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Connecticut Economic Outlook for 2011-2012: A Perspective from Sacred Heart University Students in Business Economics

John F. Welch College of Business
Sacred Heart University, lorlowskil@sacredheart.edu

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SACRED HEART UNIVERSITY
John F. Welch College of Business

CONNECTICUT ECONOMIC OUTLOOK FOR 2011-2012:

A Perspective from Sacred Heart University Students in Business Economics

Final Research Project for EC392 – Economic and Financial Forecasting
Instructor: Dr. Lucjan T. Orłowski - Professor and Chair, Department of Economics and Finance

Spring 2011

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Nontechnical Summary

by Christopher LeBeau, Joseph Lucibello

As an undergraduate class in Economic Forecasting at Sacred Heart University in Fairfield, CT, we evaluated the overall health and well being of both the Connecticut as compared to the United States. We wanted to determine where the fiscal policy of the Nutmeg State should be going in the future by looking at outlook for the real Connecticut economy, labor market developments, the public sector, the housing market, and the financial sector.

To develop feasible macroeconomic forecasts for Connecticut's economy, we have applied a range of forecasting techniques learned in our class. Our forecasts show that by the year 2012 Connecticut's Real Gross State Product should roughly be around \$225 billion, while the United States Real GDP should roughly be around \$14.4 trillion. Most importantly, the rate of growth of Connecticut's Real GSP will be 1.8 percent in 2011. Connecticut's real economy will grow at a somewhat slower pace of 1.7 percent in 2012. These forecasts are somewhat stagnant compared to the United States Federal Reserve average real GDP growth rate of 2.5% for 2011. It has been Connecticut's trend to follow closely the trend of the United States growth rates, however with larger tails of growth or contraction. We have forecasted Connecticut's Real GDP to be 230 billion, while the United States Real GDP will be about 14.5 trillion.

With both the United States and the State of Connecticut amassing large sums of debt, we feel it is important to look at where the level of inflation is now and where it will be headed in the future. Connecticut's rate of (CPI-based) inflation has been steady around 2.6% over the past decade, but the forecast shows that the State's inflation rate will slow down over the next few years, but will still grow to about 2.6 percent. Over the past few years the United States inflation growth rate has been steady around 2.4 percent. However, we expect that it will decelerate and move closer to the Federal Reserve target rate of 2 percent.

Even with the slower rates of growth as well as higher rates of inflation in Connecticut, Nutmeg's experience much higher salaries comparative to the rest of the United States. By 2012, per capita income in Connecticut will grow to about \$66,000, while average per capita income will only reach about \$44,000 in the United States.

An item constantly weighing on current elections and political debates is the omnipresent unemployment rate. In the last ten years, Connecticut has abided by the same unemployment trends as the United States as a whole. After the well publicized global financial crisis, unemployment levels in the United States peaked at a hair over 10%, while the unemployment rate in CT, never quite hit that level. Recently in January, jobless claims in the state were still 11% over the ten-year average, while concurrently the United States jobless claims is hovering at 6.5% over the average. One could argue the United States economy is recovering faster as far as

unemployment rate is concerned, but it is likely that the U.S. economy troubles were much worse than CT's causing the recovery to begin sooner for the country.

Manufacturing jobs within New England followed the United States trend of decreasing from about 900,000 to around 600,000 jobs in the last ten years. In comparison with the United States Manufacturing market, New England has demonstrated a sharper decline than the U.S. trend primarily evident between 2003 and 2008. Specifically, Connecticut follows the same trend by showing a consistent decline in jobs within the manufacturing industry for the same reasons the United States trend has been declining. The fact that the one-third of the manufacturing jobs in America simply disappeared is quite alarming— although we cannot compete in cheap markets global, there are still many markets we can and should be participating in such as defense mechanisms, biochemical fields and pharmaceutical industries. In simple economic terms, we are not maximizing output for an economy as a whole.

Restoring fiscal discipline is the focus for Governor Dan Malloy's budget proposal. In 2009, total taxes received by the state of CT decreased by over 11%. Unless Mr. Malloy is able to jump start the state economy through his new budget, he will be forced to cut back state expenditures given the lower income per capita and therefore lower amounts of taxes paid into the system.

Following each recession in the United States, the country has experienced a slight jump in home ownership rates. With this financial crisis being essentially caused by an overload of home ownership, the rate will not likely experience an increase in the near future, as previously observed.

The global financial crisis affect all banks on a local, regional and national level. A large amount of banks were forced to close their doors due to solvency issues— the largest number since the great depression; however no banks in Connecticut closed during these harsh times. Connecticut's capital ratios are significantly higher than the Basel requirements— a benchmark that measures solvency and ensures protection against a multitude of financial risks. Given its recent history and positive ratio indicators, the Nutmeg state's banks seem to be superior to, at the very least, the average American bank.

As students who are soon to enter the work force, we had our concerns about where the state has headed with its fiscal responsibility. We strongly felt that Connecticut should refocus their efforts to become a top pro-business state by growing manufacturing and making this a top priority. Although, Connecticut will never again be able to compete on textiles manufacturing, which once made us one of the richest states in the Union, we can compete on high technology areas of manufacturing such as pharmaceuticals and alternative energy. Going forward, we need to make sure that our primary focus is growing the real Connecticut economy through the means of providing the support to businesses that want to grow in Connecticut by both working with

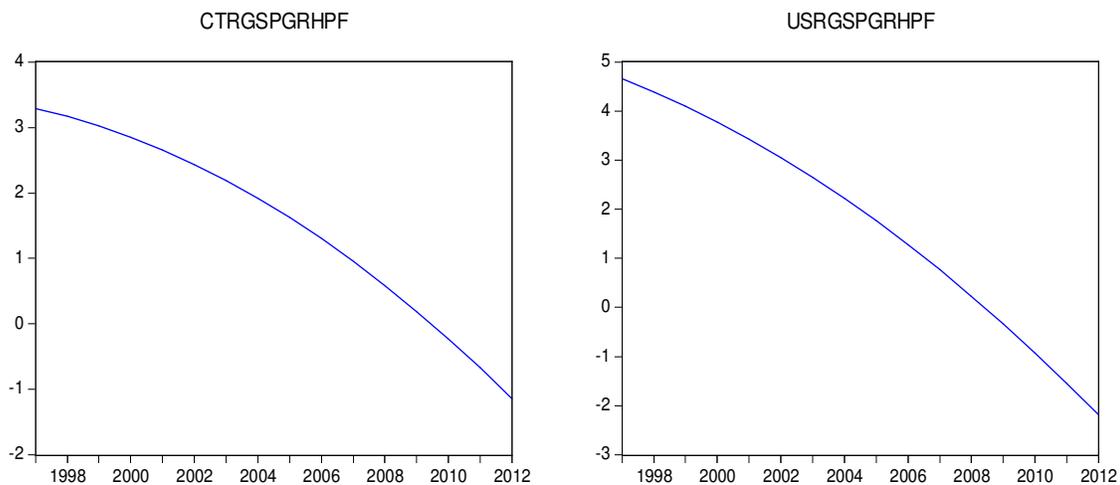
them and keeping taxes low enough to be competitive with other states. By focusing on growing our high technology industries and working to grow with businesses, we will be providing a better future for us as students as well as the generations to follow.

1. Outlook for the Real Economy of Connecticut

by Brian Barrett

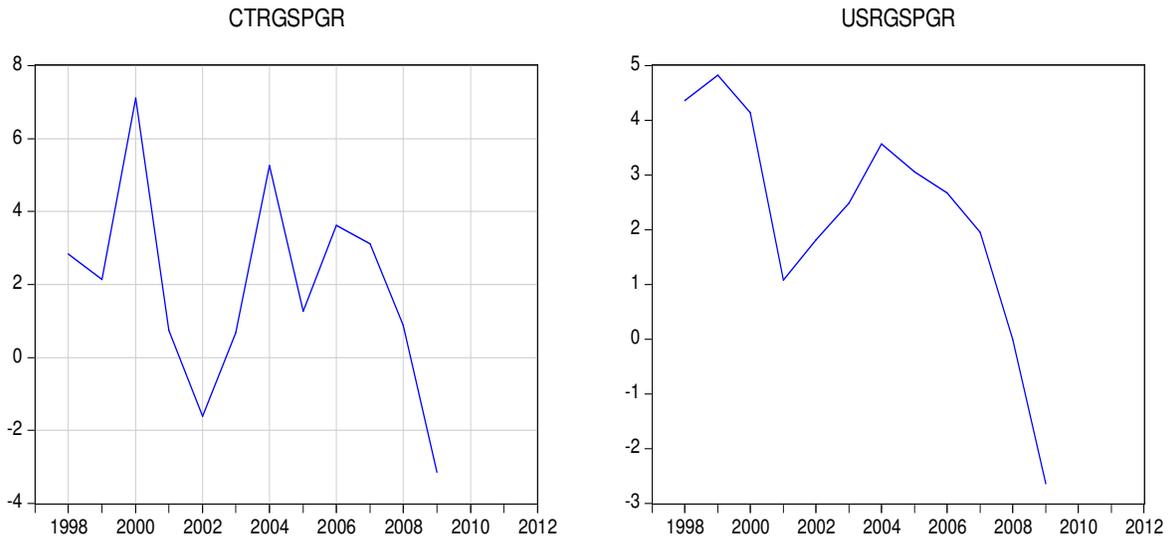
The economy has been fluctuating up and down for many years now, but with the recent events, it is important to try to forecast the near future. Although Connecticut is one of the most economically stable states, it still has been drastically affected and it is important to try to set it in the right direction again. Within the next several graphs, I will show how Connecticut compares to the overall United States economy in Real Growth Domestic Product (GDP), inflation rate, per capita personal income, and amount of exports. I will compare both Connecticut and the United States, show their trends, and show their predictions for the next few years.

The first two graphs will show both the United States' and Connecticut's Real GDP growth rate. These two graphs show the trend the Real GDP is on until the year 2012.



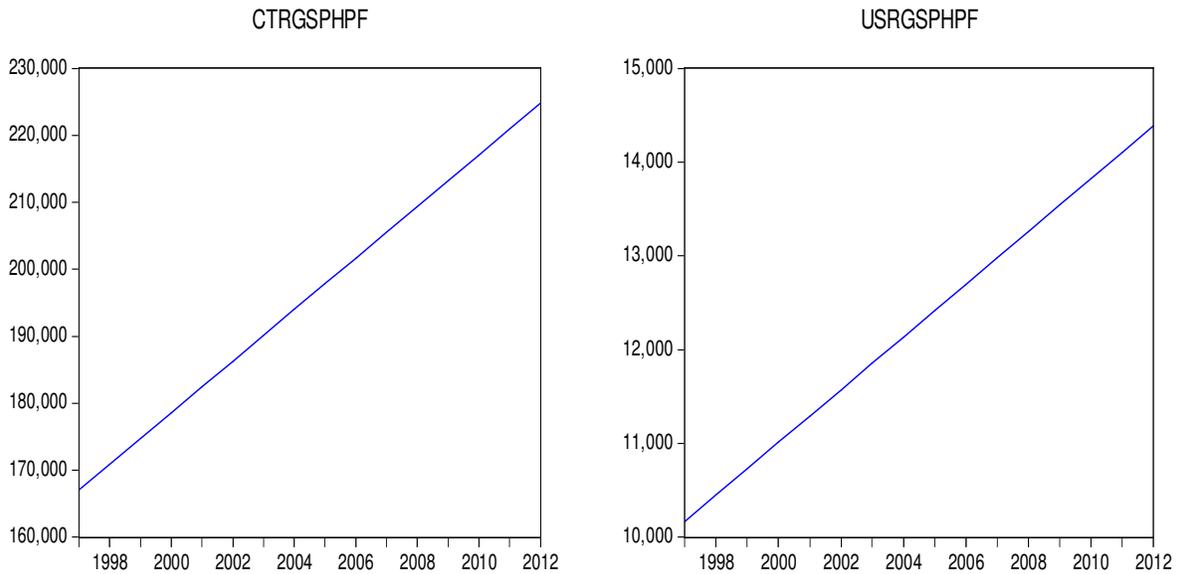
The graph on the left shows the trend of Connecticut's Real GDP and the graph on the right shows the trend of the United States' Real GDP. The trend of both graphs show how the growth rate is decreasing each year and by 2012 there will be a negative balance.

