



**The Economic Impact of Continuing Operations of the  
University of Connecticut**

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## EXECUTIVE SUMMARY

Founded in 1881, the University of Connecticut (UConn) is a public research institution whose mission is to perform basic research and to deliver excellent instruction, as well as to promote economic growth through its contributions in creating a skilled labor force, developing product and process innovations, providing community service, and generally enhancing the state's quality of life. UConn is one of the few universities in the United States that has been designated a land, sea, and space grant University. The University of Connecticut embraces the main campus in Storrs, five regional campuses, the Health Center, Law School, and School of Social Work, the last three located in Hartford County. The University's programs spread across Connecticut. Except for Middlesex and Windham counties, each Connecticut county hosts one or more UConn campuses or schools.

UConn sustains a broad range of activities, from teaching, research, medical services, and community outreach work to arts and athletic events that cover all aspects of human life. UConn is also a major business, buying a vast array of supplies and services from Connecticut companies and providing a host of services. Its impact reaches from border to borders and, as such, no other Connecticut institution matches the far-reaching effect UConn has on the state, its communities, individuals, and industries. From this perspective, UConn has multiple dimensions, well beyond the common perception of it as being merely involved with teaching and research.

As the first endeavor to measure the economic impact of UConn on Connecticut, this study provides answers to the following questions: What economic and fiscal impact does UConn have on local (county) economies and the state economy as a whole? How much increase in economic output and employment in the county and state economies does UConn generate? Is the state contribution to UConn a sound investment? As the flagship public university for Connecticut, UConn's economic and fiscal impact is important from the perspective of taxpayers' as well as from that of public policy-makers. To provide appropriate context, this study examines several recent studies of the economic impact of other public universities on their states and provinces; by comparison, this analysis is quite comprehensive in scope and scale. It accounts for all activities of the University, including employment, supply of professional workers,

procurement, research, visitor spending, and community service, to spin-off companies and licensing and royalty arrangements. These activities in turn generate rounds of spending and employment that cumulatively generate growth in Connecticut's economy.

The approach in this study to estimating UConn's economic impact is to remove it counterfactually from the Connecticut economy. The difference between today's economy with UConn and a hypothetical one without it represents the net economic impact UConn has on the state. This approach excludes any substitute activities or alternative use of UConn facilities. In this way, we capture the instantaneous impact of UConn's established patterns of economic contribution to Connecticut.

The assumptions underlying the analysis of economic impact are conservative. Specifically, UConn's research impact is specifically under-estimated because of the lack of an extensive survey of the companies whose locational *raison d'être* or even existence depends on UConn research and innovation.

The list below enumerates the basic components of the University's direct impact on the Connecticut economy (unless otherwise noted, all figures are for FY2001):

- Wages and salaries of 10,307 employees (FTE) who reside in Connecticut (includes a wage bill adjustment of \$309 million higher than state *aggregate* average annual income in the education, medical, miscellaneous business and professional services sectors than REMI assumes as its baseline);
- \$251 million spent for goods and services in Connecticut by UConn providing dual benefits of lower prices and stimulating local businesses;
- \$134 million in student expenditure injected into the economy;
- 17,218 full-time students represent an increase in the college age population of the region that has a small impact on the labor supply of the region;
- 2,783 UConn graduates in 2002 represent a flow of human capital into the Connecticut economy in various professional occupations;
- 165,949 (out of over 1 million total) net new visitors attracted to facilities at UConn, generating over \$10 million net new spending in the region;
- Professional development programs that increase productivity of the Connecticut workforce in selected sectors;

- 1,973 UConn retirees residing in Connecticut inject more than \$46 million through consumption expenditures into the economy;
- \$147.3 million in amenity value (e.g., research, community service) increases the quality of life in Connecticut;
- 26 people employed in spin-off companies associated with UConn;
- \$36 million research and development money subcontracted to various companies and institutions across Connecticut;
- \$339 million state support in various forms (primary appropriation, fringe benefits, grants and contracts) returned to taxpayers as an increase in their disposable income;

These inputs capture the full range of activities that generate the University’s net economic impact. This approach develops the analysis from expenditure patterns rather than from revenues because we know more precisely the magnitudes and sectoral distribution of expenditures. The alternative approach would be to let the Connecticut economic model allocate revenues to receiving sectors, necessarily a far less accurate approach to understanding the impact of UConn.

## **Results**

Table 20, reproduced below from the body of the report, summarizes the total economic impact of UConn on Connecticut and its counties. The total impact represents the direct, indirect and induced effects of UConn’s myriad activities. Peak values are the maximum values attained during the economy’s endogenous adjustment to UConn’s counterfactual absence.

Table 20: Summary of Findings: UConn's Peak Contribution to the Economy									
	Connecticut	Fairfield	New Haven	Hartford	Tolland	New London	Windham	Litchfield	Middlesex
Gross Regional Product (Million 2001 \$)	\$2,783	\$519	\$397	\$942	\$321	\$156	\$149	\$85	\$203
Gross Personal Income (Million 2001 \$)	\$1,917	\$134	\$185	\$679	\$360	\$103	\$201	\$72	\$182
Real Disposable Personal Income (Million 2001 \$)	\$2,077	\$280	\$289	\$609	\$298	\$126	\$169	\$95	\$200
Population (Individuals)	46,980	4,471	7,118	14,290	7,049	2,439	3,994	1,812	7,320
Employment (Jobs)	25,410	2,371	2,854	8,887	5,163	1,183	2,191	780	2,231
Non-Farm Employment (Jobs)	22,550	2,237	2,557	8,114	4,936	1,068	2,126	704	1,830
Disposable Personal Income (Million 2001 \$)	\$1,868	\$192	\$226	\$620	\$308	\$107	\$171	\$76	\$167
State Revenues at State Average Rates (Mil. 2001 \$)	\$277	\$41	\$37	\$90	\$36	\$15	\$20	\$11	\$27
Local Revenues at Adjusted State Average Rt. (Mil. 2001 \$)	\$151	\$17	\$20	\$54	\$18	\$9	\$12	\$6	\$14
State Expenditures at State Average Rates (Mil. 2001 \$)	\$78	\$7	\$11	\$23	\$12	\$4	\$7	\$3	\$12
Local Expenditures at Adjusted State Average Rt. (Mil. 2001 \$)	\$180	\$19	\$26	\$62	\$24	\$9	\$15	\$7	\$25

Were it not for UConn, Connecticut’s Gross State Product (GSP) would decline by almost \$2.8 billion, representing about 1.5%. Total employment would decline by more than 25,000 jobs representing 1.5% of Connecticut’s total employment. Thus, unemployment would be currently about 5.3% compared to 3.8% (April 2002, CT DoL). Fiscally, the state gains more revenue than it spends, while towns’ and municipalities’ expenditures slightly exceed revenues.

***A critical insight emerges from this analysis: the state’s contribution (about \$340 million) leverages \$650 million in private and federal investment. It is the total revenue (\$989 million), public and private, that creates UConn’s total impact, however, we detail the benefit-cost ratios based solely on the state’s contribution relative to total impact.***

Public support for UConn generates \$277 million in peak (that is, the value when the economy has adjusted to its counterfactual absence) new tax revenues for Connecticut. This means for every dollar of state contribution to UConn, state tax revenues increase 82 cents—meaning that the University, because of the activity it generates, is nearly self-supporting from the perspective of the state. Table 18 from the body of the report shows the primary benefit-cost ratios.

Table 18: Cost-Benefit Analysis of the State Support for UConn		
Categories	Ratios	State Support (\$339 million)
Increase in State Tax Revenue	0.82	For every \$1 spent for UConn
Increase in Gross State Product	8.21	For every \$1 spent for UConn
Increase in Gross Personal Income	5.65	For every \$1 spent for UConn
Job Creation	1	For every \$13341 spent for UConn
Federal Research Money	\$0.28	For every \$1 spent for UConn

This table also shows that for every state dollar spent on UConn, GSP increases \$8.21 (in constant 2001 dollars). Similarly, for each taxpayer’s dollar of support, personal income increases \$5.65. As these two results reveal, the state gets a very high rate of return to its investment in ‘human capital,’ considerably higher than other forms of investment (e.g., stock market, bonds, and money market funds) for taxpayers and the state. The table also

shows how the economic benefits extend to significant job creation: each \$13,341 of state investment in UConn creates one job, primarily at the college level or higher.

Ranked by size in terms of their value of output among the seventy (2-digit SIC) economic sectors that make up the state's economy, UConn is 25<sup>th</sup>. Compared to thirteen other university impact studies, UConn performs at the top of its class in return to GSP per dollar invested.

***Taken together, these results demonstrate that the University of Connecticut is a powerful economic driver for the State of Connecticut and, through its leverage effects, creates noteworthy returns to Connecticut's individual and corporate taxpayers and to their quality of life.***

We gratefully acknowledge the valuable and timely assistance of UConn's departments of purchasing, payroll, human resources, the UConn Foundation, and the UConn Health Center in providing detailed data and valuable insights into the complex operation of the University.

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TABLE OF CONTENTS

Executive Summary..... i

Table of Contents.....vi

Introduction..... 1

Investment in “Human Capital” and Previous Impact Studies..... 2

Methodologies and Modeling Strategies.....10

    I.    Model.....10

    II.   Conceptual Framework.....13

    III.  Modeling Strategies.....15

        A. University as Operating Institution.....16

        B. UConn as an Employer.....18

        C. UConn as a Magnet for a Transient Population.....20

        D. UConn as Supplier of Well-Educated Labor Force.....23

        E. UConn as Visitor Attraction Center.....24

        F. UConn as Provider of Professional Training.....26

        G. UConn as Tourist Attraction Center.....27

        H. UConn and Quality of Life.....29

        I. UConn as Innovator.....31

        J. UConn’s Income Impact.....33

Model Assumption Summaries.....34

Dynamic Economic Impact Analysis Results.....35

    Fiscal Impact.....36

    Output Impact.....39

    Employment and Population Impact.....42

Cost-Benefit Analysis and Summary of Findings.....45

Appendix I: UConn Economic Impact by Senate District.....49

Appendix II: UConn Economic Impact by Assembly District.....54

# THE ECONOMIC IMPACT OF THE UNIVERSITY OF CONNECTICUT

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## **I: Introduction**

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This study answers these questions using the Connecticut Economic Model from Regional Economic Models, Inc. of Amherst, Massachusetts, (REMI), a dynamic, multi-sector, regional model. The REMI model measures the economy in its present form as a baseline. Because UConn already exists in the baseline model, in order to identify its contribution to the state and local economies, we remove it from the state economy counterfactually and then analyze how this affects both the local (county) and state economies. Realizing the difficulties in capturing both tangible and intangible benefits of UConn to communities and the state, we exercise extreme caution in estimating input (policy) variables and avoid double counting. Because of this approach, the estimates and impact results are conservative.

The next section (II) briefly describes the role of investments in “human capital” and reviews previous university impact studies to provide context for this study. Section III then lays out the methodology and conceptual framework that this study employs. Section IV considers economic impact categories (research, purchasing, visitor expenditure, student expenditure, population, retirees, amenity, income, occupational supply, occupational training, and employment) and modeling strategies in detail. Section V then summarizes the modeling strategies and Section VI presents findings. Finally, Section VII provides a cost-benefit summary and a conclusion.

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## II: Investment in “Human Capital” and Previous Impact Studies

Who benefits from Universities? What is the magnitude of the benefits for each beneficiary? These are the primary questions to which previous impact studies respond. Methodologically, what input to use (in terms of tangible, intangible benefits), how to measure (input-output models such as IMPLAN, RIMS III, or REMI), and what time frame to use (long-term, short-term) changes from one study to another, though the majority of studies estimates the economic impact of university-induced spending using IMPLAN for a long-term perspective.

This section first reviews relevant studies and how they dealt with the two questions above, and then looks at the methodological differences and difficulties in capturing the economic impact of universities. We focus on selected studies because there are a massive number; our review does seek to be exhaustive.

Universities benefit, directly and/or indirectly, socio-economic and political life in a society. One of the crucial factors that separates one society from another is knowledge, which some economists consider the engine of growth in new economy.<sup>1</sup> In the process of generating this knowledge (by universities) and acquiring it (by individuals), spillovers or positive externalities emerge that benefit society as a whole.

In their study of the University of Arizona economic and revenue impact, Charney and Pavlakovich (1999) divide society into four groups (individuals, state and local governments, state and local communities, and society at large) in order to identify the high return that their analysis shows to each of these groups. While many other studies acknowledge the total impact universities have on their host communities, they focus their attention on one or a few aspects of the total impact. For example, after examining the role of economic growth in the Hawaiian economy, the University of Hawaii study looks at the rates of return to individuals and taxpayers from their investment in higher education.<sup>2</sup> The University of South Carolina study emphasizes returns to the individual and state, while mentioning services to the community provided

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<sup>1</sup> Charney, Alberta H. and Vera Pavlakovich, The University of Arizona: An Investment in Arizona's and Pima County's Future: Economic and Revenue Impact Analysis 1997-98, (Tuscan, Arizona: The University of Arizona, 1999).

<sup>2</sup> University of Hawaii: Economic Research Organization, Economic Impact of the University of Hawaii, (Honolulu: The University of Hawaii, 2000).

by universities.<sup>3</sup> A University of Waterloo study provides one of most comprehensive looks at the overall impact on community, state and local government. Through an extensive survey of university research-related economic activities, this study analyzes broader societal implications of these activities as well as direct university-related spending.<sup>4</sup> The University of Maryland study discusses the benefits of higher education to individuals and communities and society in separate sections.<sup>5</sup>

Although many of these studies do mention the specific groups or sectors in society that benefit from the particular universities, none of these studies estimates the actual contribution to each group and then looks at the total impact on various societal groups. Therefore, the economic impact values that these studies reported capture only the impact of university-related spending (e.g., operating expenditures, visitor spending, student spending, alumni spending, and spin-off companies).<sup>6</sup> Below, we discuss how universities benefit individuals, state and local governments, local communities and industries (society at large). One should bear in mind that the separation among these entities is not clear-cut, but they are very much intertwined with each other.

*Individuals.* Higher education benefits individuals in many ways. First, education enables individuals to be proactive after their graduation. Many university graduates initiate their own businesses entering the economic arena as entrepreneurs. Second, according to a study, there is “nearly a \$1 million lifetime difference in the earnings of people with a bachelor’s degree (\$2,225,657) versus those with just a high-school diploma (\$1,268,111).<sup>7</sup> The University of Hawaii Study (2000) estimates that the annual rate of return for a bachelor’s degree is 15.8% and for graduate degree 19.1%, surpassing the returns to any other types of investments (e.g. stock market, long-term

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<sup>3</sup> Division of Research, The Darla Moore School of Business, University of South Carolina, [The Economic Impact of the University of South Carolina](#), (South Carolina: University of South Carolina, 2000).

<sup>4</sup> PricewaterhouseCoopers, [University of Waterloo: Regional Economic Benefits Study](#), (Waterloo, Canada: University of Waterloo, 2001).

<sup>5</sup> The Jacob France Center, [The Economic Impact of the University of Maryland on the State of Maryland](#), (Baltimore: The University of Maryland, 2000).

<sup>6</sup> In fact, many studies look at the economic impact of the universities in a narrow sense, taking into account the university as operating organization. A few studies go beyond and look at the university as a knowledge generator. See, PricewaterhouseCoopers (2001), and Walter Sudmant, [The Economic Impact of the University of British Columbia on the Greater Vancouver Regional District](#), (Vancouver, Canada: The University of British Columbia, 1999).

<sup>7</sup> National Association of State Universities and Land-Grant Colleges, [Shaping the Future: The Economic Impact of Public Universities](#), (Washington, DC: Office of Public Affairs, 2001), p.2.

government bond). Another study finds that the investment return to education is 22.67%.<sup>8</sup> Third, equal access to higher education benefits women's economic status. Last, and not least, higher education improves the quality of life of individuals as well as broadens individuals' outlook and increases their tolerance.

*State and Local Governments.* Governments benefit from higher education more than any other institution in society. Government benefits are not simply related to increasing tax revenues through university-related spending, although this amounts to a large sum. To highlight the prominent benefits governments receive from the presence of higher educational institutions, first, government tax revenues increase from university-related spending (e.g., university procurement, student spending, visitor spending). The mean tax revenue generated is \$60 million annually. Furthermore, the same survey from 96 public institutions indicates that the average return on every \$1 of state money invested in a public educational institution is \$5.<sup>9</sup> Second, public higher education plays an important role in the stability of a state's economy. On average, these institutions spend \$284 million, and employ 6,562 people.<sup>10</sup> Third, university graduates increase the state's tax base because of the higher salaries, and states require less government spending for health and social services.<sup>11</sup> Fourth, often unaccounted, but a highly crucial role universities play, is the input these universities provide in shaping informed public policies. According to Langford (2000), consultants from universities contribute over 15% of university-related job creation in Calgary, Canada. Moreover, faculty expertise in policy formation further increases the role of universities in the public policy arena.<sup>12</sup> Finally, universities attract large sums of research dollars into the state, thus act as an export industry. Research dollars, then, employ individuals and purchase goods and services.<sup>13</sup> Based on 96 universities, the average out-of-state funding was \$105 million.<sup>14</sup>

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<sup>8</sup> Strang, William A., David L. Funk, and M. Matthew Onofrio, Economic Impact of the University of Wisconsin, (Madison, Wisconsin: University of Wisconsin, 1997).

<sup>9</sup> See National Association of State Universities and Land-Grant Colleges, 2001, p. 3.

<sup>10</sup> National Association of State Universities and Land-Grant Colleges, 2001, p. 4. See also University of Hawaii, 2000.

<sup>11</sup> Charney and Pavlakovich, 1999.

<sup>12</sup> Langford, Cooper H., Measuring Economic Impact of University Research on Innovation, (Calgary, CA: University of Calgary, 2000).

<sup>13</sup> Coupal, Roger and David T. Taylor, Measuring the Contribution of the University to the State's Economic Development: Definitions and Strategies, (Wyoming: University of Wyoming, 1999).

*Local Communities.* The presence of the university benefits the communities in which it is located in many different ways. As many studies point out, education promotes social justice by providing opportunities to minorities and disadvantaged people.<sup>15</sup> The prominent impact on local communities comes from the fact that the university increases the visibility of the community by its athletic events. In addition, community-related programs improve the local quality of life. These programs address or cure certain problems, inform publics, provide leadership or present opportunities to area residents to utilize university facilities to become more enlightened citizens.<sup>16</sup> Many programs for communities are low cost, no cost or volunteer programs that affect community well-being. Another direct contribution of universities to communities is attracting college age population from outside the region. On average, two out of three graduates remain in the communities after graduation supplying a highly skilled, well-educated labor force to the region.<sup>17</sup> This, in turn, affects firms' decisions to locate in these communities where there is a skilled workforce pool. Last, but not least, is the availability of faculty expertise in community affairs that contributes to informed-decision making.

*Impact on the overall economy.* The most pronounced impact of the university is that which, according to Martin and Trudeau (1998), takes two distinct forms: a static impact, primarily through university-related spending, and, a dynamic impact, through research and teaching.<sup>18</sup> The dynamic impact ultimately relates to the question of what causes economic growth. In this context, universities emerge as a powerful engine of economic growth. Classic economic growth theory analyzes growth as a function of an increase in capital and labor stocks. In addition to these, new growth theory includes increase in productivity as an important part of the economic growth equation. In fact,

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<sup>14</sup> National Association of State Universities and Land-Grant Colleges, 2001, p.4. On this issue, see also Strang, Funk, and Onofrio (1997).

<sup>15</sup> University of Hawaii, 2000.

<sup>16</sup> These issues are well-covered in the studies. However, such studies do not attempt to quantify this aspect of the universities. See, Charney and Pavlakovich (1999). Duke University, Economic Impact Year 2000 Report, (Durham, NC: Duke University, 2000). The Jacob France Center (2000). Strang, Funk, and Onofrio (1997).

<sup>17</sup> National Association of State Universities and Land-Grant Colleges (2001).

<sup>18</sup> University-related spending refers to university operating expenditure, university employment, visitor spending, student spending and alumni spending. For more information about these two types of impact, see Martin, Fernand and Marc Trudeau, "The Economic Impact of University Research," *Research File*, vol. 2, no.3, 1998.

according to studies, the increase in productivity has become a leading source of U.S. economic growth surpassing the contributions of labor and capital. Economists estimate that about 8 percent of the U.S. annual economic growth between 1979 and 1999 could be attributable to college teaching and research.<sup>19</sup>

One can describe the dynamic impact of university research and teaching as “economic capacity building.”<sup>20</sup> On the one hand, universities provide necessary skills and ability to use those skills in the job market. In this sense, the university enables people to perform necessary job requirements.<sup>21</sup> On the other hand, university research and innovations stimulate the economy by introducing new technologies or performance improvements in many sectors. Technological changes flowing out of university research make labor and capital more productive, and thereby increase economic growth.<sup>22</sup> Evidence about the role of universities can be found in increasing “technopoles” located around them, and in an increasing number of university research-related scientific papers cited in industrial patents.<sup>23</sup> In this regard, sixty-five percent of the 96 responding educational institutions report, “that they have a research park and/or business incubator.”<sup>24</sup>

With respect to increasing skills and labor productivity, universities supply skilled labor in many professions sometimes direly needed in the region. The presence of a skilled labor force attracts new firms to the region and retains existing firms. This skilled work force is often the source of improved productivity, new ideas and innovations. In addition, universities provide non-credit courses to improve skills of the existing workforce to boost productivity. These courses are similar to on-the-job training provided by firms. As the synergy between universities and companies increases, the latter are likely to substitute in-house job training with non-credit courses. Evidence

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<sup>19</sup> For more information about the role of productivity in the U.S. economic growth, see Atack, Jeremy and Peter Passel, New Economic View of American History, 2<sup>nd</sup> edition (New York: W.W. Norton & Company, 1994). For the labor-force quality difference and its role in economic growth, see Hanushek, Eric A. and Dennis D. Kimko, “Schooling, Labor-Force Quality, and the Growth of Nations,” *American Economic Review*, vol. 90 No. 5, 2000. For the role of university teaching and research in economic growth in the U.S. between 1979 and 1999, see Reseak, Robert W., *et al.*, Illinois Higher Education: Building the Economy, Shaping Society, (Urbana: Institute of Government and Public Affairs, 2000).

<sup>20</sup> Coupal and Taylor (1999).

<sup>21</sup> Martin and Trudeau (1998).

<sup>22</sup> *Ibid.*, p. 4. See also Langford (2000).

<sup>23</sup> Martin and Trudeau (1998), p. 5.

<sup>24</sup> National Association of State Universities and Land-Grant Colleges (2001).

suggests that on-the-job training increases productivity, thereby contributes to economic growth.<sup>25</sup>

In order to account for all parts of the aforementioned benefits, studies often use an input/output model such as IMPLAN or RIMS II (U.S. Bureau of Economic Analysis). Still others use specifically developed regional input/output models and associated multipliers. Many studies simply focus on the short-run economic impact of the university activities, although some of these studies attempt to capture the long-run impact by calculating rates of return to education for individuals and/or society. In terms of input variables utilized to calculate economic impact, there are large variations across the studies. For example, the University of South Carolina Study (2000) only analyzes university-related expenditure and its impact on the economy, whereas the PricewaterhouseCoopers' study (2001) initiates an extensive survey of spin-off companies and technology transfers to identify the dynamic impact of all university activities. Other studies by and large remain in-between. One important reason that these studies' focuses remain narrow is the fact that IMPLAN does not allow flexibility in inputting a range of variables into the model. The REMI model allows that flexibility. The second reason is the fact that to measure the impact of all aspects of university activities requires extensive surveys in areas, such as, research, spin-off companies, venturing, consulting, public policy, technology transfer, cultural activities, and, public service programs.<sup>26</sup> In many instances, these extensive reviews of programs and services are time consuming and costly.

