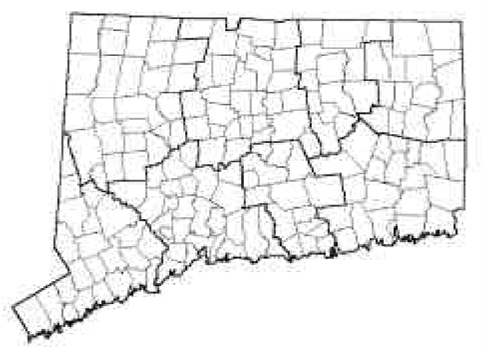
CONNECTICUT

CONNECTICUT ECONOMIC CONFERENCE BOARD

Report to the Governor and General Assembly

1998



CONNECTICUT ECONOMIC CONFERENCE BOARD

January 23, 1998

Member
Connecticut General Assembly
Legislative Office Building
Hartford, CT 06106

Dear Member:

Pursuant to the provisions of Public Act 96-252, the Connecticut Economic Conference Board is hereby submitting its consensus economic forecast and outlook for the Connecticut economy.

The Board has reviewed the quantitative and qualitative assessments that were presented at its public hearing held on November 20, 1997. There were 11 speakers representing private industry, labor, banking, academe, and private consulting groups. We have summarized their presentations in the following pages, and would like to draw your attention to the major findings:

- That the rates of growth in Connecticut income, employment, and tax revenues are likely to be slower in 1998-99 than in 1997-98;
- That the gains from the State's economic recovery have been distributed unevenly, which has and will continue to adversely affect the extent of Connecticut's progress; and
- That the State's cluster based development initiative offers promise as a vehicle for continuing Connecticut's expansion.

If you have any questions or comments, please feel free to contact me or any other member of the Connecticut Economic Conference Board.

Respectfully submitted,

Edward J. Deak, Chair
Connecticut Economic Conference Board

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THE CONNECTICUT ECONOMIC CONFERENCE BOARD

ANNUAL REPORT
TO THE GOVERNOR AND GENERAL ASSEMBLY
STATE OF CONNECTICUT

1998

The Status of and Outlook for
The Connecticut Economy

Hartford, Connecticut
January 1998

THE CONNECTICUT ECONOMIC CONFERENCE BOARD
ANNUAL REPORT 1998

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CONNECTICUT ECONOMIC CONFERENCE BOARD

EXECUTIVE SUMMARY - QUANTITATIVE FORECAST

In order to fulfill its legislative mandate, the CECB held a public hearing on November 20, 1997. Five experts from banking, private consulting, and academe offered their quantitative opinions on the current status of and future outlook for the Connecticut economy. They offered specific estimates for job, income and retail sales growth along with figures for housing starts and the unemployment rate. What follows is a summary of their judgments.

The quantitative assessment - The Connecticut recovery reached maturity in 1997 with an anticipated gain of more than 30,000 new jobs, an unemployment rate at 5.0%, and a growth in real personal income of 3.8%. Table 1 contains the mean estimates for the State's expected economic performance. From 1993-96, Connecticut was late and sluggish in its response to the national expansion. Today it is more in sync with the U.S. economy. Therefore, the experts saw Connecticut experiencing slower, but respectable growth in 1998-2,000 as the pace of the U.S. expansion declines. Job growth should dip to just below 25,000 in 1998 while the unemployment rate will remain at 5%. Real income is expected to show a slower pace of advance, but nominal retail sales growth will rise slightly in response to new malls and enhanced shopping opportunities. Lastly, housing starts may dip if interest rates move higher. The gradual decline in starts is anticipated to continue through 1999 with some up turn in 2000.

Table 1
Mean Estimates for Key Connecticut Economic Indicators

CT Indicator	1996	1997	1998	1999	2000
Employment Gain	22,000	29,900	24,700	15,300	19,000
Unemployment Rate %	5.7	5.0	5.0	5.3	5.4
Real Income % Gain	2.0	3.8	3.5	2.7	2.8
Housing Starts	7,817	9,086	8,013	8,396	8,380
Retail Sales ($ Bil.)	34.2	35.9	38.1	40.5	43.1

Forces causing slower growth - The following external forces were seen as key to Connecticut economy over the next 12-24 months. First, U.S. exports and employment growth will be hurt by the Asian financial crisis. Both Asian and European values have declined relative to the dollar. This will make it more difficult for U.S. firms to export products into these markets. And it will make it easier for foreign based firms to sell products in the U.S. in competition with domestic firms. Both factors will hurt domestic employment.

Second, the domestic stock market is unlikely to rise at a rate equal to the pace of the last three years. If a correction takes stock values lower, Connecticut was thought to be vulnerable to the decline. Equity holders, financial institutions and their employees are an important element of the State's economy.

Third, the Federal Reserve was seen as raising short-term interest rates in 1998. There was no agreement on the exact timing or the extent of such an increase. But the participants did concur that a sustained period of interest rate increase approaching 100 basis points or more would spell the end to the current boom period. Fourth, they agreed that the Asian financial crisis will itself slow the current boom, and has therefore postponed the need for a Federal Reserve rate increase for perhaps 6-12 months from the Fall of 1997. The experts concurred that employment in Connecticut's new financial sectors would be adversely affected by rising interest rates. Fifth, the speakers saw tightening labor markets as both a national and State problem. Employers were finding it increasingly difficulty to attract the desired volume and quality of labor. Labor force limitations would constrain growth in 1998, with higher wages and a rising rate of inflation.

No recession anticipated - Despite the prediction of slower growth, none of the speakers saw the likelihood of a national or State recession. And if a recession was to appear, Connecticut would not be more severely affected than the rest of the nation. Connecticut has few of the speculative excesses in real estate and banking that characterized the late 1980's. Also, the downsizing of military purchases appears to be over. It is unlikely that any other single State sector would prove to be as vulnerable to federal spending cuts as defense was subsequent to the end of the cold war in 1989. Despite the no recession forecast, the speakers were cautious about the continued pace of the U.S. expansion. The past two years have witnessed high growth, rising employment, and low inflation. The consensus view was that we are growing at a pace that is not sustainable in the near future. And that rather than being part of a "“new economic era” where persistent high growth rates are possible, we were more likely experiencing an “extraordinary run of good luck”.

Pluses for Connecticut - Connecticut was seen as possessing several important economic characteristics that clearly outweighed the identifiable negatives. On the plus side, the State's major export markets were in Canada and Europe both of which showing steady economic expansion. Second, State firms were repositioning themselves to take advantage of future growth especially in new financial markets. These financial growth opportunities included money and investment management, currency trading, reinsurance, managed care, and benefits consulting. Connecticut has also done well in expanding the tourism sector, while controlling the rise in state and local government positions. Third, the civilian aircraft industry has recovered bringing new orders to Connecticut engine manufacturers and parts suppliers. Fourth, the passage of a federal capital gains tax cut plus the partial restructuring of the tax code will benefit State residents. Fifth, the State has a highly educated workforce with nearly one-third of employees holding a college degree vs. just 23% nationally. This workforce quality helps to explain Connecticut's status as the State with the nations highest per capita income. Lastly, the speakers saw as positive the combination of low rates of domestic inflation and foreign financial turbulence that should delay the arrival of higher domestic interest rates.

Connecticut minuses - On the negative side, the speakers pointed out that Connecticut is a costly state in which to do business. This is partly the result of the high quality labor force and the added community services demanded by these workers. Second, the State is still experiencing a net outmigration of existing residents. From 1992-95 Connecticut lost small amounts of population. Today, population is growing very slowly. The loss from outmigrants as well as the failure to attract new workers from nearby regions are depleting the volume and quality of the State's workforce. In a related issue, the experts noted that Connecticut is a net exporter of college students and college graduates. They felt the State should be more aggressive in marketing information on the range and quality of our higher education, as well as the opportunity for challenging, rewarding employment in state.

Third, the State was seen as lagging in the important business cost control area of electric utility deregulation. Most Northeastern states had already fixed a timetable and/or starting date for open rate competition in electric utility sales. Connecticut has made little progress here to date. Fourth, the national political clout of both Connecticut and the Northeast was seen as declining somewhat as the State is at risk of losing a Congressional seat following the next census count. Lastly, the tightening of the state's labor market has intensified the mismatch between job opportunities and job seekers. Job openings are growing rapidly in lower Fairfield County. But many of the unemployed are concentrated in the distant large cities, often lacking the skill, experience, and means to fill the open positions.

Suggestions for Connecticut's continued expansion - Each of the speakers offered some thoughts as to what the State might do to keep the current expansion on track. The most commonly cited task was to increase the involvement of the cities and their residents in the State's growth. There was a sense that the dispersion in income distribution between cities and suburbs was growing. Also the pace of the State's past recovery and future growth would be below full potential as the cities lagged behind the rest of the region. Urban economic growth was seen as a key element in State's overall employment picture.

Second, the State should look closely at infrastructure needs within cities and on highways. Congestion delays on I-95 in Fairfield and New Haven Counties along with I-84 in Waterbury and Hartford are significant and growing. Long commutes and the inability to rely on travel time stand a close second to labor market limitations as a constraint on State growth. The State might create an "Infrastructure Development Fund" using some of the gaming revenues.

Third, the state budget surpluses were seen as transitory in nature, and should be treated conservatively. There was some sentiment for the further funding of a "rainy day" account to minimize the affect of the State's budget in both booms and recessions. Fourth, the State should pay greater attention to the loss of trained workers and the outflow of college students. While research shows that many laid off workers find new employment opportunities within the State, others are attracted elsewhere. Some suggested developing closer links among the

State's business, educational, and financial resources. The objective would be to reinvest more of the State's private wealth in local projects and job creation. Lastly, entrepreneurship and risk-taking were singled out as the core ingredients of growth. Given the fast pace of technological change in telecommunications, financial services, and so on, government can't succeed if it tries to pick winners and losers. Rather, government support for privately based cluster linked growth projects was seen as the most efficient role for public resources.

CONNECTICUT ECONOMIC CONFERENCE BOARD

EXECUTIVE SUMMARY - QUALITATIVE ASSESSMENT

In addition to the quantitative data, the Conference Board also solicited qualitative assessments examining the condition of the Connecticut economy. Six experts from private consulting, labor, business, and academe offered a range of views as to how well the State was performing, and what it might introduce in order to improve the near term recovery. Their comments can be classified into three broad categories:

A. Observations on the State's fiscal condition, and how the system of spending and taxation can be used as a tool to enhance economic development;
B. An assessment of business confidence and the distribution of gains from the recovery to date; and,
C. The role of the privately led, cluster based development strategy.

What follows is a summary of the expert's specific and collective judgments.

CONNECTICUT'S FISCAL CONDITION

Connecticut tax levels - Throughout the hearing, several speakers noted with anecdotal evidence and subjective statements that the perception of Connecticut as a high tax state was probably no longer true. While taxes were still high, the reductions introduced over the past few years have left the feeling that tax levels are no longer out of balance with competing states. Also, there was some support for the view that within the State we were moving towards a more desirable balance in revenues received from the major tax sources. While a few speakers emphasized that government controlled costs were still a deterrent to business expansion, no one strongly advocated substantial cuts in major tax rates as a principle tool of development policy. Rather, the focus was on how efficient the level of Connecticut taxation was relative to other states, and how the budget process itself might be used as a positive tool reinforcing economic progress.

State spending seen as moderate - One speaker did look systematically and quantitatively at Connecticut's State and local spending levels. A simple ranking of Connecticut governmental expenditures per capita placed the State 6th implying the need for fiscal belt tightening. But other evidence was derived using a broader ranking of government spending relative to an additional half-dozen measures of state economic size. This adjustment left Connecticut firmly in the bottom fifth of states in terms of government spending. In further refinements, the study adjusted state data for variations in income per capita, state geographic size, and the size of the state's residential population. These results showed Connecticut in the lowest 25% in terms of actual vs. predicted state spending. Given the evidence, Connecticut spending was seen as being in line relative to other states. The State was far from being wasteful in terms of its overall state spending level. The study did not distinguish among states in terms of how the money was being spent or whether Connecticut residents are receiving fair value in return for their tax dollars.

A positive role for budgeting and bonding - The issue of fair value for dollars spent was partially addressed within the context of the growing use of long-term bonding. Recent budgets have seen the migration of some operating expenditures from the current to the capital budget. This distorts the true cost of government spending and contributes to the rising debt service level which is approaching 10% of the annual operating budget. The absence of either a statutory or constitutional limit on bonding offered the temptation to be less careful about the amount and types of expenditures that receive bonding approval. The consensus was that both bonding and the biennial budgeting process could be used as strategic economic tools if they were done relative to a development plan. This would encourage a prioritizing of spending and provide a measure of accountability to see how well the spending targets lived up to their development promises.

CONNECTICUT'S BUSINESS CLIMATE

Business conditions are improving - CBIA survey evidence supported the view that state firms had turned the corner in terms of their acceptance of Connecticut as a competitive location from which to do business. Business confidence was growing, sales and profits were up, and productivity was rising. Firms found that credit was available and that it was profitable for them to invest and expand in the State. Respondents expressed growing confidence in the policy direction and decisions being made by State government. To be sure, there were still important problems to be solved. Connecticut remains a high cost State, especially for those costs that are influenced by government actions. There was a growing concern about the quality, availability and experience level of the available workforce. Technical and scientific education appear to be lagging while jobs in engineering, electronics, computer science, and software go unfilled. This situation has motivated a few firms to establish their own private contacts with city schools and colleges to stimulate interest in technical careers among the next generation of workers.

Concerns about the distribution of gains from the recovery - Some of the speakers in the qualitative session also expressed concern about the distribution of gains from the recovery. They noted that there has been a significant decline in the number and quality of traditional blue-collar job opportunities. Many of the jobs that have been created in the recovery offer lower paying employment in the service sector, often without health and other benefits. While gains in worker productivity are evident, some workers have been slow to share in the gains, with stagnant wages and purchasing power. Consequently, the State's recovery has contributed to the increasing inequality in income and wealth.

Connecticut's cities and the recovery - The State's major cities including Bridgeport, New Haven, Waterbury, and Hartford have been relatively slow to feel the benefits of the recovery. The broad metropolitan labor markets containing these cities consistently register the State's highest unemployment rates with the central cities themselves showing the greatest levels of joblessness. To be sure, jobs have been added in these labor markets over the past year and the number of unemployed persons has fallen. But the gains in the urban core continue to trail the recovery in the suburban communities. As long as this dichotomy exists, the Connecticut recovery can not reach its full potential.

It was noted that the poverty of the central cities makes it difficult to attract young professionals to work in the urban core. The absence of workers leads to job flight, which raises the tax burden on the firms that remain in the city. Commercial growth and job expansion are pushing into the suburban residential towns. These communities often don't want this kind and volume of change in their living environment. They build new, expensive infrastructure while the existing infrastructure of the central cities goes under utilized. These added costs reduce the relative competitiveness of Connecticut as a business location. One alternative may be to approach urban development and infrastructure spending on cooperative terms. This would lead to benefits that are shared equally by suburban as well as urban residents. Such an approach could lead to faster State growth and improved competitiveness.

A PRIVATE-SECTOR, CLUSTER BASED, DEVELOPMENT STRATEGY

The cluster concept - The State has supported the creation of a cluster based development strategy utilizing the research and regional development experience of Dr. Michael Porter of Harvard University. The approach has brought together key leaders from private industry, and organized them into employment and production groups to see what needs to be done to make Connecticut the premier competitive location. Cluster groups include health services, telecommunications, financial services, tourism, high tech, and manufacturing. The first phase of the cluster initiative was completed in June 1997, with a report to the Governor and legislature on competitiveness goals and the kinds of broad State support required to achieve those goals. The cluster strategy is currently in Phase II involving implementation teams. They are seeking ways to act on the recommendations and construct a legislative agenda to support the development effort.

A private initiative - The cluster strategy is based upon the leaders of private industry coming together with their supporting firms in a cooperative effort to address the topic of general competitiveness. Their purpose is to identify what they feel that State firms need to remain profitable, and what can be done to build on the competitive advantages offered by a Connecticut location. Two important messages arose from Phase I. First, the State must do a better job of marketing itself as a competitive site for locating and profiting from high value added activities. Second, that for these sectors to continue their success they must have a steady flow of well trained, creative employees. Therefore, the Phase II effort has added two additional support teams, the first looking at workforce development, education, and training, and the second focusing on the external marketing of Connecticut's competitiveness message. The Phase II report is due in early 1998.

CONNECTICUT ECONOMIC CONFERENCE BOARD

CONSENSUS THEMES ON ENHANCING ECONOMIC DEVELOPMENT

On the basis of the information gathered from this hearing, and the Conference Board's own subsequent discussion, the CECB was able to arrive at a consensus view as to some major development themes that were repeated and underscored by the experts. These themes were seen by the Board as providing an important link to the pace, shape, and success of Connecticut's economic future. We wish to draw your attention to these themes and to submit them for your review and consideration.

- **Private Linkages** - The participants saw a need to encourage and stimulate the expansion of private links among Connecticut's business firms, educational institutions, and investors of financial capital

Connecticut serves as the home base for a significant number of large national and global business firms. These firms are looking for new product ideas and a steady supply of well trained, highly educated workers. Second, the State has a number of first rate educational and research institutions. The schools are often on the leading edge of science, business and liberal education. Lastly, Connecticut contains major pockets of significant financial wealth and venture capital activity. State economic growth would be well served by encouraging greater private links and cooperation among these three sectors. It should be easier for the holders of the State's private wealth to be better informed about and be in closer contact with the local business and educational communities. As such, they would become better aware of the range of opportunities to profitably employ local capital in local businesses.

- **Entrepreneurship** - The speakers emphasize the value of stimulating entrepreneurship and risk-taking as a means to: 1. Create a menu of new business and job opportunities; and 2. Retain our existing base of skilled workers as well as hold on to our young graduates.