The next two graphs consist of the growth rate from the year 1997 to 2009 of Connecticut's Real GDP and the United States'. These graphs show how I got the numbers from the above forecast.



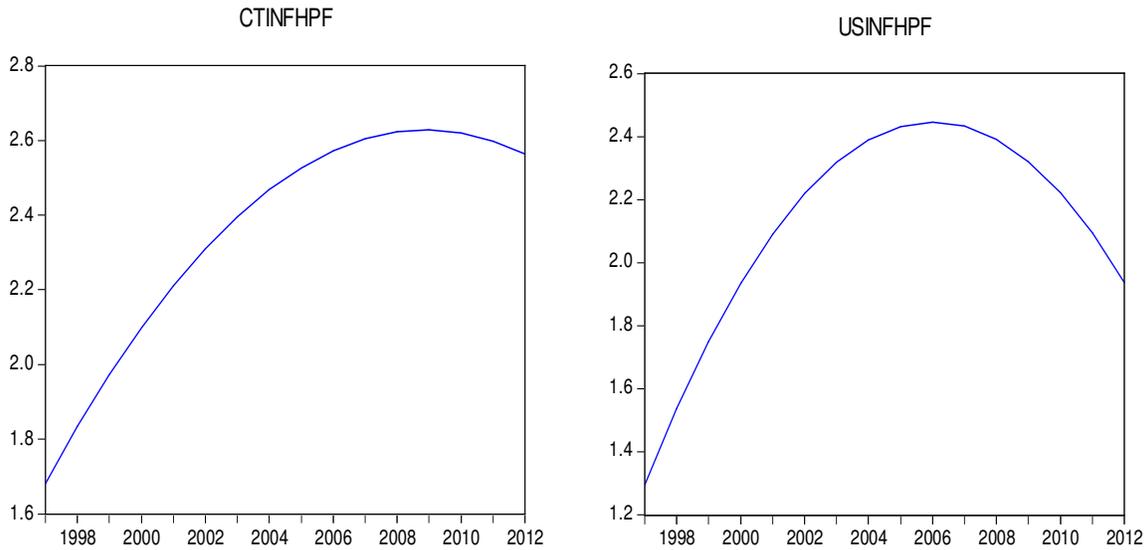
Both these graphs show a similar growth rate of Real GDP over the past 11 years. The United States had a positive growth rate till about 2008 when it went down about 2.5% each year. Connecticut's growth rate has fluctuated on a higher scale over these years. When the United States growth rate increased, Connecticut's growth increased by a great number, but when the United States growth rate decreased, Connecticut's growth decreased by a greater number. This shows that Connecticut follows the United States trend on the growth rate, but it is affected by the trend on a greater level. Although they show negative growth rates for 2009, I believe they will bounce back to a positive growth rate. The rate of growth goes up and down each year and will steady itself out by increasing over the next few years. The graph above disagrees with this trend, but other factors will help improve both Connecticut's and the United States real GDP growth rate.

These next two graphs show the linear trend of both Connecticut and the United States. They show the predicted values for 2010 through 2012 and the direction both the United States and Connecticut are heading.



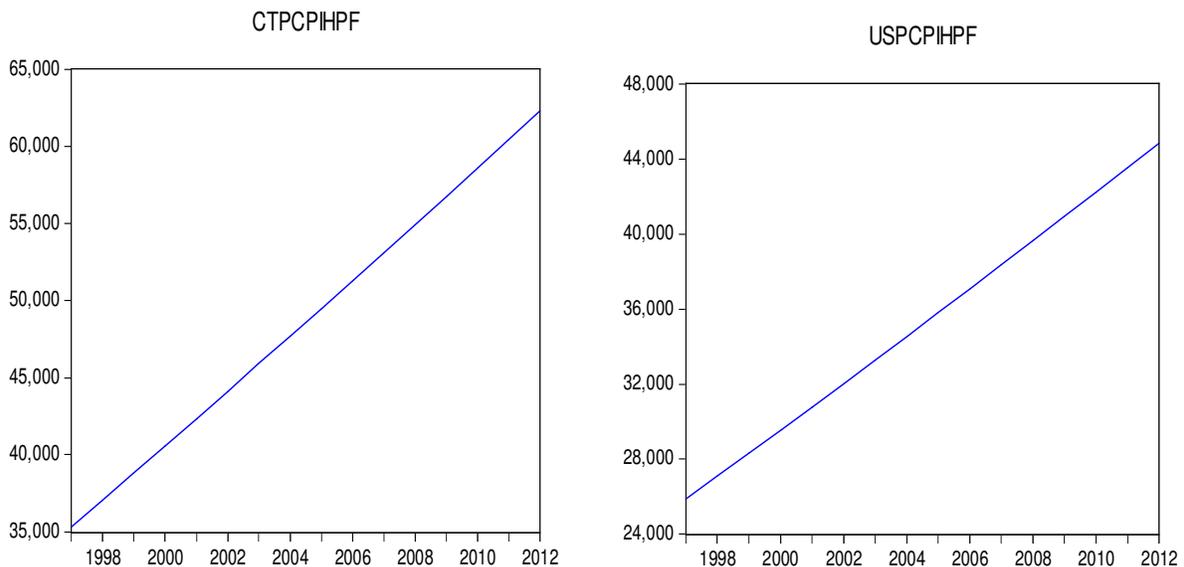
Both these graphs show the general trend of both Connecticut and the United States Real GDP over the past few years and the if the trend continues, where the Real GDP will be positioned. The graph on the left contains Connecticut's Real GDP in the millions while the one on the right contains the United States' Real GDP and that is calculated in the billions. Although the last two graphs showed that the growth rate is always fluctuating up and down, it does generally grow every year. So if Connecticut and the United States follow these trends they will both make improvements over the next few years. By the year 2012 Connecticut's Real Gross State Product should roughly be around \$225 billion, while the United States Real GDP should roughly be around \$14.4 trillion. **Based on the forecast data, the rate of growth of Connecticut's Real GSP will be 1.77 percent in 2011. The State real economy will grow at a somewhat slower pace of 1.74 percent in 2012.** These trends may not be perfectly accurate, but they can give one an idea of how the economy will be over the next few years.

The next aspect in our analysis is the relative inflation rate between Connecticut and the United States. The analysis uses real data from 1997 to 2009 and the forecast horizon extends till the end of 2012.



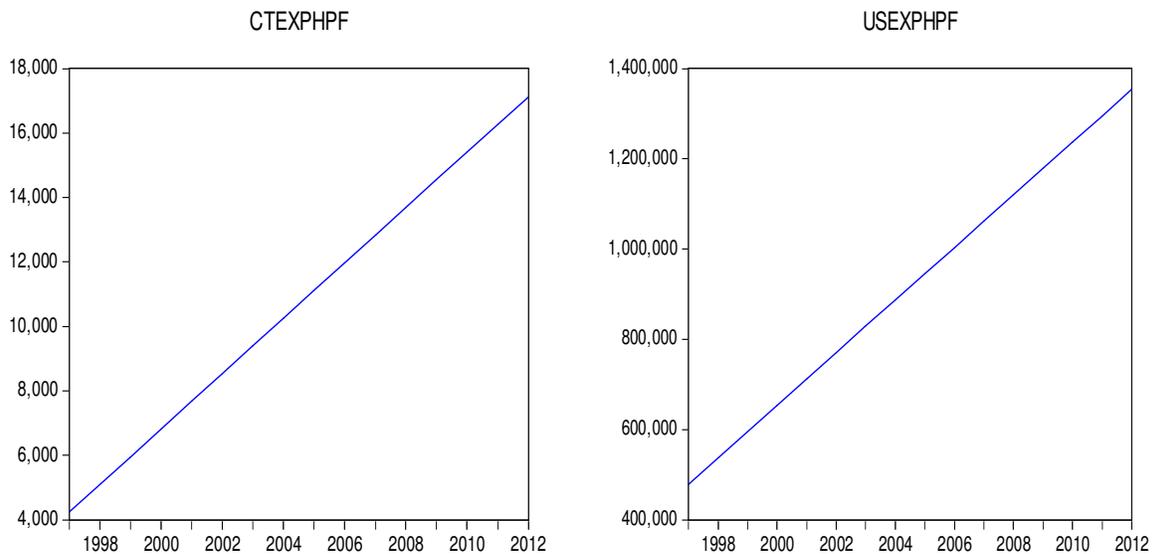
These two graphs show the trend of both Connecticut and the United States inflation rate of growth. The graph on the left shows Connecticut's inflation and shows how over the past few years the growth rate has been steady around 2.6%, but the forecast shows that the rate of growth will slow down over the next few years, but will still grow. However, the United States inflation rate has more drastic changes than Connecticut's. Over the past few years the United States inflation growth rate was steady around 2.4%, but over the next few years it should be slow down and grow around a 2% rate.

The next factor that I am going to compare is the per capita personal income of Connecticut and the United States. With real data from 1997 to 2009 I was able to forecast for the next few years.



These two graphs show how personal income is still growing in both the United States and in Connecticut. The graph on the left is a calculated forecast on the personal income in Connecticut over the next few years. The graph shows that the personal income in Connecticut is going to grow to over \$60,000. The graph on the right is very similar because they are both growing, but the amount and growth rate is not as high. In the year 2012 the United States personal income should roughly be around \$44,000, almost \$20,000 less than Connecticut's. These graphs show that Connecticut will stay profitable over the next few years and that they are still an economic powerhouse in the United States.

The last aspect that was analyzed was the amount of exports Connecticut and the United States have had over the past few years. With raw data of exports from 1997 to 2009 it became possible to predict a forecast till 2012.



The two graphs above show the statistical trends of the amount of exports. With the data we were able to predict the amount of exports both the United States and Connecticut will have by the year 2012. With Connecticut, there should be around \$17 million worth of exports by 2012 and the United States should grow towards around \$1.35 trillion by the same year. The reason for the increase in exports would be due to the increase in inflation rate. Although the rate of growth on inflation is going to fall down a little over the next few years, it is still going to be growing. Due to these factors, the people overseas would want to buy more American products, because it will be cheaper for them. When the United States inflation rate increases, American products become cheaper, so more people will be buying our goods. That is why the exports is going to increase over the next few years.

As more and more people buy American products, the Real GDP should follow the trend, which will help it gain to about \$14 trillion by 2012. This relates to the personal income, because by having a greater GDP, more money should be flowing through the market. With the inflation being so high, the increase in personal income will not be as meaningful as it was in the past, because \$60,000 in 2012 will not be equal to \$60,000 ten years ago. However, as GDP

grows and the market grows, the inflation rate should return to a more normal level, this is the cause for the downward slope it will have over the next few years. The market has been in a tough position over the past few years, but it will equal out and eventually become more stable. The market will go on trends of good times and bad times.

