sales are estimated at \$482.1 billion, accounting for 9.3% of total retail sales of \$5,211.1 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 15.8% in FY 2018 compared to a 4.3% 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, the recently enacted Public Act (PA) 18-152 makes remote sellers that make at least \$250,000 in sales and more than 200 retail transactions to Connecticut residents liable to collect sales tax as of December 1, 2018. 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 PA 18-152, 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 2018, 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

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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 decreased to 25.5% in FY 2018, from 25.8% in FY 2017. The state's per capita disposable income of \$62,189 in FY 2018 was 38.3% above the national average of \$44,954. In FY 2018, Connecticut per capita retail trade was estimated at \$15,843.

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.

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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 2017 for total DNFD and each of its four components – households, businesses, federal government, and state and local governments. In 2017, the year-end total domestic nonfinancial debt outstanding was \$49,131.4 billion, approximately 2.5 times GDP. Total non-financial debt between 2000 and 2017 has grown 157.2%, outpacing the growth in GDP of 90.0%.

By 2017, of the total \$49.1 trillion nonfinancial debt outstanding, the federal government accounted for 33.8%, followed by households at 30.8%, nonfinancial business at 29.0%, and state and local governments at 6.3%. However, debt outstanding in the private sector accounted for 59.9% of the total in 2017, 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 \$15.2 trillion by the end of 2017. Of this sum, home mortgage loans accounted for \$10.1 trillion, or 66.5% of household borrowing, followed by consumer credit at \$3.8 trillion, or 25.3%, and the remainder in other miscellaneous items.

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

				2017	Growth	
	<u>1990</u>	<u>2000</u>	<u>2017</u>	% of	(1990	(2000
				Total	to 2000)	to 2017)
Private Sector						
Households						
Home Mortgages	\$2,489.3	\$4,816.8	\$10,070.4	20.5%	93.5%	109.1%
Consumer Credit	824.4	1,741.3	3,826.4	7.8%	111.2%	119.8%
Other	<u>310.4</u>	<u>681.6</u>	<u>1,256.8</u>	2.6%	119.6%	84.4%
Total - Households	\$3,624.0	\$7,239.7	\$15,153.6	30.8%	99.8%	109.3%
Business						
Mortgages	\$1,213.0	\$1,737.0	\$4,329.5	8.8%	43.2%	149.2%
Corporate Bonds	1,008.2	2,275.8	5,365.6	10.9%	125.7%	135.8%
Other	<u>1,554.7</u>	<u>2,565.6</u>	<u>4,565.7</u>	9.3%	65.0%	78.0%
Total - Business	\$3,775.9	\$6,578.5	\$14,260.8	29.0%	74.2%	116.8%
Total - Private Sector	\$7,399.9	\$13,818.1	\$29,414.4	59.9%	86.7%	112.9%
Public Sector						
Federal Government*	\$2,830.8	\$4,090.0	\$16,606.9	33.8%	44.5%	306.0%
State & Local Gov't	<u>987.4</u>	<u>1,197.9</u>	<u>3,110.1</u>	6.3%	21.3%	159.6%
Total - Public Sector	\$3,818.2	\$5,287.9	\$19,717.0	40.1%	38.5%	272.9%
Total DNFD	\$11,218.1	\$19,106.0	\$49,131.4	100.0%	70.3%	157.2%
GDP, 4th Quarter	\$6,004.7	\$10,439.0	\$19,831.8		73.8%	90.0%
DNFD as a % of GDP	186.8%	183.0%	247.7%			

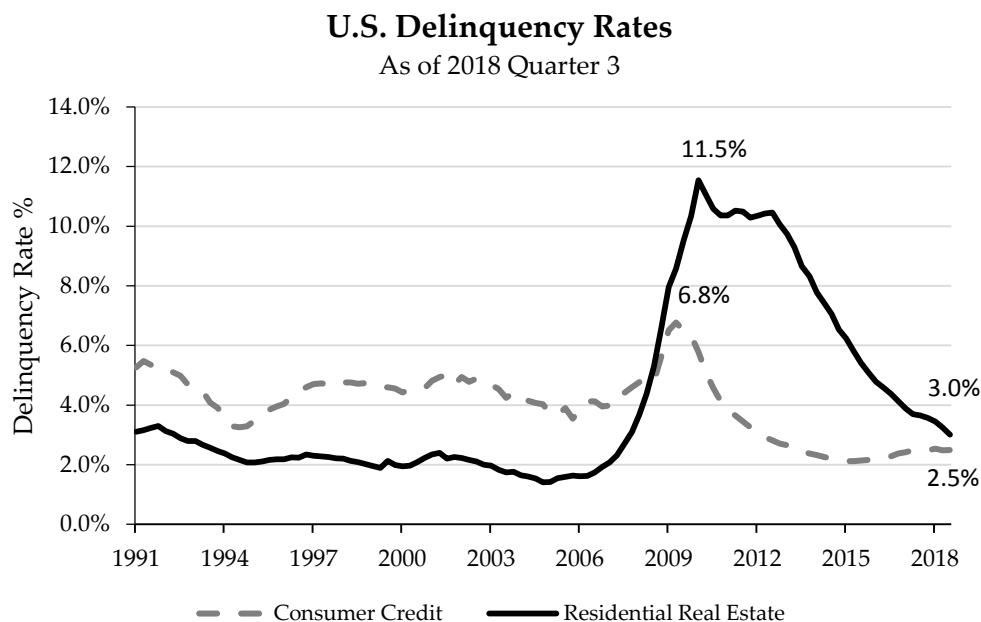
*Excludes intra-governmental holdings of Treasury securities

Source: Board of Governors of the Federal Reserve System, IHS Economics

As shown in the chart below, 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 2018, this figure fell to 3.0% as the national expansion from the Great Recession continued.

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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 2.5% in the third quarter 2018 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 \$14.3 trillion at the end of 2017. 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 19.2% since 2007. After the Great Recession, growth in business borrowings has been led by corporate bonds, which grew 87.8% between 2007 to 2016, compared to 25.6% between 2000 to 2007.

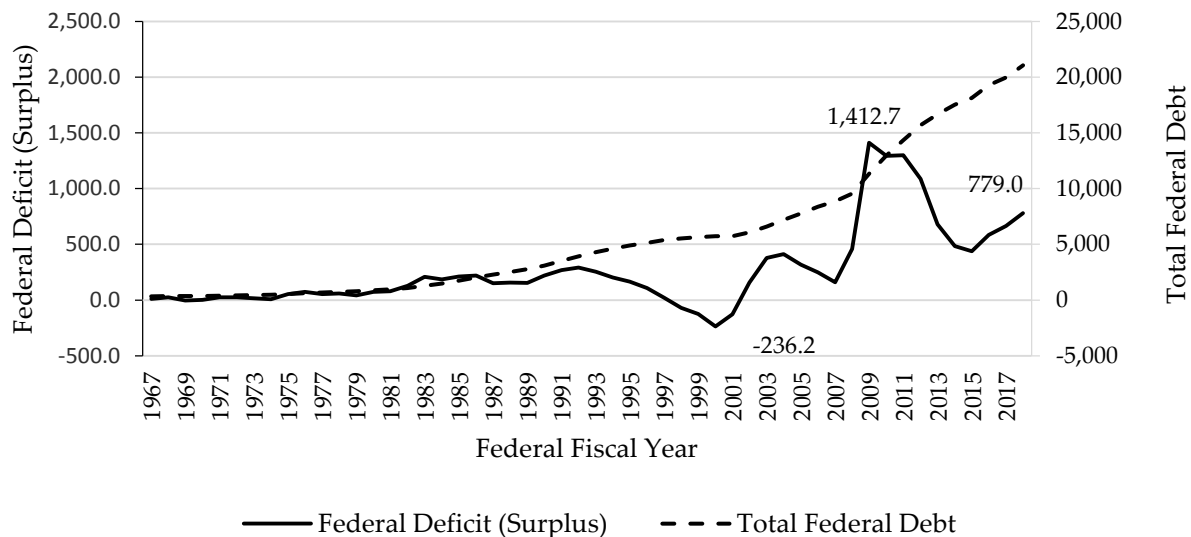
Government Borrowing

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

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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.

Federal Deficit and Outstanding Debt
(in Billions of dollars)



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 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. The federal deficit stands at \$779.0 billion as of FFY 2018. The federal government in FFY 2018 spent an estimated \$1.20 for every dollar it took in, a decrease from the recent high of \$1.63 in FFY 2010.

As the federal operating budget continued to post a deficit, the national debt also increased. By the end of FFY 2018, gross debt outstanding registered \$21.1 trillion, up 5.5% from FFY 2017.

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The U.S.'s deficit of 9.8% of GDP in FFY 2009 was a record high since WWII, it then declined to 2.4% in FFY 2015 but then increased and currently stands at 3.8% in FFY 2018.

According to the U.S. Census Bureau's "State Government Finances," state government debt outstanding in Connecticut at the end of FY 2016, the latest available year, was \$37.0 billion, compared to \$35.4 billion in 2015 and \$33.2 billion in 2014. Connecticut per capita state government debt has increased over the past three years, from \$9,233 in FY 2014 to \$10,319 in FY 2016. The fifty state average increased from \$3,583 in FY 2015 to \$3,739 in FY 2016.

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 2018. The rating process provides information for investors about risk. High ratings generally result in lower borrowing costs.

<u>Agency</u>	<u>Rating</u>	<u>Outlook</u>
Moody's Investors Service	A1	Stable
Standard & Poor's Corporation	A	Stable
Fitch Investors Service	A+	Stable
Kroll Bond Ratings	AA-	Negative

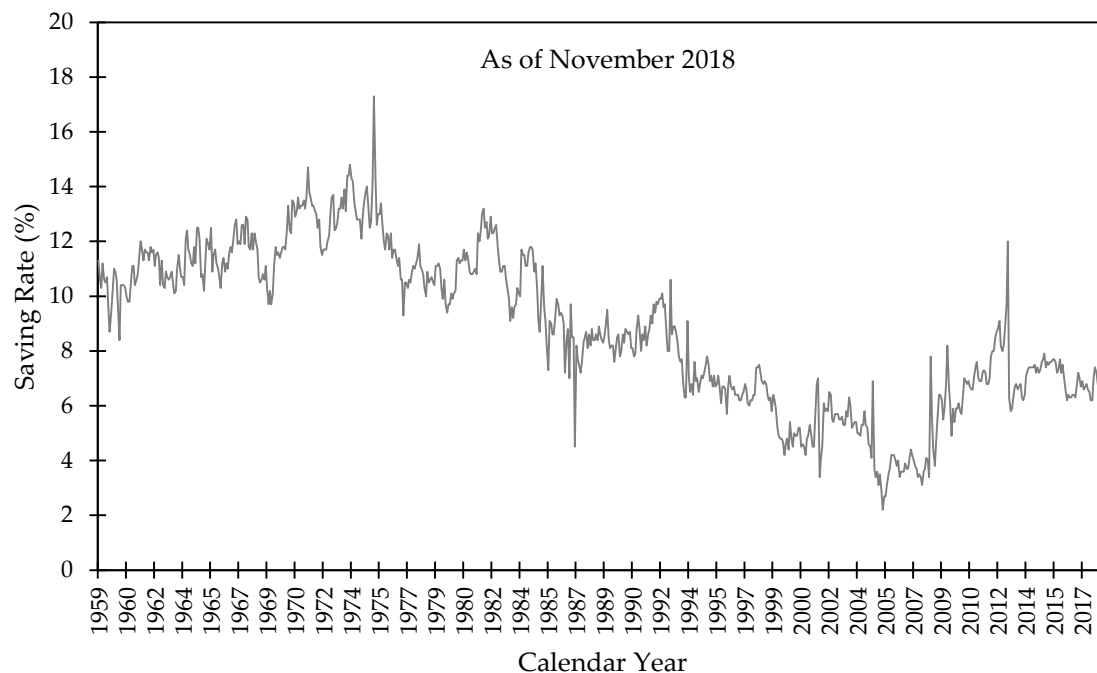
Note: Ratings as of December 2018

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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 2018. 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 6.0% in November 2018. The average savings rate for the past five years is 7.0%.

SAVINGS BY U.S. HOUSEHOLDS



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 2018, to evaluate the financial position of the nation's households.

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

	1970 <u>In Real \$*</u>	% of <u>Total</u>	2007 <u>In Real \$*</u>	% of <u>Total</u>	<u>2018 Q3</u>	% of <u>Total</u>	<u>Average Growth**</u>
Assets							
Real Estate	6,614.2	23.5%	27,985.8	28.0%	29,002.0	23.2%	3.1%
Stock related	8,892.4	31.7%	36,967.6	36.9%	54,362.6	43.5%	3.8%
Other	12,587.7	44.8%	35,100.5	35.1%	41,569.3	33.3%	2.5%
Time & Saving Deposits	3,497.3	12.4%	9,882.6	9.9%	12,527.7	10.0%	2.6%
Corporate Bonds	192.3	0.7%	1,486.9	1.5%	1,276.7	1.0%	3.9%
Gov't Securities***	<u>942.8</u>	<u>3.4%</u>	<u>3,176.2</u>	<u>3.2%</u>	<u>4,510.7</u>	<u>3.6%</u>	<u>3.2%</u>
Total	28,094.3	100.0%	100,053.9	100.0%	124,933.9	100.0%	3.1%
Liabilities							
Home Mortgages	1,845.3	59.7%	12,817.7	73.3%	10,266.6	64.6%	3.6%
Consumer Credit	862.3	27.9%	3,147.7	18.0%	3,922.8	24.7%	3.1%
Other	<u>381.1</u>	<u>12.3%</u>	<u>1,530.1</u>	<u>8.7%</u>	<u>1,705.9</u>	<u>10.7%</u>	<u>3.1%</u>
Total	3,088.7	100.0%	17,495.6	100.0%	15,895.3	100.0%	3.4%
Net Worth							
Net Home Equity	4,769.0		15,168.1		18,735.3		2.8%
As a % of Net Worth	19.1%		18.4%		17.2%		
Per Capita Net Worth (\$)	121,177.0		272,172.8		331,498.0		2.1%
As a % of Total Assets							
Home Mortgages	6.6%		12.8%		8.2%		
Liabilities	11.0%		17.5%		12.7%		
Net worth	89.0%		82.5%		87.3%		

Note:

* Real dollar is calculated by using the estimated CPI-U for 2018

** Compound annual growth rate from 1970 through 2018 Q3

*** Includes Treasury and Municipal securities

Source: Board of Governors of the Federal Reserve System

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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 2018, household assets totaled \$124.9 trillion with real estate comprising 23.2% of total assets, stocks 43.5%, and the remaining 33.3% in other assets. In 1970, real estate comprised 23.5% of total assets, stocks 31.7%, 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 3.5% through 2007 when real assets reached a peak of \$100.1 trillion just prior to the onset of the Great Recession. During that recession total real assets declined sharply falling to \$84.0 trillion before recovering to \$124.9 trillion by 2018 Q3.

