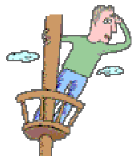

NC STATE

THE NORTH CAROLINA ECONOMIC OUTLOOK, 3rd QUARTER 2017

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TEN NORTH CAROLINA ECONOMIC HEADLINES FOR 2017 AND 2018

1. **Sectors leading growth in the state economy during the current recovery have been professional and business services, information, and leisure and food services, while the state's manufacturing sector continues to shift out of non-durable production to durable production.**

2. **The pace of job growth in North Carolina has exceeded the pace of national job growth in six of the last seven years.**

3. **While the headline unemployment rate for North Carolina has fallen to under 5%, a broader measure including underemployed workers and individuals who have left the labor force is still above 9%.**

4. **Gains in labor productivity in North Carolina have lagged national gains.**

5. **North Carolina's average wage rates – after adjusting for inflation – have only increased 3.3% since 2009, lower than the national gain of 3.6%.**

6. **The "hollowing-out" of the job market – meaning fastest gains occurring for high-paying and low-paying jobs – has been stronger in the North Carolina than in the nation.**

7. **The state's large metros – Charlotte and Raleigh – continue to be fast-growing and have accounted for almost two-thirds of total job growth in the state since 2009.**

8. **Real Gross Domestic Product in North Carolina will expand 2% in 2017 and 2.1% in 2018, the same rates as in the nation.**

9. **The annual average state unemployment rate will fall 0.3 percentage points in 2017 and 0.1 percentage points in 2018. Statewide, payroll jobs will increase by 75,000 in 2017 and by 70,000 in 2018.**

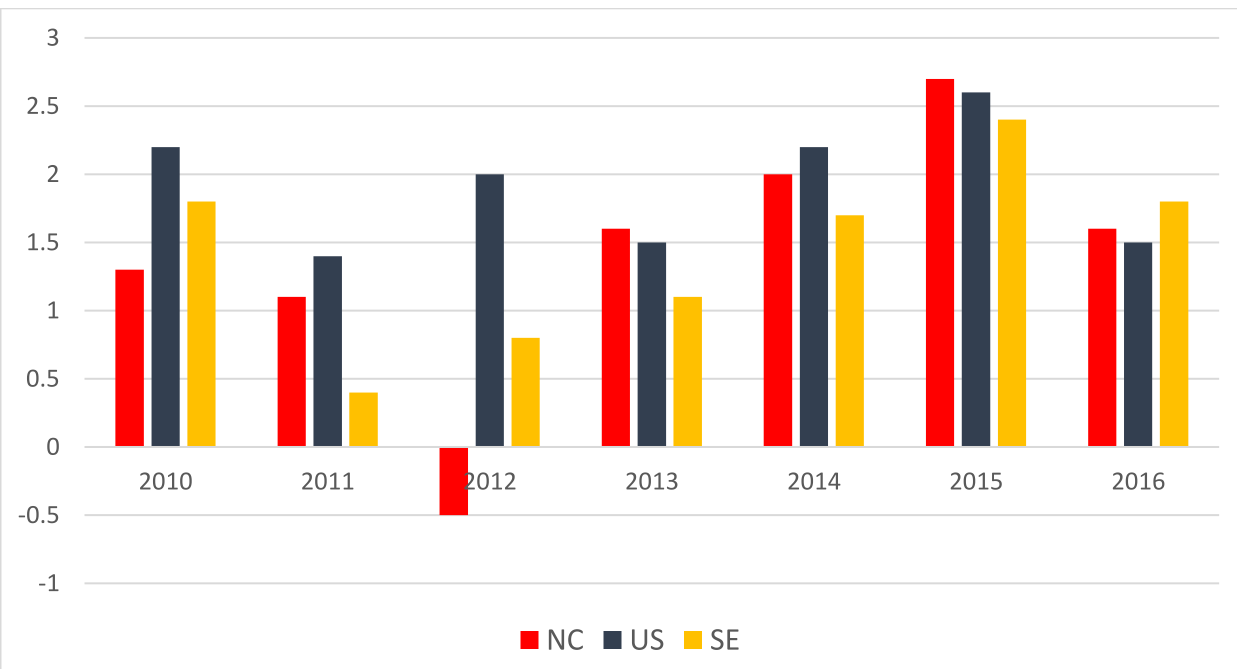
10. **A majority of North Carolina's metropolitan regions are at, or close to, their expected lowest unemployment rate of the current recovery cycle.**

Statewide Sector Trends

Using the broadest measure of economic growth – the growth rate in real Gross Domestic Product (GDP) - North Carolina's economy continued its upward trend in 2016 (Figure 1). With the exception of a drop in real GDP in 2012, the state's economy has expanded since 2010.[1] In both 2015 and 2016 North Carolina's real GDP growth rate exceeded the national growth rates. North Carolina's growth rate exceeded the Southeast states' growth rate in 2015 but not in 2016. Although state level GDP data were not available for the first quarter of 2017 at the time of this report's preparation, wage and salary data show growth continued in the first quarter of 2017 at approximately the same rate for North Carolina, the US, and Southeast states.

Figure 2 shows changes in production (real GDP) in key sectors of the North Carolina economy from the bottom of the recession in 2009 to 2015 (latest year available for state data). The top four sectors in growth have been professional and business services, information, leisure and food services, and durable manufacturing. Note, however, the decline in output of non-durable manufacturing. The contrast in growth between durable and non-durable manufacturing since the end of the Great Recession suggests the re-shaping of the North Carolina economy – especially in manufacturing – is continuing. Relative downsizing is still occurring in non-durable sectors like apparel and textiles, while durable manufacturing industries such as machinery and metals are expanding.