Entrepreneurship and risk-taking are the principle sources of new ideas, new products, and new business opportunities. History has repeatedly demonstrated that no one person or entity can consistently anticipate who the next generation of successful firms will be. The best that can be done is to create a rich and favorable environment for creative effort and potential job growth. By encouraging the birth of the widest possible menu of new market concepts, consumers will be able to pick out the alternative that best fulfills an unmet demand. This atmosphere of creativity and opportunity will also help to stem the State's loss of its existing skilled work force, and to retain our young graduates. It will show them the possibilities for profitable, challenging employment here in Connecticut.

- **Sound Budgeting Practices** - The experts felt that State government can encourage economic growth by maintaining a sound fiscal structure including a stable, predictable tax base, implementing an assessment based budgeting process, controlling and prioritizing State bonding initiatives, holding down State related business costs, and the constructive use of current revenue surpluses.

Several participants noted that the perception of Connecticut as a high tax or governmentally inefficient State were no longer fully accurate. They cautioned against using the current, and possibly transient budget surpluses to fund additional tax cuts in major revenue sources beyond those which are currently enacted. This may be especially wise in light of the expected slowing in State growth and tax revenues which may occur in 1998-2000. Still the State budget could be used as tool of economic growth if spending was bench marked against a plan of State development to both guide the allocations and assess the effectiveness of State dollars spent. Some speakers also cautioned against the increased use of State bonding. Debt service is projected to surpass 10% of the budget, and bonding can distort an understanding of State spending by shifting operating costs from the current budget and into the capital budget. Lastly, both the budget and legislative processes in general should weight the costs and benefits of programs that impact State related business costs.

- **Role of State Government** - The speakers defined an important role for State government involving support for education and training, infrastructure expansion, and the leadership to encourage private investment.

If it's the job of the private market to pick "winner and losers", it is the role of the State to shape the setting in which the selection process takes place. One goal of the State should be to provide the best available education, training, and lifelong learning opportunities at the elementary, secondary, and post-secondary levels. It can also encourage user friendly contact with and access to that educational system by the business community. Second, the State can help to lower business costs and attract new jobs by investing in a competitive infrastructure system. From traditional transportation facilities and waste disposal systems, to modern, low cost, efficient telecommunications and electric utility services, the State can work to cut access charges for products, services, and the flow of people. Lastly, once the market identifies the "winners", the State can then help to reinforce this choice with fiscal and technical support that will both broaden and deepen the region's competitive advantage. The focus here is on encouraging private investors to expand on their existing success.

- **The Role of Connecticut's Major Cities -** The participants thought it was essential to ensure the participation of Connecticut's major cities in the State's future economic growth and expansion. Urban development and State economic growth are linked.

Connecticut's recovery to date has been below par relative to the U.S., most other New England states, and past State expansions. One major reason is the persistent unemployment and lagging job growth in the cities of Bridgeport, Hartford, and New Haven, Waterbury, and New London. The City of Hartford is commonly referred to as "one of the poorest cities in America". Firms find it difficult to motivate professional workers to relocate to the State's capitol city. All five cities have served in policy studies as symbols of national urban decline. The disparity in the economic condition between these central cities and their suburbs, spotlights the unequal distribution of gains from the recovery, creates inefficiencies in the provision of services, and raises the cost of doing business in the State. The status of these cities tarnishes the image of Connecticut and retards its competitiveness. Connecticut's economic progress will remain below its full potential until the central cities become equal partners in the expansion. For Connecticut, it is most accurate to characterize the topic of urban development as being essential for economic development rather than as issue of social progress.

OUR FINAL THOUGHTS

The above themes are not easily implemented. The Board leaves to you the more difficult tasks of identifying and funding appropriate implementation measures. We recognize that the goal of enhancing economic growth initiatives must be balanced with the other demands on State resources. But the themes make sense to the Board in terms of their essential link to steady, high quality State economic expansion.

Respectfully submitted,

The Connecticut Economic Conference Board

SECTION 2

QUANTITATIVE OUTLOOK FOR THE CONNECTICUT ECONOMY

SUMMARY PAPER OF MORNING SESSION

INDIVIDUAL COMMENTS

Editorial Assistance for this section
was provided by:
Tricia Tack
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University of Connecticut

The Quantitative Outlook for the Connecticut Economy
Summary Paper of the Connecticut Economic Conference
Morning Session-November 20, 1997

Overview

State recovery in progress - Connecticut's economy is rebounding from its steep decline during the 1989 to 1992 recession. While lagging some other New England states, Connecticut has regained over two-thirds of the jobs lost, unemployment rates are down, and retail sales are picking up. A wide range of business indicators suggests that the economy is growing at a respectable pace, and the speakers believed that the state's economic position was strong. They expect the current recovery to continue, although growth rates may slow over the next five years in response to rising interest rates and wage pressures resulting from tight labor markets.

Presenters offered several recommendations to preserve Connecticut's economic recovery. The redevelopment of the state's urban core and the repair of transportation infrastructure will help create engines of growth, while alleviating many of the problems faced by Connecticut's cities. Policies that stimulate the growth of knowledge-based industry and entrepreneurship, as well as renewed cooperation between venture capital, business, and education, will promote new industry to replace the declining sectors of manufacturing and defense. The government's role in maintaining a business infrastructure, supporting education, and providing leadership will remain important over the next years. Finally, conservative budgeting was cited as being appropriate during this period of expansion.

The Current State of the Connecticut Economy

Connecticut's relative position - After four years of slow recovery, Connecticut's economy is now beginning to gain momentum, and forecasters expect a return to the late 1980's levels of employment within the next few years. Connecticut's slow-growing population and mature industry mix may account for recovery rates that are lower than those of some surrounding states. New England, in turn, lags national averages for similar reasons. As the recovery proceeds, however, the speakers expected Connecticut to match surrounding New England states and approach national averages.

State economic data 1997 - The statistics for the Connecticut economy continue to look good. Gross state product (GSP) should increase by $4 billion over 1996 levels to $111 billion. Net employment figures will show an increase in jobs from 1,583,000 in 1996 to 1,615,000 in 1997. Personal income is expected to rise from $98.8 billion in 1996 to $103.3 billion in 1997. Connecticut's unemployment rate has fallen from 5.7 percent a year ago to 5.0 percent currently. Total housing permits should rise from 8,537 in 1996 approximately 9,414 in 1997, and retail sales will increase from $34.2 billion in 1996 to $35.9 billion in 1997.

More broadly, trends over the last five years show slow but increasing growth in employment, personal income, retail sales, and GSP. Housing permits continue to grow slowly, perhaps a reflection of construction excesses in the late 1980's and slow population growth. While industries such as banking, insurance, manufacturing, and defense are still contracting, recent employment gains in services and gaming have helped to offset the decline. Although state employment is still 3.4 percent below its 1989 peak total, the unemployment rate is falling and consumer as well as business confidence continue to grow, indicating further progress.

Connecticut's Economic Forecast

The speakers expect Connecticut's recovery of recent years to continue. But growth rates will begin to decline as interest rate hikes and rising wages increase the cost of doing business within the state. It is expected that the State's growth path will reflect both expansionary and contractionary influences on the Connecticut economy.

Expansionary influences - The continuation of a low interest rate environment will help the State. High levels of wealth and income along with interest sensitive employment sectors make Connecticut particularly vulnerable to interest rate changes. The recent developments in Asian financial markets have likely postponed action by the Federal Reserve to raise rates. Other external factors also tend to support the Connecticut economy. US financial markets, despite recent volatility, continue to perform well, and analysts expect positive if slightly lower earnings. Modest federal tax cuts are possible in 1998-99. And the prospect of replacing the federal income tax code with a less progressive flat-tax, or with a national sales tax, would benefit the state because of its comparatively high incomes. Finally, State exports to its major foreign markets should grow because both Canada and Europe are experiencing economic expansion.

Other expansionary influences come from within the state. A large base of educational and research institutions support a highly educated labor force. This labor force is growing, albeit slowly, supporting growth in jobs and new construction. Concurrently, a rebound in the civilian aerospace industry may provide a welcome source of new State jobs. Many of the newly created jobs are high paying professional jobs, in keeping with the income profile of Connecticut residents. New businesses depend on this base of high personal income for venture and financial capital. Low consumer debt, strong banking profits, and good returns on high-quality bank assets suggest that Connecticut's banks are strong and show no danger of weakening. Finally, electricity deregulation has been delayed to date. When it occurs, deregulation should reduce business costs and encourage growth. Overall, Connecticut's internal strengths point to continued recovery.

Potentially adverse external influences - An eventual move by the Federal Reserve to increase interest rates seems the most likely and worrisome of the external dangers. Another concern involves the potential for a large and sudden correction in the stock market. Such a correction would affect Connecticut disproportionately because high-income individuals hold comparatively high levels of stock. As a result of Connecticut's population decrease, congressional reapportionment may cause Connecticut to lose one of its six House seats. New England could lose six seats in total, thereby decreasing the political strength of the state and the region. The continued importance of defense-related industry leaves Connecticut vulnerable to further cuts in defense spending, although cuts of the magnitude seen in recent years seem unlikely. Finally, several presenters expressed the concern that the national economy is operating above its "speed limit", and that this high level of growth cannot be sustained. If indeed the national economy begins to slow, Connecticut should join in the decline.

Potentially adverse internal influences - Connecticut is still a relatively high cost state in which to do business. One of those costs, wages, is likely to increase, as the slow growth of state population ensures tight labor markets. Furthermore, analysts feared that the skill-sets of those still unemployed are limited, and not appropriate as openings in high-technology replace manufacturing jobs. These structural problems of fit between labor force skills and job requirements will not be corrected simply through employment growth, but rather through retraining workers for the current job market. The status of Connecticut's cities is a major concern, and several of the speakers addressed this issue. The urban decline has contributed to the increase in regional income disparities. The experts also stated that the State's urban and transportation infrastructures warrant attention as a means to improve business growth. Finally, particular industries may be at risk. The recent mergers in banking along with the possibility that retail and gaming are reaching full capacity and will not continue to grow as they have in recent years, could limit future economic expansion.

Consensus forecast data - The general view among presenters was that expansionary influences should dominate contractionary ones, allowing Connecticut's economic recovery to continue. The consensus forecast predicts slower growth in net employment, real income, and retail sales, with continued low unemployment. Housing starts should fluctuate only slightly around current levels. The chart on the following page includes summary statistics for these five economic indicators.

Net employment should grow through the year 2000, increasing at the rate of approximately 19,000 jobs annually. This forecast represents slow but respectable growth, given the particular demographics of Connecticut, especially its near-zero population increase. Tight labor markets are likely to spark wage increases, thus increasing the cost of doing business in the state. Business relocations may depress net employment growth if businesses move out of state. These modest employment growth rates should rank Connecticut 39th among US states. But, this is an improvement over earlier estimates that placed it last in the nation.

Unemployment rates should remain low, although presenters disagree about the specific path rates will follow. While Mr. Getman and Ms. Kodrzycki believe the unemployment rate will fall through 1998, they expect small increases thereafter, raising the rate to between 5.6 percent and 6.1 percent in the year 2000. Mr. McEachern, however, believes that tight labor markets and growing employment will combine to keep unemployment levels quite low, ending in the year 2000 with an expected rate of 4.8 percent. These differences do not belie the general consensus that unemployment will continue to be low throughout the next four years.

Summary Statistics for Connecticut's Economic Forecast

		Mean Value:	High Value:	Low Value:
Net Employment	**4yr. Mean**	**1644.23**		
	97	1613.3	1615	1611
	98	1638.0	1643	1631
	99	1653.3	1661	1639
	00	1672.3	1681	1656
Unemployment Rate	**4yr. Mean**	**5.18**		
	97	5.03	5.1	5.0
	98	4.97	5.1	4.9
	99	5.30	5.8	4.8
	00	5.43	6.0	4.8
Real Income Growth Rate 4yr. Mean		**3.18**		
	97	3.80	4.5	3.0
	98	3.45	3.9	3.0
	99	3.80	3.0	2.5
	00	2.80	2.9	2.6
Housing Starts	**4yr. Mean**	**8468.7**		
	97	9085.7	9414	8643
	98	8013	9000	6681
	99	8396	9118	6970
	00	8380	9300	6785
Retail Sales Increase ($Bil.) 4yr. Mean		**38.63**		
	97	35.85	36.0	35.7
	98	38.10	38.2	38.0
	99	40.45	40.7	40.2
	00	43.10	43.6	42.6

Note: the four-year mean for each statistic is printed in bold beside each category heading. Data numbers were drawn from the materials presented or provided with the presentation materials of the five morning speakers.

Net real income should continue to grow, although expected growth rates decrease over the four years to an average of 2.75 percent in the years 1999 and 2000. The slowing of the rise in personal income may help alleviate the potential for business migration caused by high wage costs here in Connecticut. Connecticut's high wages, however, result, in part, from its high level of workforce education and the quality of business support services within the state. Therefore, the relatively high cost of operation in Connecticut may be justified, and may not have as depressing an effect on business growth as previously thought.

Housing starts may fall somewhat in 1998 if the Federal Reserve raises interest rates. Subsequently, starts should follow a slow upward trend from 1999- 2000. One of the possible reasons for this slow growth in residential construction is the overhang produced during building boom of the late 1980's, when speculative construction outpaced demand. Today, more conservative lending practices, combined with flat population growth and declines in the twenty to twenty-nine-year-old age bracket, may also be holding back new construction.

Retail Sales should continue to grow over the 1997 to 2000 period, and its growth rate may accelerate somewhat to as high as 6.4 percent in 2000. The recent construction of three new malls may depress profitability given the related concern that Connecticut's retail market may be saturated. These concerns notwithstanding, presenters expect retail sales to be strong.

Gross state product, according to the New England Economic Project outlook for 1997 to 2001, should increase from $111 billion in 1997 to $119 billion in 2001. These statistics reflect the overall expectation that Connecticut's recovery will continue, as the economy expands slowly over the next four years.

Other factors - The subject of maturing industries was among several other issues raised in the discussion of Connecticut's economic forecast. The problem of the declining importance of manufacturing is a national trend and not just a Connecticut or New England challenge. As the industry mix of the entire economy matures, manufacturing will continue to decline, becoming less of a contributor in the state and national job spectrum.

Stock market adjustments are also a likely event in the near future, especially if an overheating economy causes the Federal Reserve Board to raise interest rates. The strong historical correlation between price to earnings ratios and interest rate levels suggests that a rate increase would cause a correction. Similarly, given the high earnings expectations built into stock prices, earnings disappointments would likely cause significant decreases in market capitalizations. In Connecticut, high incomes correlate with high levels of stock ownership, making the state sensitive to changes in interest rates and the stock market.

Lastly, other influences on the future of Connecticut's economy include international relations, possible fluctuations in oil prices; fluctuations in food prices caused by the predicted weather phenomena; and demographic constraints as the twenty to twenty-nine-year-old age bracket continues to decline within the state.

Suggestions for Continued State Economic Growth

The speakers offered several recommendations to maintain growth and help buffer the state from future downturns in the state and national economies.

Urban redevelopment was the focus of comments by several speakers. An urban program would raise state pride and job growth while decreasing income inequity. As manufacturing jobs disappear and the income of city residents decline, city revenues decrease. This leads to higher property taxes and rising urban vacancy rates, leaving many cities unable to support new development. By making the improvement of Connecticut's cities a state priority, new engines of growth may create jobs, increase incomes, and bolster community pride. One speaker cited the current condition of Hartford as an example. As the State capitol, it serves as a highly visible and important civic center. Its current economic condition reflects poorly on the State. Another expert suggested the creation of State Development Bureau funded by tax revenues on gaming. This bureau would participate in building a distinctive identity for each of Connecticut's cities, fostering a sense of community and encouraging new business.

Infrastructure problems, specifically the difficulty of highway travel within the state, concerned several commentators. If state roads remain congested, with high usage causing long travel times, business may choose not to locate within the state, especially within the major cities where congestion problems are the worst.

A shift to knowledge-based industry and the creation of an infrastructure of innovation is a key to Connecticut's economic future, according to presenters. As Connecticut's manufacturing sector continues to decline, service sector businesses will rise in importance. New service companies tend to rely heavily on new technologies and innovative ideas. To foster this new breed of industry, Connecticut must forge linkages between educational institutions, the labor force, businesses, and venture capitalists. This form of private cooperation and coordination is occurring in other states and, if encouraged in Connecticut, would facilitate new growth within knowledge-based industries. This shift to a competitive, service-oriented economy heightens the need for state government leadership and infrastructure support. Specifically, the legislature may wish to adopt policies that encourage entrepreneurship and that maintain a high level of workforce education. User-friendly government, with low "red-tape" requirements on new businesses, and support for educational institutions will ease this economic transition.

The State's fiscal approach should remain conservative, perhaps including a "rainy day" fund for use during future economic downturns. While the state economy is doing well, and employment and incomes are high, a continuance of the 1990's conservatism will help keep the economy from 'overheating', driving inflation and wages upward. Further, the retention of funds for fiscal stimulus during the next recession would lessen the recession's affect, preserving jobs and incomes until the economy recovers. Taxes should remain fairly low, however, with attention to keeping them in line with tax levels in competing states.

The Cluster Initiative was supported as a final recommendation. The cluster approach fosters cooperative growth in key industries, and is an important element of Connecticut's development program. It asks private industry to take the leading role is setting the State's agenda for economic expansion. A later section of this report offers further discussion of this initiative.

Summary

Connecticut, when considered in light of its particular demographics, is now experiencing solid growth in employment, income, retail sales, and housing starts. Unemployment levels are low and GSP continues to rise. Overall, the state economy is doing well and should recover to its 1989 employment peak within the next few years. If national and international conditions deteriorate somewhat over the next years, then the State's growth rates may slow in response. The tightening of local labor markets and rising national interest rates pose potential risks to the State's expanison. Nevertheless, the speakers were unanimous in their expectation that Connecticut will continue to prosper over the next three years.