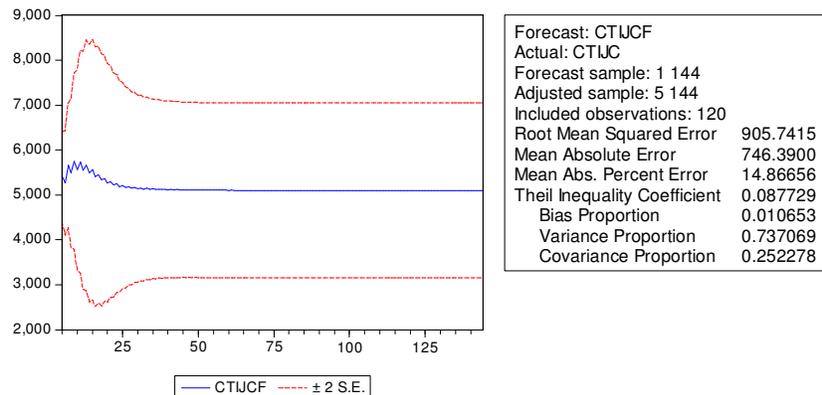
2. Labor Market Developments

by Timothy Sadowski, Courtney Kidd-Kadlubek, Tyler Locatell

This section will look into the labor markets within the state of Connecticut compared to both New England and the United States. Using economic factors which analyze the labor markets we will be able to get a good grasp of Connecticut’s Economic position almost 2 years post recession. In this first section we will analyze the leading economic indicator of initial jobless claims as well as unemployment rates comparing the US NE and CT. The following section will outline the regional data in Connecticut, and finally we will break it down to specific job markets.

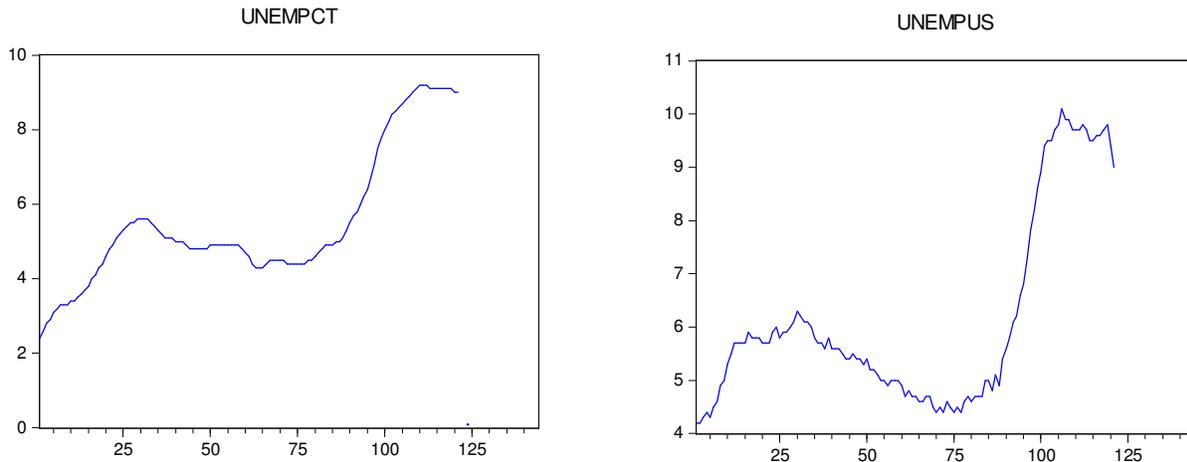
Looking at the Connecticut Initial jobless claims as well as the US initial jobless claims they look to have similar trend over the past 10 years. They both had a significant spike in 2008-2009 during the recession, and since then have come down to their 10 year average. Looking into the numbers over the past 10 years Connecticut’s 10 yr average have been 5049.68 claims per month with a min of 3793 and a max of 7560, while the US has an average 395,598 min of 291,000 and max of 654,800. For the month of January Connecticut’s Initial Jobless Claims is at 5,630, or 11% over the 10 year average while the US at 421,500 or only 6.5% over the 10 year average. Therefore comparatively speaking the United States has seen a better recover after the recession. Using an Auto regressive moving average (ARMA(4,4)) of the CT initial jobless claims does not prove to be very helpful, the estimate plateaus at 5101 which is its estimate for the rest of 2011. There are significant chances that it will hit this estimate because it is only slightly higher than the 10 year average. We believe that the Initial jobless claims will drop throughout the rest of 2011 with the unemployment rate decrease. Hiring and job openings have been high so far in 2011 if it continues we will see decreased IJCs. We find it very important for the Initial jobless claims to decrease if we want to make a full economic recovery. There are almost 4 million people that are drying out the system which is in large part the reason that we have over \$1.4 trillion in debt. In 2010 there was around \$3 billion paid out in

unemployment checks according to theday.com. A main reason that we see the high unemployment is due to the fact that companies are moving overseas to get better corporate tax rates which are taking job opportunities away from the American workers.



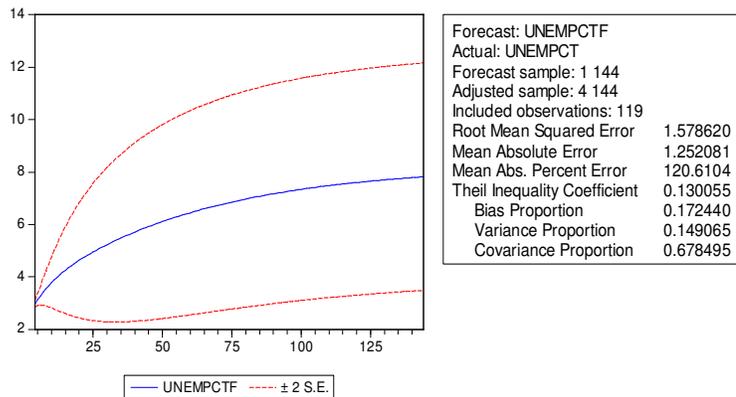
unemployment checks according to theday.com. A main reason that we see the high unemployment is due to the fact that companies are moving overseas to get better corporate tax rates which are taking job opportunities away from the American workers.

The US unemployment rate has been the topic of news for the past few years reaching record highs. Unemployment is a major concern for both CT and the US economies, because if we don't have people working and making money, we don't have people pay taxes.



Looking at these two graphs while the US has decreases in the past couple months CT has not seen the decline as it is not consistent with the US. Over the past 10 years CT has fared well and has shown to have a consistently lower unemployment rate (0.6% lower) than the US unemployment. Therefore over 2011 we should see a significant decrease in unemployment in CT to as low as 7.5% but conservatively 8%-8.5% by the end of 2011 compared it the current rate of 9%. Using ARMA(3,3) to calculate the forecast for Connecticut unemployment, it proves to be somewhat unhelpful. The significant spike of unemployment in 2008-2009

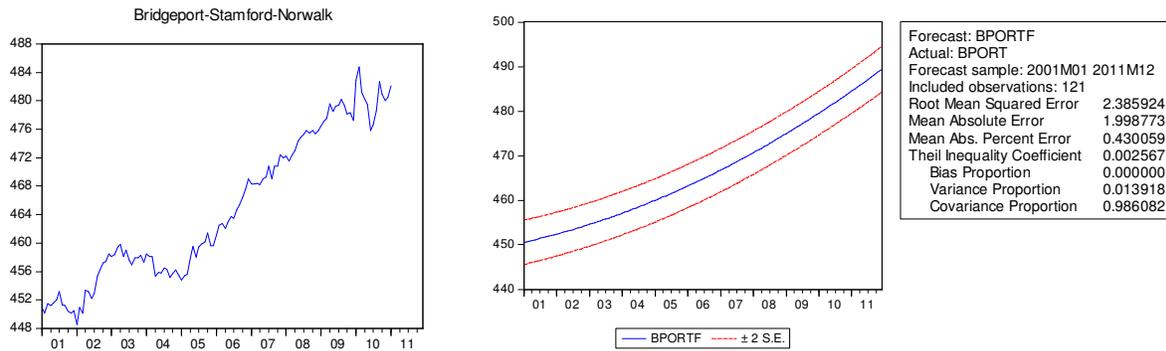
skewed the data and shows an upward trend through 2012. By the end of 2011 the forecast predicts that unemployment will be at 9.7% and by the end of 2012 10.4% which we believe is very improbable. With the current economic rebound we find it is hard for a forecast of this sort to predict the unemployment rates given the current economic conditions.



Regional Employment Data and Projections

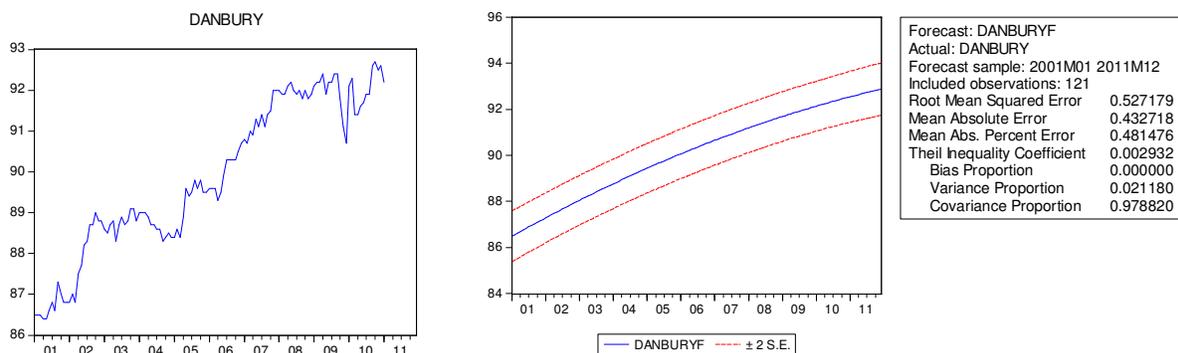
For this segment of the paper we have decided to focus on the employment data based regionally on the state of Connecticut. We focused on five regions of the state: the Bridgeport-Stamford-Norwalk region, the Danbury Region, the Hartford, East and West Hartford Region, the New Haven Region, and the Waterbury Region. We have collected data from each area and forecasted the projected growth of each region to the end of 2011. Furthermore we found the unemployment rate as well as labor market and projected the growth or decline of each to the end of 2011. Finally we found the effect of each region on the labor market and unemployment rate for the state of Connecticut.

Bridgeport-Stamford-Norwalk Region



Above is the current data and projected data for the civilian labor force for the Bridgeport-Stamford-Norwalk Region. As you can see from the prior year data this region does have an increase in civilian of labor force and as we have projected based on previous trends it will continue to increase until the end of 2011. In the beginning of 2001 the civilian labor force was 450,900 for the region and it increased to 482,000 by the end of 2010. According to our forecasts by the end of 2011, the civilian labor work force in this region should be above 490,000 within a sub-range of about 485,000 to 500,000.