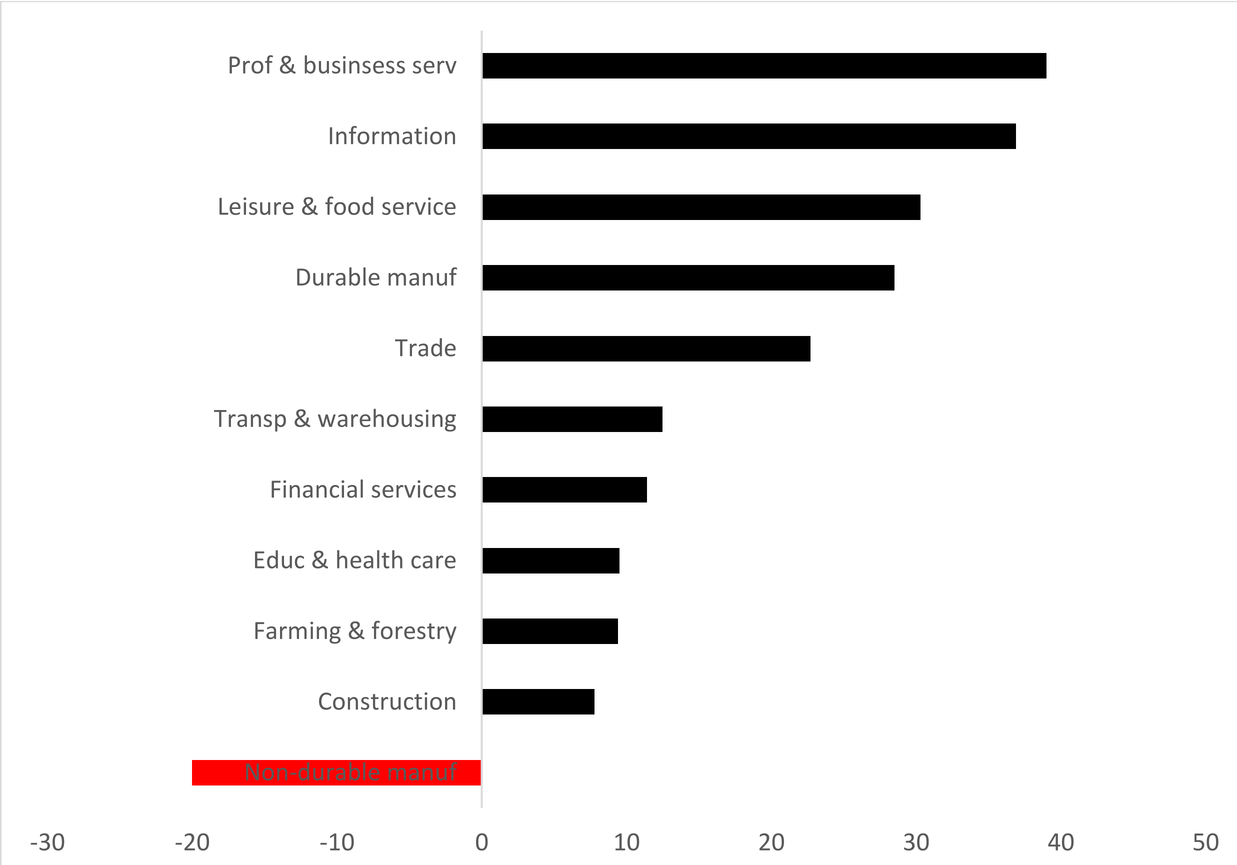
Figure 1. Real GDP Annual Growth Rate (%) in the North Carolina, US, and Southeast States' Economies, 2010-2016.



Source: U.S. Bureau of Economic Analysis

[1] The decline of real GDP in 2012 was mainly due to a contraction in the pharmaceutical industry.

Figure 2. Economic Sector Growth Rate (%) in North Carolina, 2009-2015.



Source: U.S. Bureau of Economic Analysis.

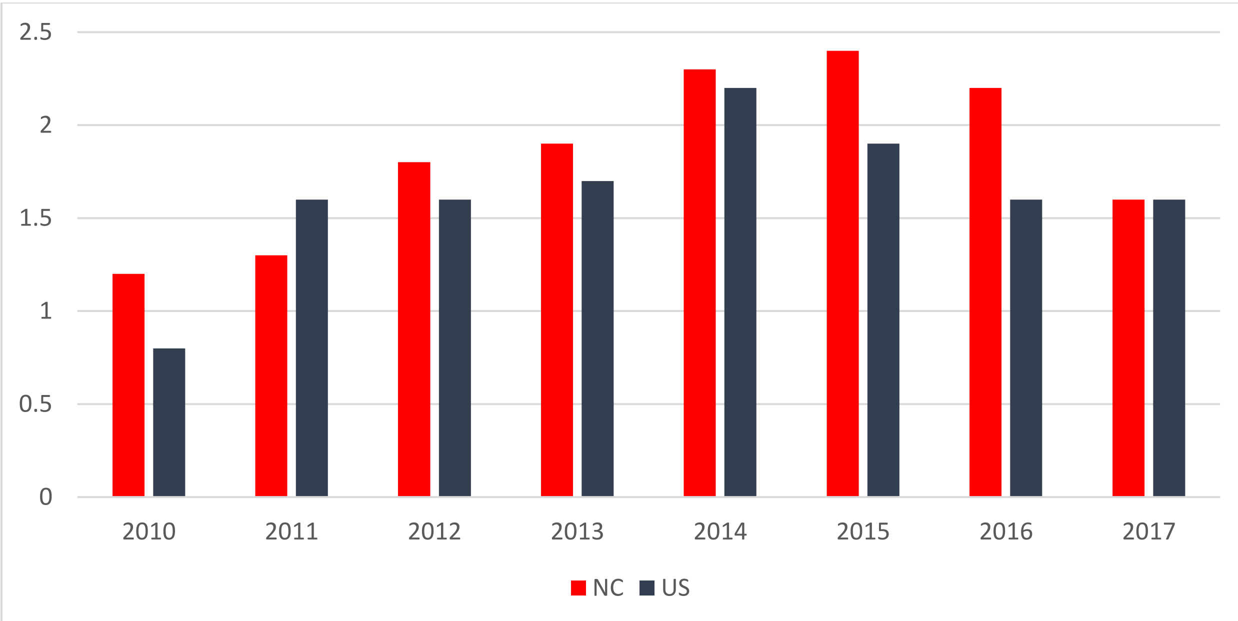
Statewide Labor Market Trends

Figure 3 shows recent annual job growth rates in North Carolina and the U.S. In six of the seven years from 2010 to 2016 North Carolina's annual job growth rate exceeded the national job growth rate (the exception was 2011). For the first six months of 2017, both North Carolina and the U.S. added jobs at an annual rate of 1.6%.

