

Barings/UNC Charlotte Economic Forecast March 2nd, 2017



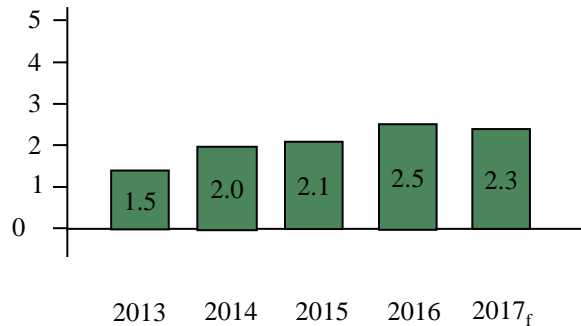
BARINGS

The logo for Barings, consisting of the word "BARINGS" in a blue, serif font. A horizontal line is positioned below the text, with a green segment on the left side.

The data used in this report comes from the websites for the U.S. Department of Commerce's Bureau of Economic Analysis (www.bea.gov) and the North Carolina Employment Security Commission (www.ncesc.com) as of February 21, 2017. The opinions expressed in this Forecast by Professor Connaughton (the Barings Professor of Financial Economics at the Belk College of Business) and UNC Charlotte do not necessarily represent the views of Barings.

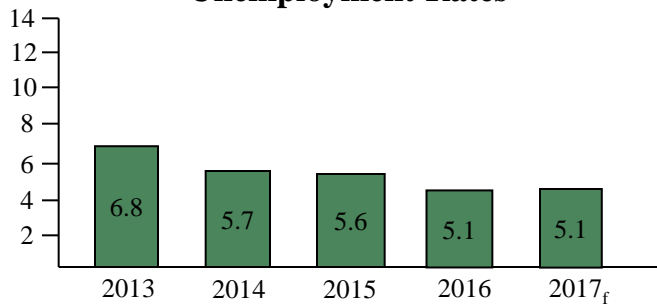
FORECAST HIGHLIGHTS

Annual Growth Rates In Real GSP



GSP/Gross State Product is a yardstick that measures the total output of a state's economy for a given year. It is analogous to the U.S. Gross Domestic Product (GDP).

Year-End Seasonally Adjusted North Carolina Unemployment Rates



- For 2016, NORTH CAROLINA real GSP is expected to increase by 2.5 percent over the 2015 level.

- Thirteen of the state's fifteen economic sectors are forecast to experience output increases during 2016. The sectors with the strongest expected growth are information with a projected real increase of 8.1 percent; agriculture with a projected real increase of 7.3 percent; construction with a projected real increase of 5.7 percent; transportation, warehousing, and utilities (TWU) with a projected real increase of 4.8 percent; and business and professional services with a projected real increase of 4.3 percent.

- For 2016, NORTH CAROLINA establishments are forecast add 85,200 net additional jobs, an increase of 2.0 percent.

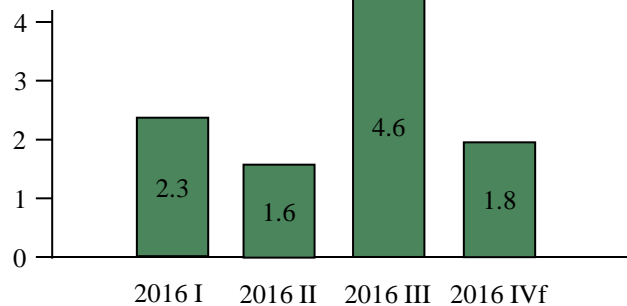
- For 2017, NORTH CAROLINA real GSP is forecast to increase by 2.3 percent over the 2016 level.

All Fifteen of the state's fifteen economic sectors are forecast to experience output increases during 2017. The sectors with the strongest expected growth are mining with a projected real increase of 16.1 percent; business and professional services with a projected real increase of 4.2 percent; durable goods manufacturing with a projected real increase of 3.8 percent; information with a projected real increase of 3.7 percent; transportation, warehousing, and utilities (TWU) with a projected real increase of 2.9 percent.

