



Outperforming the Nation: Is it Sustainable?

The Connecticut Economic Outlook: February 2012

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This CCEA Outlook explores policies for ensuring the State of Connecticut's recovery continues to outpace the Nation's.

Executive Summary:

Connecticut's economy it appears outperformed the national economy; with growth in Real Gross Domestic Product (CTR GDP) probably coming in at 2.65%, well outpacing the projected national rate of 1.85%. And Connecticut added 9,000 jobs during 2011. Will Connecticut sustain this superior performance? From September 2011 onward, forecasters downgraded their 2011 and 2012 growth-rate projections for the American economy, bringing them in-line with CCEA's own earlier national forecast. This alone argues that Connecticut's growth rate will fall. Indeed, the baseline CCEA forecast anticipates CTR GDP growth rate slowing over the next eight quarters, returning to the historical pattern where the Connecticut rate lags the national rate. While CCEA forecasts national Real Gross Domestic Product (RGDP) growth year-over-year (YoY) for 2012 of 2.6%, Connecticut's YoY growth dwindles to 1.7%. But CCEA's baseline outlook is surely pessimistic: it includes neither the continuing benefit of the Federal Reserve's commitment to sustaining very low interest rates until 2014 nor the likely impacts of major capital projects now beginning in the state. Continuation of low interest rates might boost CTR GDP growth to 3.3% in 2012 and then 2.4% in 2013, with national enjoying growth of 4.0% this year and 3.4% next year. Realistically, given the political divisions in Washington, the threat of a failure to extend unemployment benefits and medicare re-imburements, and the continuing sovereign debt crisis in Europe will all work against achieving these levels of growth.

Though still early in development of the Biosciences Connecticut complex, the major research building that will house Jackson Laboratories on the Farmington campus, and construction of the New Britain-Hartford busway, each will clearly strengthen the state's economic performance significantly, by nearly 1% in 2012 and 1.15% in 2013. These initiatives will add another 7,000 direct, indirect, and induced jobs to the already expected job creation of 11,000 over the eight quarters from September 2011 to September 2013. In aggregate, north central Connecticut saw major construction projects increasing from \$137.5 million in 2010 to \$232.5 million in 2011. Current commitments reach \$459.4 million in 2012 and then \$1.5 billion in 2013.¹ If these come on line in this timeline, the impact on the state's economic health will be significant and quite visible.

Overall, the combination of the baseline forecast, the benefit of continuing low interest rates, and a bevy of major capital projects has the potential to give Connecticut growth rates above the national pattern through the end of 2013. Equally critical, this combination of stimuli triples net new job creation over the new two years compared to the baseline forecast. Clearly, these strategic public policies and investments promise to deliver both strong short-run benefits and create the foundation for sustained long-term growth. But Connecticut could do even better by exploiting assets it has in hand to drive recovery faster and for a longer period.

¹ <http://www.capitalworkforce.org/documents/1109ConstructionReportFinal.pdf>

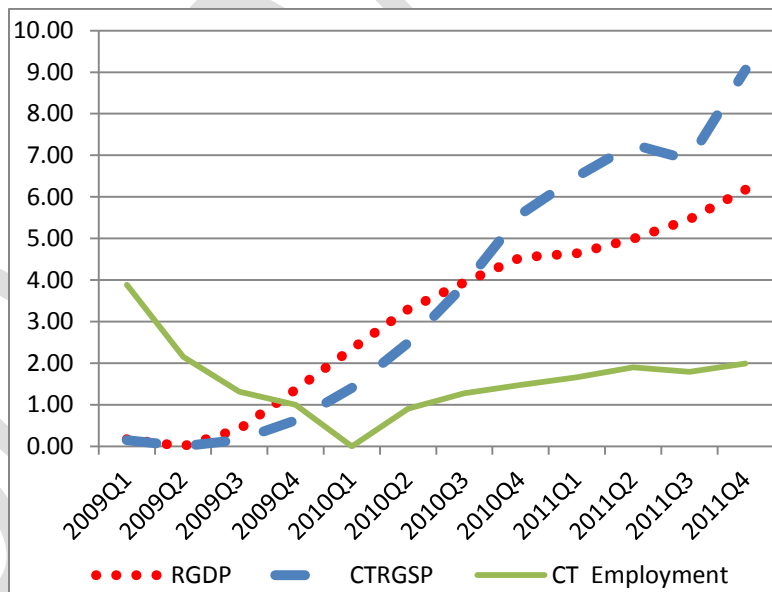
Introduction

A retrospective review of the depths of the recession and recovery to-date reveals that Connecticut employment bottomed after national and state real incomes had started rising. Despite ongoing improvement in national and state incomes by the end of 2011, state employment recovery has lagged, and has only recovered less than a quarter of the jobs lost. While several recent development initiatives will contribute to Connecticut's upturn, exploiting assets the state currently has lying unused have the potential to strengthen short-term growth even further, anchor major companies in the state for a generation, and build a powerful foundation for long-term economic health and competitive strength.