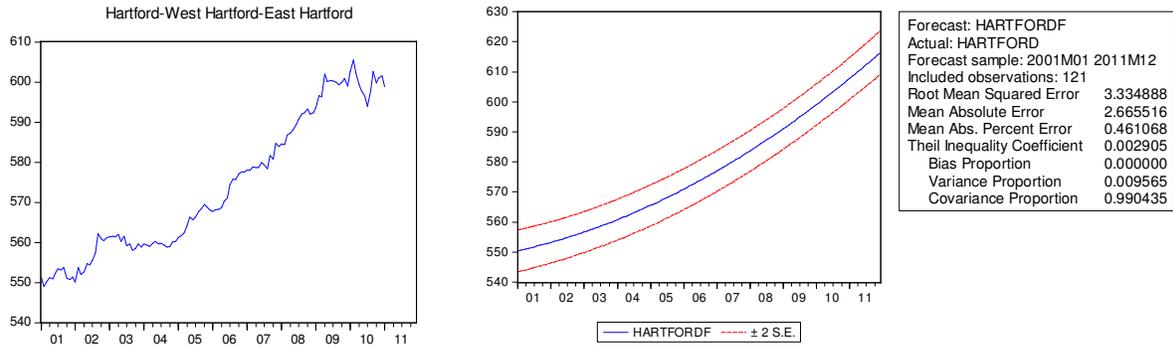
Danbury Region



Above is the previous and current civilian labor force for the Danbury Region. Danbury consists of the smallest population sample but they still continue to see an upward trend. It shows an increase from 86,500 in 2001 to 92,200 by the end of 2010. However if you look at our projections for the end of

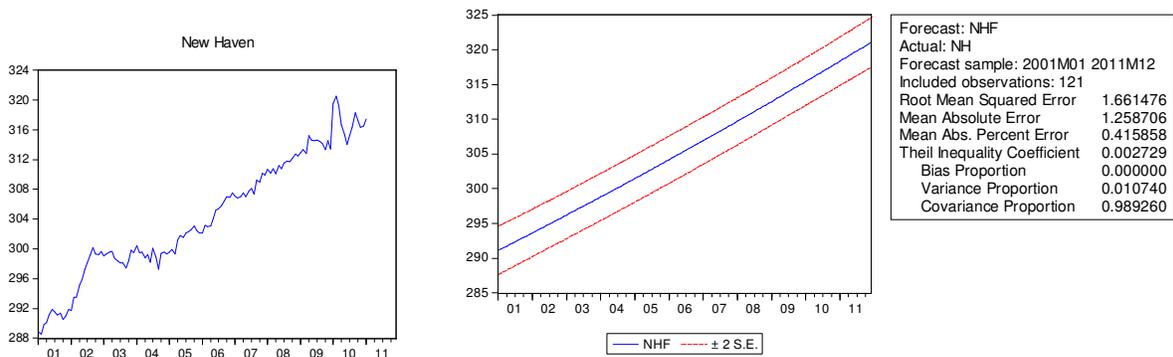
2011, the trend seems to become more neutral rather than upward sloping. For the end of 2011 we project a civilian labor force of about 92,300 for the Danbury with a region in a range of 92,700 to 91,700.

West Hartford-East Hartford-Hartford Region



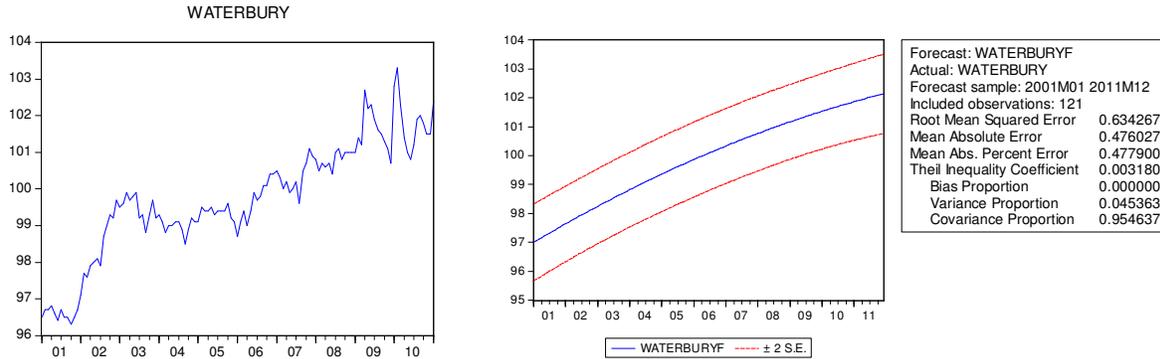
For the West Hartford-East Hartford- Hartford Region the trend is upward again. The previous and current data show an upward trend in labor force with an increase from 550,000 in 2001 to 600,000 by the end of 2010. From our projections we expect an increase in the labor force in the region in 2011 to be up to about 617,000 within a range 618,600 to 613,400.

New Haven Region



The data above shows the previous, current, and forecasted date for the civilian labor force for the New Haven Region. This region has an upward trend in labor force from 288,900 to 317,400 by the end of 2010. From our forecasting data we project the labor force to grow to about 321,200 by the end of 2011 within a range of 322,200 to 319,900. The New Haven region has a really sharp increase in civilian labor force and has a very positive outlook for the end Of 2011.

Waterbury Region



For the Waterbury Region, the previous, current and forecasted data have an upward increase, however if you look at the forecasted data it seems that data seems to become neutral as the years go on with less of a growth. The civilian labor force has increased from 96,500 in 2001 to 102,400 by the end of 2010. Our projections see an increase to about 102,200 within a range of 102,700 to 101,900. This projected increase is about what the current labor force is, this is also what the graph shows.

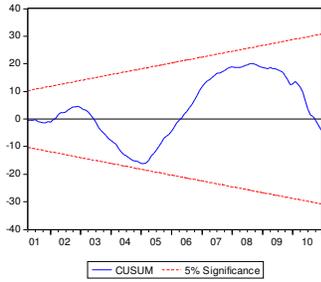
Percentage increase in Civilian Labor Force by Region

Region	2001	2010	% Increase	2011	% Increase for 2011
Bridgeport-Stamford-Norwalk	450.9	482.1	6.92%	490	1.64%
Danbury	86.5	92.2	6.59%	92.3	0.11%
Hartford-West Hartford-East Hartford	551.3	598.9	8.63%	617	3.02%
New Haven	288.9	317.4	9.87%	321.2	1.20%
Waterbury	96.5	102.4	6.11%	102.2	-0.20%

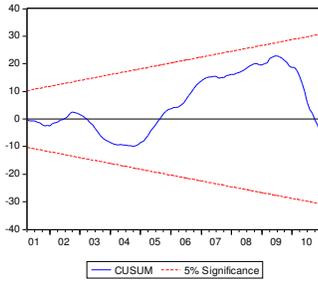
(labor force in 000's)

Above shows a breakdown of the percentage increases for each of the five regions. The chart shows that according to past data, the New Haven (9.87%) and Hartford (8.63%) regions had the highest increase in labor force for the past ten years. From our projections of growth for 2011, Hartford (3.02%), Bridgeport-Stamford-Norwalk (1.64%) and New Haven (1.2%) regions will have the largest percentage increase for the year. Danbury (.11%) will only very slightly increase and Waterbury (-.2%) is actually projected to slightly decrease.

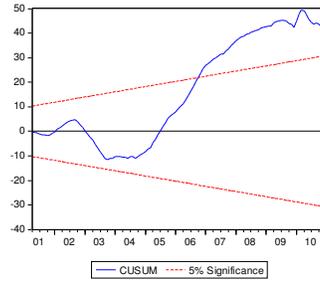
Stability CUSUM Graphs



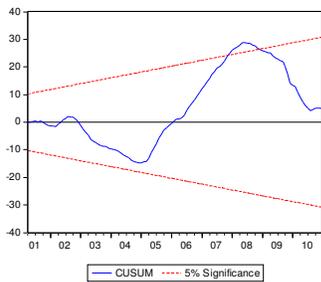
Bridgeport-Stamford-Norwalk
 (The CUSUM of residuals is stable at 95% with an expanding graph)



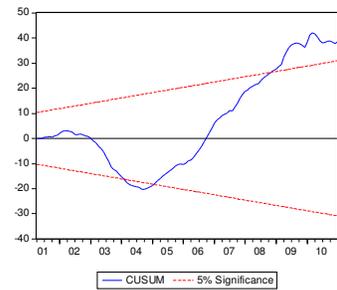
Hartford
 (The CUSUM of residuals is stable at 95% with expanding graph)



New Haven
 (The CUSUM of residuals is stable up to year 6, then it becomes unstable with an expanding graph)



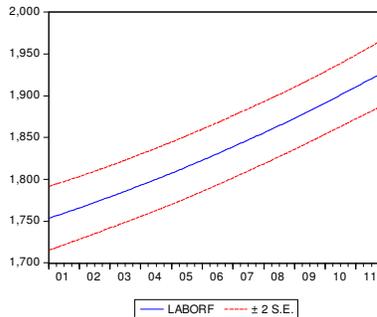
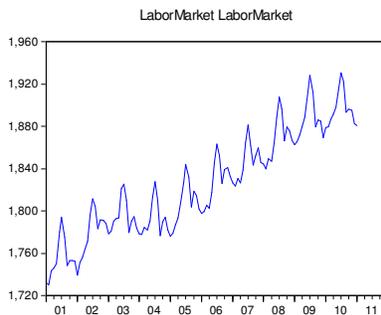
Danbury
 (Residuals stable at 95% level, except for a brief time, outward expanding)



Waterbury
 (Residuals stable at 95% up to 2009, outward expanding graph)

Labor Force

Next we looked at the total labor force for the state of Connecticut.



Forecast: LABORF	
Actual: LABOR	
Forecast sample: 2001M01 2011M12	
Included observations: 121	
Root Mean Squared Error	18.25044
Mean Absolute Error	15.09744
Mean Abs. Percent Error	0.826282
Theil Inequality Coefficient	0.004996
Bias Proportion	0.000000
Variance Proportion	0.036766
Covariance Proportion	0.963234

The labor force is a very steady increase for Connecticut with an increase from of 1,732 in 2001 to 1,880 2010. From our forecasted projections we expect by the end of 2011 the labor force to be around 1,928 within a range of 1,770 to 2,300.

In conclusion, overall the State of Connecticut is increasing its civilian working force and we see an increase for the state as whole for 2011. However, regionally we see expansion in the working force for the Bridgeport Regions, New Haven Region, Hartford Region, and Danbury Region, but a decrease in

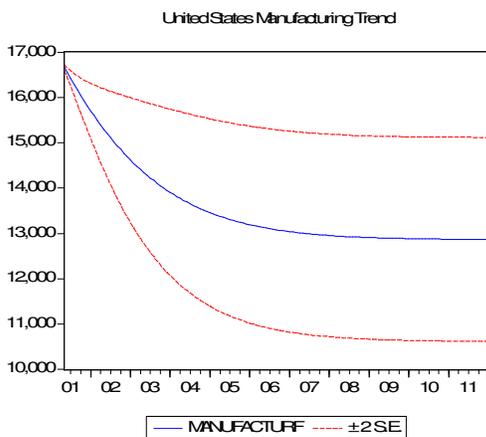
the Waterbury Region for 2011. We forecast a higher unemployment rate for the state based on past data but overall an improving labor market for the state.

Labor Markets

We focused our labor market analysis on the Manufacturing Industry on a national, region, and state level with references from the Finance industry and Construction industry. The jobs that are classified in this industry are those that are involved with the production of new products from raw materials. The United States was once a country based on manufacturing jobs but has now become increasingly weak in the Manufacturing Industry.

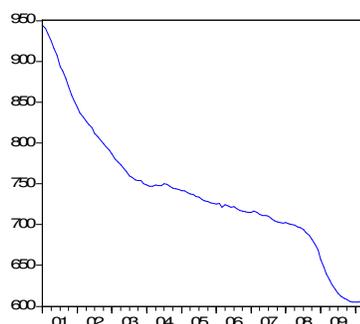
Since 2001 the United States has seen an alarming steady decrease of manufacturing jobs. Once 17 million jobs were within this industry but in the past ten years it has faltering to an unimpressive 11 million jobs. There are multiple factors of the job market affecting this decline. First, the economic crisis affected many jobs in a variety of industries during 2009 when the stock market took a large plummet due to the crash of the housing market. In industries like Government and Hospitality there is a noticeable million jobs dropped within the year of 2009, however it has seen a increase as the government has been taking steps to reduce unemployment and financially fuel companies to start hiring and keeping jobs available. This is why the decrease in jobs in the manufacturing industry stands out. The fall in this industry started in 2001 and has continued showing that the problem with jobs in this industry isn't a temporary issue resulting from the economic downfall like every other industry that was impacted, but a more permanent loss of jobs continuing to decrease.