There's also a noticeable trend in the job growth rates for both the nation and North Carolina. Job growth rates generally increased from 2010 to a peak in 2014 (for the U.S) or 2015 (for North Carolina) and then have dropped. Jobs are still being added in 2016 and 2017, but just at slower rates. The state added over 99,000 payroll jobs in 2016, but if the current pace continues, the gain will be closer to 75,000 in 2017.[2] This trend could simply be a typical pattern of accelerating growth immediately after a recession, then followed by more moderate growth as

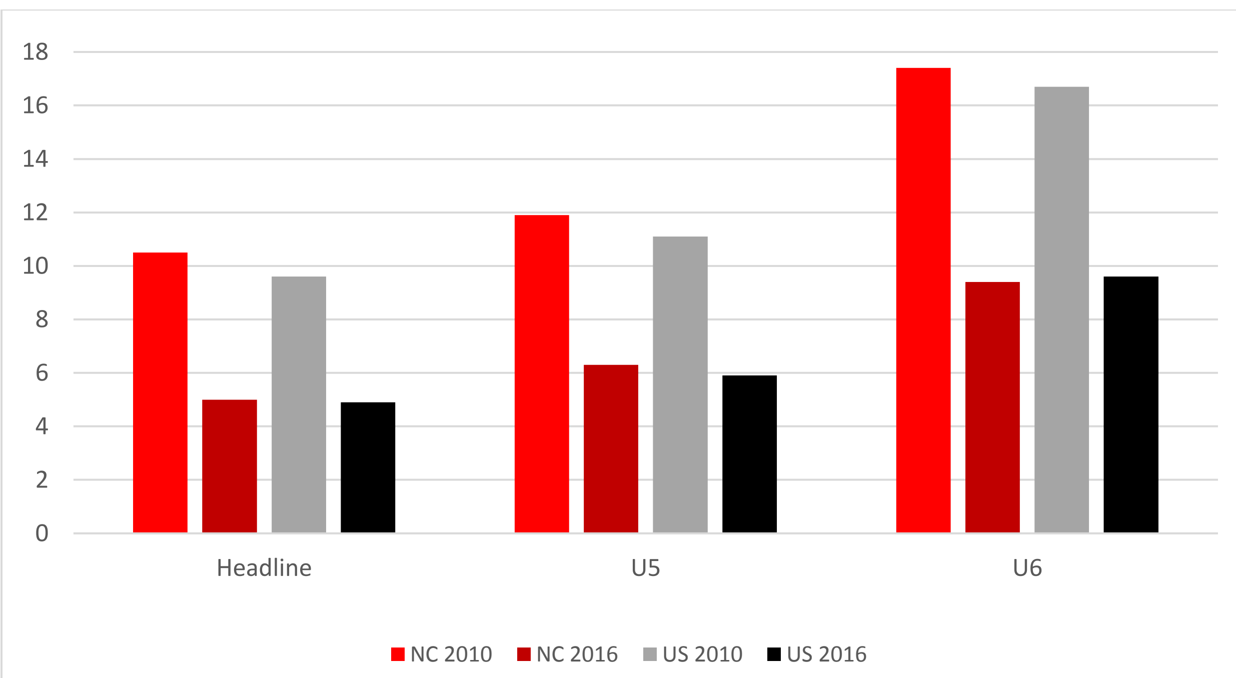
[2] Annual changes are measured on a June to June basis.

Figure 3. Annual Job Growth Rates (%) in North Carolina and the U.S., 2010-2017.



Source: Nonfarm employment numbers from the U.S. Bureau of Labor Statistics.

Figure 4. Alternative Unemployment Rate (%) Measures for NC and the US, 2010 and 2016.



Source: U.S. Bureau of Labor Statistics; annual averages.

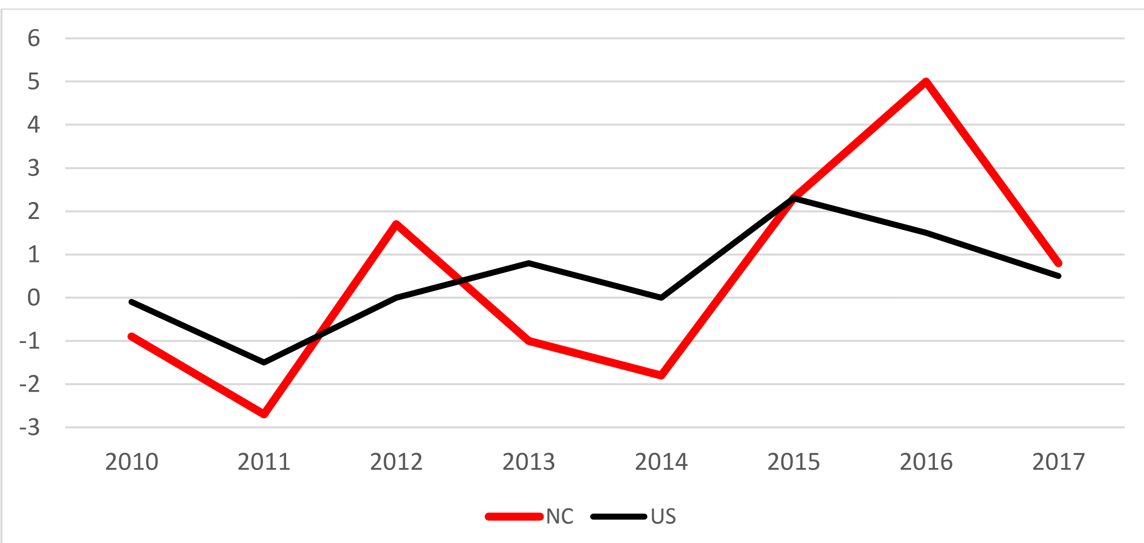
the economic recovery matures. Or it could indicate a more serious issue of underlying problems with sustaining favorable job growth.[3]