Employment Lags and Stagers

Chart 1 illustrates primary indicators of the recovery in 2010 and 2011. Connecticut employment bottomed at 1,593,000 in 2010Q2, by which time both national and state incomes were recovering. Relative to their coincident bottoms three quarters earlier, National Real Gross Domestic Product (RGDP) was already 2% above its low, while CTRGDP was up more than 1%. Additionally, Chart 1 shows that measures for CTRGDP growth by the end of 2010 with above those of the nation and that estimates for 2011 follow suit, though there are some risks attached to those projections.²

Chart 1: Bottoming and Recovering (% Change Relative to Bottom)



Sources:

- 1) Bureau of Economic and the Bureau of Labor Statistics databases.
- 2) CCEA estimates for 2011 CTRGDP are based largely on Connecticut personal income and estimated GDP deflators estimated from consumer and producer prices and national deflators from the above organizations.

² Variability is indicated by a slight decline in 2011Q3 being strongly offset in 2011Q4.

Ongoing productivity improvements continue to contribute to the state's competitiveness, and help CTRGDP growth rates outpace employment growth rates. By 2011Q4 employment gains of 32,000 only expanded employment by 2%, less than a quarter of the jobs needed to return to previous highs.

Prospects

The unusual depth and nature of the Great Recession has led CCEA to forecast economic performance over the next eight quarters in two ways: using housing permits in one approach and the bank rate in the other. Use of building permits is consistent with earlier CCEA practice but now relies on a variable that has been and is likely to continue to be a drag on the economy; housing starts hit a new low in 2011 and are unlikely to recover for several years. Use of low interest rates captures the continued expansionary monetary policy, which the Federal Reserve has announced will remain in effect until 2014;³ these low rates will stimulate the economy. Comparisons between the two cases argue that CCEA's original base-case scenario relying on housing permits probably underestimates the state's economic prospects. Switching to the Federal Reserve's interest rate commitment generates a much more optimistic forecast—essentially an upper bound—before considering the additional stimulus that will flow from the major projects noted above.

The discussion below explores these approaches and then adds two additional sources of stimulus into the forecast. First, the forecast brings in the planned expansions of the John Dempsey Hospital and the broader Biosciences Connecticut initiative, Jackson Laboratories initiative, development of a centralized data center, one which is also a hardened site, providing secure electricity generation and transmission to these major facilities. Second, the forecast brings in the additional stimulus that unleashing existing tax credits, earned in good faith but currently unusable, to drive major capital projects would deliver. The aggregate impact would be to fully restore the jobs lost—and bring the state to a record high in total employment.

