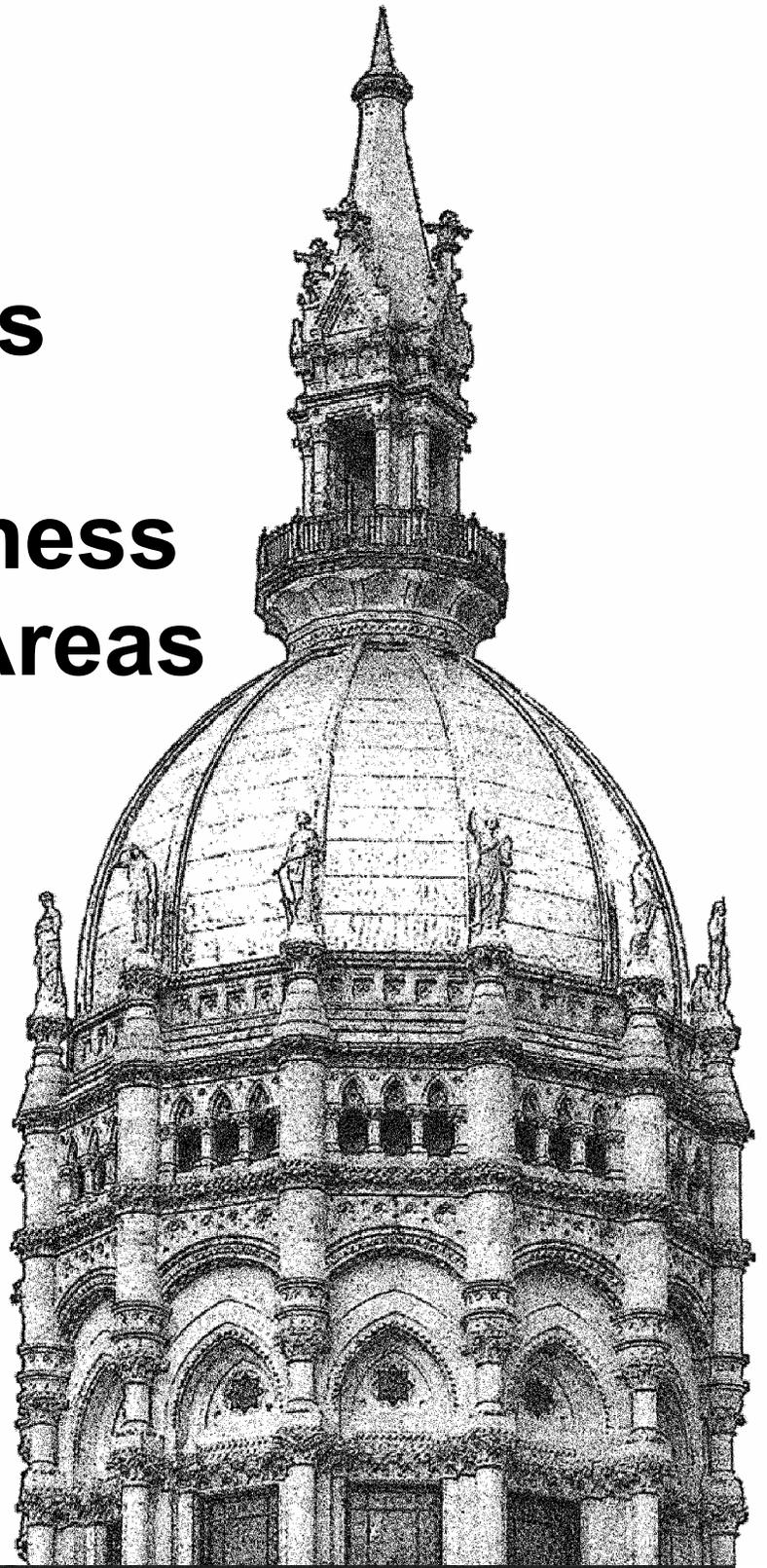


Connecticut's Economic Competitiveness In Selected Areas

December 2009



PRI

**Legislative Program Review and
Investigations Committee**

Connecticut General Assembly

**CONNECTICUT GENERAL ASSEMBLY
LEGISLATIVE PROGRAM REVIEW AND INVESTIGATIONS COMMITTEE**

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Selected Areas**

DECEMBER 2009

Table of Contents

Connecticut’s Economic Competitiveness in Selected Areas

EXECUTIVE SUMMARY

INTRODUCTION..... 1

Purpose of Study 1

Focus of Study 1

I. Economic Development: How to do it in the New Economy..... 3

The New Innovation Economy 3

State Economic Development Models..... 4

II. How much are we doing? 9

Department of Economic and Community Development..... 10

Connecticut Development Authority 15

Connecticut Innovations, Inc. 18

Small Business Administration..... 24

Other Partner Organizations and Programs 25

III. Promoting and Growing the Economy 27

Economic Planning and Policy Development..... 27

Competitiveness Initiatives..... 30

Cluster Status in Connecticut..... 33

DECD Role in Cluster Initiative 35

Regional Cooperation 41

IV. Flexible and Responsive Government..... 45

Regulatory Environment 48

Funding 54

V. Exporting and International Trade 59

Exporting Activity in Connecticut – How Much Are We Doing?..... 59

Obstacles to International Trade 60

DECD Export Assistance 61

Export Assistance – How Well Are We Doing? 62

VI. Innovation Policy 69

Table of Contents

Innovation Policy in Connecticut.....	69
How Well Are We Doing?.....	72
Comprehensive Innovation Policy.....	82
Investing in Entrepreneurial Activity.....	84
Funding and Support for Entrepreneurs in Connecticut.....	85
VII. Tax Credits	93
Connecticut Business Tax Credits.....	93
Department of Revenue Services.....	96
Department of Economic & Community Development Tax Credits.....	101
Commission on Culture and Tourism Credits	108
Tax Exemptions	110
Assessing Effectiveness of Tax Credits.....	111
VIII. Tax Policy: Connecticut and Surrounding States	119
Sales Tax Policy.....	119
Excise Taxes	120
Tax Policy on Alcoholic Beverages.....	122
Sunday Alcohol Sales	123
Cross-Border Shopping.....	131

APPENDICES

- A. Agency Responses
- B. Scope of Study
- C. Economic Development Agencies and Programs
- D. Connecticut's Industry Clusters
- E. Revolving Loan Funds
- F. Business Costs in Connecticut Compared to Other States
- G. Compilation of Connecticut Economic Rankings
- H. Definitions & Sources for Connecticut's Innovation Index
- I. Alcohol Consumption Data

Executive Summary

The Legislative Program Review and Investigations Committee undertook this study in May 2009 to examine state laws, policies, and strategies to determine if they help or hinder the state's economic competitiveness both globally and with Connecticut's surrounding states. When the committee voted to approve this study the nation was in a deepening recession, and committee members wanted to ensure that Connecticut would be well-positioned to compete in the global market place once the recession ended.

Connecticut's current unemployment rate is below the national average, indicating it is weathering the recession better than many states. However, even prior to the recession, state policymakers have been concerned with the economic trends occurring in Connecticut – little to no job growth and out-migration of residents. In addition, Connecticut is perceived as a high-cost state for doing business, making competition in the global economy that much more challenging.

In this new era it is important to recognize that the state's competitors have changed. No longer is Connecticut competing with just its surrounding states or New England. Connecticut is also competing with states in all regions of the country and around the globe. Strategies that may have worked in previous economic times, when competition was more local, may not be the right tools for ensuring the state is competitive now. The economic development model for the 21st century is often referred to as the New Innovation Economy or Knowledge Economy.

This model places less emphasis on providing loans and grants to single firms to aid in relocation or to remain in the state. Instead this model focuses on state policies and investments that promote technological innovation, spur entrepreneurship, and support research and development. The key to implementing this new model is to identify the strengths that the state already possesses, and protect and enhance them. In Connecticut, those assets include its highly productive and educated workforce; prime location; good quality of life; and world class higher education institutions.

The study concluded that Connecticut's public economic development framework is built on an older model that directs public support, including financial assistance, to individual companies, with the state's economic development agencies acting as lenders. In that capacity, the agencies' roles are primarily: administering specific incentive and assistance programs; reviewing applications for assistance; making individual determinations based on programs, guidelines, and criteria; negotiating with companies on incentive packages aimed at attracting a business to, or retaining it in, the state; and managing the "investment" portfolio.

Whether these financial incentive packages to individual companies create and/or retain jobs and at what cost, is an ongoing debate. Many of the programs do not track the number of "actual" jobs created or retained, especially over the long-term. Even organizations like the Tax Foundation, that are certainly not considered anti-business, question the economic value of individually targeted state incentives.¹

¹ Tax Foundation, 2010 State Business Tax Climate Index, September 2009, Introduction, page 1.

The new model of economic development instead focuses on long-term advancement of a state's assets including its human capital, through improving its education and training to create a pipeline of educated, productive workers, and enhancing the state's physical infrastructure, especially in areas of transportation and technological supports for the New Economy.² The model also envisions government providing broad-based technical assistance to businesses to increase their access to private capital, to streamline or adapt their processes to changing markets, and building collaborative networks among government, business, and educational institutions to implement this type of assistance and to promote innovation-based policies.

The state Department of Economic and Community Development (DECD) in September 2009 issued the state's first comprehensive economic strategic plan containing 66 recommendations in three broad areas – responsible growth, talent and technology, and cultivating the state's competitiveness. Unfortunately, the plan does not:

- establish any overarching goals for the state's economy;
- prioritize among the recommendations;
- indicate (except for a few recommendations), who or what agency is responsible for implementation, or what action or tasks are required;
- propose a time frame for implementation; or
- identify funding sources for many of the recommendations requiring financing.

The plan was primarily developed in better economic times, and many of the recommendations have price tags attached, no doubt compromising implementation in this current fiscal climate. While the plan does provide a compilation of ideas and strategies upon which the state can take action, without establishing plan priorities as the legislation required, there is no guidance for what should be acted upon first.

Even in good economic times, this would require establishing goals, setting priorities and longer-term and shorter-term policies and strategies. However, the current recession continues to threaten the state's economy, with more than 80,000 job losses, businesses closing, shrinking state revenues, declining personal income, all shaking the confidence of the state's residents. While most states' economies are incurring serious problems,³ and even though Connecticut is not among the states cited as experiencing the most severe issues, this state did not have robust job growth even before the current recession. Thus, in this recessionary period, state economic development policy must also focus on immediate ways that will help "turn the curve" on job losses, and begin to restore public confidence in the state's economy. There is a need to develop a multi-level strategy that creates jobs in the short term, ideally improving the state's broader infrastructure at the same time, and protecting and building on the state's assets for the long term.

The program review committee concludes that the state's economic conditions cannot be addressed in a "business as usual" fashion, and that a greater sense of urgency is needed to right the state's economy now and enhance its competitiveness into the future. This view that action is

² The "New Economy" is generally defined as one that is global, entrepreneurial, technology-focused, and knowledge-based.

³ "*Beyond California: States in Fiscal Peril*," Pew Center for the States, October 2009.

needed immediately was expressed repeatedly throughout the course of the study in testimony at the committee's public hearing, in interviews with committee staff, and most recently at legislative forums convened by leaders to address jobs and competitiveness.

The findings and recommendations contained in the report address the planning and policy needs of the state both in the short term and for the longer-range, the need to refocus efforts on the cluster initiative, and for more regional coordination, both in Connecticut and beyond state borders. The study also proposes changes to the organizational structure of the economic development agencies, including merging the Connecticut Development Authority and the Connecticut Innovations, Inc., and a transfer of the business financial assistance programs currently within DECD to the combined quasi-public. The committee also recommends that DECD should establish a team approach to business development and focus its efforts on technical assistance especially to small business, and in cross-cluster activities like manufacturing assistance, international trade and exporting and regulatory guidance.

The committee recommends elimination of some of the business tax credits currently in place, and a realignment of others, including modifying the job creation tax credit to broaden its eligibility to smaller businesses and allow the credit to apply if only a single job is created, which should spur more use of the credit to create jobs. The committee also recommends the creation of an "angel investor" tax credit to promote investments in start-up companies in innovation and technology areas.

Finally, the committee determined that Connecticut is one of the few states that continue to ban the sale of alcohol on Sunday and that data indicate that Connecticut residents of towns along the Massachusetts border purchase less alcohol in Connecticut than other state residents. While it is impossible to determine how much of that may be due to Massachusetts allowing retail sales of alcohol on Sunday, the committee voted to repeal the state ban to at least abolish that anti-competitive feature in Connecticut.

RECOMMENDATIONS

- 1. DECD, after holding its public informational sessions, should develop an action plan with priorities that should be achieved first, in a one-year time frame, and sets goals for a longer (five-year) period, and for those priorities established, propose what agencies or organizations will be responsible for accomplishing the tasks. The action plan with one-year priorities shall be developed by February 15, 2010.**
- 2. Reinstate the Competitiveness Council with some modifications. Rather than being a creation solely of the executive branch, it should be a statutorily established entity with appointments by both executive and legislative branches. It should be composed of 18 members, with nine appointments made by the governor and nine by legislative leaders of both majority and minority parties. Appointments should be made of business leaders from various industry clusters and from various geographic areas of the state. Council meetings should be held at least quarterly. The commissioners of DECD, Labor, Transportation and Higher Education, and the Executive Director of the Office for Workforce**

Competitiveness should be ex officio members of the Council. Staffing for the council's work should primarily be from the Department of Economic and Community Development, but supported collaboratively with any staff of the individual cluster organizations.

The primary role of the Competitiveness Council should be to guide public policy decisions and investment strategies that best promote competitiveness of the state's economic drivers, including its industry clusters. The Council's role should also ensure that policies around the cluster initiative are being implemented by relevant state agencies, including collaborative efforts with partner agencies, both public and private.

3. DECD should designate a Cluster Initiative Team within its Business Development Division that would be responsible for strategies that cut across industry cluster areas. It should be staffed by three to four of the economic development specialists currently employed in the Business Development Division (including the two already assigned to insurance and financial services, and bioscience.) These staff should be proactive in working with clusters, determine what strategies work, what obstacles the clusters face, and coordinate with other state agencies, as well as state-level and regional economic development partner agencies to implement positive strategies and overcome problems.
 - The Cluster Initiative Team staff can serve as a conduit from the cluster communities to the Commissioner of DECD, who as a member of the Governor's cabinet, should lead in shaping policies to promote competitiveness, including those policies that may require an interstate, regional approach to promoting clusters.
 - The Cluster Initiative Team should also work with clusters to initiate grant applications for federal funding such as the Economic Development Administration grants. (see below) Other duties of the Cluster Initiative Team should be to attend cluster-sponsored informational sessions; provide information and technical assistance; and sponsor or coordinate events that would attempt to link businesses with opportunities.
4. DECD should act as the lead agency and proceed with the steps needed to execute the knowledge corridor agreement (Springfield/Harford) by July 1, 2010. Once the agreement is in place, DECD should publicize the state's commitment to the industry development, and work with BEACON and the Hartford-Springfield Economic Partnership on implementation.
5. DECD should become an active participant on the Hartford-Springfield Economic Partnership steering committee; and DECD should use the results of the 2009 HSEP survey to focus its business development activities, especially building on the strengths of the region – educational institutions, relatively

affordable cost of living, and proximity to key markets – to promote business expansion in the area.

6. **The Connecticut Development Authority and Connecticut Innovations, Inc. shall be consolidated, and all direct business financial assistance programs shall be transferred from the Department of Economic and Community Development to the combined authority. To ensure that the practice of financing innovation occurs, half of all annual state business development assistance should support innovation- and technology-based businesses, and start-ups.**
7. **Creating a new state regulatory environment should be an executive branch priority, and one the governor should publicly announce. The administration should require that the interagency steering council resume its activity, stress that coordinating state policy and streamlining regulations impacting economic development is imperative, and inform the commissioners and other agency heads who are members of the council that its coordinating activities are as important as each agency's individual operations. The administration should use the DEP/DECD agreement as an example of interagency coordination and establish some measures of performance accountability.**
8. **The interagency steering council should also address ways that state agencies could electronically improve or expand services to customers, prioritizing those that impact business and economic development. The state Department of Information Technology shall assist in implementing these areas identified.**
9. **Connecticut business regulations and regulatory compliance be placed on the program review committee's study topic agenda for 2010.**
10. **To ensure that the state's energy policies are addressed as they impact the state's economic development, the commissioner of economic development, or a high-level agency designee, shall be a member of the Connecticut Energy Advisory Board and the Energy Conservation Management Board.**
11. **First, DECD should establish a team approach to business development, with three teams each staffed with 3 or 4 people. The teams would be responsible for: 1) clusters including cross-cluster initiatives; 2) incentive programs to business, including tax credits; and 3) providing technical assistance to business including exporting, manufacturing assistance, regulatory guidance, and serve as liaisons to, and coordinate with, outside partner and business organizations, as well as other divisions within DECD.**

Second, incorporate the recently transferred film office into the business development section and cross-train people in all economic development tax credits.

Third, require that any department contacts with other organizations be made directly by the DECD business development specialist, not through a referral.

Fourth, an on-line satisfaction form should be developed so that clients could evaluate the services received from the DECD business development teams. The results of the evaluations should be published as part of DECD's annual report, and the results also used to modify and improve business development services.

12. The Department of Economic and Community Development and the Office of Policy and Management should aggressively pursue funding opportunities with the federal Economic Development Administration, and determine where state assistance could be used as matching funds for the EDA grants.

13. The business development teams at DECD should research the ARRA funding available to Connecticut, what businesses and industry areas might be eligible, what the criteria are for receiving funding, and work with partner agencies, like cluster organizations, towns, and others to inform businesses and assist, whenever possible, with the application process. DECD should also publicize on its website the technical assistance that it can provide to business in seeking and obtaining ARRA funding.

14. Implement an "angel" tax credit program whereby:

- **Credit Amount:** Twenty-five percent of an investor's cash investment, provided no individual credit shall be greater than \$125,000, in qualified, early-stage enterprises in high-tech industries with an aggregate cap of \$6 million per year for the first three years and then decreasing to \$3 million annually.
 - **Applicable Tax:** Personal income tax
 - **Eligibility Criteria:** Investments shall be in a business that:
 - has been approved as a qualified Connecticut business by Connecticut Innovations, Incorporated (as modified in prior recommendation);
 - has had annual gross revenues of less than \$5 million in the most recent income year;
 - has fewer than twenty-five employees, more than half of whom reside in the state;
 - has been operating in the state for less than 10 consecutive years;
-

- is primarily owned by the management of the business and their families; and
 - has received less than \$1 million in tax credits provided by this section in any year.
- **Carry Forward**: The amount of credit allowed to any one investor shall not exceed the amount of tax due from such investor. Any tax credit not used may be carried forward five years.
 - **Effectiveness review**: a review of its effectiveness conducted by July 1, 2015, and a sunset date of July 1, 2020.
15. **Include a Connecticut angel investor on the board of Connecticut Innovations, Inc. (as modified in prior recommendation) and the Small Business Innovation Research advisory board.**
 16. **Continue funding the Innovation Pipeline Accelerator for two more years.**
 17. **Create a “sidecar” fund operating within Connecticut Innovations Inc., with 10 percent of the fund set aside for university student entrepreneurs.**
 18. **Provide state matching funds to SBIR/STTR Phase I grants at 50 percent, up to \$50,000 per grant.**
 19. **DECD and the combined CII/CDA organization shall create a slogan/brand for Connecticut that emphasizes the state as a place for innovation. The slogan shall be visible at the top of each agency’s website and on all marketing materials.**
 20. **The governor and the Connecticut Congressional Delegation should work to restore the U.S. Department of Commerce Export Assistance Center in Connecticut to its full staffing component. The governor’s office could be used to draw attention to the staffing situation, and each Connecticut U.S. senator and representative should be enlisted to advocate for the restoration of the positions to the federal administration.**
 21. **The business development division within DECD should be reorganized using a team approach (as recommended above), with no new or refilled positions needed. One of the teams should be staffed with four people, assigned to technical assistance including exporting.**
 22. **A memorandum of agreement should be developed between DECD and the U.S. Department of Commerce Export Assistance Center to partner on activities including:**

- **jointly providing exporting informational sessions to businesses, as well as joint sponsorship and joint representation of international trade events held in Connecticut;**
- **aggressively promoting the services that the Export Assistance Center can provide as well as DECD reimbursement to businesses for participation fees;**
- **finding innovative ways of supporting exporting activities;**
- **work with other government agencies (e.g., Small Business Administration) and private partners (e.g., banks, business trade groups) to coordinate and target the needed services, such as financing, or transportation;**
- **provide the expertise in the regulatory and licensing requirements that Connecticut companies indicate they need to access potential markets -- either through staff research in-house, or seeking experts in the field from the private sector or the federal government – and offer the assistance at publicized workshops around the state;**
- **explore opportunities with similar export assistance agencies in neighboring states to maximize exporting prospects for businesses in the region; and**
- **establish an aggressive marketing campaign to promote Connecticut’s export activity that:**
 - **highlights the unified federal/state team assistance approach;**
 - **features Connecticut’s recent success in exporting;**
 - **demonstrates that exporting activity is a state priority -- for example, appearances and remarks by governor, by Congressional representatives at high profile business events; and**
 - **conveys exporting as a way to grow revenue, and create new jobs.**

23. DECD should upgrade its website to give more prominence to exporting activity, make that area of its website more colorful, inviting and user-friendly, provide more current useful information, and offer some success stories.

24. Funding for export assistance, including sponsorship of programs, helping companies access U.S. DOC services, marketing materials and website improvements, should come from the unallocated Manufacturing Assistance Act bond funding, upon approval of the Bond Commission.

25. The following tax credits shall be repealed effective January 1, 2011:
- Financial Institutions;
 - Computer donation;
 - Displaced worker;
 - Research and Development to Higher Education; and
 - Small Business Guarantee Fee Tax Credit.
26. For the period beginning January 1, 2010, and ending January 1, 2013, companies may take a tax credit for each new full-time job created beyond the 2009 base year of employment. To be eligible for the credit the new job must be filled by a Connecticut resident. The credit will be equal to 15 percent of the wages paid. The business creating the job may claim the credit against its tax liability for the corporate income tax, insurance premiums tax, utility company's tax, or personal income tax. New jobs must pay at least 80 percent of state median income and offer health care benefits. The credit will be issued in three installments over three years. The annual maximum credit per job is \$4,000 and the total credit amount is capped at \$25 million annually. Businesses must apply to DECD and approval will be on a first-come, first-served basis. Businesses claiming a credit with respect to job creation may not claim a credit against any tax under other provisions of the general statutes for job creation.
27. The film tax credit should be modified such that capital investments qualify for a 30 percent credit and production expenses qualify for a 10 to 20 percent credit.
28. Tax credit programs in which either 1,000 or more credits a year are allowed or the credit value exceeds \$5 million annually be reviewed by January 1, 2012, to determine the economic impact and be subject to extension or modification by the General Assembly for another five years based on results of the study.
29. Newly established tax credits shall include a review date to determine their effectiveness and the credit will be repealed, modified, or continued based on results of the review.
30. The Insurance Reinvestment Tax Credit shall be terminated effective January 1, 2011.
31. Connecticut liquor and grocery stores should be permitted, but not required, to sell alcohol on Sunday under their current licensing provisions.

Introduction

Purpose of Study

The Legislative Program Review and Investigations Committee undertook this study in May 2009 to examine Connecticut's laws and policies and determine if they help or hinder the state's economic position both globally and with its surrounding states. The study includes both a broad and narrow focus. The broad focus examines what the state's economic development strategy has been over time, including review of Connecticut's industry cluster strategy. The narrower focus of the study examines laws and tax policies in the retail sales area in relation to surrounding states.

Focus of Study

The committee approved a study scope focusing on how Connecticut's laws and policies help or hinder the state's economic position both globally and with its surrounding states. The scope of study is contained in Appendix B. The study examines in broad measures: 1) selected Connecticut industry cluster areas, including export activity, that are considered the state's economic development priorities; and 2) whether state laws, tax policies, and other strategies enhance cluster activity and position the state to succeed in the New Economy. More narrowly, the study also examines how Connecticut's laws and tax policy affect its economic position, especially in the retail sales area, relative to surrounding states.

Research methods. The program review committee staff relied on many sources in developing the report. In addition to state statutes and budget documents, staff reviewed reports and studies produced by a variety of both federal and state government agencies, and national and state nonprofit policy organizations. Many interviews were held with staff from state agencies, nonprofits, businesses, and trade organizations across the state. Staff also attended several trade shows and spoke with local businesses from across the state.

During the course of the summer, committee staff met with the following organizations:

- State Agencies: Department of Economic and Community Development; Department of Labor; Office of Workforce Competitiveness
- Quasi-Publics: Connecticut Innovations Inc.; Connecticut Development Authority
- Connecticut Economic Resource Center
- Connecticut Center for Advanced Technology (CCAT)
- Metro Hartford Alliance
- Southeastern Connecticut Enterprise Region (SeCTer)
- Business Council of Fairfield County
- Industry cluster organizations: Aerospace Components Manufacturers; Connecticut United for Research Excellence (CURE); Insurance and Financial

Services; Connecticut Maritime Coalition; and Connecticut Technology Council (CTC)

- Biomedical Engineering Alliance & Consortium (BEACON)
- Connecticut Economic Development Association
- Connecticut State Technology Extension Program (CONNSTEP)
- Connecticut Ventures Group
- Connecticut Business and Industry Association (CBIA)
- UConn Technology Incubation Program (TIP)
- Service Corp of Retired Executives (SCORE)
- Federal Small Business Administration
- Connecticut Small Business Innovative Research (SBIR) office
- U.S. Department of Commerce Export Assistance Center
- Hedge Fund Association
- Northeast Utilities economic development department
- Federal Small Business Administration

In addition, the committee held a public hearing in October 2009 to gather input on the study and on information presented in the staff's briefing document presented on October 6, 2009. The committee received oral and written/or written testimony from nine persons, including the commissioner of DECD.

Report organization. This report is organized into eight chapters. Chapter I describes the older economic development strategies that focused on recruiting out-of-state firms for growth versus the newer model of economic development that emphasizes innovation and growth from within the state. Chapter II summarizes state and federal economic development funding directed at businesses, primarily financial incentives provided through loans and grants.

Chapters III through VI each begin with a National Governor's Association "best practice" and action steps for promoting and growing in the new, innovation-based economy. Each chapter examines the strategies that exist in Connecticut, whether the recently issued DECD economic strategic plan addresses the area, and concludes with committee findings and recommendations for each category.

Tax credits are another state financial incentive policy tool used to spur economic activity. Chapter VII describes the current business tax credits and analyzes utilization by credit. The chapter concludes with committee findings and recommendations to better align tax credits with promoting growth in the New Economy.

Finally, Chapter VIII examines Connecticut's economic competitiveness with its border states and concludes with committee findings and recommendations concerning cross-border shopping and Sunday sales of alcoholic beverages.

Economic Development: How to do it in the New Economy?

In the global economy, the United States faces new economic challenges and the competition has changed. No longer do individual states or regions compete with just each other for economic growth. In Connecticut, the challenge is not only to stay competitive within New England or with other states, but now Connecticut must be competitive throughout the world.

The more traditional approaches to economic development -- involving large employers and limited geographic competition -- focus on attracting branch-plant production facilities or large service operations through tax incentives to relocate or to build a facility within a state. However, the industrial landscape has changed with many labor-intensive jobs moving overseas. Since Connecticut is a high-cost place to do business, the state cannot compete globally on a low-cost strategy. Instead Connecticut must focus on doing business in areas where it already excels -- in particular, with a highly educated and highly productive workforce, this means competing for knowledge-based jobs (i.e., innovative, entrepreneurial, and high-tech jobs).

The New Innovation Economy

In requesting this study in early 2009, the committee was interested in ensuring Connecticut is well-positioned to compete economically when the recession is over. Being well-positioned means that the state's economy needs to be firmly grounded in what is now termed the "New Economy." This "New Economy" is one that is global, entrepreneurial, technology-focused, and knowledge-based. With recent advances in telecommunication technologies along with the global shift toward open, market-based economies that support free trade, the critical factor for economic success is innovation.

A new type of benchmarking is needed that assesses the state's economic success in terms of its innovative strength. A 2005 report issued by the national organization, The Council on Competitiveness,⁴ indicated that approximately 50 percent of the U.S. annual gross domestic product growth is attributed to innovation, and other studies have demonstrated that states with a greater share of employment in knowledge-based industries have higher incomes.⁵

Assessing the state's success in innovation requires measuring the state's economy based on a set of variables or benchmarks that together create an index to gauge its stability and growth. An index focuses less on the direct incentives, assistance packages that might attract branch-plant production facilities, and more on incentives that grow entrepreneurial and innovation-based firms. Offering financial incentives to create or retain jobs might provide short-term aid, but it is unlikely to have as much long-term impact on the economy of a state or region as strategies that focus on creating an environment for job creation to occur more naturally.

⁴ "Measuring Regional Innovation: A guidebook for conducting regional innovation assessments," Council on Competitiveness, August 2005.

⁵ Donald Grimes and Lou Glazer, "A New Path to Prosperity? Manufacturing and Knowledge-Based Industries as Drivers of Economic Growth," (Ann Arbor, Mich.: Michigan Future Inc. and University of Michigan, 2004).

It is well known that small businesses create most of the nation's new jobs, and that trend is likely to continue. According to the 2009 Report to the President on the Small Business Economy,⁶ fast-growing, high-impact firms that are technology-based account for almost all of the nation's growth in private sector employment. A new model for economic development has emerged within the last decade that recognizes that innovation and entrepreneurship are fundamental to success in the New Economy. To implement this "innovation economics" development model requires policies that focus more on promoting technological innovation, supporting higher-level workforce skills, spurring entrepreneurship, supporting knowledge networks, lowering the costs of doing business, and enhancing quality of life.

State Economic Development Models

Table I-1 summarizes different economic development strategies, including their approach and focus on growth. The older strategies focus on incentive-based strategies and recruitment of out-of-state firms for stimulating growth. However, in innovation economics the focus is on creating companies from within the state and harnessing the existing talent, innovation, and entrepreneurial spirit of the state, requiring less focus on traditional infrastructure and more on nurturing ideas and talent. Ideas do not need to be attracted from another state; each state can discover its own.

The first model in the table, "conventional economic development," developed largely after World War II, focuses on providing large multi-state firms with low-cost deals through tax breaks, loans, and grants. States largely view each other as the main competitors for attracting and retaining businesses and therefore economic development focuses mainly on creating the best incentive packages.

The second model, labeled the "neo-classical business climate," contends that government is unable to pick winners, and thus does not favor firm-specific subsidies. Instead, the promoters of the doctrine believe the best way to grow the state's economy is through a competitive tax code with low rates and few distortions and a manageable regulatory system – supporting a good overall business climate.

The third model views the source of state growth as not through capital investments but through worker incomes. The Neo-Keynesian Populism model focuses primarily on helping state residents, including workers. This model focuses less on business climate or competitiveness and more on policies that make the state tax code more progressive, expanding unemployment insurance, and funding affordable housing. Policies to promote economic development tend to focus on expanding human capital, investing in infrastructure like high-speed rail, and limiting corporate tax incentives.

The fourth, and most recent economic development model, "innovation economics," focuses less on issues like taxation and the regulatory environment and more on policies that promote innovation through a positive business environment. It is recognized that a low-cost environment alone will not drive innovation because low costs often come at the expense of public investments such as research universities, infrastructure, and worker skills that provide the

⁶ "The Small Business Economy, A Report to the President," Federal Small Business Administration, 2009.

inputs for many innovative firms. In this model, economic development focuses on promoting technological innovation, supporting a skilled workforce, spurring entrepreneurship, supporting industry clusters, and knowledge networks.

This model seeks to lower business costs, but in ways that at the same time boost quality of life. For example, developing a better transportation system, including public transportation or encouraging telecommuting, may lower costs for businesses and decrease commuting time for workers, thereby increasing productivity and improving quality of life.

	Conventional Economic Development	Neo-Classical Business Climate	Neo-Keynesian Populist	Innovation Economics
Source of Growth	Capital Investment	Capital Investment	Worker Incomes	Innovation and organizational learning
Principal Economic Development Means	Drive down costs through firm-specific subsidies	Drive down costs through lower taxes and reduced regulations	Drive up wages and benefits, and foster more progressive taxes and public spending	Spur firm innovation through targeted support (e.g., research, financing, skills, etc.) and incentives for firms to produce these themselves
Object of Policy	Recruitment of out-of-state firms	Recruitment of out-of-state firms	Small business and socially-conscious business	High-growth entrepreneurs and existing firms
Quality of Life	Minor importance	Not important	High importance	Moderately important to attract and retain knowledge workers
Goal	Get big	Get big	Get fair	Get more prosperous

Source: 2008 State New Economy Index, Kauffman Foundation, November 2008.

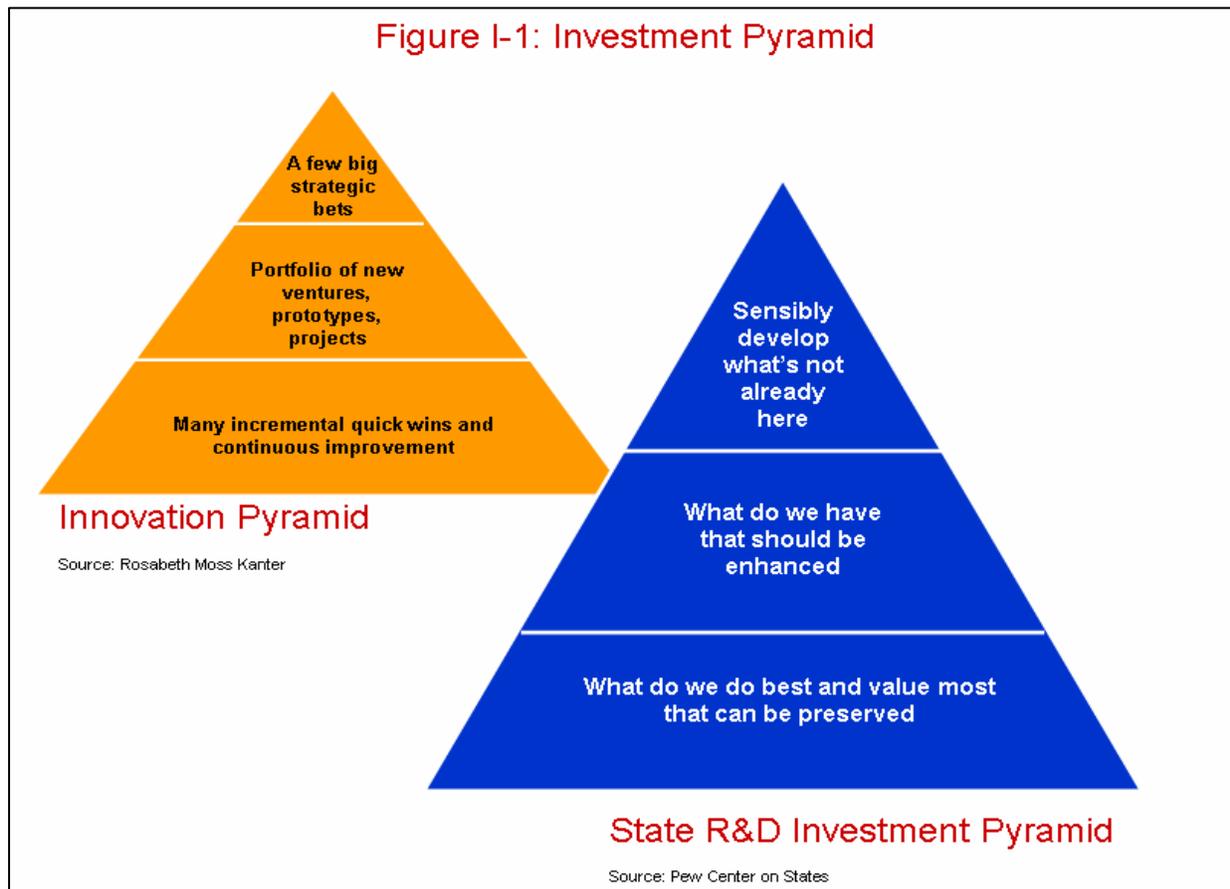
State strategy. Building an innovative-based economy does not mean the state should abandon what it has in place, or search for an economic silver bullet. Rather, to promote growth, states should develop a three-step overarching strategy that:

1. focuses on preserving the assets the state already has;
2. considers what should be enhanced; and
3. targets components that can be sensibly developed in the state that are not already there.

Figure I-1 was presented in a report by the National Governor’s Association entitled “Investing in Innovation.”⁷ The innovation pyramid on the left was a concept developed for businesses to help companies prioritize and balance their investments. The concept can be applied similarly to a state’s economic investments, and the pyramid on the right in Figure I-1 demonstrates how a state can prioritize and balance research and development investments. The pyramid concept illustrates the three-part strategy outlined above that a state should use to focus investments to promote economic growth. The most resources should be directed to the bottom

⁷ “Investing in Innovation,” National Governor’s Association, 2007.

or base of the pyramid – the foundation of the state’s economy -- and as more resources become available channel them up to enhance or add to current policies or strategies.



Investing in innovation does not rely on a single success story or “win” that seals a state’s economic future. Instead, it requires a sustained effort that cannot be done in isolation, and cannot depend on any one agency or funding source. It requires that universities, industry, and Connecticut’s government collaborate to shape policies, focus resources, and make investments that capitalize on the state’s strengths, which include a dynamic workforce, prime location, good quality of life, and educational excellence.

Investing in the innovation economy requires more than just identifying assets. It is crucial that these features that make the state competitive constantly be monitored and enhanced; if ignored, other states and regions gain a competitive edge. Also of importance is that these identified assets should not only be used as a marketing tool to promote Connecticut to businesses looking to relocate; in fact that should be a secondary objective. The primary objective of state policymakers, state agencies, and their economic development partners should be to continually assess and adjust the competitive features to meet the needs of the state’s current industry clusters. Connecticut is a high-cost state, and that puts businesses here at a competitive disadvantage. Given that, it is essential that the overall strategy developed first protect the features that are the state’s competitive fabric and invest to preserve them.

Collaboration is the key for success in the New Economy. State and regional strategies should build, protect, and promote a collaborative policy environment. Although technology has enabled people and businesses to connect and communicate more easily, innovation requires close personal interactions at every stage of development. Applying knowledge to the workplace occurs faster when industry and universities maintain a close working relationship; therefore, it is important to create a sophisticated academic-to-commerce network. Developing strong industry clusters is also key to this innovation-building, because close proximity to suppliers and customers promotes faster responses in a rapidly changing marketplace.

It is important that state policymakers, as well as agency staff charged with implementing economic development policy and programs, listen to business about what their needs are to stay competitive in Connecticut. It is also essential that the state's full economic potential -- its businesses, higher education, research and medical facilities, and transportation systems -- be addressed and promoted. State efforts should focus on investing in industry-university collaboration, building cross-disciplinary centers, and encouraging cooperation between multiple universities.

In a geographically small state like Connecticut there should be few physical barriers to forming such collaborations. But collaboration depends on more than geographic proximity and technological capacity for communication. Also needed are cooperation and a sense that all the parties are working for the same goal -- to strengthen the economy of the state and the region, and increase the prosperity of its residents. Agencies and staff should not be looking to compete with each other for an individual "win" or to lay sole claim to a success story. Instead, state agencies and their partners should have a sense of common purpose and a team approach that results in many economic successes for the state and the region.

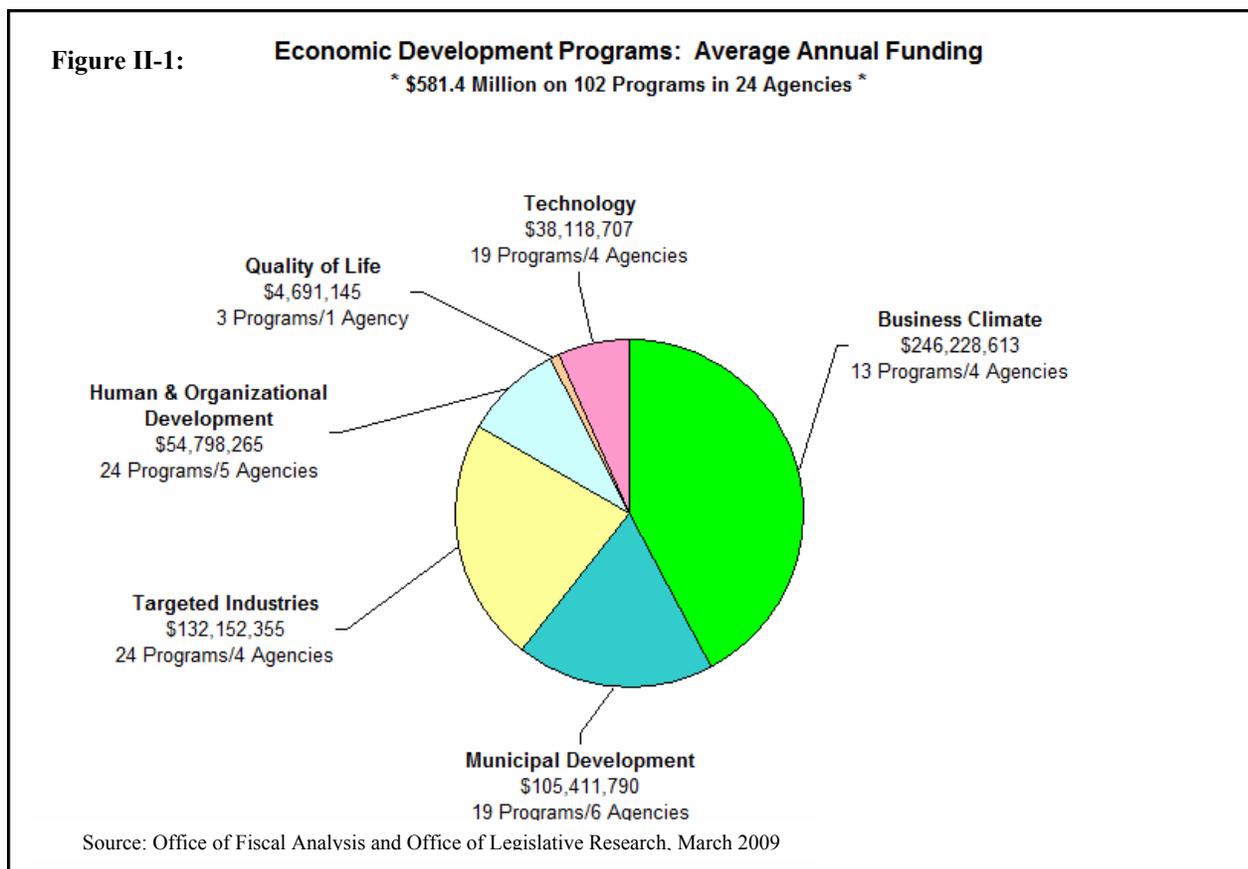
Figure I-1 above illustrates an overall strategy for guiding policy and investments. Table I-2 below provides a series of best practices (i.e., key indicators) identified and compiled by program review staff from various sources. Together, the broad guide for investment strategy and the list of specific actions a state should take provide a roadmap to enhancing a state's competitiveness for a knowledge-based, innovative economy. The program review committee used these practices to construct the framework for Chapters III through VII, which assesses how well our strategies and policies, as well as the strategic plan proposals in Connecticut, compare to those advocated by the National Governors Association.

Table I-2: Best Practices /Key Indicators To Promote and Grow Economy

<p>Accelerate Innovation</p> <ul style="list-style-type: none"> • Understand state’s economic assets • Align policies with strengths and assets • Make strategic investments especially in human capital, research and development, and infrastructure • Communicate the importance of innovation in a state’s economic development • Identify “clusters of innovation” and track and report performance <p>Develop a Comprehensive Innovation Policy</p> <ul style="list-style-type: none"> • Recognize that a knowledge/innovation economy involves more than one agency -- education, higher education, and economic development all play a role • Ensure that K-12 education system meets high standards in science, technology, engineering, and mathematics • Align post-secondary education to support the economy • Implement innovation-based economic policies • Invest in innovation and promote the transfer of research and development from education institutions to commercialization <p>Streamline Regulations</p> <ul style="list-style-type: none"> • Ensure that state regulatory policy is flexible and responsive • Ensure that regulatory process is timely and not administratively burdensome • Provide guidance and assistance to small business and start-up companies 	<p>Create a coherent, market-driven trade and international development system</p> <ul style="list-style-type: none"> • Recognize the global economy offers opportunities for growth and promote exporting as part of economic development mission • Focus on exporting competitiveness, market share, and strategic position, not just export numbers • Leverage state investments and resources with those of federal, private, nonprofit, and regional organizations • Develop strategies that assist industries (and cluster associations), identify potential markets abroad, as well as promote the state as a location for business or education • Create and foster relationships between exporters and potential exporters, banking, and other organizations that might offer assistance • Identify obstacles to exporting and work to resolve • Recognize that governor can serve a crucial role as advocate of international development and chief economic ambassador of the state <p>Convene Leaders from Various Sectors</p> <ul style="list-style-type: none"> • Bring key organizations (e.g., business, education) together with policymakers • Appoint liaisons to work with clusters to understand economic challenges and opportunities <p>Improve Access to Seed and Venture Capital</p> <ul style="list-style-type: none"> • Provide tax credits or other measures that stimulate “angel” investments • Work with other states in region to develop a large investment fund that serves a region
<p>Sources: PRI staff synopsis of reports issued By National Governors’ Association: Innovation America –Cluster-Based Strategies for Growing State Economies; Innovation America- A Final Report; and A Governor’s Guide To Trade and Global Competitiveness</p>	

How Much Are We Doing?

Development of a state's economy and promoting its competitiveness cannot rely on a single strategy left to one state agency or program, but rather depends on a framework of policies and programs aimed at an overall goal of state economic growth and increasing prosperity for its residents. While it is certainly beyond the scope of the study to identify all of the resources that the state dedicates to economic development, Figure II-1 below broadly illustrates the state's fiscal effort at promoting economic development by broad category. See Appendix C for a detailed list of agencies and programs.



While some might disagree with the categories (and programs) that have been included or others that should have been included, the graph broadly depicts the state's economic development resources and how they are allocated. What the graph does not show is how economic development stacks up as a state priority with other demands on its resources. If the \$581 million in economic development funding is measured as a percentage of the state's almost \$17 billion dollar budget, the result is about 2.5 percent of general fund money directly targeted toward developing the state's economy and improving its economic competitiveness. Human services, on the other hand, accounts for about 28 percent of the state's budget.

