THE CONNECTICUT
Economy

A University of Connecticut Quarterly Review *Winter 2000*

Connecticut's Productivity Boom

What's New About the New Economy?

Bang for the Buck in School Spending

Connecticut Morphs Into the New Economy

The Editors

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CONNECTICUT ECONOMIC INDICATORS

(Percent change: 1998-Q4 to 1999-Q4)

Indicators of Current Economic Activity

Total Nonfarm Jobs	+1.5%
Number Unemployed	-11.0%
Labor Force	+0.1%
Manufacturing	
Jobs	-1.9%
Avg. Weekly Hours	-0.2%
CT Mfg. Prod. Index	-0.8%
Avg. Hourly Earnings	+5.3%
New Auto Registrations	+13.4%
Travel and Tourism Index	+4.4%
Bradley Airport	
Passengers	+17.0%
Freight	+11.7%
State Taxes:	
Sales	+4.2%
Income	+12.3%
Real Estate Conveyance	+17.6%
Normalized Electricity Use	+2.6%
State Exports ('98-Q3 to '99-Q3)	-15.8%
Confidence in Current Economy	+5.5%
Coincident GDI	+1.3%

Indicators of Future Economic Activity

Help-Wanted Ads (*Hartford Courant*)	0.0%
Job Orders	+44.8%
Avg. Initial Unemp. Claims	-10.7%
Housing Permits	-17.8%
Net New Business Starts	+20.2%
Confidence in Future	+1.6%
Leading GDI	-0.3%

Good news

+44.8%
Job Orders

Bad news

-17.8%
Housing Permits

As Good As It Gets?

Connecticut's economy finished the decade and the century with a bang, adding 6,700 jobs in the fourth quarter and 24,500 jobs for the year. But, because the labor force has not grown in years, employers must continue to dig deeper and deeper to find workers. This tightening labor market could stall the expansion. Is this as good as it gets?

Connecticut's job growth in the 1990s has been impressive. The chart below shows that jobs in the state have grown for 18 straight quarters. In the final quarter of 1999, Connecticut added 6,700 jobs for an annualized growth rate of 1.6%. The economy has now regained all the jobs lost during the Great Recession of the early nineties.

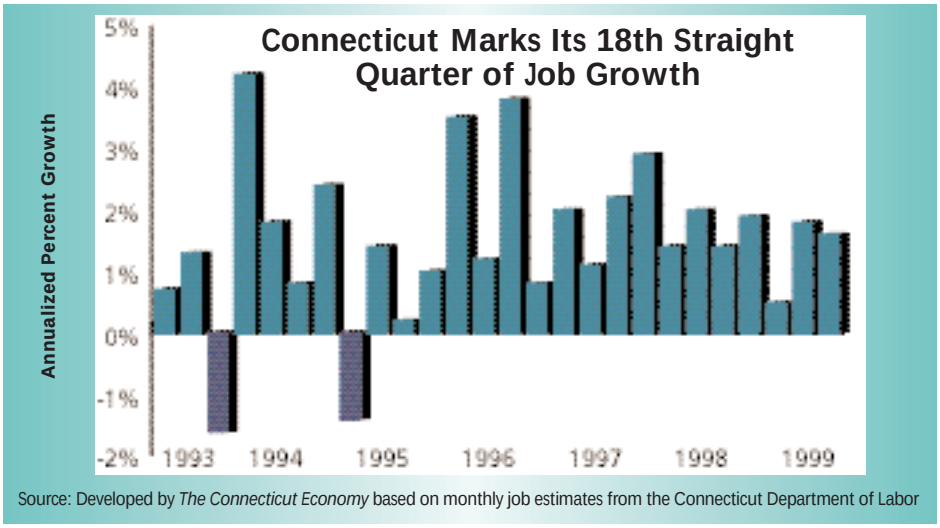
In the last year, Connecticut jobs increased by 24,500, or 1.5%. Service jobs accounted for more than half the new jobs, jumping 14,200, or 2.7%. In that sector, business services added 4,200 jobs, or 3.9%, but, as a sign of the times, health care totals were unchanged. Government, which now includes the casinos, added 7,100 jobs, or 3.0%. Trade jobs increased 3,100, or 0.9%, and finance, insurance and real estate totals grew by 2,700, or 1.9%. Only manufacturing was a loser, dropping 4,800 jobs, or 1.9%.

An ongoing threat to a continued expansion is Connecticut's flat labor force. How could the job total grow 24,500 with no growth in the labor force? The labor force consists of those employed plus those unemployed. In the last year, the number unemployed dropped by 5,400, thereby supplying the workers to fill about one fifth of the new jobs. Another source of workers in a flat labor force is those taking second jobs. If one percent of those with a job a year ago took a second job since then, this would fill about 16,000 new jobs. So there are ways that the job totals can grow even with no labor force growth, but these sources of additional workers are obviously limited.

Evidence of a tightening labor market abounds. Postings with the Connecticut job service jumped 45% in the last year, and the state unemployment rate fell from 2.9% to 2.6%. The number unemployed dropped at double-digit rates in nine of the state's ten labor market areas (in the Hartford area, the exception, the number unemployed declined 8.2%). More than half the state's 169 towns had unemployment rates below 2.0% in December, and 11 had rates below 1.0%. In only six towns did the unemployment rate reach or exceed 4.0% (Hartford topped all towns with a 4.8% rate). In another sign of labor tightness, the average hourly wage in manufacturing rose 80 cents, or 5.3%, the largest increase in more than five years.

Hikes in short-term interest rates by the Fed may have contributed to the 17.8% decline in new housing permits in the fourth quarter. But higher interest rates did not seem to dampen new car sales; new auto registrations grew 13.4% in the fourth quarter and 7.9% for the year. Despite the decline in housing permits, the housing sector seems strong, with good sales and rising prices. One measure of housing sales, real estate conveyance taxes, rose 17.6% in the fourth quarter. And the price of a typical home rose 7.5% in the last year (see page 7).

Despite the flat labor force and tightening job market, the Connecticut economy has delivered the jobs and those jobs have delivered the income. In the most recent quarter, state income tax receipts jumped 12.3%. But sooner or later, the labor force must grow for the party to continue.



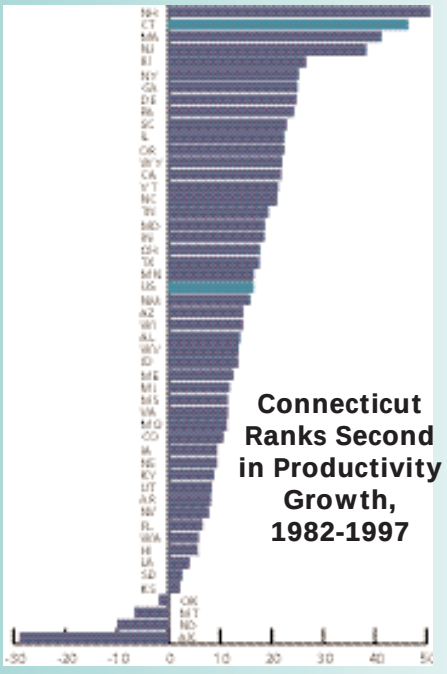
Source: Developed by *The Connecticut Economy* based on monthly job estimates from the Connecticut Department of Labor

Productivity Growth Drives Connecticut's New Economy

By Dennis Heffley

In our last issue's "Forward Look," Michael Gallis suggested that Connecticut and other New England states could easily miss the New Economy bus if the region fails to strengthen ties with the global network by investing in transportation. Perhaps, but there's little evidence that Connecticut is becoming, in his words, "...a giant cul-de-sac in the 21st century global network."

Surges in labor productivity fuel economic revolutions. Rising output per farm worker allowed rural labor to shift to urban manufacturing without cutting food production. Similarly, manufacturing productivity gains have released labor for services and other nonmanufacturing jobs without sacrificing manufactured goods. What may be truly new about the New Economy is the extent to which information technologies are boosting productivity in many sectors, allowing each to expand output and maintain or even trim product prices. Consumers benefit from these stable prices, particularly if productivity growth also lifts incomes.



Sources: Based on data from the U.S. Bureau of Economic Analysis and the U.S. Bureau of Labor Statistics

If advances in productivity drive economic change, we might get a better sense of how Connecticut and New England are faring in the transition to the New Economy by looking at recent state-level productivity gains. Gross state product (GSP) is a broad measure of economic activity. Real GSP, which adjusts for price changes over time, provides an index of the quantity of goods and services produced—a more appropriate basis for productivity calculations and comparisons. The bar chart below shows, for each state, the percent change in productivity—real GSP per nonfarm worker—from 1982 to 1997.

Connecticut and its northeast neighbors have fared well in the productivity derby. Only New Hampshire, at 50.4%, outpaced Connecticut's 46.2% growth in real GSP per worker since 1982. Four other nearby states (Massachusetts, 41.0%; New Jersey, 38.1%; Rhode Island, 26.5%; and New York, 25.1%) round out the top six. California, often seen as the New Economy frontier, ranked 14th with productivity growth of 21.7%, somewhat above the 16.3% national average but less than half Connecticut's rate of growth.

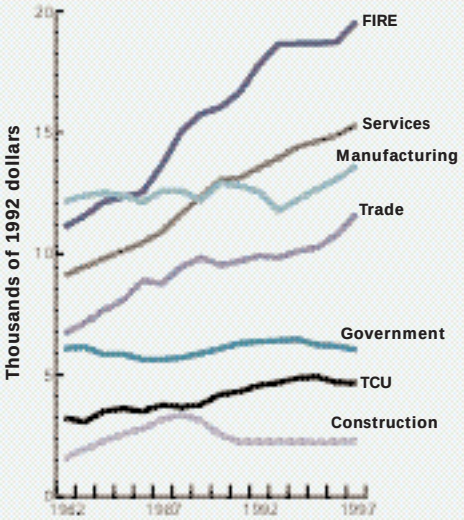
Even downsizing, of course, can raise productivity if output falls less rapidly than employment, but that doesn't explain the state's success. Connecticut lost jobs in the early 1990s, but over the 1982-1997 period jobs rose almost 13%, from 1.43 to 1.61 million. The state's real GSP, however, grew more than four times faster than jobs—from $71.8 billion to $112.6 billion in 1992 dollars, or nearly 57%. This combination of moderate job growth and rapid output growth boosted real GSP per worker from $50,064 (20th place) in 1982 to $73,059 (2nd place) in 1997. Connecticut's impressive jump in overall productivity reflects substantial output gains and is not simply the by-product of "fat trimming" or economic retrenchment.

Mixing It Up

The New Economy is not just about productivity growth. Economic transitions also entail shifts in the mix of activity. We can see some of these shifts in the industry composition of Connecticut's output per worker. The line chart to the right shows each industry's contribution to real GSP per worker in each year from 1982 to 1997. An industry's contribution will depend on its own productivity as well as its share of total employment. In any year, the vertical sum of the curves equals Connecticut's overall GSP per worker, measured in 1992 dollars.

The graph vividly shows the growing influence of nonmanufacturing sectors. Finance, insurance, and real estate (FIRE) as well as services now contribute more to overall output per worker than manufacturing, the leading source in 1982. After a lackluster showing from 1982 to 1993, the contribution of manufacturing is again on the rise, but soon may also be overtaken by wholesale and retail trade—another sector benefitting from cheap information. Government's contribution to overall productivity has been the steadiest. The contribution of transportation, communication, and utilities (TCU) grew slowly until the last few years, while that of construction rose through 1988, fell in the late 1980s and early 1990s, and has since been flat.

Changing Sources of Connecticut Productivity, 1982-1997



Sources: Based on data from the U.S. Bureau of Economic Analysis and the U.S. Bureau of Labor Statistics

Connecticut's Edge

So why is Connecticut holding its own in the shift to the New Economy? We need more detailed analysis to know for sure, but several items might be important.

Y *Education*: Connecticut boasts a high level of educational attainment, including a larger percentage of persons aged 25 + with advanced degrees than any other state. Its high school students rank second in the proportion who take SAT exams—79% versus the U.S. average of 42%.

Y *Diversity*: The New Economy moves fast and will move even faster—diversity and flexibility will count. As the second graph shows, Connecticut's economy has become more diverse and less dependent on manufacturing. Even the rapid growth

of FIRE reflects the expansion of banking, investment, and other financial services rather than just the growth of Connecticut's traditional insurance base.