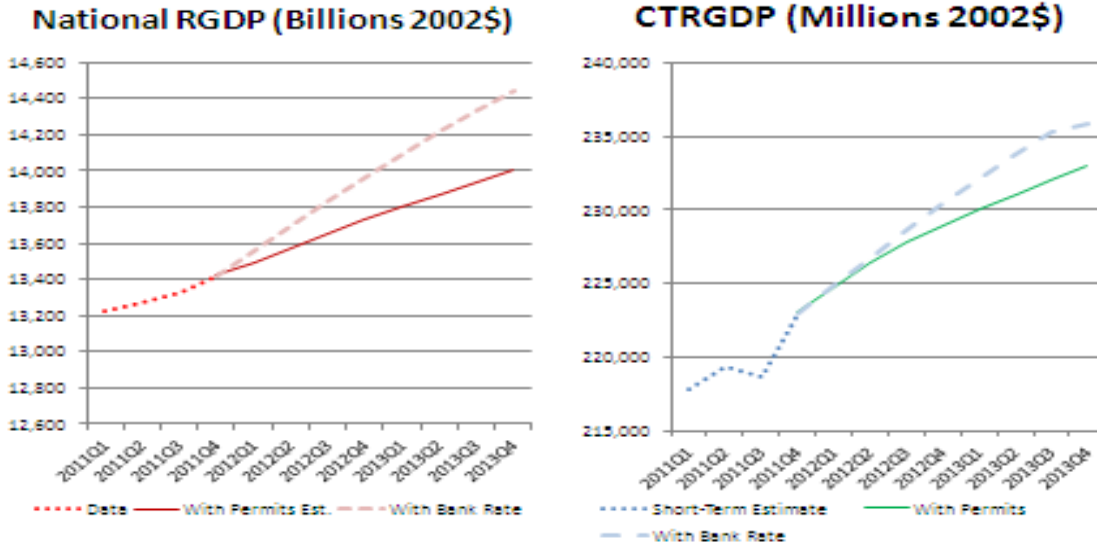
Retrospective Approaches

Chart 2 forecasts impacts generated by incorporating the Federal Reserve's low interest rate policy; CCEA estimates it will add \$400 billion to national RGDP, of which Connecticut's economy will capture about \$3 billion.

³ FOMC's Jan 25th statement:

<http://www.federalreserve.gov/newsevents/press/monetary/20120125a.htm>

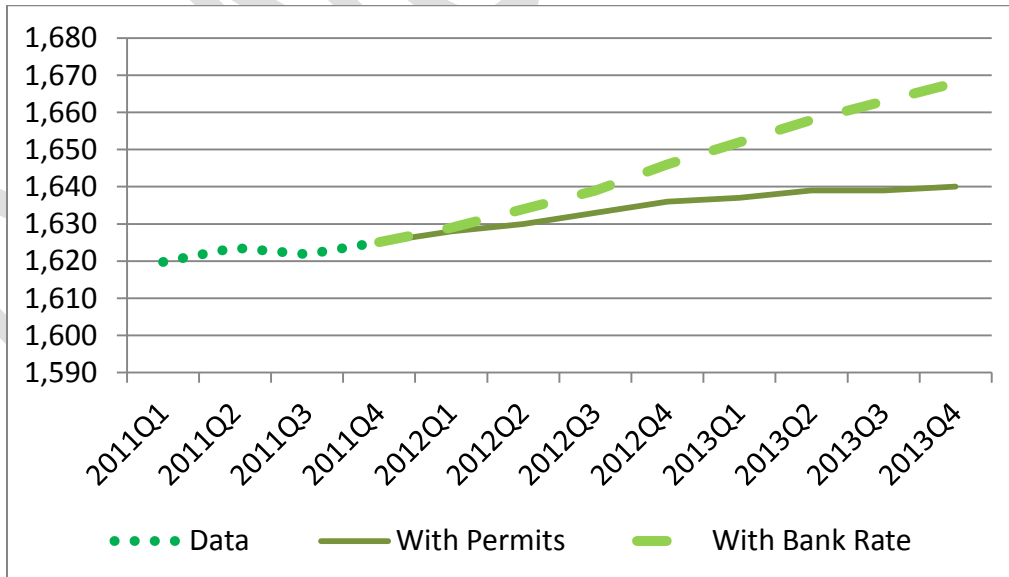
Chart 2: Income Projections



Source: CCEA

Chart 3 shows the resulting impact on Connecticut employment. Even assuming flat to continuously declining residential housing permits, state employment still rises to 1,640,000 in 2013Q4 from 1,625,000 in 2011Q4. The extended low interest rate policy yields 1,668,000 by 2013Q4, adding another 28,000 jobs.

Chart 3: Employment Growth Eschewing and Including Low Interest Rates



Source: CCEA

For the reasons noted above, this forecast should be seen as an upper bound of potential growth rates; it reflects the extraordinarily good performance in 2011Q4, following on the heels of a less than stellar performance the previous quarter. Such variability provides a shaky foundation from which to project economic performance.