Manufacturing decrease in jobs can be explained by the increase in technology, United States Corporate tax, and increased in outsourcing. In 2010 the United States imports were at 1.9 trillion compared the 1.7 trillion of exports, demonstrating the demand for US products is lower than the demand for foreign products. In the Manufacturing industry jobs are become less needed as the demand for products is focused overseas. With the low labor costs, low product costs and limited taxes the only way to stay competitive within a market is to lower costs and lower prices by outsourcing jobs. Since manufacturing jobs are based on products and labor, these jobs can easily be displaced to a foreign company for a significantly less cost than remaining in the United States.

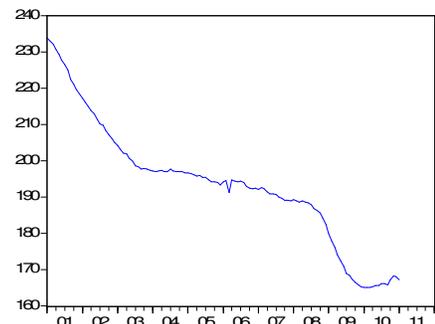


Manufacturing jobs within New England followed the US trend decreasing from about 900,000 to around 600,000 in the last ten years. In comparison with the United States Manufacturing market, New England has demonstrated a sharper decline than the US trend primarily evident between 2003 and 2008. Specifically, Connecticut follows the same trend by showing a consistent decline in jobs within the Manufacturing Industry for the same reasons the United States trend was declining.

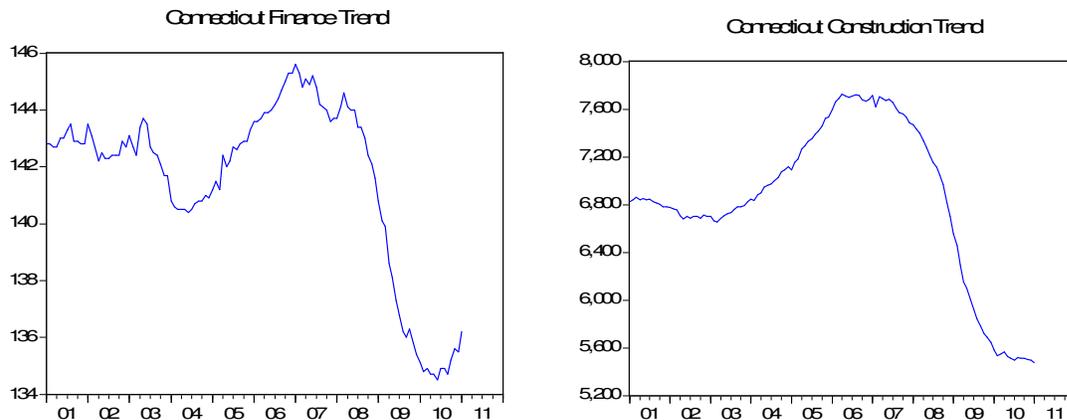
New England Manufacturing Trend



Connecticut Manufacturing Trend

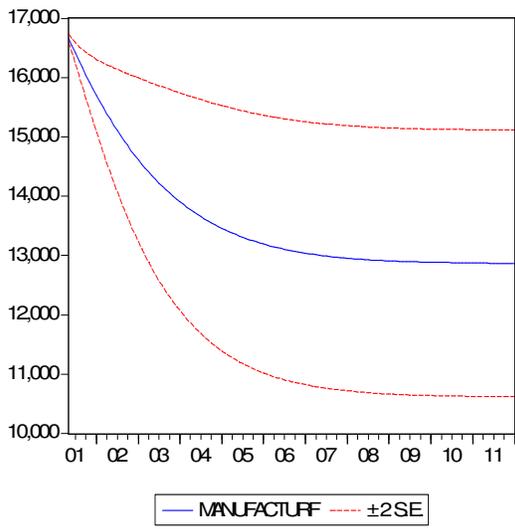


Since the trend is consistent on the national, regional, and state level the comparison between industries was necessary. When looking at the Finance Industry Graph for Connecticut we can see massive up and downs, however, the mean number of jobs stays rather consistent until the 2009 crisis. In the Construction Trend we can see an increase leading up to 2009 because of the booming housing market but then a sharp decline at 2009. This shows that there wasn't an overall decrease in jobs in every industry, but only reaffirms that the manufacturing industry is in a severe crisis with its 10 year decline in jobs.

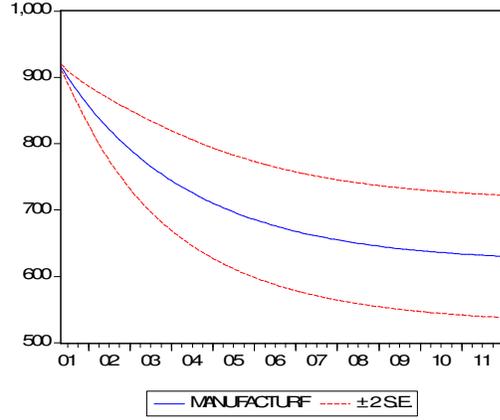


With any crisis there is often hope that some government policy may fix the problem, however, with the trends and forecast it seems as if the Manufacturing Industry is collapsing and there may be nothing the government can do about it. The forecast for the U.S., Connecticut, and New England Manufacturing industry doesn't show a large drop in jobs in 2011 but a slow decrease for the next year. By the beginning of 2012 the Manufacturing industry looks no better than before even with the Fed pushing money into the job market (which may be the reason the graph only shows a minor decline). In comparison to the Finance industry we can see how the effort to stir up more jobs by the government in the last year has increased the amount of jobs in that industry. In almost every industry that there was a noticeable decline in jobs during the 2009 crisis showed an increase in 2010 because of the government help. What it comes down to is the fact that technology can eliminate most of the need for human labor in the manufacturing industry, and the jobs that need human work can be outsourced to a foreign site that drops the cost of producing the products in every aspect. Whether we like it or not in order to stay competitive within the Manufacturing Industry a company needs to outsource, especially during the tough economic times when the population is becoming thrifter than ever. The manufacturing industry will only continue to decline and with a strong 10 year demise there are no signs that this industry will make a comeback.

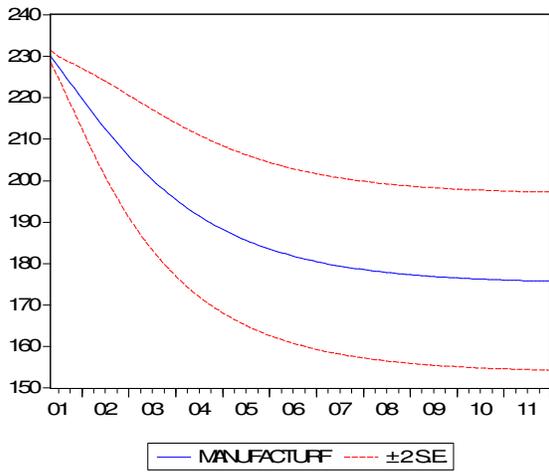
United States Manufacturing Forecast



New England Manufacturing Forecast



Connecticut Manufacturing Forecast



3. The Public Sector: Feasibility of Restoring Fiscal Discipline

by Brian Peterson, Michael DeRose, Mehmet Sahan, Vincent Spevack,
James Tsavaris

In determining the feasibility of restoring fiscal discipline in the state of Connecticut we looked into annual data of state taxes dating back to 1992 and Governor Dan Malloy's budget proposal. The purpose of the budget proposal is that there have been some critics who believe that the proposal altogether is set to be too fast so we would like to comment on the key topics within the proposal. Determine if there are any areas within the proposal that we feel should be drawn out a couple years longer than stated. As for taxes in Connecticut, we went to the Federal Reserve Bank of St. Louis' website to pull data on three categories to try and compare: total taxes in Connecticut, individual income taxes in Connecticut, and total sales and gross receipts taxes in Connecticut. Below shows a table of the annual data found on the website dating back to 1992 (data is in thousands of dollars):

Year	TotalTaxes	SalesGrossReceipts	IndivIncome
1992	6,059,339	3,073,355	1,865,711
1993	6,674,848	3,096,872	2,253,951
1994	6,838,725	3,313,600	2,236,725
1995	7,474,119	3,708,795	2,474,355
1996	7,830,171	3,932,290	2,614,481
1997	8,773,258	4,581,586	2,979,796
1998	9,393,604	4,720,531	3,405,916
1999	9,623,591	4,821,493	3,609,595
2000	10,171,242	5,054,024	3,973,621
2001	9,895,673	4,555,430	4,229,615
2002	9,032,787	4,516,123	3,685,244
2003	9,508,645	4,790,870	3,639,362
2004	10,291,289	4,900,376	4,319,546
2005	11,584,728	5,128,163	5,033,442
2006	12,131,894	4,970,456	5,777,636
2007	13,271,789	5,316,797	6,335,078
2008	14,597,970	5,812,903	7,503,520
2009	12,927,619	5,425,933	6,376,921

The raw numbers in the data didn't surprise us much as it is seen that over the years taxes have increased on a year to year basis with a slight exception in 2000 and 2008 with a higher spike in both total taxes and sales and gross receipt taxes in 2000 and an increase in all three categories in 2008. An interesting aspect of the data was how quickly the totals increased in a short period of time. The table of data above is for an eighteen year period and total taxes more than doubled from 1992 to 2009. Individual income taxes over the period rose from just under \$2 billion to a

little more than \$6 billion. Another interesting note on the data is the small decline in totals for the years after the United States hit a financial crisis or recession. When the technology stock bubble or dot-com bubble burst in 2000 it can be seen in the table that total taxes for the following year were affected and declined slightly in all three categories. Also when the U.S. went into a recession in the late 2000s and finally began to climb out in 2009, the numbers fell off especially a considerable amount for state total taxes. A simple regression below shows the three variables dependent over the years:

Dependent Variable: YEAR
 Method: Least Squares
 Date: 04/30/11 Time: 12:46
 Sample: 1992 2009
 Included observations: 18

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1987.289	4.600541	431.9686	0.0000
INDIVINCOME	6.27E-06	2.63E-06	2.384653	0.0318
SALESGROSSRECEI				
PTS	5.58E-06	2.25E-06	2.481745	0.0264
TOTALTAXES	-3.82E-06	2.37E-06	-1.609362	0.1298
R-squared	0.934270	Mean dependent var	2000.500	
Adjusted R-squared	0.920185	S.D. dependent var	5.338539	
S.E. of regression	1.508224	Akaike info criterion	3.852873	
Sum squared resid	31.84638	Schwarz criterion	4.050734	
Log likelihood	-30.67586	Hannan-Quinn criter.	3.880156	
F-statistic	66.33042	Durbin-Watson stat	1.287476	
Prob(F-statistic)	0.000000			

Looking at the independent variables both individual income taxes and sales and gross receipt taxes are significant at the 5% level which is a good sign, however total taxes falls just outside the 10% level at around 13%, leading it to be insignificant. The R-squared which we look to be around 1 was pretty close and an acceptable stat at 0.934. One of the last pieces of data we look at for the regression is the Durbin-Watson stat, which in our case came in at 1.287. This number is slightly lower than we would have liked, a number closer to 2 would have been ideal but this isn't too far off so we'll take as acceptable.