This chapter focuses on the funding directed at businesses, primarily financial incentives provided through loans and grants. The incentives that support business development are largely administered by the three major economic development agencies in Connecticut -- the state Department of Economic and Community Development (DECD), and two quasi-public economic development agencies -- the Connecticut Development Authority (CDA) and Connecticut Innovations Incorporated (CII). Chapter VII reviews economic development incentives provided through tax credits and exemptions administered by DECD and the Department of Revenue Services (DRS). Not included in this chapter is funding provided for workforce development, as that was examined as part of another committee study also completed in December 2009 reviewing alignment of postsecondary education and employment. Also, major financial supports for tourism (except the film tax credits) and agriculture are not discussed since most of those come through two other state agencies -- Commission on Culture and Tourism and the Department of Agriculture -- that support those industries.

This chapter also discusses some federal programs where funding comes into Connecticut for business development through the U.S. Department of Commerce Small Business Administration (SBA) that supports small business development in general, and through the Small Business Innovation Research (SBIR) program, which coordinates and awards research and development grants from various federal agencies.

Department of Economic and Community Development (DECD)

The department's mission is to maximize economic opportunities through the creation of jobs; workforce development; business expansion, recruitment and retention; export assistance and foreign investment; and development and implementation of comprehensive long-term development strategies, such as Connecticut's industry cluster initiative. This chapter describes "how much" the state is doing for economic development by outlining the funding that goes to business development from federal funds, the state's General Fund, bond monies, and through tax credits and exemptions.

Federal funds. DECD receives little in the way of federal funding for direct economic development. The Economic Development Administration of the U.S. Department of Commerce reported that Connecticut received one grant for \$65,000 in federal FY 07, the lowest amount of any state (this will be discussed in comparison to other states in Chapter IV). DECD has received a \$2.7 million, three-year grant from the U.S. Department of Labor that is being used through the insurance and financial services cluster to establish a center for educational excellence. The funding has helped develop an insurance analyst associates degree program in connection with the community college system, as well as providing on-the-job training to over 500 people in that industry area.

General Fund. Since 2004, DECD has funded 19 different programs with General Fund monies. Table II-1 lists the programs that received General Fund monies in any year between FY 04 and FY 08, and the amounts in current dollars. However, as the table below shows, the number of programs and their funding has been inconsistent. The instability in program funding perhaps demonstrates the lack of a long-term economic development strategy. For example, in FY 02, DECD funded the cluster initiative at \$2.4 million; in FY 04, the cluster initiative

received \$40,000 and since that time has received no state funding. The Entrepreneurial Center is the only program that has received consistent General Fund support over the five-year period.

Table II-1: DECD Programs and Funding: General Fund						
Programs	Fiscal Years					
	FY 04	FY 05	FY 06	FY 07	FY 08	Total FYs 04-08
cluster initiative	\$40,000					\$40,000
entrepreneurial center	\$150,000	\$142,500	\$142,500	\$142,500	\$142,500	\$718,000
Small Business Incubator Program @ CT Center for Advanced Technology (CCAT)				\$1 million	\$1 million	\$2 million
CONNSTEP (LEAN mfg)				\$1 million	\$1 million	\$2 million
grant for micro loan pilot					\$50,000	\$50,000
grant to OWC for SBIR tech asst.				\$250,000	\$250,000	\$500,000
CT Research Institute (strategic plan)				\$500,000		\$500,000
research-based technology transfer				\$40,000		\$40,000
fuel-cell economic development and plan				\$375,000		\$375,000
CCAT – Fuel cell plan and cluster development				\$450,000	\$250,000	\$700,000
operating grant to Westville Village as a commercial district					\$80,000	\$80,000
grant to UConn for Avery Point technology incubation program					\$250,000	\$250,000
CCAT energy application research					\$225,000	\$225,000
Eastern CT State University—biofuels information program					\$100,000	\$100,000
Total	\$190,000	\$142,500	\$142,500	\$3,807,500	3,397,300	\$7,679,800
Total DECD GF	\$21,176,551	\$22,098,589	\$16,990,826	\$23,028,157	\$25,031,721	\$108,325,844
% ED program funding of DECD GF	0.89%	0.06%	0.83%	16.5%	13.5%	7%

Source: Report on Economic Development by Office of Legislative Research and Office of Fiscal Analysis

As the table shows, while the number of economic development projects, and funding to support them, has increased over the five-year period, the first two years of funding to non-department economic development programs totaled less than one percent of DECD's General Fund budget. Further, over the five-year period the average of General Fund dollars to support non-department programs was 7 percent of the department's overall General Fund budget.

Another indicator of tepid support of economic development is the allocation of staffing to economic development within the agency itself. DECD's FY 08 annual report shows that allocation of staffing for economic development programs is not a department priority. In FY 08, of the almost \$7 million of DECD personal services, about \$700,000 (10%) was for staffing of programs in economic development, while much more was for overall agency administration, community development, or housing.

DECD bond programs. The vast majority of the financial assistance to support business economic development in the state is through the Manufacturing Assistance Act (MAA), administered through DECD. The MAA, created by the legislature in 1990, is used primarily for incentive-driven direct loans to support specific projects that are determined to have strong economic development potential. Typically, this is measured by the number of jobs to be retained or created by the project. About \$153 million in bond funds have been used over the life of the program, and MAA has funded approximately 100 projects, almost all (96 percent) in the form of loans rather than grants. Also, as loans are repaid they become part of the MAA account that can fund future projects. In FY 09 about \$5 million was collected in principal and interest on prior loans.

MAA recipients by industry. DECD indicates that for every dollar the state invests in MAA-assisted projects, \$6.30 are invested by the private sector. Seventy-one of the funded projects have been in manufacturing, with \$54.5 million in loans and almost \$14 million in grants to that industry. The other major industry area that receives funding through MAA has been the finance and insurance area, which has received almost \$62 million. Up until 2008, agricultural activity was not a program given assistance through MAA. However, P.A. 08-34 expanded eligibility to "other economic base business sectors," with several farms receiving loans in FY 08.

Table II-2 shows a more specific breakdown of MAA funding to industry areas over the years. The table highlights those funded areas considered industry clusters, and shows that three of the clusters – finance, bioscience, and aerospace manufacturing -- received about 45 percent of the assistance.

Industry	Total	Industry	Total
Insurance, Financial and Financial Consulting Services	\$63,492,250	Incubator	\$3,000,000
Manufacturing	\$39,355,044	Business Support Services	\$2,500,000
Bioscience	\$12,299,074	Printing	\$1,600,000
Wholesale	\$10,000,000	Medical Equipment Manufacturing	\$973,950
Film	\$8,000,000	Agriculture	\$785,000
Food Manufacturing	\$7,800,831	Fabric Mill	\$550,000
Aerospace Manufacturing	\$5,666,000	Contractors	\$500,000
Retail	\$3,700,000	Engineering Services	\$267,000
Utility	\$3,500,000	Educational Services	\$250,000
Transportation	\$3,275,000	Technology	\$200,000
Grand Total			\$167,714,149

Source: DECD FY 08 Annual Report

Table II-3 shows the funding through MAA by year and total number of projects funded and whether the assistance provided was grants or loans. While the MAA funding is the major source of DECD direct financial assistance, two minor sources also provided funding. Slightly more than \$14 million came from the Urban Act (another bond-funded program largely administered by the Office of Policy and Management) and \$400,000 came from the Naugatuck Valley Revolving Loan Fund.⁸

Fiscal Year	# grants	\$ amt of grants	# loans	\$ amt of loans
FY 92	0	0	1	\$2,099,074
FY 93	1	\$3,000,000	3	\$2,350,000
FY 94	0	0	0	0
FY 95	1	\$500,000	0	0
FY 96	1	\$2,000,000	0	0
FY 97	0	0	0	0
FY 98	2	\$1,950,000	10	\$5,016,044
FY 99	3	\$5,050,000	11	\$10,537,500
FY 00	1	\$5,000,000	8	\$4,975,000
FY 01	0	0	9	\$60,019,750
FY 02	0	0	10	\$8,037,831
FY 03	0	0	5	\$5,470,000
FY 04	1	\$2,500,000	0	0
FY 05	0	0	3	\$775,000
FY 06	0	0	10	\$4,227,950
FY 07	0	0	12	\$18,026,000
FY 08	0	0	18	\$26,180,000
Total	10	\$20,000,000	100	\$147,714,149

Source of Data: DECD FY 08 Annual Report

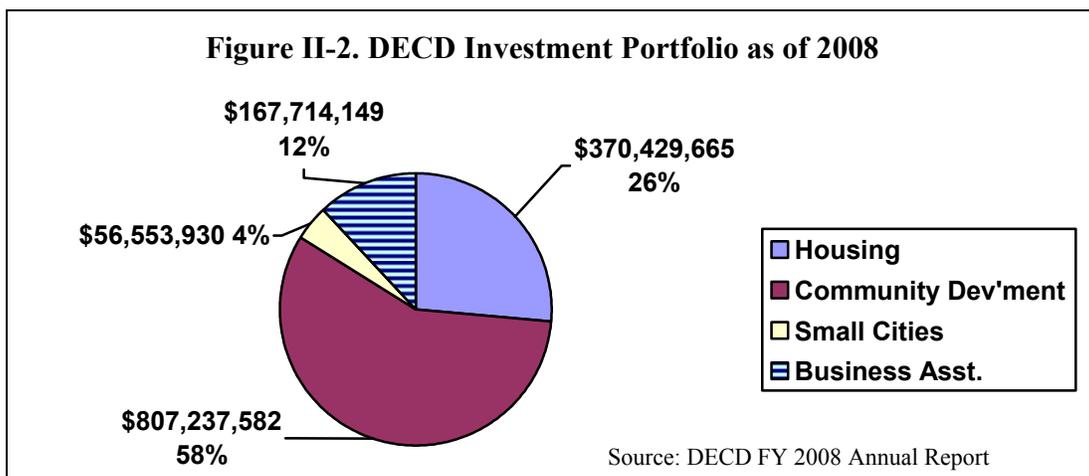
⁸ Naugatuck Valley Revolving Loan Fund is one of about 20 revolving loan programs supported by DECD in the state. Typically operated by local organizations and often funded initially with state funding, the local programs provide loans that target local businesses or projects in the region. Often DECD guarantees the loan.

As the table shows, the project activity and the financial assistance varies substantially from year to year. The highest loan amounts were provided in FY 01, slightly more than \$60 million to nine projects, while in other years no projects were funded, although the number of projects and total loans has increased again in FYs 07 and 08.

DECD reports on its assistance as a percent of the cost of the overall project, and also the amount of private funding that supports the project. However, the department does not report on how many businesses sought assistance from DECD but did not receive it, nor does it report on the amount or percentage of assistance given compared to the amount sought. Therefore, it is difficult to determine whether there were no project requests in the years when no funding occurred, or whether there was no state funding available to provide incentives.

While the primary use of MAA funds has been for direct loans to businesses, about \$65 million has also been used over the years to fund approximately 120 projects that DECD categorizes as community development. Most of those have been grants to communities for infrastructure improvements, or for large, mostly publicly funded projects, like Adriaen's Landing in Hartford. But several others, including CONNSTEP, the procurement technical assistance program, and microloans to minority- and women-owned companies are targeted toward business development.

The figure below shows DECD's financial investments by component -- business, community development, small cities, and housing -- as categorized by the department. As the figure shows, only 12 percent of the financial assistance provided by the department supports business. And though \$167 million over a 17-year period is not insignificant, averaging more than \$8 million a year, it is not a major part of the portfolio. While economic development is a broad concept and strong communities and housing supports are important, housing and community infrastructure depend on thriving commercial activity in the state's economy for revenue. There is also funding for MAA left untapped. The legislatures' Office of Fiscal Analysis reports that about \$69 million in bond money authorized for MAA is currently unallocated.



Measures of performance. Statutorily, all businesses that receive direct financial assistance through DECD must retain operations in the state for not less than 10 years afterwards. If the businesses do not comply, the recipient is required to pay back the assistance with a 5 percent additional interest penalty. DECD reports that, since 1992, 20 companies have been assessed about \$7.4 million in penalties for failure to keep operations in the state for the required period.

DECD is statutorily required to report to the legislature on jobs that resulted from the financial assistance. As a condition of receiving assistance, the vast majority of contracts between DECD and a project or business requires the creation and/or retention of jobs by a specific date, usually within two to five years of the contract date. Businesses are required to report on the job numbers and, according to DECD, these are audited and verified, either by DECD or an independent public accountant. Penalties can be assessed for failure to meet job requirements; DECD reports almost \$6.9 million in penalties were assessed against 29 companies since 1992.

DECD's FY 08 Annual Report indicates that the overall job goals the assistance was intended to achieve were met. However, the record for individual projects is not as good; of the 64 companies that had contractual obligations for job creation or retention for the FY 08 period, 32 companies met or exceeded the contractual requirements, while 32 companies did not. Another 28 companies were pending job report audits, and 16 projects had no job requirements. Table II-4 shows the FY 08 job audit results.

	# of Companies	Jobs: Contract Obligation			Actual jobs	% of Contract
		Retained	Created	Total		
Met Job Goal	32	6,622	3,026	9,648	13,441	139%
Did Not Meet	32	11,265	1,850	13,115	11,463	87%
Total	64	17,887	5,258	22,763	24,904	109%

Source: DECD FY 08 Annual Report

Connecticut Development Authority

The Connecticut Development Authority is a quasi-public agency, created in 1973, whose mission is to provide financing and investment capital to individual companies to help businesses grow in Connecticut. This mission supports an older model of economic development where the state acts as a lender, sometimes of last resort.

The authority has administered different programs over the years, all aimed at providing financial assistance of one type or another. The authority raises funds through the issuance of tax exempt bonds and through revolving loans (i.e., as loans are repaid, new loans are made). For the most part, programs administered by CDA are statutorily mandated. Periodically, the state legislature has consolidated or merged programs, making it somewhat difficult to track activity and funding by program over the long term. Also, CDA may promote or label its products differently than the name of the source of funding for the product.

According to CDA, since 1992, for every dollar the state initially contributed, the authority has provided \$17, for a total of \$742.3 million in loans, guarantees, and tax relief. The

CDA indicates it has assisted 1,600 different companies over the years. Companies may receive more than one loan or type of assistance and may receive allotments more than once in a year. Thus, the number of loan transactions greatly exceeds the number of businesses that received assistance. The authority has also provided another \$700 million in assistance to 62 companies through issuance of authority tax exempt bonds, with the companies paying the debt service.

Table II-5 lists CDA’s major lending or tax incentive programs, what business or sector each program targets, and each program’s major features.

Table II-5: Connecticut Development Authority: Targeted Businesses and Products Available
<p><i>For most businesses:</i></p> <ul style="list-style-type: none"> • Direct, participating, or guaranteed loans up to \$5 million for up to 20 years • Line of credit up to \$1 million over 8 years • May be use for most businesses except non-ownership occupied real estate
<p><i>For small businesses:</i></p> <ul style="list-style-type: none"> • URBANK program provides loan guarantees through banking partners • In any location for any business including retail or service • Guaranteed loans up to \$350,000 for up to 15 years
<p><i>For early-stage businesses with significant economic potential:</i></p> <ul style="list-style-type: none"> • Direct or mezzanine (hybrid) loans • Most businesses except real estate • Financing usually in tandem with banks or other private lenders or investors
<p><i>For technology-intensive businesses and projects:</i></p> <ul style="list-style-type: none"> • Financing to supplement capital requirements of expanding or early-stage technology-intensive companies, information technology offices, laboratory and/or research facilities, and smart buildings occupied by technology-intensive businesses • All CDA financing products, including tax incremental financing (TIF), up to \$5 million for up to 20 years; may be in tandem with other lenders or investors
<p><i>For brownfields redevelopment:</i></p> <ul style="list-style-type: none"> • For projects requiring remediation of environmentally contaminated commercial or industrial properties • Direct, guaranteed, or participating loans up to \$5 million for up to 20 years • Tax incremental financing – Financing tool that uses the estimated future increases in local tax revenue to finance the debt to pay for project. Provides a cash incentive equal to the net present value of the portion of future incremental tax revenues generated by the project (requires municipal support) and letter of credit
<p><i>For economic inducement projects:</i></p> <ul style="list-style-type: none"> • For relocation to or significant expansion in Connecticut or building or retrofitting facilities for technology-intensive use • Cash incentives based on tax incremental financing for technology-intensive projects in designated communities - TIF application needs municipal support and letter of credit • Below market rates for loans up to \$5 million for up to 20 years; can be in tandem with other lenders or investors
<p><i>For most for-profit businesses</i></p> <ul style="list-style-type: none"> • Lower-cost funding for fixed assets like machinery, equipment, facilities etc. • Small Business Administration long-term fixed rate debentures (bonds) • Up to \$4 million for up to 20 years -- up to 40% of project – (w/50% from commercial lender and 10% from business)
<p><i>For manufacturers:</i></p> <ul style="list-style-type: none"> • Acquisition of new buildings or equipment by manufacturers • Lower-cost, tax-exempt financing for manufacturers through industrial revenue bonds • Up to \$10 million over 40 years at prevailing interest rates for tax-exempt bonds
<p>Source: Connecticut Development Authority</p>

CDA uses underwriting guidelines to make its loans and loan guarantees. Because CDA is self-sustaining and relies on loan repayments to fund its activities, it tends to fund businesses and companies with a track record. Often CDA will provide some of the capital, with a private lender also financing a portion. Similar to DECD, the authority is required to conduct due diligence prior to financing. CDA’s criteria are described in its annual report. One set of criteria could be described as “qualitative,” such as the company’s compliance with OSHA standards, and whether the business qualifies as a “high performance work organization.” The other set of criteria is more quantitative, such as projected rate of return. CDA also has lending guidelines, e.g., a loan should not provide for more than \$20,000 per job retained or created.

Thus, the vast majority of CDA products are not high risk. However, two of the authority’s products feature loans targeted to start-up companies, especially those focused on technology, but it is unclear at this point how many companies have received such assistance. CDA also provides financing for development projects such as brownfield remediation and the Main Street Project, which supports revitalization of town centers of Connecticut municipalities.

Table II-6 shows the CDA annual financial assistance activity by funding source from FY 06 through FY 08.

Table II-6: CT Development Authority: Assistance Activity FY 06-FY 08						
Fund	FY 06		FY 07		FY 08	
	# Projects	Total \$	# Projects	Total \$	# Projects	Total \$
Growth Fund	9	\$3,018,487	9	\$1,822,479	6	\$1,395,973
Works Fund (A)	5	\$4,168,236	9	\$7,100,918	9	\$5,422,998
URBANK	15	\$512,200	13	\$350,000	18	\$1,046,650
Brownfields	1	\$672,874	0	0	2	\$5,500,000
Sales and Use Tax Exemption	4	\$13,850,000	10	\$21,770,000	3	\$5,400,000
Total Asst.	34	\$21,548,923	41	\$31,043,397	38	\$18,765,621
Source: CDA						

Table II-7 shows that annual costs for CDA operations have been somewhat more than \$6 million over the past three years, which translates to between 20 to 33 percent of the *direct* financial assistance annually (shown in Table II-6)⁹. Of course, this direct assistance is based on new loan activity, and not the total value of the authority’s loan portfolio, or its bond issues. CDA submitted information in its response to the final report that these self-sustaining bonds totaled \$87.1 million in 2006, \$52 million in 2007, and \$100.3 million in 2008 (See Appendix A).

⁹ CDA in its response to the final report disagreed with program review including interest expense in CDA’s operating expenses. Excluding this item, the expenses were about \$4.9 million, in each of the three years. See Appendix A for CDA’s response.

FY 06		FY 07		FY 08	
# Staff	\$ Exp.	# Staff	\$ Exp	# Staff	\$ Exp
27	\$6,688,234	27	\$6,201,499	26	\$6,337,200
Percent of Operations to Amounts Assistance	31%		20%		33%

Sources: CDA Annual Reports, Financial Statements and FY 07 Auditor’s Report of CDA

According to CDA reports, historically about three-quarters of its financial transactions have supported the manufacturing industry.

PRI staff examined the FY 08 recipients of CDA assistance, which results are presented in Table II-8. As the table indicates, the type of business receiving assistance depends greatly on the program, with manufacturers receiving much of the assistance from the Growth and Works Funds, while the URBANK program, aimed at small business, assists many more service companies.

Fund/program	# Companies	Type of Business
Growth Fund	6	5 manufacturing 1 service
Works Fund (A)	9	8 manufacturing, including 1 fuel cell manufacturer; 1 wholesale
URBANK	18	2 restaurants 9 service including 1 legal and 1 medical 1 retail 1 recreational 1 contractor 1 insurance 1 gas station 2 manufacturing
Brownfields	2	2 higher education facilities
Sales and Use Tax Exemption	3	1 wholesale distribution 2 insurance

Source of Data: CDA FY 08 Annual Report

Measures of performance. The Connecticut Development Authority, like DECD, is statutorily required to report on job creation and retention for projects that received assistance. Annually, the authority is required to report on the number of jobs at the time of project application and the number anticipated to be retained and created compared with the number actually retained and created. While CDA does report on these measures by company, those numbers are not used as a results measure of CDA programs overall.

The measures that CDA reports on as its measures of success are: 1) the actual number of jobs in the funded businesses as of June 2008 (regardless of the number of jobs at the time of the loan); and 2) the number of jobs *created* each year in the program, with a total by program. This is different than DECD reporting, which measures the number of jobs created or retained against the number indicated in the contracts.

Connecticut Innovations, Inc. (CII)

The third state economic development agency is Connecticut Innovations, Inc., a quasi-public agency created by the legislature in 1989 based on the recognized need “for a coordinated,

centralized clearinghouse to provide entrepreneurs with easy access to scientific research, technology information, technical assistance, financial capital and other resources for the creation and retention of new jobs and businesses.”¹⁰ The legislature at the time also recognized that Connecticut’s economy was heavily reliant on defense-dependent businesses and that assistance was required to help the businesses convert to new non-defense-related technologies.

CII’s primary focus is on helping technology-based entrepreneurs with the commercialization of innovative technologies through risky capital investments and other initiatives. CII also focuses on university/industry collaboration and transferring technology from the research and development stage, which often occurs in academia, to commercialization and the broader economic markets.

Funds. CII has several funds established through which loans and grants are made to companies at each stage of technology development. Below is a description of the financial incentives administered by CII and the need they address in the technology-based innovation economy.

Pre-Seed Support Services. Beginning in 2007, CII launched this program that provides in-kind assistance to entrepreneurs rather than direct funding. CII staff assists entrepreneurs in cultivating ideas, refining business strategies, and navigating the road to business formation.

Seed Investment Program. This program provides up to \$500,000 in funding to technology companies that have a prototype (e.g., sample) of their product. These are typically high-risk companies that are at the phase where they are trying to initially commercialize a product. The funding CII provides typically carries them for 12 months or less.

Eli Whitney Fund. This program is CII’s main investment fund through which capital is provided. Funding supports companies with innovations and products in: bioscience, energy and environmental systems, information technology, photonics/applied optic (e.g., lasers and fiber-optic cables for communication), advanced materials, and engineering. Companies that seek funding have begun the commercialization process. Generally, a company receives between \$500,000 and \$1 million per round of funding and usually receives from CII about \$3 million to \$4 million in total. CII funds approximately 10-12 companies a year through this fund.

The Eli Whitney fund has received national recognition. In 2007, the State Science and Technology Institute (SSTI), a national organization dedicated to improving state and regional economies through science, technology, and innovation, recognized CII for creating and implementing a fund that increases technology companies’ access to capital.

BioScience Facilities Fund. This fund helps firms build space needed to propel the bioscience industry like wet laboratory space and high-tech lab space.

¹⁰ C.G.S. Sec. 32-33

BioSeed Fund. This fund assists start-up companies involved in medical research aimed at solving unmet medical needs and assists in attracting “Series A”¹¹ financing by providing developmental stage monies and expertise. CII typically invests up to \$500,000 in a company.

Clean Tech Fund. Investments are made in seed and early-stage companies and are focused on innovations that conserve energy and resources, protect the environment, or eliminate harmful waste, or on other green technology. This program, separate from the electric ratepayer-supported Clean Energy Fund, was launched in November 2008 and the first funding occurred in FY 2009. CII, the Clean Energy Fund, and DECD each committed \$3 million for the fund, although DECD to date has not provided any monies for the fund or for the initial investments that have been made.

Table II-9 provides a breakdown of the investments by each CII fund since 2000. As is shown in the table, in the early years of this decade, CII was able to invest more in companies than in more recent years. In 2008, funding almost doubled from 2007 levels but did not reach the levels seen in the early 2000s. In total, CII has funded \$95.5 million through the various programs, averaging about \$10.6 million a year.

	2000	2001	2002	2003	2004	2005	2006	2007	2008	Total
Eli Whitney Fund	\$20,489	\$21,649	\$11,905	\$3,667	\$2,253	\$3,670	\$1,493	\$5,812	\$6,183	\$77,121
BioFacilities	\$1,500	\$1,400			\$4,922				\$4,000	\$11,822
BioSeed			\$700		\$500			\$500		\$1,700
Emerging Enterprises¹	\$744	\$500								\$1,244
Next Generation²					\$1,712	\$388				\$2,100
Pre-seed Support									\$57	\$57
Seed								\$200	\$1,300	\$1,500
Total	\$22,733	\$23,549	\$12,605	\$3,667	\$7,675	\$ 3,670	\$1,493	\$6,512	\$11,540	\$95,544

¹ Emerging Enterprise fund no longer exists. It was a separate entity between CII and Fleet Bank where the two co-funded start-up companies.
² Next Generation was a separate LLC entity formed with the Phoenix Companies that co-invested in companies. CII and Phoenix each invested 48 percent directly in companies with 2 percent going to an administrator of the fund. The fund no longer exists.

Source: CII

Grants and programs. In addition to the funds that receive financial support, CII runs other programs: a scholarship program; a BioBus education initiative; and a technology competition called Yankee Ingenuity. Funded by returns on CII’s investments, the “Technology Scholars” program offers earned scholarships, leadership training, and assistance with internships to state students who study science or engineering at colleges or universities in the state, and who agree to work in Connecticut for two years after graduation. Between FY 04 and FY 08, CII invested \$850,000 in the program and awarded 115 scholarships.

¹¹ Series A financing is the first round of financing after seed capital. Generally, the company is generating revenue but rarely is it generating net profits. Series A investors tend to be venture capitalist or angel investors (individuals who provide capital for start-up companies).

Launched in June 2001, the BioBus is a joint initiative with Connecticut United for Research Excellence (CURE), the organization that represents the bioscience industry cluster. The bus is a laboratory on wheels and visits schools to let students experience firsthand the world of science. In 2008, the CII initiative received \$500,000 in bond funding to support its operations.

The Yankee Ingenuity Technology Competition provides funding that enables business and university researchers to collaborate on research and development projects leading to marketable products. Projects are selected through a competitive process. The initiative was funded only between 2004 and 2006 for a total amount of \$400,000.

CII funding. Since CII was formed the state has allocated \$178 million in bond funding to it. However, in actuality, only \$81 million went directly to CII to use for investing in companies. In the early years, CII was used as a pass-through organization and the majority of the funding was granted to the state’s universities and colleges for high-tech research. Since the late 1990s, CII has received minimal state funding and is primarily a self-funded organization. CII relies on its return on investments to provide for both operating expenses and new investments. CII reports that since FY 05, it has achieved a cumulative internal rate of return of 19.9 percent that has enabled it to continue operating.

Bond allocations. CII receives most of its government funding from bond allocations. The legislature may authorize bond funding specifically for CII funds or programs but the State Bond Commission must then allocate the funding to CII. Table II-10 shows the authorized funding since 2000 and the unallocated portions.

Although the legislature over the years has recommended bond funding allocations to Connecticut Innovations, Inc., the money has often not been authorized by the bond commission. Of the \$50 million authorized by the legislature to CII since 2000, \$26.5 million (or more than 50 percent) remains unallocated as of August 2009. Of the amount that remains unallocated, \$6 million was slated to help biotechnology facilities and \$20.5 million was allocated in 2007 for the recapitalization of CII programs.

Description	Year	Authorized	Unallocated	Amount CII received
Biotechnology Facilities	2000	\$10 million	\$0	\$10 million
	2001	\$10 million	\$0	\$10 million
	2002	\$5 million	\$5 million	\$0
	2003	\$1 million	\$1 million	\$0
Recapitalization of CII programs	2008	\$12 million	\$8.5 million	\$3.5 million
	2009	\$12 million	\$12 million	\$0
Total		\$50 million	\$26.5 million	\$23.5 million

Source: Office of Fiscal Analysis

In addition to receiving far less than authorized in state bond funds, in tough budget years, the state has redirected funds from CII to the General Fund. CII funding was reduced by \$17.5 million, which was transferred to the General Fund between 2003 and 2005.

Since fiscal year 2000, CII has funded 63 companies in Connecticut for a total of approximately \$95.5 million in assistance. Since primarily self-sustaining, CII's funding to technology companies varies annually and Table II-11 shows how the funding has been distributed by type of industry since 2000. CII has invested about half of its funding in information technology companies with about a third going towards bioscience companies.

	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008
Information Technology	\$15,339,185	\$6,351,003	\$7,305,251	\$2,250,000	\$5,031,528	\$3,025,000	\$243,300	\$3,901,457	\$5,109,092
BioScience	\$4,394,098	\$12,330,748	\$4,300,000	\$1,067,000	\$2,400,000	\$570,350	\$1,250,000	\$1,911,050	\$4,939,384
Energy and Environment	\$2,000,000	\$2,998,423	\$0	\$0	\$0	\$0	\$0	\$0	\$642,000
Photonics	\$0	\$868,997	\$500,000	\$350,000	\$174,198	\$75,000	\$0	\$0	\$850,000
Advanced Materials	\$500,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other	\$500,000	\$1,000,000	\$500,000	\$0	\$70,000	\$0	\$0	\$700,000	\$0
TOTAL	\$22,733,283	\$23,549,171	\$12,605,251	\$3,667,000	\$7,675,726	\$3,670,350	\$1,493,300	\$6,512,507	\$11,540,476

Source: PRI analysis of CII data

CII's operating expenses, while relatively stable from year to year, consume a high percentage when compared to the amount of funding that is allocated to companies. The percentages vary between a low of 38 percent in 2008 to more than 100 percent of funding amounts in 2005 and 2006 as shown in Table II-12.

	FY 04	FY 05	FY 06	FY 07	FY 08
Operating Expenses	\$ 3,771,000	\$ 4,205,000	\$ 4,717,000	\$ 4,388,000	\$ 4,393,735
% Operations to assistance	49%	115%	316%	67%	38%

Source: CII annual reports

Small Business Innovation Research (SBIR). The U.S. Small Business Administration (SBA) Office of Technology administers the Small Business Innovation Research and the Small Business Technology Transfer (STTR) programs. The aim of these two federal initiatives is to ensure that the nation's small, high-tech innovation businesses (employing fewer than 500) are a significant part of the federal government's research and development efforts. The STTR program has a particular focus of moving ideas from the laboratory to the marketplace.

Eleven federal agencies¹² participate in the SBIR program; five agencies¹³ participate in the STTR program, awarding approximately \$2 billion annually to small companies nationwide. Grants to companies are awarded on a competitive basis. The grants are awarded as follows: the first is for a feasibility study to evaluate the feasibility and scientific merit of a new technology (Phase I awards up to \$100,000); the second is to develop the technology to a point where it can be commercialized (Phase II awards up to \$750,000); and the third is for commercialization of the results of Phase II and requires the use of private sector or non-SBIR federal funding (Phase III only applies to SBIR program). Table II-13 shows the number of awards Connecticut companies have received since 2000 and the total value of the awards.

Year	Number of Awards	Value of Awards (\$ in millions)
2000	68	\$ 17.4
2001	83	\$ 19.3
2002	109	\$ 25.1
2003	112	\$ 31.5
2004	107	\$ 38.5
2005	102	\$ 33.5
2006	88	\$ 21.1
2007	108	\$ 31.5
2008	107	\$ 32.5
Total	884	\$ 250.4
Includes SBIR & STTR awards; Phase I & Phase II		
Source: SBA Tech-Net database		

Connecticut has always competed for SBIR/STTR grants but as of 2004, Connecticut has had an office dedicated to assisting small companies with the grant programs, since the award process is very competitive. The program office operates on a grant from the Office of Workforce Competitiveness and is staffed by two people. The program had been located at the Connecticut Center for Advanced Technology (CCAT) in East Hartford but was relocated to CII in April 2009. However, the office was not funded in the FY 2010 budget and CII will have to assume the costs of running the office.

The SBIR team assists companies with their applications to receive federal grant money and helps small businesses compete for federal procurement contracts. The SBIR office also manages a database that helps small businesses in two ways: 1) it connects small businesses with larger companies in the state (and beyond) that might want to buy their products; and 2) if a large firm is seeking an innovative solution that the small business is developing, it demonstrates to federal agencies the value of a specific SBIR proposal, increasing the chances the company will be funded.

Table II-14 shows how many Phase I proposals have been submitted for review and how many have actually received awards. The table also displays how Connecticut fares compared to

¹² The SBIR program solicitations are issued by eleven federal agencies, including the Departments of Defense, Health and Human Services, Energy, Homeland Security, Agriculture, Commerce, Education, and Transportation, and NASA, National Science Foundation, and Environmental Protection Agency.

¹³ Departments of Defense, Energy, and Health and Human Services, and NASA and National Science Foundation.

its competitor states. Since 2005, Connecticut has improved its award approval rate, going from 15 percent of the proposals being awarded to 19 to 20 percent approval rates more recently.

Table II-14: SBIR Phase I awards, 2005-2008

	2005			2006			2007			2008		
	Awards	Proposals	% received									
California	816	4,937	17%	725	4,484	16%	717	4210	17%	688	4,197	16%
Connecticut	53	348	15%	53	351	15%	70	351	20%	63	333	19%
Illinois	66	388	17%	57	496	11%	75	387	19%	63	360	18%
Massachusetts	508	2,630	19%	466	2,569	18%	466	2500	19%	476	2,266	21%
Minnesota	56	379	15%	78	400	20%	53	281	19%	38	274	14%
New Jersey	102	698	15%	85	643	13%	91	607	15%	89	549	16%
New York	186	950	20%	163	944	17%	163	898	18%	195	883	22%
North Carolina	50	356	14%	56	394	14%	61	347	18%	66	361	18%
Pennsylvania	176	913	19%	133	874	15%	141	729	19%	129	721	18%
Virginia	242	1,570	15%	221	1,476	15%	249	1392	18%	224	1,324	17%
US Total	4,122	25,130	16%	3,655	23,948	15%	3785	21388	18%	3,555	21,162	17%

Source: SSTI

Small Business Administration

The federal Small Business Administration (SBA) has offices in each state and works with private lenders to provide needed capital to local small businesses. (This activity is separate from the SBIR and STTR grant programs, administered by the federal SBA office but working through CII, as described above).

The SBA financing program guarantees the loans made by private banks – the percentage of guarantee varies by size of loan – and SBA maintains its operations through fees based on the guaranteed amounts. Unlike the federal SBIR programs, the SBA financing arm is to facilitate private loans, not make outright grants. Financing is typically for general small businesses, often involved in the service or retail industry (about 44 percent of loans as shown in Table II-15), and not for companies involved in research and development.

	2006	2007	2008
Administration & Support	81	76	44
Agriculture	2	4	0
Construction	156	140	105
Education	19	16	18
Finance & Insurance	19	18	9
Health & Social Assistance	79	75	37
Information Services	19	10	7
Manufacturing	118	97	84
Mining	0	2	0
Professional, Scientific, Technical Services	162	123	75
Public Administration	2	1	1
Real Estate, Rental & Leasing	30	28	17
Retail	295	211	151
Service Industry	352	298	206
Transportation & Warehousing	41	36	12
Utilities	0	1	0
Waste Management	8	7	7
Wholesale Trade	59	51	32
Total	1,442	1,194	805
Source: PRI Staff analysis of SBA data			

Committee staff obtained SBA data on recent Connecticut loan activity and Table II-16 shows the number of loans and total financial assistance for the past three years. The number and amount of loans have declined from 2006 to 2008 as a result of the recession, according to SBA staff. However, the average amount per loan increased by 44 percent between 2007 and 2008.

	2006	2007	2008
Number of Loans	1,442	1,194	805
Dollar Amount	\$ 235,844,000	\$ 189,233,694	\$ 183,161,164
Average per loan	\$ 163,553	\$ 158,487	\$ 227,529
Source: Connecticut SBA office			

Other Partner Organizations and Programs

DECD also provides broad technical assistance and other supports to business throughout the state, often through contracts or partnerships with other organizations. Some examples of the efforts are described below.

The Connecticut Business Incubator Network. The network includes seven programs that provide low-rent space, often including laboratory facilities for small start-up or “incubator” companies at 10 locations in the state, (although none is located in Fairfield County). DECD provides funding for two of the incubator locations. The network operates a website through the Connecticut Center for Advanced Technology, and indicates that currently 84 percent of the

space was rented (as of December 2008) to about 25 start-up companies; some of the locations have a waiting list.

Procurement Technology Extension Program. Administered by the Southeastern Connecticut Enterprise Region (SECTER), a regional economic development agency, this program assists businesses who wish to sell their products or services to local, state, or federal government. The program receives an annual grant from DECD, but future funding is unsure due to the state's budget crisis. According to SECTER, in 2008, the program assisted client companies secure \$145 million in government contracts.

Small Business Development Centers. Located on the state university campuses, the centers provide counseling assistance, help with business plan development, and other services existing or potential small businesses might need.

Institute of Technology and Business Development. Operating at the campus of Central Connecticut State University, the institute provides technical assistance, customized training and advanced technology skill development, procurement assistance, and conference and meeting room facilities, and is one of the 10 incubator space locations.

Services Corp of Retired Executives (SCORE). This organization offers one-on-one counseling and advice provided by former business executives to entrepreneurs and others interested in starting a business. This national volunteer organization has several chapters in Connecticut, but receives no state funding. According to information SCORE provided to program review staff, over a six-month period from October 2008 and May 2009, the various state chapters held 4,892 individual counseling sessions and 106 workshops.

Connecticut Economic Resource Center. The center is a non-profit corporation that provides research, marketing, and economic development services to local, state, and regional policymakers and utility companies. CERC maintains a comprehensive database of economic and demographic information for Connecticut and Western Massachusetts along with on-line search tools available to businesses about assistance programs and details of site locations available in the region. DECD has provided some funding for CERC operations, but it mostly relies on utility company funding.

Connecticut Business Response Center. Operated by CERC, with some financial assistance from the state, the resource center operations include Smart Start and the Connecticut Licensing Information Center. Services include an "800" call-center where businesses may receive help with questions about licensing and other state requirements, and on-line linkages to state agencies and other businesses.

Promoting and Growing the Economy

As noted in the Introduction, several chapters in this report are framed around strategies and practices the National Governors Association has identified as ones a state should develop and implement to foster its economic development. The NGA best practices have been used by program review as an organizational framework for the next five chapters. Each chapter (or major chapter segment) starts with a National Governors Association (NGA) “best practice” and action steps (presented in a box) to promote and grow in the new, innovation-based economy. The “best practice” is followed by a discussion of what strategies exist in Connecticut, whether the September 2009 economic strategic plan addresses the area, and committee findings and recommendations to better implement the economic development practice or policy.

Planning and Policy Development

- *Understand state’s economic assets*
- *Align policies with strengths and assets*
- *Make strategic investments especially in human capital, research and development, and infrastructure*
- *Communicate the importance of innovation in a state’s economic development*

The program review committee concluded that Connecticut follows the older model of economic development where state assistance is directed toward capital investments in large individual companies rather than on human capital, research and development and other foundations that bolster innovation and promote the New Economy. Contributing to that older model are the following factors: the state’s organizational structure and programmatic approach to economic development; the state’s lack of overarching economic goals; and budgeting by agency rather than strategic or program budgeting. This makes it difficult to determine if Connecticut has clearly stated what the state’s economic assets are and whether policies and investments are aligned or not.

Economic Planning and Policy Development

As the state’s primary economic development agency, the Department of Economic and Community Development should take the lead in assessing and communicating the state’s strengths and using an investment strategy that would guide the state’s resources to preserving and nurturing those assets as depicted in Figure I-1 in Chapter I.

DECD should be the lead agency for policy and program development that supports the New Economy, such as workforce competitiveness, job creation, and constructing a regulatory environment conducive to business. DECD should also articulate and convey the message that

the competitiveness of the state's economy is key to producing revenues that support state services and thereby preserving the quality of life residents enjoy. While these overall economic development policy efforts must be coordinated with other agencies and stakeholders in the state, it is important that developing and preserving the economy receive as much attention and resources as other needs addressed by state government.

As cited earlier DECD has been involved in economic planning and policy development, but has been sporadic and not comprehensive in its approach. Agency staff was involved along with the Competitiveness Council¹⁴ in the development of three plans around competitiveness and the cluster strategy between 1998 and 2005. Also in 2005, DECD was also one of several agencies that was legislatively mandated (P.A. 05-165) to develop a plan by 2006 to establish an innovation network for economic development.

However, DECD's role in economic policy development and strategic planning has not been an agency priority. For most of the last two decades, the department has had several missions, with responsibilities for housing and community development as well, often competing for agency commitment and resources. Further, the legislature has mandated many economic development programs over the years, and often those have been assigned to DECD to administer. With agency operations geared to program administration – accepting and determining applications for assistance -- the department has developed a reactive culture that responds to requests or legislative program mandates, but is not leading economic development for the state.

The plans developed with DECD involvement have addressed Connecticut's economic strengths, including its industry cluster initiative, and established priorities to support them and drive the overall economy, such as implementing training programs to strengthen the state's highly skilled workforce, capitalizing on the potential of the state's universities and colleges, and aggressively pursuing international trade.

Further, the 2006 Innovation Network plan, discussed in greater detail in Chapter VI on Innovation, clearly was an attempt to link innovation and economic development policy. A number of consultant reports¹⁵ were used to help build the Innovation Network plan, identifying Connecticut's core technology strengths where the state holds a competitive advantage and where investments would produce the greatest dividends.

However, many of the initiatives proposed in those plans and others were never implemented, often due to funding issues, and while other programs were begun, they frequently were not sustained. This lack of implementation no doubt further frustrates those involved in economic development policy and planning, leading to a "why bother?" culture that is difficult to change once entrenched.

¹⁴ The Competitiveness Council was begun in 1996 as an informal group of more than 100 business leaders charged with looking at ways to improve Connecticut's business environment and how a full-fledged industry cluster initiative might work. The Council received official designation in December 1998, through Executive Order 13 issued by then-Governor Rowland.

¹⁵ The two primary reports were: *Building Upon Connecticut's Core Competencies in the Knowledge Economy* (Batelle, April 2005) and *A Prospectus for Technology Transfer and Commercialization* (Innovations Associates, July 2005)

Another complicating factor in determining alignment of economic development investment and resources is that funding for innovation and technology support is dispersed through many different agencies and programs, as outlined in Chapter II, therefore making it difficult to calculate a total dollar amount that supports the New Economy. Further, in the state's current fiscal crisis, financial support for many of these programs is being trimmed or cut altogether (e.g., the stem cell research fund was proposed to be withheld in the latest governor's deficit mitigation plan, but was not approved by the legislature). These measures not only will fail to accelerate innovation, but will stall its progress significantly.

The plans discussed above focused on segments of the state's economy, but no overall state economic strategic plan had ever been developed until recently. In 2007, the legislature mandated that DECD develop such a plan (P.A. 07-239). That legislation mandated a detailed process be undertaken to develop the plan, and areas that it must consider, as well as a time frame for producing the plan. DECD followed the legislative mandates and the plan was issued in September of 2009. It establishes overarching goals for the state, and sets forth:

- 22 strategies to build and strengthen Connecticut's talent and technology;
- 19 initiatives to cultivate the state's competitiveness; and
- 25 recommendations that fall under the broad category of responsible growth – including development considered transit-oriented and sustainable.

Unfortunately, the plan is being introduced in the worst recession in a generation, and many of the recommendations have a price tag attached. As stated in the Executive Summary, the plan establishes no overarching goals for the state's economy, and establishes no priorities, and so does not provide policymakers a picture of what the state should focus on first, what might be achieved when, and at what cost. DECD announced in early December 2009 that, upon the governor's direction, the department would hold four informational sessions on the plan over the next few weeks to help develop priorities and an implementation strategy. While the committee believes it would have been more helpful for the department to have developed priorities and an implementation proposal first, and then gathered public reaction, it does demonstrate that the governor and department recognize a need to develop priorities in order for the plan to move forward. Therefore, the program review committee recommends:

DECD, after holding its public informational sessions, should develop an action plan with priorities that should be achieved first, in a one-year time frame, and sets goals for a longer (five-year) period, and for those priorities established, propose what agencies or organizations will be responsible for accomplishing the tasks. The action plan with one-year priorities shall be developed by February 15, 2010.

Without clear direction or an agency taking the lead, it had appeared the plan was a static, one-time document that was a response to a legislative mandate, as opposed to a call to action. The December 2009 announcement on the informational sessions indicates that the plan is a "work in progress." The plan does acknowledge that many of the recommendations require input from various stakeholders and will also require legislative action; however, as the lead economic

development agency this should not preclude the department from setting priorities both in the short and long term.

There are many examples of organizations and other states that have done this, including for example, Washington, Virginia, and North Carolina. Locally, the Metro Hartford Alliance (the chamber of commerce for the Hartford region) has established six strategic goals for 2008-2011, with its annual 2009 priorities in a one-page, easy-to-comprehend part of its report. The committee acknowledges that differences exist between a regional business organization's plan, and one for an entire state, but without a clear idea of what is most important and how it can be executed, none of the plan might be realized.

The program review committee makes recommendations in this report that should create an organizational structure that is more flexible, responsive, and able to implement policies and strategies that communicate and promote the state's strengths, and makes other proposals that will more clearly target ways of accelerating innovation.