In this study, we use the REMI model to account for UConn's impact on state and local economies. In terms of variables, we attempt to capture as many aspects of the University as we can quantify or impute. In this sense, our analysis takes a middle approach: we attempt to quantify certain community service programs, spin-off companies and productivity increases in addition to the tangible benefits. We must add, however, that what we capture in these areas reflects the absolute minimum benefits because of the lack of an extensive survey of each program and faculty engaging in

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<sup>25</sup> Barron, John M., Mark C. Burger, and Dan A. Black, On-the-Job Training, (Kalamazoo, Michigan: Upjohn Institute for Employment Research, 1997).

<sup>26</sup> For the significance of these aspects of the universities, see Langford (2000).



consulting. Table 1 compares selected economic impact studies to shed light on the methodological differences and each study's scope.

Table 1: Comparative Perspective on the University Impact Study Methodologies for Selected Universities				
Investigator	University	Study Year	Model	Impact Categories
Center for Business Research	Arizona State University	1999	IMPLAN	University Expenditures, Faculty and Staff Expenditures, Student Expenditures, and Visitor Expenditures
University of Colorado	University of Colorado	2000	Multipliers	Visitor Expenditure, Student Expenditure, University Expenditure, and Employment
S. Hussain Ali Jafri, Jay Dudley, and David Buland	Tarleton State University	2001	IMPLAN	University Expenditures, Faculty and Staff Expenditures, Student Expenditures, Visitor Expenditures, and Retiree Expenditures
Barry C. Field and Selene Weber	The University of Massachusetts at Amherst	1996	Regional I-O Model	Faculty and Staff Expenditure, University Spending, Student Expenditures, and Visitor Expenditures
The Jacob France Center	University of Maryland	2000	RIMS II	Total Operating Expenditures (Capital & Non-Capital for all Units including Medical and Foundation and Payroll), Student Expenditures, and Visitor Expenditures)
Randall A. Childs, David Greenstreet, and Tom S. Witt	West Virginia University	1998	IMPLAN	University Expenditure, Employee Spending, Student Spending, and Visitor Expenditures
Jeffrey M. Humphreys, David G. Clements, JoAnne Lowe, and Tracie W. Sapp	The University of Georgia	1999	RIMS II	University Spending, Athletic Association Spending, Visitor Spending, and Student Spending
The Darla Moore School of Business	University of South Carolina	2000	IMPLAN	Operating Expenditure, Student Expenditure, Athletic Expenditure, and Visitor Expenditure
PricewaterhouseCooper	University of Waterloo	2001	Provincial I-O Model	Operating Expenditure, Spin-off Companies, Alumni, Visitors, and Students
Economic Research Organization	University of Hawaii	2000	92 I-O Model of Hawaii	Operating Expenditure, Student, Visitor, and Retiree
Walter Sudmant	The University of British Columbia	1999	Regional Multipliers	Direct Expenditures, Visitors, Student, Employment, Spin-off Companies, and Workforce
Duke University	Duke University	2000	Multipliers	Employment, University Spending, Student, and Visitor
Alberta H. Chamey, and Vera K. Pavlakovich	The University of Arizona	1999	Regional I-O Models	Expenditures, Employee Spending, Construction, Student, and Visitor
Murat Arik, Stanley McMillen, and Fred Carstensen	University of Connecticut	2002	REMI	University Expenditure, Student Expenditure, Number of Employees, Wage Bill Adjustment, Visitor Day, Retiree Expenditure, Population Impact, Occupational Supply, Occupational Training-Productivity, Spin-off Companies, and Amenity Value

As these studies indicate, their primary emphasis is on the narrow expenditure impact of universities on their communities. We attempt to go beyond these methodologies by taking account of the aspects of universities other than expenditure. The next section details our modeling strategy and assumptions.



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### III: Methodology and Modeling Strategies

#### 1: The Model

The REMI model is a dynamic, multi-sector, regional model developed specifically for the Connecticut Center for Economic Analysis. This model provides detail on all eight counties in the State of Connecticut and any combination of these counties. The REMI model includes all of the major inter-industry linkages among 466 private industries aggregated into 49 major industrial sectors. With the addition of farming and three public sectors (state and local government, civilian federal government, and military), there are 53 sectors represented in the model for all eight counties.

The REMI model is based on a nationwide *input-output* (I/O) model that the U.S. Department of Commerce (DoC) developed and continues to develop. Modern input-output models are largely the result of groundbreaking research by Nobel laureate Wassily Leontief. Such models focus on the inter-relationships between industries, and provide information about how changes in specific variables – whether economic variable such as employment or prices in a certain industry or other variables like population -- affect factor markets, intermediate goods production, and final goods production and consumption.

The REMI Connecticut model takes the U.S. I/O “table” results and scales them according to traditional regional relationships and current conditions, allowing the relationships to adapt at reasonable rates to changing conditions. Some salient structural characteristics of the REMI model follow.

- Consumption is determined on an industry-by-industry basis, and is based on real disposable income in Keynesian fashion, i.e. with prices fixed in the short run and GDP (Gross Domestic Product) determined solely by aggregate demand.
- The demand for labor, capital, fuel, and intermediate inputs per unit of output depends on relative prices of inputs. Changes in relative prices cause producers to substitute cheaper inputs for relatively more expensive inputs.

- Supply and demand for labor in a sector determine wages weighted by regional differences. The supply of labor depends on the size of the population and the size of the workforce.
- Migration – which affects population size – depends on real after-tax wages as well as employment opportunities and amenity value in a region relative to other areas.
- Wages and other measures of prices and productivity determine the cost of doing business. Changes in the cost of doing business will affect profits and/or prices in a given industry. When the change in the cost of doing business is specific to a region, it will also affect the share of local and U.S. markets supplied by local firms. Market share and demand determine local output.
- “Imports” and “exports between states are related to relative prices and relative production costs.
- Property income depends only on population and its distribution adjusted for traditional regional differences, *not* on market conditions or building rates relative to business activity.
- Estimates of transfer payments depend on unemployment details of the previous period, and total government expenditures are proportional to population size.
- Federal military and civilian employment is exogenous and maintained at a *fixed* share of the corresponding total U.S. values, unless specifically altered in the analysis.

Because the variables in the REMI model are all related, a change in any one variable affects many others. For example, if wages in a certain sector rise, the relative prices of inputs change and may cause the producer to substitute capital for labor. This changes demand for inputs, which affects employment, wages and other variables in those industries. Changes in employment and wages affect migration and the population level, which in turn affect other employment variables. Such chain-reactions continue

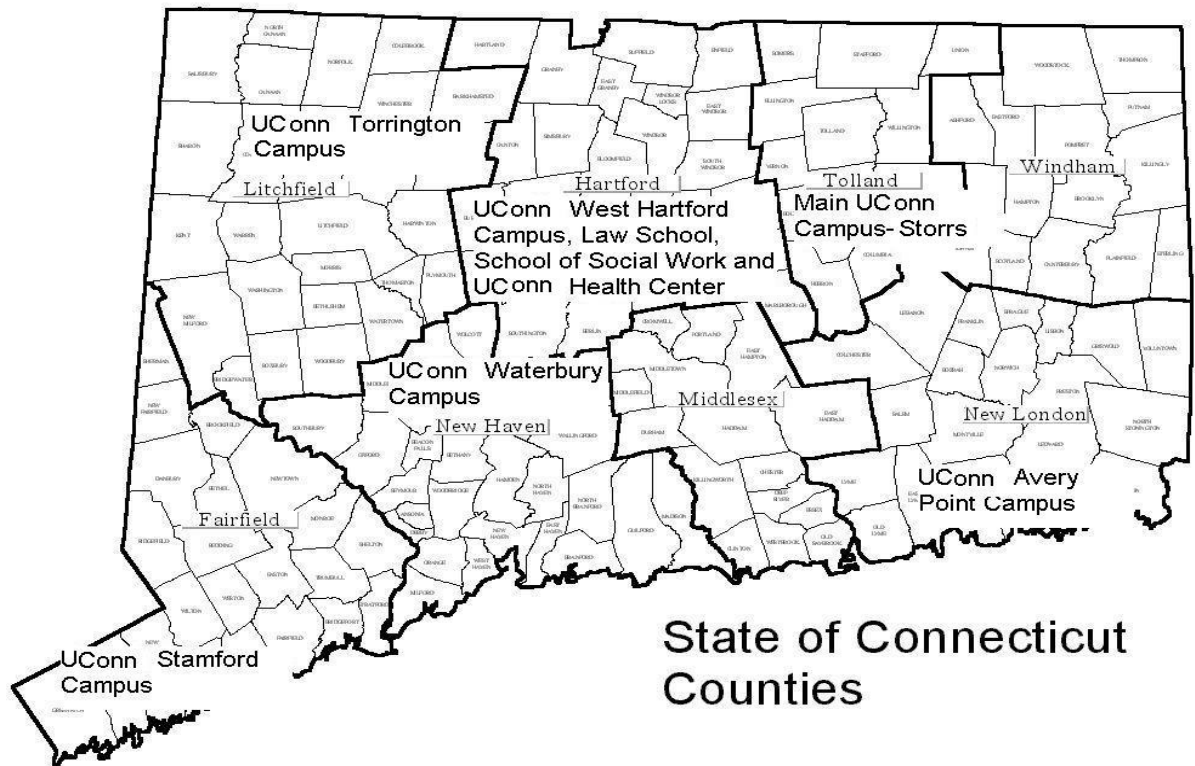
throughout the model. Depending on the analysis performed, the nature of the chain of events cascading through the model economy can be as informative for the policymaker as the final aggregate results. Because the model generates such extensive sectoral detail, it is possible for experienced economists in this field to discern the dominant causal linkages involved in the results.

## **2. Counterfactual Modeling Approach**

Most economic models, including the REMI model, measure the Connecticut economy in its present form as a baseline. Any changes in the economy are either added to or subtracted from that baseline depending on the nature of the change. Because the University of Connecticut already exists in the baseline model, we estimate the most accurate measure of UConn's impact by removing UConn from the economy. Intuitively, the results contained in this report measure the losses to the economy resulting from the disappearance of UConn. However, one can interpret these same results as the positive impact of UConn's continuing operations by reversing the signs of the economic variables.

This analysis considers nine geographic regions (eight counties and entire state). The statewide outreach of UConn provides a benefit across the entire State. Figure 1 locates the UConn campuses. Appendix I presents a secondary breakdown of the direct effects of UConn by assembly and senate/congressional districts. We organize this Appendix on a town-by-town basis. In this way, we consider the general economic environment for each area.

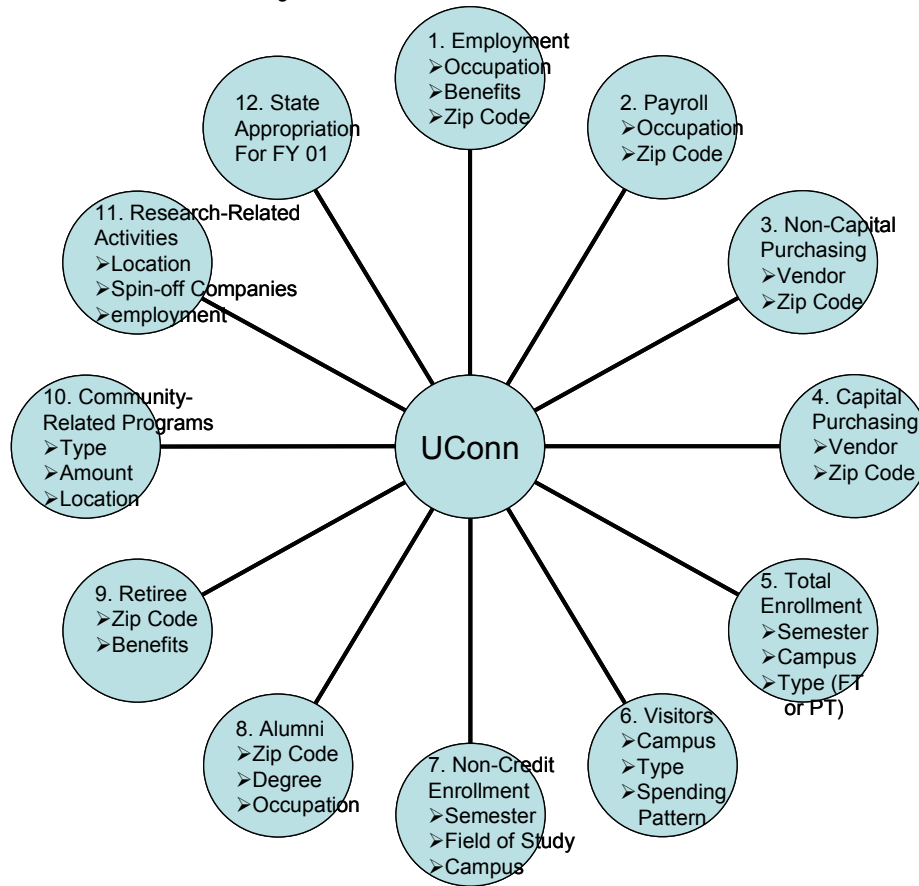
Figure 1: The UConn Campuses by County



### III: Conceptual Framework

In this analysis, we take UConn as a community located within a larger community (the counties and state). Figure 2 presents the types of data we gathered to construct our framework for analysis.

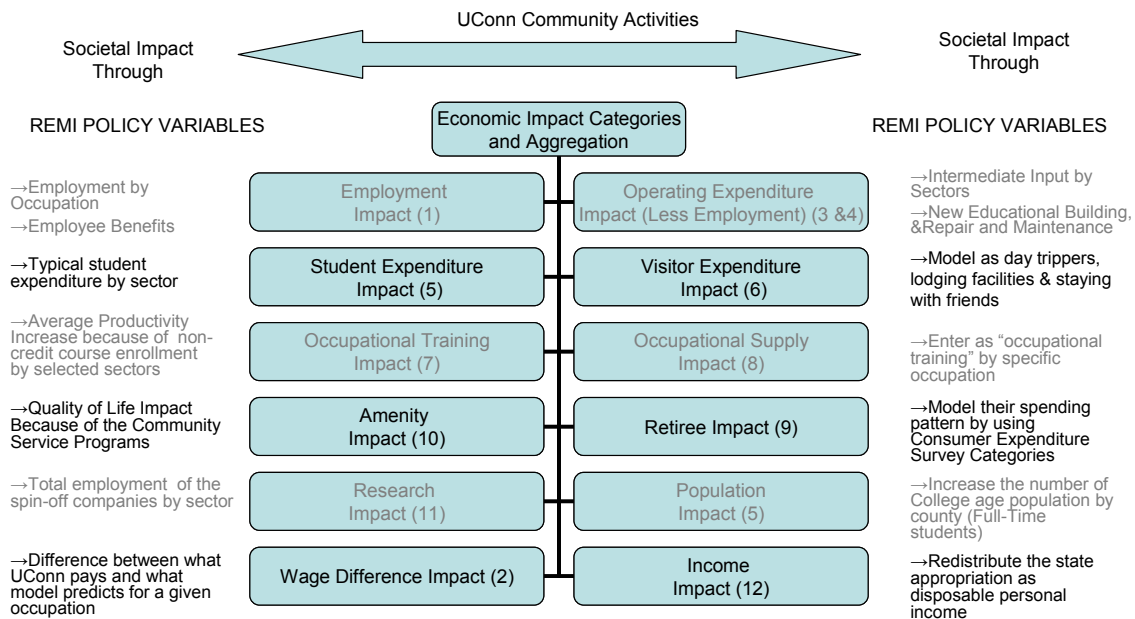
Figure 2: UConn-Related Activities: Data



As Figure 2 indicates, we gathered data by zip code and vendor whichever is appropriate. In order to use a county level model, we need such detail to identify (a) each county’s share in total economic activities, and (b) out of state leakages in terms of employment, purchasing, and research dollars.

We then constructed the following framework based on the information gathered as described in Figure 2. Figure 3 presents the framework through which UConn activities translate into economic and societal impact.

Figure 3: Impact Categories: All Impact Categories and Associated Variables are Aggregated at the County Level



Note: Numbers in parentheses show data categories in Figure 2. For the Retiree and Student Expenditures, we use Consumer Expenditure Survey Categories, available at <http://www.bls.gov>. For this study, student enrollment is calculated as the full time equivalent (FTE), which is different from the FTE calculations based on the credit. This study considers every 3 part-time student as equal to one full time student .

We identify twelve impact categories as presented in Figure 3 and seek to quantify each. For each category, as we present details in the next sections, our assumptions are highly conservative. For some categories, we take minimum values in order to remain conservative while avoiding double counting. For example, when we calculate the productivity increase because of non-credit enrollment, we only take into account 54,000 non-credit enrollments out of over 200,000 in FY 01.

#### IV: Modeling Strategies

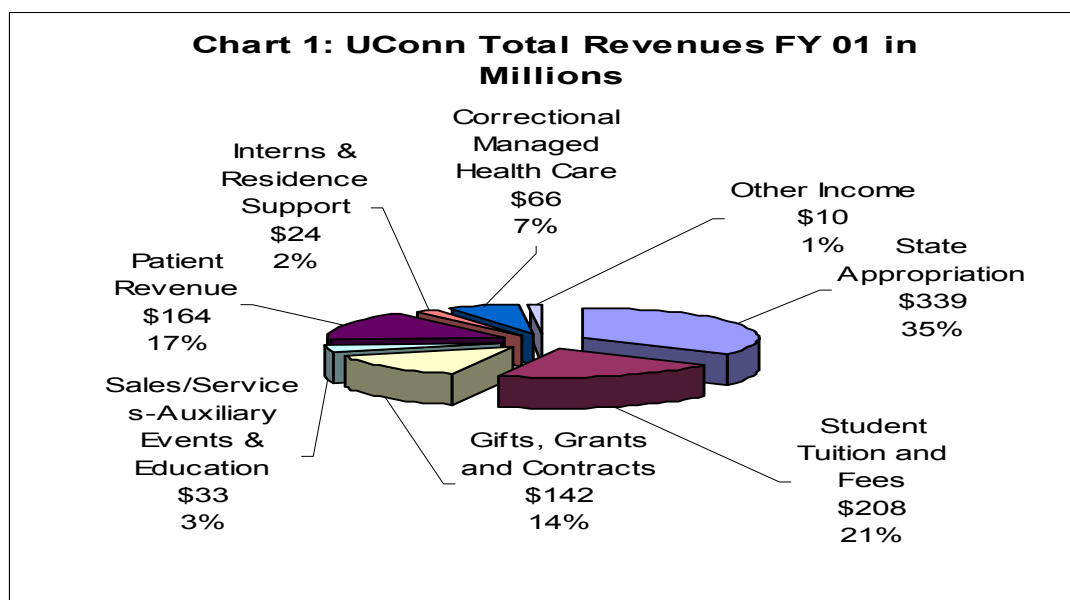
We base this study on number of general assumptions. In each category, we make further assumptions to calculate net new contribution of each category to the state. Our general assumptions are:

- Not all contributions of UConn are net new to Connecticut. Net new, for example, in visitor estimates, represents a small fraction of athletic or cultural event attendees, because some people attend such events anyway.

- We assume zero substitution for UConn programs. Therefore, we model in-state students' expenditure and their families' visits to campuses as 'recaptured' dollars, that is, they would have been spent elsewhere.
- We model UConn retirees as tourists to the region and their presence in Connecticut depends on the existence of UConn.
- We assume that, in the absence of UConn, the total state appropriation goes back to taxpayers as an increase in their total disposable income.
- We assume that UConn community services programs enhance the quality of life in the region.
- We assume that non-credit enrollment is a type of on-the-job training and increases worker productivity.

## 1: The University as an Operating Business

Revenues.<sup>27</sup> Chart 1 shows sources of the University's revenue and their shares of the total. According to Chart 1, state support for UConn accounts for 35% of its total revenue.

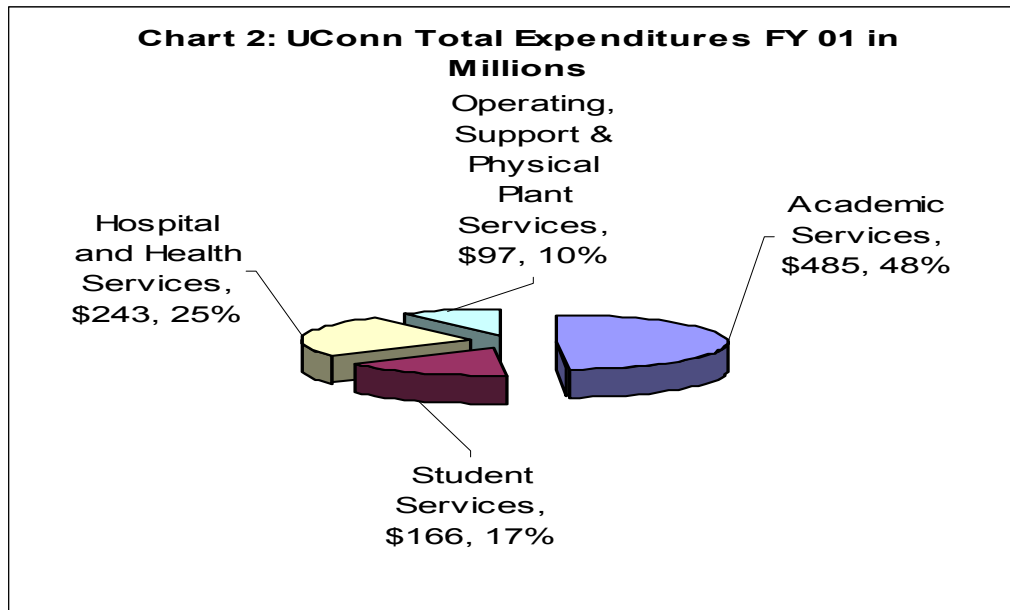


The second most important revenue source is student tuition and fees, \$208 million. Health care related revenues constitute about 26% of the total \$989 million

<sup>27</sup> Data is obtained from the University of Connecticut, Office of Institutional Research, and Budget Office.

revenue. Another important source of revenue is gifts, grants and contracts, which constitutes 14% of total revenue.

*Expenditures.* Chart 2 lays out expenditures by major categories. We divide total expenditures into four major categories for simplicity.

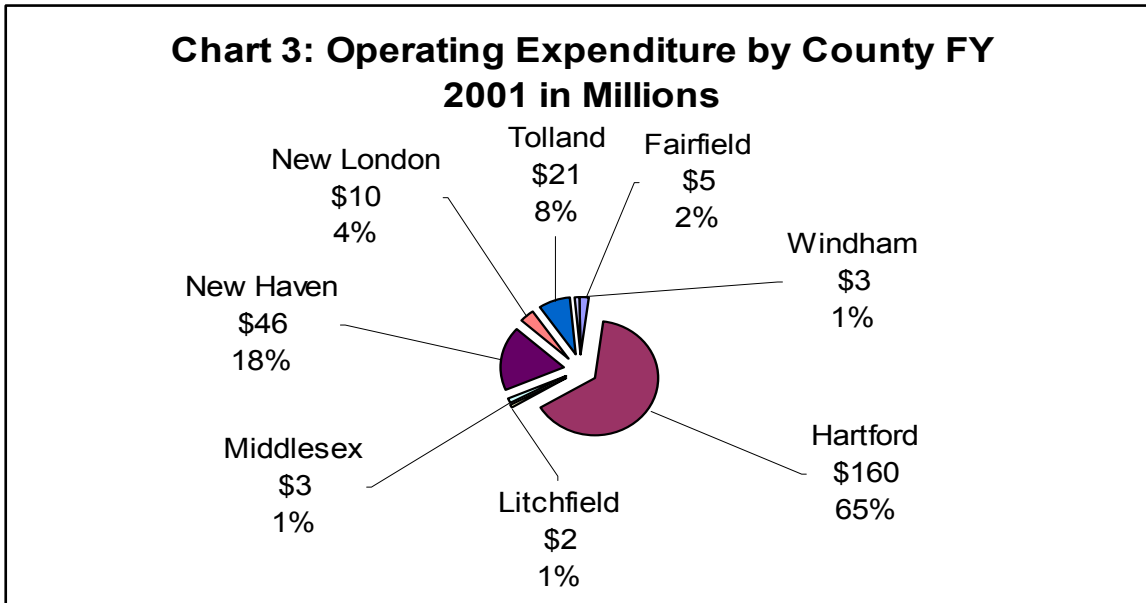


When we look at the spending by major categories, Academic Services accounts for almost half of the total spending with \$484 million. The next major category is the Hospital and Health Services that accounts for one-fourth of total UConn expenditures. Total University expenditures are about \$1 billion each year. Out of this total, a significant amount remains in Connecticut.