Figure 4 illustrates alternative unemployment rate measures for North Carolina and the U.S. in 2010 and 2016. The "Headline" rate is the rate commonly quoted in media outlets. However, to be unemployed by this measure, an individual must be without work, must want to work, and must have actively looked for work in the last month. Those who don't meet the last condition are often termed "discouraged workers". The "U5" measure eliminates the condition of looking for work and so includes discouraged workers. "U6" further counts as unemployed individuals who indicate they are working part-time only because they cannot find full-time work.

It is clear from the figure that both North Carolina and the U.S. have made progress in reducing all three unemployment measures. In 2016 the Headline and U5 measures were slightly lower for the U.S. than for North Carolina, while the U6 measure was marginally higher for the U.S. than for North Carolina. The conclusion is that North Carolina has seen better improvement for workers moving from part-time jobs to full-time work.

There has also been an increase in the labor force participation rate for North Carolina. The rate gained almost a full percentage point from its recent low level in 2014 to 2016, a significant improvement over the national trend. Still, North Carolina's participation rate is almost a percentage point less than the national rate.[4]

Figure 5. Annual Real Wage Rate Changes (%), NC and the U.S., 2010-2017.



Source: U.S. Bureau of Labor Statistics, May of each year using the CPI deflator.

[3] One such problem could be a lack of marketable skills among some jobless individuals.

[4] The labor force participation is calculated as the percentage of individuals 16 years old and over who are in the labor force, meaning they are working or actively looking for work. An aging population and an increase in the number of individuals extending their education in college are two of the main reasons for the participation rate's downward trend in recent decades.

The paths since the end of the Great Recession of annual changes in private sector real (inflation-adjusted) wage rates (average hourly earnings) in North Carolina and the nation are shown in Figure 5. In the five years from 2010 to 2014 real wage rate changes were negative in North Carolina for four of those years, compared to one for the nation. However, in the three years from 2015 to 2017, the state's wage rate gains have been the same or higher than the nation's, suggesting better improvement in North Carolina's labor market in more recent years. Between 2009 and 2017, real wage rates in North Carolina increased 3.3%, compared to 3.6% for the U.S.

North Carolina's labor force (defined as individuals aged 20 to 59) has continued to expand faster than the nation's, rising 8% between 2010 and 2016 compared to a gain of 2.3% for the nation.[5] A major reason is greater in-migration of out-of-state households moving to North Carolina. In every year from 2010 to 2016, North Carolina has ranked between 11th and 13th among states in the rate of net in-migration, defined as the difference between the number of individuals moving to North Carolina from other states and the number of individuals moving from North Carolina to other states, with the result expressed as a rate per 1000 North Carolina residents.[6]

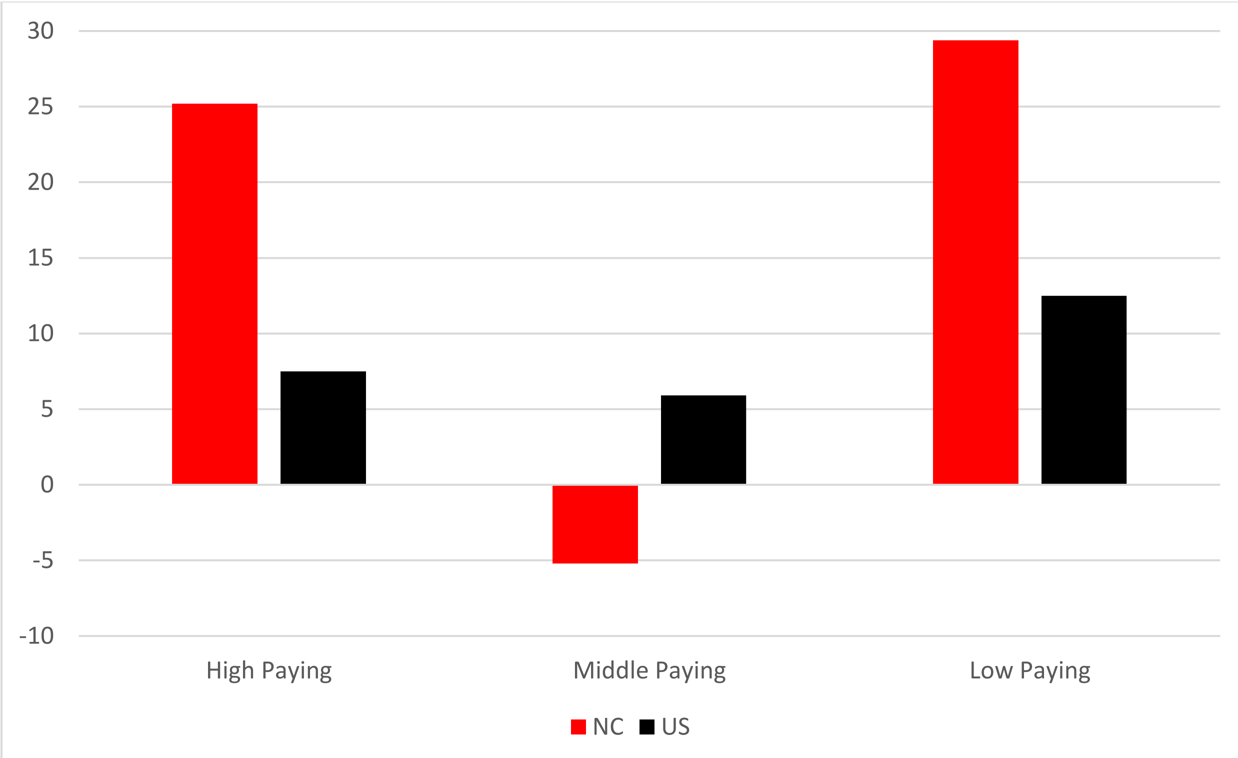
However, a continuing challenge for the state is its lag in labor productivity improvement. In only one year since 2010 has labor productivity in North Carolina improved. As a consequence, the state's aggregate labor productivity declined from 2010 to 2016.[7] In contrast, aggregate national labor productivity improved from 2010 to 2016.