Liabilities

Household liabilities totaled \$15.9 trillion in the third quarter of 2018. Home mortgages accounted for 64.6% of the total with consumer credit at 24.7% and other liabilities at 10.7%. 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 8.8%, 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 -0.9%.

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 \$109.0 trillion in the third quarter of 2018. When measured in 2018 dollars, real net worth grew from \$25.0 trillion in 1970 to a pre-recession peak of \$82.6 trillion in 2007, before declining to \$68.5 trillion in 2008. Per capita real net worth increased from \$121,177 in 1970 to \$331,498 in 2018, with an annual growth rate of 2.1%.

Along with the increase in net worth has come the additional burden of greater liabilities. In 1970 liabilities accounted for 11.0% of total assets, yet by 2018 they had risen to 12.7% 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 12.8% in 2007, before falling to 8.2% in

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2018. 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 9.8% as of second quarter 2018, a result of lower interest rates due to the onset of the Great Recession and the expansionary monetary policy implemented by the Federal Reserve.

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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 2018, the State of Connecticut produced an estimated \$268.5 billion in goods and services - \$239.7 billion in calendar year 2012 dollars. This was an estimated increase of 2.0% in current dollars and virtually flat in real dollars over FY 2017. 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 13.5% in Connecticut, 31.8% in New England and 37.4% in the nation through FY 2018. In real terms, Connecticut's GSP was 4.3% below its FY 2009 level in FY 2018, 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.

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**TABLE 44
GROSS PRODUCT**

Millions of Current Dollars

Fiscal <u>Year</u>	United States*		New England *		Connecticut	
	<u>Dollars</u>	<u>% Growth</u>	<u>Dollars</u>	<u>% Growth</u>	<u>Dollars</u>	<u>% Growth</u>
2009	14,535,532	(0.9)	808,617	(0.4)	236,610	(2.1)
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	17,115,146	4.0	916,962	2.2	246,792	0.6
2015	17,937,503	4.8	962,919	5.0	255,344	3.5
2016	18,433,832	2.8	996,587	3.5	261,937	2.6
2017	19,075,142	3.5	1,025,215	2.9	263,151	0.5
2018	19,968,219	4.7	1,065,390	3.9	268,471	2.0
% Increase ('09 to '18)		37.4			31.8	13.5

Constant Dollars**

Fiscal <u>Year</u>	United States*		New England *		Connecticut	
	<u>Dollars</u>	<u>% Growth</u>	<u>Dollars</u>	<u>% Growth</u>	<u>Dollars</u>	<u>% Growth</u>
2009	15,321,279	(2.5)	851,594	(2.8)	250,559	(5.0)
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	16,661,785	2.1	887,386	(0.1)	238,284	(1.8)
2015	17,199,823	3.2	909,652	2.5	240,544	0.9
2016	17,510,222	1.8	923,418	1.5	242,242	0.7
2017	17,837,266	1.9	934,579	1.2	239,713	(1.0)
2018	18,295,035	2.6	952,211	1.9	239,792	0.0
% Increase ('09 to '18)		19.4			11.8	(4.3)

* 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 2009 and FY 2018, the contribution to Connecticut's GSP from transportation, trade and utilities; professional and business services; and healthcare and education increased, while manufacturing and FIRE (Finance, Insurance, and Real Estate) fell. The FIRE and manufacturing sectors have

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historically played an outsized role in Connecticut's economy. However, in FY 2018, 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 2009 and FY 2018. Connecticut GSP as a portion of national GDP decreased between FY 2009 and FY 2018, from 1.63 to 1.34 percent.

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

<u>Industry</u>	<u>FY 2009</u>				<u>FY 2018</u>			
	<u>U.S.</u>	<u>%</u>	<u>CT</u>	<u>%</u>	<u>U.S.</u>	<u>%</u>	<u>CT</u>	<u>%</u>
Agriculture, Forest & Fisheries	131.5	0.9	0.37	0.2	167.2	0.8	0.32	0.1
Construction & Mining	944.1	6.5	7.23	3.1	1,103.6	5.5	8.37	3.1
Manufacturing	1,736.7	11.9	33.36	14.1	2,260.1	11.3	29.58	11.0
Transportation, Trade & Utilities	2,369.9	16.3	33.78	14.3	3,250.5	16.3	40.18	15.0
Information	729.3	5.0	10.60	4.5	1,087.4	5.4	13.78	5.1
Finance, Insurance & Real Estate	2,760.0	19.0	67.31	28.4	4,140.4	20.7	73.33	27.3
Professional & Business Services	1,745.2	12.0	27.15	11.5	2,499.0	12.5	33.28	12.4
Health Care & Education	1,233.5	8.5	22.08	9.3	1,736.7	8.7	27.94	10.4
Leisure & Hospitality	538.4	3.7	6.47	2.7	821.3	4.1	9.10	3.4
Other Services	329.6	2.3	4.39	1.9	425.5	2.1	5.23	1.9
Government	<u>2,017.4</u>	<u>13.9</u>	<u>23.86</u>	<u>10.1</u>	<u>2,476.5</u>	<u>12.4</u>	<u>27.36</u>	<u>10.2</u>
Total	14,535.5	100.0	236.61	100.0	19,968.2	100.0	268.47	100.0
Broadly Defined Services		50.5		58.3		53.6		60.6
CT as a % of U.S. Total GSP			1.63				1.34	

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 60.6% of total GSP in FY 2018, up from from 58.3% in FY 2009. During this period, the contribution to GDP from services for the nation also increased to 53.6% of GDP in FY 2018 from 50.5% in FY 2009. 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.

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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 2018, Connecticut's productivity as measured by GSP per capita was 20.1% higher than the United States as a whole. This level was significantly below where it was at the beginning of the recession; Connecticut was 40.9% higher than the nation as a whole in FY 2009. Connecticut's decline in real GSP per capita from FY 2009 to 2018 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)

<u>Fiscal Year</u>	United States		New England		Connecticut		
	<u>Real GSP</u> <u>Per Capita</u>	<u>%</u> <u>Change</u>	<u>Real GSP</u> <u>Per Capita</u>	<u>%</u> <u>Change</u>	<u>Real GSP</u> <u>Per Capita</u>	<u>%</u> <u>Change</u>	<u>As a %</u> <u>of the U.S.</u>
2009	\$50,023.7	-3.3%	\$59,221.7	-3.2%	\$70,466.5	-5.4%	140.9%
2010	\$49,796.4	-0.5%	\$59,575.2	0.6%	\$69,287.0	-1.7%	139.1%
2011	\$50,571.7	1.6%	\$60,357.1	1.3%	\$68,267.0	-1.5%	135.0%
2012	\$51,154.7	1.2%	\$60,710.6	0.6%	\$67,617.6	-1.0%	132.2%
2013	\$51,657.8	1.0%	\$60,733.7	0.0%	\$67,533.1	-0.1%	130.7%
2014	\$52,386.4	1.4%	\$60,442.2	-0.5%	\$66,285.3	-1.8%	126.5%
2015	\$53,675.6	2.5%	\$61,797.7	2.2%	\$66,999.3	1.1%	124.8%
2016	\$54,245.0	1.1%	\$62,612.9	1.3%	\$67,627.9	0.9%	124.7%
2017	\$54,864.0	1.1%	\$63,204.8	0.9%	\$67,040.0	-0.9%	122.2%
2018	\$55,874.3	1.8%	\$64,189.3	1.6%	\$67,110.0	0.1%	120.1%

Source: Bureau of Economic Analysis, IHS

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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, personal services; the private sector through proprietors' income; and a part of agricultural activity via farm properties' income. Personal income is approximately 85% 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 excess of income received by financial intermediaries from funds entrusted to them by persons, over income disbursed by these intermediaries 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.

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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 figures provided by the U.S. Bureau of Economic Analysis, personal income for Connecticut residents during FY 2018 was \$261.4 billion, a 3.4% increase over FY 2017. Total personal income in Connecticut increased 22.2% from FY 2009 to FY 2018. For the United States, total personal income increased 40.7%, and in the New England region, the increase for the same period was 34.2%.

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

TABLE 47
PERSONAL INCOME
(In Millions)

Fiscal Year	United States		New England		Connecticut	
	Dollars	% Growth	Dollars	% Growth	Dollars	% Growth
2009	12,221,005	(0.59)	723,337	0.39	214,005	0.76
2010	12,233,031	0.10	736,298	1.79	217,704	1.73
2011	12,965,849	5.99	772,794	4.96	226,362	3.98
2012	13,653,513	5.30	799,640	3.47	231,223	2.15
2013	14,111,069	3.35	814,867	1.90	231,587	0.16
2014	14,535,219	3.01	829,127	1.75	233,700	0.91
2015	15,391,915	5.89	874,105	5.42	243,496	4.19
2016	15,925,805	3.47	905,312	3.57	248,355	2.00
2017	16,462,000	3.37	932,652	3.02	252,865	1.82
2018	17,196,006	4.46	970,833	4.09	261,410	3.38

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

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Connecticut's sources of personal income vary slightly from those of the United States, with wages and employee salaries accounting for approximately 50.0% of total personal income compared to 50.2% for the nation in FY 2018. 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)

	<u>Fiscal Year 2009</u>				<u>Fiscal Year 2018</u>			
	<u>U.S.</u>	<u>%</u>	<u>CT</u>	<u>%</u>	<u>U.S.</u>	<u>%</u>	<u>CT</u>	<u>%</u>
Manufacturing Salaries & Wages	699.0	5.7	13.8	6.5	864.0	5.0	14.9	5.7
Nonmanufacturing Salaries & Wages	5,686.9	46.5	94.1	44.0	7,780.0	45.2	115.8	44.3
Proprietors Income	931.8	7.6	29.8	13.9	1,538.0	8.9	28.6	10.9
Property Income	2,342.4	19.2	41.6	19.4	3,439.0	20.0	58.7	22.5
Other Labor Income	1,516.4	12.4	24.4	11.4	1,989.2	11.6	29.2	11.2
Transfer Payments Less Payments to Social Insurance	<u>1,044.6</u>	<u>8.5</u>	<u>10.2</u>	<u>4.8</u>	<u>1,585.8</u>	<u>9.2</u>	<u>14.3</u>	<u>5.5</u>
Total	12,221.0	100.0	214.0	100.0	17,196.0	100.0	261.4	100.0

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

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

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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 21.6% from FY 2009 to FY 2018, compared to a national increase of 31.6% and a New England region increase of 30.1%.

Per capita personal income in Connecticut, for the most recent fiscal year, was 11.8% higher than for the New England region and 39.3% 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 Year	United States		New England		Connecticut	
	Dollars	% Growth	Dollars	% Growth	Dollars	% Growth
2009	39,901	(1.45)	50,302	(0.04)	60,186	0.27
2010	39,609	(0.73)	50,986	1.36	60,942	1.26
2011	41,658	5.17	53,270	4.48	63,147	3.62
2012	43,548	4.54	54,893	3.05	64,372	1.94
2013	44,689	2.62	55,720	1.51	64,424	0.08
2014	45,700	2.26	56,474	1.35	65,010	0.91
2015	48,034	5.11	59,383	5.15	67,822	4.32
2016	49,337	2.71	61,385	3.37	69,334	2.23
2017	50,634	2.63	63,074	2.75	70,718	2.00
2018	52,518	3.72	65,445	3.76	73,160	3.45

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

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The following table shows per capita income for each of the fifty states with their corresponding ranking for FY 2018. In 2018, Connecticut ranked number one in the nation based on per capita personal income. Connecticut's figure of \$73,160 for per capita personal income is approximately 39.3% higher than the national average.

TABLE 50
PER CAPITA PERSONAL INCOME BY STATE
(Fiscal 2018)

<u>State</u>	<u>Per Capita Income</u>	<u>Rank</u>	<u>State</u>	<u>Per Capita Income</u>	<u>Rank</u>
Connecticut	\$73,160	1	Florida	\$48,426	26
Massachusetts	68,851	2	Texas	48,107	27
New York	67,245	3	Iowa	47,630	28
New Jersey	66,494	4	Ohio	47,374	29
Maryland	62,035	5	Maine	47,347	30
California	61,249	6	Nevada	47,287	31
New Hampshire	60,397	7	Michigan	46,815	32
Washington	59,145	8	Tennessee	46,206	33
Wyoming	58,613	9	Montana	46,092	34
Alaska	58,365	10	Indiana	45,879	35
Virginia	55,958	11	Missouri	45,767	36
Illinois	55,559	12	Oklahoma	45,234	37
Colorado	55,550	13	North Carolina	44,950	38
Minnesota	55,144	14	Georgia	44,840	39
Pennsylvania	54,287	15	Louisiana	44,594	40
Rhode Island	54,008	16	Utah	44,341	41
Hawaii	53,719	17	Arizona	42,716	42
Vermont	52,802	18	Idaho	42,397	43
North Dakota	52,768	19	South Carolina	42,057	44
Nebraska	51,339	20	Arkansas	41,662	45
Delaware	50,603	21	Alabama	41,525	46
Wisconsin	49,833	22	Kentucky	41,169	47
Kansas	49,268	23	New Mexico	40,303	48
South Dakota	48,933	24	West Virginia	39,287	49
Oregon	48,900	25	Mississippi	37,177	50
U.S. Average	\$52,518				

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

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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)

<u>Fiscal Year</u>	<u>CPI</u>	<u>% Growth</u>
2009	214.6	1.40
2010	216.8	0.98
2011	221.1	1.98
2012	227.6	2.94
2013	231.4	1.69
2014	235.0	1.55
2015	236.7	0.72
2016	238.3	0.67
2017	242.7	1.86
2018	248.1	2.25

Source: U.S. Bureau of Labor Statistics

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

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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 Year	United States		New England		Connecticut	
	Dollars	% Growth	Dollars	% Growth	Dollars	% Growth
2009	5,693,494	(1.96)	336,987	(0.99)	99,700	(0.64)
2010	5,643,549	(0.88)	339,682	0.80	100,435	0.74
2011	5,865,272	3.93	349,584	2.92	102,398	1.95
2012	6,000,133	2.30	351,408	0.52	101,613	(0.77)
2013	6,098,427	1.64	352,164	0.22	100,086	(1.50)
2014	6,185,790	1.43	352,854	0.20	99,456	(0.63)
2015	6,503,772	5.14	369,349	4.67	102,888	3.45
2016	6,684,465	2.78	379,982	2.88	104,241	1.31
2017	6,783,668	1.48	384,328	1.14	104,201	(0.04)
2018	6,930,322	2.16	391,264	1.80	105,353	1.11

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

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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 Year	United States		New England		Connecticut	
	Dollars	% Growth	Dollars	% Growth	Dollars	% Growth
2009	18,589	(2.81)	23,435	(1.42)	28,039	(1.11)
2010	18,273	(1.70)	23,522	0.37	28,115	0.27
2011	18,845	3.13	24,097	2.45	28,565	1.60
2012	19,138	1.55	24,123	0.11	28,289	(0.97)
2013	19,313	0.92	24,081	(0.17)	27,842	(1.58)
2014	19,449	0.70	24,034	(0.20)	27,667	(0.63)
2015	20,296	4.36	25,092	4.40	28,658	3.58
2016	20,708	2.03	25,765	2.68	29,101	1.55
2017	20,865	0.76	25,992	0.88	29,142	0.14
2018	21,166	1.44	26,375	1.48	29,485	1.18

Source: IHS Economics, Bureau of Economic Analysis

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 Year	% Growth		% Cumulative Growth	
	United States	Connecticut	United States	Connecticut
1950-1960	31.0%	29.9%	31.0%	29.9%
1960-1970	38.1%	40.1%	80.9%	82.1%
1970-1980	15.3%	11.8%	108.5%	103.6%
1980-1990	21.0%	38.1%	152.0%	181.2%
1990-2000	15.7%	18.4%	192.1%	233.1%
2000-2010	4.6%	15.1%	205.4%	283.6%
2010-2018	15.8%	4.9%	253.8%	302.3%

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

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The prior table highlights the cumulative growth in real per capita personal income over the past sixty-seven years. Overall, Connecticut has higher cumulative growth in real per capita personal income during this sixty-seven year period, exceeding the United States by 48.5 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 4.9%. 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.