The following regression we ran in EViews was to test the GARCH process, or Generalized Auto-Regression Conditional Heteroskedasticity. The GARCH process is a two-equation system composed of conditional mean equation and conditional variance equation. The variables we wanted to use to run this process was a dependent variable of d(totaltaxes) and an independent variable of d(indivincome). The results show:

Dependent Variable: D(TOTALTAXES)
 Method: ML - ARCH (Marquardt) - Normal distribution

Date: 04/30/11 Time: 13:16
Sample (adjusted): 1993 2009
Included observations: 17 after adjustments
Convergence achieved after 120 iterations
Presample variance: backcast (parameter = 0.7)
GARCH = C(3) + C(4)*RESID(-1)^2 + C(5)*GARCH(-1)

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	27904.81	164780.0	0.169346	0.8655
D(INDIVINCOME)	1.351085	0.210529	6.417571	0.0000
Variance Equation				
C	6.14E+10	1.60E+11	0.382770	0.7019
RESID(-1)^2	-0.193143	0.568114	-0.339973	0.7339
GARCH(-1)	0.562522	1.428121	0.393890	0.6937
R-squared	0.825968	Mean dependent var	404016.5	
Adjusted R-squared	0.814366	S.D. dependent var	761101.7	
S.E. of regression	327922.4	Akaike info criterion	28.64683	
Sum squared resid	1.61E+12	Schwarz criterion	28.89189	
Log likelihood	-238.4980	Hannan-Quinn criter.	28.67119	
F-statistic	17.79782	Durbin-Watson stat	2.404827	
Prob(F-statistic)	0.000015			

We believe that this was a better regression to run as for the independent variable for the equation fell under the 1% significance level which proves to be stronger than both variables from the previous example. Also the Durbin-Watson stat was much stronger in this regression at 2.40. The only figure to decline in value was the R-squared which decrease down to 0.8259; however we still believe this to be an acceptable figure as it is still close to its goal of 1.

To sum up the figures in the state taxes for Connecticut for the previous eighteen years we believe an important note is that the increase will need to slow down in the upcoming years as total state taxes can't be doubling so quickly. The budget proposal for Connecticut by the Governor for the next two fiscal years is the next piece of information we will look into on how state officials will try to do their best in helping the state and its people. The budget proposal first includes an investment in job creation, cuts in spending, concessions from state employees and taxes increases as well, and to keep a safety net intact and supporting business and industry as jobs are created (State of Connecticut, 2011).

If done right, such accomplishments can be done throughout 2012 and 2013; however is it all too much, too fast? Implementing change too quickly could back fire and lead to uneasiness for the people of the state, the taxpayers. Malloy to this point has had continued efforts to make government less costly and more efficient by up to this point decreasing his

executive staff by 15%, and looks in the future to reduce the number of budgeted state agencies from 81 to 51, which is a 30% drop (State of Connecticut, 2011).

Jobs remain a strong focus for this proposal as the economy is slowly strengthening and the unemployment rate for the state of Connecticut and the national unemployment rate remain high. In his efforts for creating and retaining jobs in the state Malloy proposed a new program called the "First Five." This program will offer incentives for companies that will create at least two hundred jobs within the state (State of Connecticut, 2011). In his efforts to help repair and boost the states aging transportation infrastructure, he is proposing over a billion dollars in capital investments as well as another \$130 million for affordable and supportive housing, and an additional \$15 million for tourism marketing to help bring more visitors to the state of Connecticut (State of Connecticut, 2011). We agree with these proposals because if the transportation infrastructure is refurbished, maybe more travelers will use these lines of transportation to bring in more money to the state. Also if more marketing for tourism brings in more outsiders into the state then they will be spending money within Connecticut for the businesses of the state which is also a great idea for boosting funds for businesses which could lead to more jobs created. Our only concern with these proposals is the amount of money he proposes to put into them (over a billion dollars for the transportations aspect) as this would be adding more debt to the state for the time being.

Another key point the proposal addresses is to protect local services. It goes on to state that cities and towns will all receive the same level of Education Cost Sharing funding as they did a year ago which will further benefit from receiving a portion of tax revenue from local sales (State of Connecticut, 2011). This portion of the proposal will enable these cities and towns to achieve additional revenue without raising property taxes which then benefits all taxpayers as increases shouldn't occur from last year. An additional aspect to the budget is that it "protects the most vulnerable Connecticut residents by avoiding major service reductions in safety net programs, funding caseload growth for Medicaid, the Department of Children and Families, the Department of Developmental Services and the Department of Mental health and Addictions Services" (State of Connecticut, 2011).

The last factor in Governor Malloy's budget proposal is a spending reduction of roughly \$758 million. A couple of examples given in the proposal for this reduction include an elimination of the unit that regulates charitable gaming, and also an elimination of outside management contracts for CT Transit. In addition to these eliminations, he estimates risk reduction credits for inmates will help save Connecticut \$3.8 million a year, while state employees are also being asked to find \$1 billion in savings and concessions annually (State of Connecticut, 2011). This number seems somewhat high for state employees on a year to year basis to find in savings which could make it difficult for them.

To sum up the proposal, Governor Malloy wants to help put Connecticut back on the right path with a series of propositions over the next couple of years that affects everybody, not just one class of citizens. To quote the Governor, "I've spoken at length about shared sacrifices, and I think this budget explains what that means- I'm asking for a little from everyone to avoid overburdening any one group. And I refuse to balance the budget on the backs of the local

taxpayers” (State of Connecticut, 2011). Going after state employees to find savings we believe is one important aspect touched upon within this proposal because it should make all others who aren’t state employees and taxpayers happy that they aren’t being the only ones hit with higher taxes. However the key question remains with the budget proposal and we will have to wait and see how it all pans out over the next couple of years; is it too much too fast? At the end of fiscal year 2013 we will have an idea of the answer to this question.

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4. The Housing Market: Expecting a Rebound?

by **Matthew Choiniere, Adrianna Bianco, Lusiano Dadario, Mario Valenti, Agata Witelus**

State labor officials say unemployment in Connecticut jumped in March as 6,000 jobs were lost. The Labor Department has said that non-farm employment was a little more than 1.6 million. Unemployment rose to 9.1 percent, up from 9 percent. The most recent national rate is 8.8 percent, but labor statistics supervisor Salvatore DiPillo said there were fewer new unemployment claims. The private sector workweek also increased. The Labor Department says jobs in the professional and business services sector were down 3,700 jobs in March. Construction employment was off by 1,600. There were 1,000 fewer jobs in the leisure and hospitality sector. Additionally, the government has added 600 jobs. State labor officials say volatility in monthly labor force numbers and changes in statistical work by the U.S. Bureau of

Labor Statistics contribute to monthly changes. The number of employed workers in the state dropped to 1,617,800 last month from 1,623,800 in February, sending the unemployment rate upward one-tenth of one percent. The state has gained 21,100 jobs in the past 12 months on a seasonally adjusted basis. "We lost 6,000 jobs, exactly the same number of jobs we added in February -- and they came out of the same industries in which they were added," said Salvatore DiPillo. The construction industry and the professional and business services sectors were the biggest losers.

The construction sector added 2,000 jobs in February, but then lost 1,600 job last month. "We saw an atypical increase in employment in construction jobs in January and February," DiPillo said. "Part of that could be the improving economy, but we also saw a lot of structural damage from snow and winter weather." The state's professional and business services sector also see-sawed between gains and losses since the beginning of the year. "In the professional and business services, we added 3,600 jobs in January and another 3,500 jobs in February, but then the sector lost 3,700 jobs last month." A lot of the increase was in employment agencies and temporary jobs, but the overall trend is still upward," he said. Month to month variations in the data are to be expected. Job totals are based on a monthly survey of a sample of employers and are adjusted to eliminate seasonal variations. The state's estimated unemployment rate, on the other hand, is based on a separate household survey, "With this in mind, a number of other indicators do point to an improved Connecticut economy over this past year -- fewer new claims for unemployment, fewer unemployed people and job growth overall, and a longer private sector workweek," DiPillo. The U.S. economy gained 216,000 jobs last month, and the national jobless rate dropped to 8.8% in March from 8.9% in February.

New home construction is off to a slow start this year. Through the first three months of 2011, towns and cities in Connecticut issued 442 permits for single-family houses, condominium units and apartment units, down nearly 21 percent compared with 558 for the same period a year ago, according to a new report Tuesday from the state Department of Economic and Community Development. In March, the number of permits was flat, at 222 compared with 223 for the same month in 2010. The weak start this year comes after permit activity increased nearly 8 percent in 2010 compared with the previous year -- raising hopes that demand for new homes was gaining momentum. Unemployment in Connecticut, however, remains higher than the national rate.

The report on permits came on the same day that the S&P/Case-Shiller Home Price Indices were released showing further weakness in home prices in the country's largest metropolitan areas in February. Home builders nationally remain reluctant to pursue aggressive construction projects because the inventory of foreclosed properties on the market is holding down prices.

Construction reports for Connecticut are based on a monthly survey of 128 municipalities in the state by the U.S. Census Bureau. Once a year, the Census collects data from all 169 towns and cities in the state for an annual count. Trends in the monthly reports typically have mirrored the annual count.

Connecticut's Real Estate market has been experiencing a steady slowdown in home prices since 2006 when the U.S. mortgage foreclosures began to raise. Besides the increasing foreclosures state and country wide, Connecticut's Real Estate home prices have also been affected by the sluggish economy, large unemployment rate, rising gasoline prices, overall lower home purchasing demand and some other factors.

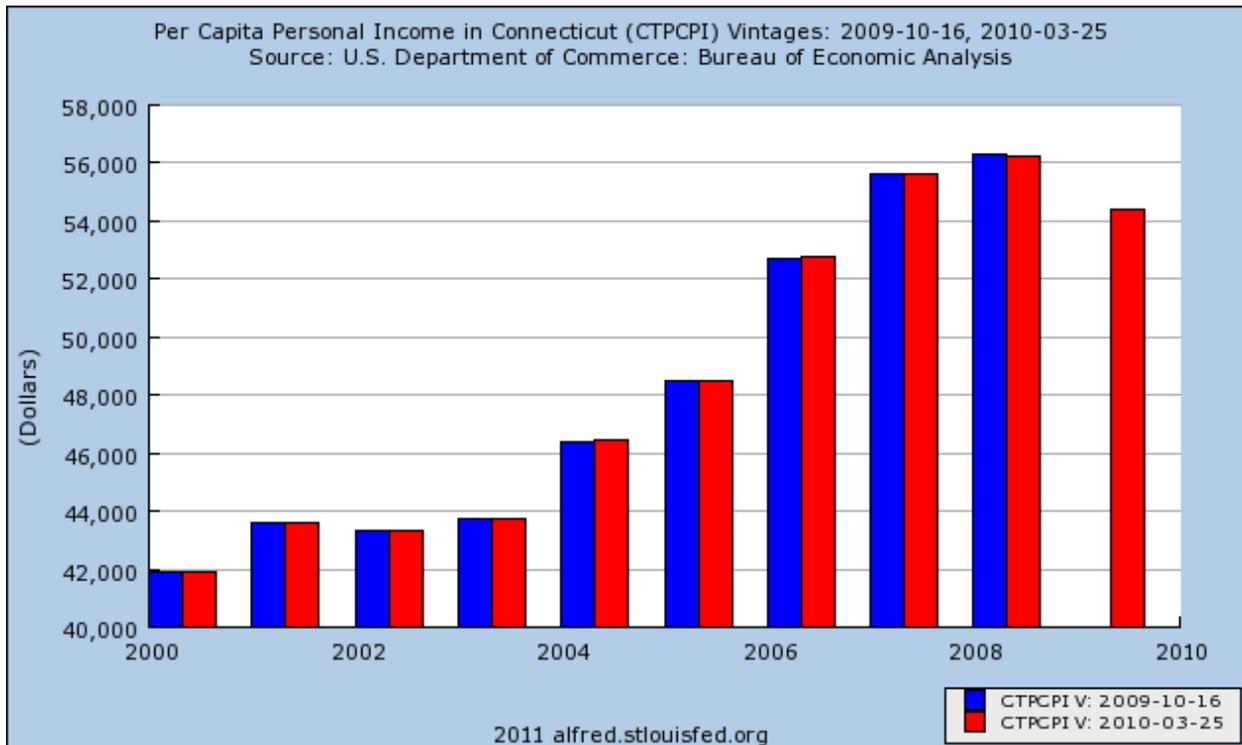
The recent U.S. economic slowdown initiated massive layoffs and ultimately a hefty unemployment rate in the whole country. The unemployment rate reached over 9% in Connecticut forcing many families into foreclosures. Foreclosed residencies have a negative effect on surrounding properties as they decrease the value of home prices. Home values are estimated based on historical sale prices within a zip code. A foreclosed home will sell for a fracture of its actual value dragging down the prices of surrounding homes in the area. Given that Connecticut experienced increased amount of home foreclosures in the last 3 years alone, home prices have been on a decline. In addition to that, home owners of properties that lost much of their value due to the surrounding foreclosures are experiencing negative equity of their homes or, in other words, the home owners owe the lender more than the property is worth and often times proceed with short sales of their homes. Short sales will also bring down surrounding property values on the Real Estate Market.