COMPETITIVENESS INITIATIVES

What makes a state competitive is the subject of much debate. The state's newly released economic strategic plan is the most recent overall effort to address Connecticut's competitiveness. But concern over the state's competitiveness is not new, and probably began in the early 1990s, when the state was in the midst of a severe economic downturn. In 1993, Connecticut established a Progress Council to assess the state's performance in a great number of areas, including the economy. However, with a change in administration in 1995, the progress council became defunct. Also in 1993, the legislature mandated that the Economic Conference Board, along with DECD and the University of Connecticut, create a Connecticut competitiveness index. The index was supposed to be an annual assessment of state policies that encouraged or discouraged economic development and a computer-based economic modeling system was to be used to produce the index scores. While the index was published once, the conference board too is now defunct, and the required state competitiveness index has not been issued since 1994.

Cluster-Based Economic Development Strategies

- *Convene leaders from various sectors to work with policymakers*
- *Align investments, and build and promote skills and talents around a cluster-based economy*
- *Appoint liaisons to work with clusters to understand economic challenges and opportunities*
- *Work with other states in region to promote cluster activity and growth*

Probably the most publicized strategy to improve the state's economic competitiveness has been the industry cluster initiative. The cluster concept is defined generally as *a group of industries that create products and services related to a common technology, market, or need in a given geographic area*. The industry cluster concept was given broad recognition in the 1990s

by Dr. Michael Porter, a Harvard Business School professor. A number of states, regions, and countries have implemented industry cluster initiatives. The industry cluster strategy is based on the recognition that more traditional economic development efforts, like capital investments in single companies, are more reactive than proactive, and may not be sufficient or timely enough to impact or strengthen a region's or state's ability to compete globally.

Experience has shown that identifying key industry clusters and supporting them is a powerful strategy for improving the competitiveness of similar businesses within the cluster area. The objective is to have the clusters grow and be better able to compete, especially in the global economy, resulting in economic prosperity for the region and its residents. For clusters to thrive, business leaders in the particular industry must cooperate in identifying problems and generating solutions, but they also need support from government, academia, and regional and local economic development agencies in order to overcome obstacles and achieve common goals.

Connecticut's advancement of the industry cluster concept began in 1996, when the legislature passed P.A. 96-252, which required the state to pursue industry cluster creation as an economic development strategy for the state. In 1997, a task force made up of various business leaders was formed by former Governor Rowland to: 1) develop specific recommendations to improve the ability of Connecticut companies to compete in a global marketplace; and 2) determine whether a high-powered industry cluster initiative should be launched in Connecticut. The task force issued a report in 1998 entitled *Partnership for Growth* that laid out several broad recommendation areas, including:

- establish a governor's council on economic competitiveness – to advise on policy matters relating to the development of industry clusters, the responsiveness of government agencies to the concept implementation, and reducing any continuing impediments to competitiveness in Connecticut;
- create industry clusters that are formalized and supported with seed-funding until they become self-sufficient and operational;
- create a specific biotechnology cluster that would be supported through new laboratory and incubator space, with specific state funding for that purpose;
- focus on workforce development, with an emphasis on responding to the “demand” side of the skills and education needed in the workforce rather than a “supply” education system, and especially focused on cluster needs in general and on manufacturing (e.g., precision manufacturing);
- create a manufacturing resource center to assist small and medium manufacturers with updating their processes and providing technical assistance to improve their productivity and competitiveness;
- develop the state's transportation system, including more aggressive promotion of Bradley International Airport;

- improve the state regulatory environment to emphasize competitive business growth and retention, that offers assistance with business compliance, especially targeting industry cluster areas;
- focus capital and incentive programs on small- and medium-sized companies, specifically expanding tax credits so that smaller companies might also be eligible;
- focus strategies like capital investment, and educational and workforce development, that promote urban areas as vibrant locations to start and/or expand a business in Connecticut;
- develop a marketing plan that promotes Connecticut's strengths as a place to conduct business and create a high-level response team of state personnel with authority to respond quickly and effectively to potential and existing businesses interested in locating or expanding here; and
- track Connecticut's progress in achieving competitiveness and creating economic opportunity for both businesses and residents in the state.

After that report was issued, several clusters were developed with early seed money and other support from the Department of Economic and Community Development. The clusters created and year of activation are listed below. As noted below, the bioscience (pharmaceutical) cluster was active even before the concept was developed as a state strategy. While health care was envisioned early on as an industry cluster, it has not become active. The clusters are:

- aerospace components manufacturing (1999)
- agriculture (2002)
- bioscience – CT United for Research Excellence (CURE) (1990)
- insurance and financial services (2002)
- maritime (2000)
- metal manufacturing (2002)
- plastics and plastic manufacturing (2001)
- software and information technology (1999)
- tourism (1999)

In 2004, the Governor's Competitiveness Council issued a second report, *Partnership for Growth II, A Competitiveness Agenda for Connecticut* on the industry cluster initiative that highlighted five areas where Connecticut should focus its efforts. Many of the areas were reinforcing the conclusions of the first report. Below is a synopsis of the recommendation categories:

- increase the competitiveness of the state's small- and medium-sized manufacturers, especially through rapid adjustment to marketplace changes;

- capitalize on Connecticut’s technology and innovation assets so as to create more jobs and economic opportunity in this growth area;
- expand business growth in Connecticut cities by offering additional capital for business growth in cities, accelerating inner-city entrepreneurship, and changing perceptions about opportunities for businesses in cities;
- strengthen the state’s economic foundations that cut across all industry cluster areas (e.g., a highly skilled, educated workforce, high quality of life, and geographic location) and improve others like advanced transportation and communication infrastructure; and
- build on the private-public collaboration and commitment that are crucial to the implementation and success of cluster-based economic development.

Cluster Status in Connecticut

Table III-1 below contains a listing of the industry clusters, including a snapshot of the economic profile of each industry -- number of industry employees and employers in the state, the average wage in the industry for 2005 and 2008, the cluster’s current status, and recent state support, if any. Not included are the Tourism and Agriculture cluster areas, which were excluded from the scope of study, because they have individual state agencies that promote and advocate for that specific industry.

As table indicates, only three of the nine clusters had positive economic trends for all three indicators from 2005 to 2008, therefore prior to the impact of the current recession. The aerospace, technology, and insurance and financial services clusters each saw an improvement in the numbers of employers, employees and wages. Two of the clusters – bioscience and maritime -- had positive trends in two of the three indicators, and all saw wages increase (in current dollars).

Industry Cluster Area	Industry Presence in CT	Status	State support 2007-2008
Aerospace Components Manufacturers	2005: Employment – 30,229 Employers – 153 Avg. Wage - \$76,646 2008: Employment – 32,370 Employers – 155 Avg. Wage - \$86,889	<ul style="list-style-type: none"> • About 60 members with 50% of manufacturing in aerospace business – supply chain (Pratt and Whitney, Sikorsky not members) • Private nonprofit, fee-based; has an executive director; focus on workforce development, LEAN mfg. Maintains website that provides an information network 	2 DECD grants targeted for this cluster – <ul style="list-style-type: none"> • \$55,000 to the competitiveness project by the cluster organization • \$750,000 to aerospace defense initiative through CT Center for Advance Technology CONNSTEP assistance to members through combined federal and state grant
Bioscience	2005: Employment – 40,177	<ul style="list-style-type: none"> • Cluster organization is 	DECD Office of Bioscience –

Table III-1: Connecticut Industry Clusters			
Industry Cluster Area	Industry Presence in CT	Status	State support 2007-2008
	Employers – 1,570 Avg. Wage - \$66,082 2008: Employment – 39,130 Employers – 1,645 Avg. Wage - \$75,096	CURE -- 120 members involved in biotechnology area including pharmaceutical, small biotech companies, hospitals, and higher education institutions • Operates Biobus program which educates teachers and students on value of biotech. Sponsors ongoing seminars in the bioscience field	one person staff; help sponsor the Bio trade show CT Stem Cell Research -- \$10 million total annually to higher education research at Yale, UConn, and Wesleyan Fund to the Biobus Biofacilities Fund by CII
Plastics	2005: Employment – 7,417 Employers – 212 Avg. Wage - \$48,824 2008: Employment – 6,656 Employers – 194 Avg. Wage - \$54,628	Organized as nonprofit 501c(3) but does not appear to be an active industry cluster	According to DECD FY 08 annual report, DECD co-sponsored high school plastics expo with the cluster
Software & Information Technology	2005: Employment – 35,309 Employers – 3,515 Avg. Wage - \$83,462 2008: Employment – 37,112 Employers – 3,668 Avg. Wage - \$90,862	• Operates largely through the Connecticut Technology Council, has over 2,000 members. Fees based on size and type of membership. • Co-sponsors annual “angel” investor summit and innovation and entrepreneurial summit	DECD grant --\$200,000 (bond \$) for “innovation pipeline accelerator”. CT Technology Council co-located with CT. Center for Advanced Technology, similar goals
Insurance and Financial Services	2005: Employment – 135,631 Employers – 9,954 Avg. Wage - \$120,030 2008: Employment – 137,374 Employers – 10,363 Avg. Wage - \$131,995	• Operates under auspices of Hartford Metro Alliance; with separate executive director. • Cluster organization has 27 members: mostly of large insurance companies and banks, and based in Hartford – does not include hedge funds, which has own separate association. • Instrumental in beginning an actuarial pilot program at University of Hartford	• DECD has one person assigned to activities associated with the industry and financial services cluster. • Joint efforts with partners obtained U.S. DOL grant in 2006 of \$2.7 million over 3 years to train people in insurance industry and establish an insurance analyst associate degree program at selected community colleges. Trained 500+ people since 2006.
Maritime	2005: Employment – 11,254 Employers – 252 Avg. Wage - \$73,603 2008: Employment – 10,609 Employers – 260	20-25 members made up of small to medium shipping agents, terminal operators, large marinas and ferry operators Fee-based membership	Partial funding from DECD for a report on the industry’s economic impact – due out Fall 2009

Industry Cluster Area	Industry Presence in CT	Status	State support 2007-2008
	Avg. Wage - \$86,399		
Metal Manufacturing	2005: Employment – 57,911 Employers – 2,192 Avg. Wage - \$57,876 2008: Employment – 56,526 Employers – 2,108 Avg. Wage - \$64,154	Still listed as an industry cluster by DECD, but organization is inactive. CT Manufacturers Assn. and CONNSTEP promote broad interests of CT manufacturing	

Source: Employment figures from CT Department of Labor (see Appendix D for NAICS codes associated with the clusters)

DECD Role in Cluster Initiative

In the earlier years of the cluster initiative, DECD appeared to take an active role in implementing the strategy, working with the Governor’s Competitiveness Council on individual cluster development, marketing, communication, and education, as well as workforce development, contract management, and project monitoring. In 2005 DECD realigned a number of functions into the Office of Strategic Competitiveness to heighten the emphasis on a “high performing” economy that included clusters.

Also in 2005, DECD and the competitiveness council developed the *Next Generation Competitiveness Strategy*, which set five priorities to drive the economic development of the state’s industry clusters and the overall economy. Those five priorities were:

1. assist Connecticut manufacturers in increasing productivity;
2. market the state and its key industries to a wider national and international audience;
3. implement training initiatives to further strengthen Connecticut’s highly skilled workforce;
4. capitalize on the research and development, as well as the economic development, potential of the state’s universities and colleges; and
5. pursue an aggressive international export initiative to increase the market share of Connecticut industries across the globe.

Connecticut has undertaken considerable activities in achieving the first priority – assisting manufacturers in increasing productivity. Manufacturing is still an important segment of the state’s economy. While the current recession has reduced the number of people employed in manufacturing by almost 8 percent this past year, there were approximately 173,000 people still employed in manufacturing in June 2009 -- more than 10 percent of Connecticut’s public and private workforce. Manufacturing accounts for about 14 percent of the state’s gross domestic

product¹⁶, and economic impact studies have shown that manufacturing activity has a multiplier effect, creating additional jobs in the economy.

However, perhaps more than any other sector of the economy, manufacturing is susceptible to the forces of global competition. Since 1994, a national effort has been underway to retain manufacturing in this country, and to especially help small- and medium-sized manufacturers reengineer their processes and operations to better compete in a global economy. The nationwide program, known as the “manufacturing extension partnership”, is administered through the National Institute of Standards and Technology of the U.S. Department of Commerce, and is operated through partnerships with each state. Funding for the operations come from federal grants, state matching funds and other support, including fees from client businesses.

In Connecticut, this partnership program is the Connecticut State Technology Extension Program, known as CONNSTEP. Each year, CONNSTEP assists about 200 different clients and completes more than 500 projects (e.g., training can be provided to more than one company). Altogether, the program reports it has assisted about half the approximately 5,000 small- to medium-sized manufacturers in the state over the years.

According to CONNSTEP, assisted clients report each year on: the number of jobs created or retained; the company’s increased or retained sales; the amounts saved in cost reductions; and amounts reinvested in the business. The figures are client-reported through an independent third-party auditor of the nationwide program. The FY 09 reported figures for Connecticut indicate:

- approximately 180 clients served;
- 1,138 jobs created or retained;
- \$323 million in increased or retained sales;
- \$11 million in cost reductions; and
- \$24 million in company reinvestments.

This model appears to work well for a number of reasons. These companies are already in the state, with no financial reward for relocation. The assistance provided to companies is more consultative than monetary, and there is already a demonstrated commitment on the part of the businesses in seeking the assistance that they intend to continue operations. A participating company is willing to risk the capital and time in applying technology and modern management methodologies to its operations to increase productivity and better compete. Further, unlike businesses seeking outright financial assistance, a company seeking consultative assistance may be more financially stable with adequate time to make the production changes to continue as a viable operation.

In interviews with program review staff, CONNSTEP personnel indicate that the cost improvements such as making manufacturing leaner and more productive have largely been made for those businesses that have participated. The current and future challenge for these

¹⁶ State gross domestic product is an economic productivity measure. It measures the value of all the goods and services produced in a state in a year.

businesses is to increase revenues through expanding their client bases, and garnering new markets, especially abroad.

To help with implementation with the fourth priority, the competitiveness council created the Technology Transfer and Commercialization Advisory Board to examine best practices in this field. A consultant, Innovation Associates, Inc. was hired, and many of the resulting recommendations were enacted in Public Act 06-83 (see Table VI-2 in Chapter VI).

Throughout 2005 and 2006, DECD and the competitiveness council established several working groups that cut across the industry clusters – like international business development, transportation, energy, and taxes. The Connecticut Economic Resource Center (CERC)¹⁷ was hired to assist with strategic planning sessions to enhance markets for existing clusters and help identify new ones, and a public relations firm was also retained to better promote the ongoing activities of the cluster initiative. Further, DECD's FY 06 annual report listed six distinct tasks the department planned to undertake related to the cluster strategy, including the feasibility of creating up to three new industry clusters.

In FY 07, the department's annual report indicated continued active DECD involvement in the cluster initiative, including assessing the feasibility of three potential emerging cluster areas: 1) creative industries (e.g., film-making), 2) homeland security, and 3) hydrogen fuel cell technology. DECD also claimed an active role in cross-cutting issues like the creation of an industry business development initiative to help small- and medium-sized businesses (i.e., 500 or fewer employees) expand their business to international markets, and the development and implementation of a plan to enhance productivity. That productivity enhancement plan included: conducting a survey; reaching out to business on the enhancement concept; and creating a manufacturing center of excellence that would manage, maintain, and make accessible relevant information on methodologies for increasing productivity.

However, the committee found that since FY 07, DECD support around industry clusters has diminished. First, the Office of Strategic Competitiveness has been renamed and is now the Office of Strategy and Policy. While the office maintains responsibility for competitiveness issues, overall policy and strategy development are a higher priority. Further, the activities surrounding the industry cluster initiative currently appear limited to the provision and/or monitoring of grants to individual clusters. No department activities around the cross-cutting issues affecting all industry clusters were undertaken during FY 08, and the recently released economic strategic plan makes no mention of the industry cluster initiative as one to be pursued to cultivate competitiveness.

Exploration of newer clusters that might be more relevant to the state's economy appears to have stalled. Financial assistance was provided to the Connecticut Center for Advanced Technology (CCAT),¹⁸ to support the emerging hydrogen fuel cell cluster, and the tax credits for

¹⁷ CERC is a nonprofit corporation that provides research, marketing, and economic development services to policymakers and others. Financial support is mainly from utility companies; it also receives some state funding.

¹⁸ CCAT is a nonprofit economic development corporation, funded primarily with federal dollars, whose mission is to improve competitiveness to Connecticut businesses (especially aerospace) through increasing efficiencies, workforce development, and use of technology.

film production have been implemented (to date, not by DECD); however, it is unclear whether there will be other efforts to encourage the film production area to attain industry cluster status.

In interviews with committee staff, industry cluster representatives indicated only tepid DECD support for the cluster initiative. This is demonstrated by DECD's diminished financial and staffing resources to industry clusters. DECD funding for clusters was \$40,000 in FY 04 – down from \$2.4 million in FY 02 – and since FY 04 the department has provided no funding for clusters. Few DECD staff resources are dedicated to the cluster initiative. One person is assigned to the insurance and financial services cluster; one person had been assigned to the bioscience cluster, but the post-retirement DECD organization chart shows that office no longer exists, and has been merged into the business development division.

Another factor that may negatively impact the success of the industry cluster is the recent elimination of the Governor's Council on Competitiveness. In February 2009, the council was one of several boards and commissions terminated by Governor Rell through Executive Order 24. With the council's termination, no external entity exists to assess whether prior cluster strategy recommendations have been implemented, whether they improve competitiveness, how the overall industry cluster initiative is working, or the resulting economic impact in the state. The council's elimination also raises concerns that there is no longer a body to carry out the responsibilities deemed necessary when the council was created in 1998 – to ensure state agencies are responsive to implementing the cluster strategy and that any impediments to competitiveness are addressed.

Without outside accountability, the industry cluster initiative may suffer in a number of ways. State agencies may place decreasing priority on industry clusters as a competitive strategy for Connecticut. There will be no entity that comprises the agencies, higher education institutions, and business groups that experience has found critical to make clusters work.

Program review finds that the economic development literature supports the industry cluster initiative as one that works. Clusters have shown “that they can power a regional economy by boosting innovation, wages, employment opportunities, entrepreneurship, and business diversification.”¹⁹ All four states that committee staff used for comparison -- Pennsylvania, Massachusetts, Virginia, and North Carolina -- actively promote the industry cluster strategy.

Since geographic intensity of an industry is primary in cluster formation and growth, it is important that policies and strategies that promote the clusters' vitality be pursued beyond state borders, when necessary. Such regional approaches will require the effort of both industry cluster representatives as well as state agencies to work collaboratively with counterparts in surrounding states. While outside groups must be involved, the industry cluster strategy needs state sanction and support to thrive and succeed; without that, the groups become little more than trade organizations.

Further, a recent publication of the Federal Reserve Bank of Boston advocates for more cross-state support for cluster activity that may cross state borders, as a way of improving the

¹⁹ *Cluster-Based Strategies for Growing State Economies*, National Governors Association, 2006, page 3.

region's competitiveness. "Historically, U.S. cluster initiatives have been conducted with support from an economic development agency at a level no higher than a state. But in the current economy, states must consider the potential of multi-state efforts and try to identify cross-border opportunities."²⁰ The report also states that "although it may seem daunting to try and coordinate efforts with competitive neighboring states, a super-regional approach would likely be a capital magnet for federal programs and, over time, should make a region more competitive in the global economy."

The program review committee finds that DECD has allowed the cluster initiative to languish due to lack of attention and support, and has not developed an alternative strategy for the cluster initiative. The committee concludes that the cluster strategy is one that the literature and experience has shown can bolster competitiveness, and should be strongly pursued.

Therefore, the program review committee **recommends that the industry cluster initiative be revived as a state economic development strategy in the following ways:**

Reinstate the Competitiveness Council with some modifications. Rather than being a creation solely of the executive branch, it should be a statutorily established entity with appointments by both executive and legislative branches. It should be composed of 18 members, with nine appointments made by the governor and nine by legislative leaders of both majority and minority parties. Appointments should be made of business leaders from various industry clusters and from various geographic areas of the state. Council meetings should be held at least quarterly. The commissioners of DECD, Labor, Transportation and Higher Education, and the Executive Director of the Office of Workforce Competitiveness should be ex officio members of the Council. Staffing for the council's work should primarily be from the Department of Economic and Community Development, but supported collaboratively with any staff of the individual cluster organizations.

The primary role of the Competitiveness Council should be to guide public policy decisions and investment strategies that best promote competitiveness of the state's economic drivers, including its industry clusters. The Council's role should also ensure that policies around the cluster initiative are being implemented by relevant state agencies, including collaborative efforts with partner agencies, both public and private.

DECD should designate a Cluster Initiative Team within its Business Development Division that would be responsible for strategies that cut across industry cluster areas. It should be staffed by three to four of the economic development specialists currently employed in the Business Development Division (including the two already assigned to insurance and financial services, and bioscience.) These staff should be proactive in working with clusters, determine what strategies work, what obstacles the clusters face,

²⁰ *A Stronger New England through Industry Clusters*, Federal Reserve Bank of Boston, Fall 2009, pp 4-5.

and coordinate with other state agencies, as well as state-level and regional economic development partner agencies to implement positive strategies and overcome problems.

- The Cluster Initiative Team staff can serve as a conduit from the cluster communities to the Commissioner of DECD, who as a member of the Governor’s cabinet, should lead in shaping policies to promote competitiveness, including those policies that may require an interstate, regional approach to promoting clusters.**
- The Cluster Initiative Team should also work with clusters to initiate grant applications for federal funding such as the Economic Development Administration grants. (see below) Other duties of the Cluster Initiative Team should be to: attend cluster-sponsored informational sessions; provide information and technical assistance; and sponsor or coordinate events that would attempt to link businesses with opportunities.**

Rationale. The program review committee believes that the restoration of a leadership/oversight group is a critical step in implementing the NGA best practice *to convene leaders*. The Competitiveness Council had performed a crucial role in developing the state’s three competitiveness plans, and its termination will create a vacuum in direct business involvement in setting the state’s economic priorities. The recommendation that the Competitiveness Council be established as an entity of both the executive and legislative branches is one that the Council itself proposed in its 2004 plan, citing that the change would help the initiative fully achieve its potential impact at improving competitiveness and increasing prosperity. Further, the committee believes that requiring the council to be established in statute offers greater assurances that the body will not be terminated, and that its work is recognized and valued.

When the industry clusters were first created, the Competitiveness Council was a very large group, with numerous businesses of each of the clusters represented. This committee recommendation proposes establishing the Competitiveness Council as a leadership and oversight body of the cluster initiative which requires the council to be a more manageable size as outlined in the *National Governors Association Report on Cluster-Based Strategies*.

While size and industry representation are important, it is also important that these business leaders represent various geographic locations of the state, as some industry clusters may well be concentrated in different areas and have different concerns. For example, while the current insurance and financial services cluster focuses on this activity in the Hartford area, additional state attention should be given to the financial services industry, including hedge fund activity, in the Fairfield County region. The lack of incubation facilities in Fairfield County, and that region’s need for development of programs in entrepreneurship, perhaps through the University of Connecticut at Stamford, might also be areas that could be addressed.

PRI staff conducted interviews with business group leaders in various parts of the state, and heard that they think policymakers and agency staff in Hartford are unaware of or unconcerned about issues they face. It is therefore important that the business leaders convened represent different regions of the state as they would have first-hand knowledge of the gaps or obstacles that might prevent an industry cluster from optimizing its full economic potential.

The recommendation around staff organization would establish the cluster liaison activity envisioned in the National Governors Association report and should help ensure that the cluster initiative receives the state sanction and support it needs to thrive. Further, states that are considered models in economic development organize around business areas. For example, Virginia's Economic Development Partnership, a state quasi-public agency, has several business development teams, including one for advanced manufacturing and another for science and research, each made up of three to four people. While DECD does not have the number of staff to dedicate to individual business areas or clusters, dedicating at least three to four people on cross-cluster initiatives would be a positive step.

Regional Cooperation

Connecticut's economic development agencies have not been leaders in working with other states or regions in promoting this area's competitiveness. A primary example of lack of leadership is with the Hartford-Springfield economic partnership (HSEP). The partnership was formed in 2000 with the public announcement of both Massachusetts and Connecticut governors at the time, and its purpose is to increase the cooperative efforts to market the region along the I-91/Connecticut River Valley between Hartford and Springfield. The organization has branded the area "The New England Knowledge Corridor" and cites that the region is home to:

- 1.86 million people;
- a labor force of more than 1.1 million;
- 41,000 companies; and
- 32 universities and colleges with over 120,000 students.

The partnership is overseen by a steering committee of more than 20 representatives of business organizations, planning agencies, utilities, and public and private higher education institutions. While Connecticut's universities and colleges, as well as members of the management team from Bradley International Airport, are represented, not one of the state's primary economic development agencies is a member of the steering committee. The absence of state economic development policymakers on such a regional initiative provides yet another example of the lack of a visible, proactive presence in leading and supporting efforts to promote state and regional competitiveness.

The state economic development agencies have also been absent in assisting with implementing another of Hartford-Springfield partnership's primary initiatives. A report released

in 2004, co-sponsored by members of the partnership with BEACON²¹, highlighted the area as a potential primary medical device cluster. The 2004 report noted that the corridor already encompassed 18 percent of New England's total medical device manufacturing employment, and supported 31 percent of the contract manufacturers registered with the federal Food and Drug Administration (FDA). Additional competitive advantages of the region include: skilled labor, access to northeast markets, higher education and research infrastructure, and high quality of life. Further, the region's economy has a long history of precision manufacturing, with processes similar to those required to meet FDA standards. Thus, the report indicates impressive current strength of the industry and cites that the industry has great potential to grow.

However, the report results have not gotten much support or traction from the state Department of Economic and Community Development. While not an official sponsor of the study, the state's lead economic development agency might have taken a more proactive role in developing the cluster potential identified in the report. For example, it might have worked with CONNSTEP²² to understand which manufacturers already produce medical devices, which ones show immediate potential of transferring with or without assistance from CONNSTEP, and perhaps assisted with studies on potential demand for medical device products, here and abroad.

DECD also might have worked with some of the partner agencies that sponsored the study to investigate what obstacles this industry might face – e.g., identifying potential new products, locating experts to educate potential manufacturers on the FDA-approval process, or marketing the ready transportation available at Bradley International Airport. DECD might also have publicly declared state support for the industry, and offered agency assistance to promote it. An opportunity to do that was at a recent symposium sponsored by BEACON and Pfizer, and held at Northeast Utilities, entitled *Forecast for the Next Decade in the Medical Device Industry*. However, the state's economic development agency was not among the presenters.

DECD, in the state's recently released economic strategic plan, recommends that the state enter into a "knowledge corridor" agreement with Massachusetts to promote the development of biomedical devices along Interstate 91. The plan states the Knowledge Corridor will dovetail with the agreement the two states have for the New Haven to Springfield high-speed rail corridor. However, no action steps or time-frame for this are given in the plan. Therefore, the program review committee recommends:

DECD should act as the lead agency and proceed with the steps needed to execute the knowledge corridor agreement (Springfield/Hartford) by July 1, 2010. Once the agreement is in place, DECD should publicize the state's commitment to the industry development, and work with BEACON and the Hartford-Springfield Economic Partnership on implementation.

²¹ "The Medical Device Industry in Southern New England's I-91 Corridor," Biomedical Engineering Alliance and Consortium, the organization that promotes the medical device industry. The 2004 report was co-sponsored by utility companies in the two states, as well as two Massachusetts regional economic development councils and the Metro Hartford Alliance.

²² Connecticut State Technology Extension Program, a federal/state partnership that helps manufacturers reengineer their processes.

Other opportunities exist for regional economic development action. In early 2009, the Hartford-Springfield Economic Partnership, in partnership with the Connecticut Business and Industry Association, conducted a survey of businesses in the partnership region – Hartford, Middlesex, and Tolland counties in Connecticut, and Hampden, Hampshire, and Franklin counties in Massachusetts. Almost 700 businesses responded, across many business areas, and the results were recently issued.²³ The survey sums up that, given the difficult economy, fewer than half of the respondents said they had plans to expand in the next two years, but only 15 percent planned to take actions that would have a direct negative impact on the region: almost none (4 percent) planned to relocate out of the region or shut down (2 percent); and only 9 percent plan to sell their business within the next five years. Thus, the vast majority of respondents expect to stay in business, and to remain in the Hartford-Springfield region.

Some of the benefits of the region cited by business survey respondents include the top-notch educational institutions, and proximity to key markets, along with the relatively affordable cost of living (compared to New York City and Boston). The survey indicates that understanding those advantages as well as the challenges of doing business in Hartford-Springfield is critical to ensuring the region's economic recovery and growth. This survey (and its results) is perhaps the most recent example, but there are other surveys and assessments of the regional and state business climate that DECD could use to focus its business development activities. Therefore, the program review committee recommends that:

- **DECD should become an active participant on the Hartford-Springfield Economic Partnership steering committee; and**
- **DECD should use the results of the 2009 HSEP survey to focus its business development activities, especially building on the strengths of the region – educational institutions, relatively affordable cost of living, and proximity to key markets – to promote business expansion in the area.**

The department should work with its Connecticut and Western Massachusetts economic development partners to help diminish the obstacles businesses in the region face with a goal of helping business to expand. Forty-four percent of respondents stated they had plans to expand their businesses some time over the next two years; that is a sizable portion given the economy. The economic development agencies in the region should work collaboratively to make sure that expansion happens.

One specific action recommended by the National Governors Association to spur a region's economy is the creation of a large regional investment fund. The committee believes that establishing such a fund in this economic climate may not be realistic, but that state economic development agencies should collaborate with other state and regional agencies on actions that may not require investments. Further, where funding is needed, a coordinated, regional approach may produce better results -- improving chances of obtaining federal grants, and leveraging limited public funds with those from non-profit organizations, and for-profit companies – and tend to have greater impact.

²³ Hartford-Springfield Regional Business Survey, 2009.

Flexible and Responsive Government

- *Streamline regulations to ensure state regulatory policy is flexible and responsive*
- *Ensure the regulatory process is timely and not administratively burdensome*
- *Provide guidance and assistance to small business and start-up companies*
- *Seek innovative ways to provide assistance and leverage funding*

The organizational structure of the state's economic development agencies is geared to an outdated economic development model. That model targets providing incentives to individual companies to relocate or remain in Connecticut, often when they threaten to leave. Further, the assistance efforts provided in the three separate agencies – Department of Economic and Community Development, Connecticut Development Authority, and Connecticut Innovations, Inc. -- are duplicative, cumbersome, confusing, and an inefficient use of staff resources.

Financial assistance. All three state economic development agencies – Department of Economic and Community Development, the Connecticut Development Authority and Connecticut Innovations, Inc. -- offer some form of financial assistance to businesses, as noted in the briefing report. For CDA and CII, this is their primary role; for DECD, while not the primary role, managing its business portfolio, with its job auditing and reporting requirements, can consume much of the agency's business development resources.

These three agencies provide state-sponsored assistance, but there are also other government and non-profit organizations that operate economic development financial assistance programs in Connecticut, including the federal Small Business Administration, which was discussed in Chapter II. At the committee briefing in October 2009, committee members had also requested that program review staff obtain information on the regional revolving loan funds, especially microloan activity, that also serve businesses in towns and regions around Connecticut. That information is contained in Appendix E.

Businesses' need for loans and other financing is certainly an economic development activity that state government must address, especially in times when access to private capital becomes tight. However, the program review committee does not believe that all state economic development agencies should be involved in these programs, especially when other types of assistance to businesses are not addressed, often because of resources.

Loan activity. Program review staff examined the overall loan activity of DECD from 1992 through 2008, and found that the annual average number of loans was fewer than six a year. Even the Connecticut Development Authority, a quasi-public lending agency whose main mission is financing has made fewer than 40 loans per year over the past three years. Table IV-1

below shows the total amounts of the assistance to business provided by each of the three economic development agencies over different time periods, along with the annual average amounts.

Table IV-1: Assistance Provided by State Economic Development Agencies					
Agency	Time Period	Total Number of projects	Avg. Annual # of Projects	Total Amount	Average Annual
DECD	FY 92 – FY 08	100 loans 10 grants	5.6 0.5	\$147 million – loans \$20 million – grants	\$8.6 million \$1.2 million
CDA	FY 06 – FY 08	113	38	\$71,357,941*	\$23.8
CII	FY 00 – FY 08	N/A	N/A	\$95,544,000 (mostly grants)	\$10.5
*CDA assistance includes sales and use tax exemptions, accounting for more than half of the assistance Source: DECD, CDA and CII reports					

DECD and CDA appear to fund similar types of businesses, although CDA has its URBANK program to assist small business, while DECD has no direct financial assistance for small businesses. CDA and DECD have some of the same large companies in their individual portfolios. Both agencies use similar loan underwriting guidelines or due diligence criteria, and both must report on the jobs created and retained.

Operating expenses. As mentioned above, the Connecticut Development Authority’s main mission is to provide direct lending and other financial assistance products to businesses, non-profits and others. Its loan products are displayed on its website (and were summarized in Chapter II) and CDA staff performs lending and portfolio management activities routinely. CDA currently has 26 staff, and its operating expenditures are about \$6 million a year²⁴ -- accounting for between 20 percent to 33 percent of its annual loan activity.

Since 2000, the operating expenses for Connecticut Innovations Incorporated totaled \$4 to \$5 million a year. While the amounts have been relatively stable from year to year, those expenses translate to more than 100 percent of CII’s overall funding amounts in some years. The committee recognizes that CII staff performs activities in addition to financing and portfolio management, such as running the BioBus education program, a technology competition called Yankee Ingenuity, and scholarship programs, but there has to be a less expensive way to provide both.

There is no way to precisely calculate what DECD’s operational expenses are as a percent of loan and grant activity, but, even excluding that agency’s expenses, an average of \$10 million to operate the two quasi-publics on annual loan (or grant) activity of \$40 million is high. The Connecticut Development Authority and Connecticut Innovations, Incorporated are self-sustaining, in that the staff and operations are paid for with loan repayments, investment returns, and fees, rather than General Fund or bonding funds. However, if operational expenses can be

²⁴ CDA disagrees with including interest expense as part of the authority’s operating expenditures. If the interest expense is excluded, the operating expenditures total about \$4.9 million annually, or between 16 percent to 26 percent of loan activity.

trimmed, that may mean more funding could be provided for loans or grants to businesses, especially for start-ups and technology-based businesses.

The program review committee believes it can also be confusing to businesses about where to seek financial assistance. Each agency perhaps was necessary when financial incentives were the main framework of economic development, with each intended to deliver a certain type of financial incentive program or programs. However, newer structures support co-location, collaboration and multi-service entities where businesses may receive assistance at one place. It is quite possible that companies that might not be good candidates for CDA loan products might be better-suited for CII assistance and vice versa; businesses should not have to go to two separate locations.

Further, the direction of more current economic development strategies has changed from one of providing direct financial assistance to individual companies or projects to broader support across businesses. The proposal below would allow DECD to focus its resources on providing that broad support. To address these organizational issues, and better align the state's economic development approach to the new model, the program review committee recommends:

The Connecticut Development Authority and Connecticut Innovations, Inc. shall be consolidated, and all direct business financial assistance programs shall be transferred from the Department of Economic and Community Development to the combined authority. To ensure that the practice of financing innovation occurs, half of all annual state business development assistance should support innovation- and technology-based businesses, and start-ups.

Rationale. First, the recommendation will create an organization structure better suited to implement a newer model of economic development. Further, the merger concept has the support of the executive branch. The consolidation of CII and CDA was proposed in a bill during the 2009 legislative session, implementing economic development areas of the governor's budget. The bill was supported by the heads of DECD, CDA, and CII in public hearing testimony but, while some of the other proposals in the bill did pass, this merger did not.

While no savings from staffing reductions would result from this recommendation immediately, the committee believes that future saving should result as vacancies occur, especially those in executive, managerial, administrative, and marketing areas of the quasi-publics. More immediate savings should occur in general and administrative expenses if CDA and CII are co-located, through reduction in rent, utilities, and contracting expenses for auditing and the like. The general and administrative expenses for CII in 2009 totaled \$1.724 million; a \$1 million savings is not unrealistic.

Responsibility for administration of tax credits currently within DECD would remain. That agency has experience with the credits, and the program review committee believes this makes a clear and natural distinction between responsibilities of the two agencies – direct financial assistance would be under the purview of the combined quasi-public and tax credits

handled by the state agency – and one that would be much easier to communicate to all businesses.

Regulatory Environment

A state’s regulatory environment is an area often linked to whether a state is competitive or not. In many cases, the environment is based more on process and perception, than on numbers or other objective measures, and is therefore difficult to assess on any state comparison, benchmarking, or scorecard.

A couple of organizations that rank states on their business climate use proxies to gauge states’ regulatory environments. Forbes measures it by examining regulatory and tort climate, and by that measure Connecticut’s rank has worsened from 28th in 2006 to 35th in 2009. The Beacon Hill Institute, which issues an annual report on states’ competitiveness, uses a measure of government and fiscal policy to gauge regulatory environment. Using that measure, Connecticut has been below 40th each year since 2004.

While certainly a subjective measure, the “business friendly” environment is widely used in marketing strategies by states like Virginia, with a Number 1 ranking by Forbes and others, and is certainly an aspect that may tip a decision for a business to locate or expand in a given state. Being considered not “business friendly” can present a handicap for a state marketing campaign, especially when it is a perceptual and subjective claim that cannot be easily refuted by numbers.

Perhaps of even greater concern than attracting new business is the impact the state’s regulatory environment can have on companies currently doing business in the state, hampering productivity and increasing costs. However, despite the state’s regulatory environment repeatedly cited as a major obstacle, the just-issued economic strategic plan barely addresses compliance with government regulations and whether that stymies economic development and job growth. The plan also does not address what aspects of the government regulatory process are burdensome – e.g., transportation permitting, environmental permitting, tax compliance -- or indicate that DECD will examine where bottlenecks occur. Instead the plan makes recommendations for creating a blue ribbon commission to examine the state’s tax structure, (which has been done for the legislature in 2005) and study existing tax credits (which DECD could do).

The plan does recognize a need for more state agency integration and calls for a Workforce and Education Cabinet, composed of the heads of commissioners or designees of all state economic development and education agencies, as well as the chairs of the boards of governors at higher education institutions, the labor department, and the Offices of Policy and Management and Workforce Competitiveness. The cabinet would conduct economic and workforce analysis to align occupational supply and demand and develop educational programs to respond. That recommendation envisions a new “team” approach that would focus on policy and program integration through communication and information sharing, rather than on agency

consolidation or major government restructuring. However, nothing similar is recommended for regulatory, permitting, or licensing areas that might more directly affect business.

This coordinated cabinet approach is similar to the one envisioned with the interagency steering council in the state's responsible growth efforts, and created as part of Executive Order 15 in 2007. That council is composed primarily of the state's development and regulatory agencies – the Office of Policy and Management, the Departments of Economic and Community Development, Environmental Protection, Public Health, Agriculture, and Transportation, and the state's housing and finance authority, and the development authority. The mission was to coordinate state policy development and capital planning to initiate and support efforts that revitalize cities, preserve the unique character of the state, and build livable, economically strong communities while protecting (the state's) natural resources. However, that effort has not been sustained, and the steering committee has not met since the beginning of 2009.

Informally, some progress is being made in streamlining the regulatory process in certain areas. In late October 2009, DECD and DEP issued a joint agreement effectively removing the need for DECD to apply for an exemption under DEP's floodplain management statutes, which had impacted the remediation of brownfields and redevelopment of certain properties. The agreement also includes other reforms that expand allowable activities under the flood management general permit – for example, dredging and structural rehabilitation of residential building will be exempt from the floodplain certification process. As the agreement indicates, this should assure a greater degree of certainty and predictability about the process to those involved in brownfield redevelopment and financing.

The program review committee believes the joint agreement is a positive step in creating an improved regulatory environment, but believes the issue is important enough to warrant a stronger, more urgent approach, and therefore recommends:

Creating a new state regulatory environment should be an executive branch priority, and one the governor should publicly announce. The administration should require that the interagency steering council resume its activity, stress that coordinating state policy and streamlining regulations impacting economic development is imperative, and inform the commissioners and other agency heads who are members of the council that its coordinating activities are as important as each agency's individual operations. The administration should use the DEP/DECD agreement as an example of interagency coordination and establish some measures of performance accountability.

While the committee does not recommend specific performance measures as part of the proposal, they could include activity measures, like the number of interagency agreements that improve regulatory coordination and outcome or results-based measures such as improvement in Connecticut's ranking in national assessments of regulatory environment to business, or increase in state economic growth.

Provision of electronic services. Connecticut lags in providing services electronically to businesses or individuals. The Center for Digital Government (CDG), a national research institute on informational technology policies and best practices in state and local government, periodically ranks states that use digital technology to streamline operations and offer better service to citizens. In 2008, Connecticut ranked 37 of the 50 states. In isolated areas, like electronic tax filing, Connecticut performs well, but other areas of automation and electronic services must be provided.

One of Connecticut's regional planning agencies, the Capital Region Council of Governments, received funds in 2008 to develop an online permitting system that allows contractors and residents in member towns to create permits, request inspections, and track projects through the review, approval and construction phase and automate contractor license verification – all on one central website. There are many examples of other states that have used automation to improve and advance economic development. Virginia, which ranks third in the CDG assessment, offers the consumer the ability to conduct an interactive comparison of any state with Virginia on a whole series of measures important to business. New Hampshire's automated systems (discussed later in the report) allow a company to develop a business plan for exporting by electronically completing an interactive questionnaire on the state's international trade center's website.

The interagency steering council should also address ways that state agencies could electronically improve or expand services to customers, prioritizing those that impact business and economic development. The state Department of Information Technology shall assist in implementing these areas identified.

Other regulatory areas. Program review believes that it is not completely clear where regulatory bottlenecks occur, and even with better interagency coordination and expansion of electronic services, problems may still remain. Further, responsibility for correcting and improving the state's regulatory environment should not rest solely with the executive branch. During the scope development stage of this study the committee had discusses examining regulatory compliance and its impact on competitiveness as part of the review. However, given the limited staff resources and the already broad scope of the study, it was determined that the regulatory aspect should be examined separately. Therefore, the program review committee recommends:

Connecticut business regulations and regulatory compliance be placed on the program review committee's study topic agenda for 2010.

High-cost areas. Other factors contribute to the state's high costs of business. (See Appendix F for a current assessment of cost contributors.) A cost that chokes the state's competitiveness is the price of energy. Connecticut's cost for electricity is the highest in the continental U.S., and two-thirds higher than the national average. At the legislative leaders' Job Growth Roundtable held in November 2009, energy costs were cited as the greatest cost differential of doing business in Connecticut. Further, energy costs impact most areas of the state's economy, not just manufacturing, as might be assumed. For example, computer use in the

financial and insurance services industry consumes a great deal of energy. While many businesses have taken advantage of the state's energy efficiency fund to conserve energy and reduce consumption, those actions address only the demand side, and not energy supply and its costs.

The state's economic strategic plan makes 10 specific recommendations dealing with energy, from narrow ones such as expanding Connecticut's fuel cell bus fleet, to very broad ones including adopting a statewide green building code and requiring the state to prepare a biennial state energy plan with short-term and long-term goals. However, the plan does not discuss how these should be implemented. Further, despite the scope of the energy problem and its economic development impact, DECD does not sit on the Connecticut Energy Advisory Board (CEAB) nor on the Energy Conservation Management Board (ECMB), both of which make energy policy and program decisions, and both of which have a number of state agency heads as members.

To ensure that the state's energy policies are addressed as they impact the state's economic development, the commissioner of economic development, or a high-level agency designee, shall be a member of the Connecticut Energy Advisory Board and the Energy Conservation Management Board.

Another NGA best practice that a flexible and responsive government should perform to accelerate economic growth is to assist small business. Based on economic activity over the past three decades, indications are that most future job growth will come from small business. However, the program review committee believes not enough is being done at DECD to assist those businesses.

Connecticut contracts with the Connecticut Economic Resource Center to operate the Business Resource Center (BRC), which serves as first point of entry for most businesses seeking information and guidance. The BRC, which receives the majority of its funding from utility companies, provides a variety of informational services to businesses or potential businesses wishing to start up, expand, or locate in Connecticut. Table IV-2 below shows the numbers of calls and assistance given at the BRC for 2009.

Table IV-2: Business Resource Center: January 1 – October 31, 2009	
Type of Assistance	Activity
Businesses Assisted at Time of Call	5,245 calls
Businesses Assisted with Follow-up Information Package	2,756
Businesses Referred to DECD	89
Source: CERC Business Response Center	

The Business Resource Center indicates that it follows up with businesses to gauge their satisfaction with services. While no satisfaction results are formally published, BRC states that based on the responses it receives from business, the vast majority are very satisfied with the BRC services. Companies referred to DECD are most often seeking some financial assistance or other incentive, and BRC anticipates they need more involved interaction. The Business

Resource Center indicates it does try to follow-up on the inquiries forwarded to DECD to determine results, but DECD actions can vary complicating satisfaction reporting.²⁵

Program review staff requested that DECD provide information on the 89 referrals that it received from the Business Resource Center (BRC). While DECD was not able to specifically identify the referrals from BRC, the department provided information on the 146 referrals it received for the period from July 1 through October 31, 2009. The results are presented in Table IV-3 below.

Table IV-3: DECD Inquiry and Referral Activity July 1 – October 30, 2009	
Overall DECD received 146 Inquiries or Referrals	
Internal DECD = 92	External referrals = 54
68 received “technical assistance” including letters about DECD programs, or general answers to questions	4 to CT Development Authority
15 were sent “pre-applications” – of those, 4 were sent back, 3 remain under review, 1 was sent a Letter of interest, and 11 not returned to date	5 to Connecticut Innovation Incorporated
3 Job Creation Tax credit – 1 approved, 2 not returned	1 to CT Center for Advanced Technology
4 Enterprise Zone inquiries – no applications	3 to regional revolving loan funds
1 Small Business Credit Assistance Program	5 to other state agencies
1 request for information	1 to Procurement Technical Assistance Program
	1 to SCORE
	3 to Small Business Development Center
	14 to Small Business Administration
	15 to Community Economic Development Fund
	2 to Connecticut Community Investment Corporation (CTCIC)
Source: Department of Economic and Community Development	

Program review finds the results of the table indicate that DECD is not an agency that is proactive. With one-third of the inquiries being sent to outside agencies, and another 46 percent provided a department informational response, it appears DECD’s business development is little more than a referral function. In many ways the DECD functions duplicate those of the business response center at the Connecticut Economic Resource Center.

