

YALE UNIVERSITY – EXECUTIVE SUMMARY

The impact of Yale University on Connecticut's economy is:

a total impact of \$2667.29 million in sales of goods and services in Connecticut including:

- \$1949.68 million in spending including \$1857.21 million spent by the institution for employee compensation (earnings), operating and capital costs; and \$92.47 million spent by net new students and campus visitors; and
- \$717.61 million in indirect or induced economic activity in the rest of Connecticut's economy.

a total of 36,428 jobs in Connecticut including:

- 12,160 full time equivalent positions¹ at the institution; and
- 24,268 full time equivalent positions in the rest of Connecticut's economy.

increased earnings², and state and local tax revenues from job creation including:

- \$1300.65 million in earnings for 12,160 full time equivalent positions at the institution;
- \$1013.69 million in earnings for remaining 24,268 full time equivalent positions in the rest of Connecticut's economy; and
- \$172.69 million³ in tax revenue from the institution's economic activity.

increased earnings, and state and local tax revenues from alumni living and working in Connecticut including:

- \$1001.73 million in earnings for an estimated 13,964 alumni living in Connecticut; and
- \$90.47 million in tax revenues paid by an estimated 13,964 alumni living in Connecticut.

¹ A full time equivalent position (FTE) represents an expected 40 hours of work per week. This work may be performed by one full time worker. In this case, one full time equivalent position is one job. This work may be performed by multiple part time workers. In this case, one full time equivalent position could represent more than one job. As such, results stated in full time equivalent positions may underestimate the actual number of jobs created.

² Earnings include salaries, wages and benefits.

³ This state tax revenue figure includes changes in corporate taxes associated with general equilibrium changes resulting from increased or decreased economic activity in different economic sectors. Table 5 in the Economic Impact Summary includes only taxes paid by employees: general and excise sales tax, income taxes, and personal property taxes.

YALE UNIVERSITY – DETAIL

Direct Impact on the Connecticut Economy

Table 1. Direct Impact on State of Connecticut (in millions) (2007)	
Spending in Connecticut	Amount
Earnings (Wages, Salaries, Benefits)	\$1,300.65
Institutional Operations	\$288.65
Institutional Capital Expenses	\$267.91
Student Expenditures	\$85.12
Campus Visitors	\$7.35
Total	\$1,949.68

Table includes expenditures in Connecticut only.

Total Impact (Direct + Indirect) on the Connecticut Economy by Sector

Table 2. Total Impact on Sectors of the State Economy (in units) (2007)		
Industry	Total Impact	Total (FTE) Jobs
Agriculture/Mining	\$3,863,368	679
Construction	\$221,432,563	4002
Finance/Real Estate	\$354,043,367	1391
Communication	\$89,280,494	331
Manufacturing	\$149,396,405	782
Services	\$995,796,642	20625
Transportation/Utilities	\$74,291,107	381
Wholesale/Retail	\$292,615,799	2536
Government	\$502,616,974	5700
Total	\$2,667,294,990	36428

Numbers may not add due to rounding.

YALE UNIVERSITY – DETAIL

Impact on State and Local Tax Revenues

The 36,428 (direct & indirect) employees generate state and local tax revenue as follows:

- \$38.18 million in sales and excise taxes;
- \$63.54 million in income tax;
- \$19.34 million in property taxes, which is
- a total of \$121.06 million in state and local taxes.

The estimated 13,964 alumni living in Connecticut generate state and local tax revenue as follows:

- \$37.33 million in sales and excise taxes;
- \$34.04 million in income tax;
- \$19.09 million in property taxes, which is
- a total of \$90.47 million state and local taxes.

The state government pays \$27.26 million to local municipalities⁴ under the Payment-In-Lieu of Taxes (PILOT) program.