Y *Timing*: Connecticut holds no monopoly on the shift from manufacturing to services and other nonmanufacturing activities, but the process is further along here than in most states. Connecticut and other Northeast states with older and more fully depreciated private and public capital stocks may be better able and more willing to make the necessary adjustments and new investments.

Y *Density*: Seventy percent of Connecticut is classified as rural land, yet only three states—New Jersey, Rhode Island, and Massachusetts—have a higher population density. Cable, internet servers, cell phone networks, and other key communication technologies are cheaper to provide in high-density areas. AOL still seems unable to provide a toll-free local access number in Storrs, but most areas of the state are "well-connected."

Y *Access*: Gallis' assertion that "Connecticut is difficult to access" is unfounded. Connecticut is uniquely positioned between Boston's complex of educational institutions and high-tech firms and New York, a focal point of international finance and trade. Major interstate highways, a protected coastline with new high speed rail service, and proximity to international and regional airports further enhance access. Access, of course, also brings the congestion that can eventually limit accessibility.

Y *Amenities*: The New Economy is not all work. With more footloose activities and the increased potential for telecommuting, states that offer a favorable environment, high-quality schooling, reliable public services, and ample recreation are increasingly attractive places to locate. High housing costs can deter potential residents, but they also *reflect* access to valued amenities.

Less than ten years ago, Connecticut and its Northeast neighbors shared fears of becoming an economic backwater in a changing economy. Those fears have largely subsided, but the notion remains that we lag behind other states in making the transition to the New Economy. Data on overall productivity growth and the changing sources of the state's economic output indicate just the opposite. Connecticut lacks a nationally recognized center of innovation—a Silicon Valley, Research Triangle, or Route 128—but this absence of a high-tech showplace has not slowed productivity growth in a variety of sectors or prevented the state's active participation in the New Economy.

How New Is The New Economy?

by Edwin L. Caldwell

A favorite aphorism long employed by economists is that a rising tide lifts all boats. This is an unfortunate metaphor to describe the behavior of our type of economy during its upswing phase. It implies that there are no exceptions—all economic entities grow during such a period and they grow by the same amount. If the tide rises by two feet, both rowboats and battleships rise by two feet.

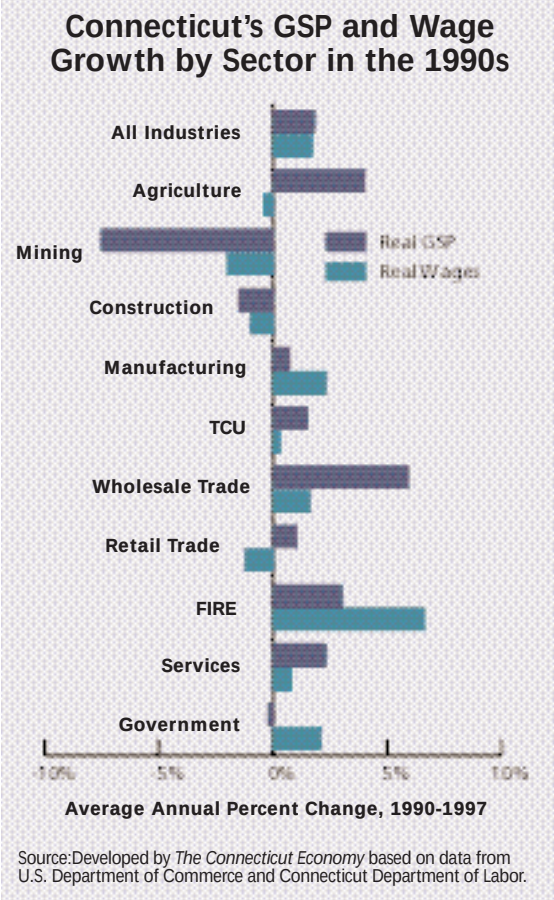
Neither of these propositions has probably ever been true of the economy. It certainly is not true of the rising tide the nation has been experiencing since 1991, as we shall see. This rising tide has provided the longest uninterrupted upswing we have experienced since records have been kept. It only recently exceeded the previous record established in the 1960s. This rising tide has been provided by what has been dubbed "The New Economy."

The New Economy has as many definitions as it has analysts. The broadest, and most widely accepted, holds that the New Economy is characterized by the dominance in many industries of several new, high technologies and the globalization of economic competition. One of the narrowest, and least widely accepted, characterizations holds that the New Economy will provide steady expansion of output into the indefinite future, low inflation provided by the high productivity of the new technology, and a stock market that continues to reach into the stratosphere, provided that Federal Reserve Chairman Alan Greenspan can be "propped up" well into this millennium, as suggested by presidential aspirant John McCain. We can hardly wait to see this drama unfold.

In the meantime, the rest of this article tackles the more prosaic job of examining some of the things that have happened to Connecticut's economy during the decade of the nineties according to several macro-economic indicators. The idea is to form some judgment about what the New Economy has done for or to us so far. But it's very early in the game, and any judgments are subject to revision.

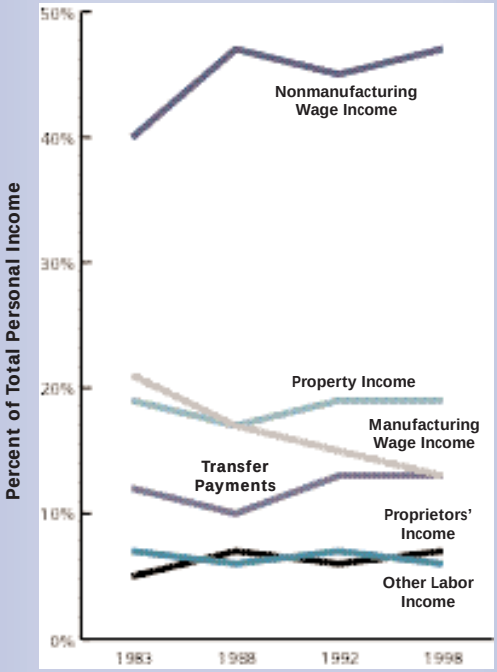
Output

The chart to the right shows the average yearly growth of the real gross state product (GSP) from 1990 through 1997 for all the major industry classifications of the state. The chart certainly puts aside the proposition that our current rising tide has lifted all boats by the same amount. In fact, it did not lift mining, construction, and government at all. But it does confirm that manufacturing plays a less dominant role in the New Economy than formerly. Data not shown in the chart show that manufacturing contributed 19.9% of the state's real gross product in 1990 and 18.5% in 1997. In the latter year, the sector created $22 billion of output to rank third behind FIRE at $31.5 billion and the services at $24.6 billion. In the years following World War II, manufacturing accounted for about half of the state's gross product. Thus the shift away from manufacturing started long before the New Economy was born.



Source:Developed by *The Connecticut Economy* based on data from U.S. Department of Commerce and Connecticut Department of Labor.

Connecticut's Wage Share of Income Shifts Away from Manufacturing



Source: Developed by *The Connecticut Economy* based on data from the Economic Report of the Governor.

The slow growth of manufacturing in the nineties is an average of all the manufacturing industries, of course—high-tech and not-so-high-tech. Some of our high-tech manufacturing sectors posted substantial average yearly growth rates in output in the nineties—electronic equipment 12%, industrial equipment (including computers) 7%, and chemicals (including pharmaceuticals) 3%. On the other hand, transportation equipment (excluding motor vehicles) fell 11% and instruments dropped 4%, which shows that demand for the product calls the tune regardless of the sophistication of the productive process.

Probably the biggest surprise in the gross product data in the chart on the previous page is the strong showing of the wholesale trade sector, especially in view of the fact that the retail sector posted only a modest gain. That raises the possibility that our wholesalers are generally serving a wider area than just the state. But undoubtedly the major story told by these gross product numbers is the rise to dominance of FIRE and the services.

Income

This dominance is also reflected in the total annual payroll data for these two industries, not shown in the chart on the previous page. FIRE payrolls increased at an average annual rate of close to 10% and the services 7%, compared with a rate of 4.5% for all industries.

There is not as much divergence among the industries in the growth of annual average wages as with gross product except for FIRE, where wages grew almost 7% a year. That was more than six times the all-industry average. In 1997, the average wage for all industries was $38,863, with a range from $18,508 in retail trade to $64,781 in FIRE. The average annual rates of increase of wages between 1990 and 1997, shown in the initial chart, are adjusted for inflation. So it is apparent the average wage earner in all but four industries—agriculture, mining, construction, and retail trade—enjoyed an increase in real wages in the nineties.

The chart to the left highlights the drop in manufacturing wage as a share of total income since 1983 and the growth nonmanufacturing wage income.

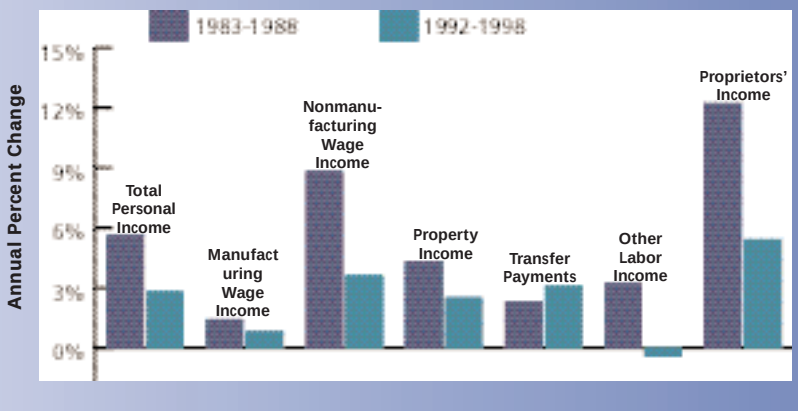
The chart below shows how the shifts noted in the chart to the left developed over the two latest cycles in Connecticut's economy. It also indicates that the annual growth of income in the eighties exceeded that of the nineties. The relatively poorer performance of income in the nineties may be at odds with the sunny perspective of New Economy advocates.

At the other end of the scale, this New Economy upswing may have intensified our poverty problem. The poverty rate in the state grew from 8.1% in 1990-1992 to 9.7% in 1993-1995 and to 9.9% in 1996-1998. This could be partially due to wages at the bottom of the scale rising more slowly than the cost of living.

So—What's New?

This review has discovered little that is new in the structural behavior of our New Economy of the nineties. But there is a lot new in the ephemeral area of expectations. Many analysts—but not many economists—think the sky is the limit as the new technology becomes still newer and more efficient and is more fully applied across the board. Stock-market investors seem to agree as they continue to enjoy the euphoria of "irrational exhuberance." But is it irrational? Stay tuned.

Real Annual Growth in Connecticut by Source of Income Over Two Cycles



Source: Developed by *The Connecticut Economy* based on data from the Economic Report of the Governor.

New Economy—Old Price Index

Housing costs set the pace for inflation

By Steven P. Lanza

When it comes to consumer purchases, nothing better characterizes the New Economy than the falling prices and rising quality of scores of items spawned by information technology. From laptops to Palm Pilots, DVD players to cell phones, prices are down, quality is up and choice is exploding.

Unquestionably, information technology has done its share to keep the lid on the CPI. But in both Connecticut and the nation, the CPI is much more heavily weighted by such prosaic items as housing, fuel and utilities. And, in Connecticut at least, rising housing prices have contributed to the biggest one-year increase in the price index since our survey began.

Down but De Minimis

To capture the effects of the New Economy on the prices consumers pay, the U.S. Bureau of Labor Statistics added a category for information and information processing to the CPI in 1989. The measure is striking. The cost of information processing has dropped at an average annual rate of 11.5% per year in the ten years between 1989 and 1999 at a time when the overall price index rose at an average annual rate of 3%. Although a Connecticut index of information processing does not exist, its measure would likely mirror the U.S. figure because the products of the New Economy sell in national, even international markets. Nevertheless, information processing is a small share of the whole CPI—just 2.5% of the overall index. Much more important is the impact that housing, with its 40% expenditure weight, has on the CPI.