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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 320 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**

2017							
Annual Avg. Data <u>MTA/MTD</u>	Composite <u>Index</u>	Grocery <u>Items</u>	<u>Housing</u>	<u>Utilities</u>	Trans- <u>portation</u>	Health <u>Care</u>	<u>Misc.*</u>
Hartford, CT	116.8	101.0	131.7	97.0	112.8	114.1	117.9
Boston, MA	148.2	106.2	207.0	141.8	110.8	135.8	130.0
New York**, NY	238.6	138.8	494.6	118.3	130.0	115.5	148.9
Index Weights	100%	13.47%	28.15%	9.90%	8.99%	4.57%	34.92%

Note: * Denotes miscellaneous goods and services

** Manhattan

Source: The Council for Community and Economic Research (C2ER), “*ACCRA Cost of Living Index*”, Annual Average Data for 2017

The Cost of Living Composite Index is weighted by a “market basket” of approximately 60 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 116.8 according to Annual Average data for

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2017. 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 16.8% according to Annual Average data for 2017. Among the six categories, the cost of housing in the Hartford area was the most expensive item at 31.7% higher than the national average, followed by miscellaneous items at 17.9%, healthcare at 14.1%, transportation at 12.8%, and grocery items at 1.0%. Utilities were 3.0% lower than the national average. 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 Annual Average data for 2017, many cities had a relatively higher cost of living than the Hartford area. These include, for example, New York City (Manhattan) at 238.6; San Francisco, California at 192.9; and Washington, D.C. at 155.7. Living costs in most cities in the southern and mountain west states are relatively low; for example, Pueblo, Colorado at 90.6; Jackson, Mississippi at 88.7; and San Antonio, Texas at 88.1. 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 117.2, 123.1, and 123.6, 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 104.3% 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 51% 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 Annual Average data for 2017, the ACCRA cost of living index was 142.2 in the Stamford area, 116.8 in the Hartford area, and 118.0 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

2017								
Annual Avg. Data	Composite	Grocery				Trans-	Health	
<u>MSA</u>	<u>Index</u>	<u>Items</u>	<u>Housing</u>	<u>Utilities</u>	<u>portation</u>	<u>Care</u>	<u>Misc.</u>	
Hartford	116.8	101.0	131.7	97.0	112.8	114.1	117.9	
New Haven	118.0	104.7	130.1	103.0	106.5	114.8	120.9	
Stamford	142.2	109.6	207.0	112.2	115.1	114.0	121.8	

Source: The Council for Community and Economic Research (C2ER), "ACCRA Cost of Living Index", Annual Average Data for 2017

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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 2017*

<u>State</u>	<u>Percentage</u>	<u>Rank</u>	<u>State</u>	<u>Percentage</u>	<u>Rank</u>
Vermont	9.90%	1	Maryland	6.05%	26
Hawaii	9.57%	2	Kansas	5.92%	27
Minnesota	8.71%	3	Washington	5.83%	28
North Dakota	8.39%	4	Montana	5.80%	29
Arkansas	7.83%	5	New Jersey	5.79%	30
Delaware	7.69%	6	Ohio	5.75%	31
West Virginia	7.47%	7	Pennsylvania	5.72%	32
Mississippi	7.23%	8	Illinois	5.66%	33
New Mexico	7.14%	9	Louisiana	5.50%	34
Maine	7.09%	10	Alabama	5.40%	35
California	6.83%	11	Nebraska	5.30%	36
Kentucky	6.83%	12	Wyoming	5.07%	37
Iowa	6.75%	13	Oklahoma	5.06%	38
New York	6.64%	14	Georgia	5.02%	39
Wisconsin	6.61%	15	South Carolina	4.88%	40
Idaho	6.57%	16	Virginia	4.88%	41
Nevada	6.55%	17	Arizona	4.82%	42
<u>Connecticut</u>	<u>6.54%</u>	<u>18</u>	Missouri	4.72%	43
Michigan	6.40%	19	Tennessee	4.71%	44
Oregon	6.26%	20	Colorado	4.46%	45
Indiana	6.18%	21	South Dakota	4.38%	46
Massachusetts	6.16%	22	Florida	4.13%	47
North Carolina	6.10%	23	Texas	4.08%	48
Utah	6.08%	24	New Hampshire	3.27%	49
Rhode Island	6.05%	25	Alaska	2.88%	50
U.S. Average	5.85%				

*Based on federal fiscal year from October 2016 through September 2017.

Source: U.S. Census Bureau, “Annual Survey of State Government Tax Collections, 2018”; IHS Economics

Economic Report of the Governor

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 \$10,770.1 million in FY 2018, and \$8,988.7 million in FY 2017. In FY 2018, this tax accounted for 59.2% of total General Fund revenue.

Economic Report of the Governor

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

<u>Income Year</u>	<u>Low Rate</u>	<u>High Rate</u>	<u>Amount At Low Rate By Filing Status</u>		
			<u>Single</u>	<u>Joint</u>	<u>Head of Household</u>
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

Economic Report of the Governor

The following table compares personal income tax collections as a percentage of personal income for the fifty states for FY 2017.

TABLE 59
STATE INCOME TAX COLLECTIONS AS A PERCENTAGE OF PERSONAL INCOME
FFY 2017*

<u>State</u>	<u>Percentage</u>	<u>Rank</u>	<u>State</u>	<u>Percentage</u>	<u>Rank</u>
Oregon	4.74%	1	Arkansas	2.60%	23
Minnesota	4.15%	2	Nebraska	2.59%	24
California	4.14%	3	Rhode Island	2.54%	25
New York	4.06%	4	Colorado	2.47%	26
Massachusetts	3.79%	5	Missouri	2.44%	27
<u>Connecticut</u>	<u>3.55%</u>	<u>6</u>	Illinois	2.40%	28
Wisconsin	3.19%	7	Michigan	2.39%	29
Hawaii	3.10%	8	South Carolina	2.25%	30
Utah	3.07%	9	Indiana	2.21%	31
Delaware	3.06%	10	Pennsylvania	2.18%	32
Virginia	3.05%	11	Alabama	2.15%	33
North Carolina	2.92%	12	Mississippi	2.08%	34
New Jersey	2.88%	13	Kansas	1.97%	35
Maine	2.87%	14	Oklahoma	1.94%	36
Montana	2.85%	15	New Mexico	1.77%	37
West Virginia	2.83%	16	Louisiana	1.61%	38
Iowa	2.83%	17	Ohio	1.59%	39
Maryland	2.82%	18	Arizona	1.32%	40
Kentucky	2.78%	19	North Dakota	0.92%	41
Idaho	2.74%	20	New Hampshire	0.84%	42
Georgia	2.68%	21	Tennessee	0.67%	43
Vermont	2.61%	22			
U.S. Average	2.45%				

Notes:

* Based on federal fiscal year from October 2016 through September 2017.

** 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, "2017 Annual Survey of State Government Tax Collections"

Economic Report of the Governor

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 2018

<u>Single</u>			<u>Married Filing jointly</u>			<u>Head of Household</u>		
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

Economic Report of the Governor

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

<u>State</u>	<u>Own</u> <u>Securities</u>	<u>Other</u> <u>State's</u> <u>Securities</u>	<u>State</u>	<u>Own</u> <u>Securities</u>	<u>Other</u> <u>State's</u> <u>Securities</u>
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: Commerce Clearing House, Inc.; State Taxation of Municipal Bonds for Individuals

Economic Report of the Governor

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

State	<u>Low Bracket</u>		<u>High Bracket</u>		State	<u>Low Bracket</u>		<u>High Bracket</u>	
	<u>%</u>	<u>To Net</u>	<u>%</u>	<u>From Net</u>		<u>%</u>	<u>To Net</u>	<u>%</u>	<u>From Net</u>
	<u>Rate</u>	<u>Income</u>	<u>Rate</u>	<u>Income \$</u>		<u>Rate</u>	<u>Income \$</u>	<u>Rate</u>	<u>Income \$</u>
Alabama (3)	2.00	1,000	5.00	6,001	Missouri (1)	1.50	1,000	6.00	9,001
Arizona (1)	2.59	20,690	4.54	310,318	Montana (1,c)	1.00	3,000	6.90	17,901
Arkansas (3,c)	0.90	4,299	6.90	35,100	Nebraska (1)	2.46	6,170	6.84	59,661
California (1,c)	1.00	16,447	12.30	1,102,947	New Hampshire (b)				
Colorado (2)	4.63	All			New Jersey (3)	1.40	20,000	10.75	5,000,000
Connecticut	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)	5.499	All		
Hawaii (1)	1.40	4,800	11.00	400,001	N. Dakota (2,c)	1.10	64,650	2.90	424,951
Idaho (1,c)	1.60	2,943	7.40	22,086	Ohio (1)	1.98	15,800	4.997	210,601
Illinois (1,d)	3.75	All			Oklahoma (1)	0.50	2,000	5.00	12,201
Indiana (1)	3.23	All			Oregon (2,c)	5.00	6,800	9.9	250,001
Iowa (1,c)	0.36	1,598	8.98	71,910	Pennsylvania (3)	3.07	All		
Kansas (1)	2.90	30,000	5.20	60,001	Rhode Island(1,c)	3.75	61,299	5.99	139,401
Kentucky (1)	2.00	3,000	6.00	75,001	S. Carolina (2,c)	3.00	5,940	7.0	14,861
Louisiana (1)	2.00	12,500	6.00	50,001	Tennessee (b)				
Maine (1,c)	5.80	42,249	7.15	100,000	Utah (1)	5.00	All		
Maryland (1)	2.00	1,000	5.75	300,001	Vermont (2,c)	3.35	64,600	8.75	237,951
Massachusetts	5.10	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	37,110	9.85	261,512	Wisconsin (1,c)	4.00	15,270	7.65	336,201
Mississippi (3)	3.00	5,000	5.00	10,001	Dist. of Col. (2)	4.00	10,000	8.95	1,000,000

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 3.0% 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: Commerce Clearing House, Inc.

Economic Report of the Governor

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 \$4,528.9 million in FY2018, \$4,380.2 million in FY2017, and \$4,334.1 million in FY 2016. In FY 2018, sales and use taxes accounted for 23.2% of the total revenue in the general fund, compared to 25.3% in FY 2017 and 25% in FY 2016.

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 30 other states. The comparison is based on FY 2017 data. From FY 1991 to FY 2017, Connecticut's sales tax collections as a percentage of personal income dropped from 3.15% with a rank of ninth to 1.66% with a rank of 31st, and compared to the national average of 1.81%. 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.

Economic Report of the Governor

TABLE 63
SALES TAX COLLECTIONS AS A PERCENTAGE OF PERSONAL INCOME
FY 2017*

State	Tax Rate	Percent of	Rank	State	Tax Rate	Percent of	Rank
	(%)	Personal			(%)	Personal	
		<u>Income</u>				<u>Income</u>	
Hawaii	4.000**	4.34%	1	Utah	4.700	1.90%	24
Nevada	6.850**	3.49%	2	Nebraska	5.500**	1.90%	25
Washington	6.500**	3.43%	3	Wisconsin	5.000**	1.86%	26
Mississippi	7.000**	3.24%	4	Rhode Island	7.000**	1.80%	27
Arkansas	6.500	2.77%	5	Wyoming	4.000**	1.79%	28
New Mexico	5.125**	2.73%	6	North Carolina	4.750**	1.70%	29
Florida	6.000**	2.57%	7	New Jersey	6.625**	1.67%	30
Indiana	7.000**	2.53%	8	<u>Connecticut</u>	<u>6.350</u>	<u>1.66%</u>	31
South Dakota	4.500**	2.52%	9	Illinois	6.250	1.65%	32
Ohio	5.750	2.47%	10	South Carolina	6.000**	1.59%	33
Texas	6.250**	2.45%	11	Pennsylvania	6.000**	1.55%	34
Tennessee	7.000**	2.40%	12	California	7.250	1.51%	<u>35</u>
Maine	5.500	2.35%	13	Oklahoma	4.500**	1.44%	36
Idaho	6.000**	2.34%	14	Massachusetts	6.250**	1.36%	37
Kansas	6.500**	2.28%	15	Alabama	4.000**	1.35%	38
Arizona	5.600**	2.25%	16	Missouri	4.225**	1.32%	39
North Dakota	5.000**	2.20%	17	Maryland	6.000	1.26%	40
Iowa	6.000**	2.18%	18	Georgia	4.000**	1.26%	41
Louisiana	5.000**	2.07%	19	Vermont	6.000**	1.16%	42
Michigan	6.000**	2.02%	20	New York	4.000**	1.12%	43
Minnesota	6.875**	1.96%	21	Colorado	2.900**	0.99%	44
Kentucky	6.000**	1.95%	22	Virginia	5.300**	0.86%	45
West Virginia	6.000**	1.93%	23				
U.S. Average***		1.81%					

Notes:

* Based on federal fiscal year from October 2016 through September 2017.