Economic Impact by Sector Detail

Industry	Direct Impact*	Total Impact	Indirect Jobs
Agriculture	\$3,940,314	\$3,693,784	675
Mining	\$0	\$169,554	3
Construction	\$265,752,662	\$221,430,780	4002
Manufacturing - Durable	\$16,539,635	\$94,828,299	460
Manufacturing - Non-Durable	\$39,072,609	\$54,573,131	322
Transportation	\$12,539,472	\$23,422,020	275
Utilities	\$30,403,837	\$50,868,489	107
Information	\$37,252,945	\$89,279,775	331
Finance, Insurance and Real Estate	\$24,450,931	\$354,040,517	1391
Whole Trade	\$37,549,679	\$112,330,850	386
Retail Trade	\$48,910,482	\$112,330,850	2151
Professional and Technical Services	\$36,776,266	\$143,508,283	1335
Other Business Services	\$13,305,412	\$106,103,023	1338
Accommodations and Food Services	\$20,163,544	\$37,374,190	1255
Other Consumer Services	\$22,598,808	\$77,671,184	1734
Health and Education Services	\$39,776,876	\$631,131,944	2804
Government	\$0	\$502,612,927	5700
Total	\$649,033,472	\$2,667,273,513	24268

* Direct impact does not include institutional operating and employees' wages and benefits spending.

⁴ Local municipalities include: Bethany, Brantford, East Lyme, Farmington, Guilford, Hamden, Lyme, New Haven, North Branford, Norfolk, Orange, West Haven and Woodbridge.

YALE UNIVERSITY – ECONOMIC IMPACT SUMMARY

Institution	Direct Impact *		Total Impact*	Direct Jobs	Indirect Jobs	Total Jobs
	Employee	Other				
Albertus Magnus College	\$11.97	\$6.28	\$59.81	501	442	943
Connecticut College	\$54.71	\$26.09	\$198.22	735	1,856	2,591
Fairfield University	\$80.12	\$66.40	\$400.19	1,169	3,839	5,008
Goodwin College	\$8.72	\$8.12	\$40.28	177	401	578
Mitchell College	\$9.25	\$4.54	\$48.76	153	460	613
Quinnipiac University	\$92.93	\$146.67	\$598.74	1,284	6,083	7,366
Rensselaer at Hartford	\$14.04	\$1.29	\$16.98	74	109	183
Sacred Heart University	\$53.70	\$40.88	\$351.76	993	3,319	4,311
St. Joseph College	\$24.88	\$9.25	\$73.14	544	584	1,128
St. Vincent's College	\$3.29	\$0.00	\$10.39	49	90	139
Trinity College	\$58.47	\$0.00	\$234.92	804	2,179	2,983
University of Bridgeport	\$28.59	\$0.00	\$328.15	408	3,300	3,709
University of Hartford	\$85.17	\$0.00	\$479.91	1,287	4,564	5,851
University of New Haven	\$48.96	\$0.00	\$261.42	860	2,431	3,290
Wesleyan College	\$96.64	\$0.00	\$448.31	984	4,967	5,951
Yale University	\$1,299.37	\$648.39	\$2,667.29	12,160	24,268	36,428
Total	\$1,970.81	\$957.92	\$6,218.28	22,179	58,891	81,070

* In \$millions. Direct impacts are not comparable because spending data was not supplied for all institutions.

Institution	Sales & Excise	Income	Property	All Taxes
Albertus Magnus College	\$933,604	\$1,471,463	\$339,024	\$2,744,091
Connecticut College	\$4,174,354	\$5,808,621	\$1,367,555	\$11,350,529
Fairfield University	\$8,483,795	\$11,233,426	\$2,650,751	\$22,367,972
Goodwin College	\$787,529	\$1,118,750	\$258,710	\$2,164,988
Mitchell College	\$979,421	\$1,344,550	\$320,206	\$2,644,177
Quinnipiac University	\$12,293,524	\$16,315,856	\$4,083,235	\$32,692,614
Rensselaer at Hartford	\$364,928	\$527,626	\$116,360	\$1,008,913
Sacred Heart University	\$6,831,632	\$9,420,823	\$2,283,577	\$18,536,032
St. Joseph College	\$1,365,815	\$2,085,696	\$475,933	\$3,927,444
St. Vincent's College	\$220,859	\$305,456	\$71,768	\$598,083
Trinity College	\$5,087,158	\$6,806,135	\$1,617,736	\$13,511,029
University of Bridgeport	\$6,620,439	\$8,467,020	\$2,056,451	\$17,143,910
University of Hartford	\$9,758,244	\$13,094,340	\$3,182,657	\$26,035,241
University of New Haven	\$5,137,805	\$7,010,489	\$1,926,782	\$14,075,076
Wesleyan College	\$10,805,383	\$13,398,786	\$3,150,933	\$27,355,102
Yale University	\$38,184,962	\$63,543,981	\$19,336,383	\$121,065,326
Total	\$112,029,450	\$161,953,017	\$43,238,059	\$317,220,526