Housing Dominates

Indeed, the single biggest determinant of changes in the overall CPI is the change in the housing component. Year-in and year-out, no other index of consumer spending comes closer in direction or magnitude to paralleling the overall CPI than does housing. Throughout the 1990s, the overall U.S. inflation rate remained within one percentage point of housing inflation.

In Connecticut, the long slump in the state's housing market contributed to the relatively low rate of inflation during the 1990s, as measured by *The Connecticut Economy*'s price index. The Connecticut price index dates back to 1993, and since that time, housing-related costs have risen at an annual average rate of just 1.4% per year. Over the same period, the state's overall price index has risen 1.8% per year. And in three years—1995, 1996, and 1998—housing costs actually fell. By no coincidence, the overall index scored its smallest gains those years—just 0.2%, 0.8%, and 1.7% respectively.

That may be changing. According to the Real Estate Center at UConn, the volume of home sales in 1999 was 40% higher than it was in 1993. In fact, sales have grown steadily throughout this period. What's more, in 1997 the price of a typical home in Connecticut started to rise, and those price increases have accelerated. In 1997, Connecticut home prices rose 2.0%; in 1998 they rose 5.0%; and last year, they rose 7.5%. And with mortgage interest rates climbing too, the cost of a typical mortgage payment rose at an even faster 12.9% rate in 1999.

Renters, too, saw a rise in prices last year, though the increase was more restrained. Rents for a two-bedroom apartment in Hartford rose 5.7% in 1999, from $638 per month to $674. Stamford rents rose just 4.1%, from $1571 to $1636. The recent flare-up in home energy prices, however, has come too late to be captured in the 1999 index, which reports energy prices with a one-quarter lag. As measured by the index, home energy prices were unchanged between 1998 and 1999.

Other Prices

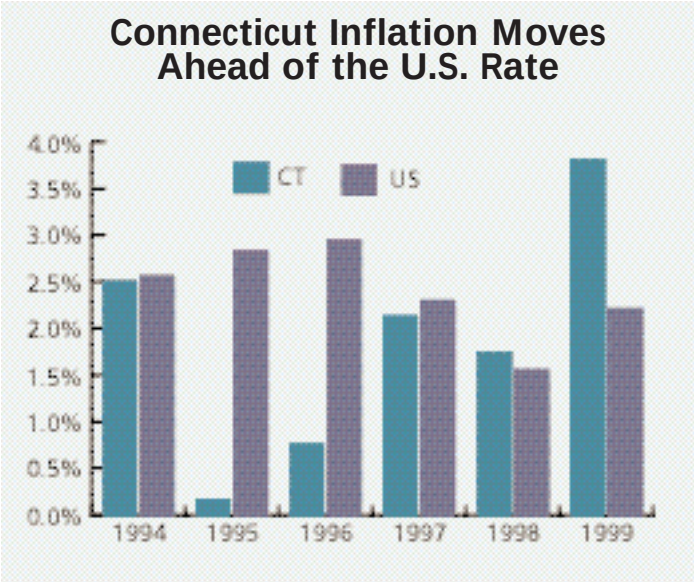
The year 1999 marked a reversal in some major price patterns and the biggest increase in the Connecticut price index since our survey began. Prices that had been accelerating in the last several years—for food, medical, entertainment, and miscellaneous items—slowed down. Prices that had been flat or decelerating—for housing, apparel and transportation—sped up. (The bar graph shows how Connecticut prices measured up to U.S. averages). And when all the counting was done, prices overall in Connecticut were up 3.8%, pulling ahead significantly, as the bar-graph shows, of the average U.S. inflation rate.

Food prices were flat in 1999, after rising 7.0% in 1998. A drop in prices for bread and cereal, meat and fish, and fruits and vegetables, offset an increase in prices for dairy items, baking supplies and alcoholic and non-alcoholic beverages. Medical prices, which had jumped 10% in 1998, held steady in 1999 as physician rates remained fixed and over-the-counter medicine got cheaper.

Apparel and transportation prices joined housing prices to move the overall state price index higher. After rising just 1.1% in 1998, apparel prices, which usually under-perform the average, moved up 4.3% in 1999. And rising gasoline prices, which did begin to appear by year's end, helped move the index for transportation items up 1.5% in 1999. In 1998, falling gas prices had contributed to a 3.2% drop in the index for transportation items.

U.S. Comparisons

Connecticut, like the rest of the country, is enjoying the New Economy's benefits of falling prices, improved quality, and broadened choice. Arguably, our higher incomes enable us to consume more high-tech gadgets than do average Americans. But the behavior of our price index is influenced by more parochial forces. A housing slump that had kept Connecticut inflation at or below U.S. averages may be turning into a housing boomlet that's carrying prices up faster here than elsewhere.



Slower Mo; Still, GDI Grows

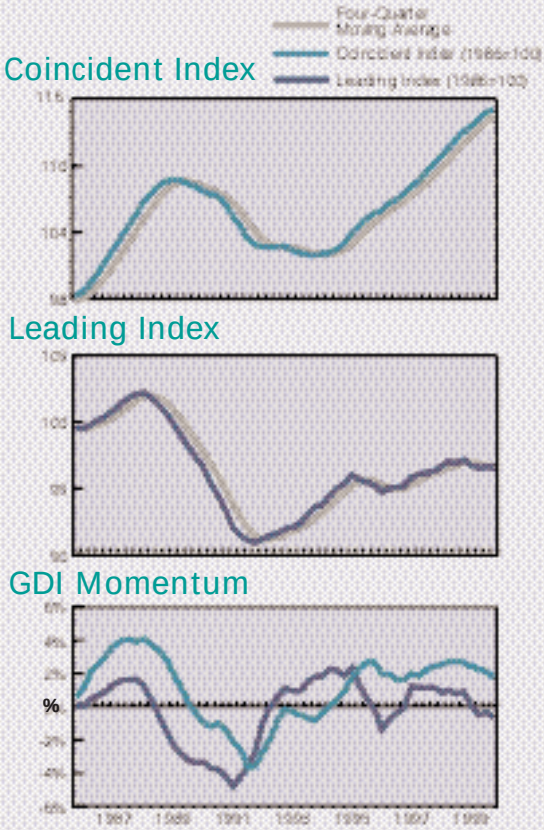
By Steven P. Lanza

Burdened by a faltering manufacturing production index, the coincident GDI lost some momentum in 1999-Q4, even as it reached a new peak. At the same time, the leading GDI showed little change. The GDI is a composite measure of the year-to-year changes in three coincident and four leading economic variables. It is indexed so 1986 = 100.

The coincident index gained 1.3% between 1998-Q4 and 1999-Q4, reaching a high of 115.1. Although it has grown steadily since 1994-Q1, the coincident index began losing momentum in 1998-Q4, as gains in jobs, income and output started slowing. In 1999-Q4, the job pace picked up. Jobs grew 1.5%—a clear improvement over the two previous quarters. Still, job growth lags behind levels reached in 1998. Real personal income, too, was up. But the 2.9% gain between 1999-Q4 and 1998-Q4, was the smallest in three years. Even so, the real drag on the coincident index in 1999-Q4 was the Connecticut Manufacturing Production Index. In its first decline since 1997-Q2, the CMPI dropped by 0.8%. Coincident GDI growth may be slowing, signs are the expansion will, in fact, continue: the index remains above its moving average and its momentum curve remains positive.

The leading GDI, however, confirms that the economic gains of the future will not likely match the gains of the past. Of the four measures in the leading index only one, initial unemployment claims, showed improvement. Initial claims dropped 9.6% from the year before. Help-wanted advertising remained unchanged between 1999-Q4 and 1998-Q4. Weekly manufacturing hours and new housing permits both declined. Weekly hours slipped 0.2%, while permits dropped 17.8%. Overall, the leading index did retreat, but just barely, falling from 96.6 in 1999-Q3 to 96.5 in 1999-Q4. The index remains below its moving average and its momentum curve remains flat but negative.

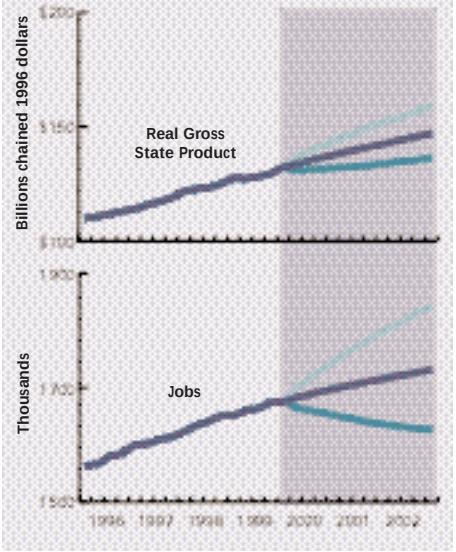
GDI Components



Economic Forecast

Surprising strength in the national economy and Connecticut's tight labor market (2.6% unemployment in 1999-Q4) suggest that GSP annualized growth will exceed 4% in 2000. Our estimate of GSP posted impressive 3.7% growth between 1998-Q4 and 1999-Q4. Jobs grew 1.5%, or by 24,500 in the same period.

Where the green lines branch off, the blue line shows the predicted values for GSP and jobs, and the green lines show a one-standard deviation margin of error for the prediction.



Economy Continues to Grow

By Kathryn Parr and Fernando Lugo-Camacho

The Connecticut economy will continue to expand despite slowing employment growth. Real Gross State Product (GSP), the total value of production in the state economy adjusted for inflation, gave a strong showing at the end of 1999, growing by an estimated 3.7% between 1998-Q4 and 1999-Q4. The outlook for real GSP continues to shine through the end of 2000 with growth exceeding 4.0%.

Job growth is slowing in Connecticut as we reach and even exceed full employment levels. This does not mean there is no unemployment but, rather, employers are having difficulty finding workers in a tight labor market. In the last quarter of 1999, various measures showed the number of new jobs slowing. We project jobs to grow 6,000 in the first quarter of 2000, 5,600 in the second, 5,300 in the third, and 5,000 in the fourth, for an annual growth of 21,900.

The Connecticut economy continues to perform well as personal income and labor productivity rise in the state. Real personal income in Connecticut has risen throughout the late 1990s. This growth increases consumer purchases and fuels the economy.

Another important factor in Connecticut's growth is the strong performance of the national economy. Real U.S. Gross Domestic Product (GDP) grew 5.8% in the last quarter of 1999. Our forecast suggests the U.S. economy will continue to grow although at a more modest pace. Nevertheless, each new quarter seems to bring surprisingly rapid growth on a national basis, surpassing all expectations.

The other indicators in our model give mixed signals. While we expect real Connecticut manufacturing earnings to grow at roughly 1% throughout 2000, we anticipate housing permits will continue to decline in their rate of growth throughout 2000.

Overall, the Connecticut economy shows signs of a maturing business cycle. Slowing employment gains suggest it will be more difficult in the future to grow at such a rapid pace. Nevertheless, high real personal incomes and a strong national economy continue to drive a healthy pace of growth for our state.

Consumer Confidence Surges in New Millennium

By Martha L. Gibson
Research Director, Center for Survey Research and Analysis

Consumer confidence in Connecticut surged in January, reaching its second-highest level since the index was created. In a recent survey conducted for *The Connecticut Economy* by the Center for Survey Research and Analysis, Connecticut residents expressed confidence in present economic conditions as well as in expectations for the future. The numbers appear to signal reduced anxiety over future economic conditions.