** 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, 2018

Source: Bureau of Economic Analysis, U.S. Census Bureau, "Annual Survey of State Government Tax Collections, 2017"; IHS Economics

Economic Report of the Governor

TABLE 64
MAJOR SALES TAX EXEMPTIONS BY STATE

<u>State</u>	<u>Food</u>	<u>Prescription Drugs</u>	<u>Motor Fuels</u>	<u>Clothes</u>
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	<u>E</u>	<u>E</u>	<u>E</u>	<u>T</u>
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: Commerce Clearing House, Inc., Federation of Tax Administrators

Economic Report of the Governor

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 \$920.7 million in FY 2018, \$1,037.6 million in FY 2017, and \$880.4 million in FY 2016. In FY 2018, this tax accounted for 5.1% of total General Fund revenue, compared to 5.9% in FY 2017.

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. 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 taxed at a rate of 3.1 mils (\$0.0031) per dollar.

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.

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TABLE 65
CORPORATION TAX BY STATE
FOR TAX YEAR 2018

State	<u>Low Bracket</u>		<u>High Bracket</u>		State	<u>Low Bracket</u>		<u>High Bracket</u>	
	%	To Net	%	From Net		%	To Net	%	From Net
	<u>Rate</u>	<u>Income \$</u>	<u>Rate</u>	<u>Income \$</u>		<u>Rate</u>	<u>Income \$</u>	<u>Rate</u>	<u>Income \$</u>
Alabama	6.50	All			Missouri	6.25	All		
Alaska	0.00	24,999	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	8.20	All		
Colorado	4.63	All			New Jersey	6.50	50,000	9.00	100,001
Connecticut (2)	7.50	All			New Mexico	4.80	500,000	6.20	500,001
Delaware	8.70	All			New York (8)	6.50	All		
Florida (3)	5.50	All			North Carolina	3.00	All		
Georgia	6.00	All			North Dakota	1.41	25,000	4.31	50,001
Hawaii	4.40	25,000	6.40	100,001	Ohio (9)				
Idaho	7.40	All			Oklahoma	6.00	All		
Illinois (4)	7.00	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	250,000	Rhode Island	7.00	All		
Kansas (6)	4.00	All			South Carolina	5.00	All		
Kentucky	4.00	50,000	6.00	100,001	Tennessee	6.50	+All		
Louisiana	4.00	25,000	8.00	200,001	Texas (10)				
Maine	3.50	25,000	8.93	250,001	Utah	4.95	All		
Maryland	8.25	All			Vermont	6.00	10,000	8.50	25,001
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	3.00	5,000	5.00	10,001	District of Col.	9.20	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 \$500; UT \$100; VT \$250; District of Columbia \$250

- (1) Banks and financial corporations (except financial S-corporations) are subject to a 10.84% tax.
- (2) A 20% surcharge is imposed for tax years 2012 – 2017, on companies with more than \$100 million in annual gross revenue. The surcharge decreases to 10% in income year 2018 and phases out completely in income year 2019.
- (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 reducing to 6.00% after June 30, 2017 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) Rate of 0.0% for qualified manufactures and 5.5% for qualified emerging technology companies
- (9) Commercial Activity Tax based on a tiered AMT and 0.26% on gross receipts over \$1 million
- (10) A franchise tax of 0.75% (0.375% for qualifying wholesalers and retailers) is imposed on entities with \$1,110,000 of total revenues.

Source: Commerce Clearing House. Rates as of November 2018.

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Motor Fuels Tax

The state imposes a tax, subject to certain limitations, (1) on 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) on 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 or 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, 2018, the Special Fuels and Motor Carrier Taxes increased by 2.2 cents per gallon from 41.7 cents per gallon in FY 17 to 43.9 cents per gallon in FY 18. 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.

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TABLE 66
MOTOR FUEL TAXES BY STATE

State	Sales			State	Sales		
	Excise Tax	Tax Rate %	Total Tax*		Excise Tax	Tax Rate %	Total Tax*
Alabama	18.0¢	-	18.0¢	Montana	31.5¢	-	31.5¢
Alaska	8.0	-	8.0	Nebraska	27.0	-	27.0
Arizona	18.0	-	18.0	Nevada	24.0	-	24.0
Arkansas	21.5	-	21.5	New Hampshire	22.2	-	22.2
California	41.7	2.3	49.2	New Jersey	10.5	-	10.5
Colorado	22.0	-	22.0	New Mexico	17.0	-	17.0
Connecticut (a)	25.0	-	25.0	New York	8.0	4.0	19.8
Delaware	23.0	-	23.0	North Carolina (e)	34.0	-	34.0
Florida	17.4	-	17.4	North Dakota	23.0	-	23.0
Georgia (b)	26.8	-	41.4	Ohio	28.0	-	28.0
Hawaii	16.0	4.0	28.1	Oklahoma	16.0	-	16.0
Idaho	32.0	-	32.0	Oregon	30.0	-	30.0
Illinois	19.0	6.3	38.2	Pennsylvania	57.6	-	57.6
Indiana (c)	29.0	-	42.6	Rhode Island	33.0	-	33.0
Iowa	30.5	-	30.5	South Carolina	20.0	-	20.0
Kansas	24.0	-	24.0	South Dakota	28.0	-	28.0
Kentucky (e)	26.0	-	26.0	Tennessee	25.4	-	25.4
Louisiana	20.0	-	20.0	Texas	20.0	-	20.0
Maine	30.0	-	30.0	Utah	29.4	-	29.4
Maryland	35.3	-	35.3	Vermont	12.1	-	12.1
Massachusetts	24.0	-	24.0	Virginia	16.2	-	16.2
Michigan	26.3	6.0	45.0	Washington	49.4	-	49.4
Minnesota	28.5	-	28.5	West Virginia (f)	20.5	-	37.8
Mississippi	18.0	-	18.0	Wisconsin	32.9	-	32.9
Missouri	17.3	-	17.3	Wyoming	24.0	-	24.0

* 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 \$2.86 per gallon.

- (a) Plus a petroleum gross receipts tax of 8.1% of wholesale price.
- (b) Includes a pre-paid sales tax converted to a cents per gallon rate of 14.6¢
- (c) The sales tax rate on gasoline is 13.6 cents starting in January 2018.
- (e) KY: Rate is variable, adjusted quarterly. MA: Rate is variable, adjusted annually
- (f) Includes an additional tax based on the average wholesale price of motor fuel.
- (g) Plus additional variable wholesale tax rate of 17.3¢ per gallon.

Source: Commerce Clearing House, Inc.; National Conference of State Legislatures

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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

<u>State</u>	<u>Rate</u>	<u>State</u>	<u>Rate</u>
Alabama	\$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
<u>Connecticut</u>	<u>\$4.35</u>	New York	\$4.35
Delaware	\$2.10	North Carolina	\$0.45
Florida	\$1.339	North Dakota	\$0.44
Georgia	\$0.37	Ohio	\$1.60
Hawaii	\$3.20	Oklahoma	\$1.03
Idaho	\$0.57	Oregon	\$1.33
Illinois	\$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	\$0.60	Tennessee	\$0.62
Louisiana	\$1.08	Texas	\$1.41
Maine	\$2.00	Utah	\$1.70
Maryland	\$2.00	Vermont	\$3.08
Massachusetts	\$3.51	Virginia	\$0.30
Michigan	\$2.00	Washington	\$3.025
Minnesota	\$3.04	West Virginia	\$1.20
Mississippi	\$0.68	Wisconsin	\$2.52
Missouri	\$0.17	Wyoming	\$0.60

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

Source: Commerce Clearing House, Inc., Federation of Tax Administrators. Rates as of January 2018.

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TABLE 68
INSURANCE COMPANIES TAX BY STATE

State	Domestic	Foreign	State	Domestic	Foreign
	Tax	Tax		Tax	Tax
	Rate % (1)	Rate % (1)		Rate % (1)	Rate % (1)
Alabama	0.50-4.00	0.50-4.00	Montana	2.75	2.75
Alaska	0.75-6.00	0.75-6.00	Nebraska (4)	0.375-3.00	0.50-3.00
Arizona (3)	0.66-3.00	0.66-3.00	Nevada	2.00-3.50	2.00-3.50
Arkansas	0.75-3.00	0.75-3.00	New Hampshire (5)	1.25-4.00	3.00
California	0.50-2.35	0.50-2.35	New Jersey	1.05-2.10	1.05-2.10
Colorado (2)	1.00-2.25	1.00-2.25	New Mexico	3.003-4.003	3.003-4.003
Connecticut	1.50-4.00	1.50-4.00	New York	1.75-7.10	1.75-7.10
Delaware (3)	1.75-5.00	1.75-5.00	North Carolina	1.90-2.50	1.90-2.50
Florida (4)	0.75-1.75	0.75-1.75	North Dakota	1.75-2.00	1.75-2.00
Georgia (2,4)	0.50-4.00	0.50-4.00	Ohio (4)	1.00-5.00	1.00-5.00
Hawaii	2.75-4.27	2.75-4.27	Oklahoma (4)	2.25-6.00	2.25-6.00
Idaho (2)	1.40	1.50	Oregon	(7)	(7)
Illinois (4)	0.40-3.50	0.40-3.50	Pennsylvania	1.25-2.00	1.25-2.00
Indiana (4)	1.30	1.30	Rhode Island	2.00	2.00
Iowa	1.00	1.00	South Carolina	0.75-2.35	0.75-2.35
Kansas (4)	2.00-6.00	2.00-6.00	South Dakota (4)	1.25-2.50	1.25-2.50
Kentucky (4)	1.50-2.00	1.50-2.00	Tennessee (2,4,5)	1.75-6.00	1.75-6.00
Louisiana (4)	(6)	(6)	Texas	0.875-4.85	0.875-4.85
Maine	1.00-2.55	1.00-2.55	Utah (3)	0.45-4.25	0.45-4.25
Maryland	2.00-3.00	2.00-3.00	Vermont	2.00	2.00
Massachusetts (3)	2.00-2.28	2.00-2.28	Virginia	1.00-2.50	1.00-2.50
Michigan	1.25-2.00	1.25-2.00	Washington	0.95-2.00	0.95-2.00
Minnesota (4)	1.00-2.00	1.00-2.00	W. Virginia (1,4,5)	2.00	2.00
Mississippi (4)	3.00	3.00	Wisconsin	2.00-3.50	2.00-2.375
Missouri (1)	1.00-2.00	1.00-2.00	Wyoming	0.75-1.00	0.75-1.00

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

- (1) Depending upon the type of insurance issued or the type of organization formed.
- (2) Rate is reduced depending upon the percentage of premiums or assets invested in the State or the State's securities.
- (3) Plus a surtax of 0.4312% on vehicles in Arizona and 0.25% in Delaware.
- (4) Plus a fire marshal's tax not to exceed 1%; 0.375% in Oklahoma; 0.50% in Indiana and South Dakota; 0.50% in West Virginia; 0.65% in Minnesota; 0.75% in Kentucky, Nebraska, Ohio, Tennessee, 0.80% in Kansas; 1.25% in Louisiana; 1.4% in Maine, and 1.15% in Oregon.
- (5) With minimum tax of \$200 in New Hampshire, North Dakota, & West Virginia, \$150 in Tennessee and \$250 in New York and Ohio.
- (6) Life, health, accident, or service insurers—premiums of \$7,000 or less, \$140; over \$7,000, \$140 plus \$225 per each additional \$10,000 over \$7,000.
- (7) After 2001, foreign and alien insurers are no longer subject to gross premium tax, but are subject to the corporate excise tax.

Source: Commerce Clearing House, Inc.

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TABLE 69
ALCOHOLIC BEVERAGE EXCISE TAXES BY STATE
(Dollars per Gallon)

State	Distilled Spirits	Wines	Wines	Bee	State	Distilled Spirits	Wines	Wines	
		14% or Less	14% to 21%				14% or Less	14% to 21%	
Alabama (2)	(1)	1.70	9.16	0.53	Montana	(1)	1.02	1.02	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	6.44	0.30	0.30	0.14
Delaware	4.50	1.63	1.63	0.26	N. Carolina	(1)	1.00	1.11	0.62
Florida	6.50	2.25	3.00	0.48	N. 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	S. Carolina (3)	2.72	0.90	1.08	0.77
Kansas	2.50	0.30	0.75	0.18	S. Dakota	3.93	0.93	1.45	0.27
Kentucky	1.92	0.50	0.50	0.08	Tennessee (4)	4.40	1.21	1.21	1.29
Louisiana	3.03	0.76	1.32	0.40	Texas	2.40	0.20	0.41	0.20
Maine	(1)	0.60	(1)	0.35	Utah	(1)	(1)	(1)	0.41
Maryland (2)	1.50	0.40	0.40	0.09	Vermont	(1)	0.55	0.55	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	1.72	0.26
Minnesota	5.03	0.30	0.95	0.15	W. Virginia	(1)	1.00	1.00	0.18
Mississippi	(1)	0.35	0.35	0.43	Wisconsin (5)	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 sale, revenue generated through markup, store profits, and additional taxes and fees.
- (2) Additional excise taxes on beer at the local level. Additional local taxes in NYC.
- (3) Additional surtaxes of 9% on alcoholic beverages and 18¢ per gallon for wine are applied.
- (4) Tennessee levies a 17% surcharge on the wholesale price of malt beverages.
- (5) An administration fee of 3¢ per gallon is imposed on intoxicating liquors.
- (6) Over 20%-\$8.55/gallon

Source: Commerce Clearing House, Inc., Federation of Tax Administrators. Rates as of January 2018.