Further, DECD’s internal organizational structure and functions are not aligned to meet its overall mission of business development. This is especially true in tight economic times when the agency can no longer rely on traditional financial incentives to attract or retain businesses. Currently, DECD’s business development division is organized vertically, headed by an administrator and an assistant administrator, and staffed with nine economic and community development specialists, and one clerical position (three other specialist positions are vacant). In addition, the film office – staffed by a director and three associates -- was recently transferred to DECD from the Office of Culture and Tourism. This unit manages the film tax credit program the state initiated in 2006.

²⁵ DECD actions can vary -- an application for assistance might be sent to the business and perhaps not returned; the business may have received some financial assistance (or not); or perhaps the case is still open, and negotiations on assistance continue – thus timing and outcome can impact results.

The job description for the economic and community development specialist, the most common position in the division, requires “considerable knowledge, skills, and ability, including knowledge of industry practices, markets and location issues, and skills in planning, organizing, and negotiating economic and community development activities.” The position requires six years of experience or a combination of education and experience equal to six years, and the compensation level for the bottom level of the class is \$64,500 (not including benefits). Program review concludes that given the experience, skills and competency requirements, and compensation level, the business development staff should be much more proactive and hands-on in assisting business. To execute a responsive business assistance approach within DECD, the program review committee recommends the following.

First, DECD should establish a team approach to business development, with three teams each staffed with 3 or 4 people. The teams would be responsible for: 1) clusters including cross-cluster initiatives (see previous recommendation on page 39); 2) incentive programs to business, including tax credits; and 3) providing technical assistance to business including exporting, manufacturing assistance, regulatory guidance, and serve as liaisons to, and coordinate with, outside partner and business organizations, as well as other divisions within DECD.

Second, incorporate the recently transferred film office into the business development section and cross-train people in all economic development tax credits.

Third, require that any department contacts with other organizations be made directly by the DECD business development specialist, not through a referral.

Fourth, an on-line satisfaction form should be developed so that clients could evaluate the services received from the DECD business development teams. The results of the evaluations should be published as part of DECD’s annual report, and the results also used to modify and improve business development services.

Rationale. One of the ways that state government has addressed its current fiscal crisis is through implementing a recent retirement incentive plan, with more than 3,000 state employees taking the incentive. With such reductions in staff – 16 General Fund positions at DECD -- state agencies cannot maintain a “business as usual” culture. This provides an opportunity to consolidate functions and reorganize so that services can be delivered without filling vacancies. The program review committee believes these modifications and restructuring to business development at DECD should achieve that goal.

Further, with the state’s fiscal situation, little financial assistance is likely to be available for individual businesses; thus, staff at DECD must refocus on what other technical assistance the department can provide. (Program review recommends all direct financial assistance

programs be transferred to the consolidated quasi-public, see recommendation on page 47) The technical assistance DECD provides should be more than referring clients to other agencies and organizations, but rather working directly with businesses, and DECD partners and organizations to ensure that companies, especially small businesses, receive the help they need.

DECD staff, as specialists in the economic development field, should build (or have built) relationships with its partner agencies, so that they know the person who can best assist a business with an issue. Whether the assistance is helping a business with an energy efficiency fund application, or obtaining an inland wetland permit, DECD should take an active, lead role, not a passive, referral one. Further, with budget cuts in grants and contracts to outside partners, like the regional planning agencies and the Connecticut Center for Advanced Technology, the level of services those partners can provide is in jeopardy. To compensate, DECD will have to increase the depth and breadth of its services to businesses. Therefore, the DECD specialists should be well-informed of all programs and assistance available and communicate that to business. (See recommendation below on ARRA funding.)

The business development specialists should be visible -- out in the field, attending chamber of commerce meetings, business expos, and cluster industry meetings -- and taking every opportunity to let companies know that the state wants them in Connecticut. Slogans (e.g., "You Belong in Connecticut") and marketing materials that promote Connecticut's business environment will do little if there is no agency follow-through and support.

Finally, DECD currently provides a hard copy evaluation on the back of its client service form. Committee staff asked DECD to provide the results of the evaluations over a recent time period, but DECD did not respond. DECD should provide clients with an evaluation form online, make the results public in its annual report, and used the results to improve services.

Funding

Another way that the state's economic development agencies can assist in business development is through obtaining and leveraging financial assistance from other sources, particularly the federal government. A primary funding source is the federal Economic Development Administration (EDA), a division of the U.S. Department of Commerce.

Federal EDA. The Federal Economic Development Administration states its mission is to "promote innovation and competitiveness, preparing American regions for growth and success in the worldwide economy (and will) fulfill its mission by fostering entrepreneurship, innovation and productivity through investments in infrastructure, development, capacity building and business development." (U.S. CFR 300.1)

In the program review briefing report, committee staff reported federal EDA grant activity for Connecticut for 2007 was one grant to UConn for \$64,000. Nationwide, the state placed last for receipt of grants from the federal EDA. Reports for 2008 and 2009 still have not been published, but PRI staff obtained EDA data for Connecticut for those two years, which are shown in Table IV-4 below. As the table indicates, there were several grants to regional planning agencies and to towns, but, other than continuation of the UConn grant, no state agency

or project received EDA grant assistance for 2008 or 2009. At the briefing, some committee members spoke of the importance of not leaving any federal dollars “on the table”, especially during the state’s current fiscal difficulties.

Table IV-4: Federal Economic Development Grants To Connecticut – 2008-2009		
Year/type	Grantees	Award
2009 -University center	University of Connecticut	\$110,000
2009 – Planning	Central CT Regional Planning agency	\$64,000
2009 –Title IX – roads	City of Derby	\$1,000,000
2009 – Access roads	City of New Britain	\$1,250,000
2009 – Planning	Shelton Economic Development Corp.	\$80,000
2009 – Roads	City of Hamden	\$550,000
2009 Total	6 projects	\$3,054,000
2008 – University Center	University of Connecticut	\$110,000
2008 – Planning	Town of Ledyard	\$100,000
2008 – Planning	City of Hartford	\$75,000
2008 Total	3 projects	\$285,000
Source: Federal Economic Development Administration		

Each federal EDA grant must be matched with the same amount from the grantee. The grants are competitive, and not formula-based, and therefore funding is not a certainty. However, DECD could at least apply for EDA grants with the possibility of matching some of the current state funding that goes to support entrepreneurial centers, incubation programs or other potentially qualifying activity. Therefore, the program review committee recommends:

The Department of Economic and Community Development and the Office of Policy and Management should aggressively pursue funding opportunities with the federal Economic Development Administration, and determine where state assistance could be used as matching funds for the EDA grants.

ARRA funding. Another opportunity for the Department of Economic and Community Development to assist businesses in the state is through better information, coordination and leadership in the American Recovery and Reinvestment Act (federal stimulus) funding. DECD has recently designated its director of business development to be the agency’s stimulus accountability officer, and DECD does provide some information about ARRA funding on the department’s website. But the information targeted to business provides a link listing all potential stimulus programs, along with contact information, broad eligibility requirements and closing dates.

To date, however, most of the department’s efforts have been focused on ARRA assistance that would benefit towns and communities. Six towns and public housing authorities have received a total of \$3.4 million in funding, and some of that may well funnel through to individual businesses. In addition, DECD is the lead agency on a combined application to federal

HUD for \$45 million in additional neighborhood stabilization funding. DECD has also been designated to receive \$19 million in weatherization assistance funding (from the state Department of Social Services) and DECD is currently reviewing bids on its request for proposals which were due in November 2009.

Further, while DECD indicates it is providing marketing and technical assistance to businesses interested in stimulus funding, that assistance to date has been:

- providing a letter of support to Greater New Haven for a CT Clean Cities Award, (\$13.5m);
- responding to 21 inquiries and making appropriate referrals; and
- coordinating with Connecticut Innovation Inc. and the Clean Energy Fund on potential projects.

Program review believes the lead economic development agency should be doing more. For example, it should be exploring if some of the proposals in the state economic strategic plan might be eligible for ARRA funding. One of the recommendations in the plan calls for investing in Connecticut's maritime ports, and similar recommendations have been made in the past²⁶ but funding has been an issue. Availability of ports as an economic driver is an area that Connecticut could capitalize on, since many states do not have such access, and thriving ports have been shown to increase a state's (or country's) economic competitiveness. However, of the more than \$571 million in ARRA funds awarded to the state Department of Transportation, more than half is allocated to highway infrastructure and only \$2.9 million to small shipyards, none of which appears allocated to improve viability and accessibility of ports.

Two ARRA state programs announced in December 2009 – one for \$135 million and the second for \$90 million – use federally backed bonds to be issued by the Connecticut Development Authority. This funding is allocated to counties and the state's five major cities for “shovel-ready” projects in 62 designated “recovery zones” in the state, and grants will be awarded based on criteria established by CDA and DECD.

DECD should be actively working with local economic development directors, towns and cities on the ARRA funding. This should not just include website information about the available funding, but also direct contact about what the requirements are, what projects are eligible, and assistance with completion of the application process. The funding will do no good if local towns and other eligible entities do not know of their availability; how to apply; or the criteria for acceptance. The application form for this funding can be completed online on CDA's website, which is a positive step. Once the award criteria are established those should be communicated clearly as well. The administering agencies should continue to make the process as simple, transparent, and expedited as possible since the stimulus funding is intended to spur and accelerate economic recovery.

The Connecticut Business and Industry Association early in 2009 posted on its website total ARRA dollar amounts and what areas of the economy the assistance was targeting, thus

²⁶ *Connecticut Strategic Economic Framework*, Connecticut Regional Institute for the 21st Century, November 1999 (also known as the Gallis report).

providing some information to different businesses of what stimulus monies might be available to them. For example, \$18 billion in ARRA has been designated nationwide to expedite the development and use of electronic medical records. It is unclear how much of this money might come to Connecticut, but DECD could be working with the technology industry cluster to ensure that Connecticut garners a portion, and then help publicize or promote it. Therefore, the program review committee recommends:

The business development teams at DECD should research the ARRA funding available to Connecticut, what businesses and industry areas might be eligible, what the criteria are for receiving funding, and work with partner agencies, like cluster organizations, towns, and others to inform businesses and assist, whenever possible, with the application process. DECD should also publicize on its website the technical assistance that it can provide to business in seeking and obtaining ARRA funding.

Exporting and International Trade

Create a coherent, market-driven trade and international development system

- - Recognize the global economy offers opportunities for growth and promote exporting as part of economic development mission
 - Focus on exporting competitiveness, market share, and strategic position, not just export numbers
 - Leverage state investments and resources with those of federal, private, nonprofit, and regional organizations
 - Develop strategies that assist industries (and cluster associations) identify potential markets abroad, as well as promote the state as a location for business or education
 - Create and foster relationships between exporters and potential exporters, banking, and other organizations that might offer assistance
 - Identify obstacles to exporting and work to resolve
 - Recognize the governor can serve a crucial role as advocate of international development and chief economic ambassador of the state

Exporting Activity in Connecticut – How Much Are We Doing?

Exporting activity is important to the state's economy, generating over \$15 billion in 2008. The top five commodities exported from Connecticut in 2008 were: 1) industrial machinery, including computers; 2) aircraft and component parts; 3) electric machinery, sound and TV equipment, and component parts; 4) optic, photo, medical, and surgical equipment; and 5) plastics.

Connecticut's biggest trade partners are:

- Canada, which accounts for about \$1.8 billion (12%) of the \$15 billion in 2008 exporting activity;
- France at \$1.7 billion;
- Germany \$1.45 billion;
- Mexico at \$1 billion; and
- the United Kingdom at \$876 million.

While exporting has increased significantly in recent years -- almost doubling from about \$8 billion in 2003 to \$15 billion in 2008 -- Connecticut still lags behind the nation in the percentage of state gross domestic product (gdp) that comes from exporting -- 7 percent in Connecticut compared to 9 percent nationally. Some of this difference may be due to the fact that about 16.5 percent of the state's gdp is in the insurance and financial services sector -- more than most states -- and only commodities and not services can be calculated as export contributors.

Overall, about 4,600 Connecticut companies export abroad, but it is difficult to determine how many others could. The need to expand exporting as a priority in enhancing the state's competitiveness has long been recognized. In 1994, the legislature passed P.A. 94-237, calling for DECD to establish a number of programs and initiatives including: an exporting services database; a program aimed at attracting foreign investment to the state; an export promotion program; and creation of an International Trade Council to advise and assist DECD. However, the exporting programs were all required to be established within the department's existing resources, and most were never implemented.

Export expansion was established as a state economic development priority again in 2005, as part of the *Next Generation Competitive Strategy*. However, DECD's resources for exporting efforts have been decreasing. The international trade office within DECD had been staffed with two people until June 2009, when one accepted the state's Retirement Incentive Program (RIP), leaving one person to carry out its program and functions.

Obstacles to International Trade

Recent surveys of businesses in Connecticut concerning international trade identify some of the impediments to initiating or exporting activity. In 2007, DECD co-sponsored -- along with the Connecticut Business and Industry Association (CBIA) and a private accounting firm -- a survey of Connecticut businesses regarding international trade and exporting. At that time, of the 447 respondents, 35 percent were already exporting and another one-third stated they would like to be involved. The respondents indicated the greatest obstacles to global trade and exporting were trade barriers and regulatory disparities, global competitiveness, limited resources (to embark on exporting), and a general lack of knowledge about trade abroad. The survey results also showed that many companies were unaware of the assistance that federal and state government could provide in the exporting area.

In 2009, a second survey was conducted, this time without state sponsorship. In the 2009 survey,²⁷ more than half of the CBIA members that responded (274 companies) stated they were involved in exporting, and 10 percent had only entered global trade in the last six months. Therefore it appears that more Connecticut companies are becoming more active in global trade. Most businesses began exporting to increase sales, especially in a recession. However, economic downturns also present challenges to small- and medium-sized businesses wishing to initiate exporting abroad including: expending capital to meet regulatory requirements; obtaining relevant exporting and importing licenses for the prospective trade country or region; and incurring additional travel expenses.

Many of the 2009 survey respondents not involved in exporting stated the greatest obstacle to international trade is lack of knowledge about export regulation, foreign markets, and potential opportunities. Even those respondents engaging in exports stated they were unaware of services that federal trade representatives provide to further business penetration abroad. Further, a persistent issue (cited in both 2007 and 2009 surveys) was that respondents had no knowledge of the state and federal government assistance to businesses wanting to get more involved in international trade. Thus, primary challenges to promoting an international trade strategy appear

²⁷ 2009 Survey of International Trade in Connecticut, CT Business and Industry Association and J.H. Cohn, LLP.

to be: making Connecticut companies more aware of government programs that might help with exporting activities; assuring that assistance can be provided in how to meet the regulations and certification necessary for exporting; and matching up Connecticut companies and their products and services with foreign markets.

DECD Export Assistance

DECD does provide information about international trade on its website. The information describes the basic assistance that can be provided by DECD, along with links to other sites that may help businesses with exporting. DECD analyzes the state's exporting data²⁸ to determine what the state is exporting and to where. DECD also periodically contributes information on exporting to the Connecticut Economic Digest, the joint publication of DECD and the state Department of Labor. DECD states it relies heavily on its partners (e.g., local chambers of commerce, and the Connecticut Business and Industry Association) to inform local businesses of services to help with exporting. But given the lack of business awareness the surveys indicate, DECD may need to try other forms of communication to reach the companies about how the state can assist.

DECD also provides information and services directly to businesses about foreign trade and exporting. Some of the activities cited in the department's FY 08 annual report include: quarterly roundtable meetings with German companies with offices or facilities in Connecticut; 100 outreach visits to companies interested in exporting; led a group of companies that participated in Medica trade show in Germany, the world's largest trade show for medical devices and equipment; and took a similar role at the Paris Air Show.

DECD has formed partnerships with other government agencies, as well as public and private organizations that also provide assistance to businesses in the trade and export area. DECD is the state representative to the Eastern Trades Council (ETC), an entity that operates under the auspices of the Council of State Governments' Eastern Region Office. The ETC helps fund and organize international trade missions for businesses operating in the 10 states in the region. The ETC has led trade missions to Poland, the Czech Republic, China, Sweden, Saudi Arabia, Thailand, and Germany, and also operates a foreign office in China. The ETC is organizing a trade mission to Turkey for spring of 2010.

DECD also has a partnership with the U.S. Department of Commerce (USDOC) Export Assistance Center in Middletown. The goal of the collaborative effort is to help small- to medium-sized businesses export their products and services by matching them with foreign importers/buyers, agents, distributors, and users. The Export Assistance Center (EAC) also evaluates product markets, customizes market research, arranges overseas business meetings, and provides information on overseas tariffs and standards.

The Middletown EAC indicates it has a database of about 2,000 companies that receive frequent information about exporting assistance available and, of that, about 1,200 companies have participated in one or more of the services provided. During federal FY 08, those have included one trade mission, five trade shows abroad, and 14 different workshops, seminars, and

²⁸ The World Institute for Strategic Economic Research (WISER) collects data on exporting in 175 countries, and all states.

roundtables on various exporting topics held in various locations in the state. Some of those are held with partner agencies, on occasion with DECD.

The USDOC also has federal trade representatives in most countries, a feature that because of resources, states cannot replicate. Therefore, DECD attempts to link local businesses with the services that the federal trade office (and their counterparts abroad) can provide. The federal office charges for services, depending on the size of the company, and DECD provides some financial assistance – 50 percent of fees up to \$1,000 -- for participating businesses.

Export Assistance - How Well Are We Doing?

The program review committee finds that the state's policies around creating and promotion of market-driven international trade as part of the state and regional economy are deficient, and the state does little to implement the NGA best practices in this area. First, DECD does not allocate nearly sufficient department resources to the international trade area. While the department's website lists international assistance among the agency's business development support functions, there no longer is anyone assigned full-time to that activity. As discussed earlier in the chapter, one person left under the retirement incentive plan in June of 2009, and the only remaining person who had been serving in the exporting office is now assigned to the commissioners' office, for special projects. A recent organizational chart of DECD, after the retirements, does not list exporting or international trade functions in the department.

Exporting activity has long been recognized as a way to enhance the state's competitiveness. As mentioned earlier, in 1994, the legislature passed P.A. 94-237, calling for DECD to initiate a number of programs to assist businesses with exporting. However, no additional funding was allocated for the measures and all required to be established within the department's existing resources. Thus, most were never implemented.

Despite lack of implementation of state policies and strategies to assist exporting, or staff resources dedicated to that function, state exporting activity thrived in recent years, as more Connecticut goods were purchased in global markets, including industrial machinery, aircraft and component parts, medical and surgical equipment, and plastics. Connecticut's exporting activity almost doubled from about \$8 billion in 2003 to \$15 billion in 2008.

Since the recession has begun, Connecticut's export activity has not dropped as much as other states in the comparative group, or nationally. Table V-1 shows the percentage increase in exporting activity between 2006 and 2008; the drop in activity from the end of the third quarter of 2008 to September 30, 2009; and the net change for the 2006-2009 time period. As the table shows, Connecticut has fared better than any of the comparative states in terms of holding on to most recent gains in exporting.

State	% Change 2006-2008	% Change 3rd q 2008-2009	Net Change 06-09
CT	23.5	-11.9	11.6
MA	17.0	-21.0	-4.0
NC	17.1	-15.5	1.6
PA	28.6	-20.1	8.5
VA	31.4	-24.3	7.3
NTL Average	23.9	-23.8	0.2

Source: World Institute for Strategic Economic Research

The committee concludes that much of this growth, and the relatively mild drop in exporting in 2009, were achieved without aggressive state economic development agency assistance. As discussed, the results of both the 2007 and 2009 CBIA surveys on International Trade showed that even many companies already engaged in exporting had no knowledge of the state and federal government assistance to businesses wishing to initiate or expand trade abroad.

Lack of knowledge of government assistance to business regarding exporting is certainly an issue. Even if companies were informed however, it is unclear how adequate the services would be given the comparatively sparse government resources aimed at international trade in Connecticut. As stated, during the past year, DECD has reduced its staffing to exporting to less than a full-time person. At the same time as state resources were dwindling, so was the staffing at Connecticut's only federal U.S. Department of Commerce Export Assistance Center (EAC), located in Middletown. According to staff there, the office is supposed to have a director, three trade specialists, and one commercial officer, and 1-2 unpaid student interns. The current staffing level is down two trade specialists, leaving only three full-time professional staff.

Other states. Compared to other states, Connecticut allocates scant resources to exporting. For example, Virginia, which has only a 25 percent greater dollar value of exporting activity (almost \$19 billion compared to Connecticut's \$15 billion), dedicates 19 people in 3 different divisions and state regions to support international trade and investment. Further, the state's exporting website is colorful and inviting, informative, and up-to-date, with a schedule of educational and technical sessions available to businesses, as well as highlights of companies' exporting success stories.

In Massachusetts, the state matches U.S. Small Business Administration funds (at a 2:1 ratio of federal to state \$) to its small business development centers to add a focus on training sessions around exporting, especially for small businesses. The Mass Export Center is staffed with six full-time people, and provides many sessions on international trade regulations and the like throughout the year; the center's website indicates two upcoming events around international trade during the month of December. According to the center's staff, the Massachusetts office receives inquiries from many Connecticut companies, and frequently businesses from here participate if space allows. In addition, Massachusetts operates an Office of International Trade and Investment (MOITI), with eight persons located in Boston, and one at each of the state's four international offices. That office concentrates primarily on international trade shows and attracting foreign investment to Massachusetts. For example, the office is organizing a Massachusetts contingent to attend the Arab Health Trade Show in Dubai in January 2010, which would have special appeal to companies interested in exporting medical equipment.

Smaller states that do not have the numbers of staff Virginia or Massachusetts have also focused more effort on exporting than Connecticut. New Hampshire, for example, has combined its state, federal, and private resources to form the International Trade Resources Center (ITRC). The center provides a one-stop export assistance facility that includes among others: the U.S. Export-Import Bank; a representative of the state university system; the biomedical council; and a representative of the New Hampshire International Trade Association.

The link to the ITRC website is on the New Hampshire state government main website, an indication of the priority placed on trade and export in that state. The ITRC website provides an electronic one-stop site that offers businesses information about all the services that New Hampshire is collaboratively providing to support and promote exporting. The ITRC also provides an innovative, unique service that offers New Hampshire companies a “virtual address” in seven Asian countries and the United Kingdom. For a fairly low start-up cost (\$350) and an ongoing monthly fee (\$175), companies are provided a local mailing address, mail sorting and forwarding, and phone and fax numbers, as well as access to meeting rooms, workspace, video conferencing, and access to business advisors in that country.

New Hampshire also has established an arrangement with Citizens’ Bank to assist businesses with sending and receiving international payments in over 25 foreign currencies in real-time exchange rates, and offers scheduled training sessions and ongoing support, especially aimed at small business.

While a smaller state in population and with a smaller state budget than Connecticut, New Hampshire seems to have used its resources to adopt two of the NGA best practices for promoting international trade: *to leverage state investments and resources with those of federal, private, nonprofit, and regional organizations; and to create and foster relationships between exporters and potential exporters, banking, and other organizations that might offer assistance.* In fact, New Hampshire’s International Trade Resource Center has won several national awards, including one for its advertising.

The results in New Hampshire seem to be positive. While New Hampshire is not one of the states committee staff used for comparative purposes, either in the Innovation Scorecard in the briefing or for this report, staff did review recent trade activity for New Hampshire, and the net percent increase in exporting for that state for 2006 through 2009 was 14.53. This is higher than any of the comparative states listed in Table V-1 -- 25 percent higher than Connecticut’s 11.54 percent growth, and much higher than 0.16 percent national average.

Connecticut. Unlike New Hampshire, Connecticut’s efforts at collaboration and leveraging resources to support exporting are weak. Even if both federal and state government export assistance offices in Connecticut were at higher staffing levels, it would be advantageous to coordinate and collaborate more extensively than they do currently. However, with both government export assistance offices’ combined full-time resources total at fewer than five people, coordination becomes even more imperative. Yet, for FFY 09, of the 14 in-state seminars and workshops sponsored by the U.S. EAC, only one was co-sponsored by DECD. Most of the other Connecticut sessions had co-sponsors including: area chambers of commerce, Northeast Utilities, the Secretary of the State, Congressman Courtney’s office, or a community college.

DECD support of its federal counterpart is not only weak, but it seems the two government offices sometimes work at cross-purposes. One example is the information the two offices provide on their websites. The Eastern Trades Council (discussed below) is co-sponsoring, along with its member states in the Eastern region, a Business Development Mission to Turkey on March 13-19, 2010. The federal EAC in Middletown indicates the mission is co-sponsored by the Rhode Island Economic Development Corporation and makes no mention of Connecticut's co-sponsorship. The same mission is listed on DECD's website, but it does not list any of the other four international trade events the federal Export Assistance Centers are currently leading.

As discussed earlier in the chapter, the U.S. DOC also has federal trade representatives in most countries, a feature that most states cannot replicate. Further, the federal exporting database can link state businesses with potential foreign buyers, distributors and buyers. The Middletown EAC indicates its database contains 2,000 Connecticut companies that receive information on exporting, and about 1,200 have used one or more of the office's services. The federal office charges for its services, depending on the size of the business, and DECD provides some financial reimbursement, but that availability is not communicated on the local U.S. Export Assistance Office's website offering the services.

While the DECD financial reimbursement is limited to 50 percent of the fees -- up to \$1,000 per company -- for FY 08 and FY 09, reimbursements totaled less than \$5,000 for each year. It is important that the state DECD work with the federal exporting agency to ensure that state businesses access these connections abroad. The committee finds the low reimbursements indicate a problem: perhaps companies do not know about it; perhaps they do not qualify; or perhaps companies do not think the reimbursement amounts make it worth applying. Whatever the reason, DECD should be more proactive about ensuring that all businesses that could benefit from the U.S. EAC services can access them.

Website information. DECD does provide some information about international trade on its website, but the website to promote exporting is uninformative, uninviting, and out-of-date. The site states that DECD is committed to international trade, and that the department "serves as the lead facilitator and strategic catalyst of international activity . . . by developing two-way trade and investment opportunities, helping businesses enter new markets and expand its business base." But little on the website reveals how this is implemented. For example, the site provides no "success" stories of any businesses DECD has assisted, nor provides website links directly to a key DECD exporting partner, the Middletown office of the U.S. Department of Commerce (although the New England office is provided).

Further, DECD current website postings, a monthly review of trade and international matters appears more national in scope, and geared to numbers, like the U.S. trade deficit, than matters that might impact Connecticut. In other areas, postings do not appear to be updated regularly -- the most recent exporters' newsletter is from 2007, and most recent trade alert is from 2006. As mentioned above, none of the upcoming U.S. DOC-sponsored trade missions is posted on the DECD website despite the fact that two may have particular appeal to Connecticut companies -- a medical trade mission to India and another to the Singapore Airshow, the third-largest airshow in the world. Similarly, the U.S. DOC-sponsored events for 2009 were not posted on DECD's website -- including 14 in-state seminars and workshops or any of the six

international trade shows or development missions – held between October 1, 2009 and September 30, 2010. In fact DECD does not have an “Events Schedule” on its exporting assistance website.

Eastern Trades Council. The Department of Economic and Community Development is a member of the Eastern Trades Council (ETC), an entity that operates under the auspices of the Council of State Governments’ Eastern Region Office. As discussed, the ETC helps fund and organize international trade missions for businesses operating in any of the 10 states in the region. The ETC has led trade missions to several European, Middle Eastern, and Asian countries. It also has a permanent office in China that can assist businesses with market research, on exporting opportunities from the Northeast U.S. to China, introduce products to potential distributors in China, and serve as a liaison to the Chinese government and associations on behalf of ETC. But the link to the Eastern Trades Council is only one of many links listed on DECD’s exporting assistance, and is not easy to locate, nor prominently featured.

While the DECD website is only one communication tool that alerts businesses to opportunities and services to initiate and expand exporting activity, the program review committee believes it is indicative of the low priority given to international trade and exporting in Connecticut. The committee finds other indications are: lack of any staff in DECD assigned to exporting; failure to define obstacles, including use of CBIA survey results, to exporting and work to correct them; an inability or lack of willingness to collaborate among relevant government agencies; and a failure to include private partners to work on innovative ways that exporting assistance services can be still be delivered despite scarce resources, as New Hampshire has demonstrated.

The program review committee believes a multi-faceted approach to elevating and promoting exporting as a growth area for Connecticut’s economy is needed and recommends the following:

The governor and the Connecticut Congressional Delegation should work to restore the U.S. Department of Commerce Export Assistance Center in Connecticut to its full staffing component. The governor’s office could be used to draw attention to the staffing situation, and each Connecticut U.S. senator and representative should be enlisted to advocate for the restoration of the positions to the federal administration.

The business development division within DECD should be reorganized using a team approach (as recommended above), with no new or refilled positions needed. One of the teams should be staffed with four people, assigned to technical assistance including exporting.

A memorandum of agreement should be developed between DECD and the U.S. Department of Commerce Export Assistance Center to partner on activities including:

- **jointly providing exporting informational sessions to businesses, as well as joint sponsorship and joint representation of international trade events held in Connecticut;**
- **aggressively promoting the services that U.S. Export Assistance Center can provide as well as DECD reimbursement to businesses for participation fees;**
- **finding innovative ways of supporting exporting activities;**
- **work with other government agencies (e.g., Small Business Administration) and private partners (e.g., banks, business trade groups) to coordinate and target the needed services, such as financing, or transportation;**
- **provide the expertise in the regulatory and licensing requirements that Connecticut companies indicate they need to access potential markets --either through staff research in-house, or seeking experts in the field from the private sector or the federal government – and offer the assistance at publicized workshops around the state;**
- **explore opportunities with similar export assistance agencies in neighboring states to maximize exporting prospects for businesses in the region; and**
- **establish an aggressive marketing campaign to promote Connecticut’s export activity that:**
 - **highlights the unified federal/state team assistance approach;**
 - **features Connecticut’s recent success in exporting;**
 - **demonstrates that exporting activity is a state priority -- for example, appearances and remarks by governor, by Congressional representatives at high profile business events; and**
 - **conveys exporting as a way to grow revenue, and create new jobs.**

DECD should upgrade its website to give more prominence to exporting activity, make that area of its website more colorful, inviting and user-friendly, provide more current useful information, and offer some success stories.

Funding for export assistance, including sponsorship of programs, helping companies access U.S. DOC services, marketing materials and website

improvements, should come from the unallocated Manufacturing Assistance Act bond funding, upon approval of the Bond Commission.

Rationale. If these recommendations are implemented, they should provide a more concerted, coordinated, and effective effort that accelerates the upward trend of state exporting. Connecticut would present a unified team approach to business, rather than a silo-image of services, with one level of government agency involved in one function and another government agency performing another. It would be clearer that all partners, public and private, have a common purpose – improving the expansion of economic opportunities abroad for Connecticut business. This should be achieved without any increase in DECD staffing, if previous business development reorganization recommendations are implemented.

Chapter VI

Innovation Policy

As presented in Chapter I, state economic development policies must adapt to the New Economy with a focus on innovative and knowledge-based industry. This chapter reviews state policies that have been proposed and implemented that are geared towards the New Economy and assesses Connecticut's strengths and weakness in the New Economy with the results presented in an Innovation index. The index, modeled after indices created in other states, ranks Connecticut compared to other states in areas important for success in the New Economy. Finally, the chapter concludes with findings and recommendations for policies and programs around innovation to enhance Connecticut's competitive advantage.

Innovation Policy in Connecticut

One of Connecticut's competitive advantages, as cited in several national rankings (see Appendix G) and on DECD's website, is its reputation as a center for innovation and technology. Beginning in the economic recession of the early 1990s, various task forces, study groups, and consultants have conducted assessments on a range of aspects that contribute to the state's economic competitiveness. Many reports have been issued offering a great number of proposals and recommendations, and often these have resulted in either legislative or executive branch initiatives to improve competitiveness. However, even when legislation is passed and/or the governor begins an initiative, the implementation may never fully occur. A summary of these proposals and initiatives along with a brief synopsis of their status is provided in Table VI-1.

Table VI-1: Legislative Proposals and Initiatives Aimed at Innovation				
Legislation/Initiative	Goal	Funding Level	Funding Source	Result
P.A. 93-382 <i>Technology Deployment Act</i>	Strengthen links between basic research and the creation and manufacturing of new products	\$5 million	Bond funding	Programs were funded but unclear whether they have continued
P.A. 96-264 <i>Economic Recovery Act</i>	Commercial property with links to a major university with programs in biotechnology, pharmaceutical and photonics are entitled to same benefits as businesses in enterprise zones.	N/A	Tax credit	Due to how the data is reported to DRS, unable to determine utilization
P.A. 04-212 <i>An Act Concerning Workforce Development</i>	Requires Office of Workforce Competitiveness to establish a competitive innovation challenge grant program	N/A	Existing resources	Since no funding was provided initiative did not occur
P.A. 05-129 <i>An Act Establishing a Connecticut New Opportunities Fund</i>	Invest in seed stage and emerging growth companies	Directs CII to establish a fund not to exceed \$50 million with 10-year term	Private entities with state covering losses	Program never launched because state never committed to covering the losses

Table VI-1: Legislative Proposals and Initiatives Aimed at Innovation

Legislation/Initiative	Goal	Funding Level	Funding Source	Result
<i>Building on Connecticut's Core Competencies in the Knowledge Economy</i> (2005 report for OWC)	Five key recommendations including: <ul style="list-style-type: none"> • focus investments on strategic technology areas • focus investments in 4 activities—talent generation; applied research; research enhancements, and innovation • Priority on initiatives that promote multi-institutional collaboration • Ensure matching requirements • Manage as one program 		Not addressed	
P.A. 05-149 <i>An Act Permitting Stem Cell Research and Banning the Cloning of Human Beings</i>	Advance embryonic stem cell research	\$100 million \$20 million in first year 06-07 \$10 million for each year after to 2015	\$20 million from General fund; \$80 million from Tobacco Settlement	3 rounds of grants awarded: FY 07: \$19.8m – 21 projects FY 08: \$9.84m -22 projects FY 09: \$9.8m – 24 projects
P.A. 05-165 <i>An Act Concerning Establishment of an Innovation Network for Economic Development</i>	Required three economic development agencies and UConn to develop a plan and budget to create an Innovation Network focused on technology transfer. Plan should address several areas including creating links between investors and incubator companies.	Use as a catalyst \$10 million from existing resources of DECD, CII, UConn, CDA, and OWC to obtain \$40 million in private funding	Existing resources	DECD produced report with recommendations – formed the basis of P.A. 06-83
P.A. 05-198 <i>An Act Concerning the Promotion of Collaborative Research Applications with Industry</i>	Office of Workforce Competitiveness required to: <ul style="list-style-type: none"> • establish Challenge Grant awards program, • prepare recommendations to advance the state's position in nanotechnology, • and establish an Advisory Council on Nanotechnology. <p>DECD required to recommend an implementation plan and budget to establish an Innovation Network (also in P.A. 05-165)</p>	No funding provided	Existing resources	-Nanotechnology report issued and Advisory council created; recommendations from report enacted into legislation (P.A. 06-530) -Innovation Network report issued -Pilot of challenge grants; funding from nanotechnology fund
P.A. 06-83 <i>An Act Concerning Jobs for the Twenty-First Century</i>	Established initiatives to spur growth in the New Economy See Table II-3 below	See Table II-3 below		

Legislation/Initiative	Goal	Funding Level	Funding Source	Result
<i>A Talent-Based Strategy to Keep Connecticut Competitive in the 21st century (2007)</i>	Resulting from governor's talent symposium series – policy proposals included: development of better STEM education; investment in innovation challenge grant program; increase early stage capital; and expand SBIR into a full service innovation and commercialization services resource center.			SBIR expanded its role from assisting with applications for grants. Now maintains database on research and technology companies. Acts as communications link and match up of companies w/tech needs and potential suppliers
Sources: Office of Workforce Competitiveness reports, Public Acts, OLR summaries, agency websites and interviews with agency staff.				

While all the initiatives listed above were important in addressing the state's capacity for innovation in one way or another, probably the most far-reaching was P.A. 06-83, *An Act Concerning Jobs for the Twenty-First Century*. The act established a number of programs and proposals to spur growth for the New Economy, including components addressing economic growth, innovation, and technology-based business. However, implementation of the components has not always occurred, often due to lack of funding. Table VI-2 below provides a listing of each major component of the initiative and its current status.

Component	Status
Establish an eminent faculty recruitment program at the University of Connecticut	Implementation underway -- six eminent professors hired for alternative energy programs including UConn Global Fuel Cell Center. Funding -- \$4 million state funding --\$2 million match from utility companies -- \$3.5 million from Clean Energy Fund
Establish a Center for Entrepreneurship at the University of Connecticut	Two entrepreneurial centers - one associated with law school, law students assist new business w/patent and other legal issues – other is located at CT Center for Advanced Technology, and associated w/business school; offers assistance to business in incubator programs
Establish a program to provide venture capital to newly established or expanding businesses in the early stages of development with CII as the administrator	Funds were never allocated
Authorizes DECD to award grants to entities operating incubator facilities	DECD has issued grants to CT Center for Advanced Technology (\$1 million annually since FY 07) for its incubation program, and to UConn at Avery Point to expand its incubator program
Connecticut has an incubation network, as discussed earlier -- this helps support two of the sites	
Requires CII to provide matching financial assistance for micro business that receive federal funds under the Phase II Small Business Innovation Research or Business Technology Transfer programs	Responsibility transferred to DECD in 2007. OWC offers \$250,000 matching SBIR grants. Total amount allows funding for about four grantees
Establish the Office of Business Advocate to serve as an information clearinghouse on public and private business assistance programs	Advocate appointed but position abolished in governor's deficit mitigation plan in early 2009
Exempt all manufacturing machinery and equipment from local property taxes with a five-year phase-in, with the full exemption taking effect beginning October 1, 2011	Implemented – biotechnology companies and film production companies also exempt

Establish an “Engineering Connecticut” Loan Reimbursement Program for persons who have been awarded an undergraduate or graduate degree in engineering and are newly employed as engineers in Connecticut as of January 1, 2006	Not implemented –lack of funding
Establish a “You Belong” Loan Reimbursement Grant program for doctoral graduates who are employed in economically valuable fields	Not implemented – lack of funding
Establish a corporate tax credit for producing films and digital media in Connecticut. Credits are transferable	Implemented – Approximately \$124 m total authorized thus far. DRS reports to date are claimed from insurance premium tax liability (\$42.7m); reports on claimed corporate business tax credits not yet available
Three pilot grant programs run through the Department of Education – a high school Math and Science Challenge program; a high school Generation Next program; and a Future Scholars program	Generation Next and Future Scholars each received funding of \$125,000; no funding for the math and science challenge program

How Well Are We Doing?

Improving a state’s economic competitiveness cannot rely on a single strategy left to one state agency or program, but rather depends on a framework of policies with an overall goal of state economic growth and increasing prosperity for its residents. The very fact that the strategy should be an interconnected one makes it much more difficult to quantify.

Also difficult to quantify in “how well are we doing” are the collaborative and cultural aspects necessary for innovative economic strategies to be implemented. Connecticut has begun to develop this culture and structure that weaves economic development throughout government and beyond, but a great deal of what we do, how much we do and how we do it is still based on an older organizational model.

Instead, following the state strategy for innovation economic development, Connecticut should target and capitalize on the features that have been the state’s traditional strengths. However, a critical assessment of what factors are needed in this innovation economy, and how the state stacks up comparatively, is needed. What may have been the state’s perceived strengths may have slipped comparatively due to: lack of attention; population or other demographic changes; or other states making improvements.

Assessments and benchmarking provide diagnostic tools, and while these tools are used to rate many measures of the state’s economy fairly frequently,⁴⁷ program review finds there is no one in state government responsible for analyzing the diagnosis and developing the best treatment. Analysis is necessary to determine what the ratings indicate and what they mean for the state’s present and future economic competitiveness, and should form the basis of what corrective measures are needed to recover lost ground and improve the state’s competitiveness. As the state strategy for the innovation economy suggests, this requires collaboration and sustained effort.

Measuring success in the New Economy. Assessing Connecticut’s progress in the New Economy requires a different approach than has previously been taken. Benchmarking based on

⁴⁷ CERC and Northeast Utilities

number of jobs created or retained only provides a narrow view of the state's economic health, and especially if examined only in terms of businesses that received state assistance. While job creation and retention is one measure, looking at that number alone does not reveal the state's entire economic picture or project it for the longer term. Connecticut should begin measuring its competitiveness in the knowledge economy by looking at a broader, longer-term set of metrics, and not just the traditional ones, like jobs and taxes.

Program review identified several states that measure themselves using an innovation scorecard, including Massachusetts, Maine, and Oregon,⁴⁸ and developed a scorecard based on many of the factors those states use to evaluate their innovation components. This assessment, labeled the Connecticut Innovation Scorecard, is presented in Figure VI-1. The committee used the same 10 states⁴⁹ that Massachusetts used for comparison in its 2008 innovation index report, as those were identified as leading technology states.

The Connecticut Innovation Index comprises 30 indicators that measure Connecticut's economic capacity and ability to compete in the high-technology and innovation-driven economy. Staff used the most recent data available for the measures in comparative rankings as well as the one-year and five-year trends. In some cases, the data are very recent, while in others they may be several years old. The year of the most recent data is listed in the index measure. For definitions of the measures and sources used to formulate the index see Appendix H. The indicators are organized into six groups:

4. Research and Development Capacity
5. Innovation Capacity
6. Employment
7. Overall Economy
8. Education Capacity
9. Connectivity Capacity

In addition to the scorecard itself, a brief summary of each of the six assessment areas is provided, including: a description of what makes that component of the innovation scorecard important; some of the background of how Connecticut is doing in that category; additional comparative information; and the category's strengths and challenges for the state.

⁴⁸ Massachusetts 2008 Index of the Innovation Economy, Maine Innovation Index, Oregon Innovation Index 2007, and John Adams Innovation Institute.

⁴⁹ California, Connecticut, Illinois, Massachusetts, Minnesota, New Jersey, New York, North Carolina, Pennsylvania, and Virginia

Figure VI-1: Connecticut Innovation Index, 2009

CONNECTICUT INNOVATION INDEX 2009 Indicator Performance Summary				
INDICATOR	1 YEAR TREND	5-YEAR TREND	NATIONAL RANK ¹	RANK ¹ COMPARED TO COMPETITORS
RESEARCH AND DEVELOPMENT CAPACITY				
R&D Intensity ^a (2006)	▼	▲	6	2
Total R&D Performance (2006)	▲	▲		
Industry R&D Performance (2006)	▲	▲		
Academic R&D Performance (2006)	▲	▲		
Federally Funded R&D Centers (2006)	N/A	N/A		
State R&D Tax Credits (\$millions) (2006)	▲	▼		4
Federal EDA ² funding (2007)	▼	▼	53	10
INNOVATION CAPACITY				
SBIR/STTR Funding (2008)	▲	▼	18	8
SBIR - % awarded to proposals (2008)	▲	▲	15	7
Venture Capital per \$1,000 GDP (2008)	▼	▼	16	10
Patents Issued per capita (2008)	▼	▼	8	4
Entrepreneurial Activity (2007)	▲	▲	32	9
EMPLOYMENT				
High Technology Employment - % Change (2004)	▼	▲	11	5
High Tech Share of all Business Establishments (2004)	▼		17	7
Percent Workforce in S&E occupations (2006)	▼		8	3
OVERALL ECONOMY				
Real Gross State product (2000 \$) % Change (2008)	▼	▲	40	10
Real Per Capita GDP (2008)	▼	▲	2	1
Population Growth & Migration (2009)		▲		9
Total Exports (2008)	▲	▲	25	3
Exports as % of GDP (2008)	▼		30	5
EDUCATION CAPACITY				
Math Skills of 8th Grade Students (2007)		▼	28	7
Science Skills of 8th Grade Students (2005)		▼	20/44	5/8
Higher Education Enrollment among young people - chance for college by age 19 (2008)		▲		3
Higher Education 18-24 year olds (2007)		▼		
S&E ³ Graduate Students per 1,000 25-34 yr olds (2005)		▲	4	2
S&E Doctorates Awarded per capita (2006)	▲	▲	8	3
Education Attainment - % of Population 25 and Older with Bachelor's Degree or More (2007)	▲	▲	5	2
CONNECTIVITY CAPACITY				
Household Connectivity (percent) (2007)	▲	▲	7	2
Residential High Speed Internet Access (2006)	▲	▲		
Classroom Connectivity (2008)	▲	▲		3

**Years in parenthesis at the end of each category represents the most recent year of data available

¹ Rankings & trend data included when available; competitor rank out of 10 and national rank out of 50 unless otherwise noted

² Federal Economic Development Agency

³ S&E - Science and Engineering

Research & Development

Connecticut has a high R&D intensity (measured by total federal R&D dollars per gross domestic product) led by strong industry based research.

Performance Summary (5 yr):

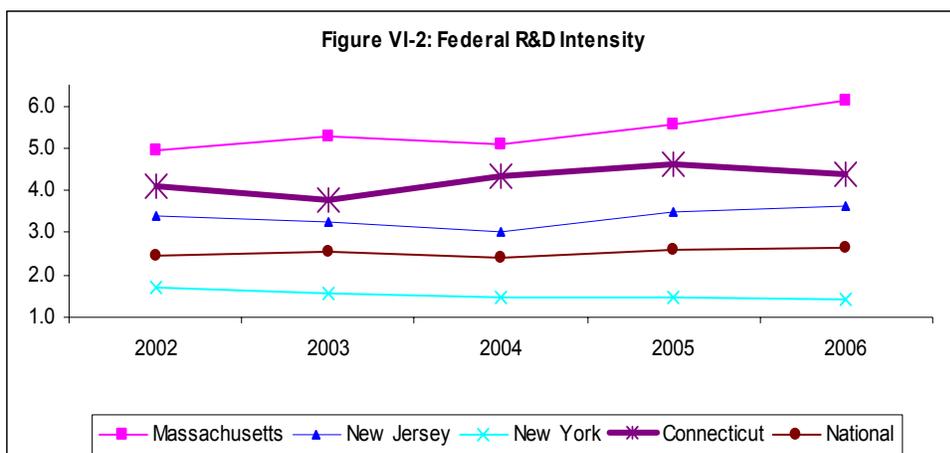
R&D Intensity: ▲
 State R&D Tax Credits: ▼
 Federal EDA funding: ▼

Why is it important?