Renewed Optimism

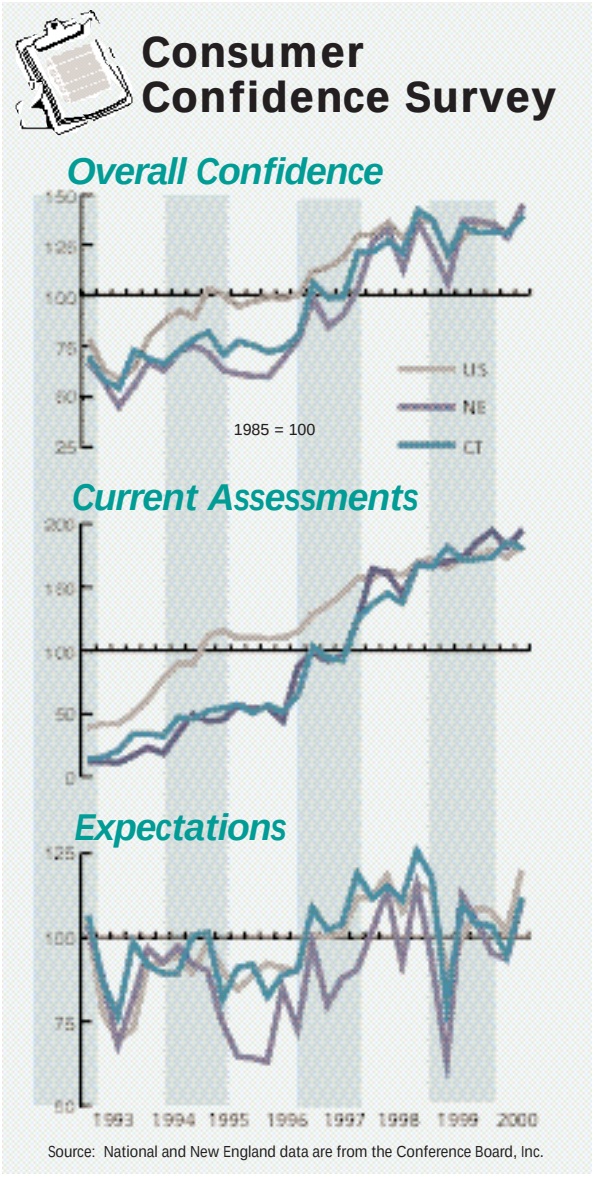
Confidence in the future economy had been dropping steadily throughout 1999. The January 2000 index, by contrast, reached the highest level since July 1998. Connecticut residents are particularly optimistic about the availability of jobs in the next six months and expect improvement in their personal finances. Confidence in Connecticut's present economy remains strong, but has pulled back from the high it reached last quarter.

We're Not Alone

The trend in Connecticut mirrors similar jumps in confidence both in New England and in the nation as a whole. Nationally, the January consumer confidence level hit an all-time high for the 32-year index. Like Connecticut residents, consumers in the New England region and the nation are optimistic about future economic conditions, reversing declining trends over the past year.

Unlike Connecticut residents, however, consumer confidence in the present economy continues to improve in New England and in the nation overall. With Y2K concerns behind us and wage rates the highest they have been for a decade, consumers have entered the new millennium with tremendous optimism. Whether that optimism adds to the Federal Reserve's inflation fears remains to be seen.

The survey of 513 Connecticut residents was conducted between January 20 and January 26, 2000.



Source: National and New England data are from the Conference Board, Inc.

Technology Fuels Connecticut's Economy

By Martha L. Gibson
Research Director, Center for Survey Research and Analysis

Technology is transforming the way we communicate, live and work. A January survey conducted by the Center for Survey Research and Analysis for *The Connecticut Economy* finds that technology training, computers, and increased efficiency are driving the economy forward.

The use of computers in the workplace is clearly growing. Seventy-two percent of workers who hold the same job now as three years ago say their computer use at work has increased, with 43% saying the increase has been significant. Sixty-six percent of respondents say their employers offer the technology training necessary to stay competitive in their jobs; 29% say they are not offered such training.

Most computer users (79%) feel that the technology makes them more efficient, though 17% say that computers have no effect on their work efficiency. The survey also sheds light on the debate over whether increased efficiencies produced by technology translate into greater work productivity or increased leisure time. Of those who say that computers make them more efficient at work, 56% say that the time saved allows them to get more done; only 25% say they are able to work fewer hours. The picture differs across income categories. Most workers earning less than $30,000 say that technology allows them to work fewer hours, while most workers earning more than $30,000 say that they use the time to get more done.

When asked how often they use their computer at work for online shopping, e-mail to friends, games, or web-surfing, a majority (53%) of respondents confess to at least some dalliance. Thirty-seven percent of workers say they sometimes use their work computers for non-work activities, 5% say they often do, and a bold 11% admit to regularly doing so. Forty-six percent of workers say that they never use their work computers for non-work related activities. How about their co-workers? Fully 62% of respondents claim their co-workers divert work computers to personal use at least occasionally. Only 28% report that their co-workers never use work computers for non-work activities.

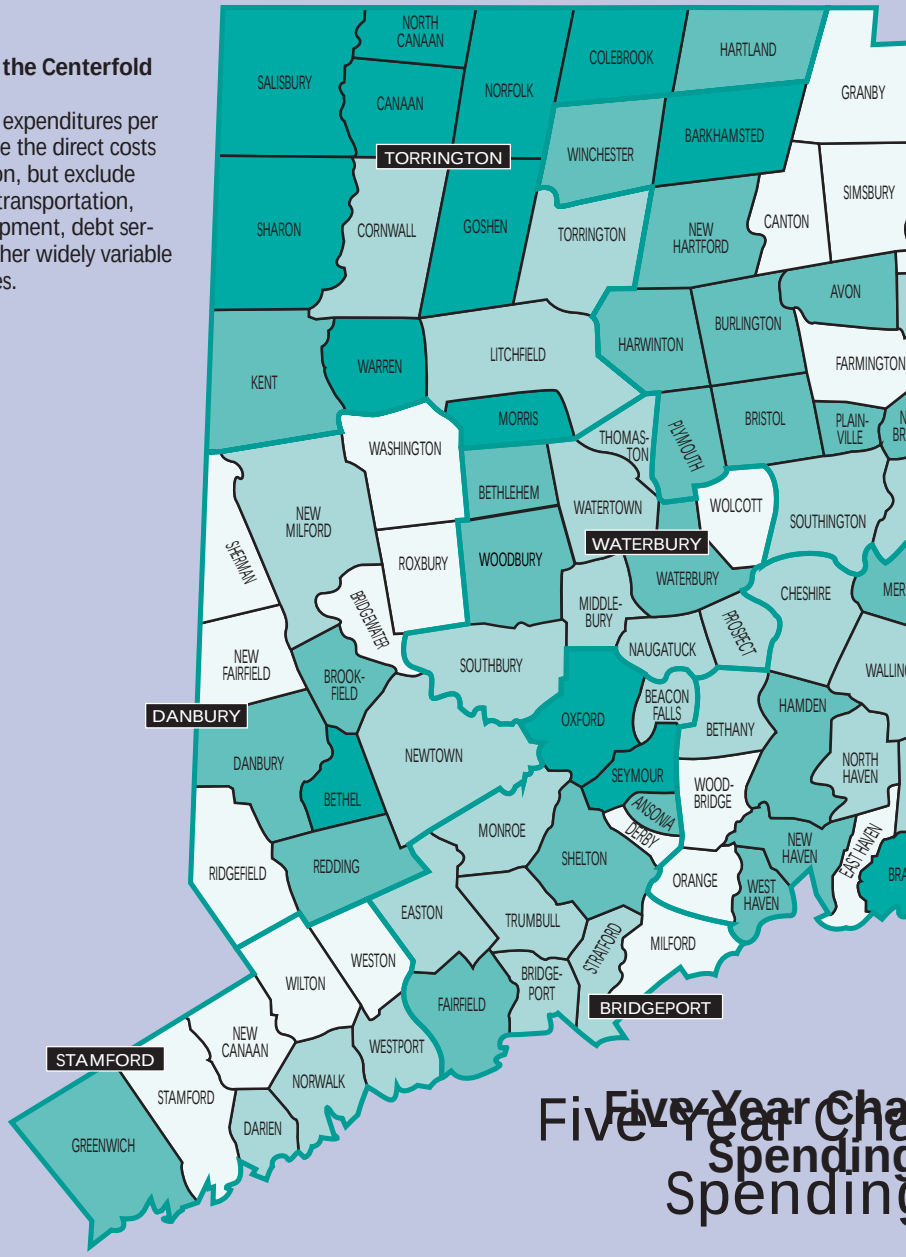
	Net Current Per Pupil Expenditure		
	1992-93	1997-98	% Change
Bridgeport LMA			
Ansonia	$6306	$7263	15.2%
Beacon Falls	6229	6688	7.4
Bridgeport	6627	7228	9.1
Derby	6466	6372	-1.5
Easton	8053	8713	8.2
Fairfield	7639	8886	16.3
Milford	7620	7981	4.7
Monroe	6413	7109	10.9
Oxford	5893	7322	24.3
Seymour	5432	6582	21.2
Shelton	6152	6945	12.9
Stratford	6951	7612	9.5
Trumbull	7033	7488	6.5
Danbury LMA			
Bethel	5776	7117	23.2
Bridgewater	9182	9563	4.2
Brookfield	6167	6956	12.8
Danbury	6969	7940	13.9
New Fairfield	6442	6581	2.2
New Milford	6230	6610	6.1
Newtown	6203	6706	8.1
Redding	7838	8948	14.2
Ridgefield	7784	8189	5.2
Roxbury	9182	9413	2.5
Sherman	7476	6664	-10.9
Washington	9182	9635	4.9
Danielson LMA			
Brooklyn	6061	6839	12.8
Eastford	7291	8510	16.7
Hampton	6977	8510	22.0
Killingly	6406	7216	12.6
Pomfret	6137	6448	5.1
Putnam	6644	7423	11.7
Scotland	6552	7880	20.3
Sterling	6427	7238	12.6
Thompson	5799	6492	11.9
Union	5052	6511	28.9
Voluntown	6513	7157	9.9
Woodstock	6076	6630	9.1
Hartford LMA			
Andover	7473	7580	1.4
Ashford	6176	7007	13.5
Avon	7229	8045	11.3
Barkhamsted	6350	7784	22.6
Berlin	6440	7128	10.7
Bloomfield	8080	8418	4.2
Bolton	6853	7162	4.5
Bristol	6413	7448	16.1
Burlington	6385	7232	13.3
Canton	7248	7223	-0.3
Chaplin	7799	9397	20.5
Colchester	5868	6602	12.5
Columbia	5539	6632	19.7
Coventry	6012	6492	8.0
Cromwell	6735	7538	11.9
Durham	6937	7784	12.2
East Granby	6965	7973	14.5
East Haddam	6177	7603	23.1
East Hampton	6090	7163	17.6

	Net Current Per Pupil Expenditure		
	1992-93	1997-98	% Change
East Hartford	$7425	$7442	0.2%
East Windsor	6738	6634	-1.5
Ellington	6621	7116	7.5
Enfield	6770	7377	9.0
Farmington	6591	6939	2.9
Glastonbury	7068	7022	-0.6
Granby	7018	7135	1.7
Haddam	7804	8099	3.8
Hartford	8450	10034	18.7
Harwinton	6385	7232	13.3
Hebron	5767	6956	20.6
Lebanon	7596	8445	11.2
Manchester	6900	7545	9.3
Mansfield	7755	8712	12.3
Marlborough	6055	6853	13.2
Middlefield	6937	7784	12.2

	Net Current Per Pupil Expenditure		
	1992-93	1997-98	% Change
Middletown	$7136	$8515	19.3%
New Britain	6900	7660	11.0
New Hartford	6632	7541	13.7
Newington	7040	7619	8.2
Plainville	6946	7847	13.0
Plymouth	6855	7734	12.8
Portland	7924	7902	-0.3
Rocky Hill	7147	7692	7.6
Simsbury	6811	7200	5.7
Somers	6424	7037	9.5
South Windsor	6703	7036	5.0
Southington	6700	7426	10.8
Stafford	6379	7544	18.3
Suffield	6350	6845	7.8
Tolland	6416	6762	5.4
Vernon	7378	8102	9.8

A Note on the Centerfold

Net current expenditures per pupil include the direct costs of instruction, but exclude outlays for transportation, capital equipment, debt service, and other widely variable expenditures.