One potential reason for this disparity is the distribution of job gains by income. From 2010 to 2016, almost half (48.4%) of the jobs added in North Carolina were in lower-paying economic sectors. By comparison, just under 40% (39.6%) of jobs added at the national level were in this category. Also, middle-paying jobs accounted for 31% of the job gains in North Carolina from 2010 to 2016, much less than the national share of 44.4% for middle-paying jobs. Since lower-paying jobs tend to have lower rates of labor productivity, the differences in the income levels of jobs created in North Carolina and the country likely account for a large part of the differences in productivity trends.[8]

The job trends for 2010 to 2016 are part of a longer run trend in North Carolina of a "hollowing-out" of the labor force, implying faster growth in higher-paying and lower-paying jobs and smaller or negative job growth in middle-paying jobs (Figure 6).

[5] Rates are from the U.S. Bureau of the Census and the North Carolina Office of Management and Budget.
[6] www.governing.com
[7] The decline in North Carolina labor productivity between 2010 and 2016 was led by double-digit drops in productivity in the utilities, nondurable manufacturing, and transportation sectors.
[8] High-paying jobs are those in professional and technical, management, financial services, and information sectors; middle-paying jobs are in construction, manufacturing, education and health care, wholesale trade, and transportation; and lower-paying jobs are in natural resources, administrative services, leisure and hospitality, retail trade, and other services sectors. On the positive side, North Carolina did generate a higher percentage of job growth during the 2010 to 2016 period from higher-paying jobs than the nation (20.6% versus 16%). Data are from the U.S. Bureau of Labor Statistics.

Figure 6. The "Hollowing-Out" of the Labor Market, Percentage Change, 2001-2015 (Percentage Change in Jobs Classified by Level of Pay in North Carolina and the US).



Source: U.S. Bureau of Labor Statistics.

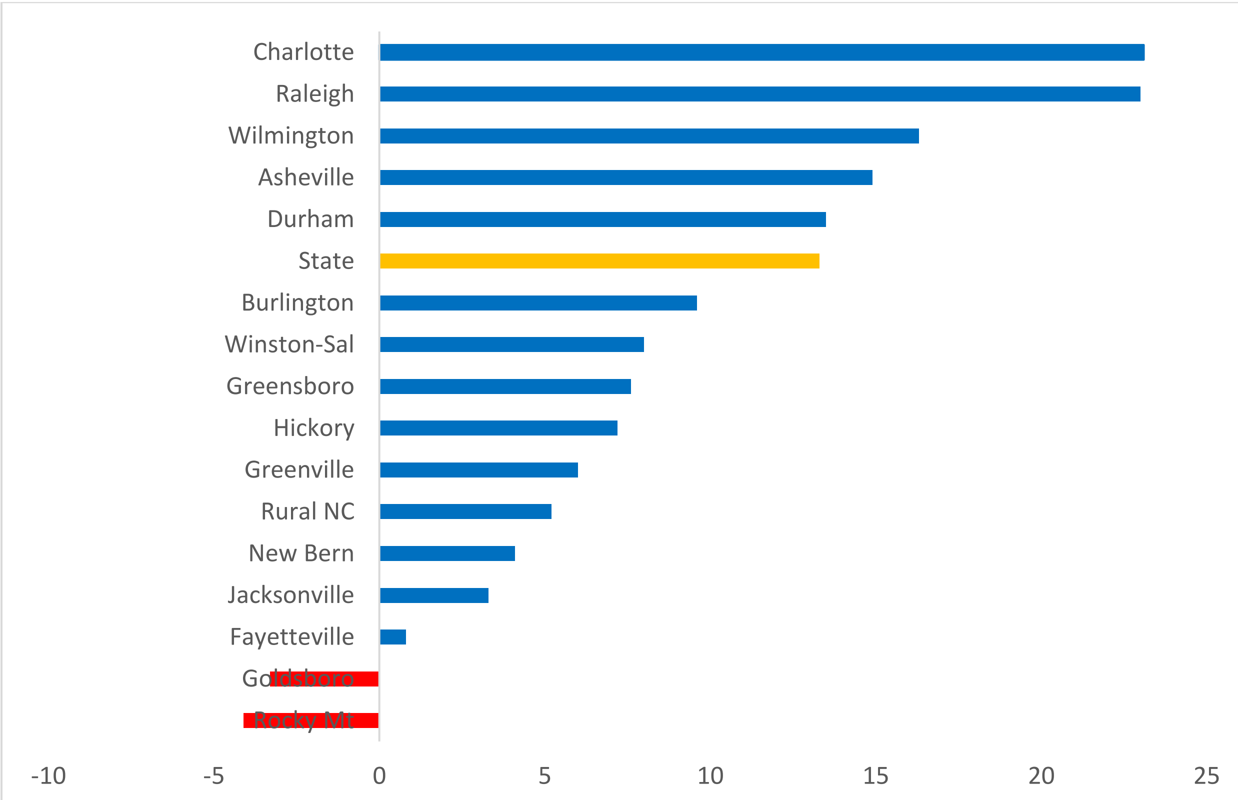
Hence, during the current economic recovery cycle, compared to the nation, more of North Carolina's economic growth has been created by increases in the labor force than by improvements in labor productivity.