Further, the resources for fostering new industry, particularly knowledge-based industry, are available within the state and could serve as the basis for new growth. Specifically, a highly-educated labor force, numerous research institutions, high incomes that provide venture capital, and banking health all offer support for an expanded employment base within the state. In conclusion, the overall forecast for Connecticut's future is for moderate growth and expansion over the next three years.

Paul Getman
President, Regional Financial Associates (RFA)
West Chester, Pennsylvania

The Northeast Regional Outlook

Mr. Getman offered an analysis that showed the Connecticut economy gaining momentum in its recovery from the 1989 to 1992 recession. Real growth in jobs, sales, and personal income is continuing at an increasing rate. Connecticut has its weaknesses. But its strengths appear to outweigh them. New industries are beginning to show growth, and business diversity remains high. With regard to regional and state-by-state comparisons, Connecticut's seemingly low growth rate appears to be acceptable.

Connecticut's performance, when put into perspective with the performance of surrounding states and the national economy, must be considered in conjunction with several trends that distinguish the state. First, Connecticut has a highly-educated population, with a low population growth rate of 0.2 to 0.3 percent annually compared to a national average of 0.8 to 0.9 percent. The state's economy is mature, having lost manufacturing jobs in favor of new service-sector and innovation-based jobs. While growth rates of near 2.0 percent are a bit low compared to national averages, these levels are respectable given local demographic factors. In fact, in 1994, the RFA long-term forecast ranked Connecticut last in employment growth among the fifty States. Revisions in the fall of 1997 listed Connecticut 39th, an impressive gain. Comparison with surrounding states is not appropriate, because many of these states have different demographic and industry mixes. Perhaps Connecticut's closest match is Maryland, which has experienced robust growth recently, suggesting similar gains for Connecticut in the near future.

Connecticut's interest sensitivity, stemming from high mortgage to income ratios and high ownership of stocks, makes Connecticut vulnerable to Federal Reserve Board interest rate hikes. It also allows the state to prosper under the low interest rates currently in effect. The recent Asian stock market correction may lead to a six-month postponement of Federal Reserve Board action to raise interest rates; this reprieve should bolster economic activity within the state.

Potential developments that could improve prospects for Connecticut's recovery include strong growth in Canada and Europe, a rebounding aircraft industry, the potential for flatter income tax rate structures, and a reduction of federal capital gains tax rates. Concerns stem from the possibility that the Federal Reserve Board may eventually take action to slow the economy, that equity market corrections may occur suddenly, and that banking sector consolidations will continue in the Northeast.

Connecticut has an impressive list of strengths. High household incomes and a highly educated workforce support a number of growing industries. Growing industries include money management, investment banking, medical technology, software, and business services. A strong base of universities and research institutions fuels growth in these industries. Finally, Connecticut can expect continued expansion of the gaming industry and a growing network of business services.

Connecticut's weaknesses include the high cost of doing business, which may, when combined with a slow-growing labor force, keep new businesses out of Connecticut. This high cost, however, may well represent Connecticut's high level of workforce education, the complexity and technology of its industry, and the availability of business services. Also, with relative decreases in its population, Connecticut can expect to lose one of its six House seats in the next reapportionment. This will reduce the State's political clout. Finally, Mr. Getman expects continued job losses in mature industries, especially in manufacturing, banking, insurance, defense, state government, hospitals, and utilities.

Consumer confidence levels are climbing. The current recovery and the expectation that such a recovery will likely continue over the next five years have fueled consumer and business optimism. The potential for the Federal Reserve Board to raise interest rates is Connecticut's most pressing concern. Given its relatively strong economic position, Connecticut should minimize government interference with business and industry. Rather than guessing which industries will succeed over the next few years, a policy of keeping costs moderate while maintaining conservative State budget policies should foster continued recovery. The recovery is gaining momentum, and Mr. Getman expects Connecticut to continue its economic expansion.

Yolanda Kodrzycki
Federal Reserve Bank of Boston
President, New England Economic Project

Perspectives on the Connecticut Economy

Ms. Kodrzycki presented an analysis of the Connecticut economy that saw a continuing recovery over the next five years. Indeed, the Connecticut economy has already recovered significantly from the 1989 to 1992 recession, bringing job growth and unemployment very near their peaks of the late 1980's. While lagging most of New England, which has already regained its late 1980's position, Connecticut continues to respond to favorable national conditions. The State's recovery, although presently gaining momentum, will undoubtedly begin to slow, becoming more gradual as economic forces slow the national economy's growth rates.

Employment growth is declining in finance, insurance, real estate and manufacturing. Growth in gaming, and services, however, may provide some stabilization, allowing Connecticut to add another 30,000 jobs in 1997. High levels of speculative construction during the late 1980's deepened the State's recession. Today, conservative building policies, coupled with the slow depletion of residential inventories, has resulted in limited growth in the construction industry. But this also means a low risk of repeating the excesses of the 1980's. Lean defense budgets leave little room for further reductions of the magnitude experienced over the last decade. These factors lead Ms. Kodrzycki to predict that the recovery of the Connecticut economy is likely to continue for the foreseeable future. Job growth should proceed at a rate of approximately 20,000 jobs per year, or 1.2 percent. Unemployment will rise gradually to 5.25 percent, much of the increase related to structural difficulties. Labor force quality and skill set problems remain a concern and may limit the recovery's strength in the future.

This recovery is likely to suffer, however, from increasingly tight labor markets, a slowing stock market, and tightening by the Federal Reserve Board, which may raise interest rates. Higher interest rates in a state with high mortgage to income ratios and high stock ownership would slow the economy.

Retail sales growth will average 4.5 percent over the next five years, representing a positive but slowing pace. Some excesses may have occurred in recent retail construction, for example, the three new shopping malls. Construction practices generally seem conservative, however. Applications for new housing permits will remain low, fluctuating slightly around a 1.1 percent annual growth rate. Excess construction during the 1980's and a low or zero population growth rate explain this apparent weakness.

Growth in real personal income should slow over the next five years from 4.5 percent in 1997 to 2.8 percent in 2001. Ms. Kodrzycki sees this as an acceptable growth rate. Given the above statistics, she makes two specific recommendations in order to preserve this recovery and build Connecticut's prospects for the future.

First, the redevelopment of the state capitol may lead to a return of business, an increase in jobs, and renewed city and state pride, all of which would transform Hartford into an engine for further growth and development. Connecticut currently lags behind other New England states; our recovery to late 1980's levels is taking longer than in neighboring states. While commercial vacancy rates in Hartford are falling, they remain near 20 percent. The largest industries -- state government, defense, manufacturing, and insurance -- are all likely to shed jobs, although the rebound in aerospace may pare job losses in the transportation sector. Redeveloping the state's urban cores may help to accelerate Connecticut's growth rates and encourage businesses to locate in or around the State's capitol.

Her second recommendation was to develop an "innovation infrastructure" that will encourage new, large corporations to grow within Connecticut. The high educational level of the Connecticut labor force and the large number of quality educational institutions, combined with the availability of venture capital, should provide a solid base on which entrepreneurial firms can grow. These linkages will foster the development of knowledge-based industry, the growth sector of the Connecticut economy. As manufacturing jobs disappear, these industries will provide new jobs and income, allowing Connecticut's economy to continue on an expansionary path.

Nicholas Perna
Senior Vice President and *Chief Economis*t, Fleet Bank
The Financial Outlook

In his analysis of the Connecticut economy, Mr. Perna stressed the national factors that have fueled economic recovery here in Connecticut. These factors, he argues, are not likely to continue for any significant period of time, leaving the state in a more risky situation than might be supposed. While the surging recovery will undoubtedly slow as interest rates rise and tight labor markets raise wages, Connecticut will likely continue to recover and grow in the absence of drastic swings in external factors. While another recession is possible, it would likely be far milder than the 1990 to 1992 recession.

The auspicious national economic conditions in which Connecticut's recovery has taken place provide Mr. Perna's starting point. The US has experienced seven straight years of remarkably low inflation. Simultaneously, real gross domestic product (RGDP) has been growing at an average rate above 2.5 percent, with employment levels near or above theoretical full-employment. Surveys of 750 mutual fund holders show that expected rate-of-return estimates are quite high, perhaps unrealistically so. These conditions are not likely to persist, especially in an economy with little or no slack.

Connecticut's recovery has gained momentum as the national economy has strengthened. Between 1989 and 1992, Connecticut employment fell nearly 10 percent. Today, while still 3.5 percent below the 1989 peak level, Connecticut has recovered nearly two-thirds of jobs lost. Estimates suggest that, within a few years, Connecticut will catch up to the rest of New England, regaining its 1989 levels of employment.

National conditions, however, are unlikely to continue to foster state growth. Oil prices, which have been stable in recent years, may begin to fluctuate. The predicted *El Nino* weather phenomena may raise food prices. Overvaluations in the stock market may result in sudden corrections. International relations may deteriorate, and the Federal Reserve Board, delayed by the tumult in the Asian stock markets, may still feel the need to raise interest rates. Thus, while Connecticut is doing well now and shows promise for the future, risks exist that could dampen or even reverse this trend. Further, this continued expansion is not sustainable given high levels of resource utilization. As a result, Mr. Perna predicted inflation rates will climb over the next five years to between 3 and 3.5 percent.

Mr. Perna's analysis leads to several recommendations. First, repairing the state's transportation infrastructure, and augmenting it near industrial centers, will help alleviate pressure on the state's roadways. As long as this infrastructure fails to provide easy access throughout the state, costs of traveling and doing business will be elevated. Without investments in infrastructure, new businesses are not likely to locate in Connecticut, and tourism will not reach its potential.

Second, the cities of Connecticut, with few exceptions, are in need of new sources of funding to support redevelopment efforts. Supporting the cities will create new engines of growth, supplying new jobs and revenue, and building state pride. Mr. Perna made one specific proposal: use the gaming-tax revenue moneys to create a State Economic Development Fund that would be used to sponsor redevelopment of Connecticut's cities.

Finally, the expansion of the "rainy-day" fund, as Connecticut enjoys this period of recovery in which unemployment is low and incomes are climbing, could help to ease the next recession. During the 1980's, expansionary fiscal policy reinforced the boom, accelerating an already overheated economy. Further, during the last recession, fiscal contractions worsened the downturn. The application of the "rainy day" fund, combined with correct use of fiscal policy, could bolster falling demand, maintaining jobs and dampening the effects of the next decline.

William McEachern
University of Connecticut
Editor-in-chief, The Connecticut Economy:
A University of Connecticut Quarterly Review
The Connecticut Economy

Mr. McEachern predicted steady growth for the Connecticut economy over the next five years, allowing the state to mirror the growth of the national economy more closely in the future. The current conditions in Connecticut are better than they have been in years and should allow the recovery from the 1989 to 1992 recession to continue, bolstering jobs, real personal income, employment, and retail sales. By keeping taxes in line with surrounding and competing states, and by continuing the modest practices of the late 1990's, Connecticut should enjoy continued growth.

Demographics, an important issue considering the relatively tight labor markets in Connecticut, serve as the starting point for Mr. McEachern's analysis. Specifically, he points out that net migration is not necessarily the culprit for labor force growth problems. Over the years 1990 to 1995, the twenty to twenty-nine-year-old age bracket shrank by nearly 20 percent, and will drop another 9 percent before the year 2000. That is, the ten to nineteen-year-old age bracket in 1990 was significantly smaller than the twenty to twenty-nine-year-old bracket in 1990. This significant decline of those entering the labor force, even with a positive net migration and constant retirements, will decrease the number of available workers. Further, the Connecticut economy has been experiencing flat population growth.

Job growth has been gaining momentum. During the last recession of 1990 to 1992, Connecticut lost a total of 154,000 jobs at a rate of 50,000 per year. As of 1997, approximately 99,400 jobs have been regained and the state should continue to regain jobs at a rate of 20,000 per year. While this job growth will likely bring Connecticut back to its 1989 peak level within a few years, with tight labor markets at current levels of employment, where will the new workers come from?

As of 1997, Connecticut has 80,000 unemployed persons. One possibility is simply to match these persons with the newly created jobs. Skill set and quality problems as well as geographic concerns limit the feasibility of this solution, however. During the recovery period, the number of unemployed has remained relatively stable. Only as the labor markets continue to tighten will efforts be made to re-educate and train members of this group. If new workers with the required skills and training are not forthcoming, rising wages will drive prospective business away from Connecticut.

Labor market tightness, the quality of the labor force, and the level of income in Connecticut will be driving factors over the next few years. Labor market tightness can been seen readily through falling unemployment rates over recent years, especially when considered together with the growth in jobs. Further, a recent survey by *The Connecticut Economy* finds that the percentage of persons working in part-time jobs is falling (16 percent in 1993 but only 13 percent in 1997), and the percentage of persons who are employed in part-time positions but are looking for full-time work has similarly decreased.

This tightness in labor markets precludes the possibility of significant under-employment, suggesting that the unemployed suffer from structural impediments. The largest age group for net migration from Connecticut is the fifty-five to sixty-nine-year-old bracket. One consistent explanation for this trend is that these workers, when they retire or are laid off, migrate to other states where costs and educational requirements may be lower.

Connecticut income levels must be considered to complete the analysis. Through the middle 1970's, Connecticut's average per capital income was 16 percent over the national average. In 1989, during the height of the boom, per capital income soared to 40 percent above national levels. Today, though we have not yet recovered completely from the 1990 to 1992 recession, Connecticut’s per capita income is still 39 percent above the national average.

No single economic region accounts for this difference. Even after subtracting the high incomes of Fairfield County, Connecticut is still second in the nation. While stock option income is included in this calculation, capital gains are not, further validating these figures since including capital gains would only increase Connecticut’s lead. Finally, the cost of living, while high in Connecticut, cannot fully explain the income differentials. While cost of living is a full 18 percent higher in Connecticut than the national average, deflating the income figures by each state’s cost of living still leaves Connecticut first in the nation.

Connecticut’s future looks strong with already high income levels continuing to rise and unemployment declining slightly and remaining fairly low. Job growth will continue, but will slow as labor market tightness constrains growth. Flat population growth will keep new housing permits quite low as well. Overall, Connecticut should expect continued recovery, although growth rates across the board will begin to slow.

Todd Martin
Vice President and Chief Economist, Peoples Bank
A Banking Perspective

Todd Martin viewed this, the third longest expansionary period on record, as stable and robust with solid growth, low inflation and strong earnings. Low levels of high quality debt, few overbuilt industries, and banking health all support the view that the recovery will continue over the next five years. With the cluster initiative, support from other government programs, and new attitudes about industry evolution, Connecticut can expect to remain competitive and prosperous.

Connecticut's current position is one of quickening recovery. Inflation rates remain low; unemployment levels nationally are at a 24-year low and are mirrored here in Connecticut; and wages are climbing, while interest rates have remained relatively stable, despite the restrictiveness of Federal Reserve policies. Other indicators look promising as well. Job growth in services, gaming, and retail is solid. Car sales are increasing, tax revenues are up, and housing permits and sales are slowly increasing, although pricing remains mixed.

The People's Bank Business Barometer (PBBB), an indicator of statewide activity based on real disposable income, non-manufacturing employment, and manufacturing production, is at an all-time high. DataCore Partners, Inc., producers of the indicator, report a rating of 107.5 for the third quarter of 1997, the highest rating achieved since the inception of the indicator in 1969. Further, this indicator correlates highly with GSP, suggesting that GSP is very likely to climb with the PBBB.

Tightening labor markets are the consequence of this much-needed growth. Danbury, Stamford, and Torrington all report unemployment rates below 3.0 percent, suggesting that these areas are beginning to overheat. These trends are not uniform, however, with unemployment rates of 4.9 percent in Bridgeport and 5.5 percent in Danielson. Individual towns exhibit even lower rates; for example, New Canaan and Weston report 1.6 percent. This tightening of the labor markets may have repercussions if wages climb too quickly, pushing business away from Connecticut.

Job losses are still occurring in transportation equipment, insurance, federal government, instruments, chemicals, and utilities. Industries such as business services, state government, construction, trade, and services continue to add jobs, however, allowing modest growth in jobs that is expected to continue. Virtually all labor market areas have experienced growth in jobs, leading to an increase in tax revenues, housing permits and sales, and consumer confidence.

The banking outlook includes a continuance of bank consolidations with a trend towards newer forms of banking institutions. Connecticut banks are enjoying high profits and solid returns on equity and assets, as well as good asset quality. Unlike the early 1990's, credit is easy and is fostering new industry growth. While performance in Connecticut is still geographically uneven, Mr. Martin expects convergence towards national economic averages.

In order to preserve this strong economic performance, Mr. Martin offers several policy recommendations. First, he sees the cluster initiative as an excellent means of fostering growth in new industries. Second, developing a "user friendly" government will generate opportunities for new businesses and cut red tape that slows business growth. Finally, a dose of "new era" thinking, in which continued growth without inflation is possible through the concept of "churn", may offer insights into the life cycle of industry. This theory predicts that as older, mature industries die, an era of innovation-based firms with high agility and nimbleness will ensue. High numbers of business startups and failures will accelerate the pace of business, creating an atmosphere of "sustainable disequilibrium", as proposed in Kevin Kelly's article "New Rules for the New Economy".

In conclusion, the Connecticut economy is in good health with slowing but very respectable growth rates and strong indicators for its economic future.

SECTION 3

QUANTITATIVE OUTLOOK FOR THE CONNECTICUT ECONOMY

SUMMARY PAPER OF AFTERNOON SESSION

INDIVIDUAL COMMENTS

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Qualitative Review--Status and Outlook for Connecticut
Summary Paper of the Connecticut Economic Conference
Afternoon Session--November 20, 1997

Overview

Connecticut's generally good current economic health directs attention a way from some underlying frailties, according to a number of the afternoon speakers. Four distinct, but interrelated, concerns emerged:

- the existence of forces limiting the State's long-term growth;
- failure to match secondary and post-secondary training with skills needed in the current market;
- marked intra-regional disparities of wealth and income; and,
- the affect of state fiscal practices.

