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Oklahoma Economy 2012: Looking Backwards and Forwards

by

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Executive Summary

Since the end of the Great Recession, consistent growth in U.S. real gross domestic product (GDP) has returned it to levels slightly above the pre-recession peak. Real GDP is forecast to continue to grow in 2012 and 2013, though at a pace below trend growth. Payroll employment in contrast lies well below the peak achieved prior to the recession. Weak GDP growth combined with strong productivity growth is responsible for the sluggish growth in employment, a pattern that also was evident following the recessions of 1990-1991 and 2001. Continued subdued employment growth of 1.1 percent is expected in 2012, rising to a more robust pace of 1.6 percent in 2013.

The Oklahoma economy was late into the recession but emerged from recession into recovery at the same time as the national economy. The absence of a housing market bubble and energy prices that initially ran counter to the national economic cycle were responsible for Oklahoma's relatively stronger economic performance during the recession. According to U.S. Bureau of Labor Statistics Current Employment Statistics data, Oklahoma's total nonfarm employment growth greatly exceeded that of the nation during the middle of 2011. Average annual Oklahoma nonfarm employment is forecast to finish 2011 two percent higher than that of 2010. Growth is forecast to slow to 1.8 and 1.4 percent in 2012 and 2013, only reaching the pre-recession peak in 2013.

The employment cycles of the state's two largest metropolitan areas fairly closely follow the state cycle, particularly that of the Oklahoma City metropolitan area. Only in the Tulsa metropolitan area is employment growth forecast to accelerate and rise above that of the state. Forecasted quarterly employment growth in the Oklahoma City metropolitan area will exceed that of the state by the end of 2012.

Oklahoma counties with a strong presence of energy production or manufacturing are not forecast to generally differ from other counties in the state in terms of employment growth. Counties dependent on agriculture though are forecast to have lower nonfarm payroll employment growth. Yet, remote rural counties are forecast to grow faster if they are not dependent on agriculture. Another pattern is those with persistently high rates of child poverty are forecast to have slower growth.

Despite the positive momentum in the economy, considerable uncertainty remains. A worsening debt crisis in Europe, slowing growth in China, and policy mistakes in the U.S. could derail the recovery and send the economy back into recession. IHS Global Insight assesses the probability of the U.S. economy falling back into recession at 30%. Oklahoma employment is forecast to decline nearly 0.3 percent under this scenario, approximately two percentage points lower than the baseline forecasted growth rate.

National Economic Conditions

Following two years of decline during the longest and most severe economic contraction since the Great Depression, U.S. real gross domestic product (GDP) increased three percent in 2010 (Figure 1). Long and severe declines in economic activity have historically characterized the aftermath of financial crises. U.S. GDP is forecast to finish the year 2011 at a level 1.7 percent higher than in 2010. Real GDP growth is forecast to continue at approximately the same growth rate (1.8 percent) in 2012, moderately accelerating to 2.4 percent in 2013.

While the losses in real GDP experienced during the Great Recession have since been recouped, U.S. payroll employment lies well below the peak attained prior to the onset of the recession. Following the pattern established during the 1990-1991 and 2001 recessions, employment has been slow to recover. During what has been referred to as "jobless recoveries," employment continues to decline early in the recovery phase and only gradually begins to increase later. The causes of jobless recoveries are a combination of weak real GDP growth and strong productivity growth. Only as GDP growth strengthens and cyclical productivity gains are exhausted, does employment begin to grow robustly.

U.S. payroll employment is forecast to finish 2011 one percent higher, and only grow about 1.1 percent in 2012. These rates approximate the growth rate in the labor force and should leave the unemployment rate largely unaffected over this period. Only in 2013 is employment forecast to grow more robustly, at a rate of 1.6 percent. The unemployment rate is only expected to approach the full employment level by the end of the decade.