- For 2017, NORTH CAROLINA establishments are forecast to add 85,200 net additional jobs, an increase of 2.0 percent.

- By December of 2017, the North Carolina unemployment rate is expected to be around 5.1 percent.

Quarterly Growth Rates in Real GDP



2016 Highlights

	2016 *	Percent Change
Current Dollars		
Total Gross Product	515,263.5	4.0
Constant (2009 Dollars)		
Total Gross Product	451,104.2	2.5
Agricultural	4,587.1	7.3
Mining	281.6	-8.9
Construction	16,365.1	5.7
Manufacturing	86,774.4	0.6
Durable Goods	39,077.1	2.5
Nondurable Goods	47,697.3	-0.9
TWU	17,095.4	4.8
Wholesale Trade	26,176.0	1.4
Retail Trade	25,260.7	3.4
Information	17,560.7	8.1
FIRE	82,207.2	2.5
B & P	55,454.7	4.3
E & H	36,024.6	2.7
H & L	15,526.7	1.5
Services	8,866.0	2.5
Government	58,924.2	0.7

* millions of dollars

2016 GSP

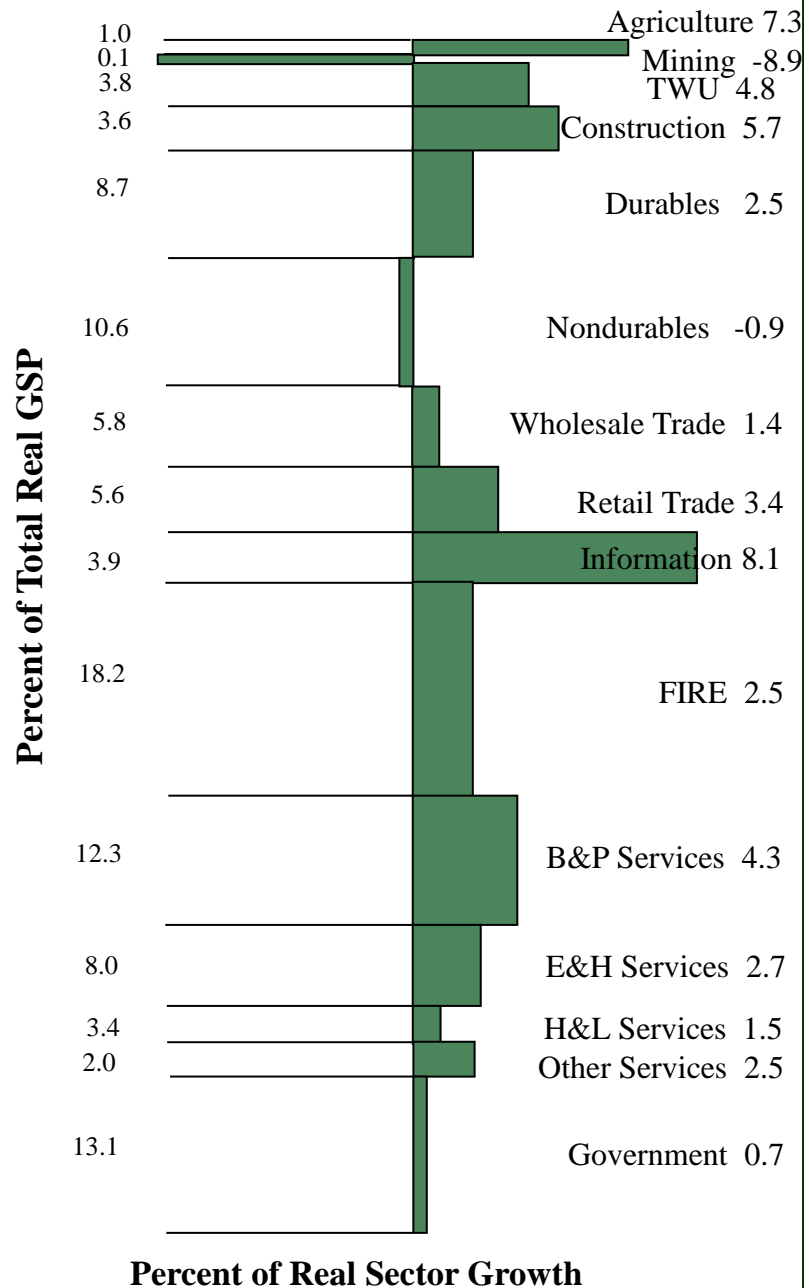
Gross State Product (GSP) is forecast to reach a level of \$515,263.5 million in 2016. Real (inflation-adjusted) GSP is forecast to increase by 2.5 percent over the 2015 level. This growth in 2016 follows a 2.1 percent real GSP growth rate in North Carolina during 2015 and a 2.0 percent growth in 2014. These three years together represent the strongest growth period experienced by the North Carolina economy since the recovery began in late 2009.