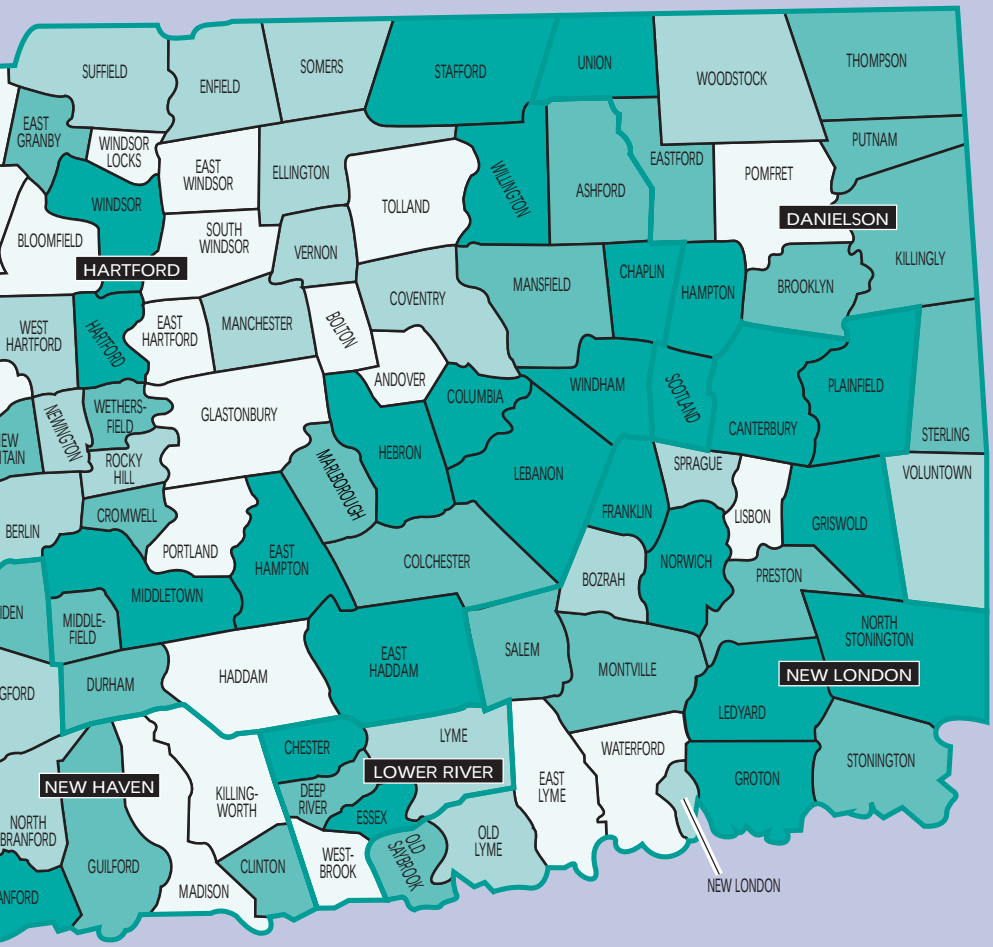


Five-Year Cha
Spending
Spendin

Source: Developed by *The Connecticut Economy* based on figures from the Connecticut Policy and Economic Council.

	Net Current Per Pupil Expenditure		
	1992-93	1997-98	% Change
West Hartford	$7477	$7957	6.4%
Wethersfield	7374	8260	12.0
Willington	6361	8054	26.6
Winchester	6480	7336	13.2
Windham	7562	8944	18.3
Windsor	6130	7244	18.2
Windsor Locks	6718	7108	5.8
Lower River LMA			
Chester	6258	7545	20.6
Deep River	6580	7475	13.6
Essex	6311	7836	24.2
Lyme	7806	8627	10.5
Westbrook	7203	7540	4.7

	Net Current Per Pupil Expenditure		
	1992-93	1997-98	% Change
New Haven LMA			
Bethany	$7361	$7894	7.2%
Branford	6408	7600	18.6
Cheshire	6890	7442	8.0
Clinton	6558	7659	16.8
East Haven	7067	6772	-4.2
Guilford	6596	7496	13.6
Hamden	8008	8946	11.7
Killingworth	7804	8099	3.8
Madison	7137	7431	4.1
Meriden	6297	7297	15.9
New Haven	7770	8754	12.7
North Branford	6266	6915	10.4
North Haven	7261	8035	10.7
Orange	8029	8196	2.1
Wallingford	6501	7112	9.4



Map shows the percentage change in net current expenditures per pupil between 1992-93 and 1997-98

anges in School
g Per Pupil
g Per Pupil

- More than 17%
- 11% to 17%
- 6% to 10.9%
- Less than 6%

	Net Current Per Pupil Expenditure		
	1992-93	1997-98	% Change
West Haven	$6184	$7112	15.0%
Woodbridge	7805	8168	4.6
New London LMA			
Bozrah	7231	7711	6.6
Canterbury	5694	7170	25.9
East Lyme	6807	7208	5.9
Franklin	6479	9169	41.5
Griswold	6226	7366	18.3
Groton	7271	8758	20.4
Ledyard	6054	7114	17.5
Lisbon	6441	6672	3.6
Montville	6833	7613	11.4
New London	7921	8557	8.0
North Stonington	6405	7613	18.9
Norwich	6539	8280	26.6
Old Lyme	7806	8627	10.5
Old Saybrook	6979	8096	16.0
Plainfield	5958	7159	20.2
Preston	7454	8713	16.9
Salem	5993	6919	15.5
Sprague	6218	6611	6.3
Stonington	7076	8026	13.4
Waterford	9337	9351	0.2
Stamford LMA			
Darien	8789	9671	10.0
Greenwich	9826	11450	16.5
New Canaan	9465	9879	4.4
Norwalk	8436	9062	7.4
Stamford	8722	8956	2.7
Weston	10037	10149	1.1
Westport	9841	10475	6.4
Wilton	8229	8474	3.0
Torrington LMA			
Canaan	8002	10061	25.7
Colebrook	6862	8257	20.3
Cornwall	7674	8157	6.3
Goshen	7119	8355	17.4
Hartland	5747	6702	16.6
Kent	7596	8445	11.2
Litchfield	7200	7634	6.0
Morris	7119	8355	17.4
Norfolk	7229	8529	18.0
North Canaan	7340	8807	20.0
Salisbury	6761	9091	34.5
Sharon	7367	8888	20.6
Torrington	6245	6846	9.6
Warren	7119	8355	17.4
Waterbury LMA			
Bethlehem	6273	7193	14.7
Middlebury	6667	7150	7.2
Naugatuck	5896	6338	7.5
Prospect	6229	6688	7.4
Southbury	6667	7189	7.8
Thomaston	6504	6933	6.6
Waterbury	7338	8395	14.4
Watertown	6015	6510	8.2
Wolcott	6031	6119	1.5
Woodbury	6273	7190	14.6
Statewide	**$7127**	**$7894**	**10.8%**

What's the Score as Connecticut Edges into a New Century?

By William A. McEachern

The New Economy produces more with less— less labor, less time, and less space. Connecticut was a leader as the economy morphed from agriculture to manufacturing. What's the score with Connecticut's economy as we move into the new century?

Connecticut's Per Capita Output Tops All Nations in the World By Far

Gross Product Per Capita in 1997 Dollars

Source:Developed by *The Connecticut Economy* based on the estimates from the U.S. Department of Commerce and the World Bank. All currencies have been converted into U.S. dollars based on purchasing power parity rates.

It's a good thing that less is more in the New Economy, because Connecticut has less in the way of natural resources than virtually any other state in the nation. Microsoft's *Encarta Encyclopedia* lists Connecticut's chief natural resource as gravel—hardly the makings of a new economy. Even when it comes to a resource as basic as land, Connecticut comes up short, at least relative to its population. But the flip side of limited land is a high population density, and this turns out to be a good thing, as we'll see.

Density Is Destiny

When counting people, Connecticut really packs them in. Connecticut averages 680 people per square mile, ranking fourth nationally in population density—nine times the U.S. average. Indeed, as we look around the world, Connecticut's population density exceeds that of such tightly packed nations as Germany, Switzerland, and the United Kingdom. And the state's density is more than twice that of China, Cuba, Denmark, France, Greece, Portugal, and Spain. In fact, Connecticut's population density is about six times the world average and exceeds 95% of all countries.

So what's the relevance of population density? Thicker density may allow for lower transportation and communication costs and more vibrant labor markets. At least in the United States, greater population density tracks with a more productive economy—an economy generating more output, income, and wealth. For example, Connecticut, New Jersey, and Massachusetts, states that rank 1, 2, and 3 in per capita income, also rank among the top four states in population density.

But isn't high population density more an effect of a higher per capita income than a cause? Perhaps people crowd into higher income states, trying to get in on a good thing, thus generating the association between population density and per capita income. This line of reasoning meets a couple of obstacles. First, some of the shine of high-income states to outsiders is dulled by a higher cost of living. Second, at least during the 1990s, people were leaving, rather than moving into, high-income states. For example, Connecticut, New Jersey, and Massachusetts, the top three states in per capita income, were among the biggest losers of population through migration to other states. Connecticut lost an estimated 226,400 people to other states during the 1990s, or 6.9% of its population; New Jersey lost 378,500, or 4.7%; and Massachusetts lost 244,500, or 4.0%.

Gross State Product

So thicker population density may enhance an economy's productivity. Let's first consider Connecticut's total output. Connecticut's gross state product of $134.6 billion in 1997 exceeded the gross national product of 173 of the 210 national economies throughout the world. Connecticut produced more than countries such as Denmark, Finland, Greece, Hungary, Israel, Ireland, Nigeria, and Norway—all countries with a larger population. In fact, Connecticut produced one-third more than Nigeria but with only 1/36th the population.

> ***"At this point all Connecticut has to show for itself is the most productive economy in the history of the world."***

We do more with less. Connecticut, with only 0.01% of the world's land area and 0.05% of the world's population, managed to produce 0.4% of the world's output in 1997. Put another way, the ratio of Connecticut's share of output to its share of population is 8-to-1, and the ratio of its share of output to its share of land is 40-to-1.

Gross Product Per Capita

While the size of Connecticut's economy is impressive, it really shines in terms of output per capita. Connecticut's $41,000 in gross product per capita in 1997 not only topped all states but topped the world—easily. The chart compares Connecticut's gross product, or gross output, per capita with the most productive nations on Earth.

Note that Connecticut's per capita output is 40% above that of Singapore, the most productive nation in the world, and one considered a frontier post for the New Economy. Connecticut's per capita output is double that of Australia, Sweden, and Finland, the home of Nokia, and another darling of New Economy buffs.

Connecticut does not yet have its Silicon Valley, though activity along I-95, I-91, and the Naugatuck Valley is promising. At this point all Connecticut has to show for itself is the most productive economy in the history of the world. Of course that may be yesterday's news if the state economy does not continue to do what it has done so well in the past—reinvent itself. At least we are starting this new game with a nice pile of chips. Ladies and gentlemen, place your bets!

Educational Bang For the Buck

By Rexford Santerre*

Returns to education may be higher than ever in the New Economy, but pressures to keep the lid on public school spending remain strong. Connecticut high school districts that offer the most education per dollar are not always the ones that rank the highest in standardized test performance.

Ask anyone who has ever attended a heated school budget hearing. Taxpayers, parents, administrators, and board members all recognize the importance of getting the most education from limited funding. Budgets get stretched in imaginative ways and some districts generate more education from scarce resources than others do. But which Connecticut districts provide education most efficiently? To address this question, I followed a four-step method to see which Connecticut public high schools squeeze the most education out of a dollar of per pupil spending.

First, I collected 1997-98 data for the 118 Connecticut public high school districts and estimated an equation to measure the effects of non-school factors on a district's average Scholastic Assessment Test (SAT) score. The notion that SAT scores measure educational output can be debated, but SAT scores do matter to college-bound students. Simply put, higher scores mean access to better colleges and more financial aid.

Step 1 results indicate that five variables explain 81% of the variation in average SAT scores across the 118 districts. Students who enter high school with more education—measured by the average percentage of the district's students who met the state's goal on the 8th grade Connecticut Mastery Test four years earlier (1993-94)—tend to do better on the SAT. SAT scores were also higher in districts with higher incomes, less poverty, a lower percentage of minority students, and a smaller percentage of students taking the SAT.

Second, a predicted SAT score for each high school district, based on its five characteristics, was generated from the equation estimated in Step 1. The predicted value identifies the SAT score that might reasonably be expected from students' initial endowments of education and their home and neighborhood environments.

Third, the predicted SAT score was subtracted from the actual SAT score to get the difference, or value-added, that each district contributed to the score. This estimate of value-added could be off the mark if some unique or important non-school factors are omitted from the Step 1 equation, but recall that the five characteristics accounted for more than four-fifths of the variation in SAT scores.