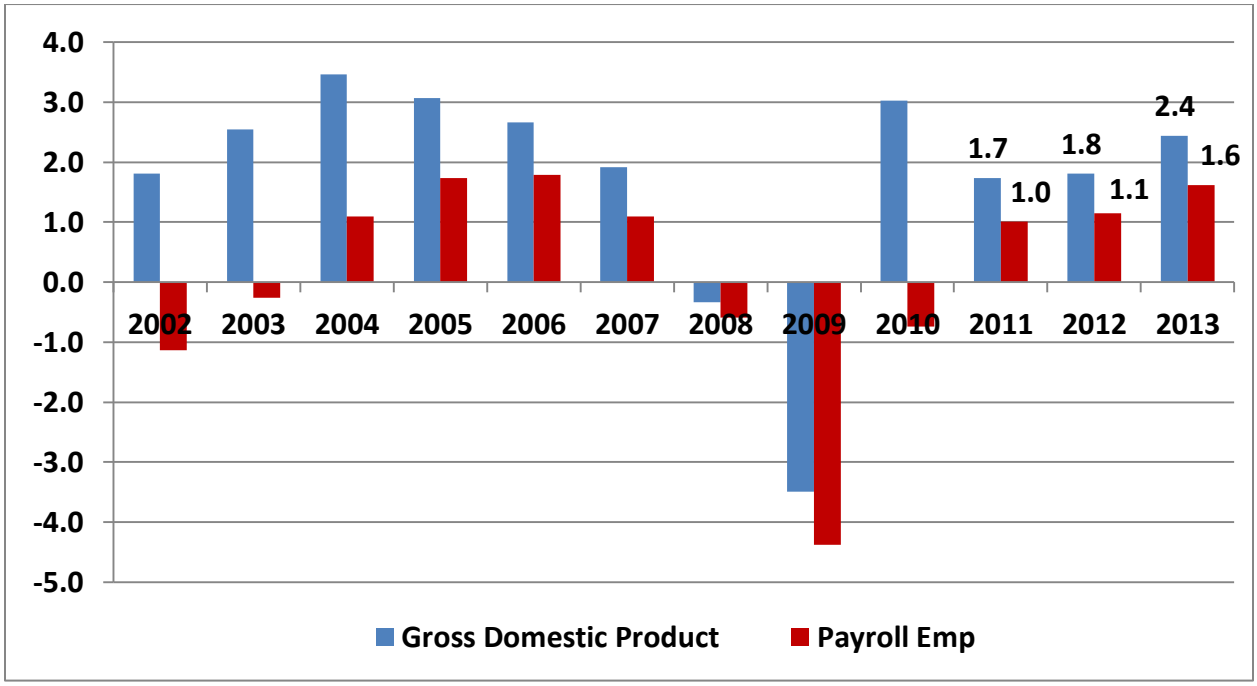

Figure 1. U.S. Real GDP and Payroll Employment Growth: Percent Change

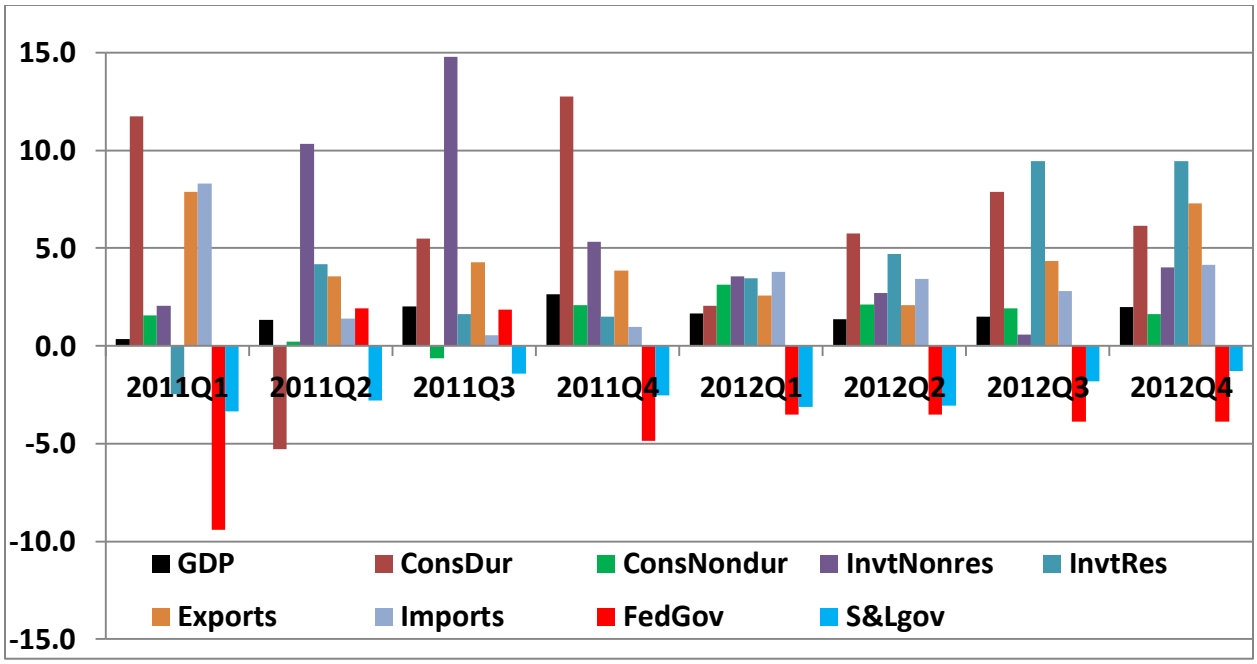

Figure 2. U.S. Real GDP Component Growth: Percent Change

As shown in Figure 2, the fastest growing spending components in 2011 were nonresidential investment, durable consumption and exports. Spending in nonresidential investment in part reflected spending related to energy development. The largest drags on the economy were the spending declines by local, state, and federal governments. In 2012, strong growth in spending is forecast by the end of the year for residential investment, durable consumption, and exports. Negative growth in the government sectors is forecast to continue but at more moderate rates.

The energy sector is expected to remain strong, though with growth moderating in 2012. As shown in Figure 3, the price of West Texas Intermediate Oil is forecast to decline slightly by the end of 2012, but then rise sharply by the end of 2013 with the strengthening of the national economy. The price of natural gas (Henry Hub) is forecast to increase robustly throughout both years. Clearly, these energy price forecasts are sensitive to the resulting economic growth in the country and world, and geopolitical events as evidenced by recent tensions with Iran. Stronger than expected economic growth in 2012 would shift some of the forecasted prices increases for 2013 into 2012. Likewise, increased uncertainty in the energy markets could cause prolonged rises in energy prices. However, significant downside risks also exist such as the unfolding debt crisis in Europe and the slowing of growth in China.

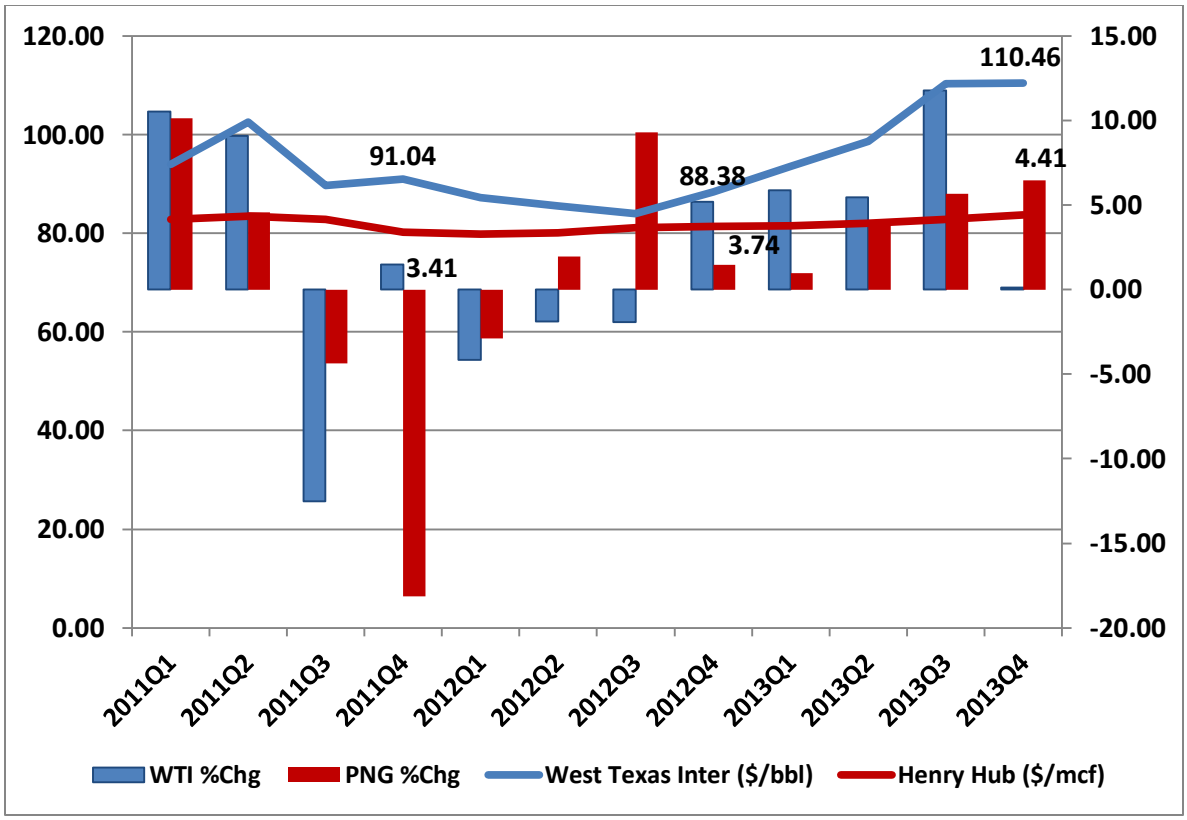

Figure 3. Energy Price Forecasts

Figures 4 and 5 show forecasts of U.S. employment by sector. These are important to understand as they factor into the sector forecasts for the Oklahoma state and local economies. Following strong growth in 2011, employment in the Natural Resources and Mining sector is expected to become much more moderate in 2012 and 2013. Energy prices affect employment in the sector, but with a time lag. Thus, a large part of the sector growth benefit of the forecasted surge of energy prices at the end of 2013 is expected to occur in 2014. Following growth in 2011, employment in Durable Goods Manufacturing is expected to be flat in 2012 and decline slightly in 2013. Employment in both Nondurable Goods Manufacturing and Construction is expected to decline in 2012, but increase mildly in 2013.