For 2016, first quarter GSP increased by an annualized real rate of 2.3 percent. During the second quarter, GSP increased by an annualized real rate of 1.6 percent. In the third quarter, GSP recorded an annualized real growth rate of 4.6 percent. In the fourth quarter of 2016, GSP is expected to grow by an annualized real rate of 1.8 percent.

During the first half of 2016, the North Carolina economy seemed to be experiencing slower growth than during the previous eighteen months. What had been happening in North Carolina during the first half of 2016 is not dissimilar to what has happened in the U.S. It seems that after 7 years of economic expansion things are beginning to slow. The U.S. economy has been expanding for 89 months, which represents the fourth longest economic expansion on record out of the 33 expansions that have been tracked by the NBER since 1854.

During the third quarter of 2016 both North Carolina and the U.S. economy began to expand at a rapid rate. The mixed signals that had been putting a damper on the economy during the first half of the year began to sort themselves out. Consumer Confidence began to rise and by December the index stood at 113.3, the highest level since the Great Recession began. This along with the general bump associated with the election seems to have pushed the economy forward with consumer spending increasing and interest rates remaining low during all of 2016.

2016 Total Real GSP Growth 2.5%



2016 GSP SECTOR ANALYSIS

The chart to the left presents the contributions of each major economic sector to North Carolina's Gross State Product (GSP). The real (inflation-adjusted) growth rate for 2016 is expected to increase by 2.5 percent. Real growth rates for each sector (displayed in black type) are plotted on the horizontal axis. Percentages of GSP contributed by each sector (displayed in green type) are plotted on the vertical axis. The resulting rectangles show the weighted importance of each sector's growth during 2016. All of the sector information presented in the table to the left is based on the new North American Industry Classification System (NAICS) definitions.

Thirteen of the state's fifteen economic sectors are forecast to experience output increases during 2016. The sectors with the strongest expected growth are information with a projected real increase of 8.1 percent; agriculture with a projected real increase of 7.3 percent; construction with a projected real increase of 5.7 percent; transportation, warehousing, and utilities (TWU) with a projected real increase of 4.8 percent; business and professional services with a projected real increase of 4.3 percent; retail trade with a projected real increase of 3.4 percent; and education and health services with a projected real increase of 2.7 percent.

Six other sectors are expected to grow, but at levels at or below the overall projected 2.5 percent GSP real growth rate. These sectors are, durable good manufacturing with a projected real increase of 2.5 percent; other services with a projected real increase of 2.5 percent; finance, insurance, and real estate (FIRE) with a projected real increase of 2.5 percent; hospitality and leisure services with a projected real increase of 1.5 percent; wholesale trade with a projected real increase of 1.4 percent; and government with a projected real increase of 0.7 percent.

Two sectors, mining and nondurable goods manufacturing are expected to experience declines in 2016.