*Model Assumptions.* As our modeling strategy, we use the UConn-related (direct and induced, such as visitors and retirees' spending) expenditures to calculate the economic impact as opposed to detailing revenues. This approach allows us to capture the detailed economic impacts of the system via the specific expenditure path rather than the nonspecific path of revenues from sources to destinations. Impact results obtained in this way are more accurate and necessarily avoid in any case the use of both revenues and expenditures (double counting). The University of Connecticut's Department of Purchasing and Health Center provided us total operating expenditures (capital and non-



capital) by zip code and vendor.<sup>28</sup> This allows us to separate in state and out-of-state expenditures. Using these data, we estimate total operating expenditure (less payroll) by county and sector at the 2-digit SIC level. In FY 2001, UConn injected about \$251 million for procurement in Connecticut. Chart 3 presents the county breakdown of these expenditures.



As Chart 3 indicates, about 65% of UConn’s operating expenditure took place in Hartford County. The second largest beneficiary of UConn spending is New Haven County with 18%. Tolland County places third with 8%, while the remaining counties share 9% of UConn operating expenditures.

## 2: The University as an Employer<sup>29</sup>

Based on payroll data and monthly employment count by zip code, we estimate that UConn employs 10,307 Full Time Equivalents (FTE) who lived in Connecticut in FY2001. This figure includes all full-time, part-time, and special payroll employees we

<sup>28</sup> Data is obtained from University of Connecticut, Department of Purchasing and the UConn Health Center.

<sup>29</sup> Monthly employment data and average payroll by occupation are obtained from the University of Connecticut, Department of Human Services.

averaged from monthly employment data. Considering this number, UConn emerges as a major employer in Connecticut.

Table 2 provides the occupational breakdown of UConn employment.<sup>30</sup> According to Table 2, over 40% of employees fall in the professional support category and 24% into faculty, indicating the presence of a highly educated workforce. The educated workforce’s increased earnings mean “they typically pay more state and local taxes than workers without degrees.”<sup>31</sup>

Occupation	Percentage (%)
Faculty	24
Administrators	3
Professional Support	41
Secretarial/Clerical	13
Para-Professional/Trades	8
Service/Maintenance	11

UConn pays about \$510 million in wages and salaries annually to employees residing in Connecticut. Table 3 shows the distribution of wage disbursements by Connecticut counties.

County	Wage Distribution (Millions)
Fairfield	\$14
Hartford	\$202
Litchfield	\$14
Middlesex	\$14
New Haven	\$27
New London	\$27
Tolland	\$154
Windham	\$58

According to Table 3, Hartford and Tolland Counties are two major recipients of employee wages and salaries. As the magnitude of the wage distribution indicates, employee spending in eight counties is likely to create significant impact on the local

<sup>30</sup> This is calculated from the Office of Institutional Research website at <http://vm.UConn.edu/~wwwoir/>

<sup>31</sup> National Association of State Universities and Land-Grant Colleges (2001), p. 2.

economy, and to play an important stabilizing role there, because these wages purchase goods and services in the local economies.

*Assumptions.* To model the employment impact, we aggregated six employment categories in Table 2 into four employment categories: Education, Medical, Miscellaneous Professional, and Miscellaneous Business Services. In order to capture the total employment impact, we make a wage bill adjustment as UConn pays more than the state averages as contained in REMI. The total wage bill adjustment is \$308 million. Furthermore, we model the insurance component of employee benefits in the amount of \$65 million as insurance sales. In addition, as we account separately and specifically for UConn's procurement, we nullify intermediate demand for goods and services purchased in Connecticut. We also nullify investment demand due to employment, because our assumption is that all physical capital remains intact. If we failed to do this, we would double count employment effects in the REMI model.

### **3: The University as a Magnet for a Transient Population**

In FY 2001, total number of full-time equivalent students was about 19,299.<sup>32</sup> The number of full time students in the same period was 17,218. The average cost of attending the main campus in Storrs per student living on campus was about \$6,000 (this excludes tuition and fees) in FY 2001.<sup>33</sup> Students affect the local economy in two direct ways: (1) their spending generates jobs in the region, and (2) they add to the local population and labor supply in the region.

When we compare the total headcount of college enrollment in Connecticut with UConn enrollment in the fall 2000, the latter represents about 23% of all Connecticut college enrollments. In terms of graduate and professional degree enrollment, UConn represents about 45% of the total of such enrollments in Connecticut colleges. These

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<sup>32</sup> Student data and estimates are obtained from the University of Connecticut, Office of Institutional Research. Full-Time Equivalency estimates in this study does not correspond the credit-based full-time equivalency estimates. We assume that every 3 part-time students spend in the region in the same amount of a full-time student.

<sup>33</sup> Obtained from the UConn, Financial Aid Office at <http://sp.UConn.edu/~wwwfaid/>

figures indicate the prominent role UConn plays in the state’s educational system and, thereby, its economy.<sup>34</sup>

*Assumptions.* We model the student enrollment both as student expenditures and population increase. According to the Office of Institutional Research, 79% of those enrolled at the Storrs campus are Connecticut residents. Furthermore, 67% of undergraduate students in Storrs live on-campus. Based on these findings, we divide students into three groups in terms of residency: resident, on-campus, and off-campus. We follow similar logic in estimating graduate student expenditures, except that we lump graduate students into two categories: those living on-campus and those off-campus.

Using these breakdowns, we estimate total student expenditures. Due to significant differences in student expenditures between Hartford and Storrs, we adjust student expenditures generated in Hartford. According to UConn Health Center data, the average living expenditure in Hartford is about \$15,000 as opposed to \$9,000 for graduate students living off-campus in Storrs. We assume undergraduates in Storrs and regional campuses spend about \$4,000 if they live with their parents and/or on-campus,<sup>35</sup> and \$9000 if they live off-campus. For graduate students, we estimate \$5,600 on-campus and \$12,000 off-campus in living expenditures. Table 4 shows the residency breakdown; Table 5 presents student expenditures by county and expenditure categories.<sup>36</sup>

Table 4: UConn Students by Type of Residency and Campus				
Campus	Student Characteristics	Resident	Off-Campus	On-Campus
Storrs	Graduate	--	77%	23%
	Undergraduate	18%	15%	67%
Law School	Graduate	--	100%	--
Health Center	Graduate	--	100%	--
West Hartford	Undergraduate	95%	5%	--
Avery Point	Undergraduate	95%	5%	--
Stamford	Undergraduate	95%	5%	--
Torrington	Undergraduate	95%	5%	--
Waterbury	Undergraduate	95%	5%	--

<sup>34</sup> Data about the Connecticut enrollment is obtained from Connecticut Department of Higher Education at [www.ctdhe.org](http://www.ctdhe.org).

<sup>35</sup> To avoid double counting, we subtracted room expenditure from the on-campus students’ total expenditures.

<sup>36</sup> For the expenditure categories, our ratios are similar to the ones used by Charney and Pavlakovich (1999).

Table 5 indicates the largest expenditure category is housing, while vehicles and auto parts follows. As a third category, food and beverages constitutes 14% of student expenditure. We assume that students attending the Storrs campus spend half of their total expenditures in Windham County. We model a total student expenditure of \$134 million, primarily injected into Tolland, Windham, and Hartford counties.

REMI SECTORS	Tolland	Hartford	Fairfield	Litchfield	Windham	New London	New Haven	Total	Percent
Housing	\$7,622,239	\$12,866,189	\$1,090,159	\$36,828	\$7,622,239	\$92,958	\$78,384	\$29,408,996	22%
Household Operation	\$1,198,709	\$1,199,554	\$153,276	\$7,025	\$1,198,709	\$16,472	\$13,944	\$3,787,689	3%
Other Durables	\$6,097,421	\$4,480,639	\$680,896	\$155,150	\$5,308,621	\$306,497	\$269,993	\$17,299,217	13%
Food and Beverages	\$6,663,944	\$4,825,645	\$807,892	\$127,175	\$6,068,395	\$256,663	\$225,146	\$18,974,859	14%
Vehicles and Parts	\$7,580,320	\$6,082,974	\$847,082	\$192,600	\$6,601,120	\$380,522	\$335,197	\$22,019,815	16%
Transportation	\$1,532,381	\$1,088,310	\$171,006	\$39,046	\$1,333,865	\$77,128	\$67,942	\$4,309,678	3%
Clothing and Shoes	\$4,597,144	\$1,793,065	\$513,017	\$117,139	\$4,001,594	\$231,383	\$203,827	\$11,457,168	9%
Other Services	\$3,064,762	\$1,195,389	\$342,011	\$78,093	\$2,667,729	\$154,255	\$135,885	\$7,638,125	6%
Computer and Furniture	\$2,298,572	\$896,532	\$256,508	\$58,570	\$2,000,797	\$115,692	\$101,913	\$5,728,584	4%
Medical Care	\$5,363,334	\$2,091,922	\$598,519	\$136,663	\$4,668,526	\$269,947	\$237,798	\$13,366,709	10%
Total	\$46,018,826	\$36,520,219	\$5,460,366	\$948,288	\$41,471,595	\$1,901,517	\$1,670,029	\$133,990,841	100%

To adjust for the impact on population, we assume that the full-time student population is an addition to the state population. If UConn vanished, out-of-state students would not be in Connecticut, and many in-state students would leave the state for their education. Table 6 shows the distribution of the student population by county and average age.

County	Tolland	Hartford	Fairfield	Litchfield	Windham	New London	New Haven
Number of Students (20 Years Old)	5926	580	476	148	5926	326	297
Number of Students (25 Years Old)	1088	1289	75	0	1088	1	0
Total	7014	1869	551	148	7014	327	297

It is evident from Table 5 is that Tolland, Windham and Hartford counties are beneficiaries of the increase in the dynamic population. With regard to the student population in Windham County, we assume that half of the full time students at the Storrs campus work or live there.

#### 4: The University as Supplier of Well-Educated Labor Force

UConn plays important role in supplying a well-educated labor force for the local economy. Each year, on average, 4,539 people receive degrees from the University of

Connecticut.<sup>37</sup> According to the Connecticut Department of Higher Education, about 19% of BAs, 16% of MA/MSs, and 38% of PhDs awarded in Connecticut in 1999 are from UConn.<sup>38</sup> When we look at the educational attainment figures people over 25 years old for 2000, which is a large part of the available labor stock in the economy, a flow of 4,539 educated workers into the economy has important implications for the local economy.<sup>39</sup>

One implication is that as the educational level of individuals increases, their annual income increases. This directly translates into an increase in tax revenues and quality of life. Furthermore, education increases job productivity and efficiency. Finally, education means better jobs and/or increasing opportunities to find better jobs than those who are uneducated. In terms of percentages, there is a positive relationship between a low unemployment rate and a high educational level. Through the flow of graduates into economy, such institutions as Health Center, School of Social Work, School of Nursing, and Law School play a crucial role in supplying most needed professions to the Connecticut economy.

*Assumptions.* Using a historical alumni survey, we estimate that 61% of UConn graduates choose Connecticut as their place of work.<sup>40</sup> We take a three-year average of UConn graduates (1998, 1999, and 2000) to estimate the average annual flow of graduates. Taking 61% of 4,539, we arrive at the total number of 2,783 graduates remaining in Connecticut. Finally, we look at the types of job respondents are holding to profile alumni by job categories. In order to find the geographical distribution of the graduates in the state, we benefited from the University of Connecticut Foundation database. By using the 1999 and 2000 alumni database, we profile alumni by zip code, and then aggregate to the county level.<sup>41</sup> Table 7 presents the results.

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<sup>37</sup> This reflects three year average of graduates (1998, 1999, 2000). Figure estimated from the University of Connecticut, Office of Institutional Research Web site.

<sup>38</sup> Figures are calculated from the CT Department of Higher Education database.

<sup>39</sup> According to the Census result, 33% of people over 25 years old have graduate degree, 52% high school and/or associate degree, and 15% less than high school in 2000. See [www.census.gov](http://www.census.gov).

<sup>40</sup> Annual alumni survey results are available at the University of Connecticut, Office of Institutional Research web site.

<sup>41</sup> University of Connecticut Foundation, Inc.

Occupation	Fairfield	New Haven	Litchfield	Windham	Hartford	Tolland	Middlesex	NewLondon	Total
Social Scientists	104	94	29	20	171	63	26	48	555
Computer, Math Research Analysts	26	24	7	5	43	16	6	12	139
Health Diagnostic Occupations	43	39	12	8	71	26	11	20	231
Health Assessment, Treatment Occupations	40	36	11	8	65	24	10	18	213
Health Technicians, technologists	40	36	11	8	65	24	10	18	213
Teachers, Librarians	49	44	14	9	80	29	12	22	259
Life Scientists	23	20	6	4	37	14	6	10	120
Engineers	19	17	5	4	31	12	5	9	102
Social, Recreational related Workers	21	19	6	4	34	13	5	10	111
Lawyers	14	13	4	3	23	8	3	6	74
Writers, Artists, Entertainers	10	9	3	2	17	6	3	5	55
Other Technicians	5	5	1	1	9	3	1	2	28
Other Professional Workers, NEC	128	116	35	25	211	77	32	59	684
<b>Total</b>	<b>522</b>	<b>473</b>	<b>146</b>	<b>100</b>	<b>857</b>	<b>316</b>	<b>129</b>	<b>240</b>	<b>2783</b>

We model UConn graduates as occupational supply under the professions given in Table 7.

The highest represented occupations are social scientists and other professional workers, not elsewhere classified, and the most preferred counties are Hartford and Fairfield.

### 5: The University Role in Visitor Attraction

UConn attracts over one million visitors each year. With its first-class athletic teams, theaters, fine arts departments, community events, as well as the Health Center, UConn contributes to the health of the region's economy through visitor expenditures. In calculating the total number of visitors, we use the athletic department's annual ticket sales revenue, visitor center survey, and Jorgensen Center for the Performing Arts attendees. For Health Center visitors, we use conference attendees, in-patient, and outpatient data by zip code to determine the total number of Health Center visitors. Furthermore, we use median party size, median days of stay, and type of accommodation from the 1997 American Travel Survey to estimate the number of visitors to the Health Center. However, due to resource limitations and the absence of a centralized database, we are unable to calculate total visitor activity at the regional campuses and conference attendees (except at the Health Center) in Storrs and regional campuses. Therefore, our estimate is conservative.

*Assumptions.* Although more than one million people visit UConn annually, not all of them are net new to the state. We assume that only 15% of all athletic events attendees are recaptured (would have gone elsewhere for events) and/or net new to the state.

Similarly, we assume only 10% of Jorgensen attendees are net new and/or recaptured. For the Lodewick Visitor Center data, we assume 80% of preadmission or other tours are recaptured visitors. Table 8 presents the results of our findings.

County	Daytrippers	With Family & Friends	Hotel & Motel
Hartford	70111	854	4016
Tolland	88489		
Fairfield	1006		
New Haven	543		
New London	615		
Litchfield	315		
<b>Total</b>	<b>161079</b>	<b>854</b>	<b>4016</b>

We model net new visitors as day-trippers, those staying with family and friends, and those staying in a hotel or motel. Assuming that each day-tripper spends \$60 and those staying in a hotel and motel spend \$150, total visitor spending amounts to about \$10 million per year. This figure and net new visitor estimates are minimums.

## 6: The University as Provider of Professional Training

In addition to granting formal degrees, over 200,000 people go through special training to enhance their skills, to refresh their knowledge, to get updated information about their fields or to improve their artistic quality. Whatever the reason, these activities significantly increase productivity and improve the quality of life for individuals and the region. For example, more than 54,000 people registered for non-credit courses through the College of Continuing Education in FY01. Moreover, Allied Health Women's Health Conferences attract over 1,000 attendees each year. Non-credit enrollment in the Fine Arts Outreach Program is about 93,850; in the Fine Arts Visiting Artist Lecture Series about 8,364; in the Museum of Natural History about 40,195; in the Continuing Medical Education about 10,489; in the Patient Education Discovery Series about 3,289; and in the Mini-Medical School Non-Credit Program about 261.

*Assumptions.* We assume that the professional development courses offered by UConn are similar to the on-the-job training, and increase labor productivity. Because of the



difficulty to measure the increase in productivity for all non-credit courses, we model only 54,000 people’s willingness to pay for non-credit courses to improve their skills. We assume that the minimum increase in productivity is the amount registrants pay for their courses. We obtained total program revenue figures from the University of Connecticut, Budget Office, and used REMI historical data to calculate an annual change in productivity in selected sectors.<sup>42</sup> Table 9 presents the imputed productivity increase due to professional development courses.

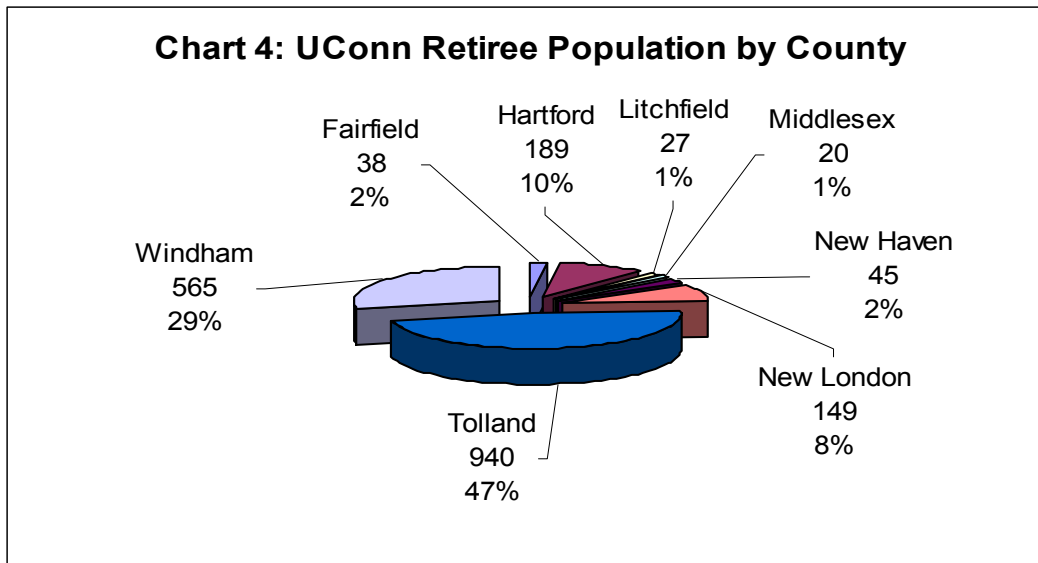
Sectors	% Increase
Amusement & Recreation	3.648
Communication	0.025
Education	1.670
Insurance	0.096
Medical	0.011
Miscellaneous Business Services	1.476
Miscellaneous Manufacturing	2.708
Miscellaneous Professional Services	0.235
Non-Profit Organization	1.685
Real Estate	0.024

## 7: The University as a Tourist Attraction

Many communities across the U.S. are designing plans to make their communities attractive for the growing retiree population. University retirees are especially target groups as they are well educated, better off and mobile. The spending of the retiree population is a significant contribution to the local economy. Because of the importance of this group, we model retirees as tourists.

*Assumptions.* We assume that retirees choose to stay in Connecticut after retirement because of the amenity value created by the presence of the University. Similarly, absent the University, these retirees would move out of state. We obtained retiree data by zip code and income from the State Retirement Office through the University of Connecticut, Department of Human Resources. As of 2002, 1,973 retirees live in Connecticut. Chart 4 shows the geographical distribution of UConn’s retiree population.

<sup>42</sup> The REMI model is developed by Regional Economic Modeling, Inc., Amherst, Massachusetts.



The heavy concentration of the retiree population in Tolland and Windham counties indicates the role played by UConn in their decision to stay in the region.

We model retirees' expenditures using the Consumer Expenditure Survey for the Northeast region.<sup>43</sup> Total retiree expenditure is about \$46 million, of which a significant portion is spent in Tolland and Windham counties. Table 10 presents the retiree expenditure by sector.

Sectors	Value
Food & Beverages	\$6,991,673
Housing	\$13,517,235
Fuel, Oil and Coal	\$1,864,446
Household Operation	\$1,957,669
Computers and Furniture	\$2,330,558
Clothing and Shoes	\$2,330,558
Vehicles and Parts	\$6,059,450
Gasoline and Oil	\$1,211,890
Transportation	\$699,167
Medical Care	\$2,796,669
Other Services	\$5,127,227
Other Durables	\$1,724,613
<b>Total</b>	<b>\$46,611,157</b>

<sup>43</sup> See Bureau of Labor Statistics at [www.bls.gov](http://www.bls.gov)

## **8: The University and Quality of Life in Connecticut**

The quality of life of a region is an important concern for residents and policy-makers alike. A high quality of life means an increasing local property tax base, concerned citizens, better educational facilities, and a business and visitor attraction center. UConn provides many programs and services that enhance the quality of life in the region. These programs and services range from providing health services to enlightening parents about child development. Because of resource limitations, we are unable to quantify each of these programs and services. Therefore, we *focused on a few selected services* to present the extent to which UConn is involved in the betterment of life in Connecticut. To account for the total number of volunteer hours for the community originating from UConn, an extensive and time-consuming survey is necessary. This exercise is beyond our current focus.

UConn provides many programs and services presented in Table 11 at low cost or no cost. In the case of some programs, we prorate the number of hours volunteers work for the program. In doing so, we take the minimum wage rate to be conservative in our estimates for the actual cost of provision. We received extensive information on the selected programs from the school themselves. For most cases, however, we rely on the information available through our UConn sources.

Table 11: UConn Selected Public Service Programs	
Programs	Amount
Asylum Hill Family Practice	\$1,200,000
Burgdorf Health Center	\$1,800,000
Care to Medicaid Recipients (Dental)	\$1,575,000
Health Careers Discovery Program Saturday Academy	\$3,240
Health Careers Discovery Program Summer Science Camp	\$21,600
High School Mini Medical/Dental School Program	\$1,200
High School Student Research Apprentice Program	\$21,600
School-Based Care (6 Public Schools--\$1000/wk)	\$216,000
Science Teacher Summer Fellowship Program	\$21,600
The AHEC Program--Bridgeport	\$303,100
The AHEC Program--Hartford	\$284,400
The AHEC Program--Norwich	\$361,800
The AHEC Program--Torrington	\$325,700
The Health Professions Partnership Initiative (HPPI)	\$150,000
Professional Development Schools in Central and Eastern Connecticut	\$1,750,000
Diversity in Teacher Education Grant	\$5,000
GEAR-UP Grant with Public Schools in Hartford	\$70,000
Gifted and Talented Grant	\$2,500,000
Bilingual Education Fellowship Program Grant	\$114,000
Neag Model Grant	\$25,000
The UCONN/UTC Professional Development Academy	\$5,000
The Stamford Project that Integrates Technology into Public Schools	\$90,000
\$2M Gates Foundation Grant to Train School Administrators	\$1,500,000
KIDS Newsletter, All Children Considered & Birth to Five	\$36,000
The Humphrey Center for Marital and Family Therapy	\$30,000
School Readiness	\$160,000
Parent Education Program	\$47,000
Center for Health Promotion Programs	\$23,000
Outpatient Physical Therapy Program	\$130,000
Teenage Minority Business Program	\$118,000
Cooperative Extension Programs	\$5,407,536
Chemistry Olympiad	\$4,800
Supplying Materials to the Nursing Career Center of CT	\$3,000
Graduate Students' Involvement in Helping Homeless and Migrant Workers	\$11,500
Undergraduate Student Activities in Acute Care Setting	\$4,800
Street Law Program	\$97,200
Community Work	\$2,253,600
Summer Engineering Camp	\$7,360
BRIDGE Program	\$11,040
<b>Grand Total</b>	<b>\$20,689,076</b>

We estimate that total value of these selected programs is more than \$20 million. Where available, we report the total amount of money spent on the services and personnel. The amount reported in Table 11 does not truly reflect the value of the

benefits UConn’s programs and services confer on society, because we value them at their cost, which we assume must be their minimum benefit.