Employment growth in both the Retail Trade and Wholesale Trade sectors is expected to strengthen in each of the next two years. Health Services employment growth is forecast to hold steady at approximately two percent. Corresponding to forecasted declines in spending, employment is forecast to decline in both State and Local Government and Federal Government in 2012, though slight gains are forecast for State and Local Government in 2013.

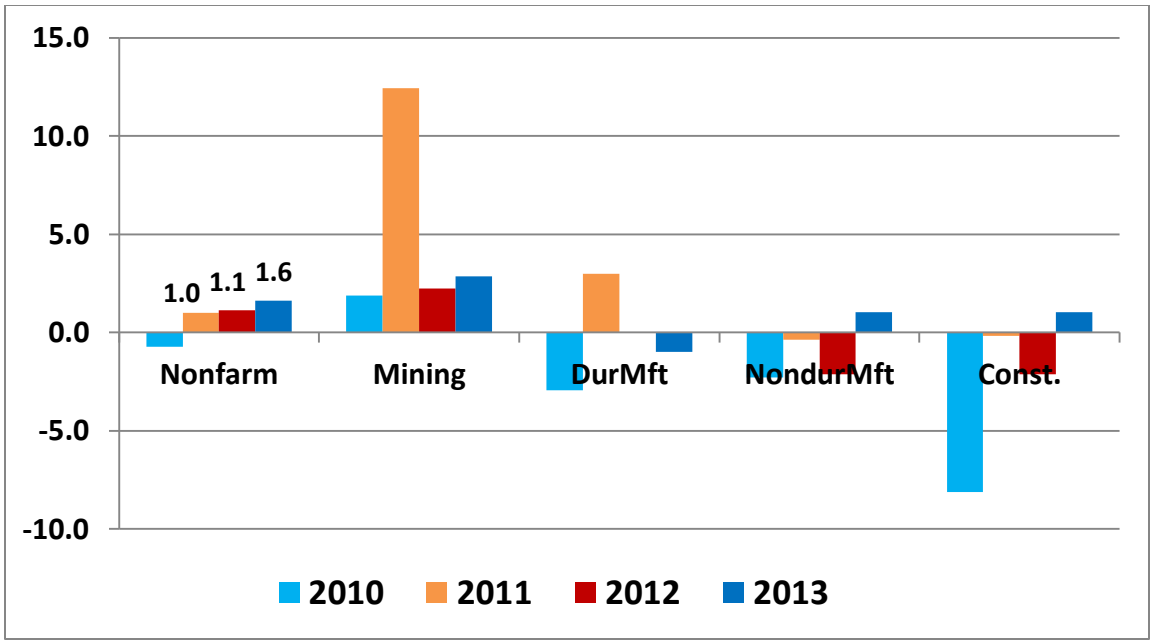

Figure 4. U.S. Employment Forecasts, Total Nonfarm and by Sector: Percent Growth

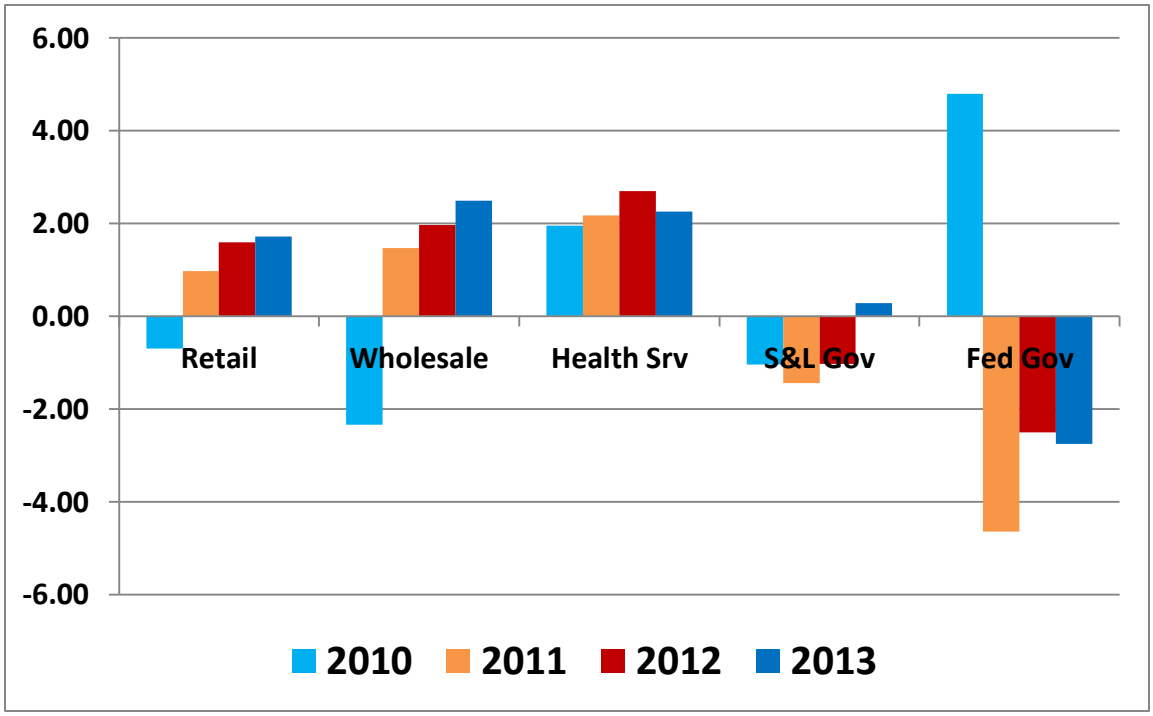

Figure 5. U.S. Employment Sector Forecasts: Percent Growth

Oklahoma Economy

The Oklahoma economy lagged behind the nation in falling into recession (Figure 6). While the national economic recession began in December of 2007, the first negative quarterly growth rate in Oklahoma did not occur until the fourth quarter of 2008. Two primary factors accounted for the disparity. First, the regions that led the nation into recession were those that experienced the largest housing market bubbles. Second, energy prices initially ran counter to the national economic cycle.

Areas in the southwest, southeast, northwest and Rocky Mountain regions of the nation saw rapid increases in housing prices, household leverage and booms in construction employment during the 2002-2006 period. However, when the housing bubble burst, many of these areas began to falter as wealth and consumer credit declined with the fall in housing prices, leading to spending declines on consumer durable goods and housing (Mian and Sufi, 2009). The declines in spending then spread across the nation as producers of consumer and housing goods elsewhere were adversely affected.

Natural gas and oil prices held up during the onset of the national recession, peaking in the second quarter of 2008. Subsequently, energy prices declined dramatically and Oklahoma and most other energy producing states fell into recession with the nation. In fact, Oklahoma experienced a quarterly negative employment growth rate approximately equal to the most negative rate experienced nationwide. Although Oklahoma was late going into recession, it emerged from recession at the same time as the nation.