Limitations on long-term growth

While businesses exhibit optimism about the short-term outlook for the state's economy, they are concerned with limitations to its longer-term expansion. Connecticut firms see a skilled labor shortage as an important danger to future growth. The shortage of skilled labor relates, in part, to the mismatch between what Connecticut's schools produce and what the current market demands. It is also the result of a geographic disparity between the location of new job growth and the location of the bulk of those who are unemployed.

Government-influenced costs are a second obstacle to State growth relative to alternative locations. This is despite the fact that Connecticut has made progress in reducing business and personal tax burdens. Unlike households, which don't compete with distant rival households, businesses compete with increasingly distant, even international rivals. Also, households have high non-monetary relocation costs that businesses don't. Because households and businesses make locational decisions differently, an otherwise equitable distribution of tax burden between them may sacrifice economic growth. In order to attract and retain employers, business tax and cost burdens should be responsive to those outside of the state. Responsiveness, however, does not necessarily mean equalization. Connecticut is a high-income, high-cost, high-benefit state. Higher costs that reflect more productive workers and a more supportive civic business environment are not sources of competitive disadvantage.

Connecticut's perceived tax burden may be greater than its actual tax burden. Ms. Siegal of Mount Auburn Associates suggested that the perception of Connecticut as an overtaxed state has taken on a life of its own. Less noticed is that after-tax per capita income is higher in Connecticut than in any other state. Several speakers noted that taxes in Connecticut are not disproportionately burdensome when compared to levels of taxation in other states. Mr. Levin, a private sector policy analyst, urged legislators to educate the public regarding the levels and purposes of state taxation. Another approach to reducing the difference between tax perception and reality in Connecticut calls for tax simplification. An article in the Summer, 1997 edition of *The Connecticut Economy* noted that the current personal income tax law produces odd jumps in the marginal tax rate at various levels of income. The same level of progressivity and revenue could be achieved through a single-rate tax with a generous exemption. These simple changes might reduce the public's perceived tax burden.

Connecticut's lack of regional government and civic infrastructure is a third limitation to longer-term business growth. The principle of strong home rule has limited the emergence of a meaningful regional governance structure. Meanwhile, the geographic unit of efficient economic competition has frequently become not the city or the state but the metropolitan region, according to Ms. Siegal. As businesses draw increasingly on regional rather than on state or local resources, the absence of regional development and leadership puts Connecticut businesses at a competitive disadvantage. Similarly, businesses find it hard to compete based on their regional identity when Connecticut's fragmented government infrastructure hinders the emergence of such an identity.

The shortage of appropriately trained skilled labor is probably the most striking limitation on business growth in Connecticut, according to Mr. Gioia of the Connecticut Business and Industry Association. Paradoxically, Connecticut's labor force is relatively well-educated compared to the labor force in other states. Speakers suggested two causes of this paradox. First, although Connecticut workers may be well-educated, their education has not furnished them with the skills required by Connecticut businesses. Second, while the percentage of well-educated workers in Connecticut is high, these workers are too few in number to meet the requirements of growing businesses. As a result of this shortage of appropriately-trained skilled labor, Connecticut businesses foresee inflationary pressure. As the labor market tightens, businesses will have to increase compensation and benefits to attract the workers they need from out of state.

Educational institutions and worker skills.

Connecticut's public secondary schools have not fully responded to the changing skill requirements of state businesses. While high schools prepare the majority of their students for college, there is little communication or coordination between secondary and post-secondary institutions. As a result, high schools prepare students for college admission but not for the demands of a college education. In addition, according to Mount Auburn Associates, higher education may not be an appropriate objective for all. Vocational and technical training can turn out productive workers with only a high school diploma. By failing to coordinate curricula with higher-education, and by neglecting the role of vocational and technical training, Connecticut's secondary schools may be separating themselves from the ultimate consumers of their product.

Improvement in labor force training requires institutional reforms that vertically integrate secondary and post-secondary education effectively. Improvement also requires vocational training geared to business skill requirements. According to Mr. Gioia, there is evidence that

State businesses recognize these problems. Therefore, they are increasing their participation in the educational system, especially in working with school districts to improve local schools.

State funding practices may also contribute to the worker training limitations of the State's institutions of higher education. Mr. Levin suspects that operating requirements are systematically under funded, while capital projects are subject to inadequate prioritization and control. Current budgeting practices raise the potential for these inefficient allocations of state resources. Pressures to restrain the operating budget lead legislators to under fund the day-to-day operations of some state programs. State bonding practices are not limited by the constitution or state statute. This allows easy approval of expensive capital projects, some of which are in fact operating expenses. The operating requirements of these capital projects then go under funded, ultimately creating the need for more capital projects. Mr. Levin suggested that UConn 2000 may be an example of this phenomenon. Campus buildings leak, floors are cracked, and walls need paint. But the State agreed to construct more buildings rather than retro fit existing ones. Connecticut's failure to maintain its transportation infrastructure properly until a bridge collapse made headlines also demonstrates this lack of planning and control.

Slow population growth has been a factor limiting the number of qualified workers. Fertility is not the only problem, however. Even when state educational institutions succeed in preparing workers for the labor market, Connecticut's residential communities fail to retain them. Ms. Siegal explained that young professionals choose to live in vibrant urban environments at the core of healthy metropolitan regions. With the exception of Stamford, Connecticut does not have sufficiently attractive urban environments. Employers pay for the lack of appeal of Connecticut's cities through higher recruitment and wage costs. Higher education graduates whom recruiters can convince to stay do so only for a wage premium. Mount Auburn Associates found that Hartford's inability to attract young professionals was one of the major barriers to growth and development not only in the city, but also in the surrounding region.

Disparities of wealth and income.

Significant disparities of wealth and income distinguish Connecticut's cities from their suburbs. Connecticut's cities have lower per capita incomes and higher concentrations of poverty than do the surrounding towns. Some statistics from Mount Auburn Associates' studies of Waterbury and Hartford are included in the summary of Ms. Siegal's remarks in this report below. The relative poverty of Connecticut's cities retards growth throughout Connecticut's metropolitan regions.

Historical accident is partly responsible. Connecticut was heavily populated earlier in its history than most states. Residents established local political boundaries that reflected the efficient geographical size for a municipality in the 19th century. Later that century, the affirmation of strong home rule ensured that local political boundaries would not change. As a result, Connecticut's cities occupy much smaller land areas than cities of comparable significance in other states. As Mr. McEachern noted in his article "Small City Geography . . . Big City Problems," published in the Summer, 1997 edition of *The Connecticut Economy*, Connecticut's four major cities, Bridgeport, Hartford, New Haven, and Waterbury, each comprise less land area than the average of Connecticut's 169 towns. Nationally, cities of over 100,000 people average four times the land area of Connecticut's cities.

The minimum efficient size of a local political jurisdiction may be larger than it was one or two hundred years ago. As already noted, regional resources and identities can help to shape economic competition. Mount Auburn Associates has determined that because the States metropolitan regions are integrated economically but not politically, current government infrastructure is inadequate to address the income and wealth disparities. One might argue that these disparities merely result from smaller political boundaries. On this theory, Simsbury's wealth should offset Hartford's poverty, as perhaps it would in a city with larger boundaries. But the central implication of Ms. Siegal's work is that urban decline is not a zero-sum game; suburbs do not gain what the cities lose. Rather, Connecticut's fragmented government and civic infrastructure imposes a lose-lose, or negative-sum, game on its residents.

The heavy reliance upon the property tax for local government revenue drives the lose-lose dynamic. Under the current system, local incentives undermine regional interests. Suburbs, whose residents might otherwise prefer to limit growth, encourage development in order to expand their tax base and keep property tax rates low. These lower rates entice city residents and businesses to move to the suburbs. The city, faced with a shrinking tax base, raises property tax rates to maintain revenue for essential services. Higher tax rates hasten the urban exodus. So the reliance on the property tax gives suburbanites development they don't want, and leaves cities with abandoned infrastructure it must pay to maintain. To the extent that employment remains in the cities, commuting suburbanites free-ride on the cities' provision of public services. Ms. Siegal noted that metropolitan Hartford has experienced a geographic shift in employment as businesses and jobs head for the suburbs. Efforts to the remaining tax commuters for their share of city expenses would only increase this shift.

Connecticut needs creative solutions. In light of Connecticut's political history, a wholesale redistribution of local tax revenue would not appear to be feasible. A more modest approach recommended by Mount Auburn Associates is to use state-level incentives to *encourage* regional cooperation and coordination, and to *discourage* programs and policies that lead to urban sprawl. For example, Oregon adopted the Mutual Strategies Program, which allocates state lottery funds to partnership efforts among local communities. Maryland adopted a plan that confined state infrastructure subsidies to existing municipalities in order to discourage urban sprawl and the abandonment of existing urban infrastructure. The Connecticut legislature could tailor similar incentives to the particular development needs of the state's metropolitan regions.

Inefficient scale of public services. Connecticut's small cities and strong local control are not only inefficient because of the disparities they create. They are inherently inefficient providers of some public services. Just as the efficient scale for local government changes over time, so too does the efficient scale for the provision of particular public services. The research by Mr. Heffley showed that the cost of State government in Connecticut was low relative to other states. But Connecticut residents do not necessarily save money because they don't pay for county government. Rather, because Connecticut has no county government, all public services are provided either at the state or the local level. Connecticut's provision of public service will be inefficient, relative to other states, for any service where the efficient scale of that service falls between the levels of state and local government. The desirability of efficient delivery of public services provides further rationale for the development of regional government and regional civic infrastructure. Connecticut could compensate for what its federal system of government lacks in hierarchy by developing networks of local government cooperation. Mount Auburn Associates concluded that legislation could enable, and incentives should encourage, regional provision of some state and local public services.

State fiscal practices

A rationalized approach to regional economic development requires that state legislators obtain timely and relevant budgetary information. Prioritization of spending requires accurate information about costs and benefits. Mr. Levin argued that neither costs nor benefits are monitored fully in Connecticut. The current state system of fund accounting provides budget data of dubious informational content. Mr. Levin explained that the budgetary provision for program expenses is often allocated among various fiscal years. Thus, budget surpluses can be just the result of this allocation, rather than the reflection of revenues and expenditures during a given fiscal year. Mr. Levin believes that the proposed adoption of Generally Accepted Accounting Principles (GAAP) accounting will improve fiscal year cutoffs in this regard. As for benefits, Mr. Levin noted that methods for measuring the success and efficiency of state spending are limited. Performance budgeting techniques being considered by the State Comptroller may improve accountability for state spending, and a legislative group is working on similar issues with consultants from the private sector.

The under funding of operating requirements while approving large capital projects is a second major source of distortion in the State's budget process. This practice distorts the informational content of operating budget data, because it understates the true operating expenses associated with state programs. The cumulative effects of understating operating requirements are sometimes addressed through additional bonded capital expenditures. Excess bonding then creates additional operating requirements, which are squeezed further as debt service consumes a growing share of the state's operating budget. In summary, the pressure to reduce operating expenditures, combined with the statutory ease with which capital projects can receive bonding approval, has further distorted the cost benefit analysis of government projects. Inadequate accounting information has made rational prioritization of spending projects extremely difficult.

Future surpluses are critically dependent on the State's continued economic expansion. Connecticut's consolidated budget has generated a surplus in each of the last six years. But despite some effort at cost control, Connecticut's budget surpluses have been heavily revenue-driven. Elastic sources of revenue, principally the income and sales taxes, have outperformed expectations during the recent expansion and stock market boom. But they could just as likely under perform revenue expectations should the stock market decline or the economy contract. For this reason, it was suggested that the State should be conservative in enacting permanent tax cuts based upon potentially temporary budget surpluses. The systematic understatement of operating budget expenditures mentioned above also contributes to being cautious in introducing tax cuts. Some tax cuts in other than the income and sales taxes may be desirable, however. That is, reducing or eliminating minor taxes may improve perceptions about Connecticut's tax structure without impairing primary revenue sources.

Summary

The four areas of concern addressed in this section are all interrelated. Policy responses that improve business prospects, reform educational institutions, reverse urban decline, and rationalize state fiscal policy may require an integrated approach. Connecticut's relative lack of governmental infrastructure increases the costs of developing and implementing some integrated solutions. The state can reduce these costs by promoting institutions that align local incentives with regional and statewide objectives. Regional development requires regional coordination and cooperation. Better processes are also the key to better outcomes for direct state involvement. Weak accounting practices and limited monitoring of spending tend to reduce the effectiveness of state programs.

Elizabeth Siegal
President, Mount Auburn Associates
Urban Issues

Ms. Siegal divided her remarks into three topics. First, she presented selected statistics that highlighted the weak performance of Connecticut's cities. Second, she summarized findings from studies of the Waterbury and Hartford regions, which Mount Auburn Associates conducted. Last, she spoke about the implications of those findings.

Statistics from the Naugatuck Valley region illustrate a marked disparity between the City of Waterbury and its environs. Per capita income of $14,000 in the city was below the national average. By comparison, the region's per capita income was significantly above the national average, at $17,500. The concentration of poverty in the city explains part of that disparity. Although Waterbury comprises only forty percent of the region's population, it contains almost seventy-five percent of those below the poverty line. Ms. Siegal suggested that the source of these contrasts can be traced to the 1980's when the city of Waterbury failed to experience the growth boom that occurred in its suburbs.

Hartford area data. The contrast between city and suburbs is stronger in the Hartford region than in the Naugatuck Valley. Statistics from the Hartford region suggest a geographic shift in employment. By 1995 metropolitan Hartford employment was ninety-four percent of its 1988 level, while the City of Hartford reached only seventy-seven percent. From 1993 to 1995, Hartford lost 12,000 jobs while other suburban communities experienced significant job gains. This shift has affected intra-regional per capita income. In 1995 Hartford per capita income was fifty-five percent of the state average, while per capita income in Avon, for example, was one hundred seventy-one percent. These disparities suggest that the last recession and the continuing recovery have been experienced differently by different communities within metropolitan Hartford.

Hartford region compared nationally. Mount Auburn Associates compared the Hartford region to thirty similar regions across the country. Based on over 200 measures of economic performance, they found that Hartford was the worst. Once again, contrasts between the City of Hartford and the rest of the region emerge. While the Hartford region had the highest percentage of professional residents of any region, the City of Hartford had the lowest. Similarly, while poverty rates in the region were the lowest, Hartford city rates were highest. Because of poor economic performance and growing disparities, Ms. Siegal noted that Hartford, Bridgeport, and New Haven have become nationally recognized symbols of urban decline and social inequity.

Connecticut's lagging economic performance is connected to these imbalances. Without a vibrant, healthy urban environment, Hartford employers find it difficult to attract and retain young professionals. Mount Auburn Associates found this to be one of the major barriers to economic growth and development in the region. Ms. Siegal cited a study by the Federal Reserve Bank of Philadelphia that discovered a direct relationship between income growth of suburbanites and income growth of central-city residents. Other studies confirm that high disparities between central cities and their suburbs retard economic growth in the region.

Causes of the intra-regional disparities. Ms. Siegal focused on two causes for the disparities mentioned. *First,* the state's administrative structure serves to limit regional development. The number, strength, and independence of municipal governments, combined with the absence of county governments, increases the costs of regional coordination. Economic inefficiency results because local jurisdictions are too small to exploit economies of scale. *Second,* the fiscal structure of local governments, i.e. over-reliance on the property tax, promotes urban sprawl and the abandonment of urban resources. Communities that might prefer to remain rural come to rely on development to expand their tax base. In turn, businesses abandon urban infrastructure to avoid rising property tax rates imposed as a result of a shrinking urban tax base. Thus fiscal structure invites further economic inefficiency.

Corrective action. Ms. Siegal concluded her remarks with three suggestions. First, address the fiscal structure problem by creating regional asset districts that use a regional revenue source to promote fiscal equity within the region and to develop and maintain regional assets. Second, create state-level incentives for municipalities to work together, and create disincentives for sprawl, such as new infrastructure. Third, make urban development an integrated part of economic development plans. Urban development is not merely social policy; it's economic policy with regional significance.

Dennis R. Heffley
Professor of Economics, University of Connecticut
State Government Relative Efficiency

Mr. Heffley presented his research comparing Connecticut state and local spending to state and local spending in the other states. First, he discussed his article on this subject, “Connecticut Government: Fit or Fat?” published in Summer, 1997 edition of *The Connecticut Economy*. Next, he reported new results from an econometric model of state spending. Last, Mr. Heffley explained a simple approach to measuring efficiency and evaluated Connecticut’s position.

Relative measures of state and local government size. Using 1993/1994 data, Mr. Heffley ranked the 50 states based on per capita state and local government spending. Connecticut ranked sixth, indicating a high level of spending in absolute terms. But per capita spending may not be the best measure of government’s size. For his article in The Connecticut Economy, Mr. Heffley constructed five different measures of government size. These were: 1. state and local production as a percent of gross state product (GSP), 2. state and local government spending as a percentage of GSP, 3. state and local government spending as a percentage of income, 4. state and local workers per 10,000 of population, and 5. state and local workers as a percentage of total non-farm employment. Connecticut ranked no higher than 36th out of 50 states by any of these measures, and had a simple average ranking of 42.

Public sector pay levels. Even though Connecticut does not employ a disproportionately high number of state and local workers, high per capita state spending might suggest that these workers are overpaid. To address this issue, Mr. Heffley calculated the percentage difference between public sector and private sector wages for both state and local government workers. Although Connecticut public sector wages are high in an absolute sense, Connecticut is a high-wage state, meaning that government and industry alike must pay high wages to secure worker services. Connecticut public sector wages are only fractionally higher than private sector wages. On this basis, Connecticut compares favorably to other states that Mr. Heffley examined.

Effects of population, per capita income, and land mass. Mr. Heffley constructed a model that explains the interstate variations in state and local spending. The model used three explanatory variables, which he theorized account for differences in spending: population, income per capita, and land area. These three variables explained 98% of the variation in state and local spending, an unusually good result for this type of analysis. The model predicted that a 1% increase in population is associated with a .92% increase in spending, while a 1% increase in income per capita is associated with a 1.24% increase in spending. Although statistically significant, the association of changes in land area with differences in spending was negligible.