*Assumptions.* To model the amenity value of the region due to UConn, we use the value of selected community service programs. Furthermore, we include in our estimates total research, gifts (a measure of willingness to pay), contracts, and investment income. We model a total of \$147 million in equivalent amenity value attributable to the presence of UConn. Table 12 presents the county breakdown of amenity values associated with UConn.

Fairfield	\$6,471,038
Hartford	\$73,148,472
Litchfield	\$2,784,284
Middlesex	\$14,101,830
New Haven	\$5,639,354
New London	\$3,973,046
Tolland	\$26,569,828
Windham	\$14,574,283
<b>Total</b>	<b>\$147,262,135</b>

According to Table 12, the University of Connecticut helps increase the quality of life across the state, though Hartford, Tolland, Middlesex, and Windham counties are the largest beneficiaries.

## **9: UConn as Innovator**

The research impact of universities is important for the health and growth of the regional economy. Both labor and capital productivity increase and technology change occurs because of university research activities and new ideas the university graduates bring to the workplace. Furthermore, research universities attract a significant amount of research dollars from out of state sources, performing as an export industry. These dollars, in turn injected into the local economy, buy goods and services and help to educate a highly innovative workforce. In FY01, external funding (excluding financial aid) was \$147.5 million. Federal support was 64.7% of this amount (\$95.4 million). About 90% of this federal money flowed into the regional economy.

In order to assess the research impact of UConn, we need an extensive survey of companies in the region that benefit from the technologies, patents, and innovations originated by UConn. Unfortunately, this worthwhile effort is beyond the scope of this study. When we look at the overall profile of UConn, we see increasing emphasis on the commercialization of University innovations.<sup>44</sup> Table 13 presents a three-year trend of research-related activities of UConn.

Table 13: UConn: Patents and Inventions			
	FY 99	FY 00	FY 01
Invention Disclosures	50	72	64
New U.S. Patent Approvals	26	26	25
Licenses Executed	12	18	12
Licences Producing Income	10	13	16
Licensing Revenue	\$481K	\$426K	\$467K
Start Ups	2	0	2

As Table 13 indicates, there were 16 licenses producing income in FY01 and two start-up companies. Without an extensive survey of those companies involved in licensing agreements with UConn, it is difficult to capture the dynamic economic impact of their research.

*Assumptions.* We received information about eight companies whose operations are wholly based on UConn-developed technologies. We estimate that these companies employ 26 people in the biotechnology sector. We model those companies receiving research dollars from UConn as an increase in their total output by the amount of money they receive. We then assign a REMI sector to each of these recipients. We report our estimates and geographical distribution in Table 14.

According to Table 14, over \$32 million research money reaches the various institutions and/or companies across Connecticut in the medical sector. More than \$31 million of this amount goes to companies and institutions in Hartford County. The second largest amount (over \$2 million) flows to educational institutions, primarily to Yale University in New Haven County.

<sup>44</sup> Recently, the University of Connecticut Research and Development Corporation has been revitalized to help UConn technologies commercialize.

Sectors	Fairfield	Hartford	Litchfield	Middlesex	New Haven	New London	Tolland	Windham	Industry Total
Amusement and Recreation	\$57,554				\$3,000	\$5,000			\$65,554
Chemical	\$2,500								\$2,500
Education	\$440,524	\$133,051		\$13,425	\$1,795,152			\$26,500	\$2,408,652
Gas		\$7,260							\$7,260
Insurance	\$32,386								\$32,386
Machinery					\$100,450				\$100,450
Medical	\$3,750	\$31,326,838	\$375,347	\$29,613	\$23,445	\$446,822		\$36,228	\$32,242,042
Misc. Business Services		\$421,900							\$421,900
Misc. Professional Services		\$289,116			\$40,000	\$31,430		\$9,500	\$370,046
Non-Profit	\$5,681	\$118,976		\$138,654	\$29,366		\$3,491		\$296,168
Real Estate		\$36,465							\$36,465
State and Local		\$20,476							\$20,476
<i>County Total</i>	<i>\$542,395</i>	<i>\$32,354,082</i>	<i>\$375,347</i>	<i>\$181,692</i>	<i>\$1,991,413</i>	<i>\$483,252</i>	<i>\$3,491</i>	<i>\$72,228</i>	<i>\$36,003,899</i>

## 10: The University's Impact on Income

We assume that in the absence of UConn, its state appropriation will cease. Therefore, we return the appropriation to taxpayers as an increase in their disposable income. We use the county population share of total state population to allocate the return. Table 15 presents the population-weighted distribution of state contributions of various forms to UConn.

County	Total Amount
Fairfield	\$87,853,326
Hartford	\$85,326,528
Litchfield	\$18,136,029
Middlesex	\$15,436,225
New Haven	\$82,024,190
New London	\$25,790,385
Tolland	\$13,574,075
Windham	\$10,859,240
<b>Total</b>	<b>\$339,000,000</b>

Out of the total appropriation of \$339 million, more than \$87 million accrues to Fairfield County. Hartford and New Haven counties follow Fairfield County in terms of the total amount refunded (\$85 and \$82 million, respectively). The remaining five counties share a total refund of \$83 million.

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## V: Model Assumption Summaries

Our assumptions regarding the economic impact categories are conservative. The research impact of UConn is specifically underestimated because of the lack of an extensive survey of the companies whose *raison d'être* depends on UConn research and innovations. Below, we present a summary of all assumptions guiding our study. Unless otherwise noted, all figures are for FY2001.

- \$251 million is spent for goods and services in Connecticut by UConn
- 10,307 employees (FTE) reside in Connecticut
- A UConn wage bill adjustment of \$309 million higher than state *aggregate* average annual income in the education, medical, miscellaneous business and professional services sectors than REMI assumes as its baseline
- \$134 million in student expenditure injected into the economy
- 17,218 full-time students represent an increase in the college age population of the region that has a small impact on the labor supply of the region
- 2,783 UConn graduates represent a flow of human capital into the state economy in various occupations
- 165,949 (out of over 1 million total) net new visitors are attracted to the facilities at UConn. This means over \$10 million net new spending in the region
- Professional development programs increase productivity of the workforce in selected sectors
- 1,973 UConn retirees residing in Connecticut inject an more than \$46 million into the economy
- \$147.3 million in amenity value increases the quality of life in the region
- 26 people employed in spin-off companies associated with UConn
- \$36 million research and development money subcontracted to various companies and institutions across the state
- \$339 million state support in various forms (primary appropriation, fringe benefits, grants and contracts) returned to taxpayers as an increase in their disposable income



## **VI: Dynamic Economic Impact Analysis Results**

The University of Connecticut is an important contributor to the state's economy. To measure the economic impact of UConn using the REMI model, we remove it from the baseline economy and analyze how this affects the state and local economies. These effects show the significant economic and social contribution UConn is making now to Connecticut. UConn impacts the entire state through purchases, student expenditures, health care, occupational supply, and public services that occur in Connecticut.

In this section, we report the output from the Input/Output model REMI for eight counties as well as for Connecticut as a whole. This section is organized as follows: we first present the fiscal impact of the continuing operations of UConn; second, we analyze output and personal income. After looking at the employment and population dynamics, we conclude with a discussion of a cost-benefit analysis of the state contribution to UConn.

Tables 16, 17, 18, and 20 show the combined direct and spillover effects on several key variables. Although these results obtain by removing UConn from the baseline economy, we report these findings in positive terms to show the economic impact of the continuing operations of UConn on the State of Connecticut. We use a time horizon of 34 years, 2002-2035. The "peak value" of a variable indicates the maximum value of that variable obtained in the study period. The "long-run impact" of a variable indicates the value of that variable in the terminal year 2035. The baseline forecast already contains UConn, so changes from that baseline measure UConn's impact. Expressed this way, these peak and terminal values are a useful summary of the overall impact. The latter represent values of economic and fiscal variables after the economy has fully adjusted the loss (counterfactually) or to the ongoing operations of UConn.

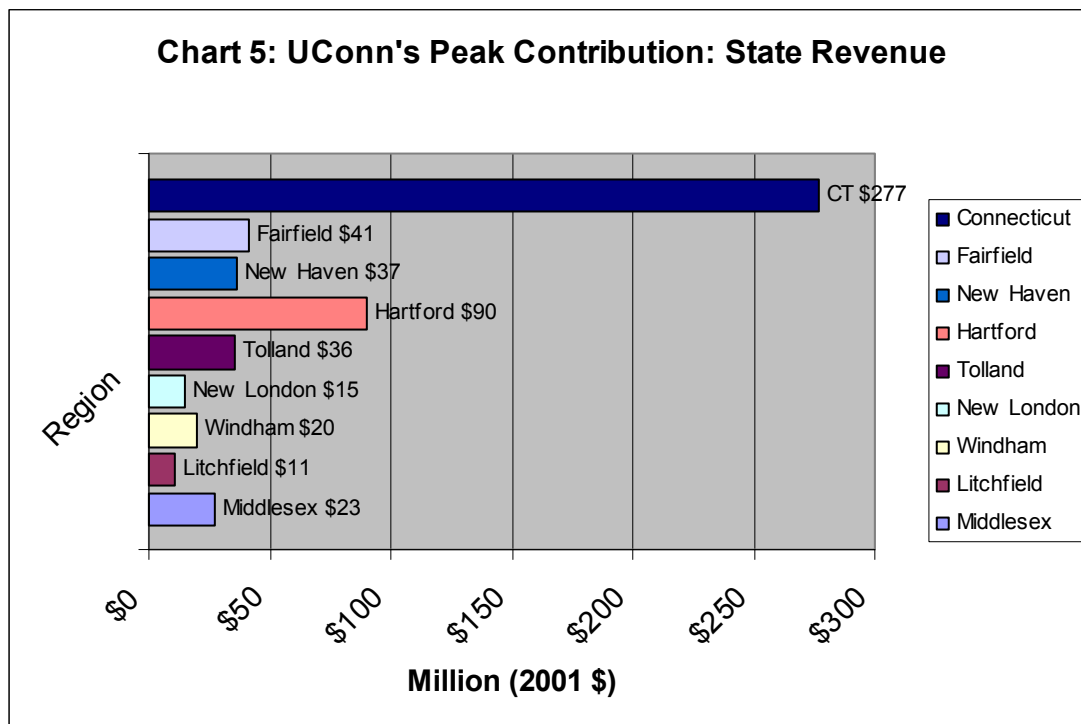
In calculating the results displayed in Tables 16, 17, 18 and 20, we removed UConn from the baseline economy but kept the government budget approximately balanced by redistributing the \$339 million annual state (gross as above) appropriation back to state residents in the form of a personal income tax cut.

## 1. Fiscal Impact

The University of Connecticut is an on-going operation that receives an annual state appropriation in several forms. The counterfactual removal of UConn would lead to a decline in general economic activity. In particular, Gross State Product (GSP) and personal income would fall, resulting in a decline in income, sales, use, and other taxes in the state. In addition, the fall of employment and population leads to a decrease in the value of local property and, thus, local property taxes.

In addition to these basic tax changes, this impact changes government spending. Induced spending is the first component of such spending. As people move into the region and there is more economic activity, the government needs to spend more to maintain the same level of service per person as in the past. This adjustment occurs endogenously or within the model based on current and projected levels of government spending.

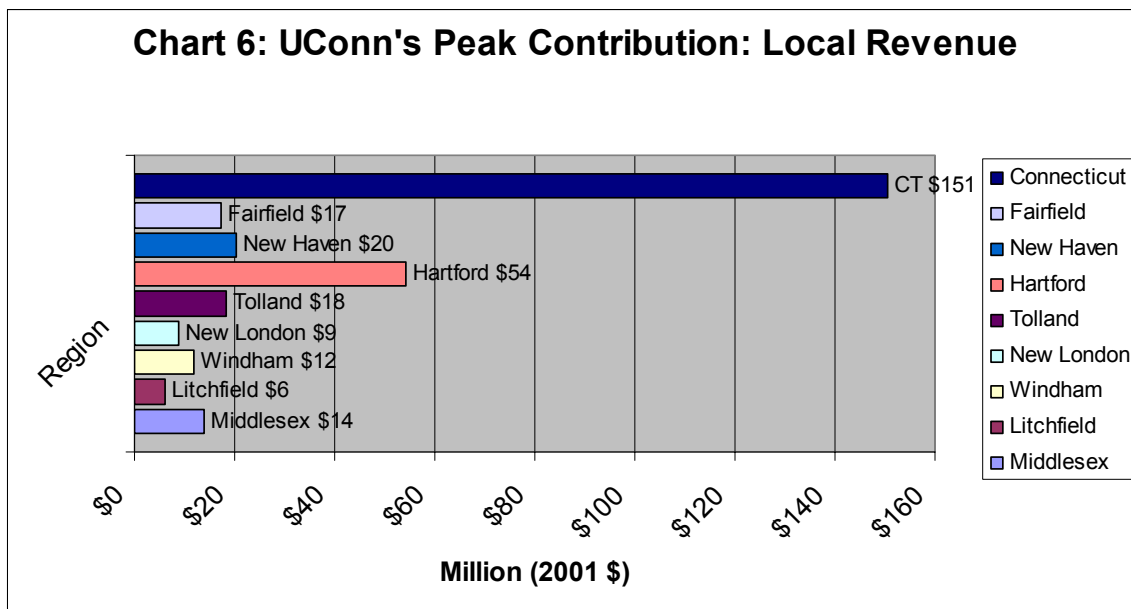
New state tax revenue depends on general economic activity. The increase in GSP and personal income (that accompany the operation of UConn) generates an increase in new tax collections through the channels discussed above across the state. New state taxes increase \$277 million in Connecticut at their peak. Chart 5 presents the county impact of UConn in terms of peak increases in state tax revenue.



According to Chart 5, Hartford County is the highest contributor to state tax revenue change due to UConn continuing operations. An increase of \$90 million in Hartford County is primarily due to the operations of the Health Center, Law School, School of Social Work, and the West Hartford (UConn) Campus. Following Hartford County is Fairfield County with \$41 million, New Haven County with \$37 million, and Tolland County with \$36 million in new state taxes raised. The lowest state tax increase takes place in Litchfield County with \$11 million.

Local tax revenues rise as a consequence of UConn’s continuing operations. Changes in local taxes stem from changes in the population in the region. As people arrive, they require housing and thus revenue from property taxes increase. They demand more public services as well and local expenditures increase. Chart 6 presents the changes in local taxes due to the ongoing operations of UConn.

### Local Revenue



In Connecticut, local governments collect \$151 million more in taxes due to the continuing operations of UConn. Hartford County benefits most from property tax revenue increases with \$54 million. The local tax revenue increase in New Haven County is \$20 million, in Tolland County \$18 million, and in Fairfield County \$17 million. The smallest increase occurs in Litchfield County with about \$6 million.

Table 15 presents the detailed fiscal impact of UConn, which reports peak changes in fiscal variables as well as their terminal values.

Table 15: UConn and Changes in State and Local Revenues and Expenditures (Million 2001 \$)									
	Connecticut			Hartford			Fairfield		
	Peak	Year	Long-Run Impact	Peak	Year	Long-Run Impact	Peak	Year	Long-Run Impact
State Revenues at State Average Rates	\$277	2035	\$277	\$90	2035	\$90	\$41	2035	\$41
Local Revenues at Adjusted State Average Rates	\$151	2035	\$151	\$54	2035	\$54	\$17	2035	\$17
State Expenditures at State Average Rates	\$78	2035	\$78	\$23	2035	\$23	\$7	2010	\$6
Local Expenditures at Adjusted State Average Rates	\$180	2035	\$180	\$62	2035	\$62	\$19	2010	\$16
	Tolland			Windham			New Haven		
	Peak	Year	Long-Run Impact	Peak	Year	Long-Run Impact	Peak	Year	Long-Run Impact
State Revenues at State Average Rates	\$36	2035	\$36	\$20	2035	\$20	\$37	2035	\$37
Local Revenues at Adjusted State Average Rates	\$18	2035	\$18	\$12	2035	\$12	\$20	2035	\$20
State Expenditures at State Average Rates	\$12	2035	\$12	\$7	2035	\$7	\$11	2014	\$10
Local Expenditures at Adjusted State Average Rates	\$24	2035	\$24	\$15	2035	\$15	\$26	2014	\$23
	New London			Litchfield			Middlesex		
	Peak	Year	Long-Run Impact	Peak	Year	Long-Run Impact	Peak	Year	Long-Run Impact
State Revenues at State Average Rates	\$15	2035	\$15	\$11	2035	\$11	\$27	2035	\$27
Local Revenues at Adjusted State Average Rates	\$9	2035	\$9	\$6	2035	\$6	\$14	2035	\$14
State Expenditures at State Average Rates	\$4	2014	\$4	\$3	2035	\$3	\$12	2022	\$12
Local Expenditures at Adjusted State Average Rates	\$9	2014	\$9	\$7	2035	\$7	\$25	2023	\$25

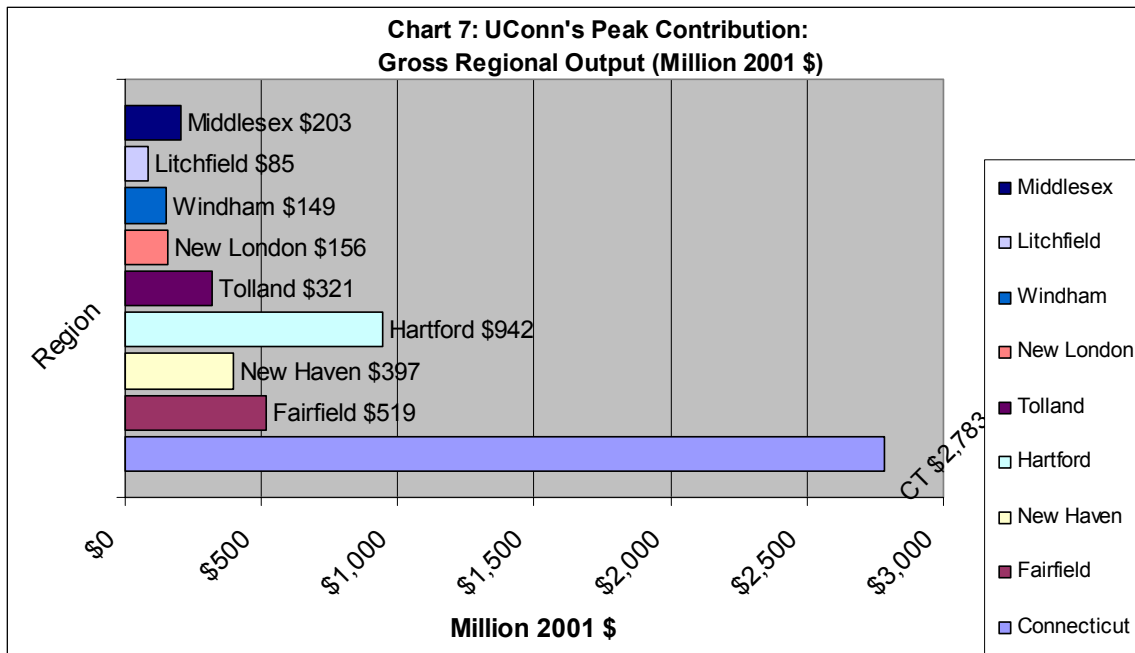
The fiscal analysis suggests that Connecticut and local economies benefit greatly from the existence of UConn; it is moreover an important source of local and state tax revenue.

## 2: Output Impact

We report two crucial economic impact categories in this section: Gross State Product and Personal Income. Gross State Product (GSP) is the nominal dollar value of final goods and services produced over a period of one year using a value-added approach, where the value added at each stage of the production process aggregates to

produce the final value. Calculations exclude intermediate goods to avoid double counting.

The results show UConn makes a significant contribution to Gross State Product (GSP). As Chart 7 indicates, the peak change in GSP is \$2.783 billion in 2001 dollars for Connecticut, which makes UConn one of the major economic forces in the Connecticut economy. The peak change in GSP represents about 1.5% of Connecticut’s \$140 billion economy. Moreover, relative to all two-digit industries in Connecticut (70 in number), UConn’s impact, in terms of its related GSP change, ranks 25<sup>th</sup> relative to the total size of each industry’s value added.



Among the counties, the largest beneficiary of UConn in terms of peak gross regional product is Hartford county with \$942 million. Next follows Fairfield with \$519 million, New Haven with \$397 million, Tolland with \$321 million and Middlesex with \$203 million. Windham and New London counties benefit by more than \$140 million; Litchfield County benefit as well with more than \$80 million. UConn’s continuing operations creates a large impact on Gross Regional Product throughout the forecast period.

UConn dramatically affects personal income throughout the state. Chart 8 shows the personal income impact for the state and its counties. The values represent peak changes in personal income due to the continuing operations of UConn.

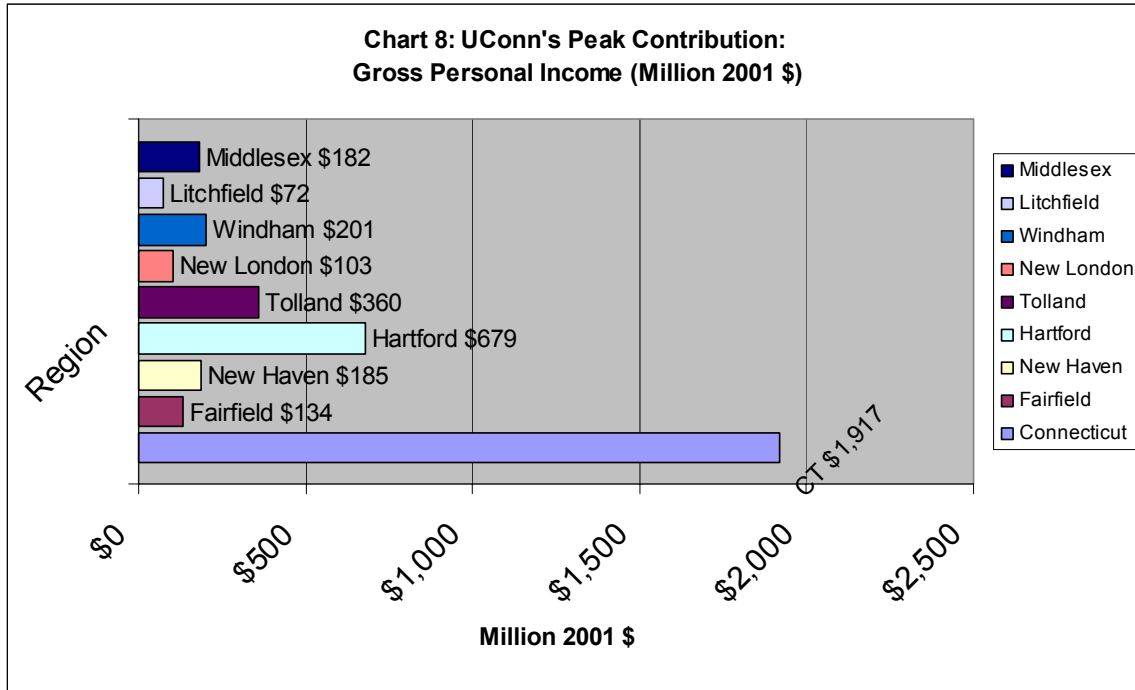


Chart 8 is particularly revealing as it shows a \$1.917 billion change in personal income throughout the state. Increasing personal income translates into more economic activities and increased local and state revenues from income taxes. Regionally, Hartford County's share is a prominent one with a \$679 million increase in personal income. With a \$360 million increase in personal income, Tolland County follows Hartford, while the other counties experience increases in personal income ranging from \$72 million in Litchfield, \$103 million in Litchfield, \$134 million in Fairfield, \$182 million in Middlesex, \$185 million in New Haven to \$201 million in Windham County.