As shown in Table 1, while over the 2001-2007 period Oklahoma ranked 23rd in job growth, over the 2007-2010 period Oklahoma had the eighth best employment growth performance (as reported by the U.S. Bureau of Economic Analysis). Three of the fastest growth states during the early period were among the bottom five in growth performance during the latter period. Michigan was among the slowest growing states in both periods. Four of the states faring the best in the latter period are significant energy producers.

Linear regression analysis of the state growth rates for the two periods confirms the above pattern (Table 2). During the 2001-2007 period the primary driver of employment growth was the natural amenity attractiveness of the state; i.e., its climate, topography and water coverage. Correspondingly, it was in these states where housing market bubbles emerged (Mian and Sufi, 2009). The bursting of the housing market bubble led these states to suffer the most during the recession. Using construction employment growth as a proxy for the size of the housing market bubble, the state with the largest housing market bubble was expected to have a 3.1 percent greater employment decline during the 2007-2010 period (and additional decline from natural amenity attractiveness). Amenity attractive states also declined because of the losses of income and wealth and reduced willingness to pay for higher quality of life (Cho et al., 2011). Energy

Table 1. U.S. State BEA Wage and Salary Employment Growth

		2001-2007 (%chg)			2007-2010 (%chg)
1	**Nevada**	23.3	1	North Dakota	4.6
2	**Arizona**	18.2	2	Alaska	1.7
3	Wyoming	16.2	3	South Dakota	0.0
4	Utah	15.9	4	Texas	-0.4
5	**Idaho**	14.9	5	Louisiana	-1.3
23	**Oklahoma**	**4.6**	**8**	**Oklahoma**	**-2.2**
46	Louisiana	0.1	46	**Idaho**	-8.0
47	Illinois	-0.1	47	**Michigan**	-9.6
48	Massachusetts	-1.5	48	Florida	-9.9
49	Ohio	-1.9	49	**Arizona**	-10.6
50	**Michigan**	-6.3	50	**Nevada**	-13.0

Table 2. Regression Analysis of U.S. State Employment Growth

	REGRESSIONS	
	2001-2007	**2007-2010**
Natural Amenity Ranking	Sig. positive (+3.7%)	Sig. negative (-1.0%)
Energy State	0	Sig. positive (+3.4%)
Farm State	Sig. positive (+4.9%)	Sig. positive (+2.6%)
Manufacturing State	0	Sig. negative (-2.8%)
Construction Employment 2002-2006 (%chg)	NA	Sig. negative [+0.7,-3.1]
R-Squared	0.51	0.66

Energy: AK, CO, LA, MT, ND, OK, TX, WV, WY

Farm: IA, MT, NE, ND, SD

Manufacturing: IL, IN, MI, OH, PA, WI

states had on average 3.4 percent greater employment growth. Manufacturing states also were more adversely affected in the latter period, while Farm states had higher growth in both periods.

Other factors were examined for their significance in explaining economic performance during the 2001-2007 period by Goetz et al. (2011). They examined employment growth, income inequality, poverty and per capita income across U.S. states and how they were related to governmental policies. The general conclusion of the study is that simple "race-to-the-bottom" policies in terms of reducing government taxes, easing regulations, and increasing the use of tax incentives do not improve economic performance. On the contrary, they found some evidence to suggest positive effects of investments in education and public infrastructure.

Recent employment growth in Oklahoma has greatly exceeded that of the nation, particularly during the second quarter of 2011 (Figure 6). Based on data through the third quarter of the year, employment is expected to have averaged two percent higher in 2011 when compared to 2010 (Figure 7). Growth is forecast to moderate to approximately 1.8 percent in 2012 and 1.4 percent in 2013. Only in 2013 does the level of employment exceed the peak established in 2008. The 2013 employment growth forecast is roughly on par with the forecast for the nation. The strong energy price growth in latter 2013 is expected to have most of its growth effect in 2014.

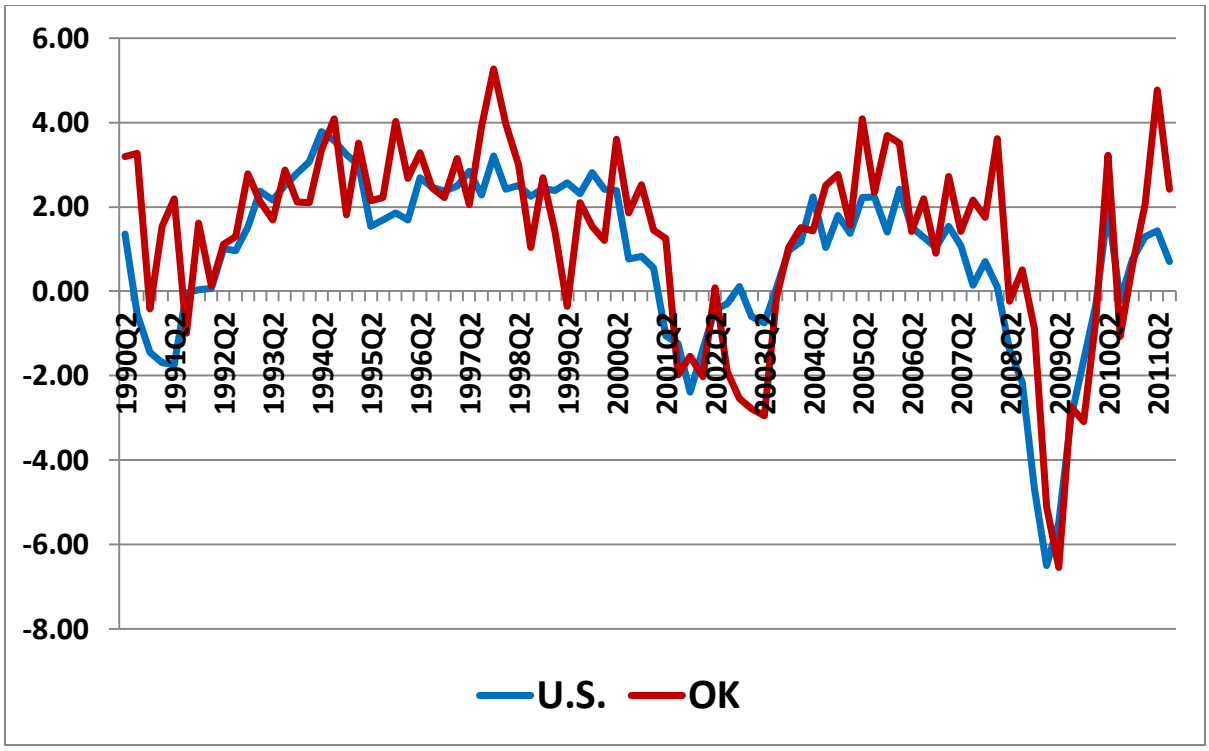

Figure 6. Quarterly U.S. and Oklahoma Nonfarm Employment Growth 1990Q1-2011Q3: (Seasonally-Adjusted Annualized Percent Change)