Connecticut governments are relatively efficient. In order to construct a rough measure of the relative efficiency of state and local spending, Mr. Heffley calculated predicted levels of spending for each state. These predictions are based on each state's values for the three explanatory variables. He then divided actual spending by predicted spending for each state, creating a ratio of actual to predicted spending. Ratios greater than one suggest relatively high state and local spending, which could be loosely interpreted as relative inefficiency. Similarly, ratios less than one suggest relatively low spending and relative efficiency. Connecticut's ratio of actual to predicted spending was .93. From highest to lowest, this measure ranks Connecticut 38th among the 50 states, meaning that Connecticut was the 13th most efficient state based on this measure.

Limitations of the study. Mr. Heffley's research suggests that Connecticut state and local government may be leaner than is commonly thought. He commented that the absence of county government in Connecticut does not bias his results, since the services provided by county government in other states (and included in their local spending) are simply provided at a different level of government in Connecticut. Still, Dr. Heffley mentioned limitations to his analysis. For example, further research might take into account other explanatory factors such as demographics, or it might focus on specific areas of spending, rather than on aggregate state and local expenditure. Also, this analysis yields results relative to the norm among all states, not relative to the frontier of what is attainable.

Michael Levin
Policy Specialist, Economic Development, Northeast Utilities
State Government Revenues

Mr. Levin discussed the state budget position, state expenditures, and state revenues. He focused on the revenue and expenditure figures reported by the Office of the Comptroller for fiscal year 1997. He concluded with some recommendations for fiscal reform.

Connecticut budget surpluses. For fiscal year 1997, the general fund ended with a surplus of $263 million. Several factors tend to distort the interpretation of these reported surplus. First, the state determines the surplus on a budgetary basis, not according to Generally Accepted Accounting Principles (GAAP). The budgetary basis tends to distort the timing of revenues and expenditures. Second, and related, the fiscal 1997 surplus would have been significantly higher were it not for the diversion of funds to cover expenses budgeted for various other fiscal years, past and future. The actual excess of revenues over spending in fiscal year 1997 was $382 million, a figure which includes the diverted funds. Third, the reported surplus would have been higher were it not for spending in excess of budget for the corresponding fiscal year. In fiscal year 1997, general fund spending exceeded the budgeted amount by $159 million; Medicaid and the Department of Children and Families accounted for most of the excess.

Regarding state expenditures, Mr. Levin noted that while consolidated state spending, which includes the transportation fund, increased 3.9% in fiscal year 1997, the actual increase was 4.7% after adding back 1997 spending recorded in other fiscal years. Despite statements to the contrary, spending growth has not approached zero in recent years. Mr. Levin anticipates 5% increases in expenditures during economic expansions and 7-10% increases during contractions for the foreseeable future.

Debt service is one source of budgetary pressure and expenditure growth. Debt service for fiscal year 1997 increased $93 million, or 9.4%. Although Connecticut's debt level may be reasonable compared to state income, Connecticut is a high income state. Mr. Levin suggested that the budget share of debt service is a better test of the debt burden. Debt service is budgeted at over 12% of total expenditures for fiscal year 1999, an unreasonably high share according to Mr. Levin.

Three problems with state bonding practices were cited by Mr. Levin. One, there is an absence of constitutional or statutory control over bonding, resulting in relatively indiscriminate use of bonding for inappropriate projects. Two, this lack of control deforms the budget process. Operating expenditures are often funded through the capital budget in order to improve the position of the operating budget. Mr. Levin speculated that this lack of integrity in the budgetary process results in under funding of operating requirements and excesses in capital spending programs, which in turn generate additional operating expenses. Three, because debt service consumes an increasingly large budget share, indiscriminate bonding crowds out legitimate and desirable capital projects.

Budget surpluses are revenue driven. Personal income tax revenue, federal aid, and sales tax revenue, the three largest components of state revenue, have increased in recent years. Consolidated budget revenue for Fiscal year 1997 increased by $523 million, or 5.2%. Although this increase is less than in the previous year, Mr. Levin noted that tax cuts were actually projected to lower revenues by $300 million in 1997. Personal income tax receipts grew by 8%, while federal aid increased by almost 7%. Sales tax revenue increased 6%.

Corrective action. Mr. Levin concluded with two broad recommendations. First, he recommended against further cuts in the personal income or sales tax. The current system is balanced and has a reasonable rate structure. Cyclical surpluses should go to the budget reserve fund, rather than into statutory tax cuts. Other revenue sources are less critical to the state's budget position and could be targeted for cuts. For example, the gross receipts tax on utilities could be eliminated to provide some rate relief pending the results of deregulation.

Second, legislators should improve the integrity of the budget and the budget process. Mr. Levin had four specific suggestions for reform. One, adopt GAAP budgeting to ensure the integrity of the fiscal year budget. Two, increase accountability for public spending and implement methods for measuring success. Three, with better monitoring of spending projects in place, consider additional investments in education, transportation and parks. Four, reform bonding procedures and adequately fund operating expenses through the operating budget.

Peter Gioia
Economist, Connecticut Business and Industry Association
Business Confidence

Mr. Gioia based his assessment of business confidence in Connecticut on three surveys conducted by the Connecticut Business and Industry Association (CBIA). One annual survey includes small and midsize businesses of up to 500 employees from across the state. CBIA also conducts a quarterly economic survey that polls its 2000 largest members regarding their forecasts for the next quarter. For the past twenty years, the CBIA has also conducted an annual membership survey on public policy issues in the state. Mr. Gioia interpreted these survey results along three lines: business prospects, business performance, and business concerns.

Businesses owners are more confident about prospects for their own firm, the state economy, and the national economy. Some respondents are more confident about the state economy than they are about the national economy. This sentiment contrasts markedly with confidence levels early this decade, when businesses expected no improvement in the state economy and expected the Connecticut economy to under perform the national economy. A reflection of this improved confidence, businesses believe that the state government will make a positive contribution to the business climate.

Business expansion plans. One survey question that addresses business confidence is whether businesses would grow, expand, or relocate in Connecticut should the opportunity arise. Five or six years ago only 35% to 40% of respondents answered that they would. In other words, roughly two-thirds of businesses said they would go elsewhere. The last survey indicates a reversal of that proportion. Approximately 60% of businesses would expand or relocate in Connecticut.

Why business confidence is up. Connecticut businesses believe that current business performance is very good. Mr. Gioia cited five reasons for this assessment. First, productivity has been improving. Second, sales are strong and growing, and 50% of respondents said that they will be introducing new products and services within a year. Third, and related, businesses are increasingly involved in new markets and international trade. Fourth, businesses are increasing investments in capital, worker training, and technology. Finally, three-quarters of respondents said they have no unmet credit needs, a significant turnaround from the credit crunch that accompanied the recession earlier this decade. Overall, Mr. Gioia noted that business performance reflects a market and product diversification that should improve Connecticut's ability to withstand a future economic downturn.

Connecticut businesses do have concerns. Intensified competition has accompanied the expansion of markets and increases in international trade. Connecticut businesses are more exposed to competitors from different cost environments than ever before. While businesses recognize improvement in Connecticut, they continue to believe that tax costs and other government-influenced costs are too high. For them, the relevant comparison is not to Connecticut's past environment but to their competitors' current one.

The availability of skilled labor is another major concern of Connecticut businesses. Businesses are increasingly working with communities and school districts to improve education outcomes. Mr. Gioia suggested that legislators should reallocate state resources to improve the level and appropriateness of education among Connecticut workers. High technology firms in the photonics and biomedical industries are particularly disadvantaged by the dearth of skilled labor. Educational reform is especially critical because these high technology firms have among the best growth prospects of any Connecticut business segment.

Roger Clayman
Field Representative at Large, Department of Field Mobilization, AFL-CIO
AFL-CIO Economic Education Program

Mr. Clayman discussed the union's economic education program designed for union members. This program has undergone a recent change. He began by reviewing the program as it was presented prior to this change. Next he summarized the new program. Finally, he pointed out some of the major differences between them.

Worker interests. The previous economic education program categorized issues as either contrary to, or consistent with, worker interests. Items contrary to worker interests include: supply-side economics, investment incentives, tax incentives for business, and reduction of government involvement in the business environment. Items consistent with worker interests include: the National Labor Relations Act, safety and health in the workplace, the minimum wage, Davis-Bacon, unemployment and worker's compensation, and public sector jobs.

Inflation analysis. A second facet of the previous economic education program was a discussion of inflation. The union argued that inflation had specific causes in food and energy prices and required specific policy solutions. A general attack on inflation launched by monetary tightening would increase unemployment and reduce job prospects. Mr. Clayman explained that the education program also criticized post-recessionary supply-side policies. By 1986, supply-side measures had resulted in only three million jobs, at a cost to the government equivalent to $234,000 per job in tax cuts. The union's position is that public works are a more cost-effective way to achieve employment growth.

The new union economic education program begins with a look at the ratio of unionized workers to nonunion workers, or union density. From 1983 to 1995, worker density in many regions of the South and Northeast declined from over 20% to between 10% and 20%. Mr. Clayman attributes the decline in union membership to the loss of manufacturing jobs, and to public policies that have reduced unions' ability to organize.

Issues facing workers today. The rest of the new education program addresses several issues of immediate concern to workers. The first is a decline in real hourly wages from $15.60 in 1970 to $11.82 in 1996, stated in 1996 dollars. Real wages have declined despite steady increases in productivity over the period. Mr. Clayman compared the decrease in real hourly wages to the large increases in compensation of many corporate chief executive officers. Second, increased concentration of wealth has accompanied the decrease in wages. In 1976, the richest 10% of the population owned 50% of the wealth, and in 1995, the richest 10% owned 70% of the wealth.

Working families have had to adjust to these growing inequalities. Workers, on average, are working one full month longer per year than they did twenty years ago. In a related statistic, Mr. Clayman mentioned that since 1970 the number of people working multiple jobs has increased by 44%. Despite the increased workload, families have been unable to keep up, as demonstrated by an increase in household debt over the period. The union believes that these hardships have been caused by legislatures' adoption of the corporate political agenda. This agenda includes free trade, deregulation, and tax cuts for business. The triumph of corporate interests has resulted in a loss of political strength, purchasing power, and economic well-being for the average worker. The education program concludes with a call for workers to fight back and resist the force of corporate interests.

Organized labor's new economic focus. Mr. Clayman explained that the previous economic education approach had not been as successful as he might have hoped. Most of their policy recommendations have been defeated by alternative policies that have caused long-term injury to members, job losses, and wage reductions. Instead of trying to make arguments about macroeconomic phenomenon, which Mr. Clayman admits economists are better at anyway, the new approach focuses on issues that are more visible in workers' daily lives. This approach is designed to be more motivational, improving union organization efforts and encouraging members to become politically active.

James F. Abromaitis
Commissioner, Connecticut Department of Economic and Community Development
Industry Cluster Initiative

Mr. Abromaitis reported on the state of the economic clusters in Connecticut and the nation. Connecticut's "Industry Cluster Initiative" was launched in February 1997 as a public/private initiative, driven by industry and the private sector, and facilitated by government, to achieve global competitiveness. Building on concepts advanced by Harvard Business School Professor Michael Porter's study of regional economies and markets throughout the world, the Connecticut Cluster Initiative began with an address by Professor Porter February 25, 1997.

An industry cluster is a group of linked industries. Prime examples of successful industry clusters are California's Silicon Valley and Italy's leather apparel and footwear industry. Cluster-based economic development supplements conventional approaches by focusing on strong common economic foundations needed for industries to prosper and compete globally such as human resources, infrastructure, capital, technology, and quality of life, as well as overall tax and regulatory climate.

Connecticut's Cluster Initiative began with 100 days of intensive industry-led advisory board meetings, following which Governor-invited business executives, representing each of six major industry clusters, reported preliminary results and recommendations in a forum participated in by the Governor on June 11, 1997. In its meeting June 25, 1997, the Connecticut Economic Conference Board also reviewed the report.

Subsequently, leadership to accomplish an "Economic Competitiveness Package" and 12 "Implementation Teams" has been established. The teams are organized under the topics of Human Resources and Workforce Development, Regulatory Environment, Capital and Incentives, Transportation Infrastructure, Reorganization and Cluster Activation, Marketing, and BioTech. Each cluster has a chair or co-chairs and an advisory group comprised of business leaders from complementary businesses across the state.

The leadership and implementation teams have been convening additional meetings toward the goal of building the "Economic Competitiveness Package." This will be a set of actions, a cluster-oriented organizational structure, a set of recommendations, and a multi-year strategy involving government and business removing impediments to economic growth to create an environment for achieving global competitiveness.

Connecticut's industry clusters (along with a tourism cluster already in progress) were identified based on their industry location quotients comparing the concentration of an industry in the state with the concentration of an industry nationally. The six initial industry clusters identified are: Manufacturing, High Technology, Health Services, Financial Services, Telecommunications and Information, and Tourism. A number of sub clusters are being identified such as Bio Tech, Photonics, and Medical Devices.

Mr. Abromaitis presented maps of cluster concentration by town, and a draft summary of the economics of the initial clusters. He noted among the highlights of this analysis that:

- The analysis covered six industry clusters from 1988 to 1995
- During that 7 year period, Connecticut's Gross State Product increased from $88.8 to $110.4 billion
- Cluster-related businesses ("establishments") increased from about 13,300 to 14,800
- Cluster-related employment declined from 573,000 to 535,000
- Cluster-related wages jumped 43%, giving evidence of the sharp increase in productivity.

The economic performance of each industry cluster was as follows:

Telecommunications and Information – achieved the largest single share of the state's total economy. Average annual output was positive for every industry making up this cluster.

Financial Services – experienced a decline in total employment, but among three industries making up the cluster, namely Pension and Health Funds, Personal Credit Institutions, and Security and Commodity Services, employment growth outpaced the nation.

Health Services – experienced strong growth in both employment and establishments. The Accident and Health Insurance industry employment had a net gain of 90.4 percent compared with 40.4 percent for the U.S.

High Technology – industries closely matched the U.S. in employment gains. Overall, a significant employment growth rate of 19.4 percent is comparable to the U.S. 20.1 percent growth rate.

Manufacturing – industries underwent a major structural shift between 1988 and 1995. The cluster, which was the single largest contributor to Gross State Product in 1988, represented 11.8 percent of total output in 1994. Employment declined 25.3 percent, but the most recent data show an employment gain that was the first increase in 13 years.

Tourism -- industries fared remarkably well. Employment soared 38.2 percent, far better than the national rate of 24.0 percent between 1988 and 1995. Total establishments increased 23.0 percent.

What follows is a discussion of the economic profiles of each industry cluster compared with those of the same industries nationally.

SECTION 4

INDUSTRY CLUSTER INITIATIVE:

INTERIM SUMMARY

SIC IDENTIFICATION + DATA

GEOGRAPHIC PROFILE

Editorial Assistance for this section
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Connecticut Department of
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Industry Clusters: An Economic Summary

The following reports on the state of the economic clusters in Connecticut and the nation. The State's industries continue to create jobs and experience growth. Even manufacturing -- which our statistics will show, suffered employment losses – has now gained one-quarter of one percent in employment over the 1995-96 period, the first increase in 13 years. The state's current total non-farm employment is over 1.6 million.

In the seven-year period presented in the economic analysis, the state's total output, as measured by Gross State Product (GSP), went from $88.8 billion to $110.4. Overall, cluster-related establishments increased by 1,470 units, up 11 percent from 13,305 to 14,775. Cluster-related employment has decreased 6.6 percent, from 573,301 to 535,683. Cluster-related annual wages have jumped 43 percent from 1988 to 1995, in line with a sharp increase in productivity. The following sections briefly characterize the highlights of each industry cluster.

Telecommunications and Information – the cluster with the largest single share of the state's total economy – saw strengths in key industries. The number of Telecommunications and Information establishments increased 60.5 percent. The sales volume of major companies contributed to a 12 percent gain in total output. During the same period, total employment decreased 11.5 percent, compared with an increase of 0.7 percent for the U.S. Average annual output growth was positive for every industry making up this cluster.

Financial – In the Financial Services cluster, Connecticut experienced a harder hit from the1990 recession than the U.S. Total employment was down by 15.4 percent (or 18,576) compared to the U.S., which had 5.8 percent job loss. Among the industries, Pension & Health Funds, Personal Credit Institutions, and Security and Commodity Services had the largest percent gains. All three outpaced the nation.