Innovation and discovery of new ideas requires firms, universities, and entrepreneurs to invest in research and development (R&D). Research and development adds to the knowledge base of the region and is essential to long-term growth. R&D spending at universities creates opportunities for partnerships between education and industry that can translate into higher retention of talented individuals and companies, creation of new companies, and long-term growth.

Strengths

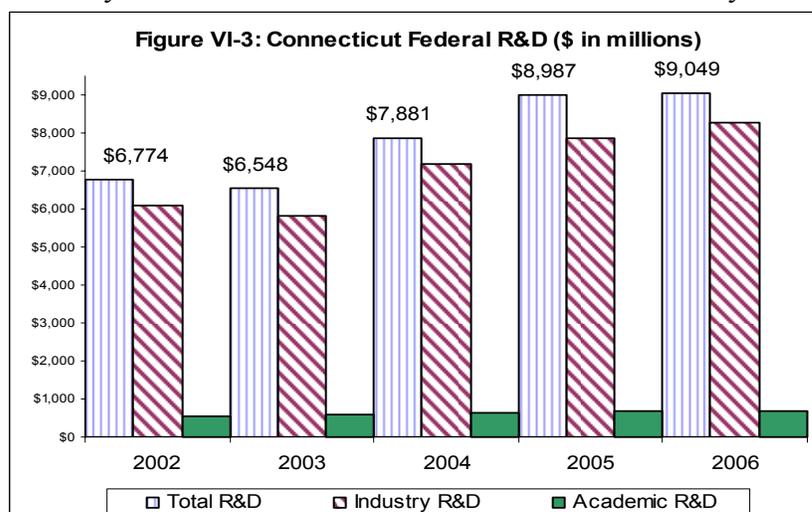
- Federal funding for industry research and development has consistently been a strength in Connecticut. **90 percent of Federal R&D money into the state goes to industry.**
- R&D funding has increased each year for the past five years.
- R&D tax credits, often cited as a plus for business, rank 4th among competitor states in terms of credits issued per GDP.



- Connecticut has a strong R&D intensity (ratio of total R&D to the state GDP) compared with competitor states. However the trend has remained relatively flat and is driven by industry.

Opportunities for Improvement

- **Connecticut remains weak on higher education research and development;** only 8 percent of total federal R&D money into the state.
- **Rank 53rd (last) in Federal EDA funding** – While not targeted specifically at R&D, this rank indicates a lack of initiative and competitive drive to obtain federal funding for economic development.



Innovation Capacity

Connecticut does not fare well in a number of measures that assess innovation capacity such as venture capital per GDP.

Performance Summary (5 yr):

SBIR: ▼
Venture Capital: ▼
Patents: ▼
Entrepreneurial: ▲

Why is it important?

This index measures the extent to which innovation, intellectual property, and promising ventures are created in the state – through patents, amount of entrepreneurial activity, venture capital into promising companies, and federal support for new innovative ideas through SBIR funding. Strong entrepreneurial activity within a state demonstrates an environment and economy that supports the efforts to start and grow businesses.

Strengths

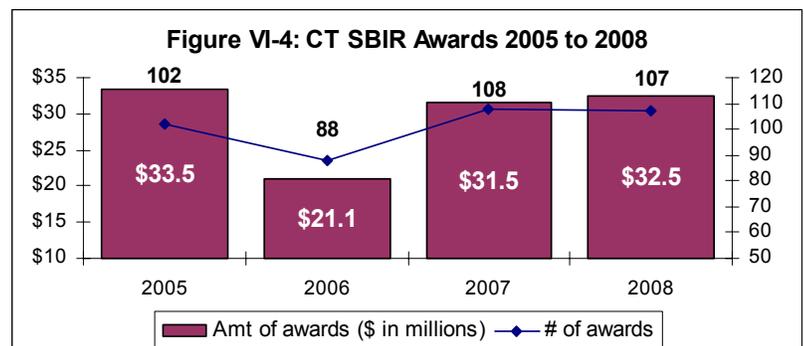
- **SBIR funding to Connecticut improved slightly (3.2 percent increase)** in 2008 – \$32.5 million from \$31.5 million in 2007. The number of awards declined from 108 in 2007 to 107 in 2008, but the dollar value increased.
- Connecticut's success in receiving grants as a percent of applications has also increased from about 15 percent in 2005 to 19 percent in 2008.
- Compared to other states, Connecticut does well in patents issued per capita. For the four-year period between 2004 and 2008, Connecticut had 213 patents per capita, placing CT 8th nationwide and 4th in the leading technology states group.

Having the capacity to use the internet facilitates knowledge dissemination, communication, collaboration, and the ability to participate directly in innovation

- Between 2003 and 2007, residential internet connectivity in CT increased 150 percent.
- 81.3 percent of CT students have access to computers; ranking 3rd among comparative technology states in 2008.

- SBIR funding: When amount of awards are measured against state GDP, **Connecticut ranks 15th nationwide** in the most recent comparative period (2003-2005); at \$164 per \$1 million of GDP, *only slightly above the national average of \$161*.

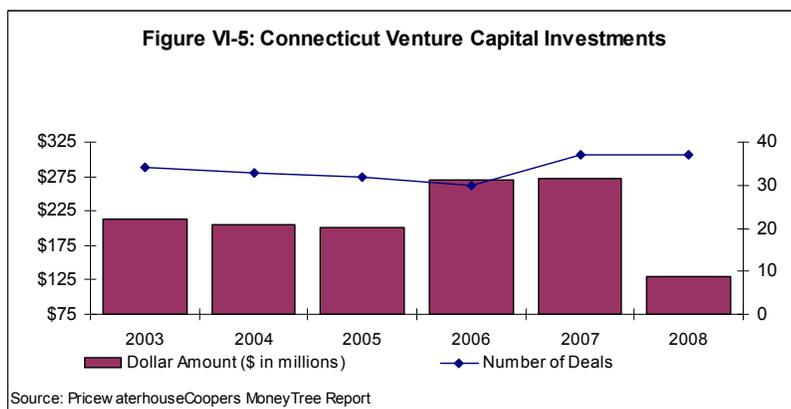
- In the 10-state comparative group CT ranks 4th, but well behind the top state, Massachusetts, which obtains \$824 for each \$1 million of state GDP.



Opportunities for Improvement

- **Patents: A downward trend.** Between 2007 and 2008, the number declined just by 16 from 1611 to 1595, but between 2003 and 2008, the drop was substantial from 1844 to 1595 (14 percent decline).
- Although entrepreneurial activity rates (see Appendix H for how this is calculated) have increased in the past five years, **Connecticut lags the national average in per capita entrepreneurs** – 300 in Connecticut versus 320 per 100,000 people in the nation.

In both the one- and five-year trends, **Connecticut companies have seen a decrease in investments from venture capital.** Connecticut experienced a dramatic (about 60 percent) drop in venture capital investments between 2007 and 2008, by far the biggest drop compared to other states.



Compared to competitor states, Connecticut ranks near the bottom for venture capital investments per \$1,000 in GDP.

	2006		2007		2008	
	Amt	Rank	Amt	Rank	Amt	Rank
MA	\$8.85	1	\$10.45	1	\$8.26	1
CA	\$7.34	2	\$8.16	2	\$7.60	2
MN	\$1.37	5	\$1.92	3	\$1.88	3
NJ	\$1.85	3	\$1.34	6	\$1.39	4
PA	\$1.53	4	\$1.44	4	\$1.22	5
NY	\$1.22	7	\$1.02	9	\$1.20	6
VA	\$1.17	8	\$1.41	5	\$1.15	7
NC	\$1.10	9	\$1.29	7	\$1.06	8
IL	\$0.61	10	\$0.88	10	\$0.70	9
CT	\$1.34	6	\$1.28	8	\$0.60	10

Source: PricewaterhouseCoopers MoneyTree Report

Employment: High Technology and Science & Engineering

Connecticut ranks low compared to its competitor states in terms of percent of workforce employed in the high tech industry and has seen a drop in scientists and engineers in the workforce between 2005 and 2006 (most recent data).

Performance Summary (1 yr):

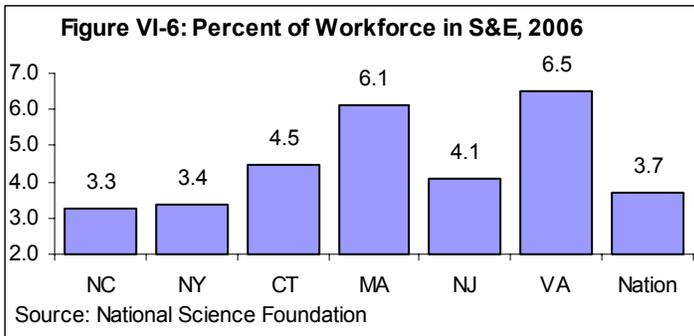
High-tech employment: ▼
High-tech business: ▼
S&E workforce: ▼

Why is it important?

The metrics under this indicator show Connecticut’s ability to sustain and grow an innovation-based economy. Knowledge workers are at the center of an innovation economy and scientists and engineers are often the professionals that spearhead innovation.

Strengths

- **4.5 percent of Connecticut’s workforce is in science and engineering occupations – higher than the national average.**



- **Compared to the nation, Connecticut has a larger percentage of high-tech employers.**

Table VI-4: High Tech Businesses

		High Tech Businesses	All Businesses	% of Total
2003	CT	7,827	91,207	8.6%
	Nation	590,417	7,223,240	8.2%

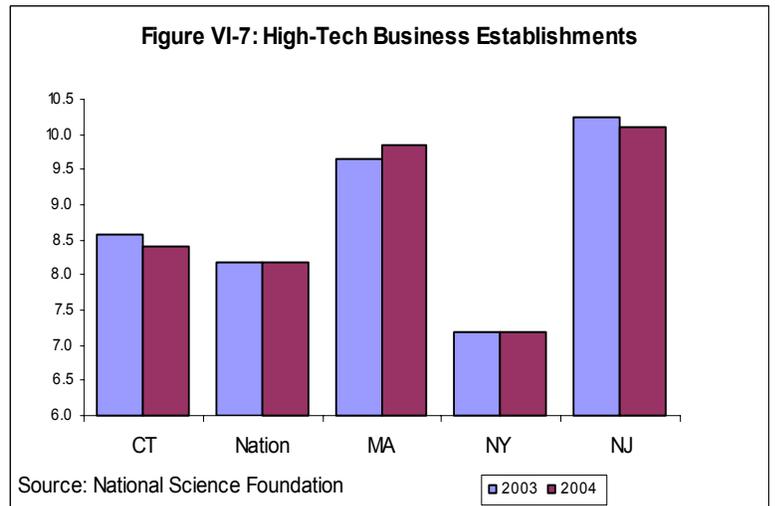
2004	CT	7,794	92,710	8.4%
	Nation	603,642	7,366,978	8.2%

Source: National Science Foundation (most recent available data)

Opportunities for Improvement

- While the nation as a whole saw no change in **high tech establishments** between 2003 and 2004 **Connecticut saw a decrease.**

- Massachusetts was the only competitor state that experienced an increase.



- **Connecticut saw a decrease in employment** (13,455 fewer employed) between 2003 and 2004 (most recent national data) – with 40 percent of the loss in employment in high-technology establishments.

Overall Economy

Per capita real GDP is still the highest in the nation and Connecticut's current unemployment rate remains below the national average. However, there has been little to no long-term job and population growth.

Performance Summary (5 yr):

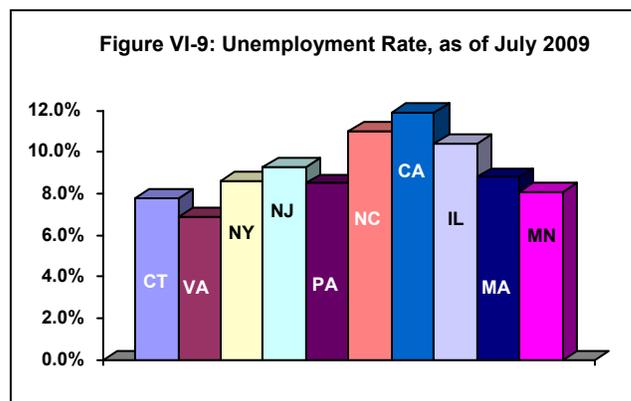
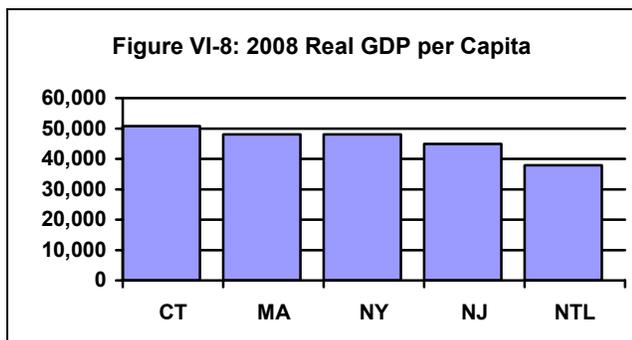
Real per capita GDP: ▲
State GDP: ▲
Population growth: ▲
Job Growth: ▼

Why is it important?

Population, employment, and income growth are gross economic measures of the prosperity of a state and are generally considered output, or resulting from other indicators in the economy like an educated and productive workforce, and a growing population. These measures are important barometers of how well the state is doing.

Strengths

- While Connecticut's **per capita real GDP** declined in 2008, it **still was the highest in the nation** (excluding D.C.) The figure below shows the 2008 per capita GDP compared to the neighboring states and the national average; Connecticut is still about \$2,000 higher than Massachusetts.
- **CT's 2009 unemployment rate is less than many other states** - as of July 2009, 7.8 percent - below the national average of 9.4 percent. CT ranked 19th, but several states had identical unemployment rates, and thus the rate of 7.8 percent was 11th. Of the states in the comparison group, only Virginia's rate was lower at 6.8 percent.



Opportunities for Improvement

- **Per capita real GDP** (in year 2000 dollars to account for inflation) **declined in 2008 from 2007**. In 2008, CT per capita GDP was \$50,758, down from \$51,139 in 2007. Connecticut was one of 12 states to experience a decline in real per capita GDP; and overall Connecticut ranked 40th in the percentage growth in GDP between 2007 and 2008.
- While Connecticut's GDP increased in current dollars from about \$212,252 billion in 2007 to \$216,174 billion in 2008, (about 1.8 percent), when real gross domestic product is examined, Connecticut does not fare as well. **In 2008, CT real GDP (in year 2000 dollars) fell by 0.4 percent from 2007.**
- **Connecticut has had very little population growth** – 1.0 percent between 2004 and 2009. Compared with the other states in the comparative group Connecticut ranked 9th (tied with Pennsylvania). Only Massachusetts had less increase in population at 0.9 percent. North Carolina was 1st (9.3 percent) and Virginia 2nd (5.3 percent), and these were the only states in the comparative group that did **not** experience a net migration to other states. The other states experienced limited growth through foreign in-migration and natural growth (fewer deaths than births).
- Connecticut incomes are high by any measure – per capita income, real GDP per capita, or annual average wage. Whether that is a deterrent to job growth is an area of concern. While some reports indicate little or no job growth in Connecticut, it depends on the period measured. If measured **since 2000, Connecticut has seen no job growth**, but if measured since 2005, CT's job growth as of 2008 was 2.6 percent, which placed the state 19th and higher than the national average. Of course, those figures do not take into account the job losses of the most recent recession.

Education Capacity

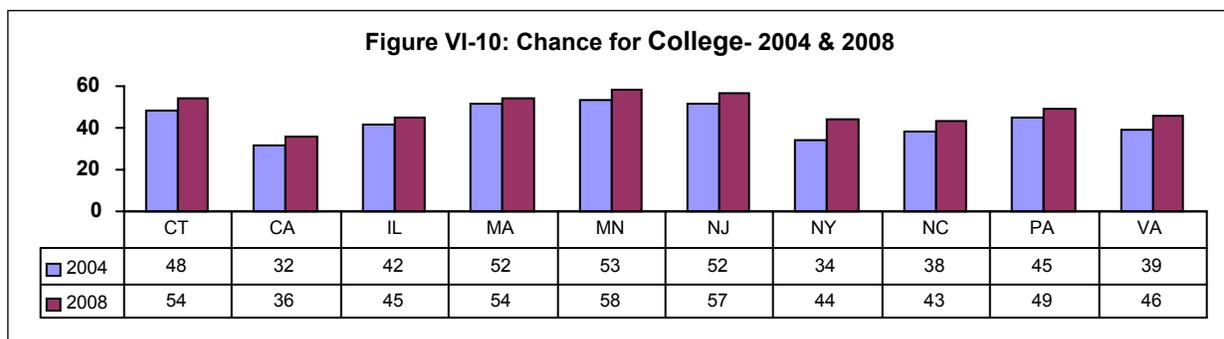
By some educational measures, Connecticut appears to be doing well, while others indicate a cause for concern.

Why is it important?

Educational attainment is a key driver of the innovation economy. Companies, universities and a pipeline of workers with advanced skills and education in math and science.

Strengths

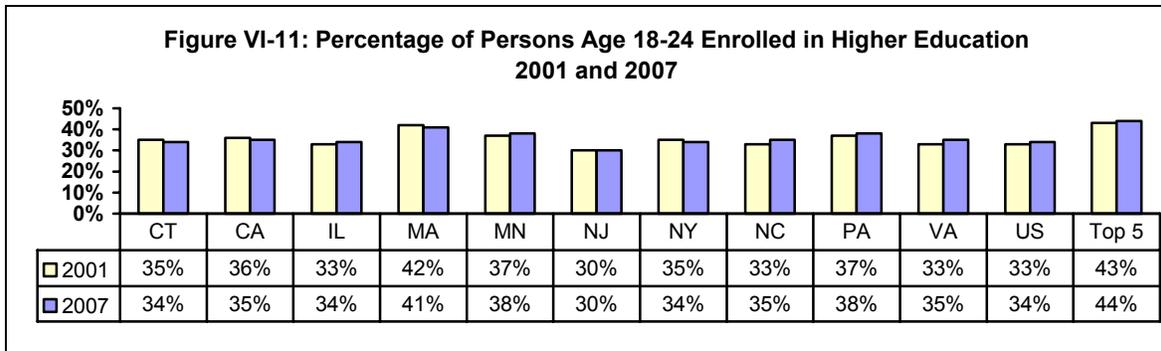
- In terms of “**chance for college**” -- a calculation that uses 4-year high school graduation rates and the college continuation rate of those graduates anywhere in the U.S. -- the chart below shows that the trend in this measure in Connecticut is a positive one, and that the **state ranks high – 3rd of 10** of leading technology states.



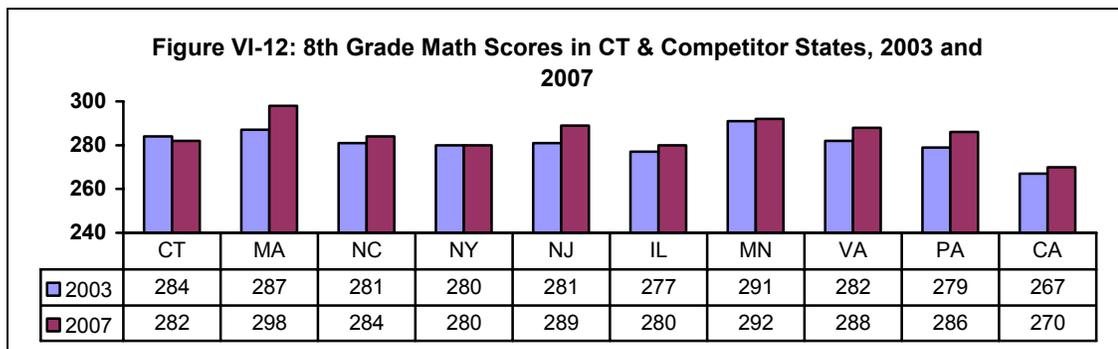
- The **number of S&E graduate students in CT grew 21 percent** over the previous decade (5,732 in 1996 to 6,943 in 2005), rising faster than the nation’s increase of 15 percent.
- In 2006, **CT ranked 8th in the nation for S&E doctorates awarded per capita** (12.6 percent), although dropped from 7th in 2007.
- Compared to the nation, Connecticut has a high percentage (**34.7 percent**) of the population with a **bachelor’s degree or higher, ranking 5th in the nation**.

Opportunities for improvement

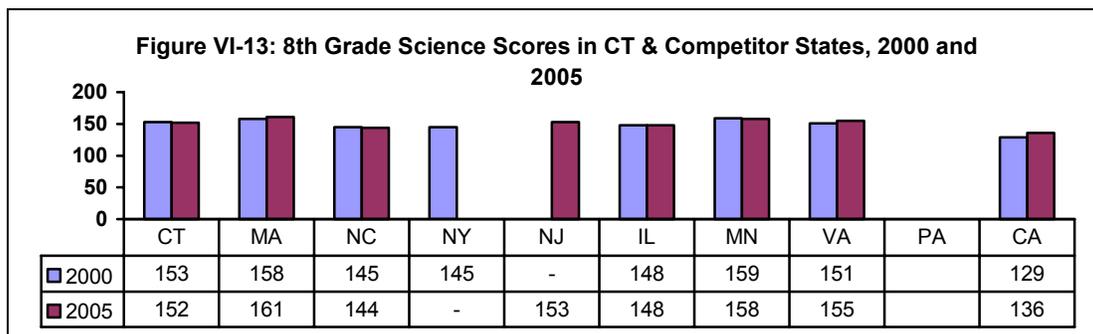
- The National Report Card on Higher Education assesses **state residents’ participation in higher education**, as a percent of 18-24 year olds who are enrolled at a higher education institution. Using this measure, Connecticut does not fare as well.
 - In 2001, 35 percent of CT residents in that age group were enrolled in higher education, two points above the national average.
 - In 2007, **Connecticut’s percentage had slipped to 34, the same as the national average**. In comparison with nine other states considered leading technology states, Connecticut ranked 6, along with New York and Illinois.



- CT's 8th-grade math scores declined two points from 2003 through 2007, a negative trend, and the only state in the comparative group to experience a downward trend in scores (Figure IV-12).
- While CT's score was still 2 points higher than the national average, it ranks 28th overall, and of the 10 states in the grouping, CT ranked 7th.



- In 2000, Connecticut 8th grade science scores were 153 and CT ranked 16th of 38 states with scores available.
- In 2005, Connecticut **science scores slipped by a point to 152 – one of 15 states to have declining scores.** Of 44 states reporting scores, CT ranked 20th. CT ranked 5th of the 8 comparative states with scores available. (Figure IV-13).



Comprehensive Innovation Policy

The National Governors Association's best practices for developing a comprehensive innovation policy are presented below. The practices encompass a multifaceted approach to building an innovative economy, both through broad policy development aimed at education and investments in human capital to more narrow strategies targeting specific types of investment activity.

Develop a Comprehensive Innovation Policy

- *Recognize that a knowledge/innovation economy involves more than one agency -- education, higher education, and economic development all play a role*
- *Ensure that K-12 education system meets high standards in science, technology, engineering, and mathematics*
- *Align post-secondary education to support the economy*
- *Implement innovation-based economic policies*
- *Invest in innovation and promote the transfer of research and development from education institutions to commercialization*

Improve Access to Seed and Venture Capital

- *Provide tax credits or other measures that stimulate "angel" investments*
- *Build an innovation network connecting entrepreneurs with investors and services*

As noted in earlier, one of Connecticut's competitive advantages is its reputation as a center for innovation and technology. In 2008, the state ranked high in two national reports that grades states according to benchmarks around innovation. The Kaufmann State of the New Economy ranked Connecticut sixth highest, and the Milken State Technology and Science Index ranked the state seventh.

The Connecticut Innovation Scorecard shows that education capacity is generally a state asset, but that recent scores in math and science in the lower grades were cause for concern. A pipeline of well-educated workers, especially in STEM -- science, technology, engineering, and math -- is critical to maintaining an innovative edge. The recent economic strategic plan addresses these concerns and lays out 10 recommendations for K-12 education, as well as higher education, adult literacy, and workforce training needs. The plan calls for greater integration of policy development, planning and program implementation of education and workforce development agencies, and indicates it should be achieved with interagency cabinet and policy/budget teams rather than a restructuring or consolidation of state agencies.

The economic strategic plan also recommends enhancing programs that prepare workers for the jobs of the future including health care, digital media, and green technology, among others. The economic competitiveness study does not examine the education and workforce

issues as another 2009 committee study on alignment of postsecondary education and employment addresses that area, and makes recommendations for improvement.

As noted earlier in the chapter, Connecticut has focused on innovation policies and competitiveness beginning in the early 1990s. Since then, various task forces, study groups and consultants have conducted reviews on a range of aspects that link innovation and the New Economy. Many of the reports included proposals for initiatives and investments to promote technology and innovation in Connecticut. Some of the proposals have been implemented and others have not, and still others have been started but have not survived, typically due to lack of funding.

Many of the recommendations contained in the September 2009 economic strategic plan around innovation, talent, and technology come from the reports noted earlier. The plan uses the state's strengths and assets identified in those reports as a focus for investments, and calls for the creation of several funds and entities, including:

- A CTech Fund for the 21st Century;
- Technology Company Working Capital Fund Program;
- International Opportunities Program; and
- An Office of Clinical Trials.

All of these initiatives will require funding (e.g., \$20 million in public money for the CTech Fund) but it is unclear where the public funding will come from for most of the proposals. Further, even funds already established for research and development appear to be in jeopardy in the state's current fiscal crisis. For example, the state committed \$100 million over 10 years to stem cell research, utilizing the State's Tobacco Settlement Fund. Since passage of the legislation in 2005, \$39.42 million has been allocated to support 78 researchers at Yale, 115 scientists at UConn, and two graduate students and a technician at Wesleyan.³² However, the Deficit Mitigation Plan issued by the governor in November 2009 calls for the \$10 million in FY 10 funding to be redirected to fill the budget gap, with another \$6 million of the tobacco settlement money that had been used for biomedical research also be redirected to the budget deficits.

Tax credits are another way Connecticut has supported research and development. Since 2000, \$175 million worth of research and development tax credits have been granted. However, this represents only 13 percent of the total value of all tax credits issued, and like other state financial assistance, indicates weak state support for building the state's innovation capacity. Since innovation investments have not been well funded in the past, it is crucial that they maintain some level of funding or the state's future competitiveness will be harmed. The committee makes recommendations below to enhance investment in this area.

³² Report to Governor and General Assembly, "An Act Permitting Stem Cell Research and Banning the Cloning of Human Embryos," June 30, 2009.

Investing in Entrepreneurial Activity

Throughout the study, program review heard from many business groups and other organizations that the greatest challenge entrepreneurs face in Connecticut is access to early-stage or seed capital. Capital at this stage is crucial since an early-stage business needs funds but banks view such ventures as too risky and the entrepreneur has typically exhausted capital from family and friends.

In the past, venture capital funding for early-stage companies was available, however more recently venture money appears to be decreasing. In 1995, start-up and early-stage companies received 39 percent of venture capital investment nationwide, but by 2008, only 25 percent of venture capital funding went to early stage companies.³³ Economic and financial experts believe that venture capitalists are not willing to wait the 10 to 15 years it requires to see a return on investment from seed companies. The amounts of money required by early stage companies are too small for venture capitalists and not worth the administrative costs, and venture capital funds typically do not consider investments under \$1-2 million.³⁴

“Angel” investors are increasingly providing the capital to fill this gap. Angel investors are typically wealthy individuals with business or technology backgrounds who provide capital, connections, and guidance to entrepreneurs. Nationally, the average angel group investment is between \$200,000 and \$500,000, whereas the average venture capital investment is \$7 million.³⁵ Angels are typically patient investors, holding investments on average eight years before expecting a return, while venture capitalists typically look for an exit strategy in five years (for example, an initial public offering or sale).

Often these small start-up companies have an innovation- or technology-based product or service. These potential technology-based companies generally need outside capital to grow and prosper, but these companies are often risky investments and many will not succeed. However, those that receive funding at fairly early stages of development are more likely to succeed and grow than those without funding. The stages of development where this financing can be targeted are:

- Seed/Start-up Stage
 - initial stage of development
 - concept or product under development; usually not fully operational
 - usually in existence for less than 18 months
- Early Stage
 - product or service in testing or pilot production
 - may be commercially available and may or may not be generating revenues
 - usually in business less than three years
- Expansion Stage

³³ PricewaterhouseCoopers MoneyTree historical trend data

³⁴ www.entrepreneurshipfoundation.org

³⁵ PricewaterhouseCoopers MoneyTree historical trend data

- Product or service in production and available commercially
- significant revenue growth
- may or may not yet be profitable
- Later Stage
 - Product or service is widely available
 - generating positive cash flow and ongoing revenue

In addition to funding, early-stage companies need other types of support to increase success. The NGA has studied this area and recommends that states undertake several strategies to encourage the formation of angel groups and expand early-stage investment, particularly since it is an area underserved by the private market. These government actions include:

- promote seminars on private equity investment for current and potential angel investors;
- assist entrepreneurs by connecting them with existing entrepreneurship education and services;
- facilitate the formation of statewide angel group networks;
- ensure angel investors are represented on state economic development advisory boards; and
- identify and collect metrics to monitor the impact of policies to encourage angel investment.

Funding and Support for Entrepreneurs in Connecticut

Connecticut has the potential to build a robust network of angel investors to fill in the gap that exists for early-stage funding. However, not only is funding required but also technical support. Over the years, the state has started several initiatives focused on building an innovation infrastructure, however, often the initiatives are not sustained. This section describes the potential for early-stage funding in Connecticut, technical support that is or has been provided in the state, and makes policy recommendations to support an innovation-based economy.

Venture capital. Although there is no known data source on overall capital invested in innovative, high-tech companies, venture capital funding is one aspect of the market where some data are available that provide a general sense of financing for entrepreneurial activity in the state. As reported in the October briefing report, Connecticut saw a decrease of greater than 50 percent in venture capital investments in 2008 from 2007. This decrease is measured as venture capital investments per \$1,000 in state GDP, and not in overall dollars, but industry experts caution that investments must be looked at on a continuum and not just from one year to another. A couple of factors could have caused the short-term drop. One explanation is venture capitalists were holding onto reserve cash in this recession. The national average also decreased in 2008 from the previous year, but only by eight percent.

Data for a slightly expanded time period also indicate cause for concern. Over the past four years, Connecticut has seen a decrease in venture capital funding while the nation saw an

increase of 22 percent. The decrease in Connecticut of 42 percent was even greater than other competitor states in the East, such as New Jersey and Maryland, which experienced decreases of 22 and 25 percent, respectively.

Another explanation for the downward trends experienced in Connecticut is that the potential “deal flow” does not exist. If the state does not foster and grow young companies there will not be an adequate number of start-ups that have matured; thus potential investments are scarce for venture capitalists. This sentiment – inadequate supply of potential investments in entrepreneurial activity -- was repeatedly mentioned to staff in interviews with industry experts and angel investors.

Although Connecticut is a small state, a robust venture capital industry exists in the state; the companies just may not be investing in Connecticut businesses. In the second quarter of 2009, Canaan Partners in Westport topped the list as the most active venture firm in the country closing 18 deals.³⁶ Two other firms making the list included Foundation Medical Partners in Rowayton and Connecticut Innovations. For the most recent quarter of data available (third quarter 2009), of the deals closed by private Connecticut-based venture capital firms, none made investments in Connecticut companies. All Connecticut Innovations investments were in Connecticut companies, but the quasi-public is required to do so by statute.

Angel groups. Connecticut has two formally organized groups active around this type of investing. The Angel Investor Forum, with 50-60 investors, and the Angel Guild, with 15-20 investors, represent the two largest active angel groups in the state. The Angel Investor Forum is a member of the Angel Capital Association, a national organization sponsored by the Kauffman Foundation. The Angel Guild is part of the Connecticut Ventures Group, which among its activities hosts a business plan competition for Connecticut students, linking the investing community with entrepreneurs. There may be other informal angel groups at work in the state, but the numbers are unknown.

In FY 07, through a Manufacturing Assistance Act (MAA) grant, the Connecticut Ventures Group received \$90,000 in funding and leveraged \$90,000 in private funding to administer the Angel Guild. This project was designed to help form an angel investor club and educate and recruit new angel investors. However, only one year of funding was provided; not sufficient time to launch and sustain such a program.

Connecticut has the potential to build a thriving angel community in the state given the wealth that exists here. According to the Angel Investor Forum website, “Connecticut has more angels per capita than any other state.” Connecticut now must implement policies to help direct this wealth at assisting potential companies within the state grow and develop.

Building an innovation network. For four years, DECD, through the MAA, provided funding to the Connecticut Technology Council (CTC) to develop and manage the Innovation Pipeline Accelerator and Innovation Database. The purpose of the statewide Innovation Pipeline was to build an infrastructure for: connecting entrepreneurs with either other entrepreneurs or existing companies seeking new products; helping university researchers develop promising ideas; and serving as a conduit between the investor community and potential new companies.

³⁶ PricewaterhouseCoopers Money Tree Report, 2Q 2009 Summary

As part of its involvement, the CTC also completed the due diligence on new enterprises, helping to identify potential companies, and assisting promising entrepreneurs develop robust business plans in an effort to increase their success in finding funding. The Pipeline provided a “deal flow” of approximately 10-15 deals per month for the Angel Investor Forum, Connecticut’s largest angel group. In other words, 10 to 15 entrepreneurs were matched with investors each month. This project represented a state-wide attempt at building the foundation for a robust network of connecting funders and entrepreneurs.

State funding for the project was also matched by CTC funding of approximately \$42,000 annually. In addition, considerable in-kind service contributions from lawyers, accountants, and consultants were provided to companies participating in the project to help them start and grow their business. Funding for the Innovation Pipeline started in 2004 and averaged \$165,500 a year. When state funding was eliminated for this program in 2009, the program was transferred to the Connecticut Center for Advanced Technology which has now assumed the administrative costs for the program.

Small Business Innovation Research. Another source of funding for innovative and technology-based companies is the federal SBIR/STTR grant awards that total approximately \$2 billion annually nationwide. As cited in the briefing report, Connecticut companies received 107 grants totaling \$32.5 million in 2008, ranking 15th nationwide for the 2003-2005 period (the most recent comparative data available).

However, not only do small businesses need financial support but they often need technical assistance, mentoring, and guidance. The state-run office in Connecticut that provides this assistance for high-tech, innovative entrepreneurs is the Small Business Innovation Research office located at Connecticut Innovations, Inc. (from its inception in 2004 to April 2009, the SBIR office had been located at the Connecticut Center for Advanced Technology).

The primary focus of the office is to assist high-tech small businesses and entrepreneurs compete for and win the highly competitive SBIR/STTR federal grants. However, the SBIR office, with three employees, also administers various programs for businesses seeking SBIR funding that are aimed at matching businesses, entrepreneurs, and others involved in technology and innovation. The following programs were created and implemented by the staff in the office based on needs recognized from working directly with entrepreneurs: the Careers for Engineers program, Collaborate to Innovate, Partner with a Prime, Partner with a Professor, Gateway to Grants, and Matches for Money.

The CT SBIR office is not only focused on developing young companies, but through the Career for Engineers program the office helps match unemployed engineers -- many of them laid off by large companies -- with small businesses looking for experienced engineers. This program started in August 2009 and 74 matches have been made, helping Connecticut keep its talented and educated workforce in the state. These types of programs aimed at helping entrepreneurs and small businesses are crucial for success in the New Economy.

The SBIR office was also asked to host the national SBIR conference in April 2010. This conference brings together federal agencies, federal laboratories, university tech transfer offices, entrepreneurs, angel investors, and both small and large businesses. This conference provides a

great opportunity for Connecticut entrepreneurs to showcase their products and ideas, find investors, and for large companies to find potential new products. The conference will also present a venue for marketing Connecticut small businesses and for the state in general. The conference and the opportunities it offers to small business and the state's economy is an example of a broad-based strategy that should be widely supported by all the state's economic development agencies. Yet, state funding for the SBIR office was terminated for FY 2010, and now its costs must be assumed by CII.

As discussed earlier in this report, Connecticut's economic development strategies have primarily focused on an older model. Connecticut must refocus these strategies more on small businesses and building the services in the state that assist businesses at the grass-roots level. Both technical assistance and capital is needed to develop and grow innovation.

A multi-pronged, *sustained* approach is needed to spur angel investing and address the gap in early-stage financing for start-up companies, and to continue the technical support and services that small high-tech businesses require. Therefore, the program review committee recommends that the state's strategy include:

- **Implement an “angel” tax credit program whereby:**
 - **Credit Amount: Twenty-five percent of an investor's cash investment, provided no individual credit shall be greater than \$125,000, in qualified, early-stage enterprises in high-tech industries with an aggregate cap of \$6 million per year for the first three years and then decreasing to \$3 million annually.**
 - **Applicable Tax: Personal income tax**
 - **Eligibility Criteria: Investments shall be in a business that:
 - has been approved as a qualified Connecticut business by Connecticut Innovations, Incorporated (as modified in prior recommendation);
 - has had annual gross revenues of less than \$5 million in the most recent income year;
 - has fewer than twenty-five employees, more than half of whom reside in the state;
 - has been operating in the state for less than 10 consecutive years;
 - is primarily owned by the management of the business and their families; and**

- has received less than \$1 million in tax credits provided by this section in any year.
 - **Carry Forward**: The amount of credit allowed to any one investor shall not exceed the amount of tax due from such investor. Any tax credit not used may be carried forward five years.
 - **Effectiveness review**: a review of its effectiveness conducted by July 1, 2015, and a sunset date of July 1, 2020.
- **Include a Connecticut angel investor on the board of Connecticut Innovations, Inc. (as modified in prior recommendation) and the Small Business Innovation Research advisory board;**
 - **Continue funding the Innovation Pipeline Accelerator for two more years;**
 - **Create a “sidecar” fund operating within Connecticut Innovations Inc., with 10 percent of the fund set aside for university student entrepreneurs;**
 - **Provide state matching funds to SBIR/STTR Phase I grants at 50 percent, up to \$50,000 per grant; and**
 - **DECD and the combined CII/CDA organization shall create a slogan/brand for Connecticut that emphasizes the state as a place for innovation. The slogan shall be visible at the top of each agency’s website and on all marketing materials.**

Rationale. Connecticut needs to make a commitment to investing in innovation-based policies. Private investors do not want to make decisions based on a certain set of facts and incentives only to be told a year or two later that the rules have changed. In order for these policies to be successful, they must be sustained over the long-term.

Connecticut has not enjoyed a good track record for sustaining public investments as demonstrated by the termination of funding for the innovation pipeline, the SBIR office, and the angel guild. While all together administrative costs for these programs totaled only approximately \$500,000 annually, the programs often represent the state’s only support and assistance many individuals and small companies receive. In order to reduce some of the risk involved with new ventures, investors and entrepreneurs need the assurance and stability that Connecticut is a state committed to fostering and growing the entrepreneurial culture of the state.

Angel tax credit. As of the beginning of 2008, 18 states, listed in Table VI-5 below, have implemented tax credits to incentivize angel investing. The NGA notes that angel investment tax credits can be controversial and their impact has not been rigorously evaluated due to the difficulty in determining direct, indirect, and induced economic benefits for the state.

Table VI-5: States with Angel Investment Tax Credits	
Arizona	Hawaii
Indiana	Iowa
Kansas	Louisiana
Maine	New Jersey
New Mexico	North Carolina
North Dakota	Ohio
Oklahoma	Oregon
Vermont	Virginia
West Virginia	Wisconsin
Source: National Governors Association Center for Best Practices, February 2008	

However, several principles from other states’ experiences can serve as guidance in structuring a tax credit for angel investments. For example, if the investment credit is set too low, it will not spark activity. This occurred in Vermont where a 10 percent credit did not result in a significant increase in investments. In Wisconsin, success in growing angel investment came from implementing two policies simultaneously – state administrative support for creating angel groups and establishment of a tax credit. The administrator of the Wisconsin Angel Network noted that having the tax credit provided a marketing tool and a reason for angels to come together. Providing an investment tax credit will energize current angel investors and attract potential angel investors that might have previously considered investing in early stage companies too risky. The tax credit in essence lowers the risk for the investor.

In 2005, DECD commissioned the Connecticut Academy of Science and Engineering (CASE) to do an assessment of seed funding in the state. That study estimated that for every \$1 million in state funding for early-stage businesses, six new companies will be created, with one or two being successful and each creating 100 or so new or additional jobs.³⁷ With \$6 million in angel investment tax credits issued annually, using CASE estimates, that would mean approximately 36 new companies being created with six to 12 of these being successful and creating high-tech, high-wage jobs each year.

The state’s economic strategic plan also recommends implementing an Angel Investor Tax Credit to individuals, corporations, and institutions investing in qualified, early-stage enterprise in targeted areas. An angel investor tax credit was proposed in the 2009 legislative session, which was referred out of the Commerce Committee to the Senate. The bill’s fiscal note had a one-time DRS cost of \$150,000-\$200,000 for systems upgrades and costs for a part-time or full-time DECD staff person to review applications, and the bill was never put to a vote. The program review committee recommendation to have CII approve the credits and to eliminate other tax credits (recommended in Section II) should free up resources for DRS to modify its system and make the credit administration possible.

Board membership. Having an angel investor on the boards of both CI and the SBIR office will help connect investors with entrepreneurs. Companies applying for SBIR grants, especially Phase II grants, often have promising technologies in development. The award

³⁷ “Assessment of a Connecticut Technology Seed Capital Fund Program,” CASE, June 2005, pg. 14.

provides a signal to investors that these technologies hold promise and their investments could be leveraged with the federal early-stage funding grants. Also, having an investor on the boards adds a private dimension to aspects important to an investor when evaluating an investment opportunity.

Innovation Pipeline. As noted in the NGA best practices and literature on the New Economy, state level infrastructure support is necessary in order to create a network of entrepreneurs and innovation-based businesses. However, just when the Innovation Pipeline project was reaching a critical mass and at the cusp of achieving a thriving innovation network, state funding stopped. Although the program is now administered by CCAT, program review believes funding for this program should continue for another two years to continue the progress that had been made. Two more years of funding will give the project time to rebuild and also sets a goal up-front for the project to build itself into a self-sustaining network for the state.

Sidecar fund. A “sidecar” fund, defined as a committed public source of capital that invests alongside an angel group, will also increase the funding available to new entrepreneurs and will add to the number of potential new companies in the state. A sidecar fund can make it easier for angels to manage their investments in subsequent rounds of financing for a new company, increasing the chances the company will succeed. A sidecar fund allows public money to follow private investments leaving the due diligence and administrative costs of vetting investments to be borne by the private market. Setting aside a portion to assist young entrepreneurs from the state’s universities will help these new ideas get off the ground and grow new companies within the state while keeping young talented people in Connecticut.

Ohio’s sidecar fund is a model example often cited by angel investors and those involved in the industry. That state’s Third Frontier program – a 10-year, \$1.6 billion commitment to establish the state as an innovation leader -- has an early-stage funding initiative which, since 2002, has invested \$4 million alongside angel investor groups. The state’s Pre-Seed Fund also provides funding to venture groups focused on early-stage financing, and to universities and hospitals to assist in the development of technologies that have the potential to be spun-off into start-up companies. Although many factors contribute to increases in venture capital funding, Ohio has seen an increase in venture capital investments per GDP of more than 100 percent since implementation of the sidecar fund.

SBIR matching grants. Providing matching funds to Phase I awardees should help promising companies in Connecticut make it to the next funding level, allowing more time to grow and thus have a greater chance for success. By matching state money with federal money, the administrative cost of identifying and vetting promising companies is undertaken by the federal government. The companies that are awarded funding are presumably less risky since the federal government has done the due diligence on the companies. Program review was unable to determine the exact number of states that have matching SBIR programs, but several states across the nation have been providing matching funds to these promising companies for years. Table VI-6 highlights a few states that provide matching funds and some aspects of their programs.

Table VI-6: SBIR/STTR State Matching Fund Programs	
State	Matching dollars
New Jersey	Bridge grants up to \$50,000 – companies that received Phase I awards and are awaiting Phase II awards
North Carolina	Phase I: 100% match up to \$100,000 – 75% awarded when receive Phase 1, 25% awarded when submit Phase 2 application Since 2006, issued \$8 million in matching grants
South Carolina	Phase I: 100% match up to \$100,000 FY10 max amount of awards \$750,000
Indiana	Phase I: 100% match
Source: Various state economic development websites	

Most other state assistance in Connecticut is targeted at larger companies. If a matching grant program were implemented, it would demonstrate that Connecticut is also committed to smaller, early-stage companies as well. In 2008, 63 Phase I awards were made to Connecticut businesses. If the number of awards remains the same, providing a matching grant would cost the state approximately \$3.15 million for a match of 50 percent on each award at a maximum of \$50,000 per award. Given the current economic conditions of the state, PRI recognizes funding is limited. However, the legislature, recognizing the long-term importance of programs offered by CII, recommended authorization of \$24 million in bond funding in fiscal years 2008 and 2009 of which \$20.5 million remains unallocated. In contrast, the average amount of a single grant through the Manufacturing Assistance Act has been \$2 million, although grants have not been awarded in several fiscal years.

Innovative brand for the state. The Department of Economic Community Development’s website does not emphasize or have a banner statement showing Connecticut’s commitment to innovation. Not only does Connecticut need to implement innovation-based policies, the state must also market itself as a place of innovation; policies without a message will go unnoticed. Getting the message out that Connecticut is a place of innovation does not require resources and could be implemented today. The following brands appear on other state’s economic development agency websites and provide an example of what could be done in Connecticut: “Team Washington: Innovation is in our nature;” “Pennsylvania: State of Innovation;” and “Florida: Innovation Hub of the Americas.”

These recommendations aim to fill a gap that exists in the market, early-stage funding, and to remain competitive with other states; many of them have already implemented similar policies. For the state to achieve success in the New Economy it must spur early stage investing, create the angel infrastructure, brand Connecticut as a place friendly to innovation, and link potential investors with entrepreneurs. The time to demonstrate the commitment to building the innovation economy is crucial and immediate; otherwise Connecticut will continue to lose ground in the global market.