2017 GSP

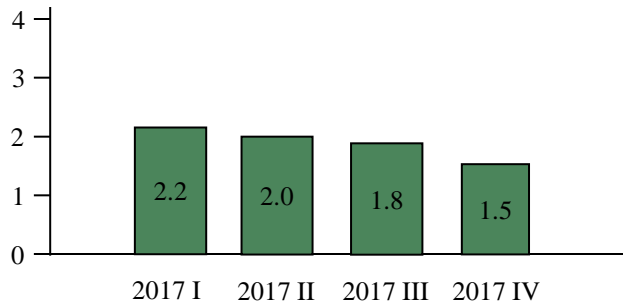
Gross State Product (GSP) is expected to reach a level of \$536,765.8 million in 2017. Real (inflation-adjusted) GSP is expected to increase by 2.3 percent over the 2016 level. This growth in 2017 would follow last years projected 2.5 percent real growth in North Carolina GSP.

For 2017, first quarter GSP is expected to increase by an annualized real rate of 2.2 percent. During the second quarter, GSP is expected to increase by an annualized real rate of 2.0 percent. In the third quarter, GSP is expected to increase by an annualized real rate of 1.8 percent. In the fourth quarter of 2017, GSP is expected to increase by an annualized real rate of 1.5 percent.

Positive economic growth in 2017 would represent the eighth consecutive year of economic growth for the North Carolina economy. While this is an impressive string of growth, the size of that economic growth has been somewhat lacking. In fact, for most of the 21st Century, both the U.S. and North Carolina economies have been unable to achieve an average 3.0 percent real GDP growth rate that had been fairly consistent since WW II.

There are only two sources of potential GDP growth. First is labor force growth and the second is productivity growth. Over the past five years we have seen both decline substantially. Between 2000 and 2009 the U.S. labor force grew on average by 1.02 percent annually, while productivity grew on average by 2.65 percent annually. This would allow for an average annual potential GDP to grow at 3.67 percent. Since 2010 the average annual U.S. labor force growth rate has been only 0.22 percent and the average annual productivity growth has only been 0.65 percent. In fact over the last five years North Carolina's labor productivity has actually been flat meaning that all of the growth we have experienced has come from labor force growth. This has come in the form of excess capacity and in-migration. The recent changes in productivity and labor force growth suggest that we face a challenge pushing long-term inflation-adjusted GDP growth above a 2.0 percent level.