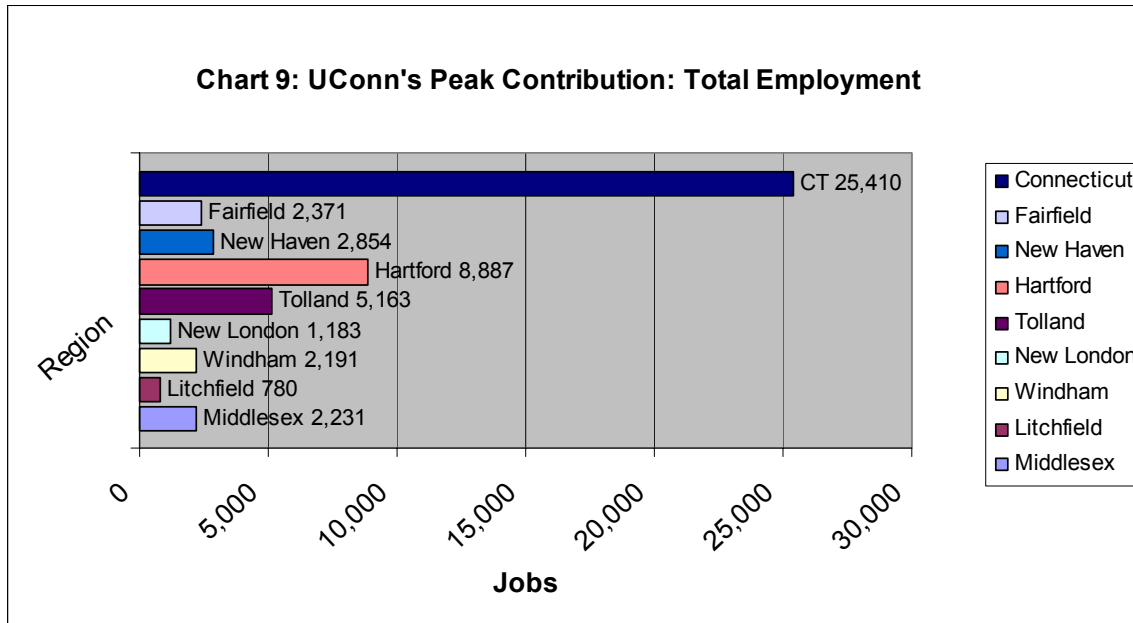
Table 16 presents a detailed summary of Gross Regional (and State) Product by county. We include the peak change in output and personal income as well as the long-run impact values. The time horizon for these calculations is 2002 through 2035.

Table 16: UConn and Changes in Output and Personal Income (Million 2001 \$)									
	Connecticut			Hartford			Fairfield		
	Peak	Year	Long-Run Impact	Peak	Year	Long-Run Impact	Peak	Year	Long-Run Impact
Gross Regional Product (Million 2001 \$)	\$2,783	2035	\$2,783	\$942	2035	\$942	\$519	2035	\$519
Gross Personal Income (Million 2001 \$)	\$1,917	2035	\$1,917	\$679	2035	\$679	\$134	2035	\$134
Real Disposable Personal Income (Million 2001 \$)	\$2,077	2035	\$2,077	\$609	2035	\$609	\$280	2035	\$280
	Tolland			Windham			New Haven		
	Peak	Year	Long-Run Impact	Peak	Year	Long-Run Impact	Peak	Year	Long-Run Impact
Gross Regional Product (Million 2001 \$)	\$321	2035	\$321	\$149	2035	\$149	\$397	2035	\$397
Gross Personal Income (Million 2001 \$)	\$360	2035	\$360	\$201	2035	\$201	\$185	2035	\$185
Real Disposable Personal Income (Million 2001 \$)	\$298	2035	\$298	\$169	2035	\$169	\$289	2035	\$289
	New London			Litchfield			Middlesex		
	Peak	Year	Long-Run Impact	Peak	Year	Long-Run Impact	Peak	Year	Long-Run Impact
Gross Regional Product (Million 2001 \$)	\$156	2035	\$156	\$85	2035	\$85	\$203	2035	\$203
Gross Personal Income (Million 2001 \$)	\$103	2035	\$103	\$72	2035	\$72	\$182	2035	\$182
Real Disposable Personal Income (Million 2001 \$)	\$126	2035	\$126	\$95	2035	\$95	\$200	2035	\$200

### 3: Employment and Population Impact

In addition to GSP and personal income, the University of Connecticut creates a significant amount of employment across the state. The REMI model assumes that changes in employment levels affect wages. These changes in wages affect migration and labor supply, which in turn affect employment levels. Chart 9 demonstrates total jobs created due to the continuing operations of UConn.

## Total Employment

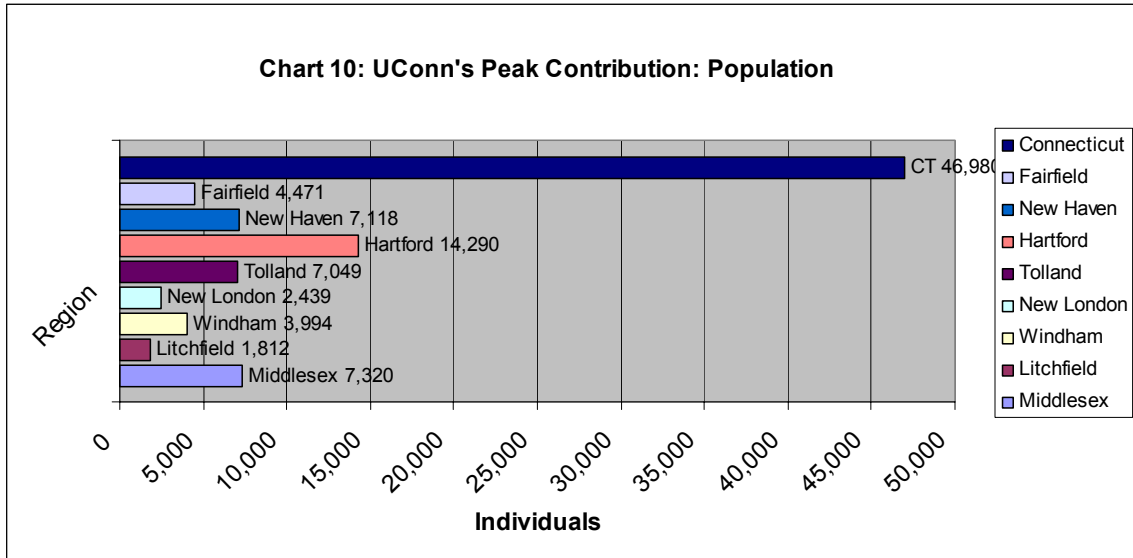


The total statewide employment impact of UConn is 25,410 jobs, which accounts for about 1.3% of Connecticut's total non-farm employment. Of these new jobs, 8,887 are in Hartford County. Combined with the \$2.783 billion increase in GSP, employment of this magnitude contributes to stability and vitality of the state and its local economies. Tolland County with 5,163 new jobs benefits second most from UConn's employment impact. The other counties' shares range from 780 jobs created in Litchfield to 2,854 new jobs in New Haven County.

Another impact of UConn is on population. The amenity value that UConn adds to the state—through services such as education, research, athletic events, public education, fine arts, diagnostic health screening, and even free health care—makes Connecticut relatively more attractive and encourages in-migration. Although we recognize that our estimate of the amenity or non-pecuniary value of UConn is low, even this amount has a considerable effect on the economy and population level. Furthermore, employment opportunities and other economic factors affected by UConn's presence attract in-migrants. These effects combine to increase new population by 46,980 in the state. As discussed previously, we assume that the UConn generates a putative increase in highly skilled labor and population aged 20-34. This is noteworthy as an aging population and loss of college age students to neighboring states has been a particular



concern for Connecticut in recent years. The population impact chart (Chart 10) below shows the increase in population by county.



According to Chart 10, four counties experience the largest peak population increase: Hartford with 14,290 people, Middlesex with 7,320 people, New Haven with 7,118, and Tolland with 7,049 people. The increase in population in the other counties ranges from 1,812 people in Litchfield to 4,471 people in Fairfield County. Table 17 presents total employment, private non-farm employment, and population changes by county and the entire state.

To analyze Table 17 briefly, we see slight differences between total jobs and private non-farm employment. We assume that this difference represents change in public sector employment due to UConn's operations. In total, 2860 new public sector jobs result from UConn's continuing operations in the entire state. Regionally, these new public sector jobs locate in Hartford County with 773 public sector jobs, Middlesex County with 401 public sector jobs, New Haven County with 297 public sector jobs, Tolland County with 227 public sector jobs, Fairfield County with 134 public sector jobs, New London County with 115 public sector jobs, Litchfield County with 76 public sector jobs, and Windham County with 65 public sector jobs. Table 17 reports the peak change in jobs and population and their long-run change.

Table 17: UConn and Changes in Jobs and Population (Unit)									
	Connecticut			Hartford			Fairfield		
	Peak	Year	Long-Run Impact	Peak	Year	Long-Run Impact	Peak	Year	Long-Run Impact
Population (Individuals)	46980	2014	42260	14290	2010	12670	4471	2010	3073
Employment (Jobs)	25410	2035	25410	8887	2024	8833	2371	2025	2337
Non-Farm Employment (Jobs)	22550	2030	22530	8114	2002	7888	2237	2025	2192
	Tolland			Windham			New Haven		
	Peak	Year	Long-Run Impact	Peak	Year	Long-Run Impact	Peak	Year	Long-Run Impact
Population (Individuals)	7049	2017	6833	3994	2015	3791	7118	2014	5375
Employment (Jobs)	5163	2003	5139	2191	2002	2155	2854	2024	2751
Non-Farm Employment (Jobs)	4936	2002	4455	2126	2002	1924	2557	2025	2467
	New London			Litchfield			Middlesex		
	Peak	Year	Long-Run Impact	Peak	Year	Long-Run Impact	Peak	Year	Long-Run Impact
Population (Individuals)	2439	2014	2013	1812	2035	1812	7320	2019	6688
Employment (Jobs)	1183	2035	1183	780	2035	780	2231	2035	2231
Non-Farm Employment (Jobs)	1068	2024	1066	704	2035	704	1830	2035	1830

## VII: Cost-Benefit Analysis and Summary of Findings

*One must realize that the state's contribution leverages \$650 million in private and federal money. It is the total revenue (\$989 million), public and private, that creates UConn's total impact, however, we detail the benefit-cost ratios based solely on the state's contribution relative to the total impact.* Does Connecticut benefit from channeling taxpayers' money to UConn? Table 18 answers this important question. Total state support for UConn in FY 2001 in various forms totaled \$339 million. This public support generates \$277 million in peak new tax revenues for Connecticut. This means for every dollar of state contribution to UConn, state tax revenues increase \$0.82.

In terms of Gross State Product (GSP), the benefit is significant. For every dollar

Table 18: Cost-Benefit Analysis of the State Support for UConn		
Categories	Ratios	State Support (\$339 million)
Increase in State Tax Revenue	0.82	For every \$1 spent for UConn
Increase in Gross State Product	8.21	For every \$1 spent for UConn
Increase in Gross Personal Income	5.65	For every \$1 spent for UConn
Job Creation	1	For every \$13341 spent for UConn
Federal Research Money	\$0.28	For every \$1 spent for UConn

spent on UConn, GSP increases \$8.21. This is indeed a significant payback to state investment in UConn. Similarly, for every taxpayer's dollar of support, their personal income increases \$5.65. As the results indicate, the rate of return to the investment in

‘human capital’ is considerably higher than other forms of investment (e.g., stock market, bonds, and money market funds) for taxpayers and the state.

The economic benefits extend to significant job creation: each \$13,341 of state investment in UConn creates one job, primarily at the college level or higher. Furthermore, we emphasize that every dollar of state contribution to UConn attracts \$0.28 federal dollars to Connecticut for research purposes.

Table 19 summarizes the cost-benefit analysis of state support for fourteen universities. According to Table 19, every dollar of state support to universities generates about \$7 on average in output (GRP) in their communities. The magnitude of this amount ranges from \$3 for every dollar invested in the University of Hawaii to \$11 in the Colorado University System and the University of Illinois at Urbana-Champaign. Considering the fact that Colorado State University is selected as a peer for the University of Connecticut, our estimate of \$8 increase in GSP per state dollar invested and 25,410 total employment is conservative (the same numbers for the Colorado University System are \$11 and 58,000, respectively).

We emphasize, though, that it is difficult to compare the numbers in Table 19 because as indicated in Table 1, the methodology, scope and assumptions of each study are different and so are the results. Keeping this in mind, we can glean useful information from Table 19 to put our study and findings in perspective.

Table 19: Findings from the Other Economic Impact Studies and UConn		
University	Output Per \$1State Support	Employment Impact
Arizona State University	7	21530
University of Arizona	6	19139
Colorado University System	11	58000
University of Hawaii	3	29058
University of Illinois at Urbana-Champaign	11	114352
Purdue University	4	22000
Iowa State University	5	22702
University of Massachusetts at Amherst	4	15552
University of Nebraska System	9	30310
Ohio State University	4	33683
University of Pittsburgh	6	26069
University of South Carolina	8	22341
West Virginia University	5	17728
<b>The University of Connecticut</b>	<b>8</b>	<b>25410</b>

Note: The purpose of this table is to give an idea about the contribution of each institution to their communities. It does not aim to compare these universities with each because of the large variation in the scope of each university's impact analysis. Figures for the Ouput Per Dollar State Support are rounded.

Source: Our own analysis and National Association of State Universities and Land-Grant Colleges, *Shaping the Future: The Economic Impact of Public Universities*, (Washington, DC: Office of Public Affairs, 2001).

To conclude, UConn contributes to Connecticut and its local economies to a great extent. Considering the economic output, personal income, and employment impacts, we argue that UConn is a backbone of the economic stability in the region. Investing in UConn is a worthy effort that will shape the future of Connecticut and its local communities. The University of Connecticut is an agglomeration of institutions spread across Connecticut that provides goods and services ranging from entertainment, sports, fine arts, community programs and services, education, retail operations to research. These activities create far-reaching socio-economic and political impact that few institutions have. Table 20 summarizes key findings.

Table 20: Summary of Findings: UConn's Peak Contribution to the Economy									
	Connecticut	Fairfield	New Haven	Hartford	Tolland	New London	Windham	Litchfield	Middlesex
Gross Regional Product (Million 2001 \$)	\$2,783	\$519	\$397	\$942	\$321	\$156	\$149	\$85	\$203
Gross Personal Income (Million 2001 \$)	\$1,917	\$134	\$185	\$679	\$360	\$103	\$201	\$72	\$182
Real Disposable Personal Income (Million 2001 \$)	\$2,077	\$280	\$289	\$609	\$298	\$126	\$169	\$95	\$200
Population (Individuals)	46,980	4,471	7,118	14,290	7,049	2,439	3,994	1,812	7,320
Employment (Jobs)	25,410	2,371	2,854	8,887	5,163	1,183	2,191	780	2,231
Non-Farm Employment (Jobs)	22,550	2,237	2,557	8,114	4,936	1,068	2,126	704	1,830
Disposable Personal Income (Million 2001 \$)	\$1,868	\$192	\$226	\$620	\$308	\$107	\$171	\$76	\$167
State Revenues at State Average Rates (Mil. 2001 \$)	\$277	\$41	\$37	\$90	\$36	\$15	\$20	\$11	\$27
Local Revenues at Adjusted State Average Rt. (Mil. 2001 \$)	\$151	\$17	\$20	\$54	\$18	\$9	\$12	\$6	\$14
State Expenditures at State Average Rates (Mil. 2001 \$)	\$78	\$7	\$11	\$23	\$12	\$4	\$7	\$3	\$12
Local Expenditures at Adjusted State Average Rt. (Mil. 2001 \$)	\$180	\$19	\$26	\$62	\$24	\$9	\$15	\$7	\$25

Appendix I

UConn Economic Impact by Senate District: Selected Input Variables  
and Gross Regional Product (GRP)

UConn Economic Impact by Senate District: Selected Input Variables and Gross Regional Product (GRP)									
Senate District	Town	Number of Alumni	Number of Employees (FTE)	Payroll	Number of Retirees	Retiree Benefits	Procurement	Change in GRP	Amenity Share
1	Hartford	49	802	\$7,755,473	10	\$200,175	\$21,502,796	\$238,507,287	\$12,620,587
	Wethersfield	13	12	\$592,418	5	\$68,223	\$358,182	\$3,972,928	\$210,227
<b>1 Total</b>		<b>62</b>	<b>814</b>	<b>\$8,347,891</b>	<b>14</b>	<b>\$268,398</b>	<b>\$21,860,978</b>	<b>\$242,480,215</b>	<b>\$12,830,814</b>
2	Hartford	49	802	\$7,755,473	10	\$200,175	\$21,502,796	\$238,507,287	\$12,620,587
	Bloomfield	4	39	\$2,372,963	10	\$254,331	\$2,972,179	\$32,967,164	\$1,744,454
	Windsor	19	0	\$795,899	3	\$31,820	\$3,281,479	\$36,397,904	\$1,925,991
<b>2 Total</b>		<b>71</b>	<b>841</b>	<b>\$10,924,335</b>	<b>22</b>	<b>\$486,326</b>	<b>\$27,756,453</b>	<b>\$307,872,354</b>	<b>\$16,291,032</b>
3	East Hartford	8	35	\$3,956,687	8	\$77,903	\$1,574,903	\$17,468,696	\$924,354
	East Windsor	0	47	\$941,047	0	\$0	\$205,585	\$2,280,334	\$120,664
	South Windsor	30	14	\$4,807,893	6	\$188,191	\$637,286	\$7,068,722	\$374,041
	Ellington	11	0	\$1,644,383	5	\$120,255	\$64,453	\$714,899	\$37,829
<b>3 Total</b>		<b>49</b>	<b>96</b>	<b>\$11,350,010</b>	<b>19</b>	<b>\$386,349</b>	<b>\$2,482,226</b>	<b>\$27,532,651</b>	<b>\$1,456,887</b>
4	Bolton	11	64	\$1,655,478	7	\$180,805	\$46,741	\$518,449	\$27,434
	Glastonbury	98	283	\$9,549,037	9	\$240,747	\$2,165,503	\$24,019,583	\$1,270,994
	Hebron	8	13	\$1,020,155	2	\$13,320	\$57,734	\$640,377	\$33,885
	Manchester	38	40	\$12,760,761	26	\$702,558	\$1,235,591	\$13,705,075	\$725,203
<b>4 Total</b>		<b>154</b>	<b>400</b>	<b>\$24,985,431</b>	<b>44</b>	<b>\$1,137,430</b>	<b>\$3,505,568</b>	<b>\$38,883,484</b>	<b>\$2,057,515</b>
5	Burlington	11	79	\$5,203,689	0	\$0	\$44,827	\$497,217	\$26,310
	Farmington	124	349	\$16,309,412	6	\$112,098	\$57,229,521	\$634,785,268	\$33,589,592
	West Hartford	191	153	\$11,272,836	34	\$956,374	\$2,999,720	\$33,272,652	\$1,760,619
	Bloomfield	4	39	\$2,372,963	10	\$254,331	\$2,972,179	\$32,967,164	\$1,744,454
<b>5 Total</b>		<b>330</b>	<b>620</b>	<b>\$35,158,900</b>	<b>50</b>	<b>\$1,322,803</b>	<b>\$63,246,247</b>	<b>\$701,522,301</b>	<b>\$37,120,975</b>
6	Berlin	8	26	\$1,339,012	3	\$36,625	\$736,213	\$8,166,010	\$432,104
	New Britain	90	39	\$10,711,760	2	\$11,308	\$3,063,341	\$33,978,333	\$1,797,960
<b>6 Total</b>		<b>98</b>	<b>65</b>	<b>\$12,050,772</b>	<b>5</b>	<b>\$47,933</b>	<b>\$3,799,554</b>	<b>\$42,144,343</b>	<b>\$2,230,063</b>
7	Enfield	26	9	\$3,091,253	3	\$72,424	\$1,881,047	\$20,864,427	\$1,104,039
	Somers	23	133	\$1,574,078	3	\$89,754	\$29,333	\$325,354	\$17,216
	Suffield	23	294	\$1,845,644	3	\$36,093	\$70,422	\$781,117	\$41,333
	Windsor Locks	0	8	\$207,533	2	\$17,412	\$64,013	\$710,030	\$37,571
	Windsor	19	0	\$795,899	3	\$31,820	\$3,281,479	\$36,397,904	\$1,925,991
<b>7 Total</b>		<b>90</b>	<b>444</b>	<b>\$7,514,407</b>	<b>14</b>	<b>\$247,503</b>	<b>\$5,326,294</b>	<b>\$59,078,833</b>	<b>\$3,126,150</b>
8	AVON	105	161	\$14,760,481	5	\$231,264	\$7,502,251	\$83,214,370	\$4,403,279
	Barkhamsted	23	41	\$575,135	1	\$51,971	\$7,291	\$80,876	\$4,280
	Canton	11	50	\$2,939,990	1	\$6,829	\$65,181	\$722,984	\$38,257
	Colebrook	0	2	\$91,209	0	\$0	\$860	\$9,535	\$505
	East Granby	4	1	\$757,739	1	\$7,092	\$56,322	\$624,722	\$33,057
	Granby	15	4	\$4,631,124	2	\$114,029	\$41,731	\$462,876	\$24,493
	Hartland	0	86	\$397	0	\$0	\$0	\$0	\$0
	New Hartford	8	0	\$1,282,566	0	\$0	\$18,373	\$203,797	\$10,784
	Norfolk	0	99	\$430,490	2	\$118,590	\$4,607	\$51,102	\$2,704
	Simsbury	41	102	\$7,842,480	4	\$151,801	\$360,287	\$3,996,271	\$211,462
	Winchester	0	30	\$343,665	0	\$0	\$625	\$6,934	\$367
	Harwington	6	0	\$769,588	0	\$0	\$9,674	\$107,304	\$5,678
	Plymouth	0	17	\$137,328	0	\$0	\$68	\$753	\$40
<b>8 Total</b>		<b>212</b>	<b>593</b>	<b>\$34,562,192</b>	<b>16</b>	<b>\$681,577</b>	<b>\$8,067,271</b>	<b>\$89,481,526</b>	<b>\$4,734,905</b>
9	Cromwell	4	12	\$2,349,980	1	\$28,817	\$128,243	\$1,422,465	\$75,270
	Newington	34	117	\$6,576,984	5	\$64,605	\$141,333	\$1,567,650	\$82,952
	Rocky Hill	45	26	\$1,785,465	2	\$20,300	\$2,203,517	\$24,441,235	\$1,293,305
	Wethersfield	13	12	\$592,418	5	\$68,223	\$358,182	\$3,972,928	\$210,227
	Middletown	34	51	\$2,295,495	2	\$37,887	\$1,117,672	\$12,397,122	\$655,993
	<b>9 Total</b>		<b>129</b>	<b>218</b>	<b>\$13,600,340</b>	<b>14</b>	<b>\$219,831</b>	<b>\$3,948,947</b>	<b>\$43,801,400</b>
10	New Haven	15	52	\$1,342,781	4	\$98,424	\$6,073,037	\$67,361,636	\$3,564,434
	West Haven	9	0	\$216,407	1	\$4,561	\$154,361	\$1,712,155	\$90,599
<b>10 Total</b>		<b>24</b>	<b>52</b>	<b>\$1,559,188</b>	<b>5</b>	<b>\$102,985</b>	<b>\$6,227,397</b>	<b>\$69,073,792</b>	<b>\$3,655,032</b>
11	New Haven	15	52	\$1,342,781	4	\$98,424	\$6,073,037	\$67,361,636	\$3,564,434
	East Haven	6	8	\$139,258	0	\$0	\$56,754	\$629,508	\$33,311
	Hamden	9	9	\$616,028	1	\$13,650	\$473,976	\$5,257,303	\$278,190
<b>11 Total</b>		<b>30</b>	<b>69</b>	<b>\$2,098,067</b>	<b>5</b>	<b>\$112,074</b>	<b>\$6,603,767</b>	<b>\$73,248,447</b>	<b>\$3,875,934</b>
12	Branford	8	0	\$1,277,329	3	\$153,514	\$418,898	\$4,646,382	\$245,863
	Guilford	26	10	\$616,394	0	\$0	\$460,426	\$5,107,008	\$270,237
	Madison	49	13	\$759,924	0	\$0	\$219,943	\$2,439,585	\$129,090
	North Branford	0	10	\$189,068	1	\$17,249	\$231,547	\$2,568,300	\$135,901
	East Haven	6	8	\$139,258	0	\$0	\$56,754	\$629,508	\$33,311
<b>12 Total</b>		<b>88</b>	<b>41</b>	<b>\$2,981,973</b>	<b>4</b>	<b>\$170,763</b>	<b>\$1,387,567</b>	<b>\$15,390,783</b>	<b>\$814,402</b>
13	Meriden	19	85	\$2,444,321	2	\$22,845	\$1,283,513	\$14,236,622	\$753,329
	Middlefield	8	18	\$495,530	0	\$0	\$4,903	\$54,378	\$2,877
	Middletown	34	52	\$2,295,495	2	\$37,887	\$1,117,672	\$12,397,122	\$655,993
<b>13 Total</b>		<b>60</b>	<b>155</b>	<b>\$5,235,345</b>	<b>4</b>	<b>\$60,732</b>	<b>\$2,406,087</b>	<b>\$26,688,122</b>	<b>\$1,412,199</b>
14	Milford	53	12	\$685,256	1	\$53,103	\$1,446,072	\$16,039,714	\$848,740
	Orange	30	1	\$291,955	1	\$18,766	\$30,842	\$342,101	\$18,102
	West Haven	9	0	\$216,407	1	\$4,561	\$154,361	\$1,712,155	\$90,599
<b>14 Total</b>		<b>92</b>	<b>13</b>	<b>\$1,193,618</b>	<b>3</b>	<b>\$76,430</b>	<b>\$1,631,275</b>	<b>\$18,093,970</b>	<b>\$957,440</b>