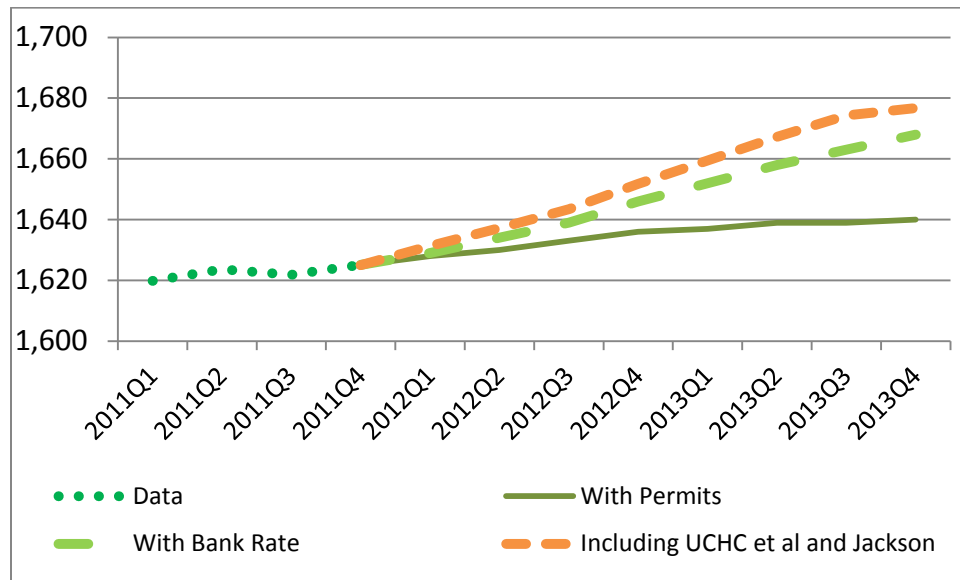
Even with the continuing low interest rates, Connecticut would recover less than 60% of the employment needed to reach its previous benchmark of 1,730,000. However, national monetary policy stimulus is not the only factor that will contribute to Connecticut's economic health over the coming quarters.

Chart 4 demonstrates the employment affect from the early construction and partial staffing of the revised JDH, UCHC, the Biosciences Center, the announced expansion of Jackson Laboratories and an additional computer "cloud" with assured electrical back-up essential for reliable communications, quality research and patient care. The JDH-Biosciences Center consists of initiatives to expand the UCHC School of Medicine and Dentistry and Jackson Laboratories announced expansion.⁴ Just in its initial phases, the biosciences complex will boost CTGDP growth by 0.9% in 2012 and by 1.15% in 2013. Coming on the heels of the JDH-Biosciences Center, Jackson Laboratories announce a similar and complementary expansion. Both expansions and the current directions of medical and pharmaceutical research suggest the critical need for a major centralized computing center with assured electrical supply and back-up. Together these facilities form the nexus of an emerging powerful cluster from which future growth and spinoffs become increasing likely.

Though only partway into their expansions by the end of 2013, the UCHC School of Medicine and Dentistry, including the Biosciences Center and the Jackson Laboratory development alone, will add another 9,000 direct, indirect, and induced jobs. Computer clouds (data centers) have relative small direct employment effects, but are infrastructure critical to building a truly competitive business and research environment. Their job impact then ramps up with fuller operations of the UCHC, JDH, spin-offs, and co-locating biomedical research organizations. All this together then delivers improved health care, creation of important, commercially valuable intellectual property, and an expanding base of highly trained personnel which then feed back to strengthen growth further.

⁴ <http://www.jax.org/news/archives/2011/ct-vote.html>

Chart 4: Connecticut Employment 2011Q1-2013Q4 Including JDH Expansion, Bioscience Complex, Jackson Laboratories, the Computing Center, and Secure Electricity Generation



Source: CCEA based on publically available impact studies carried out by it.

Even with all of this, employment impacts still fall far short of fully recovering jobs lost in the Great Recession. The Governor’s First Five initiative, employment incentives, and aggressive support for small business (e.g. the new loan program) are helpful, their incremental job creation will meet the challenge.

Economic and financial research has clearly established the general positive impact of business clusters.⁵ In addition, the benefits of clusters in the biosciences and pharmaceutical industries have been the focus of a number of specific studies.⁶ However, the benefits from the establishment of specialized business clusters - -that is, collections of businesses operating in a similar, or related, industry, within a centralized geographic area—has other, longer-term impacts that are difficult to quantify in purely economic terms. For instance, researchers have noted that developing business clusters tend to accelerate the discovery of “new technological opportunities”⁷ that may result in superior health care products and services, which has the potential to benefit thousands of individuals’ lives, not only within a particular state or region, but nationally or even internationally.

⁵ Authors Masahisa Fujita, Paul Krugman, and Anthony Venables discuss this topic in their book *The Spatial Economy: Cities, Regions, and International Trade* (The MIT Press; 2001; ISBN-10: 0262561476).