Tax Credits

The investment pyramid, as presented in Chapter I, provides a ‘best practice’ for states on where to prioritize economic development funding and incentives. The majority of state support should be directed first to areas where the state already excels, second in areas that could be enhanced, and lastly develop what does not exist in the state. Tax credits are an example of state support that incent businesses to stimulate economic activity in certain areas and should be structured in such a way that they follow the principles outlined in the investment pyramid.

Tax credits are offered by the state to lower a business’ tax liability, while encouraging investments in a particular economic area that qualifies for the credit. Primarily, business tax credits are administered through the Department of Revenue Services (DRS). However, tax credits aimed specifically at promoting economic development are administered by DECD. In addition the Office of Policy and Management and the Commission on Culture and Tourism administer tax exemptions and other assistance economic assistance.

The majority of tax credits currently established in statute provide incentives based on the older economic development model (incentives for large companies or for only select industries), whereas in the previous chapter, the proposed angel investor credit, is a New Economy policy incentive to spur investment in early-stage, innovation-based small businesses.

This chapter reviews the current tax credits Connecticut offers to businesses. Recommendations are made for both repeal and modification of selected credits in order to better align credits with economic development priorities for the New Economy that promote broad-based business incentives.

Connecticut Business Tax Credits

In Connecticut, the vast majority of business tax credits can only be used by incorporated businesses that would pay a corporation tax and not by S corporations (e.g., limited liability corporations and partnerships) where taxes are owed on the personal income paid to individuals in the business.

Table VII-1 provides a comprehensive list of all business tax credits offered to Connecticut businesses along with cumulative statistics on usage and foregone revenue for the time periods listed. The table also denotes which state agencies are responsible for administration of the credits; some tax credits are administered solely by the Department of Revenue Services (DRS) while other credits require Department of Economic and Community Development (DECD) or Commission on Culture and Tourism (CCT) approval. A few of the tax credits have been repealed and that is noted where applicable.

Table VII-1: Connecticut Business Tax Credits (sorted first by agency responsible for administration and second by total funding)					
Tax Credit (year became effective)	Guidelines	Admin.	Years	Utilization	Total Funding/ Amt Approved
Urban and Industrial Site Reinvestment Tax Credit (July 2000)	<ul style="list-style-type: none"> Investments in eligible urban reinvestment projects or eligible industrial site investment projects Credit equal to 10% of financial investment, beginning three years after investment made Transferrable 	DECD	2000-July 2009	8 companies	\$203 million
Film Tax Credits (July 2006)	<ul style="list-style-type: none"> Digital animation – production expenses or costs in excess of \$50,000; credit equal to 30%; after Jan 1, 2009, credit equal to 50%; after Jan 1, 2012 credit equal to 100% Film production - production expenses or costs in excess of \$50,000; credit equal to 30% Film production infrastructure – projects requiring capital investments eligible for tax credit of 10-20% Transferrable 	DECD (prior to 2009, CCT)	As of 10/20/09	76 certificates issued	\$137.7 million
Enterprise Zones/Urban Jobs (July 1996)	<p>4 programs:</p> <ul style="list-style-type: none"> 5-year, 80% abatement on local property taxes 10-year, 25-50% credit on corporate business tax Operation of a manufacturing facility qualifies for a 50% corporate business tax credit, or 25% if employment criteria not met Newly formed corporations meeting employment criteria qualify for a 100% corporate tax credit in first 3 years, and 50% in next 7 years 	DECD	2000-2006 (corporate tax credit) 2000-2008 (property tax abatement)	396 credits issued (corporate tax) 623 companies (property taxes)	\$6.7 million (corporate tax) \$62.5 million (property tax)
Insurance Reinvestment Fund Tax Credit (June 1994)	<ul style="list-style-type: none"> Investment in insurance-related businesses made through approved fund managers Credit value: 10% in years 3 through 6; 20% in years 7 through 9 Transferrable 	DECD	1999-2006 (corporate tax credit) 1999-2007 (insurance premium tax) 2004-2007 (personal income tax)	128 actual jobs created	\$3.2 million (corporate tax) \$43.2 million (insurance) \$5.7 million (personal)
Job Creation Tax Credit (July 2006)	<ul style="list-style-type: none"> Businesses creating 10 new jobs Credit value: up to 60% of income tax deducted and withheld from wages; credits granted for five successive years Total amount of credits not to exceed \$10 million annually 	DECD	2006 - Nov 2009	6 companies; 454 proposed job creations	\$4.1 million
Financial Institutions (January 1995)	<ul style="list-style-type: none"> Financial institutions that build and occupy a facility of at least 900,000 square feet and maintain an average of 1,200 to 2,000 employees Credit value: Years 1-10, 30% to 50% of corporate business tax depending on employment; Years 11-15, 25% 	DECD	2000-2006	22 credits	\$106,000

Table VII-1: Connecticut Business Tax Credits (sorted first by agency responsible for administration and second by total funding)

Tax Credit (year became effective)	Guidelines	Admin.	Years	Utilization	Total Funding/ Amt Approved
Fixed Capital (July 1997)	<ul style="list-style-type: none"> • Credit value: 5% of amount paid for fixed capital • Carried forward for 5 years 	DRS	2000-2006	24,277 credits	\$370 million
Electronic Data Processing (June 1994)	<ul style="list-style-type: none"> • Credit value: 100% of personal property tax owed and paid on electronic data processing equipment • Computers, printers, bundled software, and any computer-based equipment qualifies 	DRS	2000-2006	20,114 credits	\$143 million (corporate tax) \$97.6 million (insurance tax)
Incremental R&D (July 1992)	<ul style="list-style-type: none"> • Incremental R&D investments • 20% credit 	DRS	2000-2006	949 credits	\$96.6 million
Non-incremental R&D (July 1993)	<ul style="list-style-type: none"> • New R&D investments • Credit value: sliding scale based on amount invested; ranges from 1-6% 	DRS	2000-2006	1,138 credits	\$78.3 million
Housing Program Contribution (June 1987)	<ul style="list-style-type: none"> • Businesses that make cash contributions to housing programs that benefit low and moderate income individuals and families • Credit value: 100% of contribution not to exceed \$500,000 in one year; credits in aggregate not to exceed \$10 million 	DRS	2000-2006	167 credits	\$20.2 million (corporate tax) \$7.2 million (insurance tax)
Machinery & Equipment (July 1993)	<ul style="list-style-type: none"> • Companies with less than 800 employees • Deduct incremental investments in machinery and equipment • Credit value: 5-10% against corporate tax depending on employment size 	DRS	2000-2006	2,611 credits	\$18.2 million
Human capital (July 1997)	<ul style="list-style-type: none"> • Job training, donations to higher education, subsidies for child care, contributions to Individual Development Account Reserve Fund • Credit value: 5% for human capital expenditures • Carry forward for five years 	DRS	2000-2006	1,456 credits	\$14.3 million
Neighborhood Assistance (June 1982)	<ul style="list-style-type: none"> • Investments in certain community programs • Credit value: 40-100% of cash invested depending on project type 	DRS	2000-2006	828	\$9.5 million (corporate tax) \$0.9 million (insurance tax)
Insurance Department Assessment Credit (1959)	<ul style="list-style-type: none"> • Certain local domestic insurance companies are allowed a credit against the insurance premiums tax • Credit value: 80% of the Connecticut Insurance Department assessment paid during the calendar year if assets do not exceed certain amount 	DRS	2001-2007	96 credits	\$7.2 million
Apprenticeship training in manufacturing, construction, and plastics-related trades (June 1979)	<ul style="list-style-type: none"> • Credit value: \$4 per hour worked by apprentice; not to exceed \$4,800 or 50% of actual wages paid for manufacturing and plastics; \$2 per hour and not to exceed \$4,000 for construction trades 	DRS	2000-2006	174 credits	\$3.7 million
Donation of Land (June 1999)	<ul style="list-style-type: none"> • Credit for donation of open space or land for educational use • Credit value: 50% of fair market value of land • Carry forward of 15 years 	DRS	2000-2006	117 credits	\$3 million

Table VII-1: Connecticut Business Tax Credits (sorted first by agency responsible for administration and second by total funding)

Tax Credit (year became effective)	Guidelines	Admin.	Years	Utilization	Total Funding/ Amt Approved
Employer Assisted Housing (repealed June 2006)	<ul style="list-style-type: none"> • Tax credits equal to amount contributed into a loan fund that provided housing for low and moderate income employees of the business firm 	DRS	2000-2006	29 credits	\$512,000
Small Business Guarantee Fee Tax Credit (June 1999)	<ul style="list-style-type: none"> • For small businesses, gross receipts less than \$5 million, that obtain guaranteed financing from federal SBA • Credit value: amount paid as a guaranty fee to the Small Business Administration 	DRS	2000-2006	36 credits	\$446,000
Hiring Incentive for employing recipients of Temporary Family Assistance (TFA)	<ul style="list-style-type: none"> • Employee must be recipient of TFA and work a minimum of 30 hours per week • Requires Department of Labor approval • Credit value: \$125 for each full month of employment 	DRS	2000-2006	50 credits	\$358,000
Clean Alternative Fuels (repealed as of Jan 2008)	<ul style="list-style-type: none"> • Credit value: 10% of expenditures paid for incremental cost of purchasing a clean alternative fuel vehicle; 50% of expenditures for clean alternative fuel equipment 	DRS	2000-2006	31 credits	\$245,000
R&D grants to Higher Education (July 1992)	<ul style="list-style-type: none"> • Credit for businesses that make grants to higher education institutions • 25% credit 	DRS	2000-2006	6 credits	\$239,000
Computer Donation (May 2000)	<ul style="list-style-type: none"> • Donation of computers less than 2 years old to a local or regional board of education or public or nonpublic school • Credit value: 50% of fair market value; maximum of \$75,000 per business 	DRS	2000-2006	4 credits	\$70,000
Displaced Worker (April 1998)	<ul style="list-style-type: none"> • Credit of \$1,500 per displaced worker hired 	DRS	2000-2006	3 credits	\$2,500
Historic Homes (Jan 2000)	<ul style="list-style-type: none"> • Credit value: 30% of rehabilitation expenditures; credit not to exceed \$30,000 per unit and \$3 million annually for all units 	CCT	2000-2006	50 credits	\$1.1 million (corporate tax) \$7.1 million (insurance tax)
*Insurance Premium Tax data – calendar year 2001 to 2007; Corporate Tax data 2000-2006 Source: PRI staff analysis					

Department of Revenue Services

While not direct financial assistance to businesses, tax credits are used to lessen the state and or local tax a business would otherwise have to pay. The amount of tax credits allowable cannot exceed 70 percent of the amount of state tax due or reduce the amount of tax to less than \$250. It is important to note that business tax credits can be used only by incorporated businesses that would pay a corporation tax, and not by S corporations (limited liability and partnerships). Because of the lag in corporate tax filing requirements to DRS, the most recent tax year for actual business credit usage is generally 2006.

Currently, Connecticut offers 16 different business tax credits that are administered by the Department of Revenue Services (see Table VII-2).

10. Apprenticeship training credit in manufacturing plastics, plastics-related, or construction trades	18. Housing Program Contribution
11. Computer donation	19. Human capital investment credit
12. Displaced worker	20. Machinery and equipment
13. Donation of land	21. Neighborhood assistance
14. Electronic data processing	22. Research and development
15. Fixed capital	23. Research and development expenditures
16. Insurance Department Assessment Credit	24. Research and development grants to higher education
17. Hiring incentive	25. Small business guarantee fee

Source: Department of Revenue Services

Following is a description of the major business credits with the highest utilization in terms of the number of businesses accessing the credits.

Electronic data processing. This credit is equal to 100 percent of the personal property tax owed and paid on electronic data processing equipment during any income year. The credit is first applied against the corporate business tax after all other tax credits have been applied. Any tax credit that is not used may be carried forward to the next five succeeding income years. For the past five tax years (2002-2006), an average of \$17.7 million a year was issued in these credits.

Fixed capital. A credit of 5 percent for amounts paid or incurred for fixed capital (which includes machinery but does not include inventory, land, buildings or structures, or mobile transportation property) is applied against the corporate business tax. The credit allows a five-year carry forward. For each of the past five tax years (2002-2006), about 2,600 businesses have been issued credits on average, totaling about \$53 million annually.

Human capital investment credit. A credit of 5 percent against the corporate tax owed may be applied for expenditures incurred by a corporation for human capital investments such as: in-state job training, work education programs, donations to institutions of higher learning, and child care subsidies. Any credit not used during the income year can be carried forward to the next five succeeding income years. On average 170 credits are issued each year worth about \$1.8 million annually.

Machinery and equipment. This credit applies only to corporations with fewer than 800 employees and allows the incremental increase in machinery and equipment expenses to be deducted against the corporate business tax. The credit is applied on a sliding scale according to the size of the company: a five percent credit applies to companies employing between 251 and 800 employees, and a 10 percent credit applies to companies with 250 employees or less. Each year approximately 200 credits are claimed for a total of \$1.7 million annually.

Research and development (R&D) expenditures. Often firms will under invest in research since the financial payback for new inventions is often uncertain and many discoveries eventually become public goods, utilized by many. Therefore, the research and development tax credit serves as an important state policy tool to stimulate and encourage R&D activity. Connecticut has three different research and development credits: R&D for grant that businesses make to higher education institutions, R&D for non-incremental³⁸ expenditures, and Research and Experimentation for incremental expenditures.

Higher education. The least-utilized R&D credit applies to businesses that make grants to higher education institutions. A credit up to 25 percent may be applied against the business income tax owed for the incremental increase in amounts spent by a corporation for grants to higher education institutions for the purposes of research and development related to advancements in technology. Between 2000 and 2006, six credits were issued for a total of \$238,755.

Non-Incremental R&D. This credit is for the non-incremental R&D expenditures incurred in Connecticut and is applied against the corporate business tax. Small businesses³⁹ qualify for a credit up to 6 percent of R&D expenses while all other corporations qualify according to the guidelines outlined in Table VII-3.

Table VII-3: R&D Non-incremental Guidelines	
Expense Amount	Credit Percentage/Amount
\$50 million or less	1 percent
More than \$50 million but less than \$100 million	\$500,000 + 2% over \$50 million
More than \$100 million but less than \$200 million	\$1.5 million + 4% over \$100 million
More than \$200 million	\$5.5 million + 6% over \$200 million
Source: DRS	

Credits may be carried forward until the credit is fully taken. A small business⁴⁰ that cannot take the credit because it has no tax liability may exchange the credit for a refund up to 65 percent of the value of the credit.

Research & experimental. The third R&D credit -- research and experimental -- applies to the incremental research and development expenditures that are incurred in Connecticut. Companies may take 20 percent of the excess research and experimental expenditures in the current year over the costs incurred from the previous year. Credits can be carried forward for 15 years until they are fully taken. Again, small businesses that cannot take the credit because they

³⁸ Non-incremental expenditures are first-time R&D costs that a company incurs; incremental expenditures are costs incurred in subsequent years.

³⁹ A qualified small business is defined as a company that has gross income for the previous year that does not exceed \$100 million and has not met the gross income test through transactions with a related person, as defined in C.G.S. Sec. 12-217w.

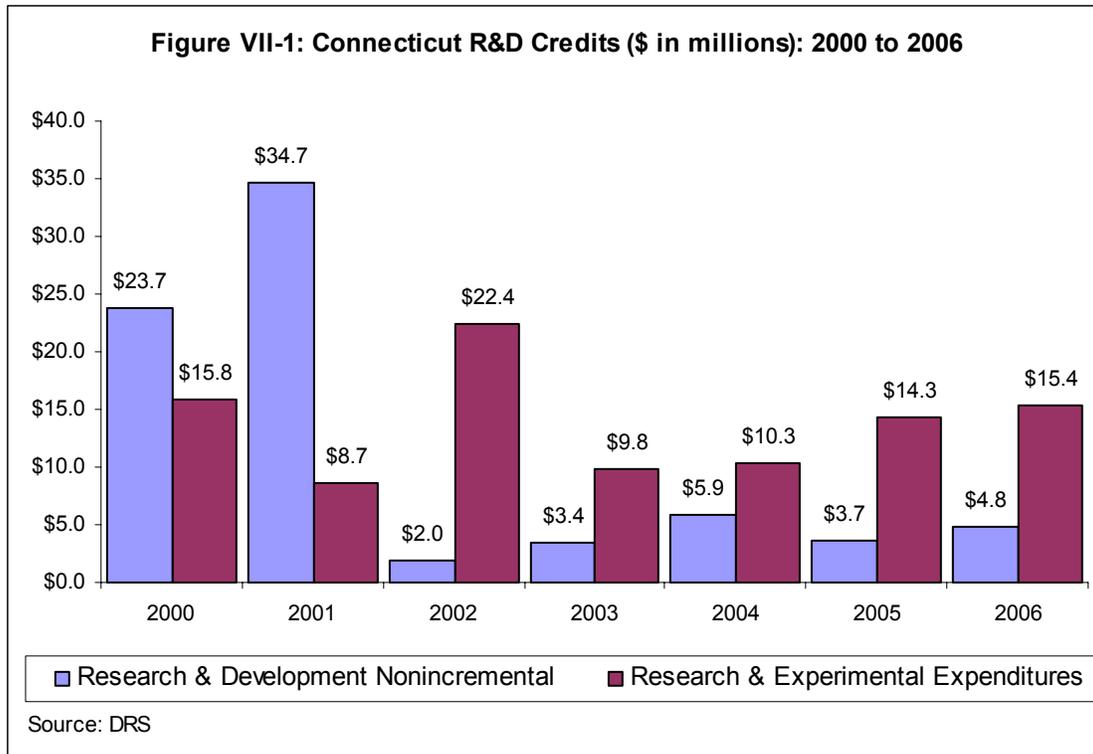
⁴⁰ For the purpose of exchanging credits, a qualified small business means a company that has gross income for the previous year that does not exceed \$70 million

have no tax liability can exchange the credit for a refund up to 65 percent of the value of the credit.

R&D credit utilization. An increase in the number of credits used is an indication that research and development is occurring in Connecticut and is an important trend to monitor to determine the state's competitiveness in the New Economy. Table VII-4 shows the number of R&D credits issued between tax years 2000 and 2006. In 2000, 435 were issued, dropping off for the next five years. In 2006, the number increased to 321 credits but still not at the level seen in 2000.

Table VII-4: Number of Credits Issued, Tax Years 2000-2006							
	2000	2001	2002	2003	2004	2005	2006
Research & Development Non-incremental	274	183	129	122	134	132	164
Research & Experimental Expenditures	161	100	121	126	149	135	157
R&D for Grants to Higher Ed Institutions	-	2	-	1	1	2	-
Total	435	285	250	249	284	269	321
Source: DRS							

The non-incremental R&D credit is particularly important since it signifies *new* R&D investments, which can lead either to new companies or new growth for existing companies. Figure VII-1 shows the trend in dollar amounts taken for the two larger R&D credits over the past seven years. As depicted in the figure, the 2006 dollar amount of non-incremental credits is down 86 percent compared to the high achieved in 2001. Even though both the number and value of credits issued did increase in 2006 from the year before, it is still lower than it was five to six years ago.



Business tax credit analysis. Figure VII-2 charts the trends in number of business credits claimed for the tax years 2000 through 2006 and also shows the trend in dollars claimed for the same time period. All the business tax credits identified in Table VII-2 are included in the figure.

The highest number of credits were issued in 2000 and 2001 and the most in terms of dollar value were issued in 2001. In 2006, the dollar amount of credits issued almost approached the 2000 level, but the number claimed was less than 46 percent of those issued in 2001, indicating an increasing value per credit claimed. The program with both the highest number of credits issued and dollar amount is the fixed capital investment credit. It accounts for:

- over 2,300 credits annually;
- 58 percent of the value of all credits issued for 2006; and
- a total of approximately \$370 million in credits since 2000.

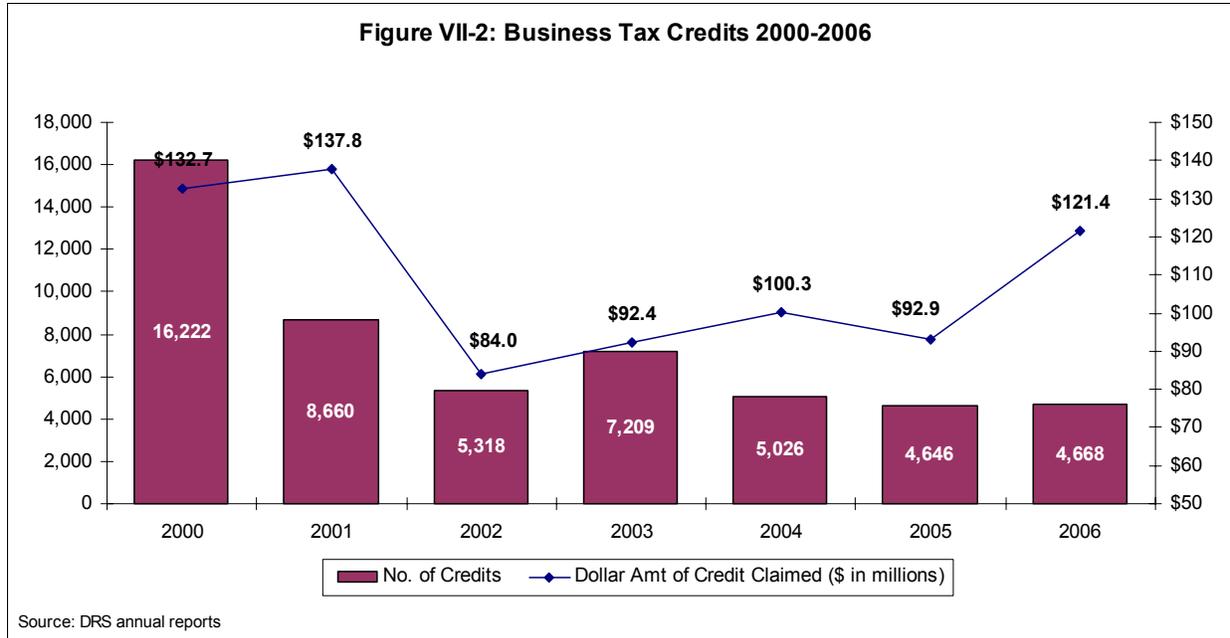


Table VII-5 lists the top six credits in terms of dollar amount claimed in 2006 (because of the lag in corporate tax filings, 2006 is the most recent year of tax credit data available).

Credit	No. of Credits	Dollar Amount of Credit Claimed	Average per return
Fixed Capital	2,313	\$77,486,450	\$33,500
Electronic Data Processing ¹	1,646	\$30,295,132	\$18,405
Research & Experimental Expenditures	157	\$15,352,359	\$97,786
Research & Development Non-incremental Expenditures	164	\$4,831,443	\$29,460
Human Capital	177	\$1,692,412	\$9,562
Machinery & Equipment	145	\$1,052,677	\$ 7,260
Total	4,602	\$130,710,453	\$28,402
All Credits issued in 2006	4,705	\$132,562,244	\$28,174
% of total	98%	99%	

¹ Includes credits claimed on the corporate business tax and the insurance business tax

Source: DRS annual report

Department of Economic & Community Development Tax Credits

The following section describes and reviews the usage of the tax credits that are administered by DECD. The credits are against property taxes and/or the corporate income tax liability, which again involves DRS, the state's tax department, but these credits require an approval or determination by DECD in order to be eligible. Table VII-6 lists the five credits offered and the dollar value of the credits that have been issued since 2000.

	2000	2001	2002	2003	2004	2005	2006	2007	2008
Enterprise Zones (including Urban Jobs)	\$ 7.0	\$ 8.5	\$ 7.5	\$ 7.9	\$ 9.0	\$ 7.6	\$ 8.4	\$ 6.3	\$ 6.9
Urban & Industrial Site					\$ 40.0	\$ 27.0	\$ 5.0	\$ 100.0	\$ 18.0
Job Creation									\$ 0.5
Insurance Reinvestment	\$ 0.9	\$ 2.8	\$ 3.6	\$ 9.3	\$ 6.9	\$ 4.6	\$ 7.1	\$ 10.5	
Financial Institutions				\$0.1					
Total	\$ 8.8	\$ 11.3	\$ 11.1	\$ 17.3	\$ 54.9	\$ 39.2	\$ 20.5	\$ 116.8	\$ 25.4

¹ Corporate tax data 2000 through 2006; property tax data 2000-2008
Source: DECD annual reports

Enterprise zone credits. The goal of the credit is to increase private investment, expand the tax base, and foster job creation in distressed areas. The credit was established in 1982 with economic activity in six communities qualifying for the credit. The credit availability has been expanded to 17 Targeted Investment Communities⁴¹ with Enterprise Zones, two Enterprise Corridor Zones along Route 8 in the upper and lower Naugatuck Valley, and a third in the northeastern part of the state along Interstate 395.

There are four separate incentive programs that fall under the Enterprise Zone category:

- A five-year, 80 percent abatement of local property taxes on qualifying real and personal property, if the property was new to the grand list as a result of a business expansion or renovation or in the case of an existing building, met the vacancy requirement. The property tax abatement takes effect with the start of the first full assessment year after the issuance of a certificate of eligibility from DECD.
- A 10-year, 25 percent credit on that portion of the state corporate business tax that is directly attributable to a business expansion or renovation project as determined by the Department of Revenue Services. The credit increases to 50 percent if a minimum of 30 percent of the new full-time positions are filled either by zone residents or by residents within a municipality who are eligible for federal Workforce Investment Act (WIA) assistance.
- Another credit is for businesses that operate a manufacturing facility located within an enterprise zone. For businesses that meet the same employment criteria as above, a credit of 50 percent can be applied against its corporate business tax. Corporations may claim the credit for 10 years beginning with

⁴¹ Targeted Investment Community – a municipality with a designated enterprise zone

the first year following the year of certification. If the company does not meet the employment criteria, the facility may still qualify for a 25 percent credit if it is located in a targeted investment community or an enterprise zone.

- Finally, a credit may be applied to newly formed corporations located in an enterprise zone or enterprise corridor that were created on or after January 1, 1997. The credit may be used over 10 years -- in the first three years, the corporation can claim 100 percent of its tax liability, and then it lowers to 50 percent of its liability for the next seven years. To claim the credit the business must meet either of the following criteria:
 - Has 375 employees or more, and at least 40 percent are:
 - residents in the municipal enterprise zone; and
 - qualify under the federal Workforce Investment Act.
 - Has fewer than 375 employees, and at least 150 of whom:
 - are residents of the municipal enterprise zone; and
 - qualify under the WIA to work within a designated Enterprise Zone.

Urban Jobs Program. The Urban Jobs Program is a discretionary program that allows the DECD commissioner to provide enterprise zone incentives in a targeted investment community to companies that are locating and expanding outside of the zone. The approval is based on economic impact and inducement. Companies can get approval for a property tax abatement and a corporate tax credit. When a company is approved by DECD, it works with the town assessor to receive the local property tax abatement and the town in turn works with OPM to receive a reimbursement for the lost property tax from the state.

The benefits to companies, as determined by DECD, include:

- A five-year, 80 percent abatement on local property taxes;
- A 10-year, 25 percent corporate business tax credit to qualified manufacturing businesses;
- For service facilities located outside of an enterprise zone in a targeted investment community, property tax benefits available on real estate and/or equipment, with a minimum investment of \$20 million to qualify for a five-year, 40 percent tax abatement increasing to 80 percent for projects greater than \$90 million; and
- Corporate business tax credits for qualifying service facilities outside of an enterprise zone in a targeted investment community is on a sliding scale based on new full-time jobs; a minimum credit of 15 percent allowed for service companies creating 300 or more but fewer than 599 jobs; a 50 percent credit for companies creating 2,000 or more jobs; and eligibility period is for 10 years.

Tax credit utilization. Table VII-7 shows the trend in the number of enterprise zone and urban job credits claimed and value of the credits from tax year 2000 to 2006. Although the

number of credits claimed in 2006 has gone down since 2000, the value of the individual credits has risen.

	2000	2001	2002	2003	2004	2005	2006	Total
Credits issued	139	76	10	50	45	38	38	396
Value of credits	\$ 1,079,806	\$ 674,564	\$ 467,145	\$ 400,245	\$1,869,062	\$ 617,235	\$ 1,549,934	\$ 6,657,991

Source: DRS Annual Reports

Table VII-8 shows the property tax abatements authorized through the enterprise zone program and urban jobs program, as well as the number of companies utilizing the credits and the planned number of jobs to be retained and created by the companies obtaining the certificates.

Year	Total company certificates	Jobs retained	Jobs planned to be created ²	Enterprise Zone Certs.	Enterprise Zone Corridor Certs.	Urban Jobs Certs.	Other ¹ Certs.	Property Tax Reimbursement
2000	103	4,070	2,403	50	13	38	2	\$ 5,988,760
2001	92	8,662	7,581	39	18	30	5	\$ 7,838,640
2002	72	5,177	4,446	28	9	31	4	\$ 7,000,000
2003	63	1,811	995	30	12	16	5	\$ 7,454,831
2004	66	2,530	1,074	42	10	13	1	\$ 7,085,146
2005	48	1,350	1,149	26	7	12	3	\$ 7,046,907
2006	61	2,434	1,476	26	17	12	6	\$ 6,858,236
2007	60	2,196	893	26	14	15	5	\$ 6,328,289
2008	58	6,297	928	28	13	15	2	\$ 6,912,464
Total	623	34,527	20,945	295	113	182	33	\$ 62,513,274

¹ Includes other zones that qualify for the enterprise zone benefits – contiguous manufacturing zone, entertainment district, qualified manufacturing plant, manufacturing plant zone, and railroad depot zone.
² These are the number of jobs the company said would be created when the application was submitted – not the actual number of jobs created.

Source: DECD

Urban and Industrial Site Reinvestment Credit. This credit is available to companies that locate or expand in Connecticut and make investments in eligible urban reinvestment projects or eligible industrial site investment projects. Investment in an eligible urban site is defined as one that will add significant new economic activity, increase employment in a new facility, and generate significant additional tax revenues to the municipality of the state. Eligible industrial site investments include purchase of real property or improvements to real property, located within Connecticut that have been subject to environmental contamination.

The credit is equal to 10 percent of the qualified investments, beginning three years after the investment is made but not later than seven years from the date of investment. For years eight through ten, the credit increases to 20 percent of the invested amounts. The credit may be claimed against various business taxes including but not limited to the corporate business tax;

insurance, hospital and medical services corporations tax; utility companies tax; and air carriers tax. The tax credit may be carried forward for the five immediate succeeding years until the full tax credit has been taken or may be assigned to another taxpayer.

The credits are performance-based (hence the 3-year wait before credits are issued) and distributed over a 10-year period. The program is designed to be revenue neutral or positive to the state and the credits are only awarded after the business has made its investment. If the business does not meet the performance requirements, such as tax revenue generation, job creation and retention targets, it does not get the credits.

Table VII-9 lists the companies that have received the Urban and Industrial Site Reinvestment credits since 2004. A total of six companies have been issued credits for a total of \$190 million.

Table VII-9: Urban and Industrial Site Reinvestment Tax Credits – Authorized Credits*					
	2004	2005	2006	2007	2008
Diageo North America, Inc.	\$40 million				
FactSet Research Systems, Inc		\$ 7 million			
Lowe’s Home Centers, Inc.		\$ 20 million			
Eppendorf Manufacturing Corporation			\$ 5 million		
Greenwich Capital Markets, Inc				\$ 100 million	
Blue Sky Studios, Inc.					\$ 18 million
*Year when the contract was signed, not necessarily when the investment was initially made					
Source: DECD FY 2008 Annual Report					

As illustrated in Table VII-10 the credit is spread out over seven years and thus the budgetary impact of the credit occurs over time.

Table VII-10: Estimated Credit Distribution Schedule (\$ millions)											
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Diageo	\$ 4	\$ 4	\$ 4	\$ 4	\$ 8	\$ 8	\$ 8	-	-	-	-
FactSet	-	\$ 1	\$ 1	\$ 1	\$ 1	\$ 1	\$ 1	\$ 1	-	-	-
Lowe’s		\$ 2	\$ 2	\$ 2	\$ 2	\$ 4	\$ 4	\$ 4	-	-	-
Eppendorf					\$ 1	\$ 1	\$ 1	\$ 1	\$ 1	\$ 1	-
Greenwich		-	-	\$ 10	\$ 10	\$ 10	\$ 10	\$ 20	\$ 20	\$ 20	
Blue Sky	-	-	-	-	\$ 1.8	\$ 1.8	\$ 1.8	\$ 1.8	\$ 3.6	\$ 3.6	\$ 3.6
Total	\$ 4	\$ 7	\$ 7	\$ 17	\$ 23.8	\$ 25.8	\$ 25.8	\$ 27.8	\$ 24.6	\$ 24.6	\$ 3.6
Source: DECD FY 2008 Annual Report											

Job Creation Tax Credit. This tax credit (C.G.S. Section 12-217ii, as amended by P.A. 07-250) is available to businesses that create at least 10 new full-time jobs. The credit is approved by the DECD commissioner if it is determined that the creation of the jobs would not occur without the credit, and the economic opportunities created in the state exceed the credit amount. The credit is applied against the insurance premium, corporation, and utility company taxes and is allowed for the income year during which the worker completes the first 12 months of employment with the taxpayer. The credit value allowed is an amount up to 60 percent of the Connecticut income tax deducted and withheld from the wages of new employees and begins on

or after January 1, 2007. For each new employee hired after that date, credits may be granted for five successive income years. The act limits the total amount of credits for all companies awarded in any one fiscal year to \$10 million. Credits must be taken in the income year in which they are earned and unused credits expire.

Since this program was created, only one company has been issued a credit, Sparta Insurance, in the amount of \$508,711 which will be distributed over a five-year period based on the creation of 30 jobs; or approximately \$17,000 per new job created.

Insurance Reinvestment Tax Credit Program. Created in 1994, the Insurance Reinvestment Act was intended as a way to leverage private investment in insurers and other businesses providing insurance related services. At the time, large insurance companies were consolidating their operations and laying off workers. The intention of the legislature was to help the insurance companies keep jobs by generating the capital needed to start or expand insurance businesses that would subsequently reemploy these workers.

In order for investments to qualify for a credit, they must be made through the following approved Connecticut-based fund managers:

- Conning & Company;
- Dowling & Partners;
- Northington Partners;
- Prospector Partners, LLC;
- Schupp & Grochmal, LLC; and
- Stamford Financial Group (has not been active in the program).

The act authorizes investors in the fund to apply the credit to any of the following tax liabilities:

- Insurance company, hospital, and medical services corporation taxes;
- Healthcare center tax;
- Corporate business tax;
- Income tax; and
- Surplus line tax.

People and businesses investing through the approved funds in a company may claim the credit if the company: 1) is engaged in insurance or insurance related activities; 2) occupies a facility that has been vacant for one year or obtains a new facility and 3) increases employment by 25 percent. The company meets the latter criterion if the new employees it hires to fill these jobs comprise 25 percent of its workforce over 10 years. If it is a new company that is being started, the company must only employ one person to meet the 25 percent criteria. Each year, the DECD Commissioner must determine whether a company meets the three criteria and if it does, DECD issues a certificate of continued eligibility. Once the certificate is obtained, the investors may claim a portion of the tax credit allowed for that year.

By law, this program is not revenue neutral. In other words, the potential impact of investments on state revenues cannot be considered as part of the credit approval criteria. The commissioner of DECD must annually determine whether the company met the three criteria in statute. If it did, the commissioner issues a certificate of continued eligibility which allows the investors to claim the portion of the credits the law authorizes for that year.

In an effort to lessen the revenue impact to the state, the legislature has made various changes to the provisions of the credit program. In 1997, the legislature limited the amount investors could claim to \$15 million per investment made by a fund manager in a single company. P.A. 00-170 limited the credits to investments made through funds that were created before July 1, 2000 and P.A. 01-6 June Special Session eliminates the credits for investments after December 31, 2015. Investors who were awarded credits before that date could continue claiming them under the statutory schedule. P.A. 08-82 redefines “insurance business” to limit the number and type of businesses eligible for investments through the Insurance Reinvestment Fund program. Several attempts have been made to repeal the credit (including some by DECD) but the bills have not made it out of committee.

Insurance Reinvestment Tax Credit Program Portfolio. The portfolio is composed of investments made by the approved fund managers in insurance and related businesses. As of June 30, 2008, the amount of money available in the funds to be invested totaled \$788 million. Of that amount, \$187 million has actually been invested in 22 companies and could potentially be claimed as tax credits. They are ‘potential’ because they may not yet have been claimed or earned (for example, the company has not met the job requirement or the company went out of business and therefore a credit cannot be earned).

As of December 31, 2008, \$116 million of investments met the criteria and the fund managers received from DECD a certificate of continued eligibility which allows the investors to claim the tax credits. Table VII-11 summarizes the most recent job figures available – number of jobs at application (623), current number of jobs (751), and the number actually created (128). Table VII-12 shows the amount of credits claimed by type of tax – corporate, insurance or personal – and the total amount taken over the years, slightly more than \$52 million dollars. Based on the number of net jobs created and the amount claimed in credits, it has resulted in a cost to the state of approximately \$406,000 per job.

Table VII-11: Employment based on Insurance Reinvestment Program as of December 31, 2008	
Current number of jobs	751
Jobs at application	623
Number of jobs created	128
Source: DECD	

Table VII-12: Tax Credits Claimed Under the Insurance Reinvestment Act (1999 through 2007)			
Income Year	Tax Type	Number of Credits Approved	Amount of Credit Claimed
1999	Corporate Business	1	\$8,281
2000	Corporate Business	6	\$6,210
2001	Corporate Business	3	\$128,403
2002	Corporate Business	2	\$36,550
2003	Corporate Business	4	\$334,040
2004	Corporate Business	3	\$314,773
2005	Corporate Business	1	\$159,615
2006	Corporate Business	5	\$2,165,750
TOTAL		25	\$3,153,622
Calendar Year	Tax Type	Number of Credits Approved	Amount of Credit Claimed
1999	Insurance Premium	9	\$515,873
2000	Insurance Premium	8	\$930,393
2001	Insurance Premium	14	\$2,696,054
2002	Insurance Premium	13	\$3,575,086
2003	Insurance Premium	19	\$9,013,128
2004	Insurance Premium	13	\$6,555,799
2005	Insurance Premium	15	\$4,488,722
2006	Insurance Premium	24	\$4,908,110
2007	Insurance Premium	29	\$10,488,076
TOTAL		144	\$43,171,241
2004	Personal Income Tax	Less than 10	\$1,053,731
2005	Personal Income Tax	Less than 10	\$1,010,570
2006	Personal Income Tax	Less than 10	\$2,012,000
2007	Personal Income Tax	Less than 10	\$1,600,700
TOTAL			\$5,677,001
Total Credits Claimed			\$52,001,864
Source: Department of Revenue Services			

Financial Institutions. This tax credit is for financial institutions that build and occupy a facility located in Connecticut of at least 900,000 square feet, and create and maintain an average of 1,200 to 2,000 employees in the state. The credit is allowed for 10 consecutive years and may be extended for an additional five years if the taxpayer employs an average of at least 3,000 employees. The credit varies from 30 percent to 50 percent of corporate tax liability depending on the number of employees. The aggregate credit is limited to \$72 million to \$120 million over the ten-year period. If the credit is extended for an additional five years, the financial institution may claim 25 percent of its corporate tax liability for years 11 through 15 and a total limit of \$145 million for the 15-year period. Between 2000 and 2006, only 22 credits were claimed totaling slightly more than \$100,000 in corporate business tax credits.

Commission on Culture and Tourism Credits

In addition to the tax credits outlined above, beginning in FY 06, the state has established a film tax credit program aimed at spurring film production and related activity in Connecticut.

The program was administered through the Commission of Culture and Tourism, but the 2009 legislative session transferred the program administration to DECD. Also, the recently adopted state budget modified the film tax credits to emphasize Connecticut-based operations, but it placed no overall cap, and the credits are still transferrable from the companies that incur the expenses to other companies that can use the credits against their tax liabilities to the state. For example, the credits may be transferred to insurance companies that can use them to lower the premium taxes owed to the state.

Digital animation production. This tax credit is available for digital animation production activity in the state for income years beginning on or after January 1, 2007. Production expenses or costs in excess of \$50,000 are eligible for a credit equal to 30 percent of the production expenses or costs. The aggregate amount of all tax credits that may be reserved cannot exceed \$15 million in any one fiscal year.

Film production. Any eligible production company incurring qualified production expenses over \$50,000 is eligible for a tax credit of up to 30 percent of such costs, and can be carried over from year to year. Applications for a tax credit voucher until recently were to be made to the Commission on Culture and Tourism (CCT) within 90 days after the first production expenses and costs are incurred and within 90 days after the last production expenses and costs are incurred. Unused credits may be carried forward for three succeeding income years or sold, assigned or transferred in whole or part no more than 3 times.

Film production infrastructure. Beginning in January 2007, digital median and motion picture industry projects approved by the Connecticut Commission on Culture and Tourism (now it will require DECD approval) that require capital investments such as buildings, facilities, or installations are eligible for a tax credit ranging from 10 to 20 percent based on the cost of the project. Unused credits can be carried forward for three succeeding years or assigned to another taxpayer.

Film credit usage. The usage and the amounts of credits authorized by CCT (will now be DECD authorization) is shown in Table VII-13. It is probably too early to determine whether the decrease in 2009 actually indicates a drop in usage, or is just due to lag time on when vouchers may be submitted after expenses are incurred.

The Department of Revenue Services is the agency that reports on actual credit amount claimed against taxes. DRS reports claims of \$42.7 million against the insurance premium tax for film credit usage in FY 07, but because of lags in corporation tax filings, nothing has been reported for film credit usage in that area yet.

	2006	2007	2008	2009	Total
Number of credits	9	37	25	2	73
Tax Credit Amounts	\$13,924,729	\$80,438,613	\$29,987,522	\$65,775	\$124,416,639

Source: Connecticut Commission on Culture and Tourism

TAX EXEMPTIONS

Connecticut also has a number of tax exemptions in place that are designed to lessen the tax pressure on businesses in certain areas. A number of these exempt certain businesses from paying local property tax, and the state, through the Office of Policy and Management, reimburses towns for a portion of the exemptions.

Property Tax Exemptions

- The distressed municipalities tax program provides a five-year state reimbursement of a portion of the property tax loss certain towns sustain as result of property tax exemptions to qualified facilities. Manufacturing facilities if located in one of 39 towns designated as “distressed,” are eligible for a reduction of 80 percent of their property taxes, while service facilities, not engaged in manufacturing are eligible for property tax reductions, depending on the amount invested in the facilities. The DECD commissioner must certify the type of facility and that the property is located in a designated municipality or zone. The state reimburses eligible towns for up to 50 percent of revenue lost. General Fund monies for this program have been between \$7 and \$8 million each year.
- Connecticut allows an exemption of 100 percent of local property tax on qualified, newly acquired manufacturing machinery and equipment. Companies receive the exemption for five years, and equipment eligible for exemption may be used in manufacturing, biotechnology, and the motion picture and film industry. The state’s payment in lieu of taxes (PILOT) program, administered by the Office of Policy and Management, provides 80 percent reimbursement of lost revenue to the towns. In FY 08, approximately 4,200 businesses received exemptions, and the state reimbursed 209 towns for approximately \$42 million. FY 10 and FY 11 proposed appropriations for this program had been at about \$105 million annually, but the recent budget reduced those amounts by \$31.8 million and \$42.7 million respectively for each of the next two years.

Sales and Use Tax Exemptions

With sales tax exemptions, the state gives up or forgoes the revenue it would have realized if that activity or purchase were not exempt. It is therefore somewhat difficult to calculate what the actual revenue would have been collected on the exempted activity. The Office of Fiscal Analysis does provide estimates in its annual Tax Expenditure Report.

Business purchase exemptions. In total, there are 28 exemptions from the sales and use tax that apply to purchases of items and equipment by businesses. The total amount of forgone revenue is estimated at \$188 million for FY 09, with the sales tax exemption on parts and

machinery use in manufacturing being the largest at \$110 million. Other large exemptions from sale tax are for commercial vehicles used in interstate commerce (\$12 million) and aircraft parts, repairs and replacement parts, and machinery (\$6 million).

Business service exemptions. In addition to actual items and products, some services that businesses purchase are also exempt from sales and use tax. Connecticut exempts 24 such services, with a total estimated worth of \$152 million for FY 09. The exemption with the greatest value to business is the purchase of computer and data processing services (\$64 million); renovation and repair for residential property (\$21 million); and advertising (\$20 million).

ASSESSING EFFECTIVENESS OF TAX CREDITS

As a policy tool, tax credits should be designed according to four relevant principles of taxation: *neutral* – taxes should have as little an effect on market decisions as possible by being broad-based; *fair and equitable* – taxes should treat similar taxpayers the same and should be based on ability to pay; *easy and economical to administer* – minimizing cost of compliance for taxpayers and of collection by government; and be *measured to ensure accountability*.⁴²

Most states offer business tax credits as part of their economic development strategies. Many also review the tax credits periodically to determine their efficacy and whether they should be continued.

By statute, DECD is required to conduct a study to estimate the state revenue that will be generated by the projects at the time the credit is granted and also continually assess what revenue actually is generated. Based on the information provided in DECD's annual reports, the estimates are calculated at the time of application and approval of projects and republished each year in the annual reports. However, data are not based on actual figures once the project and company has been established in the state, but simply restate the estimates from the application. The figures are merely estimates and do not reflect what the company has actually contributed to the Connecticut economy, and provide no useful information in determining if these tax credits have been effective in spurring economic activity in the state.

As a separate effort, the legislature created a Business Tax Credit and Tax Policy Review Committee in statute in 1997 and reconstituted it in 2005 with the task of annually evaluating changes or modifications made to business tax credits to determine their impact on economic development in the state. The Department of Revenue Services made a presentation to the committee; however, that appears to be the only activity of the committee. In addition, the Legislature's Finance, Revenue, and Bonding Committee also asked the Connecticut Center of Economic Analysis to study corporate tax policy including tax credits and their study was published in December 2005.⁴³

PRI reviewed the current business tax credits offered and provides recommendations based on the previously cited principles of taxation. Overall, PRI recommends the jobs creation tax credit and film tax credit be modified to better align state policy with incentive goals. In an

⁴² Brunori, David, "State Tax Policy: A Political Perspective." The Urban Institute Press, 2001.