15	Middlebury	11	1	\$387,024	1	\$5,388	\$20,079	\$222,713	\$11,785
	Prospect	11	0	\$411,406	0	\$0	\$7,444	\$82,572	\$4,369
	Waterbury	23	56	\$14,851,918	6	\$68,374	\$423,248	\$4,694,625	\$248,416
	Naugatuck	6	3	\$616,599	1	\$7,557	\$1,067,108	\$11,836,275	\$626,315
<b>15 Total</b>		<b>51</b>	<b>61</b>	<b>\$16,266,947</b>	<b>7</b>	<b>\$81,319</b>	<b>\$1,517,879</b>	<b>\$16,836,185</b>	<b>\$890,885</b>
16	Wolcott	26	0	\$361,684	1	\$5,289	\$61,987	\$687,557	\$36,382
	Waterbury	23	56	\$14,851,918	6	\$68,374	\$423,248	\$4,694,625	\$248,416
	Southington	19	0	\$2,844,832	0	\$0	\$65,714	\$728,895	\$38,570
<b>16 Total</b>		<b>68</b>	<b>56</b>	<b>\$18,058,434</b>	<b>7</b>	<b>\$73,663</b>	<b>\$550,949</b>	<b>\$6,111,077</b>	<b>\$323,367</b>
17	ANSONIA	8	0	\$101,729	0	\$0	\$9,909	\$109,906	\$5,816
	Beacon Falls	0	0	\$495,193	0	\$0	\$2,447	\$27,145	\$1,436
	Bethany	8	0	\$356,443	0	\$0	\$2,309	\$25,615	\$1,355
	Derby	4	12	\$167,906	0	\$0	\$66	\$735	\$39
	Woodbridge	19	1	\$19,737	1	\$31,188	\$144,407	\$1,601,753	\$84,757
	Hamden	9	9	\$616,028	1	\$13,650	\$473,976	\$5,257,303	\$278,190
	Naugatuck	6	3	\$616,599	1	\$7,557	\$1,067,108	\$11,836,275	\$626,315
	Seymour	4	56	\$183,505	0	\$0	\$4,381,044	\$48,594,182	\$2,573,856
<b>17 Total</b>		<b>56</b>	<b>81</b>	<b>\$2,557,140</b>	<b>3</b>	<b>\$52,395</b>	<b>\$6,081,266</b>	<b>\$67,452,915</b>	<b>\$3,571,763</b>
18	Griswold	0	0	\$322,384	0	\$0	\$0	\$0	\$0
	Groton	8	10	\$1,930,968	18	\$449,677	\$677,505	\$7,514,829	\$397,646
	Lisbon	0	7	\$1,607,038	6	\$103,029	\$622,644	\$6,906,318	\$365,447
	North Stonington	0	17	\$691,740	7	\$178,659	\$38,775	\$430,088	\$22,758
	Preston	4	0	\$356,207	2	\$73,858	\$32,308	\$358,363	\$18,963
	Sprague	0	0	\$0	0	\$0	\$0	\$0	\$0
	Stonington	0	2	\$505,006	5	\$44,157	\$31,305	\$347,233	\$18,374
	Voluntown	4	2	\$347,397	2	\$31,539	\$1,165	\$12,919	\$684
<b>18 Total</b>		<b>15</b>	<b>38</b>	<b>\$5,760,740</b>	<b>40</b>	<b>\$880,918</b>	<b>\$1,403,702</b>	<b>\$15,569,749</b>	<b>\$823,872</b>
19	Andover	4	81	\$1,626,311	6	\$197,873	\$5,370	\$59,563	\$3,152
	Bozrah	8	16	\$302,566	2	\$21,720	\$26,949	\$298,915	\$15,817
	Columbia	11	37	\$4,168,932	46	\$1,062,957	\$127,167	\$1,410,528	\$74,638
	Franklin	0	0	\$31,367	0	\$0	\$88	\$974	\$52
	Lebanon	11	7	\$3,642,541	27	\$354,529	\$114,540	\$1,270,471	\$67,227
	Montville	4	10	\$57,437	0	\$0	\$50	\$555	\$29
	Norwich	71	197	\$9,849,458	55	\$1,019,592	\$7,917,763	\$87,823,192	\$4,647,154
	Salem	11	5	\$531,173	1	\$40,217	\$8,294	\$91,992	\$4,868
	Mansfield	11	268	\$41,677,818	288	\$9,763,677	\$8,482,719	\$94,089,632	\$4,978,743
	Coventry	9	0	\$6,571,961	31	\$517,337	\$34,048	\$377,651	\$19,984
<b>19 Total</b>		<b>141</b>	<b>622</b>	<b>\$68,459,563</b>	<b>455</b>	<b>\$12,977,901</b>	<b>\$16,716,987</b>	<b>\$185,423,472</b>	<b>\$9,811,663</b>
20	East Lyme	4	0	\$581,614	0	\$0	\$30,130	\$334,200	\$17,684
	Ledyard	15	78	\$2,053,275	5	\$112,055	\$43,381	\$481,179	\$25,462
	New London	15	12	\$1,205,428	9	\$123,581	\$121,900	\$1,352,107	\$71,547
	Old Lyme	8	9	\$660,961	2	\$110,744	\$27,500	\$305,027	\$16,140
	Old Saybrook	11	12	\$724,394	5	\$86,422	\$86,679	\$961,437	\$50,874
	Waterford	4	6	\$1,093,252	5	\$177,831	\$158,275	\$1,755,576	\$92,896
<b>20 Total</b>		<b>56</b>	<b>116</b>	<b>\$6,318,923</b>	<b>26</b>	<b>\$610,634</b>	<b>\$467,865</b>	<b>\$5,189,526</b>	<b>\$274,603</b>
21	Shelton	15	2	\$272,181	2	\$59,455	\$66,514	\$737,763	\$39,039
	Stratford	11	0	\$694,015	1	\$29,271	\$263,013	\$2,917,319	\$154,370
	Sharon	0	9	\$1,612	0	\$0	\$18,800	\$208,524	\$11,034
	Seymour	3	56	\$183,505	0	\$0	\$4,381,044	\$48,594,182	\$2,571,356
<b>21 Total</b>		<b>30</b>	<b>67</b>	<b>\$1,151,313</b>	<b>3</b>	<b>\$88,726</b>	<b>\$4,729,370</b>	<b>\$52,457,788</b>	<b>\$2,775,798</b>
22	Trumbull	23	1	\$564,421	0	\$0	\$142,698	\$1,582,799	\$83,754
	Bridgeport	11	73	\$1,210,566	2	\$24,920	\$653,421	\$7,247,695	\$383,511
	Monroe	6	1	\$289,281	0	\$0	\$6,145	\$68,152	\$3,607
<b>22 Total</b>		<b>39</b>	<b>75</b>	<b>\$2,064,267</b>	<b>2</b>	<b>\$24,920</b>	<b>\$802,264</b>	<b>\$8,898,646</b>	<b>\$470,871</b>
23	Bridgeport	11	73	\$1,210,566	2	\$24,920	\$653,421	\$7,247,695	\$383,511
<b>23 Total</b>		<b>11</b>	<b>73</b>	<b>\$1,210,566</b>	<b>2</b>	<b>\$24,920</b>	<b>\$653,421</b>	<b>\$7,247,695</b>	<b>\$383,511</b>
24	Bethel	26	12	\$239,519	3	\$61,095	\$55,515	\$615,765	\$32,583
	Danbury	30	9	\$899,907	2	\$22,119	\$222,435	\$2,467,234	\$130,553
	New Fairfield	4	0	\$136,479	0	\$0	\$980	\$10,867	\$575
<b>24 Total</b>		<b>60</b>	<b>21</b>	<b>\$1,275,905</b>	<b>5</b>	<b>\$83,214</b>	<b>\$278,930</b>	<b>\$3,093,866</b>	<b>\$163,712</b>
25	Norwalk	23	20	\$1,016,044	4	\$42,290	\$277,136	\$3,073,967	\$162,659
	Darien	2	0	\$43,564	1	\$22,390	\$62,045	\$688,199	\$36,416
<b>25 Total</b>		<b>24</b>	<b>20</b>	<b>\$1,059,608</b>	<b>5</b>	<b>\$64,680</b>	<b>\$339,181</b>	<b>\$3,762,166</b>	<b>\$199,075</b>
26	Redding	0	15	\$1,644,051	0	\$0	\$36,725	\$407,351	\$21,555
	Ridgefield	0	1	\$286,734	1	\$64,896	\$10,679	\$118,445	\$6,268
	Weston	0	11	\$82,266	0	\$0	\$1,100	\$12,201	\$646
	Westport	8	30	\$324,238	0	\$0	\$23,278	\$258,201	\$13,663
	Wilton	8	1	\$1,056,126	1	\$6,497	\$43,058	\$477,599	\$25,272
	New Canaan	4	0	\$110,067	0	\$0	\$4,378	\$48,555	\$2,570
<b>26 Total</b>		<b>19</b>	<b>58</b>	<b>\$3,503,482</b>	<b>2</b>	<b>\$71,393</b>	<b>\$119,218</b>	<b>\$1,322,353</b>	<b>\$69,972</b>
27	Darien	2	0	\$43,564	1	\$22,390	\$62,045	\$688,199	\$36,416
	Stamford	9	15	\$1,163,216	8	\$140,284	\$686,905	\$7,619,091	\$403,164
<b>27 Total</b>		<b>11</b>	<b>15</b>	<b>\$1,206,780</b>	<b>8</b>	<b>\$162,674</b>	<b>\$748,950</b>	<b>\$8,307,290</b>	<b>\$439,580</b>



28	Easton	15	0	\$198,314	0	\$0	\$129,020	\$1,431,075	\$75,725
	Fairfield	34	23	\$874,486	2	\$35,280	\$247,875	\$2,749,415	\$145,485
	Newtown	19	0	\$965,197	1	\$29,091	\$7,423,146	\$82,336,937	\$4,356,850
	Monroe	6	1	\$289,281	0	\$0	\$6,144	\$68,152	\$3,607
<b>28 Total</b>		<b>73</b>	<b>24</b>	<b>\$2,327,277</b>	<b>3</b>	<b>\$64,371</b>	<b>\$7,806,184</b>	<b>\$86,585,579</b>	<b>\$4,581,666</b>
29	Canterbury	8	26	\$1,457,384	13	\$166,661	\$8,010	\$88,843	\$4,701
	Killingly	0	73	\$304	0	\$0	\$0	\$0	\$0
	Plainfield	0	11	\$1,043,736	4	\$78,781	\$93,145	\$1,033,161	\$54,670
	Putnam	30	844	\$3,251,604	33	\$541,008	\$749,151	\$8,309,518	\$439,697
	Scotland	0	1,003	\$918,170	4	\$100,142	\$5,469	\$60,662	\$3,210
	Sterling	4	17	\$90,299	0	\$0	\$17,512	\$194,242	\$10,278
	Thompson	0	30	\$336,337	1	\$60,460	\$5,411	\$60,022	\$3,176
	Windham	15	22	\$21,819,907	284	\$4,116,687	\$1,800,125	\$19,966,844	\$1,056,543
	Mansfield	11	268	\$41,677,818	288	\$9,763,677	\$8,482,719	\$94,089,632	\$4,978,743
<b>29 Total</b>		<b>68</b>	<b>2,293</b>	<b>\$70,595,559</b>	<b>627</b>	<b>\$14,827,415</b>	<b>\$11,161,542</b>	<b>\$123,802,923</b>	<b>\$6,551,018</b>
30	Canaan	4	140	\$15,059	1	\$25,528	\$29,649	\$328,868	\$17,402
	Cornwall	0	4	\$208,143	0	\$0	\$500	\$5,546	\$293
	Goshen	0	8	\$70,366	0	\$0	\$752	\$8,345	\$442
	Kent	4	30	\$7,149	1	\$27,902	\$475	\$5,269	\$279
	Litchfield	19	74	\$3,090,520	5	\$42,791	\$138,158	\$1,532,433	\$81,089
	Morris	0	3	\$74,408	1	\$29,218	\$25	\$277	\$15
	North Canaan	0	0	\$3,088	0	\$0	\$0	\$0	\$0
	Salisbury	0	2	\$17,381	1	\$15,839	\$50	\$555	\$29
	Sherman	4	52	\$42,598	0	\$0	\$505	\$5,601	\$296
	Torrington	15	18	\$2,432,286	6	\$108,214	\$1,579,676	\$17,521,644	\$927,156
	Warren	0	0	\$25,895	0	\$0	\$0	\$0	\$0
	Washington	4	15	\$62,752	0	\$0	\$60	\$666	\$35
	Sharon	0	9	\$1,612	0	\$0	\$18,800	\$208,524	\$11,034
	New Milford	8	0	\$324,973	1	\$22,345	\$19,135	\$212,242	\$11,231
	Harwington	6	0	\$769,588	0	\$0	\$9,674	\$107,304	\$5,678
<b>30 Total</b>		<b>62</b>	<b>356</b>	<b>\$7,145,820</b>	<b>16</b>	<b>\$271,837</b>	<b>\$1,797,459</b>	<b>\$19,937,274</b>	<b>\$1,054,979</b>
31	Bristol	45	317	\$12,882,762	6	\$152,056	\$503,298	\$5,582,536	\$295,399
	Plainville	0	247	\$4,377,567	2	\$59,404	\$14,051,959	\$155,863,208	\$8,247,484
	Southington	19	0	\$2,844,832	0	\$0	\$65,714	\$728,895	\$38,570
	Plymouth	0	17	\$137,328	0	\$0	\$68	\$753	\$40
<b>31 Total</b>		<b>64</b>	<b>580</b>	<b>\$20,242,489</b>	<b>8</b>	<b>\$211,460</b>	<b>\$14,621,039</b>	<b>\$162,175,393</b>	<b>\$8,581,493</b>
32	Bethlehem	0	0	\$295,348	2	\$61,589	\$85	\$943	\$50
	Bridgewater	0	2	\$112,032	1	\$20,733	\$12,000	\$133,103	\$7,043
	Brookfield	4	3	\$517,259	0	\$0	\$18,577	\$206,053	\$10,903
	Oxford	11	9	\$229,452	0	\$0	\$27,501	\$305,041	\$16,141
	Roxbury	4	9	\$180,347	1	\$24,353	\$150	\$1,664	\$88
	Southbury	11	28	\$946,651	5	\$110,414	\$126,350	\$1,401,465	\$74,158
	Thomaston	4	2	\$390,197	1	\$46,592	\$7,799	\$86,502	\$4,577
	Watertown	15	9	\$513,224	3	\$57,663	\$23,163	\$256,924	\$13,595
	Woodbury	11	9	\$46,703	0	\$0	\$6,190	\$68,663	\$3,633
	New Milford	8	0	\$324,973	1	\$22,345	\$19,135	\$212,242	\$11,231
<b>32 Total</b>		<b>68</b>	<b>70</b>	<b>\$3,556,186</b>	<b>14</b>	<b>\$343,687</b>	<b>\$240,950</b>	<b>\$2,672,599</b>	<b>\$141,420</b>
33	Chester	0	39	\$808,241	1	\$36,758	\$37,476	\$415,676	\$21,995
	Clinton	4	5	\$373,865	1	\$20,613	\$23,911	\$265,222	\$14,034
	Colchester	11	10	\$1,269,032	3	\$50,825	\$20,828	\$231,026	\$12,225
	Deep River	4	8	\$354,030	0	\$0	\$14,059	\$155,939	\$8,251
	Durham	15	14	\$547,578	1	\$1,443	\$28,039	\$311,005	\$16,457
	East Haddam	0	0	\$801,815	2	\$57,209	\$658	\$7,304	\$386
	East Hampton	0	6	\$832,871	2	\$82,073	\$62,828	\$696,881	\$36,875
	Essex	0	0	\$362,297	0	\$0	\$92,945	\$1,030,935	\$54,552
	Haddam	0	4	\$626,200	1	\$5,473	\$8,500	\$94,279	\$4,989
	Killingworth	11	22	\$626,068	1	\$35,238	\$212,532	\$2,357,390	\$124,741
	Lyme	0	4	\$135,598	0	\$0	\$1,623	\$18,002	\$953
	Marlborough	4	7	\$966,083	5	\$74,612	\$9,045	\$100,329	\$5,309
	Portland	4	12	\$527,545	0	\$0	\$361,712	\$4,012,079	\$212,299
	Westbrook	8	0	\$187,780	2	\$11,536	\$11,792	\$130,799	\$6,921
<b>33 Total</b>		<b>60</b>	<b>131</b>	<b>\$8,419,002</b>	<b>19</b>	<b>\$375,781</b>	<b>\$885,948</b>	<b>\$9,826,865</b>	<b>\$519,987</b>

34	Cheshire	53	43	\$3,453,265	2	\$28,126	\$15,713,600	\$174,293,998	\$9,222,747
	North Haven	23	4	\$873,161	1	\$3,074	\$397,683	\$4,411,071	\$233,411
	Wallingford	49	11	\$1,150,811	3	\$54,167	\$415,546	\$4,609,198	\$243,895
34 Total		124	58	\$5,477,236	6	\$85,367	\$16,526,829	\$183,314,267	\$9,700,054
35	ASHFORD	11	11	\$10,482,033	56	\$1,149,657	\$175,462	\$1,946,215	\$102,984
	Brooklyn	11	24	\$1,775,897	14	\$269,901	\$29,462	\$326,791	\$17,292
	Chaplin	0	13	\$3,655,279	28	\$511,919	\$9,430	\$104,592	\$5,534
	Eastford	4	1	\$1,834,601	20	\$356,407	\$2,117	\$23,482	\$1,243
	Hampton	8	7	\$3,785,455	25	\$650,176	\$46,420	\$514,890	\$27,245
	Pomfret	8	16	\$1,232,842	11	\$224,122	\$50,045	\$555,098	\$29,373
	Rockville	0	68	\$760,037	3	\$72,076	\$10,805	\$119,848	\$6,342
	Stafford	8	7	\$5,300,899	55	\$820,602	\$2,046,232	\$22,696,646	\$1,200,991
	Tolland	23	16	\$12,982,561	49	\$1,029,299	\$205,135	\$2,275,345	\$120,400
	Union	11	2	\$4,839,298	2	\$22,106	\$65,505	\$726,579	\$38,447
	Vernon	34	90	\$9,745,589	32	\$662,382	\$511,830	\$5,677,183	\$300,407
	Willington	19	480	\$19,086,320	92	\$2,123,916	\$306,389	\$3,398,440	\$179,828
	Woodstock	11	275	\$2,883,916	25	\$510,549	\$113,628	\$1,260,356	\$66,692
	Coventry	9	0	\$6,571,962	31	\$517,337	\$34,048	\$377,651	\$19,984
	Ellington	11	0	\$1,644,383	5	\$120,255	\$64,453	\$714,899	\$37,829
35 Total		167	1,010	\$86,581,073	447	\$9,040,703	\$3,670,962	\$40,718,015	\$2,154,590
36	Greenwich	15	15	\$307,342	1	\$14,991	\$686,092	\$7,610,073	\$402,686
	New Canaan	4	1	\$110,067	0	\$0	\$4,378	\$48,555	\$2,570
	Stamford	9	15	\$1,163,216	8	\$140,284	\$686,905	\$7,619,091	\$403,164
36 Total		28	30	\$1,580,625	9	\$155,275	\$1,377,374	\$15,277,719	\$808,419

Appendix II:

UConn Economic Impact by Assembly District: Selected Input Variables  
and Gross Regional Product (GRP)

UConn Economic Impact by Assembly District: Selected Input Variables and Gross Regional Product (GRP)