Fourth, each district's value-added was divided by its high school spending per pupil to get its value-added per dollar. A higher ratio reflects greater cost-effectiveness—a larger increment in the average SAT score per dollar of per pupil spending. The table lists the 30 most cost-effective high school districts. Figures in parentheses show each district's rank in terms of actual SAT scores. (See results for all 118 districts on the website: *www.lib.uconn.edu/ccea/quarterly.htm*)

A high actual SAT score does not ensure that a district adds a lot of educational value for the money. East Lyme, which ranked only 21st based on its actual SAT score, generated the biggest "bang for the buck" among the 118 high school districts. Only 8 of the top 30 districts, in terms of value-added per dollar, also had an actual SAT score in the top 30. Perhaps most impressive were New Britain, Meriden, Middletown, Windham, and Thompson—each ranked in the bottom 30 in terms of actual SAT score but ranked in the top 30 based on value-added per dollar. These districts seem to offer high educational value for the dollar although their low SAT scores might suggest otherwise.

The bottom end of the value-added per dollar ranking (not shown) also holds some surprises. Darien and Regional District 9 (Joel Barlow High School) stand out among the 30 districts with the lowest value-added per dollar. Both rank in the top 10 based on actual SAT scores but fall to 107th and 102nd in value-added per dollar. It is also interesting to note the value-added per dollar ranking of the five districts with the highest actual SAT scores: New Canaan drops to 57th place, Ridgefield 40th, Simsbury 16th, Weston 87th, and Wilton 72nd. All but Simsbury seem to provide considerably less value-added per dollar than their high SAT scores might suggest. Perhaps much of the high performance in these districts is produced at home or at lower grade levels, as reflected in the students' earlier Mastery Test scores.

High school districts should not be judged by test scores alone. Rather than capturing challenging courses and gifted teachers, high SAT scores may largely reflect students who are innately bright or have favorable home environments. One also should consider what it costs to deliver more education. Parents want the best for their children, but spending lavishly for small test score gains makes little sense, especially when the money is diverted from other equally important uses.

Many studies find that more spending has little impact on test scores. If so, a low value-added per dollar may signal excessive spending. Data from this study suggest that value-added per dollar does fall with more spending. Spending averages $7,340 per pupil for the 30 most cost-effective districts and $8,272, nearly 13% more, in the 30 districts with the lowest value-added per dollar. Educational spending, like most activities, exhibits diminishing returns and may not be a good substitute for creative teachers who, at little extra cost, are able to motivate, challenge, and encourage students.

Connecticut's Most Efficient High School Districts, 1997-98

High School Value Added Per Dollar Ranking

1.	East Lyme (21)
2.	Manchester (61)
3.	Stafford (49)
4.	Coventry (57)
5.	Somers (63)
6.	New Britain (110)
7.	East Haddam (39)
8.	Region 8 (29)
9.	Region 11 (42)
10.	Ledyard (25)
11.	Region 13 (35)
12.	Vernon (44)
13.	Meriden (94)
14.	Bristol (77)
15.	Lebanon (43)
16.	Simsbury (3)
17.	Newtown (32)
18.	Canton (10)
19.	Tolland (19)
20.	Middletown (101)
21.	Windsor (75)
22.	Killingly (81)
23.	Windham (100)
24.	Region 19 (12)
25.	Clinton (53)
26.	Plymouth (46)
27.	East Windsor (55)
28.	Thompson (93)
29.	Bethel (41)
30.	Glastonbury (13)

Figures in parentheses indicate rank based on actual SAT score.

Source: Based on analysis of data from the Connecticut Department of Education and the Connecticut Policy and Economic Council. Sample excludes three endowed high schools.

*Rexford Santerre is Professor of Economics at Bentley College and Board of Finance Member, Thompson, CT.

The Regions: The Upward Momentum Continued In the Fourth Quarter

By Edwin L. Caldwell

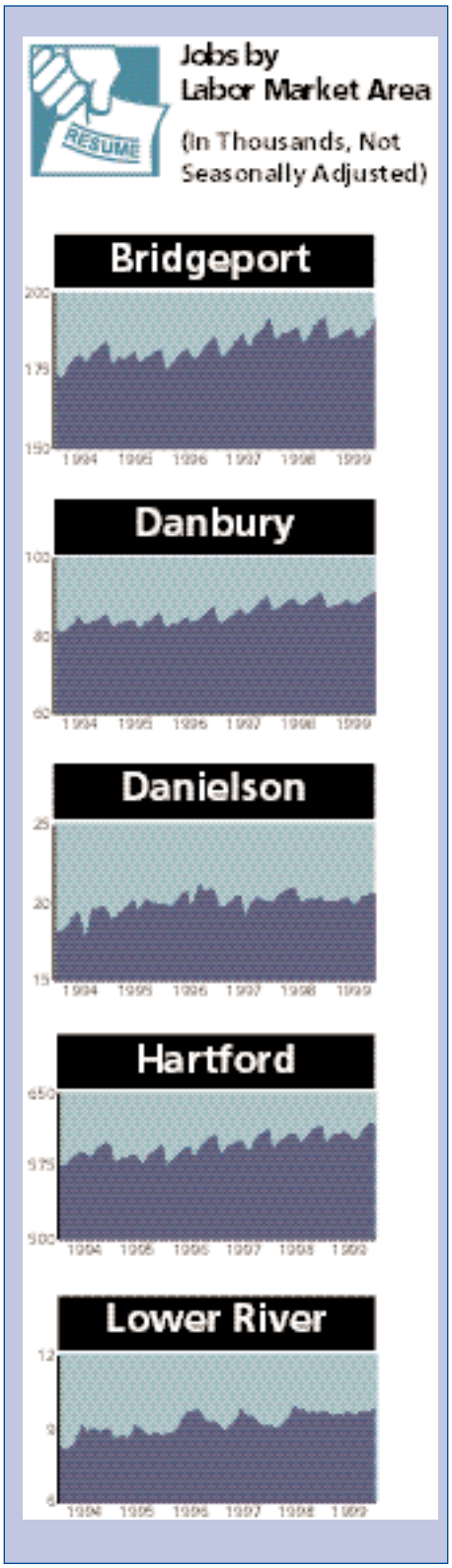
Only two of the state's ten regions experienced a slight year-to-year decrease in employment in the fourth quarter, compared with four in the third quarter. All ten posted further decreases in their unemployment rates, with four registering rates of less than 2% for the first time. But housing permits are another story. Six of the regions experienced losses in this category in this latest quarter, compared with the same period a year earlier.

BRIDGEPORT

Bridgeport was one of the regions to experience a small loss in employment over the year—0.4%. Four of the seven major industrial groups fell, but FIRE[1], services, and government added jobs. FIRE added 2.5% more jobs. The accompanying charts show job growth in the labor market areas since the beginning of 1994. All the regions made some gains. The chart shows that Bridgeport had a growth spurt from 1995 through 1997 and then leveled off. Over the whole period from December 1994 to December 1999 Bridgeport added 4% more jobs to its payrolls. In the last year, the unemployment rate fell from 3.6% to 3.1%. But, believe it or not, that low rate put Bridgeport in a tie with Danielson for the highest rate among the regions. Housing permits dropped nearly 40% over the year due mainly to a comparison with a very vigorous fourth quarter of 1998. In this latest quarter, Bridgeport, Milford, and Shelton showed the most steam. Sikorsky recently received orders for five of its new S-92 helicopters and reports other orders in the offing.

DANBURY

Danbury jobs grew 0.3% over the year. Manufacturing, TCU[2], and trade suffered losses but construction, FIRE, services, and government provided a push. FIRE was particularly strong. Referring to the accompanying chart, Danbury experienced a steady increase in jobs, growing from 85,000 in December 1994 to 91,000 in December 1999, a gain of 7%. The unemployment rate fell from 2.0% in 1998-Q4 to 1.7% a year later. This latest rate is the lowest among the regions and obviously represents a very tight labor market. New housing permits fell close to 50% in 1999-Q4 from the same period the year earlier mainly because the city of Danbury permitted a very large project in the earlier period which was not equalled in the later period. But the towns of New Milford and Newtown posted fairly strong numbers in 1999-Q4.



DANIELSON

Danielson jobs grew 1.2% between 1998-Q4 and 1999-Q4, the second highest rate among the regions. Trade, services, and government were strong; construction, TCU, and FIRE held steady; and manufacturing posted a loss. Danielson added 900 jobs between December 1994 and December 1999, a gain of 4.6%. Housing permits fell more than 40% over the last year, but Brooklyn, Killingly, and Woodstock showed some life.

HARTFORD

Hartford jobs grew 0.4% over the year. Construction, TCU, trade, services, and government gained and manufacturing and FIRE lost jobs. Over the longer period of 1994 through 1999, shown in the chart, Hartford gained 20,600 jobs, an increase of 3.4%. Hartford showed a steady, if slow, progression in jobs from 1995 on, with only seasonal peaks and troughs. Hartford's unemployment rate of 2.7% in 1999-Q4 was close to the state's 2.6%. Housing permits were off 21% in 1999-Q4 from the same period a year earlier, compared with the state's drop of 18%. But there were many points of strength in this region of 58 towns. Among them were Avon, Ellington, Glastonbury, Manchester, Southington, and Tolland.

There is still plenty going on to keep the pot boiling in this largest, by far, of the ten regions. Wal-Mart will construct a new store in Newington on the Berlin Turnpike for an opening in 2001. Coca-Cola of East Hartford is moving ahead with a $30 million expansion that will create 200 new jobs. Wethersfield received a new discount store, Warehouse Department Stores, that provides 50 new jobs.

LOWER RIVER

Lower River jobs grew 0.7% over the year. Construction and FIRE scored large gains and TCU and government suffered substantial losses. Manufacturing held steady and trade and services posted modest gains. From 1994 through 1999 Lower River added 9% more jobs, the second highest rate of growth among the ten regions. The region's unemployment rate dropped from 2.5% to 1.9% over the year, ranking it fourth lowest among the regions. Housing permits grew 44% over the year. Westbrook was the leader but Chester, Deep River, Essex, and Lyme also added to the strength.

NEW HAVEN

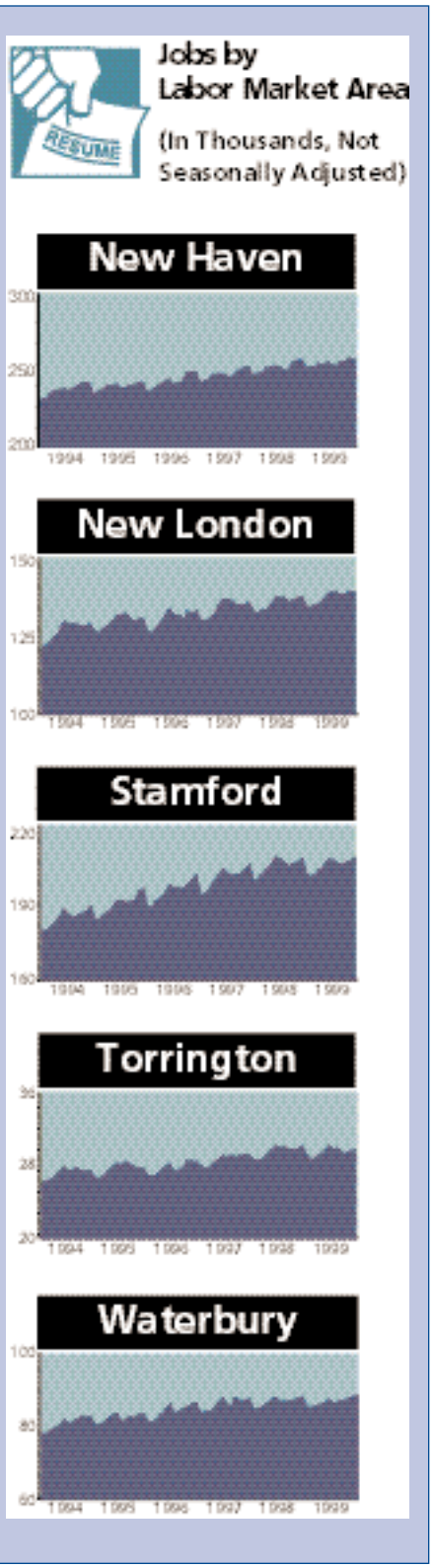
New Haven jobs grew 0.3% between 1998-Q4 and 1999-Q4. Construction, trade, FIRE, and services contributed to the increase while manufacturing, TCU, and government suffered losses. Over the period from 1994 through 1999, New Haven added 16,700 jobs for a gain of 6.9%. As the chart shows, the region maintained its reputation for solid and steady growth over this period. The unemployment rate dropped from 2.9% to 2.6% between 1998-Q4 and 1999-Q4, mirroring the drop at the state level. The region was one of four to score an increase in housing permits over the year. They rose almost 20%. Hamden chalked up a large increase, and slightly smaller increments were registered by North Haven, Wallingford, Clinton, and Madison. Home Depot continues its march through Connecticut. Late this year it will open a 130,000 square-foot store in Wallingford, creating between 200 and 300 new jobs.