Regional Trends

Figure 7 shows a clear trend of faster job growth continuing to occur in North Carolina's larger regions during the current economic recovery. Indeed, the Charlotte and Raleigh metropolitan areas accounted for 64% of the state's job growth during the period. Wilmington, Asheville, and Durham also had above-state-average job growth. Two regions, Goldsboro and Rocky Mount, lost jobs in the 2010-2017 time span.

The regional labor market trends reflect the differing impacts on localities of large economic and social trends impacting the nation and state. Among these are the growth of expanding industries in technology, research, and financial services in large metropolitan regions

Figure 7. Job Growth Rates (% Change) in North Carolina Regions, 2010-2017.



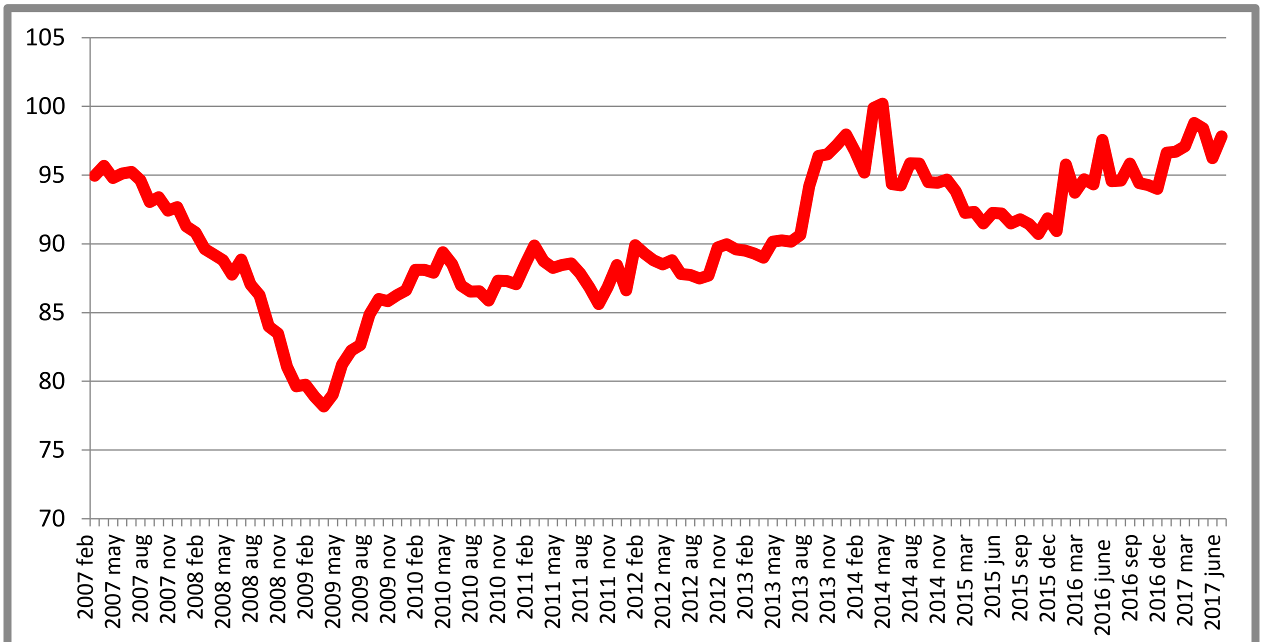
Source: U.S. Bureau of Labor Statistics, based nonfarm employment from February 2010 (low point of job market) to May 2017 (latest available data) using seasonally-adjusted data. Rural NC includes counties outside the listed metropolitan areas.

and the on-going downsizing of nondurable manufacturing in small town and rural regions; the popularity of large metropolitan areas to highly-educated millennial generation individuals combined with the movement of college-bound youths out of small-town and rural areas; and the gains from international trade to the economic sectors of large metropolitan areas contrasted with the losses from international trade to the economic sectors of small town and rural areas.

Forecasts

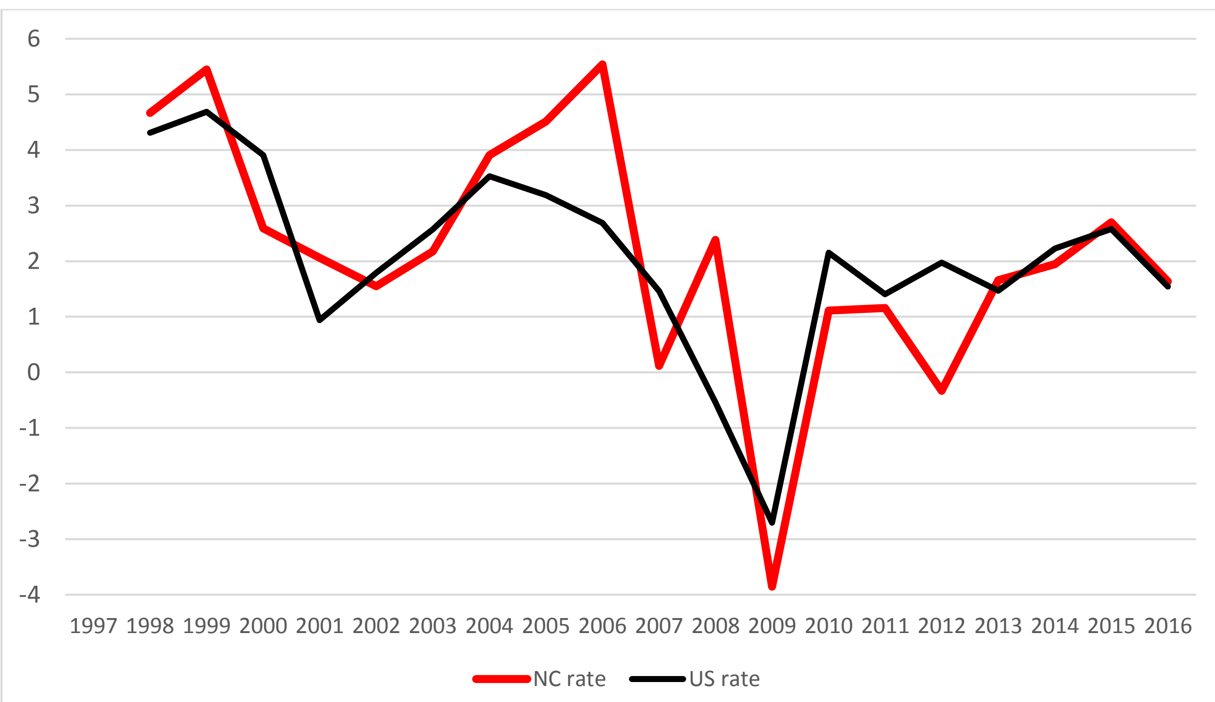
The NCSU Index of North Carolina Leading Economic Indicators (Figure 8) has followed a modest upward trend since late 2015, suggesting gradual improvement in economic growth for the rest of 2017. Figure 9 shows recent real GDP growth in North Carolina has closely tracked the national GDP growth rate. As previously discussed, North Carolina's faster-than-the-nation labor force growth is being countered by its slower-than-the-nation productivity improvements. Therefore, a reasonable forecast for real GDP growth in North Carolina in the near term is real GDP growth in the nation.