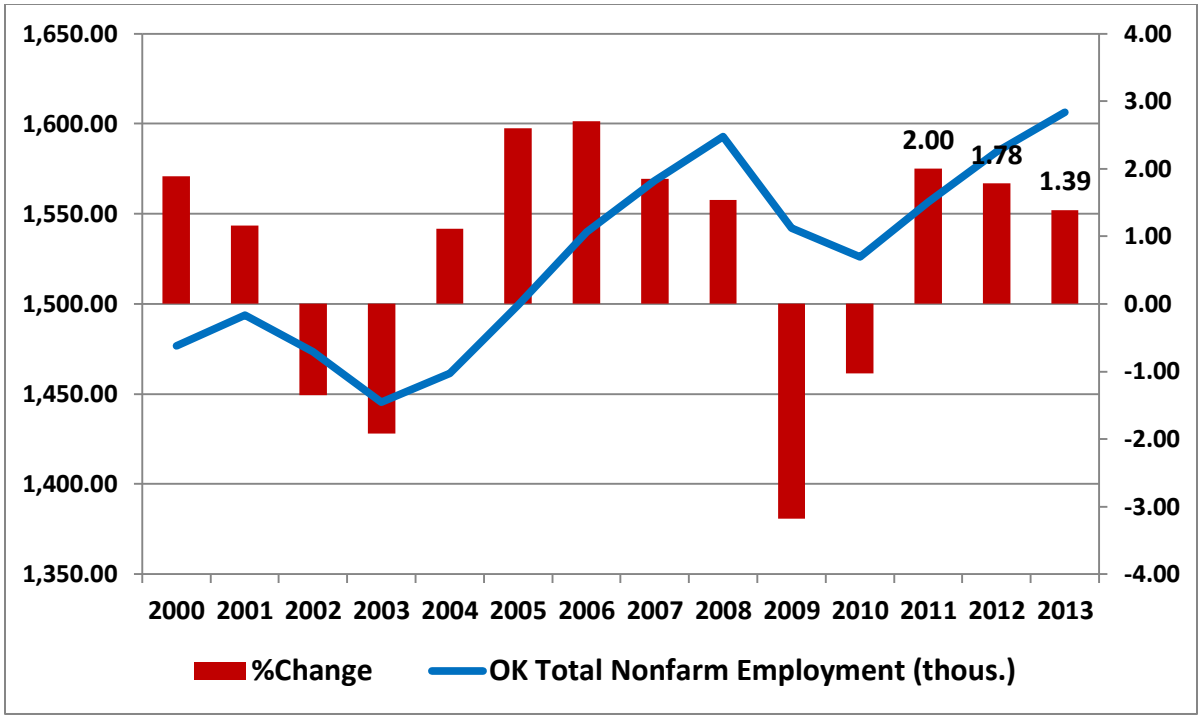

Figure 7. Oklahoma Total Nonfarm Employment: Level and Percent Change

Other states are likely to catch up to Oklahoma as the housing market bottoms out and improved national economic conditions lead to renewed household interest in natural amenities. Yet, any deterioration of quality of life that arose from fast growth in these states during the previous decade may limit their future growth (Rickman and Rickman, 2011). Likewise, strong world demand for energy could continue to boost growth in energy producing states.

Figures 8 and 9 display the forecasted growth rates of key sectors of the Oklahoma economy. Following the nation, employment growth in the Natural Resources and Mining sector is expected to moderate along with energy prices. Yet, any deviation in energy prices from the forecasts will greatly affect the forecast for employment in this sector. Employment growth in both Durable Goods Manufacturing and Construction is forecast to moderate over the next two years. Growth in Nondurable Goods Manufacturing is forecast to turn slightly negative over the period. State and Local Government employment is forecast to rise slightly as the state budget recovers, but this is highly dependent on the political process. Federal Government employment in the state is forecast to continue declining.