Although the foreclosure frenzy in Connecticut is not as severe as it is in the four so-called sand states (Arizona, California, Florida, and Nevada) Connecticut has experienced steep home price declines in the last few years and unless foreclosures, economic recovery, unemployment rate and increasingly skyrocketing fuel prices are not improving, the state has yet many more declining property values to experience. And for example, the increasingly escalating fuel costs have a large impact on the housing market as well. As the potential new home owners and first time home buyers are becoming more sensitive to raising gasoline prices, home buying is becoming a less attractive option and substitutes such as rentals are becoming a better option.

Besides that, mortgage brokers and banks make it very difficult for the potential buyers to obtain a mortgage. Mortgage applicants are faced with very strict credit requirements and precise income approvals. The rigid mortgage approval requirements combined with increasing fuel and living prices make home buying in Connecticut a declining activity.

Mortgages were not always a very difficult loan to obtain. A few years ago, before the recent financial crisis, mortgage approval rates skyrocketed and any person who showed some income was mortgage approved. Mortgage brokers became very creative with variable interest rates and subprime adjustable rates assuring minimal risk to its clients. Many of the clients are now faced with foreclosures or forced into short sales on their homes for the reason that when interest rates fluctuated many home owners with adjustable rates were unable to make the monthly mortgage payments. In addition to that, sluggish economy increased the unemployment rate leaving many homeowners without jobs and therefore, without necessary funds to support mortgage payments.

CT Per Capita Income:

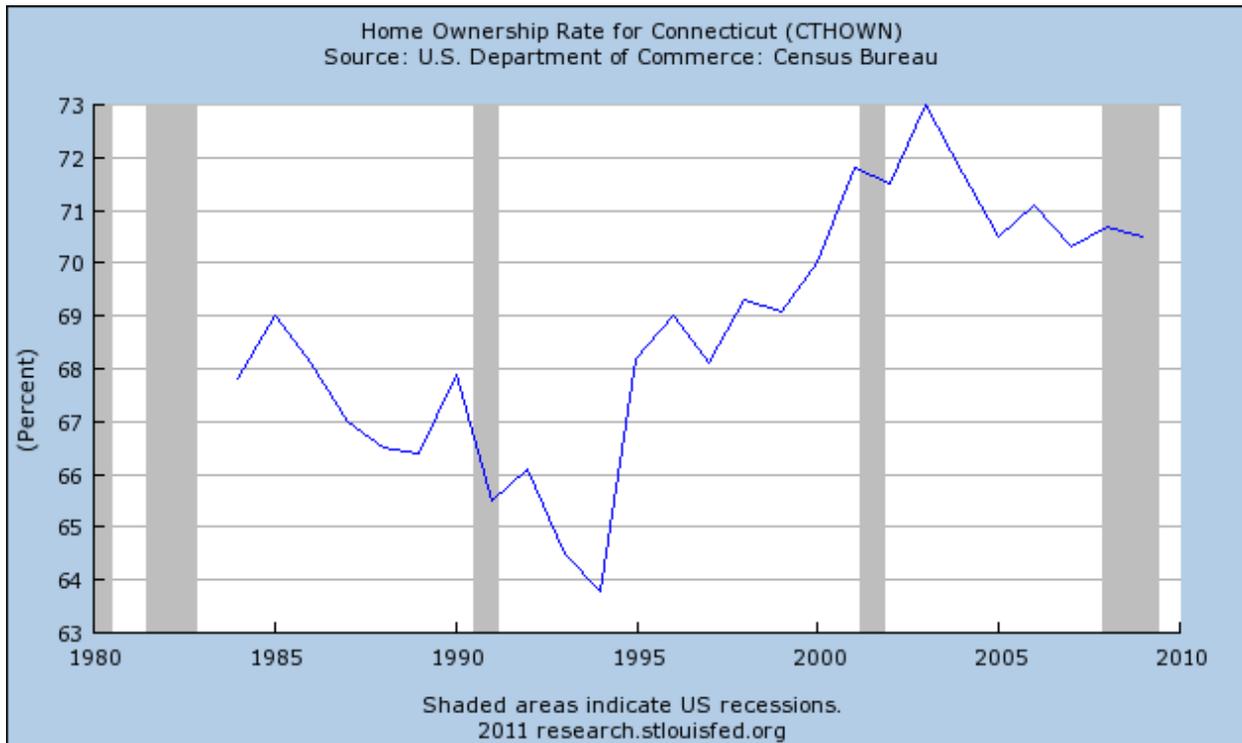


In our analysis of the housing outlook for Connecticut in the upcoming years we considered per capita income as an independent variable. Connecticut has been known to have some of the richest towns in the country. To the contrary it also has some of the poorest and dangerous. In 2007 for example the US Census Bureau, ranked Connecticut number 1 in Per Capita Income by State (\$54,117). There was also another study done by the US Census Bureau which compared the Per Capita income of Connecticut, United States Average, and New England Average. Every year since 1969 Connecticut has surpassed both the US and New England in per capita income. In 2008 Connecticut's per capita income was 42% higher than the US average and 15% higher than the New England average. The state looked like it had a great future ahead of it besides the increasing budget deficit it had been accumulating. Then things began to get a rocky not only for Connecticut but for the entire United States, which rippled until eventually everyone around the world was affected.

Since 2008 the unemployment rate has been on a steady climb. With this climb per capita income has been affected all around the United States. Some of the worst came in 2009 when the National Average Per Capita Income fell by 1.7%. Though Connecticut's Per Capita Income has been growing there has been a decline in the growth rate each year since 2006 where the growth rate was at 7% for 2 years then decreased to 2%. This 5% year decline was larger than the national average. In 2006 the per capita national average growth rate was at 6%, then fell to 5%, and finally to 3% in 2008. The national average growth rate dropped 2% compared to Connecticut's 5% in 2008. This decreasing growth in Connecticut's per Capita income will have a negative correlation with housing market. With less money in income, consumer confidence and purchasing power will decrease (Though we have recently seen some increases in Consumer Confidence and purchasing power).

Based on the past statistical data the future outlook of the housing market according to Connecticut's Per capita Income depicts a slow recovery. There are many factors contributing to this that intertwine with Per capita Person Income. With the decreasing value of the dollar, inflation and the slight increase in per capita growth per year, Connecticut doesn't seem like it is growing as much as it would like to. There is a lot riding on the future housing market not only for Connecticut but for the United States.

Home Ownership Rate:



Another important factor in the economic outlook of Connecticut is the Home Ownership rate. When determining whether Connecticut's housing market is on the rebound, this variable is

extremely significant. Home ownership means more financial sustainability by those individuals purchasing homes. This means home buyers have more spending money and are comfortable financially when they purchase a home. In this table we see Connecticut's Home Ownership rate over the past 15 years. There has been a lot of volatility over the years as you can see with the graph above.

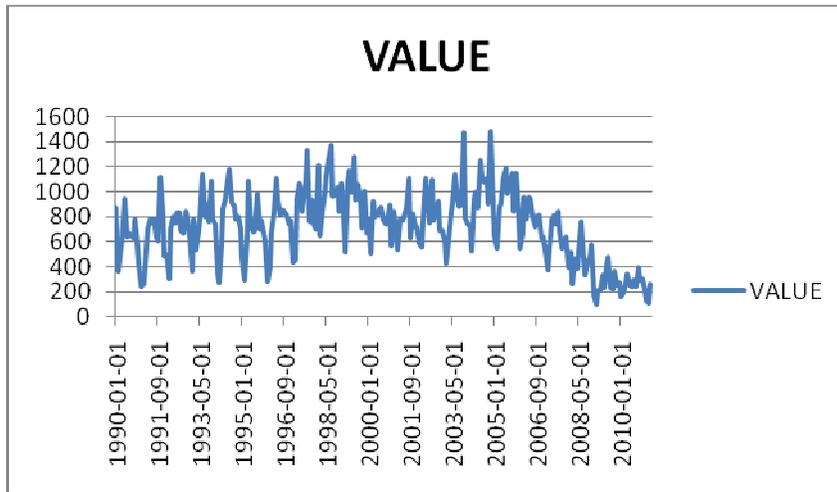
When looking at home ownership one must consider reason for certain spikes in home ownership. It makes these statistics less valid. For example when the US launched the first time home buyer tax credit, this tax credit forced first time home buyers into home ownership, when in reality they may not have been ready to do so. This tax credit was given to attempt to help the bursting housing bubble and credit markets which was currently tanking. However instead it put more pressure on first time home buyers who would inevitably not be able to afford their homes in a long run. In 2009 home prices hit record lows, and people were still not comfortable to purchase homes. This is a negative outlook for the future of the housing market. With current home ownership rates matching lows of the 80's Connecticut and the United States in general has to find a way to fix this problem for the future of the US economy. When the second phase of the Federal Reserve's Quantitative Easing (QE2) ends in June 2011 we will see how the economy responds, and hope it is in a positive manner.

While attempting to develop a forecast for the Connecticut Housing market, we felt it was significantly important to examine the number of privately owned housing starts in Connecticut and also, the number of new private housing units in the state. Because these variables are similar in nature, there is a similar correlation seen between the two.

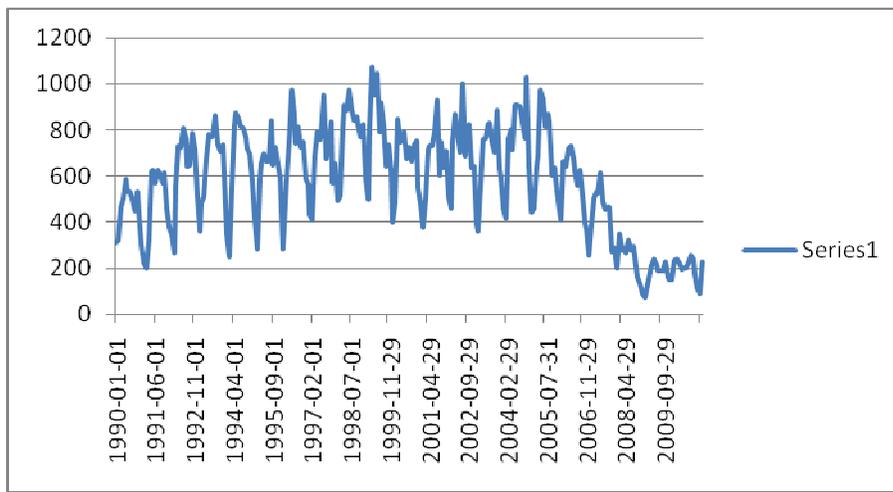
After examining data from the St. Louis Federal Reserve, it is evident that beginning in 2006, both variables began to progressively decrease. The overall cause of this can be attributed to the Global Financial Crisis and the collapse of the United States housing market in 2008. A substantial amount of foreclosures caused the mortgage industry to breakdown and the overall the number of homes being privately built in the United States diminished. Connecticut was one of the states that happened to suffer the most from these crises.