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**TABLE 70
GENERAL FUND REVENUES**

<u>TAXES (\$K)</u>	<u>FY 2014⁽¹⁾</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Personal Income	\$8,718,659	\$9,151,037	\$9,181,648	\$8,988,667	\$10,770,150
Sales and Use	4,100,564	4,205,051	4,181,852	4,192,203	4,202,246
Corporation	782,239	814,805	880,449	1,037,565	920,746
Public Service Corporation	293,303	276,833	289,894	271,504	250,631
Inheritance & Estate	168,075	176,750	221,821	218,660	223,839
Insurance Companies	240,666	220,629	238,843	222,804	230,605
Cigarettes	376,835	358,704	373,518	381,455	376,448
Real Estate Conveyance	180,511	185,955	196,498	209,982	202,526
Oil Companies	35,580	-	170	-	-
Electric Generation	15,315	7	-	-	-
Alcoholic Beverages	60,644	61,651	63,113	63,155	63,211
Admissions, Dues, Cabaret	39,935	38,436	39,331	39,509	40,272
Miscellaneous	498,260	474,009	718,850	699,331	1,059,928
Total - Taxes	\$15,510,588	\$15,963,866	\$16,385,988	\$16,324,835	\$18,340,602
Less Refunds of Taxes	(1,182,397)	(1,163,639)	(1,223,198)	(1,263,824)	(1,269,667)
Less Refunds of R&D Credit	(5,055)	(7,878)	(7,623)	(5,485)	(5,664)
Total - Taxes Less Refunds	\$14,323,136	\$14,792,350	\$15,155,167	\$15,055,526	\$17,065,271
<u>OTHER REVENUE</u>					
Transfer-Special Revenue	\$323,219	\$323,315	\$339,961	\$328,716	\$339,512
Indian Gaming Payments	279,873	267,986	265,907	269,906	272,957
Licenses, Permits & Fees	314,722	257,444	296,502	275,386	306,165
Sales of Commodities & Services	40,523	35,813	43,454	39,143	33,238
Rents, Fines & Escheats	130,875	168,679	141,741	151,402	189,428
Investment Income	(336)	943	910	2,371	15,911
Miscellaneous	206,782	185,014	179,820	330,388	177,307
Less Refunds of Payments	(66,625)	(64,281)	(64,281)	(44,199)	(61,058)
Total - Other Revenue	\$1,229,032	\$1,174,912	\$1,207,958	\$1,353,113	\$1,273,461
<u>OTHER SOURCES</u>					
Federal Grants	\$1,243,861	\$1,241,244	\$1,301,532	\$1,325,237	1,143,075
Transfer from Tobacco Fund	107,000	97,367	110,600	118,299	109,700
Transfer From/(To) Other Funds	106,528	(23,834)	5,565	(149,207)	78,376
Transfers to BRF - Volatility Adjustment	-	-	-	-	(1,471,333)
Total - Other Sources	\$1,457,389	\$1,314,777	\$1,417,697	\$1,294,328	\$(140,182)
GRAND TOTAL	\$17,009,556	\$17,282,038	\$17,780,822	\$17,702,968	\$18,198,550
<u>TAXES</u>	<u>% of Total</u>	<u>% of Total</u>	<u>% of Total</u>	<u>% of Total</u>	<u>% of Total</u>
Personal Income	51.26	52.95	51.64	50.77	59.18
Sales and Use	24.11	24.33	23.52	23.68	23.09
Corporation	4.60	4.71	4.95	5.86	5.06
Public Service Corporation	1.72	1.60	1.63	1.53	1.38
Inheritance & Estate	0.99	1.02	1.25	1.24	1.23
Insurance Companies	1.41	1.28	1.34	1.26	1.27
Cigarettes	2.22	2.08	2.10	2.15	2.07
Real Estate Conveyance	1.06	1.08	1.11	1.19	1.11
Oil Companies	0.21	-	-	-	-
Electric Generation	0.09	0.00	-	-	-
Alcoholic Beverages	0.36	0.36	0.35	0.36	0.35
Admissions, Dues, Cabaret	0.23	0.22	0.22	0.22	0.22
Miscellaneous	2.93	2.74	4.04	3.95	5.82
Total - Taxes	91.19	92.37	92.16	92.22	100.78
Less Refunds of Taxes	(6.95)	(6.73)	(6.88)	(7.14)	(6.98)
Less Refunds of R&D Credit	(0.03)	(0.05)	(0.04)	(0.03)	(0.03)
Total - Taxes Less Refunds	84.21	85.59	85.23	85.05	93.77
<u>OTHER REVENUE</u>					
Transfer-Special Revenue	1.90	1.87	1.91	1.86	1.87
Indian Gaming Payments	1.65	1.55	1.50	1.52	1.50
Licenses, Permits & Fees	1.85	1.49	1.67	1.56	1.68
Sales of Commodities & Services	0.24	0.21	0.24	0.22	0.18
Rents, Fines & Escheats	0.77	0.98	0.80	0.86	1.04
Investment Income	(0.00)	0.01	0.01	0.01	0.09
Miscellaneous	1.22	1.07	1.01	1.87	0.97
Less Refunds of Payments	(0.39)	(0.37)	(0.36)	(0.25)	(0.34)
Total - Other Revenue	7.23	6.80	6.79	7.64	7.00
<u>OTHER SOURCES</u>					
Federal Grants	7.31	7.18	7.32	7.49	6.28
Transfer from Tobacco Fund	0.63	0.56	0.62	0.67	0.60
Transfer From/(To) Other Funds	0.63	(0.14)	0.03	(0.84)	0.43
Transfers to BRF - Volatility Adjustment	-	-	-	-	(8.08)
Total - Other Sources	8.57	7.61	7.97	7.31	(0.77)
GRAND TOTAL	100.00	100.00	100.00	100.00	100.00

Economic Report of the Governor

TABLE 71
SPECIAL TRANSPORTATION FUND REVENUES

<u>TAXES</u> (\$K)	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Motor Fuels	\$508,058	\$516,581	\$518,230	\$498,455	\$499,833
Oil Companies	380,700	337,903	250,000	238,354	312,506
Sales and Use Tax	-	-	109,002	188,380	327,458
DMV Sales	82,216	83,868	87,161	84,951	85,906
Less Refunds of Taxes	(6,993)	(7,236)	(17,409)	(13,236)	(10,050)
Total – Taxes Less Refunds	\$963,981	\$931,116	\$946,984	\$996,904	\$1,215,653
<u>OTHER REVENUE</u>					
Motor Vehicle Receipts	\$236,063	\$249,479	\$251,506	\$242,912	\$253,074
Licenses, Permits & Fees	138,390	145,429	143,867	144,028	141,866
Interest Income	6,771	6,946	8,159	8,995	17,673
Federal Grants	12,100	12,115	12,181	12,168	12,196
Transfer from Other Funds	-76,500	41,197	-	-	-
Transfer to Other Funds	(6,500)	(6,500)	(6,500)	(6,500)	(5,500)
Transfer to TSB	(15,000)	(15,000)	-	-	-
Less Refunds of Payments	(3,614)	(3,871)	(3,384)	(4,103)	(4,891)
Total – Other Revenue	\$291,710	\$429,795	\$405,829	\$397,499	\$414,418
GRAND TOTAL	\$1,255,691	\$1,360,911	\$1,352,813	\$1,394,403	\$1,630,071
<u>TAXES</u>	<u>% of Total</u>	<u>% of Total</u>	<u>% of Total</u>	<u>% of Total</u>	<u>% of Total</u>
Motor Fuels	40.46	37.96	38.31	35.75	30.66
Oil Companies	30.32	24.83	18.48	17.09	19.17
Sales and Use Tax	-	-	8.06	13.51	20.09
DMV Sales	6.55	6.16	6.44	6.09	5.27
Less Refunds of Taxes	(0.56)	(0.53)	(1.29)	(0.95)	-0.62
Total – Taxes Less Refunds	76.77	68.42	70.00	71.49	74.58
<u>OTHER REVENUE</u>					
Motor Vehicle Receipts	18.8	18.33	18.59	17.42	15.53
Licenses, Permits & Fees	11.02	10.69	10.63	10.33	8.70
Interest Income	0.54	0.51	0.60	0.65	1.08
Federal Grants	0.96	0.89	0.90	0.87	0.75
Transfer from Other Funds	(6.09)	3.03	-	-	-
Transfer to Other Funds	(0.52)	(0.48)	(0.48)	(0.47)	(0.34)
Transfer to TSB	(1.19)	(1.1)	-	-	-
Less Refunds of Payments	(0.29)	(0.28)	(0.25)	(0.29)	(0.30)
Total - Other Revenue	23.23	31.58	30.00	28.51	25.42
GRAND TOTAL	100.00	100.00	100.00	100.00	100.00

(1) Beginning in FY 2014, Federal Grants within the General Fund reflect the conversion to net budgeting of the Medicaid account. In addition, in reporting FY 2014 results the Comptroller included \$598.5 million from the proceeds of GAAP Conversion Bonds within the revenue schedule. Since these proceeds were reserved for use in mitigating the cumulative GAAP deficit, the Office of Policy and Management has not included the \$598.5 million within the General Fund revenue schedule

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APPENDIX

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Economic Report of the Governor

Connecticut Resident Population Census Counts

	Population		Population		2000-2010 <u>Change</u>	%	2017 <u>DPH* Est</u>
	<u>2000</u>	<u>Rank</u>	<u>2010</u>	<u>Rank</u>			
Total	3,405,565		3,574,097		168,532	4.9	3,588,184
Andover	3,036	147	3,303	147	267	8.8	3,248
Ansonia	18,554	57	19,249	60	695	3.7	18,813
Ashford	4,098	135	4,317	136	219	5.3	4,244
Avon	15,832	68	18,098	65	2,266	14.3	18,352
Barkhamsted	3,494	143	3,799	141	305	8.7	3,651
Beacon Falls	5,246	125	6,049	123	803	15.3	6,168
Berlin	18,215	59	19,866	54	1,651	9.1	20,505
Bethany	5,040	126	5,563	126	523	10.4	5,497
Bethel	18,067	61	18,584	62	517	2.9	19,802
Bethlehem	3,422	144	3,607	143	185	5.4	3,439
Bloomfield	19,587	52	20,486	52	899	4.6	21,406
Bolton	5,017	127	4,980	131	-37	-0.7	4,916
Bozrah	2,357	153	2,627	152	270	11.5	2,563
Branford	28,683	32	28,026	37	-657	-2.3	28,111
Bridgeport	139,529	1	144,229	1	4,700	3.4	146,579
Bridgewater	1,824	160	1,727	162	-97	-5.3	1,644
Bristol	60,062	11	60,477	13	415	0.7	60,223
Brookfield	15,664	69	16,452	71	788	5.0	17,133
Brooklyn	7,173	113	8,210	110	1,037	14.5	8,208
Burlington	8,190	108	9,301	104	1,111	13.6	9,640
Canaan	1,081	168	1,234	168	153	14.2	1,062
Canterbury	4,692	131	5,132	130	440	9.4	5,075
Canton	8,840	101	10,292	95	1,452	16.4	10,298
Chaplin	2,250	155	2,305	156	55	2.4	2,241
Cheshire	28,543	33	29,261	32	718	2.5	29,330
Chester	3,743	141	3,994	139	251	6.7	4,254
Clinton	13,094	81	13,260	82	166	1.3	12,957
Colchester	14,551	74	16,068	72	1,517	10.4	16,029
Colebrook	1,471	165	1,485	165	14	1.0	1,413
Columbia	4,971	129	5,485	127	514	10.3	5,418
Cornwall	1,434	166	1,420	167	-14	-1.0	1,376
Coventry	11,504	87	12,435	87	931	8.1	12,439
Cromwell	12,871	83	14,005	79	1,134	8.8	13,956
Danbury	74,848	7	80,893	7	6,045	8.1	85,246
Darien	19,607	51	20,732	51	1,125	5.7	21,887
Deep River	4,610	133	4,629	133	19	0.4	4,494
Derby	12,391	84	12,902	84	511	4.1	12,581
Durham	6,627	116	7,388	116	761	11.5	7,240
East Granby	4,745	130	5,148	129	403	8.5	5,166
East Haddam	8,333	105	9,126	106	793	9.5	9,036
East Hampton	13,352	78	12,959	83	-393	-2.9	12,901
East Hartford	49,575	19	51,252	19	1,677	3.4	50,319
East Haven	28,189	35	29,257	33	1,068	3.8	28,857

Economic Report of the Governor

Connecticut Resident Population Census Counts

	<u>Population</u> <u>2000</u>		<u>Population</u> <u>2010</u>		<u>2000-2010</u> <u>Change</u>	<u>%</u> <u>Chg.</u>	<u>2017</u> <u>DPH* Est</u>
		<u>Rank</u>		<u>Rank</u>			
East Lyme	18,118	60	19,159	61	1,041	5.7	18,789
East Windsor	9,818	96	11,162	94	1,344	13.7	11,395
Eastford	1,618	163	1,749	161	131	8.1	1,756
Easton	7,272	111	7,490	115	218	3.0	7,579
Ellington	12,921	82	15,602	74	2,681	20.7	16,195
Enfield	45,212	20	44,654	22	-558	-1.2	44,585
Essex	6,505	117	6,683	120	178	2.7	6,588
Fairfield	57,340	13	59,404	14	2,064	3.6	62,105
Farmington	23,641	44	25,340	44	1,699	7.2	25,572
Franklin	1,835	159	1,922	159	87	4.7	1,944
Glastonbury	31,876	29	34,427	29	2,551	8.0	34,575
Goshen	2,697	151	2,976	150	279	10.3	2,888
Granby	10,347	93	11,282	92	935	9.0	11,357
Greenwich	61,101	10	61,171	10	70	0.1	62,855
Griswold	10,807	89	11,951	90	1,144	10.6	11,687
Groton	39,907	23	40,115	25	208	0.5	39,075
Guilford	21,398	49	22,375	50	977	4.6	22,283
Haddam	7,157	114	8,346	109	1,189	16.6	8,264
Hamden	56,913	14	60,960	11	4,047	7.1	61,284
Hampton	1,758	161	1,863	160	105	6.0	1,844
Hartford	121,578	3	124,775	3	3,197	2.6	123,400
Hartland	2,012	158	2,114	158	102	5.1	2,112
Harwinton	5,283	124	5,642	125	359	6.8	5,452
Hebron	8,610	104	9,686	99	1,076	12.5	9,507
Kent	2,858	150	2,979	149	121	4.2	2,800
Killingly	16,472	67	17,370	68	898	5.5	17,172
Killingworth	6,018	121	6,525	121	507	8.4	6,401
Lebanon	6,907	115	7,308	117	401	5.8	7,209
Ledyard	14,687	72	15,051	77	364	2.5	14,837
Lisbon	4,069	136	4,338	135	269	6.6	4,274
Litchfield	8,316	106	8,466	108	150	1.8	8,168
Lyme	2,016	157	2,406	154	390	19.3	2,354
Madison	17,858	64	18,269	64	411	2.3	18,196
Manchester	54,740	15	58,241	15	3,501	6.4	57,932
Mansfield	20,720	50	26,543	41	5,823	28.1	25,912
Marlborough	5,709	123	6,404	122	695	12.2	6,397
Meriden	58,244	12	60,868	12	2,624	4.5	59,927
Middlebury	6,451	118	7,575	114	1,124	17.4	7,725
Middlefield	4,203	134	4,425	134	222	5.3	4,393
Middletown	43,167	21	47,648	20	4,481	10.4	46,478
Milford	52,305	17	52,759	17	454	0.9	54,508
Monroe	19,247	54	19,479	59	232	1.2	19,635
Montville	18,546	58	19,571	57	1,025	5.5	19,149
Morris	2,301	154	2,388	155	87	3.8	2,277