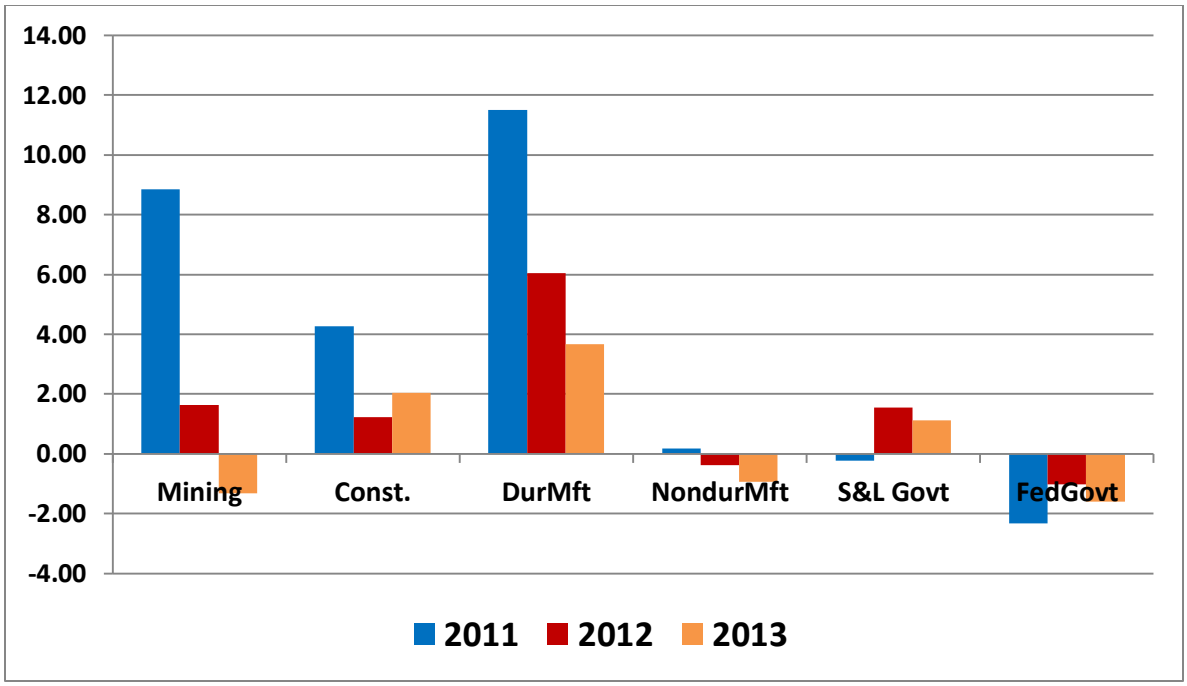

Figure 8. Employment Forecasts of Key Oklahoma Sectors

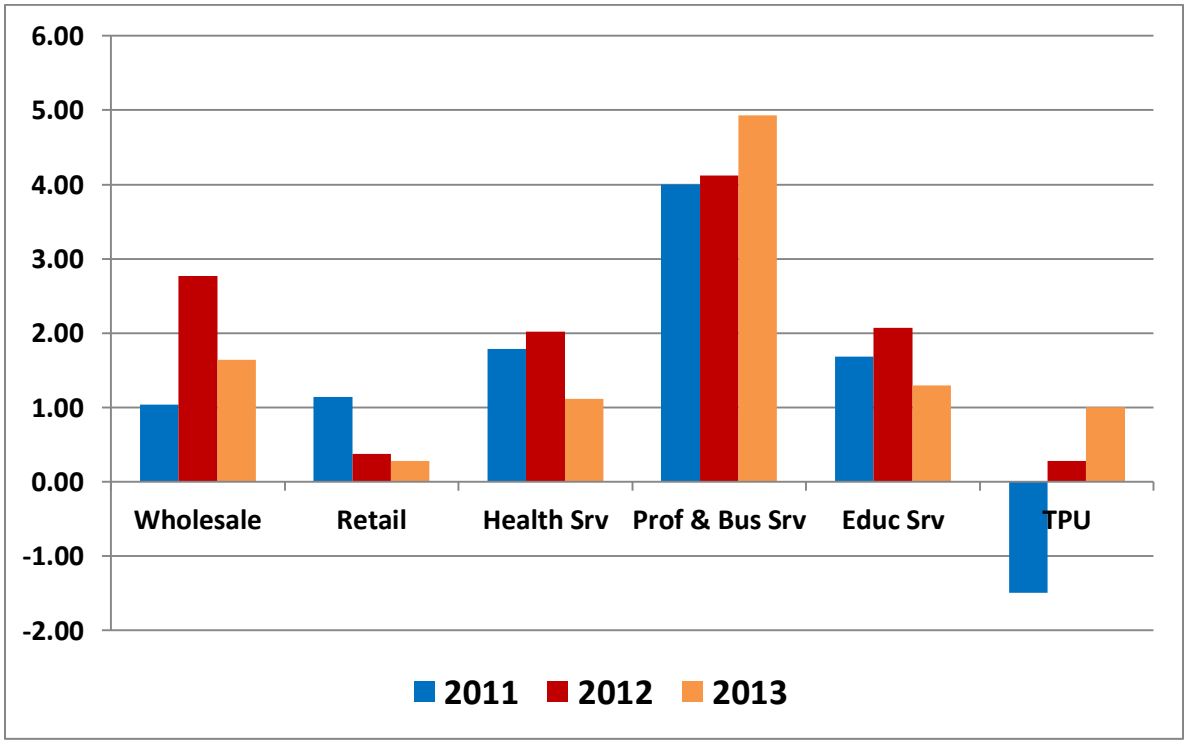

Figure 9. Employment Forecasts of Key Local Service Sectors in Oklahoma

Employment in the service sectors of the state, which often depends on the export sectors of the economy, generally is expected to grow over the next two years. Growth in Wholesale Trade is forecast to strengthen, while that in Retail Trade is forecast to ebb. Health Services and Education Services employment is forecast to continue at approximately the current pace in 2012, though slowing in 2013. Strong growth in Professional and Business Services is forecast to continue. Employment growth in Transportation Services and Public Utilities is forecast to turn from negative in 2011 to positive in 2012 and more robustly positive in 2013.

Following declines in 2009, both Real Personal Income and Nonfarm Real Gross State Product (GSP) increased in 2010. Based on data through 2010 from the U.S. Bureau of Economic Analysis (BEA), real GSP is forecast to increase approximately 4.7 percent in 2011, declining to 3.2 percent in 2012. Using BEA data through the second quarter of 2011, and the consumer price index for all urban consumers produced by the U.S. Bureau of Labor Statistics through the third quarter of 2011, real income is forecast to increase 3.1 percent in 2011, with growth declining to 2.8 percent in 2012.

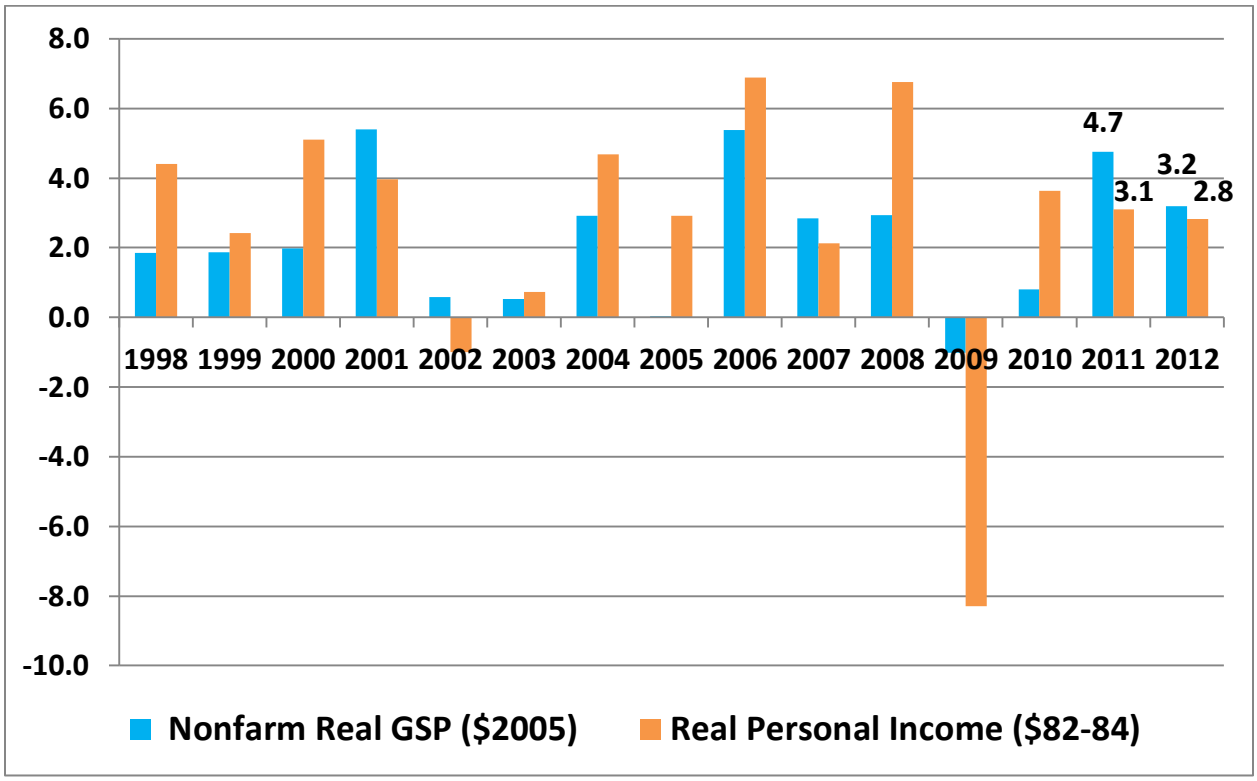

Figure 10. Real Personal Income and Nonfarm Real Gross State Product Growth (percent change)

Local Economies in Oklahoma

The employment cycles of the state's two largest metropolitan areas fairly closely follow the state cycle, particularly that of the Oklahoma City metropolitan area (Figure 11). This should not come as a surprise, because employment in the two metro areas comprises over 60 percent of state payroll employment. State employment growth in 2011 exceeded that of the metro areas, particularly during the second quarter.

Annual average employment growth for the state and the two metropolitan areas are displayed in Figure 12. Only in the Tulsa metropolitan area is employment growth forecast to accelerate, rising above that of the state. Although not evident in the annual growth numbers, forecasted quarterly employment growth in the Oklahoma City metropolitan area exceeds that of the state by the end of 2012.