Quarterly Growth Rates in Forecasted Real GSP

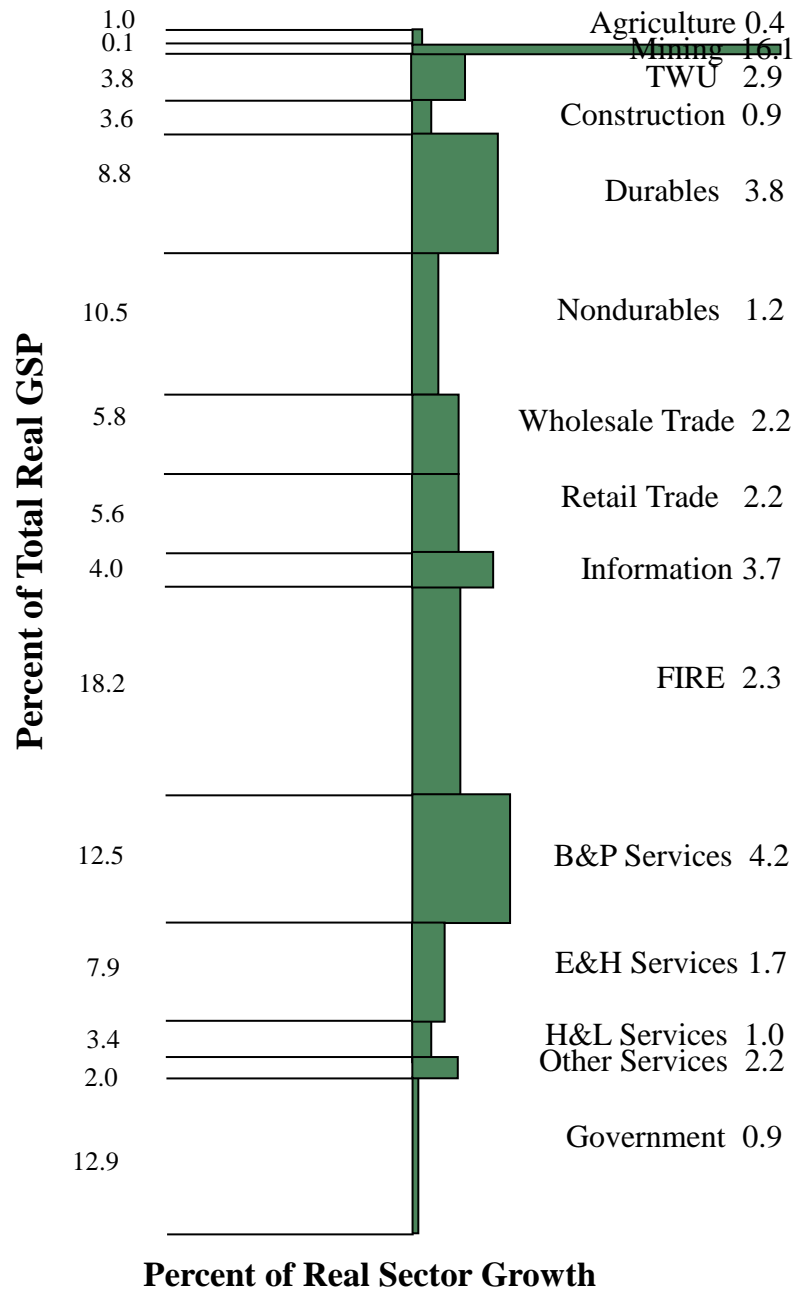


2017 Highlights

	2017 *	Percent Change
Current Dollars		
Total Gross Product	536,765.8	4.2
Constant (2009 Dollars)		
Total Gross Product	461,349.9	2.3
Agricultural	4,606.9	0.4
Mining	326.9	16.1
Construction	16,519.5	0.9
Manufacturing	88,823.2	2.4
Durable Goods	40,563.3	3.8
Nondurable Goods	48,259.9	1.2
TWU	17,598.1	2.9
Wholesale Trade	26,746.5	2.2
Retail Trade	25,810.6	2.2
Information	18,204.8	3.7
FIRE	84,103.7	2.3
B & P	57,778.7	4.2
E & H	36,643.6	1.7
H & L	15,685.4	1.0
Services	9,061.4	2.2
Government	59,440.7	0.9