Economic Report of the Governor

Connecticut Resident Population Census Counts

	<u>Population</u>		<u>Population</u>		<u>2000-2010</u>	<u>%</u>	<u>2017</u>
	<u>2000</u>	<u>Rank</u>	<u>2010</u>	<u>Rank</u>	<u>Change</u>	<u>Chg.</u>	<u>DPH* Est.</u>
Naugatuck	30,989	30	31,862	30	873	2.8	31,461
New Britain	71,538	8	73,206	8	1,668	2.3	72,710
New Canaan	19,395	53	19,738	55	343	1.8	20,376
New Fairfield	13,953	75	13,881	81	-72	-0.5	14,017
New Hartford	6,088	120	6,970	118	882	14.5	6,718
New Haven	123,626	2	129,779	2	6,153	5.0	131,014
New London	25,671	40	27,620	38	1,949	7.6	27,072
New Milford	27,121	37	28,142	36	1,021	3.8	27,099
Newington	29,306	31	30,562	31	1,256	4.3	30,404
Newtown	25,031	41	27,560	39	2,529	10.1	27,965
Norfolk	1,660	162	1,709	164	49	3.0	1,642
North Branford	13,906	76	14,407	78	501	3.6	14,208
North Canaan	3,350	145	3,315	146	-35	-1.0	3,279
North Haven	23,035	46	24,093	47	1,058	4.6	23,751
North Stonington	4,991	128	5,297	128	306	6.1	5,270
Norwalk	82,951	6	85,603	6	2,652	3.2	89,005
Norwich	36,117	26	40,493	24	4,376	12.1	39,470
Old Lyme	7,406	110	7,603	113	197	2.7	7,432
Old Saybrook	10,367	92	10,242	96	-125	-1.2	10,132
Orange	13,233	79	13,956	80	723	5.5	13,997
Oxford	9,821	95	12,683	85	2,862	29.1	13,035
Plainfield	14,619	73	15,405	75	786	5.4	15,093
Plainville	17,328	66	17,716	67	388	2.2	17,705
Plymouth	11,634	86	12,243	88	609	5.2	11,718
Pomfret	3,798	140	4,247	137	449	11.8	4,167
Portland	8,732	102	9,508	101	776	8.9	9,360
Preston	4,688	132	4,726	132	38	0.8	4,666
Prospect	8,707	103	9,405	103	698	8.0	9,797
Putnam	9,002	98	9,584	100	582	6.5	9,357
Redding	8,270	107	9,158	105	888	10.7	9,233
Ridgefield	23,643	43	24,638	46	995	4.2	25,187
Rocky Hill	17,966	62	19,709	56	1,743	9.7	20,105
Roxbury	2,136	156	2,262	157	126	5.9	2,171
Salem	3,858	138	4,151	138	293	7.6	4,141
Salisbury	3,977	137	3,741	142	-236	-5.9	3,623
Scotland	1,556	164	1,726	163	170	10.9	1,677
Seymour	15,454	70	16,540	70	1,086	7.0	16,583
Sharon	2,968	149	2,782	151	-186	-6.3	2,718
Shelton	38,101	25	39,559	26	1,458	3.8	41,397
Sherman	3,827	139	3,581	144	-246	-6.4	3,643
Simsbury	23,234	45	23,511	48	277	1.2	24,952
Somers	10,417	91	11,444	91	1,027	9.9	11,106
South Windsor	24,412	42	25,709	43	1,297	5.3	25,937
Southbury	18,567	56	19,904	53	1,337	7.2	19,571

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Connecticut Resident Population Census Counts

	<u>Population</u>		<u>Population</u>		<u>2000-2010</u>	<u>%</u>	<u>2017</u>
	<u>2000</u>	<u>Rank</u>	<u>2010</u>	<u>Rank</u>	<u>Change</u>	<u>Chg.</u>	<u>DPH* Est.</u>
Southington	39,728	24	43,069	23	3,341	8.4	43,863
Sprague	2,971	148	2,984	148	13	0.4	2,914
Stafford	11,307	88	12,087	89	780	6.9	11,949
Stamford	117,083	4	122,643	4	5,560	4.7	130,824
Sterling	3,099	146	3,830	140	731	23.6	3,742
Stonington	17,906	63	18,545	63	639	3.6	18,593
Stratford	49,976	18	51,384	18	1,408	2.8	52,345
Suffield	13,552	77	15,735	73	2,183	16.1	15,698
Thomaston	7,503	109	7,887	112	384	5.1	7,602
Thompson	8,878	100	9,458	102	580	6.5	9,288
Tolland	13,146	80	15,052	76	1,906	14.5	14,722
Torrington	35,202	27	36,383	27	1,181	3.4	34,538
Trumbull	34,243	28	36,018	28	1,775	5.2	36,154
Union	693	169	854	169	161	23.2	839
Vernon	28,063	36	29,179	34	1,116	4.0	29,289
Voluntown	2,528	152	2,603	153	75	3.0	2,558
Wallingford	43,026	22	45,135	21	2,109	4.9	44,741
Warren	1,254	167	1,461	166	207	16.5	1,410
Washington	3,596	142	3,578	145	-18	-0.5	3,453
Waterbury	107,271	5	110,366	5	3,095	2.9	108,629
Waterford	19,152	55	19,517	58	365	1.9	19,007
Watertown	21,661	48	22,514	49	853	3.9	21,740
West Hartford	63,589	9	63,268	9	-321	-0.5	63,133
West Haven	52,360	16	55,564	16	3,204	6.1	54,843
Westbrook	6,292	119	6,938	119	646	10.3	6,956
Weston	10,037	94	10,179	97	142	1.4	10,331
Westport	25,749	39	26,391	42	642	2.5	28,042
Wethersfield	26,271	38	26,668	40	397	1.5	26,195
Willington	5,959	122	6,041	124	82	1.4	5,921
Wilton	17,633	65	18,062	66	429	2.4	18,581
Winchester	10,664	90	11,242	93	578	5.4	10,739
Windham	22,857	47	25,268	45	2,411	10.5	24,686
Windsor	28,237	34	29,044	35	807	2.9	28,898
Windsor Locks	12,043	85	12,498	86	455	3.8	12,554
Wolcott	15,215	71	16,680	69	1,465	9.6	16,672
Woodbridge	8,983	99	8,990	107	7	0.1	8,853
Woodbury	9,198	97	9,975	98	777	8.4	9,557
Woodstock	7,221	112	7,964	111	743	10.3	7,809

* 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, 2017"

Economic Report of the Governor

MAJOR U.S. ECONOMIC INDICATORS - FISCAL YEAR BASIS

TABLE 1
U.S. ECONOMIC VARIABLES

	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>
Gross Domestic Product (\$B)	14,535.5	14,673.9	15,275.7	15,890.1	16,455.9	17,115.1	17,937.5	18,433.8	19,075.1	19,968.2
Percent Change	-0.9%	1.0%	4.1%	4.0%	3.6%	4.0%	4.8%	2.8%	3.5%	4.7%
Real GDP (2012=100)	15,321.3	15,379.4	15,740.1	16,038.3	16,311.5	16,661.8	17,199.8	17,510.2	17,837.3	18,295.0
Percent Change	-2.5%	0.4%	3.0%	1.9%	1.7%	2.1%	3.2%	1.8%	1.9%	2.6%
GDP Deflator (2012=100)	94.9	95.4	97.0	99.1	100.9	102.7	104.3	105.3	106.9	109.1
Percent Change	1.6%	0.6%	1.7%	2.1%	1.8%	1.8%	1.5%	0.9%	1.6%	2.1%
Housing Starts (K)	646.3	594.0	569.7	684.4	877.4	952.9	1,053.6	1,149.1	1,201.1	1,252.2
Percent Change	-42.9%	-8.1%	-4.1%	20.1%	28.2%	8.6%	10.6%	9.1%	4.5%	4.3%
Unemployment Rate	7.6%	9.8%	9.3%	8.5%	7.8%	6.8%	5.7%	5.0%	4.7%	4.1%
New Vehicle Sales (M)	10.6	11.2	12.2	13.6	15.1	15.9	16.9	17.5	17.3	17.2
Percent Change	-30.5%	5.3%	9.3%	11.4%	10.6%	5.5%	6.0%	3.9%	-1.3%	-0.3%
Consumer Price Index ('82-'84=100)	214.6	216.8	221.1	227.6	231.4	235.0	236.7	238.3	242.7	248.1
Percent Change	1.4%	1.0%	2.0%	2.9%	1.7%	1.6%	0.7%	0.7%	1.9%	2.2%
Industrial Production Index ('07=100)	93.3	91.3	95.7	98.8	100.9	103.4	105.4	102.7	102.6	105.5
Percent Change	-10.7%	-2.1%	4.8%	3.3%	2.1%	2.5%	1.9%	-2.5%	-0.1%	2.8%
Personal Income (\$B)	12,221.0	12,233.0	12,965.8	13,653.5	14,111.1	14,535.2	15,391.9	15,925.8	16,462.0	17,196.0
Percent Change	-0.6%	0.1%	6.0%	5.3%	3.4%	3.0%	5.9%	3.5%	3.4%	4.5%
Real Personal Income (\$B in 2012=100)	12,998.1	12,866.0	13,398.1	13,766.4	14,015.6	14,229.3	14,945.2	15,377.9	15,650.0	16,047.7
Percent Change	-1.7%	-1.0%	4.1%	2.7%	1.8%	1.5%	5.0%	2.9%	1.8%	2.5%
Disposable Personal Income (\$B)	10,902.3	11,063.1	11,611.8	12,179.5	12,508.0	12,814.9	13,523.8	13,984.6	14,469.0	15,149.8
Percent Change	1.2%	1.5%	5.0%	4.9%	2.7%	2.5%	5.5%	3.4%	3.5%	4.7%
Disposable Personal Income (\$B in 2012=100)	11,596.4	11,635.8	11,999.7	12,280.3	12,423.8	12,545.5	13,131.6	13,503.9	13,755.8	14,138.5
Percent Change	0.1%	0.3%	3.1%	2.3%	1.2%	1.0%	4.7%	2.8%	1.9%	2.8%

Economic Report of the Governor

MAJOR U.S. ECONOMIC INDICATORS - FISCAL YEAR BASIS

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

	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>
Personal Income	12,221.0	12,233.0	12,965.9	13,653.5	14,111.1	14,535.2	15,391.9	15,925.8	16,462.0	17,196.0
Percent Change	-0.6%	0.1%	6.0%	5.3%	3.4%	3.0%	5.9%	3.5%	3.4%	4.5%
Wages & Salaries	6,385.9	6,277.1	6,520.1	6,757.4	7,036.0	7,271.8	7,668.8	7,965.7	8,259.3	8,644.0
Percent Change	-1.5%	-1.7%	3.9%	3.6%	4.1%	3.4%	5.5%	3.9%	3.7%	4.7%
Manufacturing Income	699.0	657.7	695.3	719.3	739.0	761.7	796.0	809.3	829.4	864.0
Percent Change	-6.6%	-5.9%	5.7%	3.5%	2.7%	3.1%	4.5%	1.7%	2.5%	4.2%
Nonmanufacturing Inc.	5,686.9	5,619.4	5,824.8	6,038.1	6,297.0	6,510.1	6,872.8	7,156.4	7,429.8	7,780.0
Percent Change	-0.9%	-1.2%	3.7%	3.7%	4.3%	3.4%	5.6%	4.1%	3.8%	4.7%
Other Labor Income	1,516.4	1,528.0	1,579.6	1,614.2	1,678.5	1,750.0	1,809.1	1,858.6	1,911.9	1,989.1
Percent Change	0.6%	0.8%	3.4%	2.2%	4.0%	4.3%	3.4%	2.7%	2.9%	4.0%
Proprietor's Income	931.8	1,024.6	1,166.8	1,300.8	1,377.5	1,420.6	1,441.0	1,416.5	1,456.9	1,538.0
Percent Change	-4.4%	10.0%	13.9%	11.5%	5.9%	3.1%	1.4%	-1.7%	2.9%	5.6%
Farm Income	28.8	32.7	54.3	62.9	78.3	77.2	61.4	49.3	37.9	36.0
Percent Change	-34.9%	13.6%	66.1%	15.8%	24.5%	-1.3%	-20.5%	-19.6%	-23.2%	-5.0%
Nonfarm Income	903.0	991.9	1,112.5	1,238.0	1,299.3	1,343.3	1,379.6	1,367.1	1,419.0	1,502.0
Percent Change	-2.9%	9.8%	12.2%	11.3%	5.0%	3.4%	2.7%	-0.9%	3.8%	5.8%
Rental Income	295.7	361.8	435.5	504.3	533.2	583.8	629.2	677.0	710.9	745.2
Percent Change	40.0%	22.3%	20.4%	15.8%	5.7%	9.5%	7.8%	7.6%	5.0%	4.8%
Personal Dividend Inc.	688.8	503.2	611.1	742.9	834.0	864.1	1,015.1	1,047.9	1,095.1	1,123.5
Percent Change	-17.9%	-27.0%	21.4%	21.6%	12.3%	3.6%	17.5%	3.2%	4.5%	2.6%
Personal Interest Income	1,358.0	1,265.0	1,251.2	1,311.7	1,287.4	1,303.0	1,387.1	1,451.6	1,478.2	1,570.4
Percent Change	-2.3%	-6.8%	-1.1%	4.8%	-1.9%	1.2%	6.5%	4.6%	1.8%	6.2%
Transfer Payments	2,021.9	2,245.7	2,352.4	2,353.7	2,392.2	2,469.6	2,621.1	2,731.2	2,817.9	2,915.7
Percent Change	8.6%	11.1%	4.8%	0.1%	1.6%	3.2%	6.1%	4.2%	3.2%	3.5%