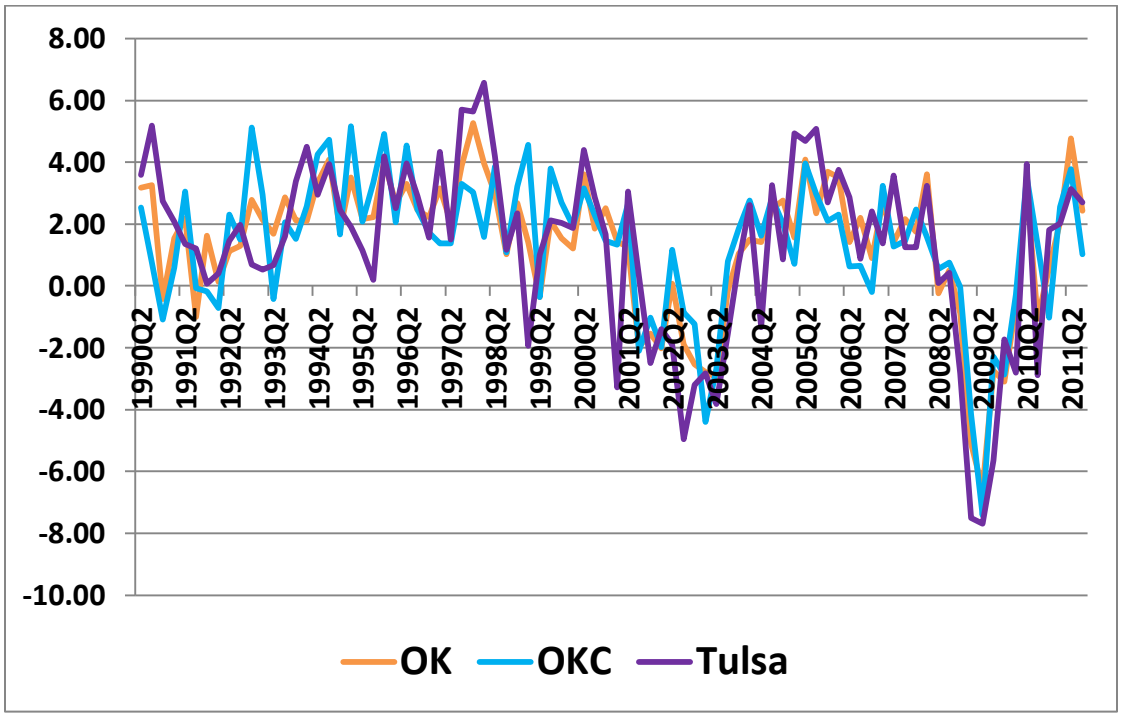

Figure 11. Quarterly Oklahoma, OKC and Tulsa Nonfarm Employment Growth (Seasonally-Adjusted Annualized Percent Growth)

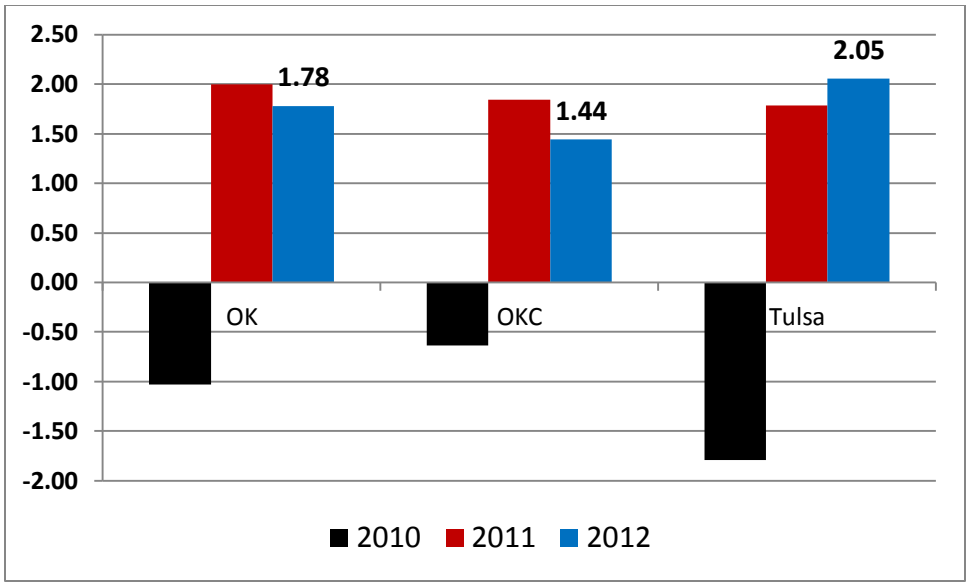

Figure 12. Annual Growth of Payroll Employment (percent change)

Figure 13 maps the forecasted employment growth rates across Oklahoma counties. Counties with a strong presence of energy production or manufacturing are not forecast to generally differ from the average county. Counties dependent on agriculture though are forecast to have lower nonfarm payroll employment growth. Yet, remote rural counties are forecast to grow faster if they are not dependent on agriculture. Among the many other types of counties, those with persistently high rates of child poverty (above 20 percent in the 1970, 1980, 1990 and 2000 Censuses) are forecast to have slower growth. Clearly, this result could derive from the factors that underlie the higher poverty rates. High poverty rates, however, likely exert a negative feed-back effect on employment, as they present challenges to work-force development in an increasingly competitive global economic environment."