Figure 8. NCSU Index of North Carolina Leading Economic Indicators



Source: calculations by Dr. Michael Walden

Figure 9. Real GDP Growth Rate Trends (Annual % Rate) for NC and the US, 1998-2016

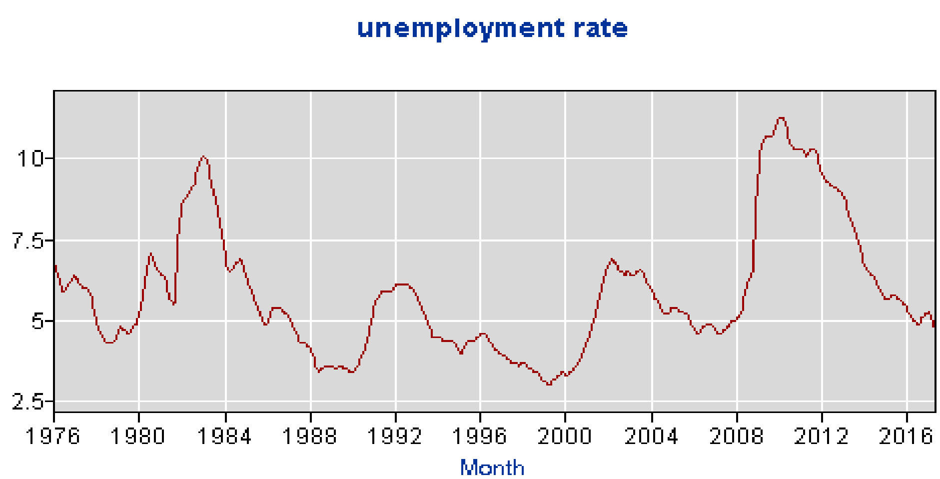


Source: U.S. Bureau of Economic Analysis.

National real GDP growth began slowly in 2017, rising only 1.4% on an annualized basis in the first quarter of 2017. However, forecasts by both the Federal Reserve and the Congressional Budget Office predict annual growth of between 1.7% and 2.3% in 2017 and 1.7% and 2.4% in 2018.[9] Even the Trump Administration, which has been more optimistic about economic growth forecasts, sees the economy expanding at rates near this range, specifically 2.3% in 2017 and 2.5% in 2018.[10] Therefore, it is reasonable to accept the CBO and Federal Reserve ranges for North Carolina and use a midpoint for each year, **resulting in forecasted annual growth rates of real state GDP of 2% in 2017 and 2.1% in 2018**.

North Carolina's unemployment rate was traditionally lower than the national unemployment rate. For example, from 1976 to 2000, the state's jobless rate averaged 1.4 percentage points under the U.S. jobless rate. However, likely as a result of the economic impacts of globalization on small-town and rural regions of the state, this differential has changed in the 21st century, and North Carolina's unemployment rate has averaged higher than the national rate. Since 2014, the state's jobless rate has averaged 0.2 percentage points higher than the national rate.

Figure 10. Long-Term Trends in the North Carolina Headline Unemployment Rate (%).



Source: Bureau of Labor Statistics

[9] Congressional Budget Office, *An Update to the Budget and Economic Outlook: 2017-2027*, Washington, DC, June 29, 2017; Board of Governors of the Federal Reserve System, *Federal Open Market Committee Projections*, Washington, DC, March 15, 2017.

[10] Office of Management and Budget, *Budget of the U.S. Government, Fiscal Year 2018: A New Foundation for American Greatness*, Washington, DC, May 23, 2017. The International Monetary Fund (IMF) projects the exact same real GDP growth rates for 2017 and 2018 as the Trump Administration (IMF, *World Economic Outlook Update,* Washington, DC, January 16, 2017).

The headline North Carolina unemployment rate has already fallen to low point almost equal to the low point in the previous economic expansion of 2001-2007 (Figure 10). However, this low point is still higher than the low points in the headline unemployment rate in earlier economic expansions. Yet the significant upgrading of labor force requirements during the last twenty years and the increased automation of many job tasks means the lowest unemployment rate associated with a growth cycle will likely be higher than during expansions of the 20th century. The forecasts by the Federal Reserve suggest a 0.2 percentage point drop in 2017 and a 0.1 percentage point reduction in 2018 in the national annual average headline unemployment rate, while the Congressional Budget Office predicts a 0.4 percentage point reduction in 2017 and a 0.1 percentage point drop in 2018. Taking an average of these two forecasts and applying them to North Carolina gives a **0.3 percentage point reduction in 2017 and a 0.1 percentage point fall in 2018 in the headline annual average unemployment rate for the state. Payroll jobs will increase by 75,000 in 2017 and by 70,000 in 2016.**

Economic conditions will continue to vary for the state's regions, meaning differing regional forecasts for 2017 and 2018. Figure 11 shows the difference between the May 2017 headline unemployment rate in the state's major metropolitan regions and the lowest May unemployment rate of the previous growth cycle in the region.[11] The same month (May) is used for the comparisons because the jobless rate data are not seasonally-adjusted at sub-state levels. A positive number in Figure 11 means the regional jobless rate has not reached the low point of the previous growth cycle, whereas a negative number in Figure 11 indicates the current regional jobless rate has fallen below the low point of the previous growth cycle.