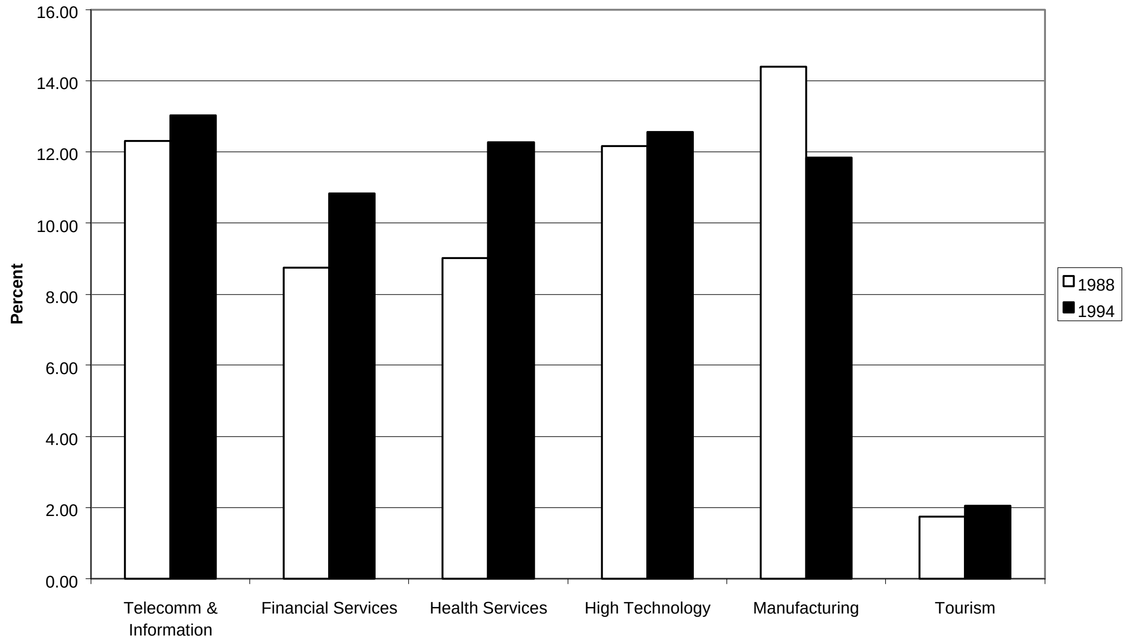
Health Services - Connecticut's Health Services cluster has experienced strong growth in both employment and establishments. Total employment increased 25.9 percent compared with 22.0 percent for the same period for the U.S. The single strongest growth is the Accident and Health Insurance industry, with a net employment gain of 2,818, up 90.4 percent compared with 40.4 percent for the U.S. The Hospital and Nursing/Personal Care industries also had employment growth of 23.7 and 31.1 percent, respectively, exceeding the U.S. employment growth for both these industries. The number of Health Service establishments increased 62.2 percent from 1988 to 1995.

High Technology – In Connecticut, the High Technology industries closely matched the U.S. in employment gains. Overall, for the cluster, a significant growth rate of 19.4 percent is comparable to the U.S. 20.1 percent growth rate in the High-Tech cluster. In Drugs and Medical Instruments alone, Connecticut's jobs grew at remarkably fast rates of 264.2 percent and 29.5 percent, respectively, exceeding the national growth rates of 13.4 and 4.2 percent. More than 7,000 jobs were created in the High-Tech sector in Connecticut between 1988 and 1995. Total establishments increased from 1,839 to 2,035, a gain of 11.5 percent. Almost without exception, average annual output gains were positive, ranging from 0.19 percent for Fiber Optic Strands to 6.8 percent for Computer and Data Processing. The High-Technology cluster now constitutes the second largest contributor to the State's total output as measured by GSP.

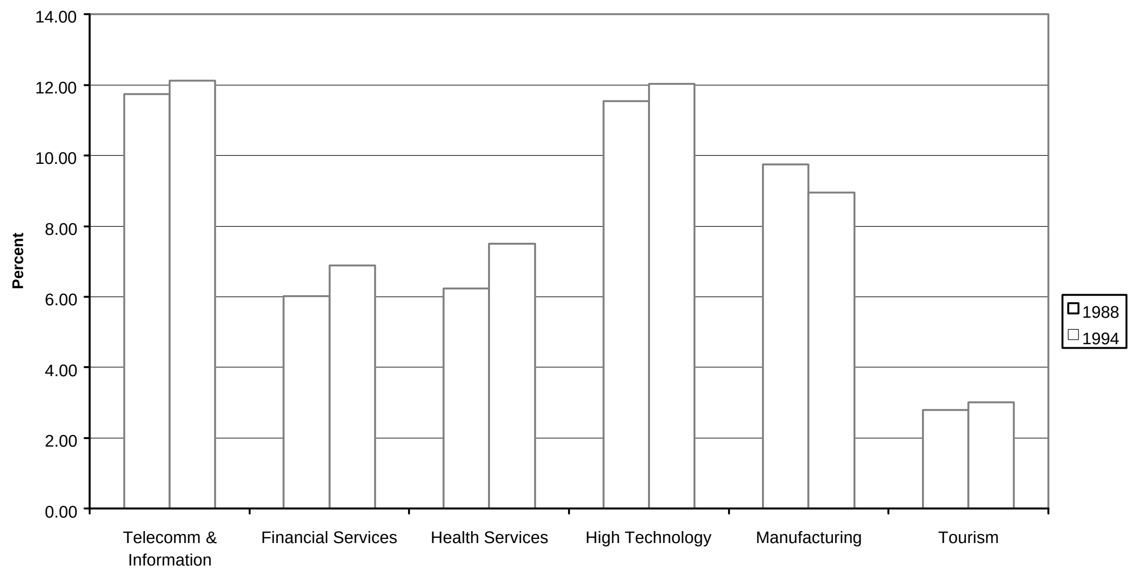
Manufacturing – Connecticut's manufacturing industries underwent a major structural shift between 1988 and 1995. Employment decreased 25.3 percent from 208,871 to 156,076 in this period, compared with the U.S. decrease of 7.5 percent. All industries suffered employment declines except Plastics Materials and Synthetics, which gained 21.2 percent in employment. Other industries such as the electrical and electronic components industries that had output gains helped offset employment declines. Certain classifications of industrial machinery also experienced positive output growth. Thus the Manufacturing Cluster, which was the single largest cluster contributing to Gross State Product in 1988, was 11.8 percent of total output in 1994.

Tourism – The Tourism Cluster fared remarkably well. Employment soared 38.2 percent, far better than the national rate of 24.0 percent between 1988 and 1995. Employment grew from 33,840 to 46,760. Total establishments increased 23.0 percent. Among individual industries, employment for Motion Pictures was up19.5 percent; Charter Bus Transportation was up 182.1 percent; and Air Transportation was up 23.8 percent.

Percentage Share of Connecticut's Total Economy

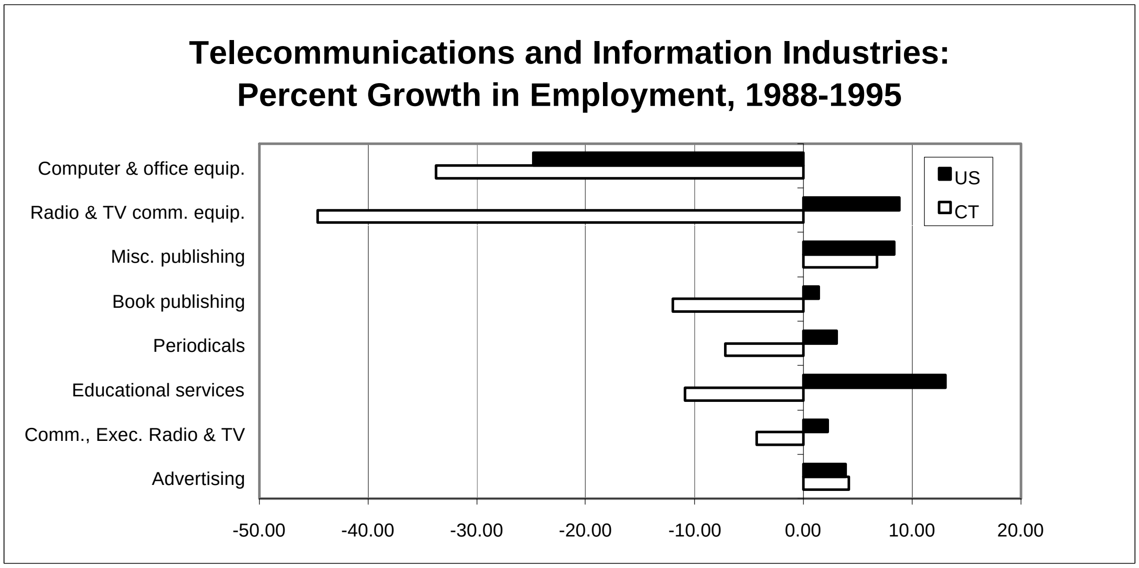


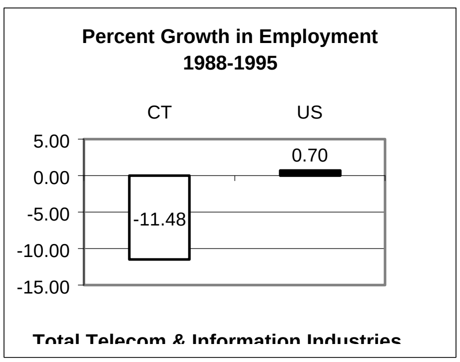
Percentage Share of U.S. Total Economy



Source: Bureau of Economic Analysis
Total CT GSP $88.8 billion (1988); $110.4 billion (1994)
US Total GSP $5.04 trillion (1988); $6.84 trillion (1994)
Prepared by CT Dept Econ & Comm Dev, PPE/Research

Telecommunications and Information Cluster

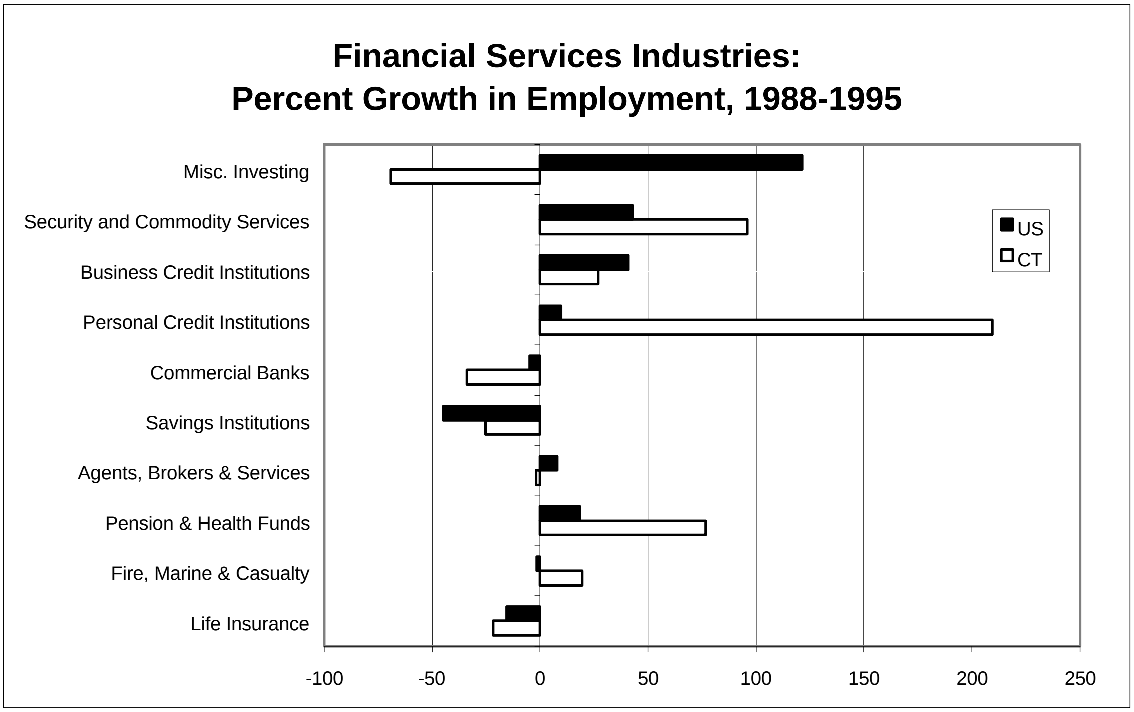


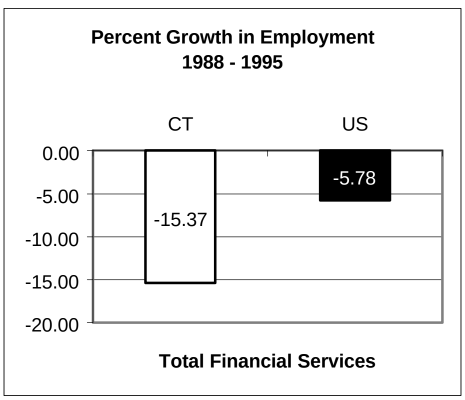


Industry	1988 Employment	1995 Employment	1988 -1995 Net Change
Advertising	3,060	3,188	128
Comm., Exec. Radio & TV	18,862	18,061	-801
Educational services	36,792	32,802	-3,990
Periodicals	3,020	2,803	-217
Book publishing	2,144	1,887	-257
Misc. publishing	1,077	1,150	73
Radio & TV comm. equip.	1,870	1,036	-834
Computer & office equip.	7,967	5,277	-2,690
Connecticut	74,792	66,204	-8,588
U.S.	3,624,727	3,650,219	25,492

Connecticut's employment performance in the Telecommunications and Information Cluster was relatively weak during the 1988 to 1995 period compared to the U.S. Connecticut employment declined 8,588, down 11.5 percent compared with a small gain of 0.7 percent for the U.S. Only Advertising and Miscellaneous Publishing posted employment gains of 4.2 percent and 6.8 percent, respectively, while the remaining sectors had job losses. The industry had the largest and second largest of Gross State Product (Output) among the six industry clusters for 1994 and 1988.

Financial Services Cluster

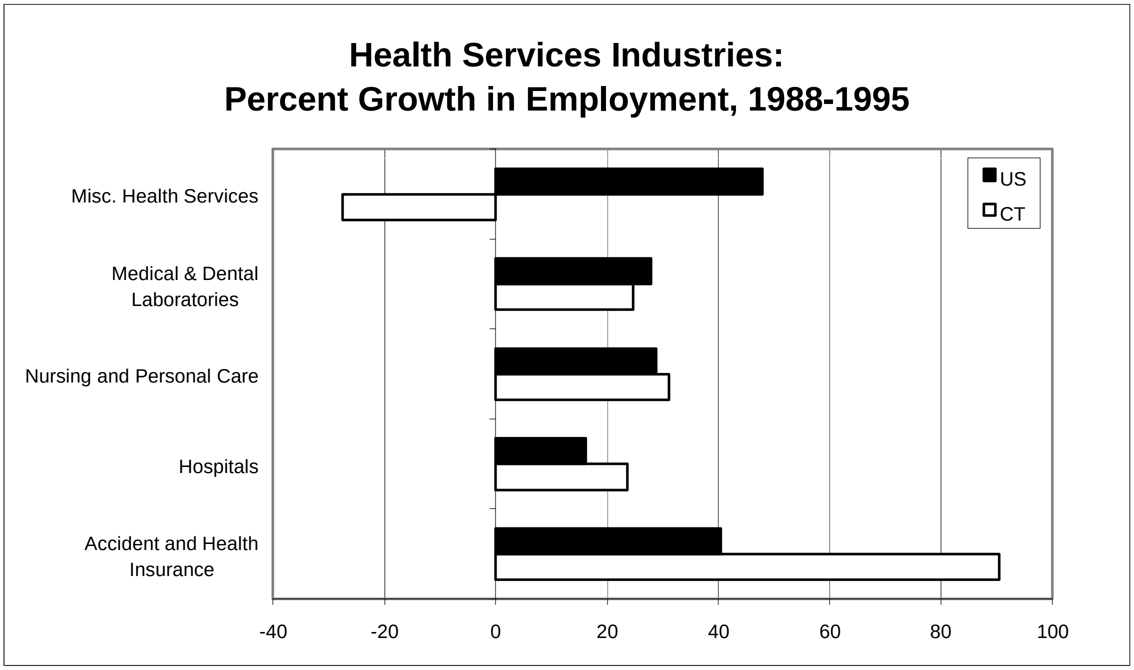


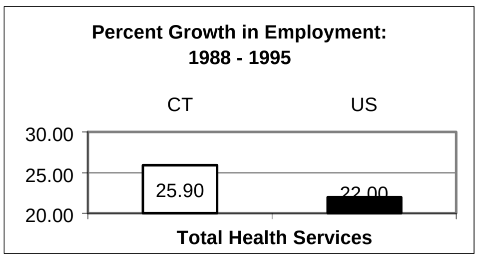


Industry	1988 Employment	1995 Employment	1988 -1995 Net Change
Life Insurance	56,141	43,967	-12,174
Fire, Marine & Casualty	8,659	10,337	1,678
Pension & Health Funds	230	406	176
Agents, Brokers & Services	10,976	10,777	-199
Savings Institutions	15,904	11,894	-4,010
Commercial Banks	21,675	14,319	-7,356
Personal Credit Institutions	1,005	3,109	2,104
Business Credit Institutions	3,369	4,273	904
Security and Commodity Services	1,389	2,722	1,333
Misc. Investing	1,495	463	-1,032
Connecticut	120,843	102,267	-18,576
U.S.	4,025,254	3,792,650	-232,604

In the Financial Services cluster, both Connecticut and the nation experienced sharp reductions in total employment. Connecticut suffered a loss of 15.4 percent employment (18,576 jobs) over the period from 1988 to 1995 compared to the US that had a decrease of 5.8 percent in employment. Among the industries, Pension & Health Funds, Personal Credit Institutions, and Security and Commodity Services had the largest percent employment gain. All three outpaced the nation.