Assembly District	Town	Number of Alumni	Number of Employees (FTE)	Payroll	Number of Retirees	Retiree Benefits	Procurement	Change in GRP	Amenity Share
1	Bloomfield	4	39	\$2,372,963	10	\$254,331	\$2,972,178	\$32,967,164	\$1,744,454
	Hartford	11	178	\$1,723,438	2	\$44,483	\$4,778,399	\$53,001,619	\$2,804,575
1 Total		15	217	\$4,096,401	12	\$298,814	\$7,750,577	\$85,968,783	\$4,549,029
2	Hartford	11	178	\$1,723,438	2	\$44,483	\$4,778,399	\$53,001,619	\$2,804,575
2 Total		11	178	\$1,723,438	2	\$44,483	\$4,778,399	\$53,001,619	\$2,804,575
3	Hartford	11	178	\$1,723,438	2	\$44,483	\$4,778,399	\$53,001,619	\$2,804,575
3 Total		11	178	\$1,723,438	2	\$44,483	\$4,778,399	\$53,001,619	\$2,804,575
4	Hartford	11	178	\$1,723,438	2	\$44,483	\$4,778,399	\$53,001,619	\$2,804,575
4 Total		11	178	\$1,723,438	2	\$44,483	\$4,778,399	\$53,001,619	\$2,804,575
5	Hartford	11	178	\$1,723,438	2	\$44,483	\$4,778,399	\$53,001,619	\$2,804,575
5 Total		11	178	\$1,723,438	2	\$44,483	\$4,778,399	\$53,001,619	\$2,804,575
6	Hartford	11	178	\$1,723,438	2	\$44,483	\$4,778,399	\$53,001,619	\$2,804,575
6 Total		11	178	\$1,723,438	2	\$44,483	\$4,778,399	\$53,001,619	\$2,804,575
7	Hartford	11	178	\$1,723,438	2	\$44,483	\$4,778,399	\$53,001,619	\$2,804,575
	Windsor	13	0	\$530,599	2	\$21,213	\$2,187,653	\$24,265,269	\$1,283,994
7 Total		23	178	\$2,254,037	4	\$65,697	\$6,966,052	\$77,266,888	\$4,088,569
8	Columbia	11	37	\$4,168,931	46	\$1,062,957	\$127,167	\$1,410,528	\$74,638
	Lebanon	6	3	\$1,821,270	14	\$177,264	\$57,270	\$635,236	\$33,614
	Coventry	9	0	\$6,571,961	31	\$517,337	\$34,047	\$377,651	\$19,984
	Vernon	11	30	\$3,248,530	11	\$220,794	\$170,610	\$3,373,398	\$100,136
8 Total		38	70	\$15,810,692	101	\$1,978,352	\$389,095	\$5,796,812	\$228,371
9	East Hartford	3	12	\$1,318,896	3	\$25,968	\$524,968	\$5,822,899	\$308,118
	Manchester	13	13	\$4,253,587	9	\$234,186	\$411,864	\$4,568,358	\$241,734
	Glastonbury	49	142	\$4,774,518	5	\$120,373	\$1,082,751	\$12,009,792	\$635,497
9 Total		64	167	\$10,347,001	16	\$380,527	\$2,019,583	\$22,401,049	\$1,185,349
10	East Hartford	3	12	\$1,318,896	3	\$25,968	\$524,968	\$5,822,899	\$308,118
10 Total		3	12	\$1,318,896	3	\$25,968	\$524,968	\$5,822,899	\$308,118
11	East Hartford	3	12	\$1,318,896	3	\$25,968	\$524,968	\$5,822,899	\$308,118
11 Total		3	12	\$1,318,896	3	\$25,968	\$524,968	\$5,822,899	\$308,118
12	Manchester	13	13	\$4,253,587	9	\$234,186	\$411,864	\$4,568,358	\$241,734
12 Total		13	13	\$4,253,587	9	\$234,186	\$411,864	\$4,568,358	\$241,734
13	Manchester	13	13	\$4,253,587	9	\$234,186	\$411,864	\$4,568,358	\$241,734
13 Total		13	13	\$4,253,587	9	\$234,186	\$411,864	\$4,568,358	\$241,734
14	South Windsor	30	14	\$4,807,893	6	\$188,191	\$637,286	\$7,068,722	\$374,041
14 Total		30	14	\$4,807,893	6	\$188,191	\$637,286	\$7,068,722	\$374,041
15	Bloomfield	4	39	\$2,372,963	10	\$254,331	\$2,972,178	\$32,967,164	\$1,744,454
	Windsor	13	0	\$530,599	2	\$21,213	\$2,187,653	\$24,265,269	\$1,283,994
15 Total		16	39	\$2,903,562	11	\$275,544	\$5,159,831	\$57,232,433	\$3,028,448
16	Simsbury	41	102	\$7,842,480	4	\$151,801	\$360,287	\$3,996,271	\$211,462
16 Total		41	102	\$7,842,480	4	\$151,801	\$360,287	\$3,996,271	\$211,462
17	Avon	105	161	\$14,760,481	5	\$231,264	\$7,502,251	\$83,214,370	\$4,403,279
	Canton	11	50	\$2,939,990	1	\$6,829	\$65,181	\$722,984	\$38,257
17 Total		116	212	\$17,700,471	6	\$238,093	\$7,567,432	\$83,937,354	\$4,441,536
18	West Hartford	64	51	\$3,757,612	11	\$318,791	\$999,907	\$11,090,884	\$586,873
18 Total		64	51	\$3,757,612	11	\$318,791	\$999,907	\$11,090,884	\$586,873
19	West Hartford	64	51	\$3,757,612	11	\$318,791	\$999,907	\$11,090,884	\$586,873
19 Total		64	51	\$3,757,612	11	\$318,791	\$999,907	\$11,090,884	\$586,873
20	Hartford	11	178	\$1,723,438	2	\$44,483	\$4,778,399	\$53,001,619	\$2,804,575
	West Hartford	64	51	\$3,757,612	11	\$318,791	\$999,907	\$11,090,884	\$586,873
20 Total		75	229	\$5,481,051	13	\$363,275	\$5,778,306	\$64,092,503	\$3,391,448
21	Farmington	124	349	\$16,309,412	6	\$112,097	\$57,229,521	\$634,785,268	\$33,589,592
	Plainville	0	123	\$2,188,783	1	\$29,702	\$7,025,980	\$77,931,604	\$4,123,742
21 Total		124	473	\$18,498,195	7	\$141,800	\$64,255,501	\$712,716,872	\$37,713,334
22	Plainville	0	123	\$2,188,783	1	\$29,702	\$7,025,980	\$77,931,604	\$4,123,742
	Bristol	11	79	\$3,220,691	2	\$38,014	\$125,824	\$1,395,634	\$73,850
22 Total		11	203	\$5,409,474	3	\$67,716	\$7,151,804	\$79,327,238	\$4,197,592
23	New Britain	23	10	\$2,677,940	1	\$2,827	\$765,835	\$8,494,583	\$449,490
	Berlin	4	13	\$669,506	2	\$18,312	\$368,106	\$4,083,005	\$216,052
23 Total		26	23	\$3,347,446	2	\$21,139	\$1,133,942	\$12,577,588	\$665,542
24	New Britain	23	10	\$2,677,940	1	\$2,827	\$765,835	\$8,494,583	\$449,490
24 Total		23	10	\$2,677,940	1	\$2,827	\$765,835	\$8,494,583	\$449,490
25	New Britain	23	10	\$2,677,940	1	\$2,827	\$765,835	\$8,494,583	\$449,490
	Newington	17	59	\$3,288,492	3	\$32,303	\$70,666	\$783,825	\$41,476
25 Total		39	68	\$5,966,432	3	\$35,130	\$836,502	\$9,278,409	\$490,966
26	New Britain	23	10	\$2,677,940	1	\$2,827	\$765,835	\$8,494,583	\$449,490
26 Total		23	10	\$2,677,940	1	\$2,827	\$765,835	\$8,494,583	\$449,490
27	Newington	17	59	\$3,288,492	3	\$32,303	\$70,666	\$783,825	\$41,476
27 Total		17	59	\$3,288,492	3	\$32,303	\$70,666	\$783,825	\$41,476
28	Wethersfield	13	12	\$592,417	5	\$68,223	\$358,182	\$3,972,928	\$210,227
28 Total		13	12	\$592,417	5	\$68,223	\$358,182	\$3,972,928	\$210,227
29	Rocky Hill	45	26	\$1,785,465	2	\$20,300	\$2,203,517	\$24,441,235	\$1,293,305
	Hartford	11	178	\$1,723,438	2	\$44,483	\$4,778,399	\$53,001,619	\$2,804,575
	Wethersfield	13	12	\$592,417	5	\$68,223	\$358,182	\$3,972,928	\$210,227
29 Total		69	216	\$4,101,321	9	\$133,006	\$7,340,098	\$81,415,782	\$4,308,107
30	Berlin	4	13	\$669,506	2	\$18,312	\$368,106	\$4,083,005	\$216,052
	Southington	9	0	\$1,422,416	0	\$0	\$32,857	\$364,447	\$19,285
30 Total		13	13	\$2,091,922	2	\$18,312	\$400,963	\$4,447,453	\$235,337
31	Glastonbury	49	142	\$4,774,518	5	\$120,373	\$1,082,751	\$12,009,792	\$635,497
31 Total		49	142	\$4,774,518	5	\$120,373	\$1,082,751	\$12,009,792	\$635,497
32	Cromwell	4	12	\$2,349,980	1	\$28,817	\$128,243	\$1,422,465	\$75,270
	Portland	4	12	\$53	0	\$0	\$361,712	\$4,012,079	\$212,299
	Middletown	17	26	\$1,147,747	1	\$18,943	\$558,836	\$6,198,561	\$327,996
32 Total		24	49	\$3,497,727	2	\$47,760	\$1,048,791	\$11,633,104	\$615,564
33	Middletown	17	26	\$1,147,747	1	\$18,943	\$558,836	\$6,198,561	\$327,996
33 Total		17	26	\$1,147,747	1	\$18,943	\$558,836	\$6,198,561	\$327,996

34	East Hampton	0	6	\$832,871	2	\$82,073	\$62,828	\$696,881	\$36,875
	Haddam	0	4	\$626,200	1	\$5,473	\$8,500	\$94,279	\$4,989
	Middletown	17	26	\$1,147,747	1	\$18,943	\$558,836	\$6,198,561	\$327,996
34 Total		17	35	\$2,606,818	4	\$106,489	\$630,163	\$6,989,722	\$369,860
35	Westbrook	8	0	\$187,780	2	\$11,536	\$11,792	\$130,799	\$6,921
	Clinton	2	2	\$373,865	1	\$10,306	\$11,956	\$132,611	\$7,017
	Essex	0	0	\$362,297	0	\$0	\$46,473	\$515,467	\$27,276
	Old Saybrook	6	6	\$724,394	3	\$43,211	\$43,340	\$480,719	\$25,437
35 Total		15	8	\$1,648,336	5	\$65,054	\$113,560	\$1,259,596	\$66,651
36	Chester	0	39	\$808,241	1	\$36,758	\$37,476	\$415,676	\$21,995
	Deep River	4	8	\$354,030	0	\$0	\$14,059	\$155,939	\$8,251
	Lyme	0	4	\$135,598	0	\$0	\$1,623	\$18,002	\$953
	Essex	0	0	\$181,149	0	\$0	\$46,473	\$515,467	\$27,276
	Old Saybrook	6	6	\$362,197	3	\$43,211	\$43,340	\$480,719	\$25,437
36 Total		9	57	\$1,841,214	4	\$79,969	\$142,969	\$1,585,803	\$83,913
37	East Lyme	4	0	\$581,614	0	\$0	\$30,130	\$334,200	\$17,684
	Old Lyme	8	9	\$660,961	2	\$110,744	\$27,500	\$305,027	\$16,140
37 Total		11	9	\$1,242,574	2	\$110,744	\$57,630	\$639,226	\$33,825
38	Waterford	4	6	\$1,093,252	5	\$177,831	\$158,275	\$1,755,576	\$92,896
	New London	5	4	\$52,410	3	\$41,194	\$40,633	\$450,702	\$23,849
38 Total		9	10	\$1,145,662	8	\$219,025	\$198,909	\$2,206,279	\$116,745
39	New London	5	4	\$52,410	3	\$41,194	\$40,633	\$450,702	\$23,849
39 Total		5	4	\$52,410	3	\$41,194	\$40,633	\$450,702	\$23,849
40	New London	5	4	\$52,410	3	\$41,194	\$40,633	\$450,702	\$23,849
	Groton	3	3	\$643,656	6	\$149,892	\$225,835	\$2,504,943	\$132,549
40 Total		8	7	\$696,066	9	\$191,086	\$266,468	\$2,955,645	\$156,398
41	Groton	3	3	\$643,656	6	\$149,892	\$225,835	\$2,504,943	\$132,549
41 Total		3	3	\$643,656	6	\$149,892	\$225,835	\$2,504,943	\$132,549
42	Groton	3	3	\$643,656	6	\$149,892	\$225,835	\$2,504,943	\$132,549
	Montville	2	5	\$28,718	0	\$0	\$25	\$277	\$15
	Ledyard	15	78	\$2,053,275	5	\$112,055	\$43,381	\$481,179	\$25,462
42 Total		19	86	\$2,725,650	11	\$261,947	\$269,241	\$2,986,399	\$158,026
43	North Stonington	0	17	\$691,740	7	\$178,659	\$38,775	\$430,088	\$22,758
	Stonington	0	2	\$505,006	5	\$44,157	\$31,305	\$347,233	\$18,374
43 Total		0	20	\$1,196,746	12	\$222,815	\$70,080	\$777,321	\$41,132
44	Killingly	0	24	\$101	0	\$0	\$0	\$0	\$0
	Canterbury	8	26	\$1,457,384	13	\$166,661	\$8,010	\$88,843	\$4,701
	Plainfield	0	11	\$1,043,736	4	\$78,781	\$93,145	\$1,033,161	\$54,670
44 Total		8	60	\$2,501,222	17	\$245,442	\$101,155	\$1,122,003	\$59,371
45	Lisbon	0	3	\$803,519	3	\$51,515	\$311,322	\$3,453,159	\$182,724
	Griswold	0	0	\$322,384	0	\$0	\$0	\$0	\$0
	Preston	4	0	\$356,207	2	\$73,858	\$32,308	\$358,363	\$18,963
	Sterling	4	17	\$90,299	0	\$0	\$17,512	\$194,242	\$10,278
	Voluntown	4	2	\$347,397	2	\$31,539	\$1,165	\$12,919	\$684
45 Total		11	22	\$1,919,806	7	\$156,912	\$362,307	\$4,018,682	\$212,648
46	Norwich	36	99	\$4,924,729	28	\$509,796	\$3,958,881	\$43,911,596	\$2,323,577
46 Total		36	99	\$4,924,729	28	\$509,796	\$3,958,881	\$44,071,345	\$2,323,577
47	Lisbon	0	3	\$803,519	3	\$51,515	\$311,322	\$3,453,159	\$182,724
	Norwich	36	99	\$4,924,729	28	\$509,796	\$3,958,881	\$43,911,596	\$2,323,577
	Scotland	0	1,003	\$918,170	4	\$100,142	\$5,469	\$60,662	\$3,210
	Sprague	0	0	\$0	0	\$0	\$0	\$0	\$0
47 Total		36	1,105	\$6,646,419	35	\$661,452	\$4,275,672	\$47,425,416	\$2,509,510
48	Colchester	11	10	\$1,269,032	3	\$50,825	\$20,828	\$231,026	\$12,225
	East Haddam	0	0	\$801,815	2	\$57,209	\$658	\$7,304	\$386
	Salem	11	5	\$531,173	1	\$40,217	\$8,294	\$91,992	\$4,868
48 Total		23	16	\$2,602,020	6	\$148,251	\$29,780	\$330,322	\$17,479
49	Windham	15	23	\$25,418,865	331	\$4,830,465	\$1,955,591	\$21,691,261	\$1,147,791
49 Total		15	23	\$25,418,865	331	\$4,830,465	\$1,955,591	\$21,691,261	\$1,147,791
50	Brooklyn	11	24	\$1,775,897	14	\$269,901	\$29,462	\$326,791	\$17,292
	Chaplin	0	13	\$3,655,279	28	\$511,919	\$9,430	\$104,592	\$5,534
	Eastford	4	1	\$1,834,601	20	\$356,407	\$2,117	\$23,482	\$1,243
	Hampton	8	7	\$3,785,455	25	\$650,176	\$46,420	\$514,890	\$27,245
	Pomfret	8	16	\$1,232,842	11	\$224,122	\$50,045	\$555,098	\$29,373
	Killingly	0	24	\$101	0	\$0	\$0	\$0	\$0
50 Total		30	85	\$12,284,176	98	\$2,012,524	\$137,474	\$1,524,853	\$80,687
51	Putnam	30	844	\$3,251,604	33	\$541,008	\$749,151	\$8,309,518	\$439,697
	Thompson	0	30	\$336,337	1	\$60,460	\$5,411	\$60,022	\$3,176
	Killingly	0	24	\$101	0	\$0	\$0	\$0	\$0
51 Total		30	899	\$3,588,042	34	\$601,468	\$754,562	\$8,369,540	\$442,873
52	Stafford	8	7	\$5,300,899	55	\$820,602	\$2,046,232	\$22,696,646	\$1,200,991
	Union	11	2	\$4,839,298	2	\$22,106	\$65,505	\$726,579	\$38,447
	Woodstock	11	275	\$2,883,916	25	\$510,549	\$113,628	\$1,260,356	\$66,692
	Somers	11	66	\$787,039	2	\$44,877	\$14,667	\$162,677	\$8,608
52 Total		41	350	\$13,811,152	84	\$1,398,133	\$2,240,032	\$24,846,258	\$1,314,737
53	ASHFORD	11	11	\$10,482,033	56	\$1,149,657	\$175,462	\$1,946,215	\$102,984
	Tolland	23	16	\$12,982,561	49	\$1,029,299	\$205,135	\$2,275,345	\$120,400
	Willington	19	480	\$19,086,320	92	\$2,123,916	\$306,389	\$3,398,440	\$179,828
	Coventry	9	0	\$6,571,961	31	\$517,337	\$34,047	\$377,651	\$19,984
53 Total		62	508	\$49,122,876	228	\$4,820,209	\$721,034	\$7,997,651	\$423,195
54	Mansfield	23	537	\$83,355,635	575	\$19,527,353	\$16,965,437	\$188,179,263	\$9,957,485
54 Total		23	537	\$83,355,635	575	\$19,527,353	\$16,965,437	\$188,179,263	\$9,957,485
55	Andover	4	81	\$1,626,311	6	\$197,873	\$5,370	\$59,563	\$3,152
	Bolton	11	64	\$1,655,478	7	\$180,805	\$46,741	\$518,449	\$27,434
	Hebron	8	13	\$1,020,155	2	\$13,320	\$57,734	\$640,377	\$33,885
	Marlborough	4	7	\$966,083	5	\$74,612	\$9,045	\$100,329	\$5,309
	Vernon	11	30	\$3,248,530	11	\$220,794	\$170,610	\$1,892,394	\$100,136
	Rockville	0	34	\$380,019	2	\$36,038	\$5,403	\$59,924	\$3,171
55 Total		38	229	\$8,896,576	32	\$723,443	\$294,903	\$3,271,036	\$173,087

56	Vernon	11	30	\$3,248,530	11	\$220,794	\$170,610	\$1,892,394	\$100,136
	Rockville	0	34	\$380,019	2	\$36,038	\$5,403	\$59,924	\$3,171
56 Total		11	64	\$3,628,548	12	\$256,832	\$176,013	\$1,952,318	\$103,307
57	East Windsor	0	47	\$941,047	0	\$0	\$205,585	\$2,280,334	\$120,664
	Ellington	23	0	\$3,288,766	9	\$240,510	\$128,904	\$1,429,798	\$75,658
57 Total		23	47	\$4,229,813	9	\$240,510	\$334,490	\$3,710,132	\$196,321
58	Enfield	9	3	\$1,030,418	1	\$24,141	\$627,016	\$6,954,809	\$368,013
58 Total		9	3	\$1,030,418	1	\$24,141	\$627,016	\$6,954,809	\$368,013
59	Somers	11	66	\$787,039	2	\$44,877	\$14,667	\$162,677	\$8,608
	Enfield	9	3	\$1,030,418	1	\$24,141	\$627,016	\$6,954,809	\$368,013
59 Total		20	69	\$1,817,457	3	\$69,019	\$641,682	\$7,117,486	\$376,621
60	Windsor Locks	0	8	\$207,533	2	\$17,412	\$64,013	\$710,030	\$37,571
	Enfield	9	3	\$1,030,418	1	\$24,141	\$627,016	\$6,954,809	\$368,013
60 Total		9	11	\$1,237,951	3	\$41,553	\$691,029	\$7,664,839	\$405,584
61	Suffield	23	294	\$1,845,644	3	\$36,093	\$70,422	\$781,117	\$41,333
	East Granby	2	0	\$378,869	1	\$3,546	\$28,162	\$312,361	\$16,529
	Windsor	13	0	\$530,599	2	\$21,213	\$2,187,653	\$24,262,269	\$1,283,994
61 Total		37	295	\$2,755,113	5	\$60,853	\$2,286,236	\$25,358,748	\$1,341,856
62	Barkhamsted	23	41	\$575,135	1	\$51,971	\$7,291	\$80,876	\$4,280
	Granby	15	4	\$4,631,124	2	\$114,029	\$41,731	\$462,876	\$24,493
	New Hartford	8	0	\$1,282,566	0	\$0	\$18,373	\$203,797	\$10,784
	East Granby	2	0	\$378,869	1	\$3,546	\$28,162	\$312,361	\$16,529
62 Total		47	45	\$6,867,694	4	\$169,547	\$95,557	\$1,059,910	\$56,085
63	Canaan	4	140	\$15,059	1	\$25,528	\$29,649	\$328,868	\$17,402
	Colebrook	0	2	\$91,209	0	\$0	\$860	\$9,535	\$505
	Hartland	0	86	\$397	0	\$0	\$0	\$0	\$0
	Norfolk	0	99	\$430,490	2	\$118,590	\$4,607	\$51,102	\$2,704
	North Canaan	0	0	\$3,088	0	\$0	\$0	\$0	\$0
	Winchester	0	30	\$343,665	0	\$0	\$625	\$6,934	\$367
63 Total		4	358	\$883,909	3	\$144,119	\$35,741	\$396,439	\$20,978
64	Cornwall	0	4	\$208,143	0	\$0	\$500	\$5,546	\$293
	Goshen	0	8	\$70,366	0	\$0	\$752	\$8,345	\$442
	Salisbury	0	2	\$17,381	1	\$15,839	\$50	\$555	\$29
	Sharon	0	18	\$3,223	0	\$0	\$37,599	\$417,048	\$22,068
	Torrington	8	9	\$1,216,143	3	\$54,107	\$789,838	\$8,760,822	\$463,578
64 Total		8	41	\$1,515,257	4	\$69,946	\$828,740	\$9,192,316	\$486,410
65	Torrington	8	9	\$1,216,143	3	\$54,107	\$789,838	\$8,760,822	\$463,578
65 Total		8	9	\$1,216,143	3	\$54,107	\$789,838	\$8,760,822	\$463,578
66	Bethlehem	0	0	\$295,348	2	\$61,589	\$85	\$943	\$50
	Morris	0	3	\$74,408	1	\$29,218	\$25	\$277	\$15
	Warren	0	0	\$25,895	0	\$0	\$0	\$0	\$0
	Woodbury	11	9	\$46,703	0	\$0	\$6,190	\$68,663	\$3,633
	Litchfield	9	37	\$1,545,260	3	\$23,896	\$69,079	\$766,217	\$40,545
66 Total		21	49	\$1,987,614	6	\$114,702	\$75,379	\$836,099	\$44,242
67	Kent	4	30	\$7,149	1	\$27,902	\$475	\$5,269	\$279
	New Milford	8	0	\$324,973	1	\$22,345	\$19,135	\$212,242	\$11,231
67 Total		11	30	\$332,122	2	\$50,247	\$19,610	\$217,511	\$11,510
68	Middlebury	6	1	\$193,512	1	\$2,694	\$10,040	\$111,356	\$5,893
	Watertown	15	9	\$513,224	3	\$57,663	\$23,163	\$256,924	\$13,595
68 Total		21	9	\$706,736	4	\$60,357	\$33,203	\$368,280	\$19,488
69	Bridgewater	0	2	\$112,032	1	\$20,733	\$12,000	\$133,103	\$7,043
	Roxbury	4	9	\$180,347	1	\$24,353	\$150	\$1,664	\$88
	Washington	4	15	\$62,752	0	\$0	\$60	\$666	\$35
	Southbury	6	14	\$473,326	3	\$55,207	\$63,175	\$700,732	\$37,079
69 Total		13	40	\$828,457	5	\$100,292	\$75,385	\$836,165	\$44,245
70	Naugatuck	6	3	\$616,599	1	\$7,557	\$1,067,108	\$11,836,275	\$626,315
70 Total		6	3	\$616,599	1	\$7,557	\$1,067,108	\$11,836,275	\$626,315
71	Waterbury	9	22	\$5,940,767	2	\$27,350	\$169,299	\$1,877,850	\$99,366
71 Total		9	22	\$5,940,767	2	\$27,350	\$169,299	\$1,877,850	\$99,366
72	Waterbury	9	22	\$5,940,767	2	\$27,350	\$169,299	\$1,877,850	\$99,366
72 Total		9	22	\$5,940,767	2	\$27,350	\$169,299	\$1,877,850	\$99,366
73	Waterbury	9	22	\$5,940,767	2	\$27,350	\$169,299	\$1,877,850	\$99,366
73 Total		9	22	\$5,940,767	2	\$27,350	\$169,299	\$1,877,850	\$99,366
74	Waterbury	9	22	\$5,940,767	2	\$27,350	\$169,299	\$1,877,850	\$99,366
74 Total		9	22	\$5,940,767	2	\$27,350	\$169,299	\$1,877,850	\$99,366
75	Waterbury	9	22	\$5,940,767	2	\$27,350	\$169,299	\$1,877,850	\$99,366
75 Total		9	22	\$5,940,767	2	\$27,350	\$169,299	\$1,877,850	\$99,366
76	Litchfield	9	37	\$1,545,260	3	\$23,896	\$69,079	\$766,217	\$40,545
	Burlington	11	79	\$5,203,689	0	\$0	\$44,827	\$497,217	\$26,310
	Harwinton	11	0	\$1,539,176	0	\$0	\$19,348	\$214,609	\$11,356
	Thomaston	4	2	\$390,197	1	\$46,592	\$7,799	\$86,502	\$4,577
76 Total		36	118	\$8,678,321	4	\$70,488	\$141,053	\$1,564,544	\$82,788
77	Bristol	11	79	\$3,220,691	2	\$38,014	\$125,824	\$1,395,634	\$73,850
77 Total		11	79	\$3,220,691	2	\$38,014	\$125,824	\$1,395,634	\$73,850
78	Bristol	11	79	\$3,220,691	2	\$38,014	\$125,824	\$1,395,634	\$73,850
	Plymouth	0	34	\$274,656	0	\$0	\$136	\$1,507	\$80
78 Total		11	113	\$3,495,346	2	\$38,014	\$125,960	\$1,397,141	\$73,930
79	Bristol	11	79	\$3,220,691	2	\$38,014	\$125,824	\$1,395,634	\$73,850
	Southington	9	0	\$1,422,416	0	\$0	\$32,857	\$364,447	\$19,285
79 Total		21	79	\$4,643,106	2	\$38,014	\$158,681	\$1,760,082	\$93,135
80	Southington	9	0	\$1,422,416	0	\$0	\$32,857	\$364,447	\$19,285
	Wolcott	26	0	\$361,683	1	\$5,289	\$61,987	\$687,557	\$36,382
80 Total		36	0	\$1,784,099	1	\$5,289	\$94,844	\$1,052,005	\$55,667
81	Southington	9	0	\$1,422,416	0	\$0	\$32,857	\$364,447	\$19,285
81 Total		9	0	\$1,422,416	0	\$0	\$32,857	\$364,447	\$19,285
82	Meriden	6	28	\$814,774	1	\$7,615	\$427,838	\$4,745,541	\$251,110
	Middlefield	4	9	\$247,765	0	\$0	\$2,451	\$27,189	\$1,439
82 Total		10	37	\$1,062,538	1	\$7,615	\$430,288	\$4,772,730	\$252,548