⁶ See, for example: Owen-Smith, Jason and Walter W. Powell’s paper, “Knowledge Networks as Channels and Conduits: The Effects of Spillovers in the Boston Biotechnology Community” (*Organization Science*, Vol. 15, No. 1, 2004, pp. 5-2); and, Orsenigo, L., F. Pammolli, Massimo Riccaboni’s “Technological change and network dynamics: Lessons from the pharmaceutical industry” (*Research Policy*, 30, 2001, pp. 485–508).

⁷ Quote from Section 1 of Andrew A. Toole’s recent paper, “The impact of public basic research on industrial innovation: Evidence from the pharmaceutical industry” (*Research Policy*, Volume 41, Issue 1, February 2012, Pages 1-12).

Given the practical challenges businesses face in constructing laboratories and major business operations in close proximity to organizations engaged in similar work – thereby establishing a specialized cluster – public support is frequently necessary, as is support for the basic research that takes place within both academic and commercial settings.⁸ For this reason, as well as the arguments developed in this *Outlook*, that CCEA has long argued for converting what is now a liability—nearly \$2.5 billion in tax credits state businesses have earned—into a powerful development asset powering construction of as much as 10 million square feet in new advanced manufacturing plants, research facilities, and other qualifying projects. Critically, this would generate tens of thousands of new jobs and anchor major companies in the state for a generation. The final payoff is that this approach is entirely self-financing: it generates so much net new revenue for the State that it repays fully the redemption of the tax credits and delivers a revenue bonus.

Converting Liability to Assets: Unleashing Accumulated Tax Credits

In the course of attracting industry over the past several years, Connecticut has issued over billions in tax credits. Regrettably, a significant share of these credits—approaching \$2.5 billion—lie unused and unusable because of current restrictions. Given current fiscal challenges, such restrictions make sense, as current policy sees these credits simply as liabilities and a threat to current revenue. However, failure to permit use of the credits eats away at the state’s credibility with the business community and undermines the vigorous initiatives now being undertaken.

Adopting an approach that avoids any impact on current revenues (or any impact for the next two to three years), an approach that converts what are now liabilities into an asset with powerful appeal, and an approach whose implementation will generate very substantial new tax revenues that fully covers the cost of redemption of the credits, delivers multiple “wins” for the state and its citizens. The approach—fully analyzed in CCEA’s “Driving Recovery” (<http://ceea.uconn.edu/studies/Driving-Recovery-Report.pdf>)—achieves all of these objectives and more. It would fully restore Connecticut’s reputation as a good place to do business and create the foundation for a generation of strong growth and sustained competitiveness.

Conclusions

Even with the short-term pain from the unavoidable efforts to rebalance the state budget, CCEA projects the Connecticut economy’s real output and employment will continue to grow modestly.⁹ In addition, this *Outlook* points to significant added growth in RGDP and employment flowing from the Fed’s continuing policy of low-interest rates, development of the biomedical cluster in Farmington, and other major projects.

Developing the biosciences cluster, with the twin anchors of the UConn Health complex and Jackson Laboratories, establishes a leading-edge industry that should contribute to the well-being and wealth of Americans for generations to come. Connecticut is now establishing the elements essential to creating

⁸ “[Our analysis] finds a positive return to public investment in basic biomedical research. ... [However] the calculations represent only a fraction of the social return to public basic research investment.” (ibid)

⁹ Realistically, the only option to the policies adopted would have been dramatic budget reductions, which CCEA projected would have much larger negative impacts on both employment and output.

industry synergies of the kind that emerged at North Carolina's Research Triangle and along Route 128 in the Boston area. This biomedical complex can deliver strong growth to the state for two decades or more. Thus, beyond the forecasting period, as the biosciences complex builds out and becomes fully operational, the impacts on Connecticut growth will continue to expand.

The remaining challenge is to articulate policies and programs that expand on this initial success, with particular attention on retaining and growing strong, high-value sectors in the state's economy. The most obvious example is advanced manufacturing, in which Connecticut is both highly competitive in absolute terms, has improved its competitive position strikingly in the past decade, and now on some measures leads the nation. More broadly, as with the biosciences, Connecticut needs to strengthen its commitment to research and development. Unleashing accumulated tax credits by converting them from a liability into an asset could fully recover all of the jobs lost in the last four years and put the state on a path of sustained economic health and competitive strength.¹⁰

¹⁰ The question of efficacy of tax credits is separate from the issue of permitting businesses to use tax credits earned in good faith. For a thorough analysis of the potential of permitting use of tax credits to underwrite costs of completed capital projects, see "Driving Recovery" on the CCEA website: <http://ceea.uconn.edu/studies/Driving-Recovery-Report.pdf>