Health Services Cluster

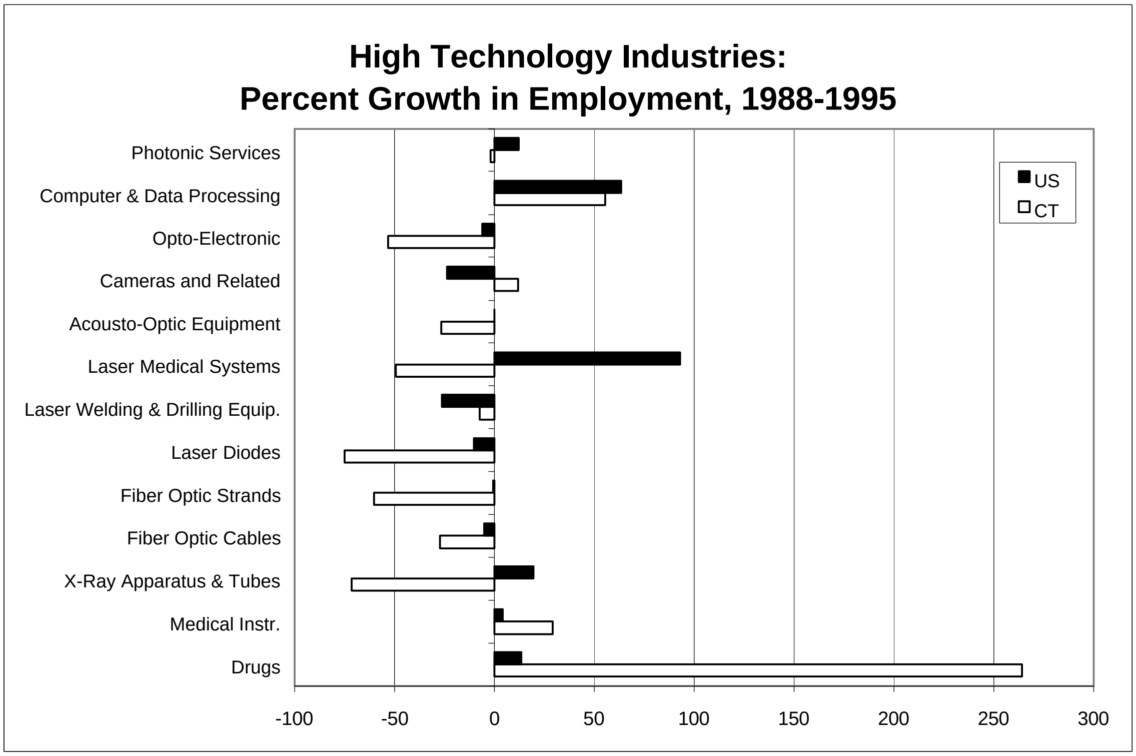


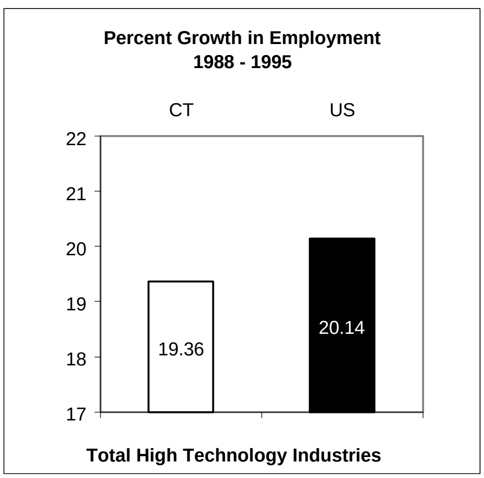


Industry	1988 Employment	1995 Employment	1988 -1995 Net Change
Accident and Health Insurance	3,117	5,935	2,818
Hospitals	54,820	67,785	12,965
Nursing and Personal Care	29,802	39,074	9,272
Medical & Dental Laboratories	2,293	2,859	566
Misc. Health Services	4,310	3,127	-1,183
Connecticut	94,342	118,780	24,438
U.S.	5,106,327	6,229,922	1,123,595

Connecticut's Health Services cluster has experienced strong growth. Total employment increased from 1988 to 1995 by 24,438, a 25.9 percent increase compared with 22.0 percent for the same period for the U.S. The single strongest component of that growth is the accident and health insurance industry with a net employment gain of 2,818, up 90.41 percent compared with 40.44 percent for the U.S. The hospital and nursing/personal care industries also had employment growth of 23.7 and 31.1 percent, respectively, exceeding the U.S. employment growth for both these industries. Only miscellaneous health services lagged the national trend in this period. Overall, the health services cluster represents almost 10 percent of the state's total economy as measured by contribution to gross state product.

High Technology Cluster



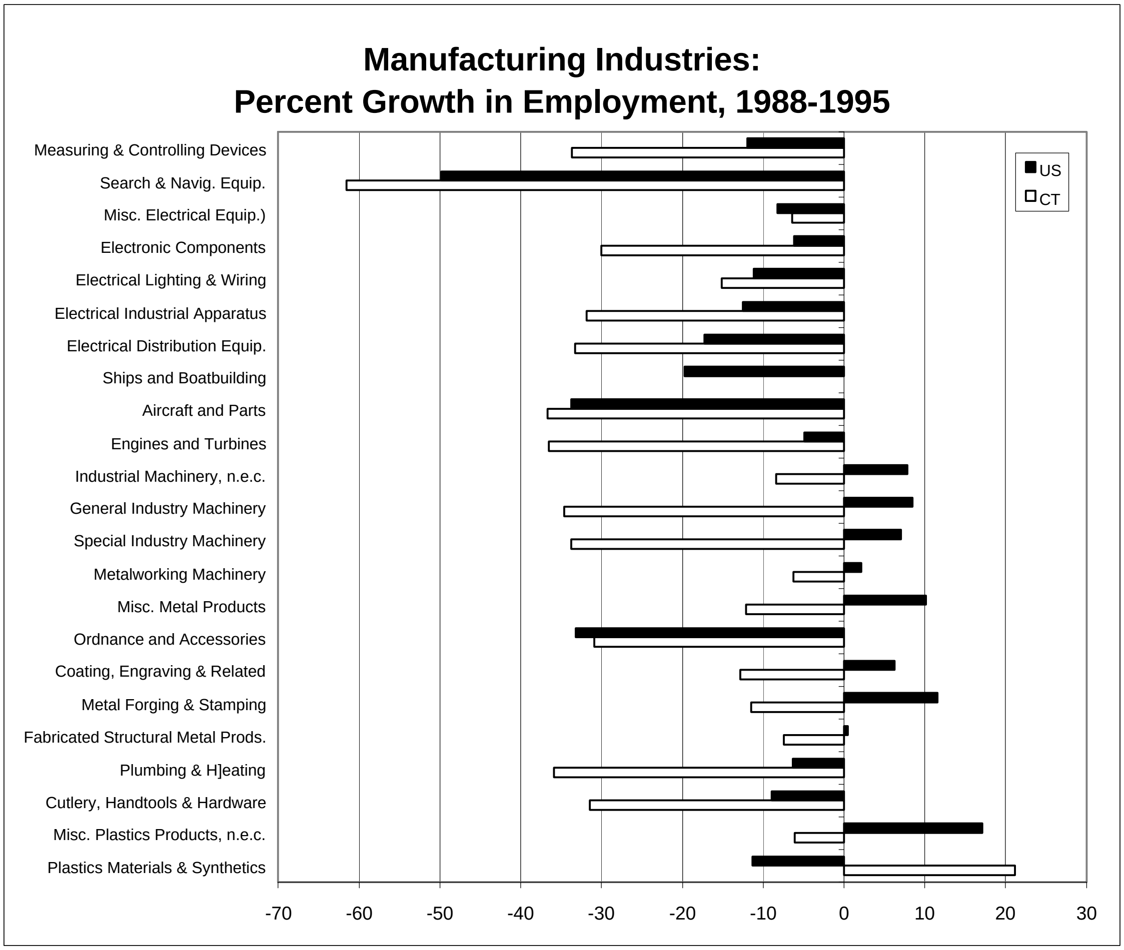


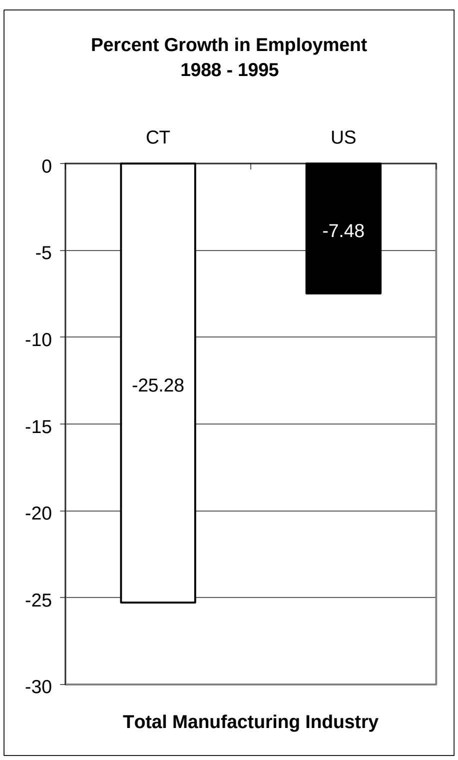
Industry	1988 Employment	1995 Employment	1988 - 1995 Net Change
Drugs	2,280	8,303	6,023
Medical Instr.	5,888	7,610	1,722
X-Ray Apparatus & Tubes	610	175	-435
Fiber Optic Cables	3,627	2,635	-992
Fiber Optic Strands	88	35	-53
Laser Diodes	1,579	394	-1,185
Laser Welding & Drilling Equip.	1,486	1,379	-107
Laser Medical Systems	1,419	719	-700
Acousto-Optic Equipment	1,289	948	-341
Cameras and Related	1,855	2,079	224
Opto-Electronic	3,547	1,661	-1,886
Computer & Data Processing	9,557	14,861	5,304
Photonic Services	5,374	5,274	-100
Connecticut	38,599	46,073	7,474
U.S.	2,325,162	2,793,529	468,367

In terms of employment growth, the nation fared marginally better than Connecticut in Hi-Tech between 1988 and 1995. Though Connecticut's jobs grew at a relatively faster rate than the national average in Drugs and Medical Instruments, the rapid employment growth in the remaining sectors maintained the vast majority of jobs in Connecticut within the Hi-Tech cluster. Though the nation outperformed the state, more than 7,000 jobs were created in the Hi-Tech sector in Connecticut between 1988 and 1995.

Manufacturing Cluster

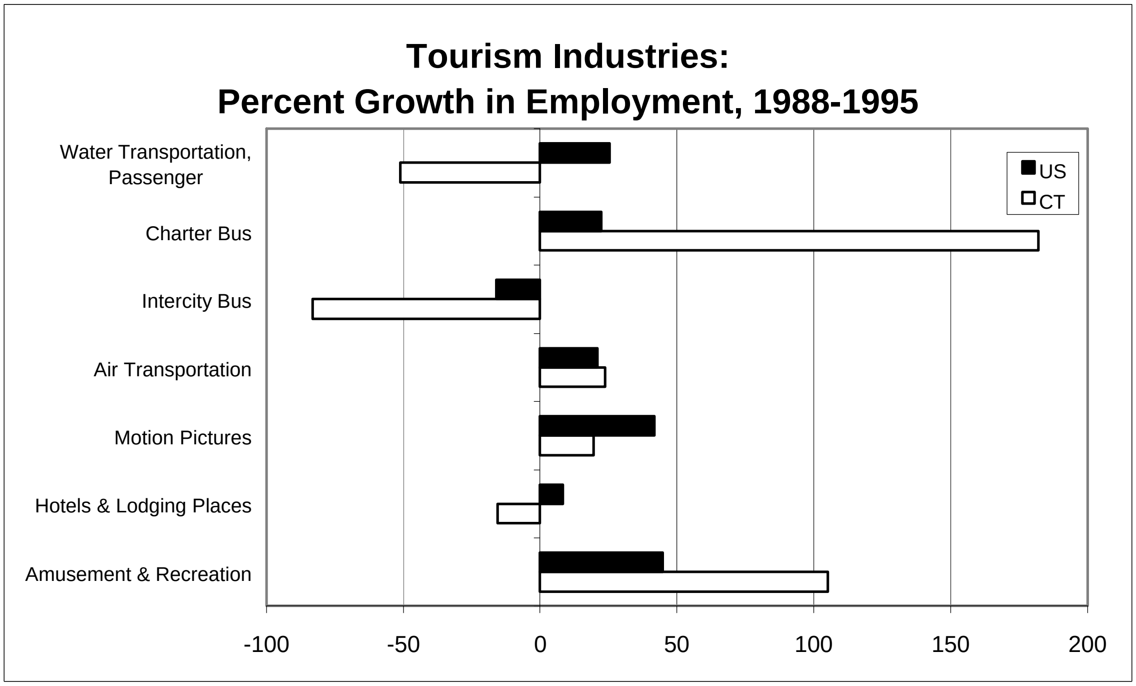
Connecticut's manufacturing industries underwent a major structural shift between 1988 and 1995. Employment decreased 25.3 percent from 208,871 to 156,076 in this period, compared with the U.S. decrease of 7.5 percent. All industries suffered employment declines except Plastics Materials and Synthetics, which gained 308 in employment, or 21.2 percent. Miscellaneous Plastics Products also had the single largest growth in average annual output. Higher output, resulting most likely from higher productivity in such industries as Electrical Distribution, Electrical Industrial Apparatus, Electrical Lighting and Wiring, Electronic Components, and Miscellaneous Electrical Equipment also helped to offset the employment declines. Metalworking, Special, General, and otherwise-classified Industrial Machinery experienced positive output growth despite the decreases in employment. Thus the Manufacturing Cluster, which was the single largest cluster contributing to Gross State Product in 1988, was 11.8 percent of total output in 1995.

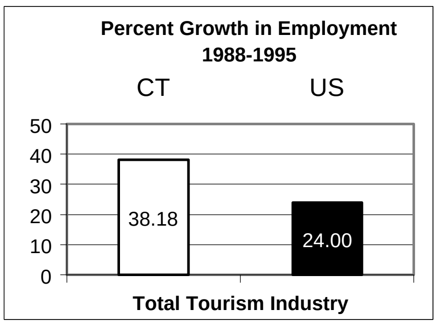




Industry	1988 Employment	1995 Employment	1988 -1995 Net Change
Plastics Materials & Synthetics	1,456	1,764	308
Misc. Plastics Products, n.e.c.	9,205	8,647	-558
Cutlery, Handtools & Hardware	9,235	6,332	-2,903
Plumbing & H]eating	1,170	750	-420
Fabricated Structural Metal Prods.	5,523	5,114	-409
Metal Forging & Stamping	6,806	6,027	-779
Coating, Engraving & Related	3,942	3,435	-507
Ordnance and Accessories	3,615	2,499	-1,116
Misc. Metal Products	7,147	6,282	-865
Metalworking Machinery	8,395	7,868	-527
Special Industry Machinery	6,699	4,435	-2,264
General Industry Machinery	8,092	5,292	-2,800
Industrial Machinery, n.e.c.	7,112	6,516	-596
Engines and Turbines	7,041	4,472	-2,569
Aircraft and Parts	59,058	37,407	-21,651
Ships and Boatbuilding	17,500	17,500	0
Electrical Distribution Equip.	2,519	1,682	-837
Electrical Industrial Apparatus	5,098	3,475	-1,623
Electrical Lighting & Wiring	6,425	5,453	-972
Electronic Components	11,074	7,745	-3,329
Misc. Electrical Equip.	2,938	2,750	-188
Search & Navig. Equip.	6,657	2,559	-4,098
Measuring & Controlling Devices	12,164	8,072	-4,092
Connecticut	208,871	156,076	-52,795
U.S.	5,650,405	5,227,908	-422,497

Tourism Cluster





Industry	1988 Employment	1995 Employment	1988 -1995 Net Change
Amusement & Recreation	12,798	26,271	13,473
Hotels & Lodging Places	12,352	10,422	-1,930
Motion Pictures	3,705	4,426	721
Air Transportation	4,140	5,127	987
Intercity Bus	375	63	-312
Charter Bus	95	268	173
Water Transportation, Passenger	375	183	-192
Connecticut	33,840	46,760	12,920
U.S.	3,578,212	4,437,004	858,792

The state's tourism cluster fared remarkably well. Employment soared 38.2 percent, far better than the national rate of 24.0 percent between 1987 and 1995. Employment grew from 33,840 to 46,760. In the Amusement and Recreation industry, rapid growth in employment of 105.3 percent was more than double the 44.8 percent for the U.S. Other strengths in Connecticut's tourism industries were Motion Pictures, up 19.5 percent, Charter Bus Transportation, up 182.1 percent, and Air Transportation, up 23.8 percent. Overall, tourism's contribution to the state's total output jumped from 1.7 to 2.1 percent.