NEW LONDON

New London jobs grew 1.5% between 1998-Q4 and the same period in 1999, by far the largest percentage gain among the ten regions. All sectors except manufacturing posted gains. The increases in TCU and FIRE were very strong. Over the longer period of 1994 through 1999, the region added 11,200 jobs for a gain of 8.6%. That was the third highest percentage gain among the regions. The chart shows that the gain has been rather bumpy, which is not surprising considering the impact of the job losses at Electric Boat and the compensatory gains at the Foxwoods and Mohegan Sun casinos. Over the past year the unemployment rate dropped from 3.2% to 2.8%, but that is still the fourth highest rate among the regions. New housing permits fell 22% in 1999-Q4 from the same period the year earlier, but some of the towns were strong, including Groton, Stonington, Griswold, and Plainfield. Construction is underway in Groton on a 285-room hotel, the Mystic Marriott and Spa, a $38 million project. And the casinos keep moving along. New Year's day set records at both of them.

STAMFORD

Stamford jobs grew 0.2% over the year, which is remarkable considering the region's long-standing, low unemployment rate. All of the gain came in FIRE and services. FIRE gained 3.3% over the previous year for the largest percentage increase in that category among the regions. The other five sectors posted losses. The loss in trade was the largest among the three regions that suffered a decline in this sector. Over the longer period of 1994 through 1999, Stamford added 20,100 jobs for a gain of 10.6%, the highest actual and percentage gains among the regions. The chart shows that the gain has been both sharp and fluctuating on a seasonal basis. The unemployment rate dropped from 2.0% to 1.8% over the year to put it in a tie with Torrington for second lowest in the state. Danbury is lowest with a rate of 1.7%. New housing permits doubled between 1998-Q4 and 1999-Q4—286 compared with 143 the year earlier. Most of that came from a large project in the city of Stamford. But Greenwich and Norwalk also racked up strong numbers. The state has offered to extend a lucrative package of tax concessions if Warburg Dillon Read—formerly known as Swiss Bank—agrees to expand its headquarters and bring in more jobs. The number could reach as high as 2,000.



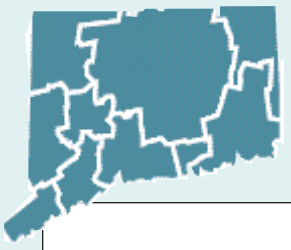
TORRINGTON

Torrington lost 1.1% of its jobs between 1998-Q4 and 1999-Q4, joining Bridgeport as the only two regions to suffer a reduction of employment over the year. TCU and trade posted small gains, FIRE held steady, and construction, manufacturing, services, and government suffered losses. But over the longer period of 1994 through 1999, Torrington was one of the leaders, adding 8.4%, or 2,300 jobs to its roster. Only Stamford and New London had a higher percentage gain. Torrington's unemployment rate dropped from 2.0% in 1998-Q4 to 1.8% in 1999-Q4, which placed it in a tie with Stamford for the second lowest rate among the regions. The number of new housing permits in this latest period exactly matched the number issued a year earlier. The town of Torrington issued nearly half of the region's total.

WATERBURY

Waterbury jobs grew 0.2% during this latest reporting period. It was the only region to increase jobs in manufacturing. TCU, trade, and FIRE also posted gains while construction, services, and government came up short. Over the longer period shown in the chart, the region added 5,600 jobs, or 6.8% of the total. The region's unemployment rate dropped from 3.4% in 1998-Q4 to 2.9% in 1999-Q4, leaving it second to Bridgeport and Danielson at 3.1%, the highest rates among the regions. Housing permits fell almost 8% below the year-earlier level. Microwave Tower Service of Oregon, a company that makes parts for cellular phones, has moved its headquarters and 150 new jobs into the former Duracell building in the town of Waterbury.

1. FIRE - Finance, Insurance, and Real Estate
2. TCU - Transportation, Communication, and Utilities



Labor Market Data

Labor Market Area	Labor Force		Nonfarm Jobs		Manufacturing Jobs	
	1999-Q4 (000)	% Change Year Ago	1999-Q4 (000)	% Change Year Ago	1999-Q4 (000)	% Change Year Ago
Bridgeport	217.7	-0.8	189.5	-0.4	37.7	-2.8
Danbury	110.5	-0.1	90.3	0.3	18.6	-4.5
Danielson	32.2	0.4	20.5	1.2	5.5	-4.1
Hartford	583.0	0.2	616.1	0.4	93.9	-1.9
Lower River	12.3	1.4	9.7	0.7	2.9	0.0
New Haven-Meriden	273.7	0.2	260.1	0.3	40.2	-0.2
New London-Norwich	153.9	1.4	141.7	1.5	24.0	-0.1
Stamford	193.6	0.1	208.8	0.2	26.6	-1.2
Torrington	38.5	-1.4	29.5	-1.1	5.9	-4.8
Waterbury	115.2	-0.2	87.8	0.2	18.7	0.5
Statewide	1714.1	0.1	1697.7	1.5	272.2	-1.9

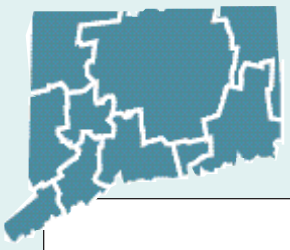
Labor Market Area	Construction Jobs		Trade Jobs		FIRE* Jobs	
	1999-Q4 (000)	% Change Year Ago	1999-Q4 (000)	% Change Year Ago	1994-Q3 (000)	% Change Year Ago
Bridgeport	7.0	2.9	42.5	-0.8	10.9	2.5
Danbury	4.1	0.8	22.7	-0.4	5.0	4.9
Danielson	0.9	0.0	5.0	2.7	0.6	0.0
Hartford	21.9	6.1	126.4	0.2	70.6	-0.4
Lower River	0.5	15.4	2.1	1.6	0.4	10.0
New Haven-Meriden	10.2	1.0	54.9	0.7	13.7	0.5
New London-Norwich	5.0	1.3	29.1	1.5	3.8	2.7
Stamford	6.1	-1.6	44.0	-2.7	26.1	3.3
Torrington	2.1	-3.1	6.9	5.1	0.8	0.0
Waterbury	3.5	-0.9	19.1	1.4	3.7	2.8
Statewide	63.4	3.5	367.6	0.9	140.5	1.9

* Finance, Insurance & Real Estate

Labor Market Area	Service Jobs		Government Jobs		TCU* Jobs	
	1999-Q4 (000)	% Change Year Ago	1999-Q4 (000)	% Change Year Ago	1999-Q4 (000)	% Change Year Ago
Bridgeport	63.1	0.4	21.3	0.5	7.0	-2.3
Danbury	25.8	2.7	11.1	3.4	3.0	-1.1
Danielson	4.9	5.0	3.1	3.3	0.5	0.0
Hartford	178.0	1.2	97.6	0.9	27.5	1.5
Lower River	2.7	3.8	0.8	-11.1	0.3	-16.7
New Haven-Meriden	93.7	1.6	31.0	-2.1	16.5	-2.4
New London-Norwich	35.9	1.4	37.1	2.3	6.8	2.5
Stamford	78.4	2.8	17.7	-1.5	10.0	-6.0
Torrington	9.6	-2.7	3.3	-2.9	0.9	8.0
Waterbury	26.8	-0.4	12.1	-1.6	3.8	1.8
Statewide	535.0	2.7	241.7	3.0	77.3	0.7

*Transportation, Communications, and Utilities

Sources: Quarterly figures developed by *The Connecticut Economy* based on monthly estimates from the Connecticut Department of Labor. Figures are not seasonally adjusted. Statewide totals are not necessarily the sums of individual labor market areas.



Labor Market Data

Labor Market Area	Number Unemployed		Unemployment Rate (%)		Initial Unemployment Claims	
	1999-Q4 (000)	% Change Year Ago	1999-Q4	1998-Q4	1999-Q4	% Change Year Ago
Bridgeport	6.8	-13.2	3.1	3.6	1431	-16.0
Danbury	1.8	-15.4	1.7	2.0	349	-28.9
Danielson	1.0	-21.1	3.1	4.0	211	-14.6
Hartford	15.7	-8.2	2.7	2.9	3,475	-7.8
Lower River	0.2	-22.2	1.9	2.5	*	*
New Haven-Meriden	7.0	-10.6	2.6	2.9	1,494	-10.3
New London-Norwich	4.3	-12.3	2.8	3.2	672	-3.7
Stamford	3.5	-11.8	1.8	2.0	567	-15.9
Torrington	0.7	-12.5	1.8	2.0	344	-13.6
Waterbury	3.4	-12.9	2.9	3.4	813	-10.9
Statewide	44.0	-11.0	2.6	2.9	9,354	-10.7

* Lower River included in Hartford LMA.

Manufacturing Labor Market Area	Average Weekly Earnings		Average Weekly Hours		Average Hourly Earnings	
	1999-Q4	% Change Year Ago	1999-Q4	% Change Year Ago	1999-Q4	% Change Year Ago
Bridgeport	$685.98	6.7	42.8	1.5	$16.02	5.2
Danbury	667.44	6.0	42.9	1.9	15.57	4.0
Danielson	534.18	8.5	41.7	0.7	12.82	7.7
Hartford	717.84	4.0	43.4	-1.0	16.55	5.1
Lower River	548.53	1.0	40.3	-2.7	13.62	3.8
New Haven-Meriden	640.58	1.4	42.5	-0.2	15.06	1.6
New London-Norwich	694.38	3.3	42.9	-0.1	16.17	3.4
Stamford	538.16	-0.6	39.9	-5.3	13.48	5.0
Torrington	595.93	9.1	41.6	4.6	14.34	4.3
Waterbury	640.42	2.0	44.1	-0.4	14.52	2.3
Statewide	$676.86	5.2	43.0	-0.2	$15.74	5.3

Labor Market Area	State Job Service Postings		Housing Prices*		Housing Permits	
	1999-Q4	% Change Year Ago	1999-Q4 (000)	% Change Year Ago	1999-Q4	% Change Year Ago
Bridgeport	1,481	-4.5	219.3	8.2	200	-39.3
Danbury	621	35.6	292.7	9.3	264	-48.4
Danielson	408	195.7	★	★	83	-44.3
Hartford	3,698	8.8	134.2	7.4	872	-21.0
Lower River	F	F	★	★	46	43.8
New Haven-Meriden	3,443	201.8	135.4	6.1	314	19.8
New London-Norwich	1,690	400.0	155.8	1.0	175	-21.9
Stamford	776	68.7	536.3	9.1	286	100.0
Torrington	1,020	100.4	108.9	3.3	55	0.0
Waterbury	1,840	-21.7	159.7	3.7	148	-7.5
Statewide	14,977	44.8	$218.2	7.5	2443	-17.8

* Current period's housing prices are a four-quarter moving average of the selling price of a typical home.

F Lower River included in Hartford LMA.

★Markets are too small for reliable estimates.

Sources: Quarterly figures developed by *The Connecticut Economy* based on monthly estimates from the Connecticut Department of Labor. Figures are not seasonally adjusted. Statewide totals are not necessarily the sums of individual labor market areas. Housing permits are quarterly averages based on monthly figures from the Connecticut Department of Economic and Community Development and are not seasonally adjusted. Housing prices, from UConn's Center for Real Estate and Urban Economic Studies, are preliminary.

How Come We're Still Tops?