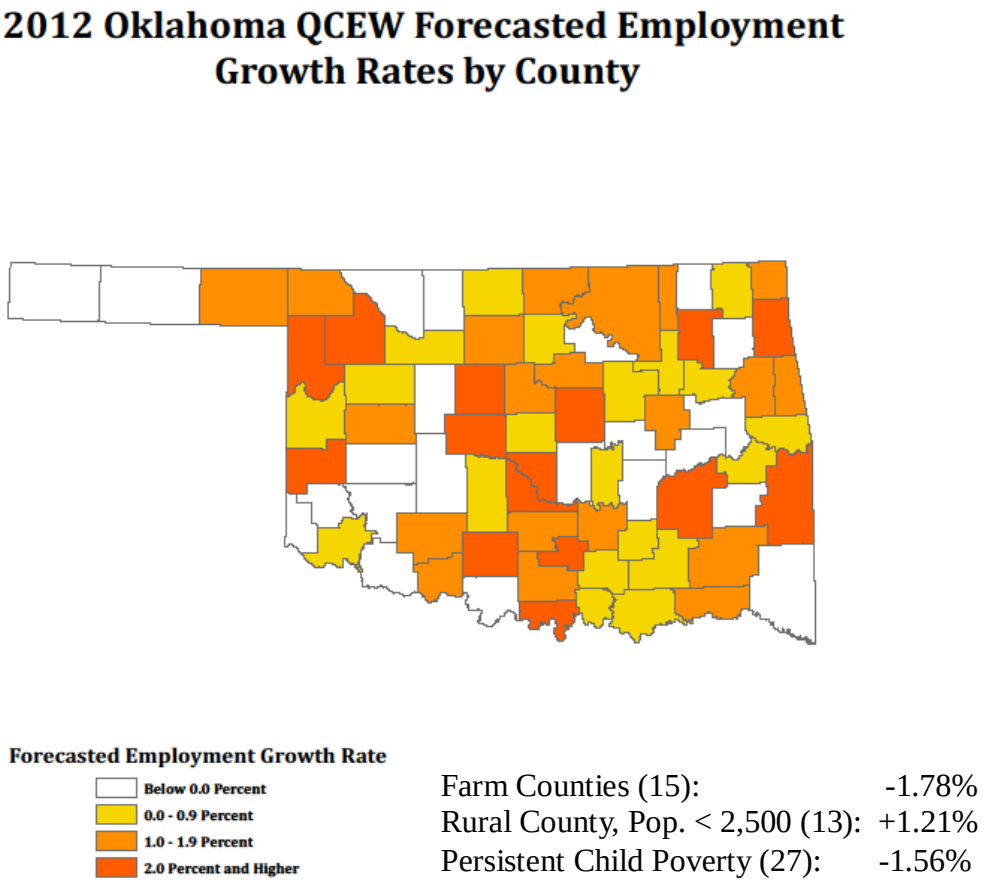

Figure 13. Forecasted County Growth Rates across Oklahoma

Pessimistic Scenario

Despite the positive momentum in the economy, considerable uncertainty remains. A worsening debt crisis in Europe, slowing growth in China, and policy mistakes in the U.S. could derail the recovery and send the economy back into recession. IHS Global Insight assesses the probability of the U.S. economy falling into recession at 30% (down from 40% in November). Figure 14 displays the employment forecasts associated with this scenario.

U.S. employment is forecast to decline nearly 0.8 percent in the recession scenario, a large change from the baseline forecast of over 1 percent growth. Oklahoma employment is forecast to decline nearly 0.3 percent under this scenario, approximately two percentage points lower than

the baseline forecast. What is evident is how sensitive the Oklahoma economy is to national and world conditions. With energy prices dependent on the worldwide growth, as shown during the last recession, they cannot be expected to completely buffer the state from a national downturn.

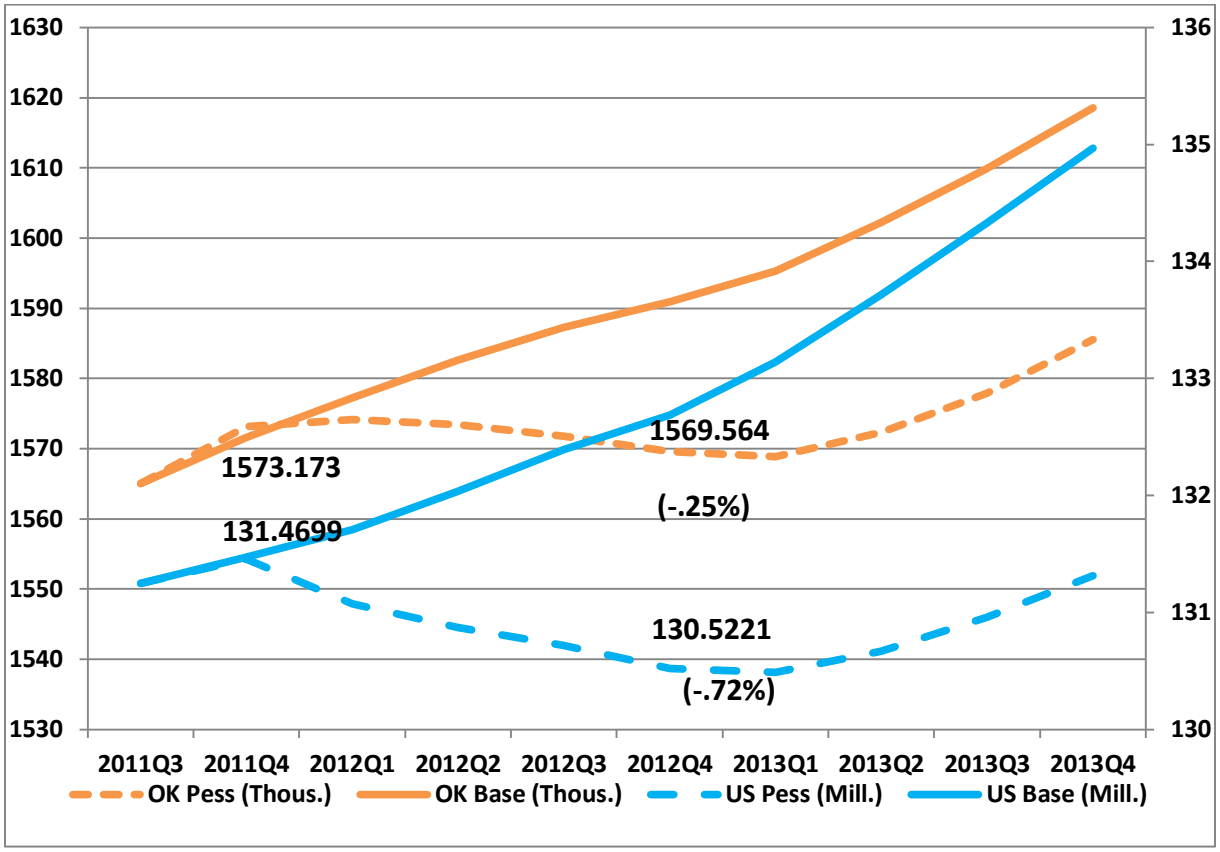

Figure 14. Pessimistic Scenario: U.S. and Oklahoma

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Appendix Table. Major Economic Indicators (percent changes in parentheses below levels)

Indicator	2010	2011	2012	2013
U.S. Gross Domestic Product (%Chg)	3.0	1.7	1.8	2.4
U.S. Payroll Employment (%Chg)	-0.7	1.0	1.1	1.6
U.S. Unemployment Rate (%)	9.6	9.0	9.0	8.8
U.S. Consumer Price Index (%Chg)	1.6	3.1	1.5	1.7
Oklahoma Nonfarm Employment (thous.)	1,526.2 (-1.03)	1,556.7 (2.00)	1,584.5 (1.78)	1,606.5 (1.39)
Oklahoma Population (thous.)	3,760.2 (1.15)	3,791.5 (0.83)	3,826,7 (0.93)	3,864.9 (1.00)
Oklahoma Unemployment Rate (%)	7.05	5.85	5.83	5.56
Oklahoma Real Personal Income (Mill. $82-84)	61,056 (3.62)	62,949 (3.10)	64,730 (2.83)	66,496 (2.73)
Oklahoma Real GDP (Mill. $2005)	131,666 (0.81)	137,855 (4.70)	142,186 (3.14)	146,365 (2.94)
Oklahoma City Metro Employment (thous.)	556.3 (-0.64)	566.5 (1.84)	574.7 (1.44)	584.6 (1.73)
Tulsa Metro Employment (thous.)	405.6 (-1.79)	412.9 (1.78)	421.3 (2.05)	430.3 (2.12)