Data and Graphs:

New Private Housing Units



Privately Owned Housing Starts



Future Forecast

In April of 1999, the number of privately owned housing starts reached an all time high of 1,074. In February of 2009, approximately 10 years later, the number of privately owned housing starts decreased by nearly 1,000 units. As you can see, the mortgage crisis has hit the state of Connecticut extremely hard and since then, the road to recovery has been evident, but very slow and sluggish.

In a study performed in February of last year by OLR Research, several analysts believed that because of factors such as the extension of first-time homebuyer federal tax credits, low mortgage interest rates, the buyers' reaction to a decreasing housing supply within specific price ranges and towns, and an overall improving economy have led to small but positive changes in the Connecticut State Housing Market. However, in the same report these analysts have noted

that private construction and new housing starts haven't showed much sign of improvement. Consistent with their data, there has been little sign of improvement in either of these two variables throughout 2010 and thus far in 2011 present in our own data.

Other variables such as unemployment and the housing price index will play an importantly crucial role in the number privately built homes in Connecticut and will ultimately depict the future of the Connecticut State Housing Market. Overall, we do believe that we have seen the worst and we expect that the housing market will begin to slowly recover.

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5. The Financial Sector: Connecticut's Comparative Advantage?

by Tiffany Cifone, Adam Clay, Christopher Fanelli, Sean Klein, Thomas Sullivan

Connecticut is a state in America with a population of 3,518,288. Connecticut has become one of the financial leaders because of its close proximity to New York. Connecticut's pinnacle of its financial strength is the largest trading floor in the world, located at UBS in Stamford, Connecticut.

After reviewing the next few pages, one can see that since the economic turmoil Connecticut has begun to make great strides in its banking and financial sectors. Banks have seen an increase in assets as well as increases in income.

Because of these and other factors you will read, confidence in Connecticut's banking and finance sectors is seeing an exponential gain which mirrors the growth in their banks.

Commercial bank data in CT in the years ending 12/31/2007-2010:

Profitability Indicators

Net interest income is the difference between the revenue that is generated from a bank's assets and the expenses associated with paying out its liabilities (deposits). The excess revenue that is generated from the spread between interest paid out on deposits and interest earned on assets is the net interest income. In 2007, total commercial banks in the state of CT earned a net interest income of \$739,297,000. Total interest income received from all the CT banks assets amounted to \$1,441,773. And total interest paid out during the same period equaled only \$648,476. The net interest income of some CT banks is more sensitive to changes in interest rates than others. These numbers can vary according to several factors, such as the type of loans in the bank's total assets and the liabilities that are held. In 2008 the net interest income totaled \$2,267,247,000, increasing from 2007 levels by \$1,527,950,000 or an increase of 207%. In 2009, net interest income remained around the same level at \$2,267,000,000. And in 2010, net interest income totaled \$2,535,000,000, an increase of about 12%.

Net operating income after taxes at the end of 2007 was \$ 188,945,000. In 2008 operating income increased to \$ 230,063,000. In 2009, operating income retracted a little bit to \$230,000,000. In, 2010 operating income increased 55% to \$357,000,000 showing a robust measure of profitability back into the banking sector after the very unstable financial markets during the recession of 2007-2008. CT banks have rebounded quite a bit, showing signs of strength in the post recessionary conditions. Net interest margin during 2007 and 2008 remained at 3.25% and 3.46% respectively. During 2009 the interest margin surged about 24%, and in 2010 that number increased another 31%. Through the years of 2007-2010, bank assets increased significantly especially from 2009-2010 showing in huge increase of 774%. With that said, return on assets was very meager in 2007 and 2008 but picked up to about 4% in 2010. Return on equity in 2007 was 7.15% then increased during 2008 and 2009 to its 2010 level of 3.5%

The years of 2007-2010 were historically unstable financial market conditions and therefore many banks nationwide were unable to stay in business due to the amount of defaults on its loans among other banking conditions. The subprime loan market was a major if not the main cause of the financial crisis because these loans were given to Americans that had a history of either bad credit or in some cases needed no financial history of the persons income at all. CT banks did get affected by the crisis just as everyone else in the financial system did but perhaps it rebounded to now show solid financial strength and growth.

Bank Solvency Measures

To analyze the state of Connecticut's banks solvency measures regulators can use two common ratios: Core Capital Ratio and Total Capital Ratio

Core Capital Ratio, also commonly referred to as Tier 1 Capital Ratio, is the core measure of a bank's financial strength. This measurement is used by regulators to evaluate a bank's Tier 1 capital to its Risk Weighted Assets. Regulators then use this information to asses

risk and to ensure that financial institutions are abiding by standards established by the Basel Committee on Banking Supervision (Basel). Tier 1 capital primarily consists of stockholders' equity. Basel set a minimum effective rate of 8.5%.

$$\text{Tier 1 Capital/Risk Weighted Assets} = \text{Core Capital Ratio}$$

Total Capital Ratio, like the Core Capital Ratio, measures a bank's financial strength. This ratio is also used by regulators but consists of Tier 1 and Tier 2 capital to its Risk Weighted Assets. Tier 2 capital consists of undisclosed reserves, revaluation reserves, general provisions, and subordinated term debt. Basel set a minimum total capital rate of 10.5%.

$$(\text{Tier 1} + \text{Tier 2})/\text{Risk Weighted Assets} = \text{Total Capital Ratio}$$

By analyzing these two ratios for all FDIC-Insured institutions in the state of Connecticut analysts can measure the state's financial health over time. In 2007, Connecticut's core capital ratio was 9.7% and the total core capital ratio was 11.9%. These two ratios show that the state banking health is adequately solvent but both of these ratios are very close to the requirements set forth by Basel. In 2008, Connecticut's core capital ratio was 12.8% and the total core capital ratio was 14.2%. Both ratios show an increase compared to the previous year indicating stronger solvency.

In 2009, Connecticut's core capital ratio was 13.4% and the total core capital was 14.7% continuing to show an increase in Connecticut banking strength. In 2010, Connecticut's core capital ratio was 14.1% and the total capital ratio was 15.3%. The increasing trend of both ratios over the past four years indicate that Connecticut has strong banking health and was not affected greatly by the recent financial crisis. Connecticut banks are adequately solvent and possess the capital requirements to protect themselves against a multitude of financial risks.

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Section 5: Appendix

Formulas:

Year Ending 12/31/2010

Profitability Indicators:

Net Interest Income = Total Interest Income - Total Interest Expense

NII = 3,293 - 758 = \$2,535 Billion

Net Operating Income after Taxes and Interest Payments = \$357 Million

Net Interest Margin = NII / Total Bank Assets

Net Interest Margin = 2,535 / 82,930 = .031

Net Operating Income After Taxes and Interest Payments = \$357 Million

Return on Assets = 357/82,930 = .004

Return on Equity = 375 / 10,830 = .035

Solvency Measures:

Core Capital Ratio = Tier 1 Core Capital / Risk-Weighted Assets
 $7,916 / 56,134 = 14.1\%$

Total Capital Ratio = Tier 1 + Tier 2 Capital / Risk-Weighted Assets
 $7,916 + 697 / 56,134 = 15.3\%$

Basel II Ratio = $6\% + 2.5\%$ = effective minimum of 8.5%
CT banks are adequately solvent compared to other banks

Minimum Total Capital Ratio = $8\% + 2.5\%$ = 10.5%

Equity Multipliers:

Measure Leverage and Risk

Total Bank Assets / Total Equity
 Capital
 $82,930 / 10,840 = 7.65\%$

Profit Margin = Net Income / (Total Interest Income + Non-interest Income)
 $357 / (3,293 + 734) = .089\%$

The Regional Banking Model has done well for Connecticut during the after math of the financial crisis.

Year Ending 12/31/2009***Profitability Indicators:***

Net Interest Income = Total Interest Income - Total Interest Expense
 $\text{NII} = 3,690 - 1,423 = \$2,267 \text{ Billion}$

Net Operating Income after Taxes and Interest Payments = \$230
 Million

Net Interest Margin = $\text{NII} / \text{Total Bank Assets}$
 $\text{Net Interest Margin} = 2,267 / 9,490 = .24$

Return on Assets = $230,000 / 77,549,000 = .003$

Return on Equity = $230,000 / 9,490,000 = .024$

Solvency Measures:

Core Capital Ratio = Tier 1 Core Capital / Risk-Weighted Assets
 $7,013 / 52,390 = 13.4\%$

Total Capital Ratio = Tier 1 + Tier 2 Capital / Risk-Weighted Assets
 $7,013 + 705 / 52,390 = 14.7\%$

Basel II Ratio = $6\% + 2.5\% =$ effective minimum of 8.5%
CT banks are adequately solvent compared to other banks

Minimum Total Capital Ratio = $8\% + 2.5\% = 10.5\%$

Equity Multipliers:

Measure Leverage and Risk

Total Bank Assets / Total Equity
 Capital
 $77,549 / 9,490 = 8.17\%$

Profit Margin = Net Income / (Total Interest Income + Non-interest Income)
 $230 / (3,690 + 713) = .052\%$

The Regional Banking Model has done well for Connecticut during the aftermath of the financial crisis.

Year Ending
 12/31/2008

Profitability Indicators

Net Interest Income = Total Interest Income - Total Interest Expense

NII = 2,267,247,000

Net Operating Income after Taxes and Interest Payments = 2.3E+08

Net Interest Margin = NII / Total Bank Assets

NII = 2267247000

Total Bank Assets = 65,513,384,000

Net Interest Margin = 0.034607386

Return on Assets = 0.003511695

Return on Equity 0.025680724

8,958,587,000

Solvency Measures

Core Capital Ratio = Tier 1 Core Capital / Risk-Weighted Assets

Tier 1 Core Capital = 6,718,744,000

Risk-Weighted Assets = 52,648,986,000

12.76%

Total Capital Ratio = Tier 1 + Tier 2 Capital / Risk-Weighted Assets

Tier

1 6,718,744,000

Tier

2 747,350,000

Risk Weighted Assets 52,648,986,000

14.18%

Basel II Ratio = 6% + 2.5% = effective minimum of 8.5%

CT banks are adequately solvent compared to other banks

Minimum Total Capital Ratio = 8% + 2.5% = 10.5%

Equity Multipliers

Measure Leverage and Risk

Total Bank Assets / Total Equity Capital

Total Bank Assets = 65,513,384,000

Total Equity Capital = 8,958,587,000

7.31291486

Profit Margin = Net Income / (Total Interest Income + Non-interest Income)

Net income = 230063000

Total Interest Income = 3622000000

Non-Interest Income = 589,768,000

0.054623854

Year Ending 12/31/2007

in millions

Profitability Indicators

Net Interest Income = Total Interest Income - Total Interest Expense

793,297

Net Operating Income after Taxes and Interest Payments =

188,945

Net Interest Margin = NII / Total Bank Assets

NII = 793,297

Total Bank Assets = 24,424,463

Net Interest Margin = 0.0325

Return on Assets = 0.79%

Return on Equity 7.15%

Solvency Measures

Core Capital Ratio = Tier 1 Core Capital / Risk-Weighted Assets

Tier 1 Core Capital = 1,867,988

Risk-Weighted Assets = 19,232,527

9.71%

Total Capital Ratio = Tier 1 + Tier 2 Capital / Risk-Weighted Assets

Tier 1 1,867,988

Tier 2 431,779

Risk Weighted Assets 19,232,527

11.96%

Basel II Ratio = 6% + 2.5% = effective minimum of 8.5%
CT banks are adequately solvent compared to other banks

Minimum Total Capital Ratio = 8% + 2.5% =
 10.5%

Equity Multipliers

Measure Leverage and Risk

Total Bank Assets / Total Equity Capital

Total Bank Assets =	24,424,463
Total Equity Capital =	2,653,772
	9.20367801

Profit Margin = Net Income / (Total Interest Income + Non-interest Income)

Net income =	188,945
Total Interest Income =	1,441,773
Non-Interest Income =	234,046
	0.112747856