Based on this analysis, Rocky Mount, Goldsboro, and Jacksonville have the biggest drops in their unemployment rates of at least 0.5 percentage points in order to reach the lows of the previous cycle. A second set of regions - including Fayetteville, Wilmington, New Bern, Raleigh, Durham, Asheville, Greensboro, and Greenville – have current jobless rates very close to their lows in the previous cycle. A third group of four metros – Winston-Salem, Burlington, Charlotte, and Hickory – currently have unemployment rates well below their lows in the previous economic growth cycle.

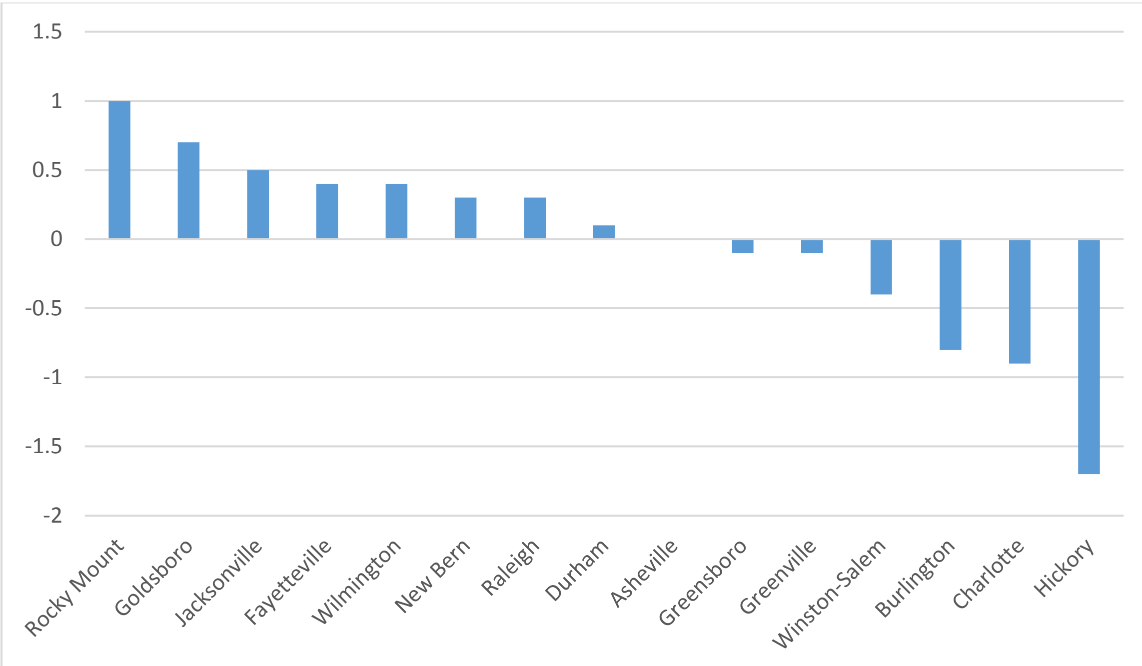
There are several implications of these results. First, over half (eight of fifteen) of the state's regions appear to be close to their low unemployment rate for this cycle.

Second, three other regions – all in the east – need 0.5 to 1 percentage point drops in their jobless rate before reaching their previous cycle low. These three regions have all been challenged by recent economic forces. However, as growth continues over the next two years, tight labor markets in other regions should motivate greater business expansion in areas that have lagged in the economic recovery.

Third, there are four regions – interestingly all in the western part of the state – that already have unemployment rates below their previous lowest levels during the last growth cycle. But there are some caveats – both positive and negative. Charlotte's lowest jobless rate during the previous growth cycle may have been "artificially high" due to the slow recovery in the region's significant financial services sector. This sector suffered major downsizing during

[11] In most cases this was May, 2007. In one case the date was May 2006, and in two cases the date was May 2008.

Figure 11. Difference Between May 2017 Unemployment Rate and Lowest May Unemployment Rate in Previous Recovery Cycle (% point).



Source: U.S. Bureau of Labor Statistics.

and after the Great Recession. So Charlotte's current unemployment rate may not be so low – relative to the previous cycle's low – as it appears. Supporting this argument is that Charlotte's current (May 2017) unemployment rate is very similar to the unemployment rate of its sister rapid-growth region, Raleigh (4.0% versus 3.8%).

Hickory and Winston-Salem's relatively low jobless rates may be driven by another factor – excessively slow or negative growth in the labor force. Between May 2010 and May 2017, Winston-Salem's labor force grew only 1.2%, while Hickory's declined by 3.3%. Slow or negative growth in the labor force can be caused by workers without jobs giving up on job searches, therefore not qualifying as officially unemployed by the definition of the headline unemployment rate. If these individuals were included as unemployed, the regions' jobless rates would be higher. Hence, among the four regions with current jobless rates well below their lows of the previous growth cycle, Burlington appears to have made the most progress.

Key Conclusions

Based on both national and state trends, it is expected economic growth will continue in 2017 and into 2018. In North Carolina, real GDP growth in both years will be near 2%, between 70,000 and 75,000 net new payroll jobs will be added each year, and progress on reducing the headline unemployment rate will be minor for the state as well as for most of the state's regions.

Economic challenges continue with uneven growth across the state, the hollowing-out of the labor force, slow improvement in wages, and labor productivity gains that lag national gains.