83	Meriden	6	28	\$814,774	1	\$7,615	\$427,838	\$4,745,541	\$251,110
	Wallingford	12	3	\$287,703	1	\$13,542	\$103,887	\$1,152,299	\$60,974
83 Total		18	31	\$1,102,476	1	\$21,157	\$531,724	\$5,897,840	\$312,083
84	Meriden	6	28	\$814,774	1	\$7,615	\$427,838	\$4,745,541	\$251,110
84 Total		6	28	\$814,774	1	\$7,615	\$427,838	\$4,745,541	\$251,110
85	Wallingford	12	31	\$287,703	1	\$13,542	\$103,887	\$1,152,299	\$60,974
85 Total		12	31	\$287,703	1	\$13,542	\$103,887	\$1,152,299	\$60,974
86	East Haven	6	8	\$139,258	0	\$0	\$56,754	\$629,508	\$33,311
	Guilford	13	5	\$308,197	0	\$0	\$230,213	\$2,553,504	\$135,119
	North Branford	0	10	\$189,068	1	\$17,249	\$231,547	\$2,568,300	\$135,901
86 Total		19	23	\$636,522	1	\$17,249	\$518,514	\$5,751,312	\$304,330
87	North Haven	11	2	\$436,580	1	\$1,537	\$198,842	\$2,205,535	\$116,706
	Hamden	5	4	\$308,014	1	\$6,825	\$236,988	\$2,628,651	\$139,095
87 Total		16	6	\$744,594	1	\$8,362	\$435,830	\$4,834,187	\$255,800
88	North Haven	11	2	\$436,580	1	\$1,537	\$198,842	\$2,205,535	\$116,706
	Hamden	5	4	\$308,014	1	\$6,825	\$236,988	\$2,628,651	\$139,095
	New Haven	4	15	\$383,652	1	\$28,121	\$1,735,153	\$19,246,182	\$1,018,410
88 Total		20	21	\$1,128,246	2	\$36,483	\$2,170,983	\$24,080,369	\$1,274,210
89	Cheshire	18	14	\$1,151,088	1	\$9,375	\$5,237,867	\$58,097,999	\$3,074,249
	East Haven	6	8	\$139,258	0	\$0	\$56,754	\$629,508	\$33,311
	Bethany	8	0	\$356,443	0	\$0	\$2,309	\$25,615	\$1,355
	Prospect	11	0	\$411,406	0	\$0	\$7,444	\$82,572	\$4,369
89 Total		42	22	\$2,058,195	1	\$9,375	\$5,304,375	\$58,835,695	\$3,113,284
90	Wallingford	12	3	\$287,703	1	\$13,542	\$103,887	\$1,152,299	\$60,974
	Cheshire	18	14	\$1,151,088	1	\$9,375	\$5,237,867	\$58,097,999	\$3,074,249
90 Total		30	17	\$1,438,791	1	\$22,917	\$5,341,753	\$59,250,299	\$3,135,223
91	Hamden	5	4	\$308,014	1	\$6,825	\$236,988	\$2,628,651	\$139,095
91 Total		5	4	\$308,014	1	\$6,825	\$236,988	\$2,628,651	\$139,095
92	New Haven	4	17	\$383,652	1	\$28,121	\$1,735,153	\$19,246,182	\$1,018,410
92 Total		4	17	\$383,652	1	\$28,121	\$1,735,153	\$19,246,182	\$1,018,410
93	New Haven	4	17	\$383,652	1	\$28,121	\$1,735,153	\$19,246,182	\$1,018,410
93 Total		4	17	\$383,652	1	\$28,121	\$1,735,153	\$19,246,182	\$1,018,410
94	New Haven	4	17	\$383,652	1	\$28,121	\$1,735,153	\$19,246,182	\$1,018,410
94 Total		4	17	\$383,652	1	\$28,121	\$1,735,153	\$19,246,182	\$1,018,410
95	New Haven	4	17	\$383,652	1	\$28,121	\$1,735,153	\$19,246,182	\$1,018,410
95 Total		4	17	\$383,652	1	\$28,121	\$1,735,153	\$19,246,182	\$1,018,410
96	New Haven	4	17	\$383,652	1	\$28,121	\$1,735,153	\$19,246,182	\$1,018,410
96 Total		4	17	\$383,652	1	\$28,121	\$1,735,153	\$19,246,182	\$1,018,410
97	New Haven	4	17	\$383,652	1	\$28,121	\$1,735,153	\$19,246,182	\$1,018,410
97 Total		4	17	\$383,652	1	\$28,121	\$1,735,153	\$19,246,182	\$1,018,410
98	Guilford	13	5	\$308,197	0	\$0	\$230,213	\$2,553,504	\$135,119
	Branford	3	0	\$425,776	1	\$51,171	\$139,633	\$1,548,794	\$81,954
98 Total		16	5	\$733,973	1	\$51,171	\$369,846	\$4,102,298	\$217,073
99	Branford	3	0	\$425,776	1	\$51,171	\$139,633	\$1,548,794	\$81,954
99 Total		3	0	\$425,776	1	\$51,171	\$139,633	\$1,548,794	\$81,954
100	Durham	15	14	\$547,578	1	\$1,443	\$28,039	\$311,005	\$16,457
	Middletown	17	25	\$1,147,747	1	\$18,943	\$558,836	\$6,198,561	\$327,996
	Middlefield	4	9	\$247,765	0	\$0	\$2,451	\$27,189	\$1,439
100 Total		36	48	\$1,943,090	2	\$20,386	\$589,325	\$6,536,755	\$345,892
101	Clinton	2	2	\$186,932	1	\$10,307	\$11,956	\$132,611	\$7,017
	Killingworth	11	22	\$626,068	1	\$35,238	\$212,532	\$2,357,390	\$124,741
	Madison	49	13	\$759,924	0	\$0	\$219,943	\$2,439,585	\$129,090
101 Total		62	38	\$1,572,924	2	\$45,545	\$444,430	\$4,929,586	\$260,848
102	Branford	3	0	\$425,776	1	\$51,171	\$139,633	\$1,548,794	\$81,954
102 Total		3	0	\$425,776	1	\$51,171	\$139,633	\$1,548,794	\$81,954
103	Cheshire	18	14	\$1,151,088	1	\$9,375	\$5,237,867	\$5,822,899	\$3,074,249
	Hamden	5	4	\$308,014	1	\$6,825	\$236,988	\$4,685,857	\$139,095
	Wallingford	12	3	\$287,703	1	\$13,542	\$103,887	\$1,152,299	\$60,974
103 Total		34	21	\$1,746,805	2	\$29,742	\$5,578,741	\$11,661,055	\$3,274,318
104	Ansonia	4	0	\$50,865	0	\$0	\$4,955	\$54,953	\$2,908
	Derby	2	6	\$83,953	0	\$0	\$33	\$368	\$20
104 Total		6	6	\$134,818	0	\$0	\$4,988	\$55,321	\$2,928
105	Ansonia	4	0	\$50,865	0	\$0	\$4,955	\$54,953	\$2,908
	Beacon Falls	0	0	\$495,193	0	\$0	\$2,447	\$27,145	\$1,436
	Seymour	8	113	\$367,010	0	\$0	\$8,762,087	\$97,188,365	\$5,142,711
105 Total		11	113	\$913,068	0	\$0	\$8,769,489	\$97,270,463	\$5,147,056
106	Bethel	13	6	\$119,759	2	\$30,548	\$27,758	\$307,882	\$16,292
	Newtown	6	0	\$965,197	0	\$9,697	\$2,474,382	\$27,445,646	\$1,452,283
106 Total		19	6	\$1,084,956	2	\$40,245	\$2,502,140	\$27,753,528	\$1,468,575
107	Bethel	13	6	\$119,760	2	\$30,548	\$27,758	\$307,882	\$16,292
	Brookfield	4	3	\$517,259	0	\$0	\$18,577	\$206,053	\$10,903
107 Total		17	8	\$637,018	2	\$30,548	\$46,334	\$513,935	\$27,195
108	New Fairfield	4	0	\$136,479	0	\$0	\$980	\$10,867	\$575
	Sherman	4	52	\$42,598	0	\$0	\$505	\$5,601	\$296
	New Milford	8	0	\$324,973	1	\$22,345	\$19,135	\$212,242	\$11,231
108 Total		15	52	\$504,050	1	\$22,345	\$20,620	\$228,710	\$12,102
109	Danbury	10	3	\$299,969	1	\$7,373	\$74,145	\$822,411	\$43,518
109 Total		10	3	\$299,969	1	\$7,373	\$74,145	\$822,411	\$43,518
110	Danbury	10	3	\$299,969	1	\$7,373	\$74,145	\$822,411	\$43,518
110 Total		10	3	\$299,969	1	\$7,373	\$74,145	\$822,411	\$43,518
111	Ridgefield	0	1	\$286,734	1	\$64,896	\$10,679	\$118,445	\$6,268
111 Total		0	1	\$286,734	1	\$64,896	\$10,679	\$118,445	\$6,268
112	Monroe	11	2	\$578,562	0	\$0	\$12,289	\$136,304	\$7,213
	Newtown	6	0	\$965,197	0	\$9,697	\$2,474,382	\$27,445,646	\$1,452,283
112 Total		18	2	\$578,562	0	\$9,697	\$2,486,671	\$27,581,949	\$1,459,496
113	Shelton	8	1	\$136,091	1	\$29,728	\$33,257	\$368,881	\$19,519
113 Total		8	1	\$136,091	1	\$29,728	\$33,257	\$368,881	\$19,519

114	Woodbridge	19	1	\$19,737	1	\$31,188	\$144,407	\$1,601,753	\$84,757
	Derby	2	6	\$83,953	0	\$0	\$33	\$368	\$20
	Orange	15	1	\$145,977	1	\$9,383	\$15,421	\$171,050	\$9,051
114 Total		36	7	\$249,668	2	\$40,571	\$159,861	\$1,773,171	\$93,828
115	West Haven	6	0	\$144,271	1	\$3,041	\$102,907	\$1,141,437	\$60,399
115 Total		6	0	\$144,271	1	\$3,041	\$102,907	\$1,141,437	\$60,399
116	West Haven	6	0	\$144,271	1	\$3,041	\$102,907	\$1,141,437	\$60,399
116 Total		6	0	\$144,271	1	\$3,041	\$102,907	\$1,141,437	\$60,399
117	Orange	15	1	\$145,977	1	\$9,383	\$15,421	\$171,050	\$9,051
	West Haven	6	0	\$144,271	1	\$3,041	\$102,907	\$1,141,437	\$60,399
	Milford	18	4	\$228,419	0	\$17,701	\$482,024	\$5,346,571	\$282,913
117 Total		39	5	\$518,667	2	\$30,125	\$600,352	\$6,659,059	\$352,363
118	Milford	18	4	\$228,419	0	\$17,701	\$482,024	\$5,346,571	\$282,913
118 Total		18	4	\$228,419	0	\$17,701	\$482,024	\$5,346,571	\$282,913
119	Milford	18	4	\$228,419	0	\$17,701	\$482,024	\$5,346,571	\$282,913
119 Total		18	4	\$228,419	0	\$17,701	\$482,024	\$5,346,571	\$282,913
120	Stratford	4	0	\$231,338	0	\$9,757	\$87,671	\$972,440	\$51,457
120 Total		4	0	\$231,338	0	\$9,757	\$87,671	\$972,440	\$51,457
121	Stratford	4	0	\$231,338	0	\$9,757	\$87,671	\$972,440	\$51,457
121 Total		4	0	\$231,338	0	\$9,757	\$87,671	\$972,440	\$51,457
122	Shelton	8	1	\$136,091	1	\$29,728	\$33,257	\$368,881	\$19,519
	Stratford	4	0	\$231,338	0	\$9,757	\$87,671	\$972,440	\$51,457
	Trumbull	8	0	\$188,140	0	\$0	\$47,566	\$527,600	\$27,918
122 Total		19	1	\$555,569	1	\$39,485	\$168,494	\$1,868,921	\$98,894
123	Trumbull	8	0	\$188,140	0	\$0	\$47,566	\$527,600	\$27,918
123 Total		8	0	\$188,140	0	\$0	\$47,566	\$527,600	\$27,918
124	Bridgeport	3	21	\$345,876	1	\$7,119	\$186,692	\$2,070,770	\$109,575
124 Total		3	21	\$345,876	1	\$7,119	\$186,692	\$2,070,770	\$109,575
125	Bridgeport	3	21	\$345,876	1	\$7,119	\$186,692	\$2,070,770	\$109,575
125 Total		3	21	\$345,876	1	\$7,119	\$186,692	\$2,070,770	\$109,575
126	Bridgeport	3	21	\$345,876	1	\$7,119	\$186,692	\$2,070,770	\$109,575
126 Total		3	21	\$345,876	1	\$7,119	\$186,692	\$2,070,770	\$109,575
127	Bridgeport	3	21	\$345,876	1	\$7,119	\$186,692	\$2,070,770	\$109,575
	Fairfield	8	6	\$218,621	1	\$8,820	\$61,969	\$687,354	\$36,371
127 Total		12	27	\$564,497	1	\$15,939	\$248,661	\$2,758,124	\$145,946
128	Bridgeport	3	21	\$345,876	1	\$7,119	\$186,692	\$2,070,770	\$109,575
128 Total		3	21	\$345,876	1	\$7,119	\$186,692	\$2,070,770	\$109,575
129	Bridgeport	3	21	\$345,876	1	\$7,119	\$186,692	\$2,070,770	\$109,575
129 Total		3	21	\$345,876	1	\$7,119	\$186,692	\$2,070,770	\$109,575
130	Bridgeport	3	21	\$345,876	1	\$7,119	\$186,692	\$2,070,770	\$109,575
130 Total		3	21	\$345,876	1	\$7,119	\$186,692	\$2,070,770	\$109,575
131	Oxford	11	9	\$229,452	0	\$0	\$27,501	\$305,041	\$16,141
	Middlebury	6	1	\$193,512	1	\$2,694	\$10,040	\$111,356	\$5,893
	Southbury	6	14	\$473,326	3	\$55,207	\$63,175	\$700,732	\$37,079
	Naugatuck	6	3	\$616,599	1	\$7,557	\$1,067,108	\$11,836,275	\$626,315
131 Total		28	26	\$1,512,888	4	\$65,458	\$1,167,824	\$12,953,405	\$685,428
132	Fairfield	8	6	\$218,621	1	\$8,820	\$61,969	\$687,354	\$36,371
132 Total		8	6	\$218,621	1	\$8,820	\$61,969	\$687,354	\$36,371
133	Fairfield	8	6	\$218,621	1	\$8,820	\$61,969	\$687,354	\$36,371
	Weston	0	5	\$41,133	0	\$0	\$550	\$6,101	\$323
	Westport	4	15	\$162,119	0	\$0	\$11,639	\$129,101	\$6,832
133 Total		12	26	\$421,874	1	\$8,820	\$74,158	\$822,555	\$43,526
134	Trumbull	8	0	\$188,140	0	\$0	\$47,566	\$527,600	\$27,918
	Fairfield	8	6	\$218,621	1	\$8,820	\$61,969	\$687,354	\$36,371
134 Total		16	6	\$406,762	1	\$8,820	\$109,535	\$1,214,953	\$64,289
135	Easton	15	0	\$198,314	0	\$0	\$129,020	\$1,431,075	\$75,725
	Redding	0	15	\$1,644,051	0	\$0	\$36,725	\$407,351	\$21,555
	Newtown	6	0	\$321,732	0	\$9,697	\$2,474,382	\$27,445,646	\$1,452,283
	Weston	0	5	\$41,133	0	\$0	\$550	\$6,101	\$323
135 Total		21	20	\$2,205,230	0	\$9,697	\$2,640,677	\$29,290,173	\$1,549,886
136	Westport	4	15	\$162,119	0	\$0	\$11,639	\$129,101	\$6,832
	Norwalk	6	5	\$254,011	1	\$10,573	\$69,284	\$768,492	\$40,665
136 Total		9	20	\$416,130	1	\$10,573	\$69,284	\$897,592	\$69,284
137	Norwalk	6	5	\$254,011	1	\$10,573	\$69,284	\$768,492	\$40,665
137 Total		6	5	\$254,011	1	\$10,573	\$69,284	\$768,492	\$40,665
138	Danbury	10	3	\$299,969	1	\$7,373	\$74,145	\$822,411	\$43,518
138 Total		10	3	\$299,969	1	\$7,373	\$74,145	\$822,411	\$43,518
139	Bozrah	8	16	\$302,566	2	\$21,720	\$26,949	\$298,915	\$15,817
	Franklin	0	0	\$31,367	0	\$0	\$88	\$974	\$52
	Montville	2	5	\$28,718	0	\$0	\$25	\$277	\$15
	Lebanon	6	3	\$1,821,270	14	\$177,265	\$57,270	\$635,236	\$33,614
139 Total		15	25	\$2,183,922	16	\$198,985	\$84,332	\$935,402	\$49,497
140	Norwalk	6	5	\$254,011	1	\$10,573	\$69,284	\$768,492	\$40,665
140 Total		6	5	\$254,011	1	\$10,573	\$69,284	\$768,492	\$40,665
141	Darien	4	0	\$87,128	1	\$44,779	\$124,090	\$1,376,399	\$72,832
	Norwalk	6	5	\$254,011	1	\$10,573	\$69,284	\$768,492	\$40,665
141 Total		9	5	\$341,139	2	\$55,351	\$193,374	\$2,144,890	\$113,497



142	Wilton	4	1	\$528,063	1	\$3,249	\$21,529	\$238,800	\$12,636
142 Total		4	1	\$528,063	1	\$3,249	\$21,529	\$238,800	\$12,636
143	Wilton	4	1	\$528,063	1	\$3,249	\$21,529	\$238,800	\$12,636
	New Canaan	4	0	\$110,067	0	\$0	\$4,378	\$48,555	\$2,570
143 Total		8	1	\$638,130	1	\$3,249	\$25,907	\$287,355	\$15,206
144	Stamford	3	5	\$387,738	3	\$46,761	\$228,968	\$2,539,697	\$134,388
144 Total		3	5	\$387,738	3	\$46,761	\$228,968	\$2,539,697	\$134,388
145	Stamford	3	5	\$387,738	3	\$46,761	\$228,968	\$2,539,697	\$134,388
145 Total		3	5	\$387,738	3	\$46,761	\$228,968	\$2,539,697	\$134,388
146	Stamford	3	5	\$387,738	3	\$46,761	\$228,968	\$2,539,697	\$134,388
146 Total		3	5	\$387,738	3	\$46,761	\$228,968	\$2,539,697	\$134,388
147	Stamford	3	5	\$387,738	3	\$46,761	\$228,968	\$2,539,697	\$134,388
	New Canaan	4	0	\$110,067	0	\$0	\$4,378	\$48,555	\$2,570
147 Total		7	5	\$497,805	3	\$46,761	\$233,346	\$2,588,252	\$136,957
148	Stamford	3	5	\$387,738	3	\$46,761	\$228,968	\$2,539,697	\$134,388
148 Total		3	5	\$387,738	3	\$46,761	\$228,968	\$2,539,697	\$134,388
149	Stamford	3	5	\$387,738	3	\$46,761	\$228,968	\$2,539,697	\$134,388
	Greenwich	5	5	\$102,447	0	\$4,997	\$228,697	\$2,536,691	\$134,229
149 Total		8	10	\$490,186	3	\$51,758	\$457,666	\$5,076,388	\$268,617
150	Greenwich	5	5	\$102,447	0	\$4,997	\$228,697	\$2,536,691	\$134,229
150 Total		5	5	\$102,447	0	\$4,997	\$228,697	\$2,536,691	\$134,229
151	Greenwich	5	5	\$102,447	0	\$4,997	\$228,697	\$2,536,691	\$134,229
151 Total		5	5	\$102,447	0	\$4,997	\$228,697	\$2,536,691	\$134,229