Economic Report of the Governor

MAJOR U.S. ECONOMIC INDICATORS - FISCAL YEAR BASIS

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

	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>
Less:										
Contributions to Social Insurance	977.3	972.3	950.8	931.3	1,027.7	1,127.6	1,179.4	1,222.6	1,268.1	1,329.8
Percent Change	0.2%	-0.5%	-2.2%	-2.0%	10.3%	9.7%	4.6%	3.7%	3.7%	4.9%
Equals:										
Personal Income	12,221.0	12,233.0	12,965.9	13,653.5	14,111.1	14,535.2	15,391.9	15,925.8	16,462.0	17,196.0
Percent Change	-0.6%	0.1%	6.0%	5.3%	3.4%	3.0%	5.9%	3.5%	3.4%	4.5%
Less:										
Personal Taxes	1,318.7	1,170.0	1,354.1	1,474.1	1,603.0	1,720.4	1,868.2	1,941.2	1,993.0	2,046.2
Percent Change	-13.4%	-11.3%	15.7%	8.9%	8.7%	7.3%	8.6%	3.9%	2.7%	2.7%
Equals:										
Disposable Income (\$B)	10,902.3	11,063.1	11,611.8	12,179.5	12,508.0	12,814.9	13,523.8	13,984.6	14,469.0	15,149.9
Percent Change	1.2%	1.5%	5.0%	4.9%	2.7%	2.5%	5.5%	3.4%	3.5%	4.7%
Less:										
Personal Outlays	10,261.7	10,400.2	10,800.5	11,224.2	11,536.5	11,929.6	12,509.2	12,966.5	13,514.3	14,133.8
Percent Change	-0.6%	1.3%	3.8%	3.9%	2.8%	3.4%	4.9%	3.7%	4.2%	4.6%
Equals:										
Personal Savings	640.7	662.9	811.3	955.3	971.5	885.2	1,014.6	1,018.1	954.7	1,016.1
Percent Change	44.4%	3.5%	22.4%	17.7%	1.7%	-8.9%	14.6%	0.3%	-6.2%	6.4%
Personal Savings Rate	5.9%	6.0%	7.0%	7.8%	7.8%	6.9%	7.5%	7.3%	6.6%	6.7%

Economic Report of the Governor

MAJOR U.S. ECONOMIC INDICATORS - FISCAL YEAR BASIS

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

	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>
Establishment Employ.	134.4	130.2	131.0	133.1	135.2	137.6	140.4	143.1	145.5	147.8
Percent Change	-2.7%	-3.1%	0.6%	1.6%	1.6%	1.7%	2.1%	1.9%	1.7%	1.5%
Manufacturing	12.7	11.5	11.6	11.8	12.0	12.1	12.3	12.4	12.4	12.6
Percent Change	-7.7%	-8.9%	0.9%	1.8%	1.2%	0.9%	1.6%	0.6%	0.2%	1.5%
Nonmanufacturing	121.7	118.6	119.4	121.3	123.2	125.5	128.1	130.7	133.1	135.0
Percent Change	-2.2%	-2.5%	0.6%	1.6%	1.6%	1.8%	2.1%	2.0%	1.8%	1.4%
Construction & Mining	7.4	6.3	6.2	6.4	6.6	6.9	7.2	7.3	7.5	7.8
Percent Change	-10.3%	-14.0%	-1.5%	3.2%	2.4%	4.1%	4.7%	2.1%	2.2%	3.9%
Information	2.9	2.7	2.7	2.7	2.7	2.7	2.7	2.8	2.8	2.8
Percent Change	-4.1%	-5.4%	-2.0%	-0.5%	0.4%	1.2%	0.7%	1.1%	1.4%	-1.1%
Public Utility, Trade & Transportation	25.6	24.6	24.8	25.3	25.6	26.1	26.7	27.1	27.4	27.6
Percent Change	-3.9%	-3.8%	0.8%	1.9%	1.3%	1.9%	2.1%	1.5%	1.2%	0.8%
Finance, Insurance & Real Estate	8.0	7.7	7.7	7.7	7.8	7.9	8.0	8.2	8.4	8.5
Percent Change	-3.1%	-3.6%	-0.7%	0.7%	1.3%	1.1%	1.6%	1.9%	2.1%	1.7%
Services	55.3	54.6	55.7	57.2	58.6	60.0	61.6	63.3	64.8	66.2
Percent Change	-1.2%	-1.1%	1.9%	2.7%	2.5%	2.4%	2.6%	2.7%	2.4%	2.1%
Professional & Business	17.1	16.5	17.0	17.6	18.2	18.8	19.4	19.9	20.2	20.7
Percent Change	-4.7%	-3.6%	3.1%	3.6%	3.3%	3.1%	3.0%	2.6%	2.0%	2.4%
Education & Health	19.4	19.8	20.1	20.6	20.9	21.2	21.7	22.3	22.9	23.4
Percent Change	2.6%	1.8%	1.7%	2.1%	1.8%	1.4%	2.3%	2.8%	2.7%	2.1%
Leisure & Hospitality	13.2	13.0	13.2	13.6	14.0	14.5	14.9	15.4	15.9	16.2
Percent Change	-1.9%	-1.9%	1.5%	2.9%	3.2%	3.4%	2.9%	3.4%	2.9%	2.1%
Other Services	5.4	5.3	5.3	5.4	5.5	5.5	5.6	5.7	5.7	5.8
Percent Change	-1.3%	-2.0%	0.1%	1.2%	1.0%	1.4%	1.2%	1.0%	1.4%	1.6%
Government	22.6	22.6	22.3	22.0	21.9	21.8	21.9	22.1	22.3	22.3
Percent Change	0.9%	0.0%	-1.3%	-1.4%	-0.4%	-0.2%	0.5%	0.8%	0.9%	0.1%
Civilian Labor Force	154.6	153.9	153.6	154.3	155.3	155.5	156.6	158.0	159.8	161.1
Percent Change	0.6%	-0.4%	-0.2%	0.4%	0.7%	0.1%	0.7%	0.9%	1.1%	0.8%
Unemployment Rate	7.6%	9.8%	9.3%	8.5%	7.8%	6.8%	5.7%	5.0%	4.7%	4.1%

Economic Report of the Governor

MAJOR U.S. ECONOMIC INDICATORS - FISCAL YEAR BASIS

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

	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>
All Items	214.6	216.8	221.1	227.6	231.4	235.0	236.7	238.3	242.7	248.1
Percent Change	1.4%	1.0%	2.0%	2.9%	1.7%	1.6%	0.7%	0.7%	1.9%	2.2%
Food & Beverages	218.2	218.6	223.0	231.5	235.4	239.1	245.1	247.7	248.2	251.6
Percent Change	4.8%	0.2%	2.0%	3.8%	1.7%	1.5%	2.5%	1.1%	0.2%	1.3%
Housing	217.5	216.5	217.2	221.0	224.9	230.2	235.6	240.7	247.8	254.8
Percent Change	2.2%	-0.5%	0.3%	1.8%	1.8%	2.4%	2.3%	2.1%	2.9%	2.9%
Energy	208.2	206.4	227.9	245.8	246.0	246.6	221.1	192.5	197.8	213.3
Percent Change	-8.1%	-0.9%	10.4%	7.9%	0.1%	0.2%	-10.3%	-12.9%	2.8%	7.8%
Commodities	170.9	173.2	178.7	186.3	187.9	188.1	184.5	180.2	180.3	183.0
Percent Change	-0.6%	1.3%	3.2%	4.3%	0.8%	0.1%	-1.9%	-2.3%	0.0%	1.5%
Apparel	119.4	120.1	119.8	124.9	127.0	127.6	126.8	125.9	126.1	125.9
Percent Change	0.7%	0.6%	-0.3%	4.3%	1.7%	0.5%	-0.6%	-0.7%	0.2%	-0.2%
Transportation	182.6	189.0	202.9	215.4	217.9	217.9	206.1	196.0	198.4	206.2
Percent Change	-5.3%	3.5%	7.4%	6.2%	1.2%	0.0%	-5.4%	-4.9%	1.2%	4.0%
Services	258.1	260.1	263.2	268.5	274.6	281.5	288.3	295.6	304.2	312.3
Percent Change	2.8%	0.8%	1.2%	2.0%	2.3%	2.5%	2.4%	2.5%	2.9%	2.7%
Medical Care	369.4	382.2	394.0	407.4	420.6	430.2	441.0	454.0	471.0	480.4
Percent Change	3.0%	3.5%	3.1%	3.4%	3.3%	2.3%	2.5%	2.9%	3.8%	2.0%
Other Goods & Services	355.3	377.1	384.6	390.7	397.8	404.7	411.2	418.9	427.7	437.8
Percent Change	4.8%	6.1%	2.0%	1.6%	1.8%	1.7%	1.6%	1.9%	2.1%	2.3%

Economic Report of the Governor

MAJOR CONNECTICUT ECONOMIC INDICATORS - FISCAL YEAR BASIS

**TABLE 6
PERSONAL INCOME
(BILLIONS OF DOLLARS)**

	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>
Personal Income	214.00	217.70	226.36	231.22	231.59	233.70	243.50	248.35	252.86	261.41
Percent Change	0.8%	1.7%	4.0%	2.1%	0.2%	0.9%	4.2%	2.0%	1.8%	3.4%
Disposable Personal Income	184.51	191.27	196.28	199.02	196.67	196.58	204.61	209.61	214.58	222.72
Percent Change	4.0%	3.7%	2.6%	1.4%	-1.2%	0.0%	4.1%	2.4%	2.4%	3.8%
Total Wages	98.60	96.42	100.59	102.17	105.12	107.11	110.67	113.13	113.57	115.41
Percent Change	-2.7%	-2.2%	4.3%	1.6%	2.9%	1.9%	3.3%	2.2%	0.4%	1.6%
Manufacturing Wages	12.63	11.88	12.73	12.91	13.19	13.23	12.93	12.55	12.70	13.17
Percent Change	-5.2%	-6.0%	7.1%	1.4%	2.2%	0.2%	-2.2%	-2.9%	1.2%	3.7%
Nonmanufacturing Wages	85.97	84.53	87.86	89.26	91.93	93.88	97.74	100.57	100.87	102.24
Percent Change	-2.3%	-1.7%	3.9%	1.6%	3.0%	2.1%	4.1%	2.9%	0.3%	1.4%
Other Labor Income	22.33	22.32	23.11	22.97	23.41	23.89	24.48	25.00	25.19	25.74
Percent Change	0.0%	-0.1%	3.6%	-0.6%	1.9%	2.1%	2.4%	2.2%	0.8%	2.2%
Proprietor's Income	29.84	36.48	34.85	32.84	28.10	26.82	27.22	27.47	27.87	28.56
Percent Change	24.3%	22.2%	-4.4%	-5.8%	-14.4%	-4.6%	1.5%	0.9%	1.5%	2.5%
Property Income	51.67	48.16	52.14	57.06	59.62	61.53	66.03	67.11	70.08	75.14
Percent Change	-7.1%	-6.8%	8.3%	9.4%	4.5%	3.2%	7.3%	1.6%	4.4%	7.2%
Transfer Payments Less Social Insurance	11.56	14.33	15.67	16.19	15.33	14.35	15.10	15.65	16.15	16.57
Percent Change	26.7%	24.0%	9.3%	3.3%	-5.3%	-6.4%	5.2%	3.7%	3.2%	2.6%
Transfer Payments	25.69	28.28	29.24	29.24	29.74	30.04	31.24	32.28	33.02	33.82
Percent Change	10.9%	10.1%	3.4%	0.0%	1.7%	1.0%	4.0%	3.3%	2.3%	2.4%
Social Insurance	14.13	13.95	13.57	13.05	14.40	15.69	16.14	16.63	16.87	17.26
Percent Change	0.7%	-1.3%	-2.7%	-3.8%	10.3%	8.9%	2.9%	3.0%	1.4%	2.3%
Residence Adjustment	10.05	9.95	11.09	12.17	12.90	12.70	13.07	13.00	14.19	16.44
Percent Change	-8.0%	-1.0%	11.5%	9.7%	6.0%	-1.5%	2.9%	-0.5%	9.1%	15.9%

Economic Report of the Governor

MAJOR CONNECTICUT ECONOMIC INDICATORS - FISCAL YEAR BASIS

**TABLE 7
DEFLATED PERSONAL INCOME
(BILLIONS OF DOLLARS)**

	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>
Personal Income	227.62	228.98	233.93	233.15	230.02	228.80	236.43	239.81	240.40	243.96
Percent Change	-0.4%	0.6%	2.2%	-0.3%	-1.3%	-0.5%	3.3%	1.4%	0.2%	1.5%
Disposable Personal Income	196.25	201.17	202.84	200.67	195.34	192.45	198.67	202.40	204.01	207.86
Percent Change	2.8%	2.5%	0.8%	-1.1%	-2.7%	-1.5%	3.2%	1.9%	0.8%	1.9%
Total Wages	104.87	101.41	103.95	103.02	104.41	104.86	107.46	109.23	107.97	107.70
Percent Change	-3.8%	-3.3%	2.5%	-0.9%	1.4%	0.4%	2.5%	1.7%	-1.2%	-0.2%
Manufacturing Wages	13.44	12.50	13.16	13.01	13.10	12.95	12.55	12.12	12.08	12.29
Percent Change	-6.2%	-7.0%	5.3%	-1.1%	0.7%	-1.2%	-3.0%	-3.5%	-0.4%	1.8%
Nonmanufacturing Wages	91.44	88.91	90.79	90.00	91.31	91.91	94.90	97.11	95.90	95.41
Percent Change	-3.4%	-2.8%	2.1%	-0.9%	1.5%	0.7%	3.3%	2.3%	-1.3%	-0.5%
Other Labor Income	23.75	23.47	23.89	23.17	23.25	23.39	23.77	24.14	23.95	24.02
Percent Change	-1.2%	-1.2%	1.8%	-3.0%	0.4%	0.6%	1.6%	1.6%	-0.8%	0.3%
Proprietor's Income	31.74	38.36	36.02	33.11	27.91	26.26	26.43	26.53	26.50	26.65
Percent Change	22.9%	20.9%	-6.1%	-8.1%	-15.7%	-5.9%	0.7%	0.4%	-0.1%	0.6%
Property Income	54.96	50.66	53.88	57.53	59.22	60.24	64.11	64.80	66.63	70.12
Percent Change	-8.2%	-7.8%	6.4%	6.8%	2.9%	1.7%	6.4%	1.1%	2.8%	5.2%
Transfer Payments Less Social Insurance	12.30	15.07	16.19	16.32	15.23	14.04	14.66	15.11	15.35	15.46
Percent Change	25.3%	22.6%	7.4%	0.8%	-6.7%	-7.8%	4.4%	3.1%	1.6%	0.7%
Transfer Payments	27.33	29.75	30.22	29.48	29.54	29.41	30.33	31.17	31.39	31.57
Percent Change	9.7%	8.9%	1.6%	-2.4%	0.2%	-0.4%	3.2%	2.8%	0.7%	0.6%
Social Insurance	15.03	14.68	14.02	13.16	14.31	15.36	15.67	16.06	16.04	16.10
Percent Change	-0.5%	-2.4%	-4.4%	-6.1%	8.7%	7.4%	2.0%	2.5%	-0.2%	0.4%
Residence Adjustment	10.69	10.46	11.46	12.27	12.81	12.44	12.69	12.55	13.49	15.34
Percent Change	-9.1%	-2.1%	9.5%	7.0%	4.5%	-2.9%	2.0%	-1.0%	7.4%	13.8%