Includes institutions' PILOT transfers to local government.

A.1 METHODOLOGICAL NOTE

An economic impact analysis of your institution captures the economic activity –both the direct and indirect effects – generated by your daily operations. Your institution makes purchases from Connecticut businesses and hires employees. This is your institution’s *direct effect*. This money is then spent again. Employees use their salaries and wages to purchase goods and services from other businesses, pay taxes to the government, and make mortgage payments to banks. Local businesses use money from their sales to pay their employees, purchase goods and services from other suppliers and pay taxes to the government. These effects ripple through the economy and are known as the *indirect effects*. Typically, these analyses are performed using tables that summarize these spending patterns; known as input-output tables.

This economic analysis uses the Connecticut REMI Policy Insight (REMI) model to analyze the direct and indirect effects. The REMI model embeds the standard input-output tables within a larger dynamic *general equilibrium model* of the economy. It is like a miniature economy built in a computer program with which we can ask ‘what if?’ types of questions and see how the economy would respond. In the REMI model, the direct and indirect effects interact in *simulated time* with evolving prices, labor markets, population, capital markets, exports (national and international), and consumer demand. The REMI results simulate many complex and unique market interactions. As such, the REMI model’s results reflect a broader economic perspective than most other input-output models. The REMI model’s results are not necessarily directly comparable to other input-output models.

Because of its complexity, the REMI model offers more ways to characterize your educational institution than standard input-output tables. The variables considered in this analysis include: (i) employment and spending by the institution, (ii) differences in institutional wages vs. average market wages in the educational sector, (iii) institutional spending, (iv) ‘net new’ student spending, (v) ‘net new’ visitor spending, (vi) occupational supply resulting from institutional graduates staying in Connecticut, (vii) temporary changes in the college age population in Connecticut, and (viii) an amenity value. The amenity value is a monetary estimate of the changes in the quality of life in the region. In this case, it is composed of uncompensated services provided by the institution to the community and the ‘net new’ portion of donations.

Only ‘net new’ spending *in Connecticut* can be included in this analysis to accurately capture your institution’s impact on the Connecticut economy. Any out-of-state economic activity, like purchases from out-of-state vendors, does not affect sales in Connecticut and does not affect Connecticut’s economy. ‘Net new’ economic activities are purchases and sales that would not have taken place in Connecticut if the institution were not operating in Connecticut. Consider the following example. In the case of students, their living expenses are ‘net new’ to the state if (1) they moved here from out-of-state to attend school or (2) live in Connecticut but would have moved out of state to attend school if this institution were not here. Establishing ‘net new’ values is based on data, when available; otherwise assumptions are made that are consistent with other comparable studies.

The data came from the IPEDs financial and online databases and the Independent College Sector survey. Visitor spending vectors were obtained and modified from the most recent Connecticut State Visitor Survey. Student spending vectors are based on Census Bureau samples of college student spending patterns. Where there were gaps in the supplied data, modeling techniques were used based on ‘like’ institutions within the independent college sector. The REMI model itself compensated for colleges that supplied employment but no operating expenditures. In these cases, the direct impact estimates are not comparable between colleges. In one case, missing data could not be fully reconstructed and, necessarily, the total impact is likely an underestimate. Also, the REMI model generates the ‘total’ values internally. As a result, totals may be the exact sum of individual values because of compounded rounding errors. All

dollar values are reported in current dollars (2008\$) using the internal regional REMI price deflator, which differs from the national consumer price index.