⁴³ William F. Lott and Stan McMillen, "The Economic Impact of Connecticut's Corporate Tax Policy Changes: 1995-2012," Storrs: Connecticut Center for Economic Analysis, University of Connecticut, December 2005.

effort to streamline business tax credits and reduce administrative costs both for the state and businesses, several credits are recommended for repeal. In addition, PRI recommends current and future tax credits have sunset dates and be reviewed for their economic impact especially for credits that result in large revenue losses for the state.

DRS credits with low utilization. Five tax credit programs have had extremely low utilization; fewer than 50 credits in total were issued over the past seven fiscal years, with four of the programs issuing between zero and two credits in the past three years. The credits with low utilization include: financial institutions credit, computer donation credit, displaced worker credit, research and development grants to higher education, and small business guarantee fee credit. Multiple factors could be causing the low utilization such as: no economic activity in that area, the credits are not worth applying for, or companies do not qualify due to narrowly defined criteria. The low usage indicates they are not broad-based tax credits and not fulfilling the purpose of providing an economic incentive to engage in that activity. Therefore, the program review committee recommends:

The following tax credits be repealed effective January 1, 2011:

- **Financial Institutions;**
- **Computer donation;**
- **Displaced worker;**
- **Research and Development to Higher Education; and**
- **Small Business Guarantee Fee Tax Credit.**

Even though the small business guarantee fee tax credit is the only credit aimed at small business, utilization has been extremely low at 15 credits in the last five years, signaling it is not structured properly. Program review proposes a recommendation below to give small businesses tax credit benefits.

Although repealing these tax credits produces minimal savings to the state of \$123,000 annually, assuming the usage remains the same as in 2006 (latest data available from DRS), it will reduce the number of credit programs DRS must track and administer. Further it should minimize confusion about credits the state offers by reducing the number and focusing on those that support overall state policy goals to spur economic activity.

Job creation. A primary purpose of any tax credit is to promote economic growth, including job creation. The current unemployment in Connecticut (8.8 percent) and nationally (10 percent)⁴⁴ indicate that there is an urgent need to create jobs. Since the mid-1990s, prior to the recession, nationally small businesses have created between 60 and 80 percent of net new employment,⁴⁵ yet most of the state's tax credit policy is still designed to incent large businesses.

For example, all the tax credits except the Insurance Reinvestment credit only allow businesses to offset liability on corporate, insurance, or utility company taxes. However, in 2006 (the latest available data from DRS) only 43,275 of the 161,025 businesses in Connecticut, or 27

⁴⁴ Bureau of Labor Statistics, November 2009

⁴⁵ Small Business Administration, "The Small Business Economy," 2009, pg 9.

percent, were incorporated businesses (down from 33 percent in 2002).⁴⁶ Thus Connecticut's business tax credits are structured so that they do not apply to a large segment of the state's economy and do not benefit a broad base of businesses. In order to spur greater economic activity, credit eligibility should be expanded by allowing credits on personal income tax to S corporations – LLCs and LLPs.

Legislative concern has been raised about allowing business credits to offset personal income tax liability, but a precedent for this does exist in Connecticut. The Insurance Reinvestment credit provides an individual income tax credit. In addition, many states allow credits for entities other than corporations. Massachusetts and Pennsylvania both permit job creation tax credits for S corporations and other examples of states that have broadened credit eligibility can be found in Table II-2.

Connecticut has a job creation credit in place but it has not been widely used (only six credits issued since 2006) and, as presently established, is not a broad-based credit. Even though new firms and small businesses have been responsible for almost all of the net new jobs over the past three decades,⁴⁷ the current credit eligibility makes the job creation tax credit suited only for large companies. The requirement that 10 new jobs be added in the state is not realistic job creation for a small company. Further, the current job tax credit is targeted only at incorporated businesses, which is not a large percentage of state businesses. Given the economic situation of the state, the lack of job growth for the past 10 years, and the low usage of the current job creation tax credit, the program review committee recommends the job creation tax credit be modified as follows:

For the period beginning January 1, 2010, and ending January 1, 2013, companies may take a tax credit for each new full-time job created beyond the 2009 base year of employment. To be eligible for the credit the new job must be filled by a Connecticut resident. The credit will be equal to 15 percent of the wages paid. The business creating the job may claim the credit against its tax liability for the corporate income tax, insurance premiums tax, utility company's tax, or personal income tax. New jobs must pay at least 80 percent of state median income and offer health care benefits. The credit will be issued in three installments over three years. The annual maximum credit per job is \$4,000 and the total credit amount is capped at \$25 million annually. Businesses must apply to DECD and approval will be on a first-come, first-served basis. Businesses claiming a credit with respect to job creation may not claim a credit against any tax under other provisions of the general statutes for job creation.

Rationale. Not only is the federal government grappling with policy solutions for the nation's high unemployment levels but individual states have been looking for ideas on how to create jobs as well. As part of New Jersey's Economic Stimulus Act of 2009, the state offered a \$3,000 grant for each new job created between December 1, 2008 and January 1, 2011. In the

⁴⁶ Department of Revenue Services Annual Reports

⁴⁷ Dane Stangler and Robert Litan, "Where Will the Jobs Come From," Kauffman Foundation, November 5, 2009.

first few months of implementation, almost all of the \$70 million allocated for the program was spoken for, indicating jobs were being created, at least to be eligible for the program. It is still too soon to know how many jobs were created as a result of the incentive; New Jersey's unemployment rate is currently 9.3 percent. As with any job creation incentive, it is difficult to know what the unemployment rate would be without the grant or credit and also how many of those jobs might have been created without the credit.

Twenty-two states offer broad state-wide job creation tax credits while 12 states target specific industries or geographic zones, with each state structuring the guidelines and incentives slightly differently.⁴⁸ Many of the tax credits were in place prior to the recession. Table VII-14 highlights how other states have structured job creation tax credits.

Table VII-14: Selected State Job Creation Tax Credits	
State	Credit Guidelines
Colorado	-Qualify for credit based on # of jobs by area; pay wages above local averages -State income tax credit based on payroll tax incurred from new jobs -Must create a new job for one year before become eligible
Massachusetts	-Create 10 full-time equivalent biotechnology and medical device manufacturing jobs -Incentive payment equals 50% of salary attributable to new jobs times personal income tax -Payment made in equal installments over three years
North Carolina	-Create minimum of 5-15 jobs based on county for new full-time jobs -Credit taken over four years following the year the jobs are created -Must offer health insurance and wage must meet or exceed county standard -Offset state income and franchise tax liability; unused credits carried forward for 5 years
Maryland	-Credit for businesses that expand or establish a new facility before January 1, 2013 and create full-time jobs paying 150% of federal minimum wage -Credit may be taken against one of the following: corporate tax, personal income tax, insurance premiums tax, and public service company franchise tax -Credit equal to lesser of \$1,500 times number of jobs or 5 percent of wages paid if in revitalization area or \$1,000 or 2.5 percent if not in revitalization area -Half of the credit claimed in first year and half in following year
New Mexico	-Credit equal to 10 percent of combined salaries and benefits for each new job -May take the credit for up to 4 years and excess credit will be refunded -Credit shall not exceed \$12,000 per year per job -Credit applied against state portion of gross receipts, compensating, and withholding tax
Ohio	-Create at least 25 new full-time positions paying 150% of federal minimum wage; in special circumstances could create 10 new full-time positions if pay 400% -Applied against corporate or income tax and is refundable -Terms of credit determined by tax credit authority
Pennsylvania	-Create at least 25 jobs or increase employment by 20% within three years -Credit value of \$1,000 per new job; a minimum of 25% of credits awarded each year will go to employers with 100 or fewer employees -Business must maintain operation in the state for five years -Employees must earn hourly wage rate of at least 150% of federal minimum wage -Claim the credit when job is created
Source: Various states' department of revenue websites	

⁴⁸ Federal Reserve Board of San Francisco, "Tax Credits for Job Creation and Retention: What Can We Learn from the States?" Number 2009-08, February 20, 2009.

Moody's Investors Service predicts Connecticut will be one of 31 states that will recover from the recession last – not until third quarter 2010. Therefore, Connecticut must take actions to hasten the state's economic recovery. A wide-ranging and temporary job creation tax credit seems necessary given Connecticut's current conditions and future forecast.

Program review estimates that if \$25 million is committed annually for the next three years, anywhere from 6,250 jobs to 12,800 jobs could be created over those three years.⁴⁹ Expanding the credit to allow businesses other than corporations will allow more small businesses to qualify, and the creation of just one job to be eligible for the credit should also spur employment activity. Although program review is recommending expanding the cap placed on the credit from \$10 million to \$25 million, it is a paltry amount when compared with other credits administered by DECD that have produced far fewer jobs. Additionally, through the creation of new jobs, more Connecticut residents will be employed, meaning fewer residents relying on safety nets such as unemployment insurance and Medicaid. The state could also expect some of the foregone revenue to be offset by the income tax paid from the jobs created.

It is important to establish a base-year of employment to safeguard against firms firing and re-hiring to qualify for the credit. Capping the credit at a maximum amount per job ensures the policy does not end up just subsidizing high-wage jobs. On the other hand, having a minimum wage threshold ensures good-paying jobs are created.

The credit will be issued on a first-come, first-served basis depending on the job creation date. The other option would be to take the \$25 million and divide it up based on the number of jobs created in the entire year. However, this decreases the value of the credit and is harder to manage. Offering it based on a first-come, first-served basis has several benefits: it encourages businesses to hire now, it makes it easier to administer, and the credit value is certain for those businesses that create jobs quickly.

With numerous reports citing job growth coming from small businesses, and more recently, Moody's predicting that states with high-tech employment are likely to recover faster because that is where job growth will come from, and mostly in small businesses, Connecticut needs to make small business growth a priority. Expanding the jobs creation tax credit to LLCs and LLPs extends the opportunity for small businesses to participate. Having a start and end date to the credit encourages hiring when it is most needed, rather than waiting until the economy improves.

Aligning incentives with state goals. More than 40 states offer tax breaks or rebates for film and television production.⁵⁰ States across the country are questioning the longer-term economic benefits that come from such a targeted or specific industry, and one that is typically transient. During this economic downturn, some states, including Connecticut, have taken measures to limit or curtail their film tax credit program. For example, during the 2009 session, the Connecticut legislature eliminated credits for out-of-state expenditures, established the tiered

⁴⁹ Low estimate using max credit of \$4,000 per job annually; high estimate calculated by using 2008 state median income of \$48,788 times 80% (which equals \$39,030) times the 15% credit for a total credit of \$5,855

⁵⁰ P.J. Huffstutter and Richard Verrier, "Filmmaking Incentives Losing Glamour in Cash-Strapped States," *Los Angeles Times*, September 22, 2009.

production credit, required half of principal photography days or post-production costs be spent in Connecticut, capped aggregate amounts spent on star talent, and increased the minimum expenditures needed to qualify for the credits.

At the briefing meeting in October, committee members asked for additional information about Connecticut’s Film Tax Credits, specifically which ones were targeted at temporary establishments or activity as opposed to permanent infrastructure. Staff obtained the usage of the tax credits broken out by the three types of credits offered. Table VII-15 shows the breakout with 98 percent of credits defraying production expenses and only 3 percent for infrastructure projects.

Table VII-15: Authorized Film Tax Credits, as of 10/20/09		
Tax Credit Type	Tax Credit amount	% of Total
Film Infrastructure	\$3,588,198	3%
Digital Animation	\$10,688,191	8%
Film Production	\$123,440,616	90%
Total	\$137,717,005	
Totals do not add up to 100% due to rounding; Does not include most recent South Windsor project		
Source: Commission on Culture and Tourism		

Program review finds that the film tax credits are structured such that they provide greater incentives for temporary production and not more permanent activity. If the companies make more permanent capital investments they qualify only for a 10 to 20 percent credit, whereas production expenses qualify for a 30 percent credit. To correct this, the program review committee recommends:

The film tax credit be modified such that capital investments qualify for a 30 percent credit and production expenses qualify for a 10 to 20 percent credit.

By changing the incentives, Connecticut would be promoting more permanent film production establishments rather than temporary productions. Although this tax credit targets an industry that has traditionally not been one of Connecticut’s economic strengths, as the newer model of investment strategy suggests, PRI believes the credit should be allowed additional time to demonstrate an impact before evaluating its value to the state’s economy. An initial evaluation of its effectiveness was conducted by DECD in 2008. While only one year of data was available for the review, the results of the analysis indicated that the tax credit has a small and positive impact on the state’s economy.⁵¹ However, the findings are sensitive to the assumptions used in the analysis and one year may not be indicative of a trend. Based on statutory guidelines, DECD is slated to conduct another review in 2010 allowing for a more robust assessment of the credit since businesses will have had more time to respond to the incentives. Also, ending the credit after a short amount of time would send a signal to the business community that Connecticut’s incentives are unpredictable; however the committee concludes that modifications are necessary in order to align the credit with state priorities. These changes still provide credits for all types of

⁵¹ DECD, “The Economic and Fiscal Impacts of Connecticut’s Film Tax Credit,” February 2008.

film activity but incent more permanent business activity which will have a longer term impact on the state economy.

Economic impact. As previously mentioned, DECD is required to provide an analysis of the economic impact of all credits requiring their approval. However, the analysis provided in the annual report is based on predictions made upon approval of the credits and is never updated to reflect the impact of actual investments made by businesses. Many of the credits authorized by DECD result in large amounts of foregone revenue to the state and not understanding the actual, as opposed to potential, impact on the Connecticut economy represents a significant lack of oversight. Given the fiscal value of the credits approved by DECD and the limited number of companies awarded credits to date, the program review committee recommends that:

Tax credit programs in which either 1,000 or more credits a year are allowed or the credit value exceeds \$5 million annually be reviewed by January 1, 2012, to determine the economic impact and be subject to extension or modification by the General Assembly for another five years based on results of the study.

Currently the Film Tax Credits and Enterprise Zone credits require an analysis on their impact to the state. DECD issued the first report in February 2008 on the film tax credits and statute requires a report to be produced every two years.⁵² The Enterprise Zone Credits are also subject to review by January 2011.

However, Connecticut is unique in that it does not establish end dates to its tax credits. In review of tax credits offered across the country, majority of the credits reviewed have an established end date. This sets a time frame up-front and allows businesses to plan based on the criteria set forth initially, instead of wondering if at any point in time the credits will be revoked. Therefore, the program review committee recommends,

Newly established tax credits shall include a review date to determine their effectiveness and the credit will be repealed, modified, or continued based on results of the review.

One credit of particular concern is the Insurance Reinvestment Tax Credit. The tax credit, by legislation, has not been subject to review and the economic benefit of the credit to the state is uncertain. In order to qualify for the credit, investors do not need to prove that the economic activity will result in a net gain for the state. As such, the credit has produced little job growth and at a high cost to the state. In total, \$52 million in corporate, insurance premium, and individual income tax credits have been awarded, with 128 jobs created over nine years, at an average cost of \$406,250 per job. Between 2004 and 2007, fewer than 10 individual income tax payers each year received credits totaling \$5.7 million over the four-year period, meaning state taxpayers have lost a great amount of revenue to a few individuals with high tax liability. In summary, the tax credit is not broad-based, is not fair and equitable, and the benefit to the state's economy is questionable.

⁵² Sec. 10-417

DECD has proposed legislation to repeal this tax credit but the legislation did not pass. Instead, modifications were made to the credit that will make investments made in an insurance business after December 31, 2015, not eligible for the credit. However, given the economic situation of the state and the credit's poor track record in job creation and cost, action should be taken sooner on ending the credit. Therefore, the program review committee recommends,

The Insurance Reinvestment Tax Credit be terminated effective January 1, 2011.

If the amount of credits issued maintain the same level as the most recent year reported, repealing the tax credit could save the state approximately \$14 million next year. This money instead could be used for the proposed job creation tax credit recommended earlier, which has the potential to have a greater impact on improving the job conditions in the state than the Insurance Reinvestment Tax Credit.

Standard threshold for credits. At the October briefing, committee members asked if there is a standard cost-effectiveness threshold that states should spend per credit per job created. There is not a published standard for states; however, the federal government regulations for the Community Development Block Grant administered by the Housing and Urban Development set a cap at \$35,000 per permanent full-time equivalent job retained or created.⁵³ In addition, the Connecticut Development Authority's underwriting guidelines provides assistance up to \$20,000 per job created. As noted in a recent New England Public Policy Center paper on tax credits, a threshold may not be the best measurement but instead the cost-effectiveness should be compared to policies aiming to achieve similar goals.

⁵³ Weiner, Jennifer, "State Business Tax Incentives: Examining Evidence of their Effectiveness," New England Public Policy Center, December 2009.

Tax Policy: Connecticut and Surrounding States

In addition to the broader study concerning aspects of Connecticut’s economic competitiveness, examined in earlier chapters, the study scope also called for a narrower look at Connecticut’s economic competitive position with its border states. This chapter compares Connecticut’s tax policy on retail sales with the surrounding border states of New York, Massachusetts, and Rhode Island.

Sales Tax Policy

General sales tax rates vary by state and also by the items that are considered taxable. In addition to state sales tax, localities in some states may impose an additional sales tax. Connecticut applies only one uniform state sales tax rate.

Connecticut has maintained a sales tax rate of 6 percent since 1992 but with the recent passage of the FY 2010-2011 biennial budget, the sales tax will be lowered to 5.5 percent effective January 1, 2010, (however, the rate change will not take effect if any of the monthly financial statements issued by the comptroller indicates gross tax revenue to the General Fund for FY 10 to be at least one percent less than the estimated gross tax revenue adopted by the Finance, Bonding, and Revenue Committee). Rhode Island has consistently had the highest *state* sales tax of the surrounding states, taxing items at 7 percent. However, when including the additional local sales tax, the New York counties that border Connecticut - Dutchess, Putnam, and Westchester – have the highest sales tax rates ranging from 8.125 percent to 8.375 percent. Massachusetts had the lowest sales tax rate of any of the border states until August 1, 2009, when rates were raised to 6.25 percent. This now means Connecticut has the lowest rate of the four states, as shown in Table VIII-1.

State	State Tax Rate	Local Tax Rate	Total Sales Tax
Connecticut	6%	-	6%
Massachusetts	6.25%	-	6.25%
New York	4%	4.125-4.375%	8.125 – 8.375%
Rhode Island	7%	-	7%
Source: Tax Foundation			

Rhode Island is the only border state that is a member of the Streamlined Sales Tax Project (SSTP). The goal of the project is to demonstrate to Congress uniformity among the various states’ sales taxes. If consistency can be shown, then it improves the chances of achieving federal legislation that would permit the states to collect sales tax on interstate commerce such as Internet and catalog purchases, and lessen the complications associated with doing business in multiple states. The SSTP requires using standardized definitions for terms (e.g., clothing, food, and computer software) and eliminating thresholds (taxing items at different rates) as Connecticut does for clothing. Participation is optional -- 23 other states across the

country participate in the program but Connecticut has not. Currently, Congress is considering legislation that would implement the Streamlined Sales Tax Project nationwide.

Sales tax revenue. Generally, sales tax revenue is somewhat less volatile than other types of taxes. However, a slow-down in the economy will result in a decrease in sales tax revenue. About 40 percent of all Connecticut's state (not local) taxes come from the sales and gross receipts tax. As with the other border states, the percentage of total revenue that is derived from the sales tax has been declining since 2005. As illustrated in Table VIII-2, Rhode Island relies more heavily on its sales tax revenues, collecting about half its revenue from the sales tax.

	2005	2006	2007	2008
Connecticut	44%	41%	39%	39%
Massachusetts	32%	31%	29%	28%
Rhode Island	52%	51%	49%	50%
New York	34%	33%	31%	31%

Source: US Census Bureau, State Tax Collections 2005-2008

Excise Taxes

Excise taxes, which are known as selected sales taxes, are applied to specific consumer products and typically levied in addition to the sales tax. Alcoholic beverages (beer, wine, and liquor), tobacco products (cigarettes and cigars), and motor fuel (gasoline and diesel) are the most common consumer products that have excise taxes.

Excise taxes are typically charged on the item itself rather than a percentage of the price. For example, the excise tax on cigarettes may be \$2 per package, not a percent of the price of the package. In comparison to other types of taxes, such as income and sales tax, excise taxes are not a major revenue generator for states. Excise taxes in Connecticut make up approximately 6 percent of the state revenues collected annually.

Cigarette excise tax. In addition to charging consumers a sales tax, an excise tax is imposed on cigarettes. Payment is indicated by affixing a stamp to each pack of cigarettes. As of January 1, 2009, Connecticut had the lowest excise tax on cigarettes when compared to border towns as is shown in Table VIII-3. However, due to the FY 2010-2011 biennial budget passed in August, Connecticut's tax will increase 50 percent to \$3 a pack, making it the second-highest tax behind Rhode Island of the four comparative states. Although the rate was increased by 50 percent, past experience with rate increases show that state revenues will not grow by 50 percent because as cigarette prices increase, sales of cigarette packs have tended to decrease.

	2006	2007	2008	2009
Connecticut	\$1.51	\$1.51	\$2.00	\$3.00
Massachusetts	\$1.51	\$1.51	\$1.51	\$2.51
Rhode Island	\$2.46	\$2.46	\$2.46	\$3.46
New York	\$1.50	\$1.50	\$1.50	\$2.75

Source: Tax Foundation

Although one might conclude that the high tax rate on cigarettes would result in more cross-border shopping into other states, this is likely not the case. A recent study found that only a small percent of smokers purchase outside their state.⁵⁴ The study analyzed data from the Current Population Survey Tobacco Use Supplement (U.S. Census) and found that approximately 0.8 percent of consumers report purchasing cigarettes from “other” locations, which include the Internet and Indian reservations, while 96 percent of smokers purchase from within their home state. One could conclude from this that cigarette smokers purchase as needed rather than planned purchasing in bulk.

As shown in Table VIII-4, Connecticut collected in 2008 approximately \$330 million in cigarette excise tax revenue. This was the largest amount collected for the past six years. The large increase in revenue was due to an increase in the excise rate by \$0.49 a pack even though the state saw a decline in packages of cigarettes sold.

Smoking rates have been declining for the past five years according to available sales data reviewed by staff. The state experienced a decrease in sales volume of 10 percent when the excise tax was increased from \$1.11 per pack to \$1.51 per pack (36 percent increase). In the years following the tax increase, sales decreased by an average of 2 percent a year. In 2008 when the tax per pack was increased from \$1.51 to \$2 a pack, sales decreased by 5 percent, but more revenue was collected due to the higher tax rate.

	Packages Sold (in millions)	Percent change	Excise Tax Revenue Collected (\$in millions)
FY 2003	204		\$252
FY 2004	185	(10%)	\$276
FY 2005	179	(3%)	\$270
FY 2006	179	-	\$268
FY 2007	172	(4%)	\$264
FY 2008	163	(5%)	\$330
*Data includes total cigarette sales. Cartons with more than 25 cigarettes are taxed at higher rate but represent only about .01 - .05 percent sales			
Source: Department of Revenue Services			

Motor vehicle fuels excise tax. Motor vehicle fuel used or sold in Connecticut is taxed in a number of ways. Gasoline and gasohol (mixture of gasoline and alcohol – mostly ethanol) are taxed by the state at 25 cents per gallon, and by the federal government at 18.4 cents per gallon. In addition there is a state Petroleum Products Gross Earnings Tax of 7.5 percent, which increases the cost per gallon of gasoline by approximately 13 cents per gallon.⁵⁵ Thus, the total tax on a gallon of gasoline in Connecticut is 56.4 cents.

⁵⁴ Chiou, Lesley and Muehlegger, Erich, “Crossing the Line: The Effect of Cross Border Cigarette Sales on State Excise Tax Revenues,” February 2008.

⁵⁵ Independent Connecticut Petroleum Association

Compared with the border states, Connecticut has the second-highest total tax on gasoline as shown in Table VIII-5.

Table VIII-5: Gasoline Excise Taxes				
	Excise Tax	Other State Taxes	Federal Tax	Total Taxes
New York	\$0.08	\$0.32	\$0.184	\$0.584
Connecticut	\$0.25	\$0.13	\$0.184	\$0.564
Rhode Island	\$0.27	\$0.04	\$0.184	\$0.494
Massachusetts	\$0.21	\$0.025	\$0.184	\$0.419
Source: ICPA				

Committee staff had hoped to look at gas sales data by town, but due to data limitations this type of analysis was not feasible.

Alcohol excise and sales taxes. States also impose excise taxes on alcoholic beverages based on alcohol volume. In Connecticut, a tax is imposed also on all distributors of alcoholic beverages based on the quantity of alcohol sold to off-premise establishments.

Table VIII-6 shows how Connecticut’s alcohol excise tax rate compare to the border state rates of Massachusetts, Rhode Island, and New York.

Table VIII-6: Alcohol Excise Tax, Rates as of July 1, 2009			
	Spirits (per gallon)	Wine (per gallon)	Beer (per gallon)
Connecticut	\$4.50	\$0.60	\$0.20
Massachusetts	\$4.05	\$0.55	\$0.11
Rhode Island	\$3.75	\$0.60	\$0.11
New York	\$6.44	\$0.30	\$0.14
Source: Tax Foundation			

In addition to the excise tax, all the states that border Connecticut now charge sales tax on alcoholic beverages; however, this is a recent development. Massachusetts did not impose sales tax on alcohol until August 1, 2009, so the impact could not be assessed.

Tax Policy on Alcoholic Beverages

In addition to the excise and sales tax on alcohol, there are other tax policies that also may affect sales. Unlike cigarettes and other items subject to sales tax, some states impose restrictions on when and where alcohol can be sold.

When. Connecticut, for example, is the only remaining New England state that does not allow off-premise alcohol to be sold on Sundays. States also impose restrictions on the hours when alcohol can be sold. Following are the permitted alcohol sale hours of Connecticut and its border states:

- Connecticut – Sales Monday to Saturday 8 am–9 pm

- Rhode Island – Sales Monday to Saturday 9 am–10 pm; Sunday noon–6 pm
- New York – Sales of wine and spirits Monday to Saturday 9 am–midnight; Sunday noon–9 pm; beer can be sold 24 hours a day
- Massachusetts - Sales Monday to Saturday 8 am–11 pm; Sunday noon–11 pm

Where. States also vary in the types of stores where liquor can be sold whether in grocery stores, stand-alone registered liquor stores, or state-run distribution centers. Each of the bordering states applies different restrictions as to where retail purchases of alcohol can occur. In Connecticut, outside of liquor stores, only beer can be sold in grocery stores. In New York, beer is only sold at supermarkets and convenience stores with wine and liquor sold only at liquor stores. In Massachusetts, beer and wine can be sold in grocery and convenience stores but not liquor. Rhode Island has the most restrictive provisions, requiring that alcohol of any kind be sold only in liquor stores.

It is difficult to measure the effect location restrictions has on alcohol sales. However, a common assumption is that if alcohol is more readily available -- for example, sold in grocery stores -- consumers are more likely to purchase more than if they had to make separate trips to purchase alcohol.

Consumption. Massachusetts and Rhode Island have had consistently higher per capita alcohol consumption rates than Connecticut for the past ten years (See I for detailed data).⁵⁶ However, Rhode Island only allows beer, wine, and liquor to be sold at liquor stores whereas Massachusetts allows beer and wine to be sold in multiple locations including grocery stores. Although a direct correlation cannot be drawn, the consumption data do not appear to support the hypothesis that greater access leads to larger per capita sales.

Sunday Alcohol Sales

Allowing Sunday sales of alcohol has been a policy states have debated for many years. Since 2002, 13 states, including Massachusetts, Rhode Island, and New York, have changed their laws repealing Sunday sales bans. Now only 14 states have a ban, with Connecticut the only New England state continuing to prohibit the sale of alcohol on Sunday.

By still having this law in place, the concern is that Connecticut loses sales tax revenue to border states. Rhode Island, New York, and Massachusetts all allow alcohol sales seven days a week, although this has been a fairly recent development in all three bordering states. Table VIII-7 lists the states that currently have a ban on Sunday alcohol sales and those that have repealed their bans.

⁵⁶ National Institute on Alcohol and Alcoholism of the National Institutes of Health

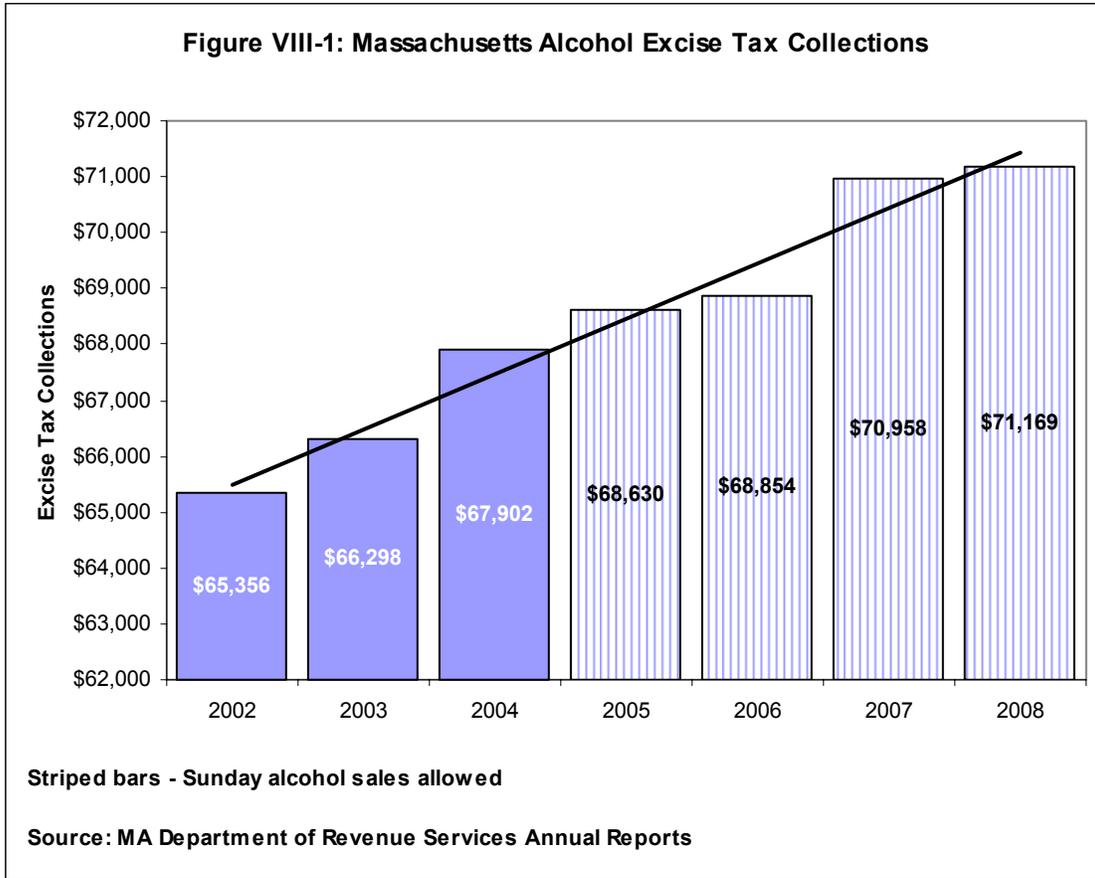
Table VIII-7: Sunday Sales		
Prohibit	Repealed Bans Since 2002	Repealed Before 2002
Alabama	Colorado	Alaska
Arkansas	Delaware	Arizona
Connecticut	Idaho	California
Georgia	Kansas	Florida
Indiana	Kentucky	Hawaii
Minnesota	Massachusetts	Illinois
Mississippi	New York	Iowa
Montana	Ohio	Louisiana
North Carolina	Oregon	Maine
Oklahoma	Pennsylvania	Maryland
South Carolina	Rhode Island	Michigan
Tennessee	Virginia	Missouri
Texas	Washington	Nebraska
Utah		Nevada
West Virginia		New Hampshire
		New Jersey
		New Mexico
		North Dakota
		South Dakota
		Vermont
		Wisconsin
		Wyoming

Source : March 2009 issue of State Legislature

This analysis, as per the scope of study, of the permission and/or prohibition of Sunday sales of alcohol focuses on the impact of tax policy and tax revenue for the state, not the social policy implications of allowing Sunday sales.

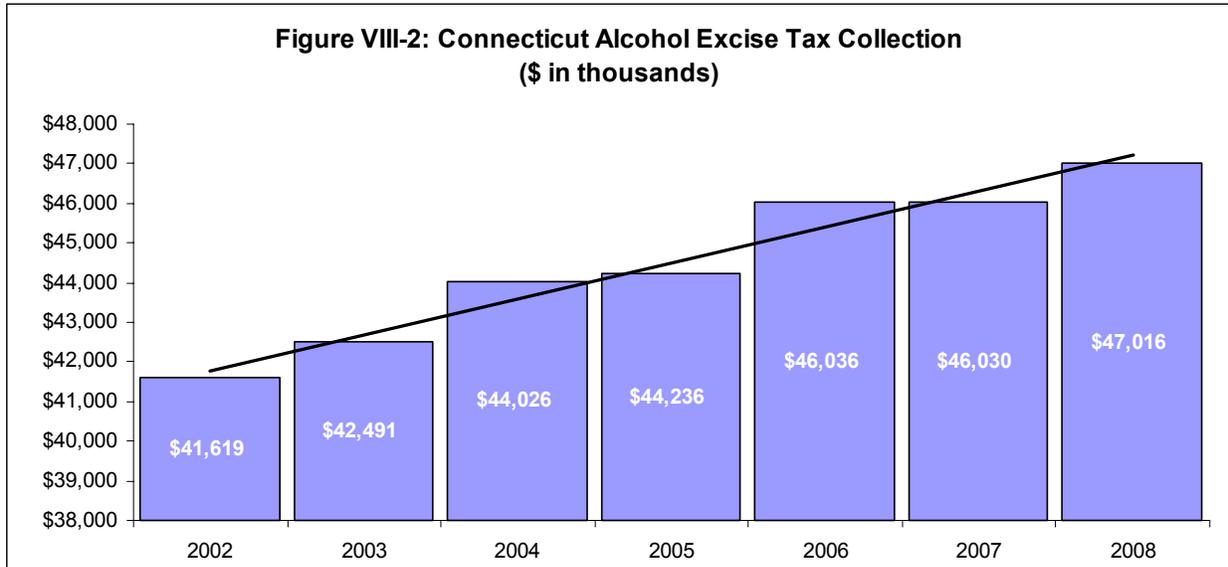
In an effort to determine the effect on Connecticut tax revenue by allowing Sunday sales, PRI reviewed the excise tax revenues collected in Massachusetts, both prior to allowing Sunday sales and after the ban was lifted. Prior to August 1, 2009 Massachusetts did not have a sales tax on alcohol, only an excise tax.

Figure VIII-1 shows the annual excise tax collections on alcohol in Massachusetts from 2002 to 2006. As the chart depicts, revenue collections have been increasing since 2002. One might expect a larger than normal increase in revenue in 2004 when Sunday sales began and then a leveling off as consumers adjusted to the change. However, as depicted in the figure, allowing Sunday sales had little impact on excise tax collections. Prior to allowing Sunday sales, excise tax collections were increasing and continued to increase at a steady rate after the law changed with a large increase occurring between 2006 and 2007, two years after the Sunday sales ban was lifted. Although 2004 revenues did increase 2.4 percent from 2003, the largest percentage increase in tax collections occurred between 2006 and 2007 (3.1 percent); during this time period no tax policy (sales nor excise taxes) on alcohol changed in that state.



	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Percent Increase	1.4%	2.4%	1.1%	0.3%	3.1%

PRI also analyzed excise tax collections for the same time period in Connecticut with the data presented in Figure VIII-2 below. Over the period, overall excise taxes from alcohol sales rose 13 percent, greater than the increase in Massachusetts (9 percent), even though the ban on Sunday sales was lifted in Massachusetts during this time period, and remained in place in Connecticut.



Upon review of recent literature, it appears that location of sales (i.e., where alcohol is allowed to be sold) prior to lifting a Sunday alcohol sales ban impacts sales once the ban is lifted. A recently released study by Stehr explored the effects of Sunday sales bans on taxes and cross-border shopping.⁵⁷ In states with the least restrictions on where alcohol is sold (e.g. grocery stores versus liquor stores), sales improved only marginally, while those that had the most restrictive location requirements, sales increased the most after a ban was lifted.

The study showed that in general, repealing a Sunday ban on spirits (hard liquor only) will increase sales by 3.5 percent but the increase in beer sales was only marginally significant at 2.4 percent. However, in states that did not allow spirits to be sold in grocery stores and then repealed the statewide ban on Sunday sale of spirits, the sales of spirits increased by 7.2 percent. In states that already allowed spirits to be sold in grocery stores prior to the repeal of a Sunday sales ban, there was no significant effect.

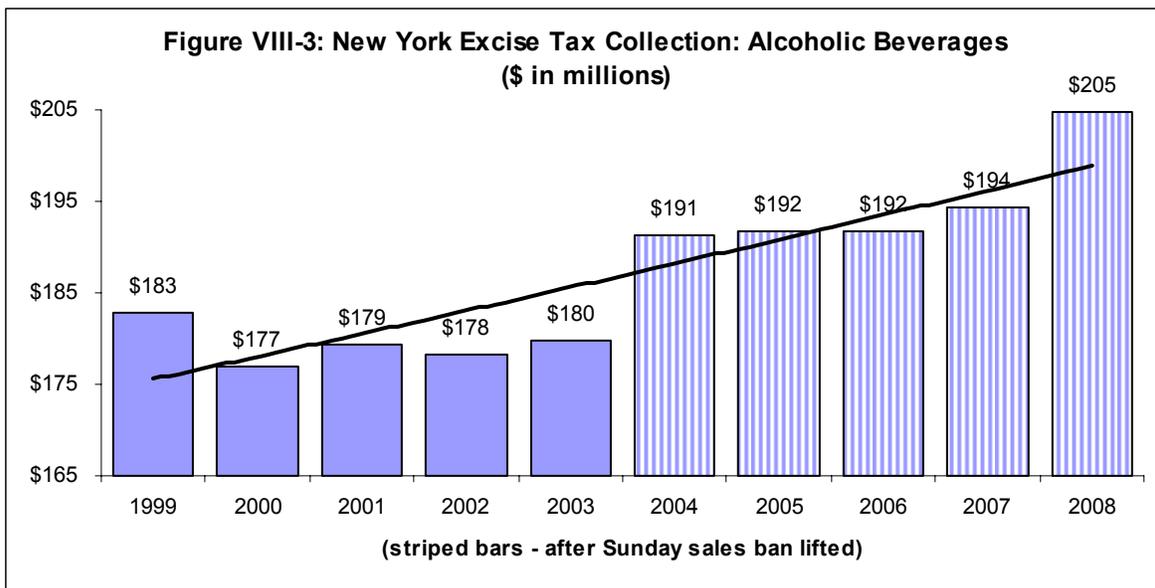
The study looked at the different effects of repealing the Sunday ban, depending on the location of sale of alcohol types and, in particular, whether spirits were sold in grocery stores. The study did not calculate the effect of selling beer and wine in grocery stores, however, it could be the combination of selling beer and wine in grocery stores prior to a Sunday ban, as was the case in Massachusetts, does not greatly affect sales after the ban is lifted. In addition, prior to lifting the Sunday ban, Massachusetts allowed Sunday sales during the holiday season, between Thanksgiving and New Year's Day, and since 1990, also allows stores within 10 miles of the New Hampshire and Vermont borders to be open on Sundays year round. All of these factors could have dampened the effect the repeal of the ban on Sunday alcohol sales had on tax revenue in Massachusetts.

Other state comparison. Due to the additional factors that may have contributed to the unique situation in Massachusetts, PRI analyzed several other states' experiences pre- and post Sunday sales repeals and the results are discussed below. New York, Colorado, and Kansas

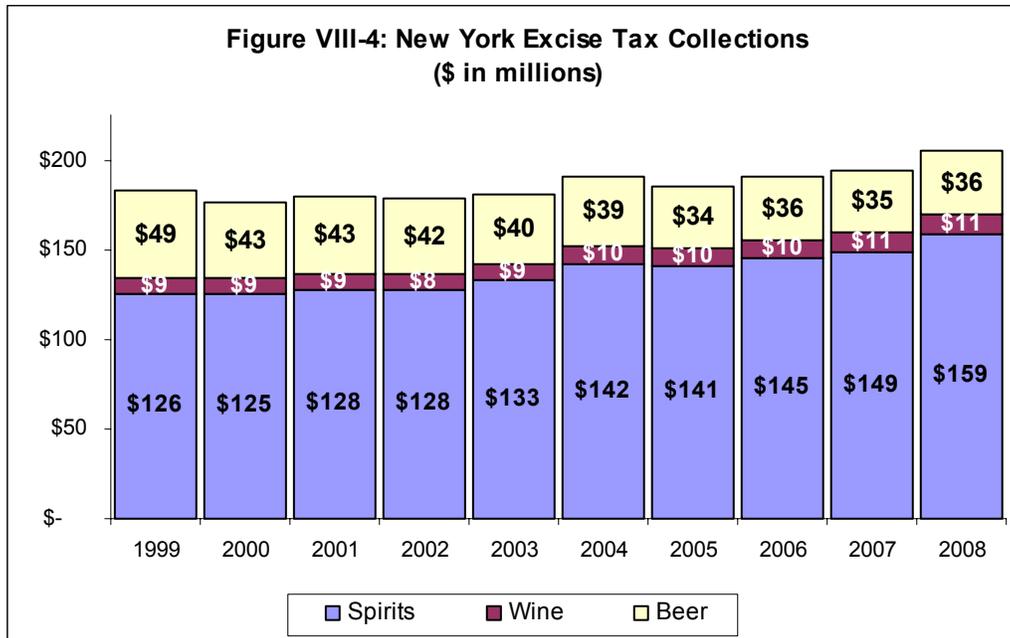
⁵⁷ Stehr, Michael, "Excise Taxes on Drinking and Cross-Border Shipping for Alcoholic Beverages," National Tax Journal, March 2007.

allow only the sale of beer in grocery stores, similar to Connecticut. All three states now allow the sale of alcohol on Sunday, although certain counties in Kansas – about 25 percent - do not allow Sunday sales. In terms of border competition, Kansas stores compete for customers along the Missouri border, a highly populous area of the state, while Colorado does not experience competition from its bordering states.

New York. Figure VIII-3 presents the overall excise tax collections for New York between 1999 and 2008. When New York repealed the Sunday ban on alcohol sales in 2003, overall excise tax collections increased 6.5 percent in the initial year and then leveled off at about 1 percent per year thereafter until 2008.



However, the increase in excise tax revenue was comprised of increases in spirit and wine sales only; beer sales actually decreased in the years subsequent to allowing Sunday sales (see Figure VIII-4). Also of note is the 5 percent increase in excise tax collections from 2007 to 2008, four years after the repeal of the Sunday ban, and the three percent decrease between 1999 and 2000.



In the period analyzed, beer sales have been steadily declining while spirit sales have been increasing with notable increases in 2004 and 2008 respectively. Both the increases and decreases suggest alcohol sales are influenced by factors other than repeal of Sunday bans, such as economic conditions.

Colorado. In July 2008, Colorado lifted its Sunday alcohol sale ban. In the 12 months after the ban, alcohol sales volume increased most notably in liquor and wine. However, as Table VIII-8 shows, gallons of all types of alcohol sold in Colorado also increased between July 2005 and July 2006 when compared to the previous 12 months, and the annual percentage increase was even greater than when Sunday sales were allowed.

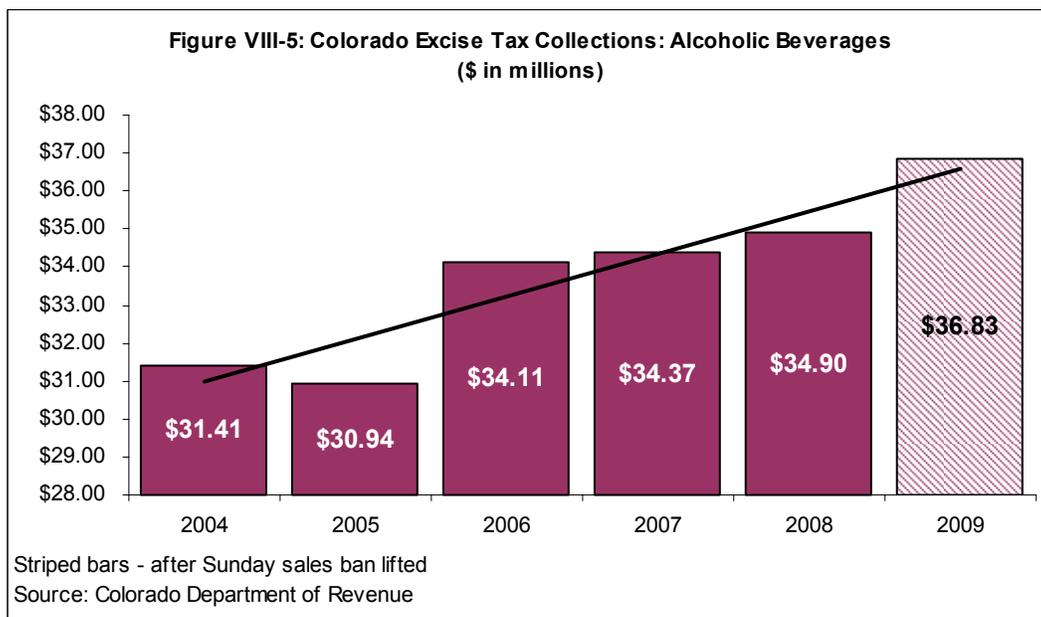
	Liquor	% change from previous 12 months	Wine	% change from previous 12 months	Beer	% change from previous 12 months
July 2004 – June 2005	8,336,845		11,667,272		105,891,845	
July 2005 - June 2006	9,432,347	13%	12,873,379	10%	110,269,523	4%
July 2006 – June 2007	9,496,025	1%	13,753,428	7%	109,112,723	(1%)
July 2007 – June 2008	9,638,434	1%	13,881,431	1%	110,755,376	2%
July 2008 – June 2009	10,276,930	7%	14,793,954	7%	114,367,629	3%
Quarter	Liquor	% change	Wine	% change	Beer	% change
July 2008 – Sept 2008	2,788,163		3,937,343		33,744,668	
July 2009 – Sept 2009	2,487,779	(11%)	3,536,224	(10%)	30,478,765	(10%)

Source: Colorado Department of Revenue Services

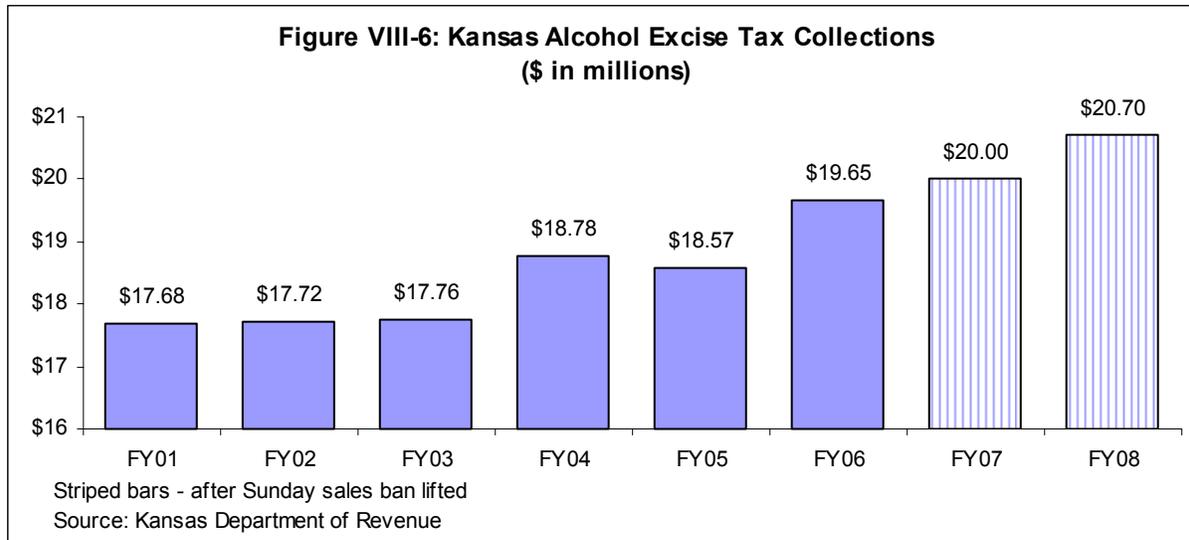
However, this increase in 2008 and 2009 may not be sustained. In comparing the most recent three months of sales in Colorado (July 2009 – September 2009) to the same quarter in 2008 (July 2008 – September 2008), gallons sold for all three beverage types are down 10-11

percent. It is difficult to predict a trend from only one calendar quarter of sales data, but it suggests that an initial increase in sales occurred immediately following the passage of Sunday sales and then is being followed by a leveling off or even a decrease in sales. However, this trend could also be indicative of the economic recession as well.