Connecticut's lead in personal income in 1998 was 42.4% above the national average, the highest on record. How come Connecticut remained in the top spot throughout the 1990s while enduring the worst of the recession?

First, let's rule out a couple of common misconceptions about the source of Connecticut's income success. A caller to a radio talk show recently claimed that without Fairfield County the rest of the state's per capita income would drop to "something like 48th in the nation." The statement went unchallenged by the hosts and by subsequent callers. As our readers well know, even if Fairfield County's income and population were chopped from Connecticut's totals, per capita income for the rest of the state tumbles all the way down to third in the nation, behind New Jersey and Massachusetts.

The record bull market offers another overblown explanation for the state's high per capita income. The lion's share of stock-market booty lies in capital gains, but the federal definition of personal income excludes capital gains. Adding capital gains to the pot increases our lead.

One big reason why Connecticut kept its lead is that migrations from the state served as a safety valve during the rough times. Many who couldn't find jobs left the state, and the resulting reduction in population dressed up our per capita income during the early part of the decade. Since the onset of the recovery, jobs have grown 10% while the population remained virtually flat and this too beefed up per capita income.

Tax Bite Grows

What happens to Connecticut's first-place income rank once taxes are subtracted? After all, as a high-income state, Connecticut residents pay higher federal tax rates on average. Connecticut's per capita income lead drops from 42.4% above the national average based on per capita income to 35.2% above the national average based on per capita disposable income—personal income minus taxes. Nevertheless, Connecticut still tops the nation in per capita disposable income.

Disposable income in Connecticut was 80.4% of personal income in 1998. The national average was 84.7%. Back in 1993 disposable income in Connecticut was 84.3% of personal income, compared to a national average then of 87.3%. Thus, disposable income in Connecticut dropped from 84.7% of personal income to 80.4% between 1993 and 1998. In the nation that figure dropped from 87.3% to 84.7%.

In short, Connecticut's after-tax share dropped by 5.1 percentage points from 1993 to 1998 while in the nation that share dropped by only by 3.0 percentage points. Why the difference? Clinton's tax increase in 1993 combined with a booming stock market during the 1990s to hit high-income households the most, and Connecticut has a larger share of high rollers than any other state. (Some may think that our new state income tax explains the growing bite. It may contribute a bit, but that tax was already fully implemented by 1993, and tax rates actually declined by 1998.)

Population Rises Ever So Slowly

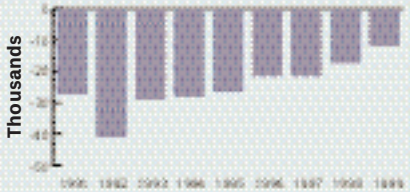
The Census Bureau released 1999 population estimates for Connecticut showing that the state gained about 9,500 people between July of 1998 and July 1999, for a growth rate of 0.3%. Although this was the fourth year of population growth, Connecticut added more people last year than in the previous three years combined. The upper chart shows the annual change in Connecticut's population during the 1990s. The worst year was 1992, when population in the state declined by 13,600.

The biggest driver of population change from year to year has been net domestic migration—the loss of residents to other states. The bottom chart shows net domestic migration from Connecticut each year during the 1990s. The greatest out-migration occurred in 1992, when an estimated 40,400 people (net) left the state. The loss declined to only 11,400 in 1999. Still, over the decade, Connecticut lost an estimated 226,400 people to other states, or 6.9% of our population. But because births exceeded deaths and because net international migration was positive every year, Connecticut's overall population loss between 1990 and 1999 amounted to only 5,100, a drop of 0.2%.

From 1990 to 1999, Connecticut ranked 48th in the nation in population growth, 28th in births, 27th in deaths, 45th in net domestic migration, but 15th in net international migration.

Annual Change in Connecticut Population: On the Rebound

Connecticut's Population Loss to Other States Slows Down



Source: Developed by *The Connecticut Economy* based on annual estimates from the U.S. Census Bureau. Bottom figure shows net domestic migration from Connecticut to other states by year.

Connecticut Metro Population Growth

Estimates of population changes by metropolitan area are now available for 1990 to 1998. Danbury grew the fastest during this period among the state's seven metro areas, up 4.3%. The average growth for U.S. metro areas was 9.1%; so Danbury, though the leader in Connecticut, grew by less than half the national average. Stamford-Norwalk ranked second in the state, up 0.9%; Bridgeport was third, up 0.3%; and Waterbury fourth, up 0.2%. Las Vegas topped the 360 U.S. metro areas, jumping by 55.0%.

Each of Connecticut's other three metro areas experienced population declines, with Hartford down 1.2%, New Haven down 1.4%, and New London-Norwich down 2.9%, ranking 17th from the bottom nationally. Incidentally, four of the 16 worst performing metro areas based on this measure were in Western New York State, with Utica-Rome and Binghamton ranking last and next to last in the nation, respectively, experiencing population declines of 6.9% and 5.9%. Three New England metro areas also ranked among the bottom 16. Population in Pittsfield, Mass., and Bangor, Maine, declined 5.1%, ranking them fifth from the bottom. Population in Lewiston-Auburn, Maine, dropped 5.0%, ranking seventh from the bottom among the 360 U.S. metro areas.

Population Projections

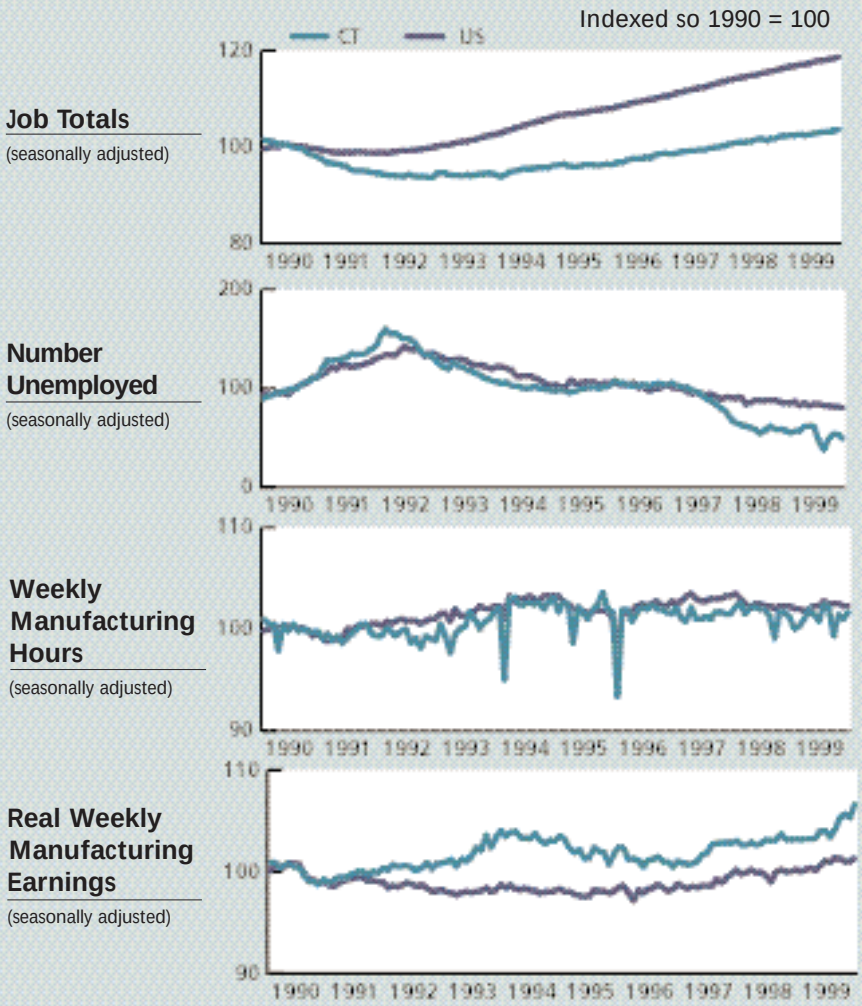
The U.S. Census Bureau projects Connecticut's population growing by 33,000, or 1.0%, between 2000 and 2005.

Large differences exist across age groups. Those ages 0 to 17 are projected to decline by 14,000, or 1.8%. Those 18 to 24 will grow by 23,000, or 8.4%. Those 25 to 64 will grow 29,000, or 1.6%. And those 65 and over will decline slightly—by 5,000, or 1.1%. This decline in the older population reflects the net out-migration that occurred during the 1990s. In an earlier issue of *The Connecticut Economy*, we estimated that during the first half of the decade, Connecticut on net lost 32,000 people ages 55 to 69 to other states, or 7.4% of that cohort. This was the largest percentage loss of any age group (see "Connecticut's Exodus Is Losing Steam," Winter 1997, pp. 4-5).

What does population growth look like beyond 2005? Between 2005 and 2015, Census Bureau projections show Connecticut's population growing by 189,000, or 5.7%. The number ages 0 to 17 is projected to grow by 8,000, or 1%; ages 18 to 24, by 28,000, or 9.4%; ages 25 to 64, by 83,000, or 4.6%; and over 65, by 70,000, or 15.3%.

Between 2000 and 2015, the number of 18 to 24 year olds is projected to grow by 51,000, or 18.3%. This will increase the demand for higher education in the state, produce a growing supply of workers to the labor force (assuming the state can hold onto these young people), and provide a growing market for entry-level housing.

INDEX OF ECONOMIC INDICATORS



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Connecticut Travel and Tourism Index

The overall index increased 4.4% in the fourth quarter compared to the same quarter the year before. The index consists of hotel-motel revenues, hotel-motel occupancy rates, attendance at six major tourist attractions, and traffic on five tourist roads.

Hotel/Motel Rev.	H	9.4%
Occupancy Rate	H	0.1%
Attendance	H	3.3%
Traffic	H	4.9%
Overall	H	4.4%

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Connecticut Has IT

By Barbara Hackman Franklin
President and CEO Barbara Franklin Enterprises
Former US Secretary of Commerce

The 24 year-old son of longtime friends has just received venture capital money to start an Internet company. In my generation, it would have been impossible to obtain venture capital—or any kind of capital—to start a company at that age. But the world has changed and this sort of thing happens routinely in the New Economy.

The term New Economy, as used here, refers to an economy based on technology. First and foremost, there is information technology (IT), which includes four segments: computer hardware, computer software and services, communications equipment, and communications services. But the New Economy for our purposes also encompasses pharmaceuticals and biotechnology.

Clearly, the New Economy—led by the IT revolution—is causing breathtaking change in our country and throughout the world. American business has been affected across the board. IT has changed the way goods and services are produced and distributed. IT has cut down uncertainty in business decision-making by delivering key data on a nearly real time basis. Productivity has increased dramatically as the new technology has been employed by the "old economy."

How is Connecticut faring in this New Economy? Pretty well, so far. The IT-producing sector, in its four segments, includes about 4,500 businesses and employs nearly 74,000 people. It has been the fastest growing industry segment during the past decade, and the jobs created are good ones, paying an average salary of $50,000. However, the true impact is far greater because of IT's high utilization in many other industries throughout the state.

Last October, Governor Rowland and the Connecticut Technology Council launched a software and IT "cluster" to emphasize its importance to our state's economic growth.

In biotechnology, a cluster was created in 1998. Connecticut United for Research Excellence, Inc. (CURE) formed a partnership with the Department of Economic and Community Development to stimulate the growth of this promising sector. Employment is over 10,000 and growing.

My bottom line: Connecticut is well-positioned in the New Economy. We rank fifth out of the 50 states, according to the State New Economy Index, a ranking based on 17 indicators published by the Progressive Policy Institute.

To keep growing, we need ample supplies of good ideas, skilled people, capital, and access to markets. We have plenty of ideas and market access. But, there is great competition to attract skilled workers who prefer to be where there is a critical mass of companies needing them. Therefore, Connecticut should step up efforts to promote our clusters and our fine quality of life.

The issue of capital is more complex. Our state has long been considered an expensive place to do business. Things are changing, but this perception makes capital harder to attract. One approach is used by Connecticut Innovations, Inc. This unusual firm, initially state funded, provides seed capital for high tech ventures and is now self-sustaining. Such activities might be expanded.

At the very least we—universities, business, labor, and government—should intensify the search for creative ways to bring capital, people, and ideas together for the future of Connecticut.

THE CONNECTICUT
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A University of Connecticut Quarterly Review

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