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

Economic Report of the Governor

MAJOR CONNECTICUT ECONOMIC INDICATORS - FISCAL YEAR BASIS

**TABLE 8
MANUFACTURING EMPLOYMENT
(THOUSANDS -Seasonally Adjusted)**

	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>
Manufacturing	177.58	163.39	163.33	162.90	161.09	158.56	156.86	156.58	157.54	161.83
Percent Change	-4.7%	-8.0%	0.0%	-0.3%	-1.1%	-1.6%	-1.1%	-0.2%	0.6%	2.7%
Transportation Equip.	43.94	42.41	42.11	42.32	41.76	40.63	40.18	41.14	42.79	45.19
Percent Change	0.0%	-3.5%	-0.7%	0.5%	-1.3%	-2.7%	-1.1%	2.4%	4.0%	5.6%
Fabricated Metals	31.60	28.19	28.40	28.80	29.65	30.06	29.37	29.15	29.34	29.38
Percent Change	-5.3%	-10.8%	0.7%	1.4%	3.0%	1.4%	-2.3%	-0.8%	0.6%	0.2%
Electrical Equip. & App	10.58	9.72	9.89	9.85	9.71	9.29	8.79	8.41	8.07	8.13
Percent Change	-5.2%	-8.2%	1.8%	-0.4%	-1.4%	-4.3%	-5.4%	-4.3%	-4.1%	0.8%
Chemicals	11.00	9.82	9.60	8.74	8.05	7.93	7.83	7.65	7.66	7.95
Percent Change	-8.9%	-10.8%	-2.2%	-8.9%	-7.9%	-1.4%	-1.4%	-2.2%	0.1%	3.8%
Printing & Support	6.62	5.82	5.68	5.58	5.27	5.10	5.12	5.21	5.39	5.31
Percent Change	-11.6%	-12.1%	-2.5%	-1.7%	-5.6%	-3.2%	0.2%	1.9%	3.4%	-1.4%
Industrial Machinery	17.03	15.33	14.88	14.71	14.27	13.99	14.13	13.84	13.46	13.37
Percent Change	-5.4%	-10.0%	-2.9%	-1.2%	-2.9%	-2.0%	1.0%	-2.1%	-2.8%	-0.7%
All Other	56.80	52.11	52.78	52.91	52.37	51.56	51.44	51.18	50.83	52.50
Percent Change	-5.9%	-8.3%	1.3%	0.2%	-1.0%	-1.6%	-0.2%	-0.5%	-0.7%	3.3%

Economic Report of the Governor

MAJOR CONNECTICUT ECONOMIC INDICATORS - FISCAL YEAR BASIS

**TABLE 9
NONMANUFACTURING EMPLOYMENT
(THOUSANDS -Seasonally Adjusted)**

	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>
Nonmanufacturing	1,487.2	1,442.7	1,455.2	1,467.9	1,482.8	1,496.0	1,511.8	1,520.8	1,523.3	1,524.4
Percent Change	-2.2%	-3.0%	0.9%	0.9%	1.0%	0.9%	1.1%	0.6%	0.2%	0.1%
Construction & Mining	60.3	51.8	51.4	52.2	52.8	54.6	57.4	59.6	59.2	59.3
Percent Change	-12.9%	-14.1%	-0.9%	1.7%	1.2%	3.4%	5.1%	3.8%	-0.8%	0.2%
Information	36.4	32.5	31.6	31.1	31.7	32.0	32.2	32.4	32.1	30.9
Percent Change	-5.5%	-10.7%	-2.7%	-1.4%	1.9%	0.9%	0.6%	0.5%	-1.0%	-3.6%
Utilities	6.8	6.4	6.3	6.0	6.0	6.0	5.7	5.6	5.5	5.2
Percent Change	2.2%	-5.9%	-1.6%	-3.9%	-0.2%	0.4%	-5.1%	-1.3%	-2.5%	-5.6%
Transportation	40.6	38.5	39.3	39.9	41.4	42.3	43.5	45.1	45.6	48.0
Percent Change	-2.8%	-5.4%	2.2%	1.6%	3.6%	2.3%	2.7%	3.8%	1.1%	5.1%
Wholesale Trade	67.3	63.2	63.0	63.0	62.9	62.9	62.6	62.4	62.6	62.9
Percent Change	-2.6%	-6.2%	-0.3%	0.1%	-0.2%	-0.1%	-0.4%	-0.4%	0.3%	0.6%
Retail Trade	182.6	177.4	179.6	180.9	182.0	183.9	184.4	185.0	184.3	182.6
Percent Change	-4.4%	-2.8%	1.3%	0.7%	0.6%	1.1%	0.3%	0.3%	-0.4%	-0.9%
Finance & Insurance	121.0	116.6	116.7	115.3	113.2	110.1	110.0	110.1	108.8	107.9
Percent Change	-1.8%	-3.6%	0.1%	-1.2%	-1.8%	-2.7%	-0.2%	0.1%	-1.2%	-0.8%
Real Estate	19.9	19.0	18.8	18.7	18.9	19.0	19.5	19.9	19.8	20.0
Percent Change	-4.7%	-4.7%	-0.7%	-0.8%	1.1%	0.8%	2.8%	2.0%	-0.6%	1.1%
Professional & Business	201.5	192.4	197.6	203.8	207.6	212.3	216.9	218.5	218.4	219.6
Percent Change	-5.0%	-4.5%	2.7%	3.1%	1.8%	2.3%	2.2%	0.7%	-0.1%	0.6%
Education & Health	299.9	304.1	310.8	314.8	318.9	321.9	325.9	327.4	332.6	336.8
Percent Change	2.6%	1.4%	2.2%	1.3%	1.3%	1.0%	1.2%	0.4%	1.6%	1.3%
Leisure & Hospitality	135.2	132.6	135.4	140.0	144.3	148.8	150.6	152.1	155.6	155.5
Percent Change	-1.6%	-1.9%	2.1%	3.4%	3.1%	3.1%	1.2%	1.0%	2.3%	0.0%
Other Services	62.1	60.6	60.6	60.6	62.0	62.2	63.5	64.3	64.9	65.1
Percent Change	-2.8%	-2.4%	0.0%	0.0%	2.3%	0.4%	2.0%	1.4%	0.8%	0.3%
Federal Government	19.5	19.8	18.3	17.8	17.4	17.3	17.6	17.7	18.0	18.1
Percent Change	-0.6%	1.3%	-7.2%	-2.8%	-2.2%	-0.8%	2.0%	0.3%	1.5%	0.8%
State & Local Gov't.	234.4	228.1	225.9	223.7	223.7	222.6	222.0	220.6	216.1	212.5
Percent Change	-0.1%	-2.7%	-0.9%	-1.0%	0.0%	-0.5%	-0.3%	-0.6%	-2.0%	-1.7%

Economic Report of the Governor

MAJOR CONNECTICUT ECONOMIC INDICATORS - FISCAL YEAR BASIS

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

	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>
Labor Force	1,887.6	1,899.4	1,919.3	1,903.0	1,870.7	1,874.1	1,903.9	1,892.2	1,918.5	1,908.3
Percent Change	1.0%	0.6%	1.0%	-0.8%	-1.7%	0.2%	1.6%	-0.6%	1.4%	-0.5%
Nonfarm Employment	1,664.8	1,606.1	1,618.5	1,630.8	1,643.9	1,654.6	1,668.7	1,677.4	1,680.8	1,686.2
Percent Change	-2.4%	-3.5%	0.8%	0.8%	0.8%	0.7%	0.9%	0.5%	0.2%	0.3%
Residential Employment	1,759.3	1,733.1	1,743.8	1,742.6	1,717.2	1,738.5	1,787.5	1,788.8	1,824.8	1,826.8
Percent Change	-1.0%	-1.5%	0.6%	-0.1%	-1.5%	1.2%	2.8%	0.1%	2.0%	0.1%
Unemployed	128.3	166.3	175.4	160.4	153.5	135.5	116.4	103.4	93.7	86.2
Percent Change	40.0%	29.6%	5.5%	-8.5%	-4.3%	-11.7%	-14.1%	-11.2%	-9.4%	-8.0%
Unemployment Rate	6.8%	8.8%	9.1%	8.4%	8.2%	7.2%	6.1%	5.5%	4.9%	4.5%
Households	1,365.3	1,369.7	1,366.1	1,367.2	1,358.3	1,361.5	1,359.9	1,363.9	1,368.6	1,369.7
Percent Change	0.4%	0.3%	-0.3%	0.1%	-0.7%	0.2%	-0.1%	0.3%	0.3%	0.1%
Housing Starts	3,764.8	3,853.1	3,539.2	3,634.6	5,337.8	4,658.4	4,729.1	6,016.9	4,849.0	4,687.1
Percent Change	-44.0%	2.3%	-8.1%	2.7%	46.9%	-12.7%	1.5%	27.2%	-19.4%	-3.3%
Single Family Percent Change	2,479.1	2,848.4	2,469.8	2,387.4	3,051.6	2,761.4	2,389.8	2,748.0	2,753.7	2,972.8
	-49.6%	14.9%	-13.3%	-3.3%	27.8%	-9.5%	-13.5%	15.0%	0.2%	8.0%
Multi Family Percent Change	1,285.7	1,004.7	1,069.5	1,247.3	2,286.2	1,896.9	2,339.3	3,262.9	2,113.0	1,714.3
	-28.5%	-21.9%	6.4%	16.6%	83.3%	-17.0%	23.3%	39.5%	-35.2%	-18.9%
New Car Registrations	129.0	133.3	148.1	152.1	161.8	175.1	176.3	182.5	179.2	173.3
Percent Change	-29.8%	3.4%	11.0%	2.7%	6.4%	8.2%	0.7%	3.5%	-1.8%	-3.2%

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

Economic Report of the Governor

MAJOR CONNECTICUT ECONOMIC INDICATORS - FISCAL YEAR BASIS

**TABLE 11
ANALYTICS**

	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>
Wages/Total Income	46.1%	44.3%	44.4%	44.2%	45.4%	45.8%	45.4%	45.5%	44.9%	44.1%
Other Labor Income /Total Income	10.4%	10.3%	10.2%	9.9%	10.1%	10.2%	10.1%	10.1%	10.0%	9.8%
Social Insurance /Total Income	6.6%	6.4%	6.0%	5.6%	6.2%	6.7%	6.6%	6.7%	6.7%	6.6%
Transfer Payments /Total Income	12.0%	13.0%	12.9%	12.6%	12.8%	12.9%	12.8%	13.0%	13.1%	12.9%
Proprietor's Income /Total Income	13.9%	16.8%	15.4%	14.2%	12.1%	11.5%	11.2%	11.1%	11.0%	10.9%
Property Income /Total Income	24.1%	22.1%	23.0%	24.7%	25.7%	26.3%	27.1%	27.0%	27.7%	28.7%
Average Wages (Thousands)	58.92	58.78	59.59	61.78	62.22	63.31	64.35	65.84	67.11	66.46
Average Mfg. Wages (Thousands)	70.61	70.27	71.78	77.01	78.19	80.87	82.16	81.10	80.46	80.58
Manufacturing Share of Nonfarm Employment	10.7%	10.2%	10.1%	10.0%	9.8%	9.6%	9.4%	9.3%	9.4%	9.6%
Residential Employment /Total Nonfarm Employment	1.057	1.079	1.077	1.069	1.045	1.051	1.071	1.066	1.086	1.083

Economic Report of the Governor

MAJOR CONNECTICUT REGIONAL ECONOMIC INDICATORS - CALENDAR YEAR BASIS

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

BRIDGEPORT-STAMFORD-NORWALK										
	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>
Personal Income	90,605.7	89,552.6	95,621.6	96,668.7	97,162.8	91,893.8	97,580.1	99,450.7	101,227.2	104,589.8
Percent Change	9.9%	-1.2%	6.8%	1.1%	0.5%	-5.4%	6.2%	1.9%	1.8%	3.3%
Total Wages	35,784.7	32,774.1	33,937.0	35,507.7	36,231.8	36,293.2	37,399.6	38,608.3	38,719.2	38,308.4
Percent Change	-0.9%	-8.4%	3.5%	4.6%	2.0%	0.2%	3.0%	3.2%	0.3%	-1.1%
HARTFORD-WEST HARTFORD-EAST HARTFORD										
	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>
Personal Income	60,708.4	60,007.6	61,539.3	64,216.0	66,241.8	66,745.1	69,523.6	71,625.8	72,437.8	74,252.9
Percent Change	3.7%	-1.2%	2.6%	4.3%	3.2%	0.8%	4.2%	3.0%	1.1%	2.5%
Total Wages	35,673.3	34,358.6	34,739.4	36,201.9	37,426.0	38,180.3	39,783.7	41,103.9	41,269.0	42,370.9
Percent Change	1.0%	-3.7%	1.1%	4.2%	3.4%	2.0%	4.2%	3.3%	0.4%	2.7%
NEW HAVEN-MILFORD										
	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>
Personal Income	38,974.5	37,954.7	38,831.2	40,426.4	41,616.7	42,013.5	43,436.7	44,633.5	45,106.7	46,930.5
Percent Change	2.6%	-2.6%	2.3%	4.1%	2.9%	1.0%	3.4%	2.8%	1.1%	4.0%
Total Wages	18,959.7	18,255.0	18,389.8	18,868.7	19,491.8	19,857.4	20,429.2	21,044.3	21,398.7	21,926.6
Percent Change	2.4%	-3.7%	0.7%	2.6%	3.3%	1.9%	2.9%	3.0%	1.7%	2.5%
NEW LONDON-NORWICH, CT-RI										
	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>
Personal Income	12,653.5	12,574.7	12,730.5	13,229.7	13,559.9	13,532.7	13,915.5	14,499.3	14,724.6	15,260.9
Percent Change	3.7%	-0.6%	1.2%	3.9%	2.5%	-0.2%	2.8%	4.2%	1.6%	3.6%
Total Wages	6,852.8	6,704.9	6,652.7	6,736.9	6,793.3	6,755.4	6,880.2	6,965.3	7,153.7	7,415.8
Percent Change	3.8%	-2.2%	-0.8%	1.3%	0.8%	-0.6%	1.8%	1.2%	2.7%	3.7%