As shown in Figure VIII-5, Colorado also saw an overall increase of 6 percent in excise tax collections the year after the state lifted the Sunday sales ban. The largest increases came from wine and spirits, 7 percent and 6 percent respectively, with beer tax collections increasing only 3 percent. However, sales increased by 10 percent between 2004 and 2006 when Sunday sales were not allowed. This suggests other factors contribute to increased sales, such as during good economic times people spend money more freely on alcohol, and cut back during recessions.



Kansas. The experience in Kansas also makes it difficult to predict a definite pattern following permitting Sunday alcohol sales. The state legislature allowed counties to open on Sunday in November 2005, halfway through fiscal year 2006. Between 2005 and 2006 sales increased 5.8 percent but in the first full year of allowing Sunday sales, the increase was only 1.8 percent, as shown in Figure VIII-6.



These findings suggest that there is typically a bump in sales following the repeal of Sunday sales ban but the percentages of increase vary. The experience in the states analyzed indicates there are other factors, such as the economy, influencing the sale of alcohol and contributing to increases and decreases.

Since all three states examined have experienced a bump in excise tax collections after lifting a Sunday ban, PRI calculated a potential increase for Connecticut in the initial year after repealing the ban. The high and low increases for volume of alcohol sold in New York and Colorado were used to calculate a range. (Kansas volume data was unavailable. PRI staff also tried to obtain data from Rhode Island but that state was unable to fulfill the request).

The figures for New York and Colorado in Table VIII-9, show increases between 7-11 percent for wine and between 7-8 percent for spirits. Beer sales in both states were not impacted by the repeal of Sunday sales ban. In fact in New York, excise tax collections for beer decreased the two years following the ban and in Colorado the 3 percent increase was not substantially different than the average two percent increase in the years prior to the Sunday sales ban.

Using those ranges, Connecticut could anticipate an additional \$2.5 - \$3.1 million annually in excise tax revenues from the sale of wine and spirits if Sunday sales were allowed.⁵⁸ Increases in the amount of alcohol sold would also raise more sales tax revenue. In the year following the repeal of the ban, program review estimates that Connecticut could expect an approximate increase of \$5 million in sales tax revenue from beer, wine and liquor store sales, for a total revenue gain of \$7-8 million.⁵⁹

⁵⁸ Calculation based on the percent increases in wine and spirits sold in Colorado and New York multiplied by the 2008 gallons sold in Connecticut multiplied by Connecticut's excise tax rates.

⁵⁹ Calculation based on 2008 sales at beer, wine, and liquor stores, assuming an 8 percent increase in sales and a sales tax rate of 6 percent.

Table VIII-9: Volume Increases After Sunday Sales Ban Lifted		
	% increase in volume	
State	Wine	Spirits
New York	11%	8%
Colorado	7%	7%
Source: PRI data analysis		

Cross-Border Shopping

As part of the narrower scope, PRI also reviewed Department of Revenue Services' (DRS) sales tax data to examine whether there is evidence of Connecticut shoppers crossing the border into Massachusetts to shop.

States must balance the need to raise revenue versus remaining competitive with border states when establishing the rate for a sales tax. If rates vary significantly from state to state, it creates an incentive for consumers to cross state borders to shop in lower-tax jurisdictions. However, when deciding where to shop, consumers face a tradeoff between the cost savings due to the lower tax versus the costs and inconvenience incurred from the distance traveled.

The Connecticut Department of Revenue Services collects sales tax receipts directly from retailers. However, for retailers with multiple locations in the state, many compile all their store data and submit sales tax collections originating from one retail location to DRS. This means that for large chain-store retailers, they will often report the total of their Connecticut sales from one store. Due to this method of reporting, PRI was unable to analyze overall sales tax receipt collections by Connecticut town, thereby making it impossible to analyze cross-border shopping generally.

However, PRI was able to review alcohol sales data from stand-alone beer, wine, and liquor stores (i.e., not grocery stores) in Connecticut. Since legislative permitting laws limit the number of "package" stores one person can own, reporting problems do not arise for these particular retail outlets. The Department of Revenue Services grouped the alcohol sales data by location of the town to the state's borders for years 2004 through 2008. For confidentiality reasons, DRS does not release sales data if there are fewer than 10 retailers in the town, which is why the data are grouped together by town category in Table VIII-11.

PRI assumes that an incentive existed for Connecticut residents to cross the Massachusetts border to shop -- prior to August 1, 2009 -- based on the lower sales tax rate, lower excise tax rates, and also the fact that no sales tax was imposed on alcoholic beverages prior to that date. PRI also assumes that New York residents have the opposite incentive -- to cross the border and shop in Connecticut due to a lower sales tax rate in Connecticut. However, with Sunday being the second busiest shopping day and package stores not open on Sunday in Connecticut, fewer New York residents may cross the border to shop. As for the Rhode Island border, little incentive exists for Connecticut residents to cross-border shop because of the higher sales tax, as shown in Table VIII-10. Due to lower population levels in the Rhode Island and Connecticut towns on the Rhode Island/Connecticut border, PRI believes the small variation in sales tax has minimal impact on overall sales tax collections in the state.

State	State Tax Rate	Local Tax Rate	Total Sales Tax
Connecticut	6%	-	6%
Massachusetts	6.25%	-	6.25%
New York	4%	4.125-4.375%	8.125 – 8.375%
Rhode Island	7%	-	7%
Source: Tax Foundation			

PRI first analyzed the per capita alcohol sales data by town category. Table VIII-11 shows the per capita (residents over the age of 21) alcohol sales at Connecticut beer, wine and liquor stores (this data excludes beer sales occurring at grocery stores). Based on the per capita sales data, towns that border Massachusetts have lower sales than the other town groupings in the state. In fact, sales in towns bordering Massachusetts are anywhere from 35 percent to 43 percent lower than alcohol sales in Connecticut non-border towns.

	2004	2005	2006	2007	2008
MA Border Towns	\$197	\$213	\$234	\$249	\$271
NY Border Towns	\$372	\$381	\$384	\$392	\$406
RI Border Towns	\$295	\$289	\$306	\$322	\$312
Non-Border Towns	\$340	\$357	\$375	\$402	\$417
Total for CT	\$333	\$349	\$365	\$390	\$404
Source: Sales data – DRS; Town Population – State Data Center					

Multiple factors could be influencing the sale of alcohol, including price, availability, and income of the consumer. As incomes rise, consumers might either purchase more alcohol or buy higher-priced alcohol, resulting in higher sales and tax collections. However, when considering the average median household income for each of the town groupings, as shown in Table VIII-12, Connecticut towns on the Massachusetts border household median income is only 11 percent lower than non-border towns while Rhode Island border towns are 19 percent lower. However, Rhode Island towns have a higher per-capita consumption of alcohol than Massachusetts border towns, suggesting factors other than income are influencing lower sales in the latter group. In addition, although New York border towns have a high median household income, per-capita sales are lower than in the non-border towns. However, sales on the New York border are still higher than Rhode Island and Massachusetts border towns. It is difficult to separate the different factors influencing sales but it appears more than just income is driving the differences.

MA Border Towns	\$71,741
NY Border Towns	\$108,658
RI Border Towns	\$64,480
Non-Border Towns	\$79,446
Total for CT	\$80,178
Source: CERC Town Profiles	

The study previously cited by Stehr examined the impact cross-border shopping has on state alcohol sales. However, the data were from 2001, and in the analysis, the impact of cross-border shopping to individual states was based on the assumption that no other state had repealed its Sunday sales ban. Since all the states that border Connecticut now allow Sunday sales, that study does not provide a fruitful estimation of the impact cross-border shopping has in Connecticut.

Based on the income and alcohol sales data for Connecticut, further analysis is needed to fully explain the reasons contributing to the lower sales per capita in towns along the Massachusetts border. However, looking at just the sales data from beer, wine, and liquor stores, it appears package stores bordering Massachusetts are losing sales. This may be due to a variety of factors: price; increased availability of where alcohol is sold in Massachusetts; the greater accessibility of the extra day (Sunday) to purchase alcohol; or the fact that until recently Massachusetts had no sales tax on alcohol.

For a variety of reasons, program review believes that the Sunday sales ban in Connecticut should be repealed. Therefore the program review committee recommends,

Connecticut liquor and grocery stores should be permitted, but not required, to sell alcohol on Sunday under their current licensing provisions.

Rationale. Sunday sales ban of alcohol is a policy that has been repealed in 36 states. All states in the Northeast have repealed it, considering it to be anti-competitive and limiting consumer preferences.

In Connecticut's case, since the state is small, with cross-border alcohol availability on Sunday appearing to impact sales along the Massachusetts border, the repeal of the ban may lessen the accompanying revenue loss to the state. In fact, if all stores decide to open on Sunday, this recommendation should result in increased revenue to the state of \$7.5 to \$8 million in the year immediately following the lift of the ban. Given the economic conditions of the state it seems prudent for the state to allow Sunday alcohol sales and offer package stores on the borders to more effectively compete.

APPENDICES

APPENDIX A: AGENCY RESPONSES



Joan McDonald
Commissioner



State of Connecticut
Department of Economic and
Community Development

November 9, 2009

Senator John Kissel, Co-Chair
Representative Mary Mushinsky, Co-Chair
Legislative Program Review and Investigations Committee
State Capitol, Room 506
Hartford, CT 06106

Dear Senator Kissel and Representative Mushinsky:

I am writing to you in response to a recent study concerning **Economic Competitiveness in Selected Areas** conducted by members of the Legislative Program Review Committee (LPRIC) Staff. We appreciate the efforts by the committee and staff to review and explore this area, especially during these difficult economic times.

As you are aware the Department of Economic and Community Development (DECD) is an agency with broad and diverse areas of responsibility, including economic, community and housing development, that are interrelated and all of which have a direct impact on the state's economy.

After reviewing LPRIC's study and having heard some of the testimony and discussion from the recent hearing, I am disappointed that the committee is not taking a more holistic approach to evaluating and addressing the many issues that affect businesses performance and industry competitiveness in our state. While your staff did acknowledge some of the study's shortcomings in this regard, they did not focus on some of the key factors that drive business decisions in Connecticut.

Businesses and investors generally do not make decisions based on individual issues or single factors. Rather they look at the aggregate effect of all of the various factors that influence business and investment decisions. These factors include but are not limited to, high energy costs, labor costs, regulatory red tape/mandates, lack of affordable housing, inadequate transportation, lack of a trained workforce, healthcare costs, unpredictable and inconsistent tax structure and legislation that companies view as anti-business.

All of these factors should be examined if Connecticut's competitiveness is to be accurately measured and solutions for improvement are to be offered and evaluated. My department's recently completed State Economic Strategic Plan may prove helpful to the committee in this regard.

I also feel it is important for you and committee members to get a better understanding of DECD's job creation and retention activities during this economic downturn.

First and foremost, under Governor Rell's direction and in partnership with our state's chambers of commerce, we have initiated a sustained business outreach program called "Business Connections."

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The state's Industry Clusters play a key role as well. While many of our state's Industry Clusters have matured and become self-sustaining, DECD still actively collaborates with industry leaders and supports many of the initiatives emanating from the clusters. This market-driven approach has great value for all of us in the public sector and continues to help strengthen the competitiveness of Connecticut companies and industries.

Ensuring that all Connecticut residents share in the state's economic success is an important public policy objective to be realized. That is why DECD continues to fund programs like the Microloan Guarantee Program for Women- and Minority-Owned Businesses administered by the Connecticut Community Economic Development Fund. Since its inception in 1999, the Microloan Guarantee Program for Women- and Minority-Owned Businesses has loaned \$3.5 million to 115 businesses and helped create 2,557 full- and part-time jobs.

DECD actively works to maintain Connecticut's global orientation, whether it is in terms of trade promotion counseling and outreach, assisting companies take advantage of global market opportunities or pursuing foreign direct investment activities. DECD leverages resources to avoid duplicative efforts.

Connecticut has experienced several years of export growth. From 2007 to 2008, Connecticut's annual export commodities (exclusive of services) grew an outstanding 10.97%, from \$13.79 billion to \$15.31 billion. This increase follows the state's 12.66% gain in 2007, and its tremendous 25.6% jump in 2006. It is important to note, however, that this data—as well as the state's contribution to the GDP—paints a conservative picture of Connecticut's export story as it omits exported services, as the collection of such service data is inexact and tenuous.

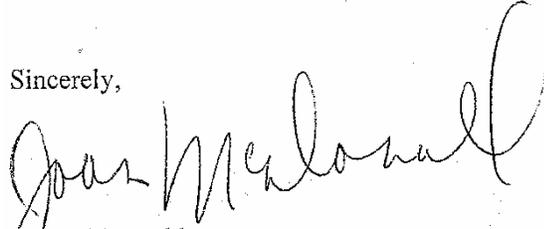
Foreign direct investment continues to have a major impact on the state's economy. In fact, Connecticut is tied with South Carolina as first in the country in the per capita share of its workforce supported by U.S. subsidiaries. U.S. subsidiaries in Connecticut employ over 100,000 workers in the state.

Certainly not to be overlooked are DECD's financial assistance programs that are helping companies retain and create jobs in the state. We have several programs at our disposal, including MAA, enterprise zones, the Job Creation Tax Credit Program and the Urban and Industrial Site Reinvestment Tax Credit Program that are having a positive impact on our economy. Since the onset of the recession, DECD has offered financial support to companies to help create and retain over 28,000 jobs in our state, leveraging another \$1.2 billion in capital in the process.

Finally, DECD continues to take an active role in shaping Connecticut's economic future. The recent completion of the draft State Strategic Economic Development Plan pursuant to PA 07-239 is a major step forward in understanding the importance and interrelated nature of transportation, workforce development, housing and education and how they impact our competitiveness as a state. The plan includes 66 initiatives for policymakers to consider that would improve the state's economic development performance.

We at DECD look forward to working with you and the committee on these issues and others as we collectively strive to strengthen Connecticut's business climate and the overall competitiveness of our industries and companies in the global marketplace.

Sincerely,

A handwritten signature in black ink, appearing to read "Joan McDonald". The signature is fluid and cursive, written over a light background.

Joan McDonald
Commissioner, Department of Economic and Community Development
Chair, Connecticut Innovations

CC: Senator Andrew Maynard, Ranking
Representative Mary Ann Carson, Ranking
LPRIC members
Carrie Vibert, Director, LPRIC



Thank you for the opportunity to comment on and review the draft of the Legislative and Program Review report on Connecticut's Economic Competitiveness dated December 2009. Please consider the following comments for your final report:

- Page 17, Table II-6 – The CDA acts as a conduit issuer of self-sustaining bonds, enabling some private sector companies to take advantage of tax exempt financing. The CDA acted as a conduit issuer for self-sustaining bonds of: \$87,130,000 in calendar year 2006; \$52,000,000 in 2007; and \$100,330,000 in 2008. CDA's operating expenses reflect resources needed to sustain and execute these transactions; however, Table II-7 appears to imply that CDA's operating expenses only support direct financing activity.
- Page 17, Table II-7 – The operating expenses shown include several items that are not associated with direct cost of operations (personnel and administrative expenses are considered direct expenses.) The numbers in the report include interest expense associated with CDA's interest on debt and allowance for loss allocations. Excluding those items, the expenses at CDA are as follows: \$4,906,115 for fiscal year 2006; \$4,907,244 for 2007; and \$4,854,942 for 2008. These corrections would necessitate changes to the percentages reflected in the table; however, we would need to determine how to reflect self-sustaining activity in the calculation.
- Page 18 – The number of jobs at the time of funding vs. approval of transaction is generally the same. When timing causes slight variations, we report the most current.
- Page 46 – The 26 people mentioned and the expenses as modified of \$4.8 million support lending activity, self-sustaining bond activity, brownfield tax increment financing, business technical assistance and Hartford Civic Center administrative activity.

In conclusion, the CDA is always looking for operational efficiencies. Modest expense reductions would not substantially enhance our available funding; however, cuts would affect our ability to maintain activity levels and administrative loan management that would directly impact loan performance and financial results.

Thank your for the opportunity to comment.

APPENDIX B: Scope of Study

CONNECTICUT'S ECONOMIC COMPETITIVENESS IN SELECTED AREAS

BACKGROUND

Connecticut has identified several “industry clusters”, such as the aerospace and bioscience industry sectors, that are the foundation of its economic growth. Exports, many from industry clusters, are a sizable contributor to the state’s economy. In 2007, the value of exports totaled \$13.7 billion or about 6.7 percent of the state’s economy, an increase of about 12 percent from 2006 levels. However, concern has been raised about whether Connecticut is positioned to rebound from the current recession in a way that advances the state’s major economic drivers to its maximum benefit. The study will look broadly at what state policymakers can do to enhance the state’s economic opportunities.

Issues have also been raised about whether Connecticut’s laws and tax policy may restrict the state’s ability to compete with surrounding states, especially in the area of retail sales, and if so, to what extent businesses close to Connecticut borders bear the burden.

AREAS OF FOCUS

The study will focus on how Connecticut’s laws and policies help or hinder the state’s economic position both globally and with its surrounding states. To do that, both a broad and narrow approach will be used. Broadly, the study will examine: 1) selected Connecticut industry cluster areas, including export activity, that are considered the state’s economic development priorities; and 2) whether state laws, tax policies, and other strategies enhance cluster activity. More narrowly, the study will also examine how Connecticut’s laws and tax policy affect its economic position, especially in the retail sales area, relative to surrounding states.

AREAS OF ANALYSIS

The first three areas of analysis will assess Connecticut’s competitive position globally and nationally, while the last four areas will examine the state’s position compared to surrounding states.

Industry Cluster Focus:

- Identify those industry clusters Connecticut consider its economic development priorities, including exports, and select several for in-depth analysis.
- Identify other states with similar priorities, and based on several measures, assess how well Connecticut compares in economic competitiveness.
- Evaluate what laws, tax policies and other strategies advance (or detract from) the economic competitiveness in these areas, and opportunities for enhancing Connecticut’s position, including through expanded revenues.

Surrounding State Focus:

- Determine the current tax policies of Connecticut and surrounding states regarding sales, excise, and use taxes; identify any major changes in those policies in past years and any corresponding impact on revenue to the state.
- Determine sales tax differences in the various surrounding states and review any existing data or evidence that these differences provide incentives for state businesses and residents to cross borders to purchase goods and/or services.
- Examine the impact on economic competitiveness of any restrictive laws or policies that exist in Connecticut, such as minimum pricing and blue laws, on businesses and residents particularly those in towns near the state borders.
- Assess deficiencies, if any, on use tax reporting, collection, and enforcement, including inter-agency collaboration among the Departments of Revenue Services, Economic and Community Development, and Consumer Protection.

AREA NOT UNDER REVIEW

The study will not include other tax areas such as local, property, business/corporation or wealth taxation (i.e., estate, inheritance, or gift taxes), nor will the study examine other reasons that potentially affect economic competitiveness, like costs of doing business, housing, and energy costs.

APPENDIX C: Economic Development Agencies and Programs

Category	Program Purpose	Funders	Average Annual Funding
Business Climate	Improving business climate	OPM	\$ 237,913,213
	Creating jobs	CDA	\$ 8,315,400
Municipal Development	Developing infrastructure	DECD CDA	\$ 97,547,508
	Cleaning up and redeveloping brownfields	CDA DEP	\$ 1,678,575
	Developing urban areas and neighborhoods	DECD, OWC, OPM, CDA	\$ 6,185,708
Targeted Industries	Developing targeted industries	DECD CII	\$ 122,048,289
	Promoting tourism	OPM, CCT	\$ 9,970,732
	Preparing plans and developing policies	DECD	\$ 133,333
Human and Organizational Development	Developing the workforce	DECD, DOL, OWC, CII	\$ 54,798,265
Technology	Venture capital; promoting innovation	CII, DECD, OWC	\$ 36,726,337
	Technology transfer	DECD, CII	\$ 1,392,370
Quality of Life	Developing arts, cultural, and historical assets	CCT	\$ 4,691,145
Total			\$ 581,400,874

APPENDIX D: Connecticut's Industry Clusters

<u>Industry</u>	<u>NAICS Description</u>
Aerospace Components Manufacturing	3364 Aerospace Product and Parts Manufacturing
Bioscience	3254 Pharmaceutical and Medicine Manufacturing 334510 Electromedical and Electrotherapeutic Apparatus Manufacturing 334516 Analytical Laboratory Instrument Manufacturing 334517 Irradiation Apparatus Manufacturing 3391 Medical Equipment and Supplies Manufacturing 423450 Medical, Dental, and Hospital Equipment and Supplies Merchant Wholesalers 423460 Ophthalmic Goods Merchant Wholesalers 446110 Pharmacies and Drug Stores 446130 Optical Goods Stores 541710 Research and Development in the Physical, Engineering, and Life Sciences 6215 Medical and Diagnostic Laboratories
Insurance and Financial Services	522 Credit Intermediation and Related Activities 523 Securities, Commodity Contracts, and Other Financial Investments and Related Activities 524 Insurance Carriers and Related Activities 525 Funds, Trusts, and Other Financial Vehicles 531 Real Estate
Maritime	3366 Ship and Boat Building 4831 Deep Sea, Coastal, and Great Lakes Water Transportation 4832 Inland Water Transportation 4883 Support Activities for Water Transportation 4885 Freight Transportation Arrangement
Metal Manufacturing	331 Primary Metal Manufacturing 332 Fabricated Metal Product Manufacturing 333 Machinery Manufacturing 337124 Metal Household Furniture Manufacturing 33991 Jewelry and Silverware Manufacturing 423510 Metal Service Centers and other Metal Merchant Wholesalers
Plastics	325211 Plastics Material and Resin Manufacturing 3261 Plastics Product Manufacturing 326220 Rubber and Plastics Hoses and Belting Manufacturing
Software and Information Technology	3341 Computer and Peripheral Equipment Manufacturing 3344 Semiconductor and other Electronic Component Manufacturing 334611 Software Reproducing 334613 Magnetic and Optical Recording Media Manufacturing 423430 Computer and Computer Peripheral Equipment and Software Merchant Wholesalers 425110 Business to Business Electronic Markets 443120 Computer and Software Stores (retail) 454111 Electronic Shopping 454112 Electronic Auctions 5112 Software Publishers 518 Internet Service Providers, Web Search Portals, and Data Processing Services 5415 Computer Systems Design and Related Services 611420 Computer Training

Source: Connecticut's Industry Clusters, Department of Labor, July 2005

APPENDIX E: Revolving Loan Funds

Loan Organization	Loan Type	Period	# of Loans	Total \$ Lent
Connecticut Community Investment Corporation (CCTIC)	MicroLoan	10/1/04-9/30/09	84	\$2,300,000
Connecticut Community Investment Corporation (CCTIC)	CHEFA/Childcare	10/1/04-9/30/09	21	\$500,000
Community Economic Development Fund (CEDF)	MicroLoan	2006-2007	33	\$900,000
MetroHartford Alliance – Growth Fund Loan Program	Revolving loan fund	Period ending 9/30/09	12	\$2,800,000
Middlesex County Revitalization Commission	Revolving Loan Fund (\$50,000)	Period ending 6/30/09	7 active	\$350,000
Waterbury Development Corporation	3 Revolving Loan Programs	2008-2009	9	\$1,006,700
Waterbury Development Corporation	Microloan	2009	2	\$50,000
Northeast Economic Alliance (Windham)	Revolving Loan Fund (2 microloans)	1/1/09 -11/1/09	9	\$364,000
Northeast Economic Alliance (Windham)	Seed Capital (1 microloan)	1/1/09-11/1/09	4	\$162,000
Southeast Connecticut Enterprise Region	Revolving loan	1/1/07-8/31/08	3	\$1,496,000
Hartford Community Fund	Commercial Loans (not housing redevelopment) 1 microloan	6/6/05 – 11/1/09	45 1	\$4,528,142 \$30,000
Community Capital Fund (Bridgeport)	Commercial real estate loans Small business	2005-2008	3 25	\$225,000 (average) \$148,000 (average)
Hartford Economic Development Corporation (HEDCO)/Greater Hartford Business Development Corporation	11 different loan funds No response on activity levels			

APPENDIX F: Business Costs in Connecticut Compared to Other States

Health care costs

Several measures examined:

1. Total average family premium (for each employee) for employer-based health insurance by state:

Average premium in Connecticut for 2008 was \$13,436 – the average in the US was \$12,298 – CT was 9.2% above national average and ranked 5th-highest (Kaiser Family Foundation Health Facts) (behind Massachusetts and New Hampshire and RI), but above other comparative states.

State	2008	State	2008
CT	\$13,436	NC	\$12,308
MA	\$13,788	VA	\$11,935
PA	\$12,339	NTL	\$12,298

2. Employer contribution to the premium was \$10,361 – the national average was \$8,904 – CT was 16.4% above the national average for employer contribution. This ranked CT 4th highest (behind Massachusetts and Rhode Island, but not NH).
3. Overall premiums for family have increased 131% in 10 years (1999-2009) and by one third from 2003 to 2008 nationwide (latest state by state data). Connecticut's premiums for family coverage have increased by one-third over the same time period. In Massachusetts the increase was 40%, in New Hampshire 39%, North Carolina 45%, Pennsylvania 35%, and Virginia 30%.

State	% increase 2003- 2008	State	% increase 2003- 2008
CT	33%	NC	45%
MA	40%	VA	30%
PA	35%	NTL	33%

4. Average annual % growth in health care expenditures by state – from 1991 to 2004 (a little old) was 5.7% below the national average of 6.7%

Workers Compensation Premiums

Connecticut workers compensation premiums are \$2.46 per \$100 of payroll. Connecticut's 2008 ranking placed the state 20th – down from 14th highest in 2006 (a good trend), but still (about 10%) above the median of \$2.26 per \$100 of payroll. The table below shows competitor states – Massachusetts pays only \$1.39 per \$100 of payroll.

State	2008	State	2008
CT	\$2.46	NC	\$2.43
MA	\$1.39	VA	\$1.43
PA	\$2.68	NTL (median)	\$2.26

Wages

Average weekly wage for first quarter of 2009 (latest data available) –for Connecticut was \$1,189 (\$61,828 annually) a 5.6% drop from the same quarter of 2008. Below is a comparative table. CT ranked 2nd (without D.C.) after New York nationwide and was 34% above the national average. Not sure this is the best measure since salaries and bonuses in financial services may skew average.

State	2009	% change	State	2009	% Change
CT	\$1,189	-5.6%	NC	\$766	-2.8%
MA	\$1,101	-3.7%	VA	\$906	+0.1%
PA	\$862	-0.7	NTL (average)	\$882	-2.5%

Source: Bureau of Labor Statistics

Median household income (3-year average, inflation-adjusted) portrays a somewhat different picture:

Ct's median income is \$65,976 (4th nationwide) behind New Hampshire (1st) New Jersey and Maryland. Below are comparative states:

State	3-year median income	State	2009
CT	\$65,976	NC	\$43,538
MA	\$60,038	VA	\$61,472
PA	\$51,156	NTL (average)	

Source: Census Bureau

Energy Costs

An average total energy cost (per million BTU) in Connecticut for 2007 was \$24.93 compared to the national average of \$18.23. CT was 37% above the national average and ranked 2nd in the nation behind Hawaii, and above the other comparative states:

State	2007
CT	\$24.93
MA	\$23.89
NC	\$19.17
PA	\$18.30
National	\$18.23
VA	\$17.58

In 2007, Connecticut also ranked 2nd in the nation for electricity prices per million BTU, at a rate of \$48.20 compared with the national average of \$26.84 – 80% higher.

State	2007
CT	\$48.20
MA	\$44.44
NC	\$22.96
PA	\$26.69
National	\$20.91
VA	\$17.58

Source: Energy Information Administration, Energy Prices by Source, Table S1a, 2003

Taxes

The Council on State Taxation for the past seven years has commissioned Ernst & Young to examine the state and local tax burdens to businesses across the country. The taxes included in the analysis are: property taxes, sales and excise taxes, gross receipt taxes, corporate income and franchise taxes, business and corporate license taxes, unemployment insurance taxes, and individual income taxes paid by owners of non-corporate businesses.

Connecticut businesses pay a lower percentage of taxes as a percent of state GDP when compared to the national average and competitor states – ranking 2nd in the nation behind North Carolina. Connecticut businesses' share of tax growth between 2002 and 2008 was also the smallest when compared to the national average and other competitor states – ranking first in the nation with growth of 26.5%.

Business Taxes as % of GDP	
State	% of GDP
NC	3.6%
CT	3.7%
VA	3.9%
MA	4.2%
PA	4.9%
National	4.9%

Business share of tax growth 2002-2008	
State	% of Growth
CT	26.5%
NC	37.2%
VA	38.2%
MA	41.8%
PA	44.2%
National	45.6%

Source: Council on State Taxation, "Total state and local business taxes," January 2009

Housing Affordability

Connecticut housing affordability ranks poorly compared to the national average and the competitor states. Using the Census Bureau's 3-year average (2006-2008), adjusted for inflation, Connecticut households pay a higher percentage of their household income (30.3%) towards rent than the national average (29.8%) and the other competitor states.

State median gross rent as % of household income (3 yr average 2006-2008)	
VA	28.4
NC	28.7
PA	28.8
National average	29.8
MA	30.1
CT	30.3

Connecticut households that own their own homes also pay a higher percentage of their income (24.1%) towards monthly owner costs than the national average (21.6%) and the other competitor states except Massachusetts.

Median monthly owner costs as % of household Income (2006-2008)	
CT	24.1%
MA	24.3%
NC	19.8%
PA	20.6%
VA	21.3%
National average	21.6%

The median home value in Connecticut between 2006 and 2008 was \$305,100. This value is 59% higher than the national average but 19 percent lower than Massachusetts.

Median Value of owner-occupied housing (2006-2008)	
NC	145,600
PA	155,400
National average	192,400
VA	259,200
CT	305,100
MA	363,900

Source: Census Bureau

Appendix G: Compilation of Connecticut Economic Rankings

Common Themes:

- Infrastructure poor – rating based on highway performance, ease of commuting, energy costs, housing costs, and lack of capital planning
- Energy costs primary driver in the increase in the cost of doing business between 2005 and 2007 according to the Milken scorecard which in 2007 we were 63.8 percent above the national average
- Entrepreneurial activity around national average
- Top ten in new economy measures

G-1

Organizations	2004	2005	2006	2007	2008
Beacon Hill – State Competitiveness Report	Overall rank: 15 Govt & Fiscal Policy: 42 Security: 4 Infrastructure: 31 Human Resources: 10 Technology: 5 Business Incubation: 18 Openness: 13 Environmental Policy: 43	Overall rank: 21 Govt & Fiscal Policy: 42 Security: 6 Infrastructure: 38 Human Resources: 11 Technology: 4 Business Incubation: 40 Openness: 11 Environmental Policy: 41	Overall rank: 24 Govt & Fiscal Policy: 44 Security: 5 Infrastructure: 37 Human Resources: 9 Technology: 4 Business Incubation: 47 Openness: 12 Environmental Policy: 41	Overall rank: 25 Govt & Fiscal Policy: 40 Security: 8 Infrastructure: 41 Human Resources: 10 Technology: 4 Business Incubation: 38 Openness: 13 Environmental Policy: 43	Overall rank: 21 Govt & Fiscal Policy: 43 Security: 2 Infrastructure: 38 Human Resources: 13 Technology: 7 Business Incubation: 36 Openness: 12 Environmental Policy: 41
Corporation for Enterprise Development (CFED) – Development Report Card	Overall Performance: A Employment: D Earnings & Job Quality: A Equity: A Quality of Life: B Resource Efficiency: A Business Vitality: A Competitiveness of existing business: A Entrepreneurial Energy: C Development Capacity: A Human resources: A Financial resources: A Infrastructure: C Amenity & Natural Capital: D Innovation Assets: A		Overall Performance: A Employment: D Earnings & Job Quality: A Equity: A Quality of Life: C Resource Efficiency: A Business Vitality: B Competitiveness of existing business: B Entrepreneurial Energy: B Development Capacity: B Human resources: A Financial resources: C Infrastructure: C Amenity & Natural Capital: D Innovation Assets: A	Overall Performance: A Employment: D Earnings & Job Quality: A Equity: B Quality of Life: B Resource Efficiency: A Business Vitality: A Competitiveness of existing business: B Entrepreneurial Energy: B Development Capacity: A Human resources: A Financial resources: A Infrastructure: D Amenity & Natural Capital: C Innovation Assets: A	

Organizations	2004	2005	2006	2007	2008
Milken – Cost of Doing Business (higher the rank more expensive to do business)		Overall Rank: 5 Wage Cost: 127.2 Tax Burden: 105.4 Electricity cost per kwh: 136.6 Industrial Rent per sqft: 115.6 Office rent per sqft: 119.5 Cost of doing business index: 122.7 (22.7 percent above the national average)		Overall Rank: 5 Wage Cost: 128.9 Tax Burden: 106.8 Electricity cost per kwh: 163.8 Industrial Rent per sqft: 113.5 Office rent per sqft: 116.1 Cost of doing business index: 127.5 (27.5 percent above the national average)	
Milken – State Technology and Science Index	Overall Rank: 10 Research & Development Index: 13 Risk Capital & Entrepreneurial Index: 12 Human Capital Investment: 6 Technology & Science Workforce: 9 Tech Concentration & Dynamism: 14				Overall Rank: 7 Research & Development Index: 7 Risk Capital & Entrepreneurial Index: 11 Human Capital Investment: 4 Technology & Science Workforce: 9 Tech Concentration & Dynamism: 14
The Pew Center on the States – Government Performance Project		Overall: C+ Money: C People: B Infrastructure: C+ Information: C-			Overall: B- Money: B- People: B- Infrastructure: C+ Information: B-
SBEC – Small Business Survival Index			Rank: 32	Rank: 38	Rank: 37
Tax Foundation – State Business Tax Climate	Overall Rank: 37 Corporate Income Tax: 19 Individual Income Tax: 21 Sales & Gross Receipts: 33 Unemployment Insurance		Overall Rank: 41 Corporate Income Tax: 18 Individual Income Tax: 18 Sales & Gross Receipts: 34 Unemployment Insurance	Overall Rank: 37 Corporate Income Tax: 28 Individual Income Tax: 19 Sales & Gross Receipts: 33 Unemployment Insurance	Overall Rank: 38 Corporate Income Tax: 17 Individual Income Tax: 18 Sales & Gross Receipts: 30 Unemployment Insurance

Organizations	2004	2005	2006	2007	2008
	Tax: 24 Fiscal Balance: 43		Tax: 26 Wealth & Property Tax: 50	Tax: 16 Wealth & Property Tax: 49	Tax: 19 Wealth & Property Tax: 50
Kauffman – State of New Economy Index				Overall Rank: 6 IT Professionals: 5 Managerial/Professional Jobs: 3 Workforce Education: 4 Immigration of Knowledge workers: 2 Manuf. Value-added: 14 High wage traded services: 2 Export focus of manuf: 26 Foreign Direct Investmt: 4 “Gazelle” Jobs: 25 Job Churning: 46 Fast growing firms: 12 IPOs: 15 Entrepreneurial Activity: 25 Inventor patents: 6 Online Population: 7 Internet Domain Names: 23 Education Technology: 29 Digital Government: 36 Online Agriculture: 1 Broadband telecomm.: 14 High-Tech Jobs: 14 Scientists & Engineers: 6 Patents: 14 Industry R&D: 7 Venture Capital: 11	Overall Rank: 6 IT Professionals: 7 Managerial/Professional Jobs: 4 Workforce Education: 4 Immigration of Knowledge workers: 5 Migration of knowledge workers: 5 Manuf. Value-added: 2 High wage traded services: 2 Export focus of manuf: 20 Foreign Direct Investmt: 1 “Gazelle” Jobs: 23 Job Churning: 49 Fast growing firms: 7 IPOs: 7 Entrepreneurial Activity: 35 Inventor patents: 2 Online Population: 21 Internet Domain Names: 21 Education Technology: 25 Digital Government: 37 Online Agriculture: 5 Broadband telecomm.: 9 Health IT: 9 High-Tech Jobs: 15 Scientists & Engineers: 6 Patents: 14 Industry R&D: 9 Non-industry R&D: 38 Alternative Energy use: 12 Venture Capital: 18

Organizations	2004	2005	2006	2007	2008
Expansion Management – Helping Companies Evaluate Future Locations	Overall Rank: 44 General Tax Bite Rank: 42 Taxes & spending 5 yr trend: 26 Infrastructure spending: 46 Education spending: 37 Spending on Itself: 45 Debt Mngmt: 48 Right to Work laws: No	Overall Rank: 48 General Tax Bite Rank: 43 Taxes & spending 5 yr trend: 28 Infrastructure spending: 50 Spending on Itself: 45 Debt Mngmt: 49 Right to Work laws: No	Overall Rank: 50 (last) General Tax Bite Rank: 45 Taxes & spending 5 yr trend: 48 Infrastructure spending: 49 Spending on Itself: 47 Debt Mngmt: 49 Right to Work laws: No	Overall Rank: 50 (last) General Tax Bite Rank: 45 Taxes & spending 5 yr trend: 45 Infrastructure spending: 50 Spending on Itself: 47 Debt Mngmt: 49 Right to Work laws: No	
Forbes’ – Ranking of States’ Business Costs			Overall Rank: 28 Business Cost Rank: 43 Labor Rank: 8 Regulatory Environmt: 43 Economic Climate: 28 Growth Prospects: 23 Quality of Life: 4	Overall Rank: 31 Business Cost Rank: 44 Labor Rank: 8 Regulatory Environmt: 40 Economic Climate: 37 Growth Prospects: 24 Quality of Life: 4	Overall Rank: 33 Business Cost Rank: 45 Labor Rank: 13 Regulatory Environmt: 41 Economic Climate: 24 Growth Prospects: 29 Quality of Life: 3
Ernst & Young and Council on State Taxation – Total State and Local Business Taxes (higher ranking is better)				Ratio of business taxes to expenditures that benefit business: 23 Business share of State and Local Taxes: 2 Taxes as % of GSP: 4 Business share of tax growth between 2002 & 2007: 2	Ratio of business taxes to expenditures that benefit business: 18 Business share of State and Local Taxes: 2 Taxes as % of GSP: 2 Business share of tax growth between 2002 & 2008: 1

Appendix H: Definitions & Sources for Connecticut's Innovation Index

Category	Measure	Definition	Source
Research and Development Capacity	R&D Intensity	ratio of total R&D performed in a state to the GDP of the state	National Science Foundation
	Total/Industry/Academic R&D performance	federal R&D dollars into Connecticut	National Science Foundation
	Federally Funded R&D Centers	R&D performing organizations that are exclusively or substantially financed by the federal government. Each center is administered by an industrial firm, university, or other nonprofit institution (e.g. Argonne National Laboratory at University of Chicago; Lincoln Laboratory at MIT)	National Science Foundation
	State R&D Tax credits	Research conducted in the state that qualifies for a tax credit	Department of Revenue Services
	Federal EDA funding	Federal economic development agency funding	EDA
Innovation Capacity	SBIR/STTR funding	Federal funding program run through the Small Business Administration -Small Business Innovation Research grants and Small Business Technology Transfer grants	SBIR Tech Net Database
	SBIR - % awarded to proposals	Number of Ct companies that applied for SBIR/STTR grants versus those that actually received funding	SBIR
	Venture Capital per \$1,000 GDP	Venture capital funding to CT companies per thousand GDP	PricewaterhouseCoopers MoneyTree Report
	Patents issued	Number of patents issued to Connecticut inventors or companies	US Patent and Trademark Office
	Entrepreneurial Activity	measures business entry and includes all new business owners	Kauffman Foundation
Employment	High Tech employment % change	Measures the extent to which the workforce in the state is employed in high-technology industries. High-technology industries are defined as those in which the proportion of employees in technology-oriented occupations is at least twice the average proportion for all industries.	National Science Foundation
	High Tech Share of all Business Establishments	Measures the portion of the state's business establishments that are classified as high-technology industries.	National Science Foundation
	Percent Workforce in S&E occupations	Percent of the workforce in science and engineering occupations. S&E occupations are defined by standard occupational codes that encompass mathematical, computer, life, physical, and social scientists; engineers; and postsecondary teachers in any of these S&E fields. Managers, technicians, elementary and secondary schoolteachers, and medical personnel are excluded.	National Science Foundation
Overall Economy	Real Gross State product (2000 \$) % change	Measures the real gross state product percent change using 2000 dollars	Bureau of Economic Analysis
	Real per capita GDP	Gross domestic product measured on a per capita basis	Bureau of Economic Analysis

	Population Growth & Migration	Measures population changes – state in and out migration	U.S. Census Bureau
	Total Exports	Measures the commodities that are exported out of the state	WISERTrade data – World Institute for Strategic Economic Research
	Exports as % of GDP	Value of exports as a percent of state gross domestic product	WISERTrade data and Bureau of Economic Analysis
Education Capacity	Math skills of 8 th grade students	National Assessment of Education Progress (NEAP) provides data based on skills testing that allows comparison across states.	U.S. Dept of Education
	Science skills of 8 th grade students	National Assessment of Education Progress (NEAP) provides data based on skills testing that allows comparison across states.	U.S. Dept of Education
	Higher education enrollment among young people – chance for college by age 19	A calculation that uses 4-year high school graduation rates and the college continuation rate of those graduates anywhere in the U.S.	National Center for Education Statistics
	Higher education 18-24 year olds	Higher education attainment among 18-24 year olds	National Report Card on Higher Education
	S&E Graduate students per 1,000 25-34 yr olds	Number of science and engineering students per one thousand 25 to 34 year olds	National Science Foundation
	S&E doctorates awarded per capita	Number of science and engineering doctorates awarded divided by the state population	National Science Foundation
	Education attainment - % of population 25 and older with bachelor's degree or more	Percent of the population over the age of 25 with a bachelor's degree or higher	U.S. Census Bureau
Connectivity Capacity	Household connectivity	Percent of households with internet connection	U.S. Census Bureau Current Population Survey
	Residential high speed internet access	Number of high speed residential lines	Federal Communications Commission
	Classroom connectivity	Measures access to computers in the classroom	Education Week – Technology Counts

Appendix I: Alcohol Consumption Data

Connecticut per capita ethanol consumption, 2002-2006					
	Beer	Wine	Spirits	Total	National Rank
2002	0.95	0.5	0.74	2.20	6
2003	0.93	0.52	0.77	2.22	6
2004	0.92	0.53	0.79	2.24	6
2005	0.9	0.54	0.79	2.23	6
2006	0.93	0.55	0.84	2.32	6

Source: National Institute on Alcohol Abuse and Alcoholism Division of the National Institute of Health

Massachusetts per capita ethanol consumption, 2002-2006					
	Beer	Wine	Spirits	Total	National Rank
2002	1.13	0.54	0.8	2.46	3
2003	1.1	0.56	0.82	2.48	3
2004	1.1	0.58	0.84	2.52	3
2005	1.07	0.59	0.85	2.50	3
2006	1.1	0.61	0.84	2.55	3

Source: National Institute on Alcohol Abuse and Alcoholism Division of the National Institute of Health

Rhode Island per capita ethanol consumption, 2002-2006					
	Beer	Wine	Spirits	Total	National Rank
2002	1.17	0.48	0.73	2.38	4
2003	1.12	0.51	0.79	2.42	3
2004	1.12	0.49	0.79	2.4	5
2005	1.13	0.51	0.81	2.45	4
2006	1.13	0.53	0.86	2.52	4

Source: National Institute on Alcohol Abuse and Alcoholism Division of the National Institute of Health

New York per capita ethanol consumption, 2002-2006					
	Beer	Wine	Spirits	Total	National Rank
2002	0.95	0.38	0.59	1.91	9
2003	0.93	0.4	0.61	1.93	9
2004	0.91	0.41	0.62	1.95	9
2005	0.9	0.43	0.64	1.97	8
2006	0.88	0.45	0.65	1.99	9

Source: National Institute on Alcohol Abuse and Alcoholism Division of the National Institute of Health