Performance of Connecticut Industrial Clusters, 1988 - 1995

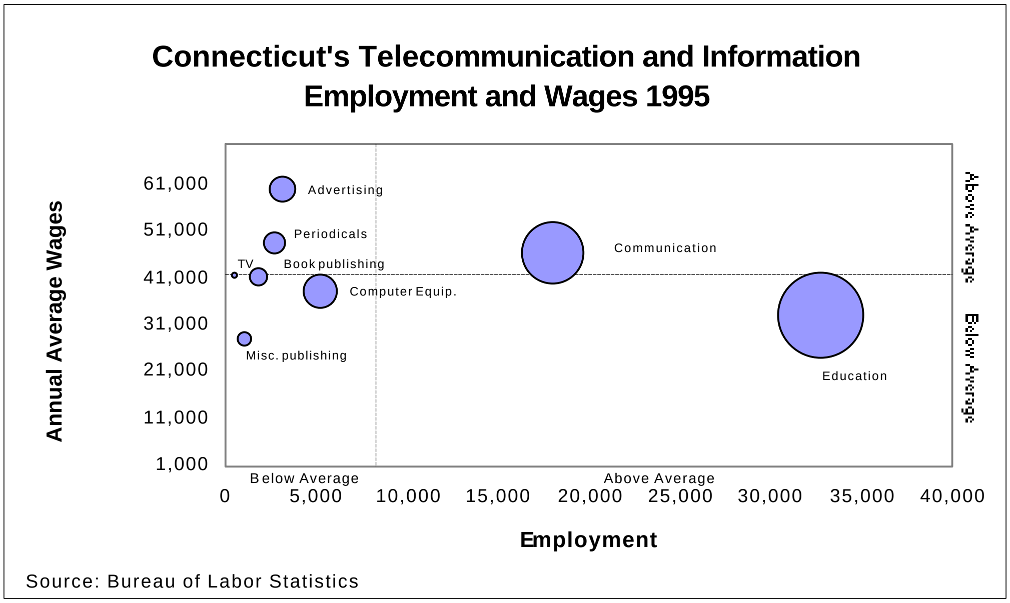
SIC	Industrial Clusters	Average Reporting Units 1988	Average Reporting Units 1995	Average Employment 1988	Average Employment 1995	Employment Growth Rate 1988-1995	Annual Average Wages 1988	Annual Average Wages 1995	Average Annual Output Growth Rate 1988 -1995
	TELECOM AND INFORMATION								
731	advertising	471	455	3,060	3,188	4.18%	38,703	60,161	6.82
48	comm., exec. radio&TV	320	374	18,862	18,061	-4.25%	34,667	46,542	5.33
82	educational services	562	1,025	36,792	32,802	-10.84%	20,573	33,048	8.59
2721	periodicals	117	131	3,020	2,803	-7.19%	32,764	48,382	3.93
2731	book publishing	54	60	2,144	1,887	-11.99%	34,582	41,281	3.93
2741	misc. publishing	82	75	1,077	1,150	6.78%	21,961	28,126	3.93
3663	radio & TV comm. equip.	16	16	1,870	559	-70.11%	28,828	41,787	2.39
357	computer & office equipment	39	36	7,967	5,277	-33.76%	37,971	38,113	1.03
	FINANCIAL SERVICES								
631	life insurance	171	229	56,141	43,967	-21.68%	32,064	49,759	9.95
633	fire, marine & casualty	200	335	8,659	10,337	19.38%	36,502	59,153	9.95
637	pension & health funds	51	58	230	406	76.52%	27,922	42,904	9.95
641	agents, brokers & services	1,532	1,664	10,976	10,777	-1.81%	34,019	45,844	5.83
603	savings institutions	294	595	15,904	11,894	-25.21%	22,019	31,745	-0.59
602	commercial banks	719	666	21,675	14,319	-33.94%	23,118	30,898	-0.59
614	personal credit institutions	76	87	1,005	3,109	209.35%	28,662	51,625	15.88
615	business credit institutions	96	93	3,369	4,273	26.83%	49,442	84,351	15.88
628	security and commodity services	269	534	1,389	2,722	95.97%	76,667	127,599	13.41
679	misc. investing	112	105	1,495	463	-69.03%	52,668	130,732	8.66
	HEALTH SERVICES								
632	accident and health insurance	39	53	3,117	5,935	90.41%	25,533	48,590	9.95
806	hospitals	50	70	54,820	67,785	23.65%	24,182	32,061	8.62
805	nursing and personal care	256	293	29,802	39,074	31.11%	16,447	23,540	8.62
807	medical & dental laboratories	278	282	2,293	2,859	24.68%	26,541	38,131	8.62
809	misc. health services	212	163	4,310	3,127	-27.45%	20,220	31,416	8.62
	HIGH TECHNOLOGY								
283	drugs	21	16	2,280	8,303	264.17%	42,179	64,186	4.13
384	medical instr.	75	86	5,888	7,610	29.25%	24,281	37,334	5.44
3844/36	x-ray apparatus & tubes	7	2	1,401	175	-87.51%	34,056	49,354	5.44
3357	fiber optic cables	39	32	3,627	2,635	-27.35%	27,389	34,584	-4.25
3229	fiber optic strands	9	7	88	35	-60.23%	30,864	24,343	0.19
3674	laser diodes	19	10	1,579	394	-75.05%	35,175	45,472	2.39
3699	laser welding & drilling equip.	25	22	1,486	1,379	-7.20%	28,501	37,880	2.39
3845	laser medical systems	7	15	1,419	719	-49.33%	28,394	38,538	5.44
3827	acousto-optic equipment	12	9	1,289	948	-26.45%	43,249	64,457	5.44
3861	cameras and related	20	23	1,855	2,079	12.08%	53,092	95,983	5.44
3679	opto-electronic	63	56	3,547	1,661	-53.17%	25,455	36,137	2.39
737	computer & data processing	1,085	1,227	9,557	14,861	55.50%	38,785	48,894	6.82
873	photonic services (partial)	457	530	5,374	5,274	-1.86%	38,815	49,055	3.46
	MANUFACTURING								
282	plastics materials & synthetics	14	13	1,456	1,764	21.15%	30,577	50,995	4.31
308	misc. plastics products, n.e.c.	216	227	9,205	8,647	-6.06%	22,725	30,978	6.23
342	cutlery, handtools & hardware	93	76	9,235	6,332	-31.43%	25,166	35,322	0.33
343	plumbing & heating	23	17	1,170	750	-35.90%	23,590	31,112	0.33
345	fabricated structural metal prods.	170	180	5,523	5,114	-7.41%	26,397	35,567	0.33
346	metal forging & stamping	145	138	6,806	6,027	-11.45%	26,944	8,043	0.33
347	coating, engraving & related	135	152	3,942	3,435	-12.86%	24,883	33,706	0.33
348	ordnance and accessories	15	17	3,615	2,499	-30.87%	26,866	8,088	0.33
349	misc. metal products	218	174	7,147	6,282	-12.10%	26,571	32,387	0.33
354	metalworking machinery	421	481	8,395	7,868	-6.28%	30,514	43,399	1.03
355	special industry machinery	107	90	6,699	4,435	-33.80%	31,005	40,418	1.03
356	general industry machinery	116	98	8,092	5,292	-34.60%	29,827	39,804	1.03
359	industrial machinery, n.e.c.	572	533	7,112	6,516	-8.38%	28,074	33,570	1.03
351	engines and turbines	17	10	7,041	4,472	-36.49%	40,581	42,677	1.03
372	aircraft and parts	131	112	59,058	37,407	-36.66%	34,433	48,427	-6.87
373	ships and boatbuilding	30	27	17,500	17,500	0.00%	24,550	31,085	-6.87
361	electrical distribution equip.	30	22	3,742	1,682	-55.05%	29,299	125,612	2.39
362	electrical industrial apparatus	75	56	5,098	3,475	-31.84%	24,856	61,177	2.39
364	electrical lighting & wiring	67	68	6,425	5,453	-15.13%	25,932	40,732	2.39
367	electronic components	158	180	11,074	7,745	-30.06%	23,366	31,529	2.39
369	misc. electrical equip.	58	44	2,938	2,750	-6.40%	26,850	32,479	2.39
381	search & navig. equip.	25	15	6,657	2,559	-61.56%	34,154	47,602	5.44
382	measuring & controlling devices	150	140	12,164	8,072	-33.64%	30,391	47,877	5.44
	TOURISM & ENTERTAINMENT								
79	amusement & rec. & casino	1,461	1,374	12,798	26,271	105.27%	15,080	20,499	13.43
70	hotels & lodging places	393	376	12,352	10,422	-15.63%	11,762	16,343	0.00
78	motion pictures	447	538	3,705	4,426	19.46%	13,851	16,895	7.26
45	air transportation	139	154	4,140	5,127	23.84%	26,083	30,080	3.04
413	intercity bus	3	4	375	63	-83.20%	21,512	22,286	4.83
414	charter bus	6	9	95	268	182.11%	17,295	18,825	4.83
448	water transportation, passenger	15	16	375	183	-51.20%	20,165	6,880	-1.06

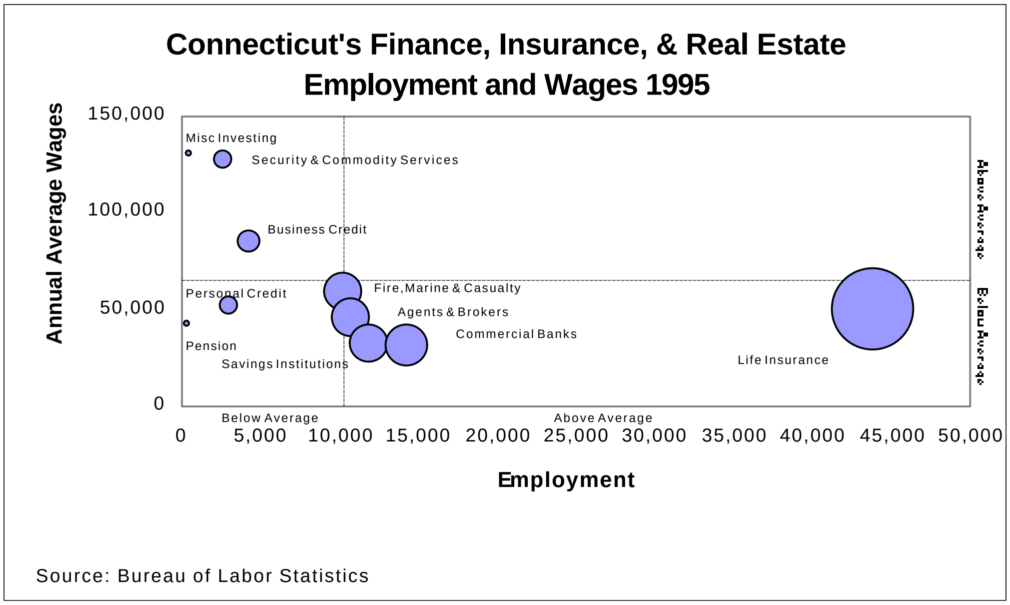
Note: Output growth rates for industries with 3-digit SIC are growth rates for corresponding industries with 2-digit SIC

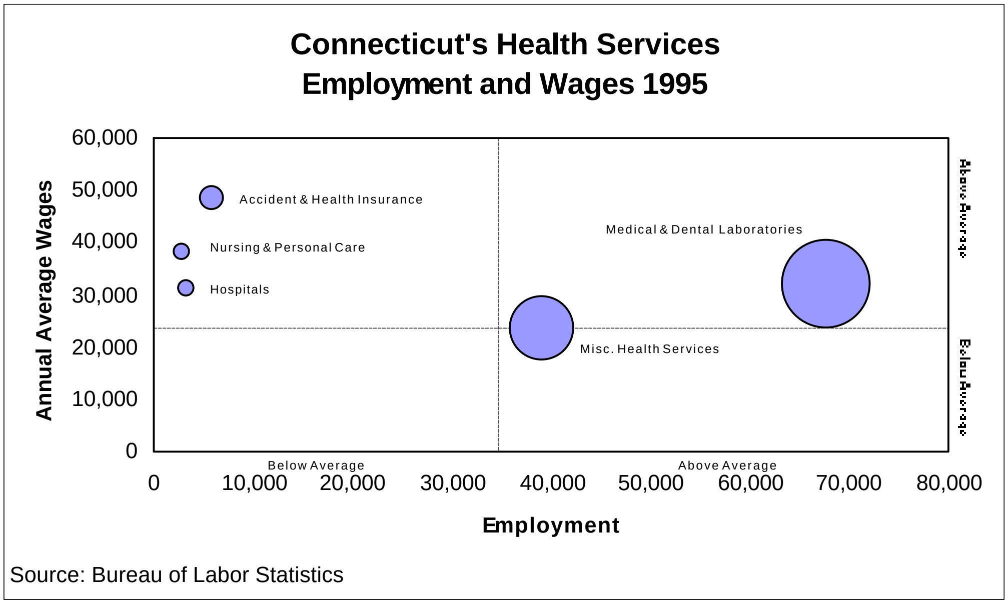
Source: State of Connecticut, Department of Economic and Community Development, PPE/Research

*(*Primary data*:* U.S. Department of Labor, Bureau of Labor Statistics, *Employment and Wages Annual Averages, 1988, 1995;*

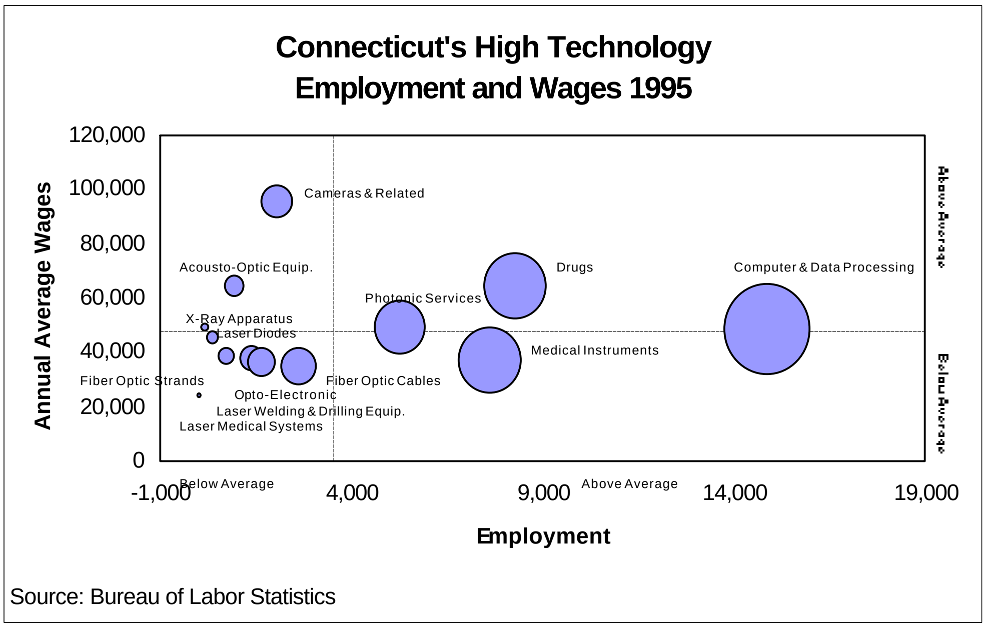
U.S. Department of Commerce, Bureau of Census, *County Business Patterns;* Bureau of Economic Analysis)


Connecticut's Telecommunication and Information
Employment and Wages 1995
Annual Average Wages
61,000
51,000
41,000
31,000
21,000
11,000
1,000
Advertising
Periodicals
TV
Book publishing
Computer Equip.
Misc. publishing
Communication
Education
Above Average
Below Average
0
5,000
10,000
15,000
20,000
25,000
30,000
35,000
40,000
Employment
Source: Bureau of Labor Statistics


Connecticut's Finance, Insurance, & Real Estate
Employment and Wages 1995
Annual Average Wages
150,000
100,000
50,000
0
Misc Investing
Security & Commodity Services
Business Credit
Personal Credit
Pension
Savings Institutions
Fire,Marine & Casualty
Agents & Brokers
Commercial Banks
Life Insurance
Above Average
Below Average
0
5,000
10,000
15,000
20,000
25,000
30,000
35,000
40,000
45,000
50,000
Employment
Source: Bureau of Labor Statistics

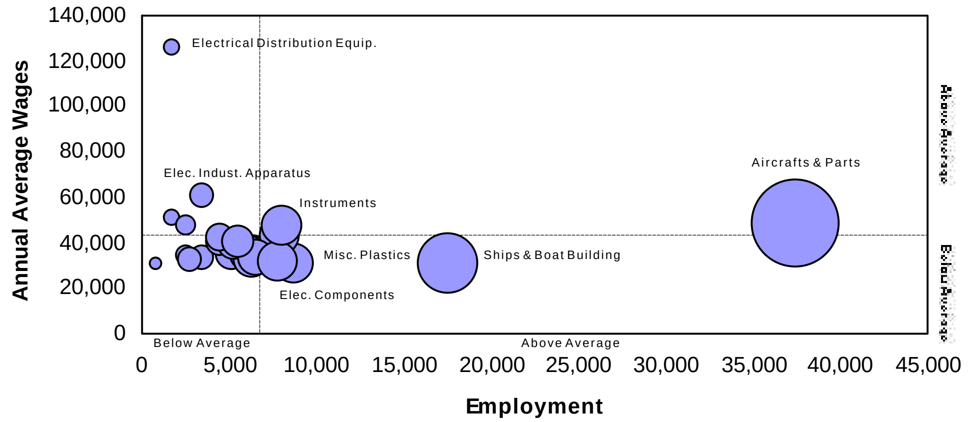


Connecticut's Health Services
Employment and Wages 1995
Annual Average Wages
60,000
50,000
40,000
30,000
20,000
10,000
0
Accident & Health Insurance
Nursing & Personal Care
Hospitals
Medical & Dental Laboratories
Misc. Health Services
Above Average
Below Average
Below Average
Above Average
0
10,000
20,000
30,000
40,000
50,000
60,000
70,000
80,000
Employment
Source: Bureau of Labor Statistics



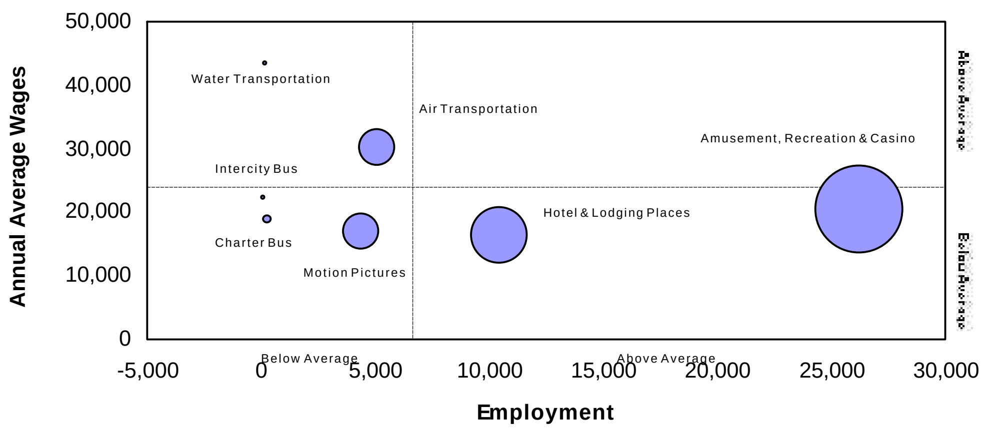
Connecticut's High Technology
Employment and Wages 1995
Annual Average Wages
120,000
100,000
80,000
60,000
40,000
20,000
0
Cameras & Related
Acousto-Optic Equip.
Drugs
Computer & Data Processing
Photonic Services
X-Ray Apparatus
Laser Diodes
Medical Instruments
Fiber Optic Strands
Fiber Optic Cables
Opto-Electronic
Laser Welding & Drilling Equip.
Laser Medical Systems
Above Average
Below Average
Below Average
Above Average
-1,000
4,000
9,000
14,000
19,000
Employment
Source: Bureau of Labor Statistics

Connecticut's Manufacturing Employment and Wages 1995



Source: Bureau of Labor Statistics

Connecticut's Tourism Employment and Wages 1995



Source: Bureau of Labor Statistics