* millions of dollars

2017 Total Real GSP Growth 2.3%



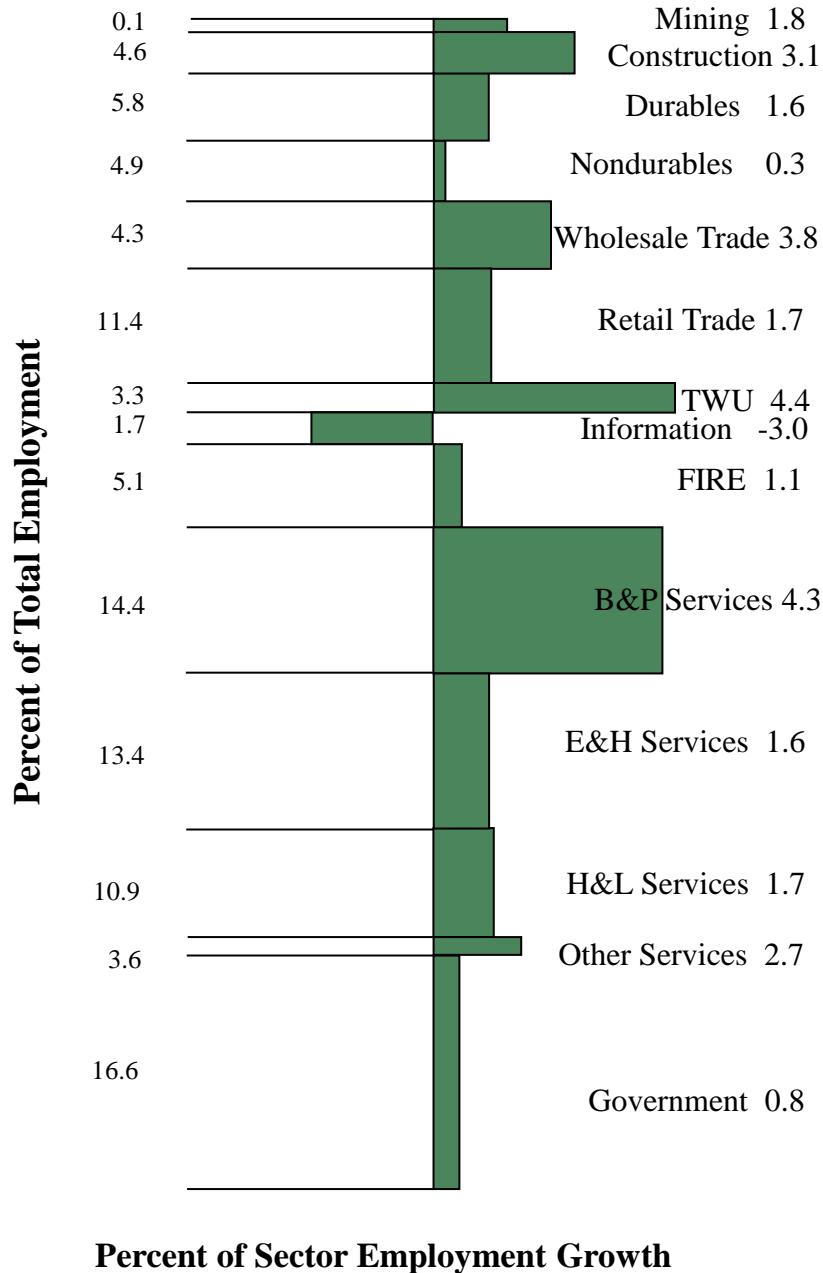
2017 GSP SECTOR ANALYSIS

The chart to the left presents the projected contributions of each major economic sector to North Carolina's Gross State Product (GSP). The real (inflation-adjusted) growth rate for 2017 is forecast to increase by 2.3 percent. Projected real growth rates for each sector (displayed in black type) are plotted on the horizontal axis. Projected percentages of GSP contributed by each sector (displayed in green type) are plotted on the vertical axis. The resulting rectangles show the expected weighted importance of each sector's growth during 2017. All of the sector information presented in the table to the left is based on the new North American Industry Classification System (NAICS) definitions.

All Fifteen of the state's economic sectors are forecast to experience output increases during 2017. The sectors with the strongest expected growth are mining with a projected real increase of 16.1 percent; business and professional services with a projected real increase of 4.2 percent; durable goods manufacturing with a projected real increase of 3.8 percent; information with a projected real increase of 3.7 percent; transportation, warehousing, and utilities (TWU) with a projected real increase of 2.9 percent.

Ten other sectors are expected to experience growth rates, but at levels at or below the overall 2.3 percent GSP real growth rate. These sectors are finance, insurance, and real estate (FIRE) with a projected real increase of 2.3 percent; retail trade with a projected real increase of 2.2 percent; wholesale trade with a projected real increase of 2.2 percent; other services with a projected real increase of 2.2 percent; educational and health services with a projected real increase of 1.7 percent; nondurable goods manufacturing with a projected real increase of 1.2 percent; hospitality and leisure services with a projected real increase of 1.0 percent; government with a projected real increase of 0.9 percent; construction with a projected real increase of 0.9 percent; and agriculture with a projected real increase of 0.4 percent.

2016 Year-End Employment Trends



2016 EMPLOYMENT SECTOR ANALYSIS

The sector employment analysis presented on this page is based on the new North American Industrial Classification System (NAICS). Seasonally adjusted nonagricultural employment in North Carolina reached 4,360,200 persons in December 2016, an increase of 2.0 percent over the employment level in December 2015. The state added 85,200 net jobs during the year.

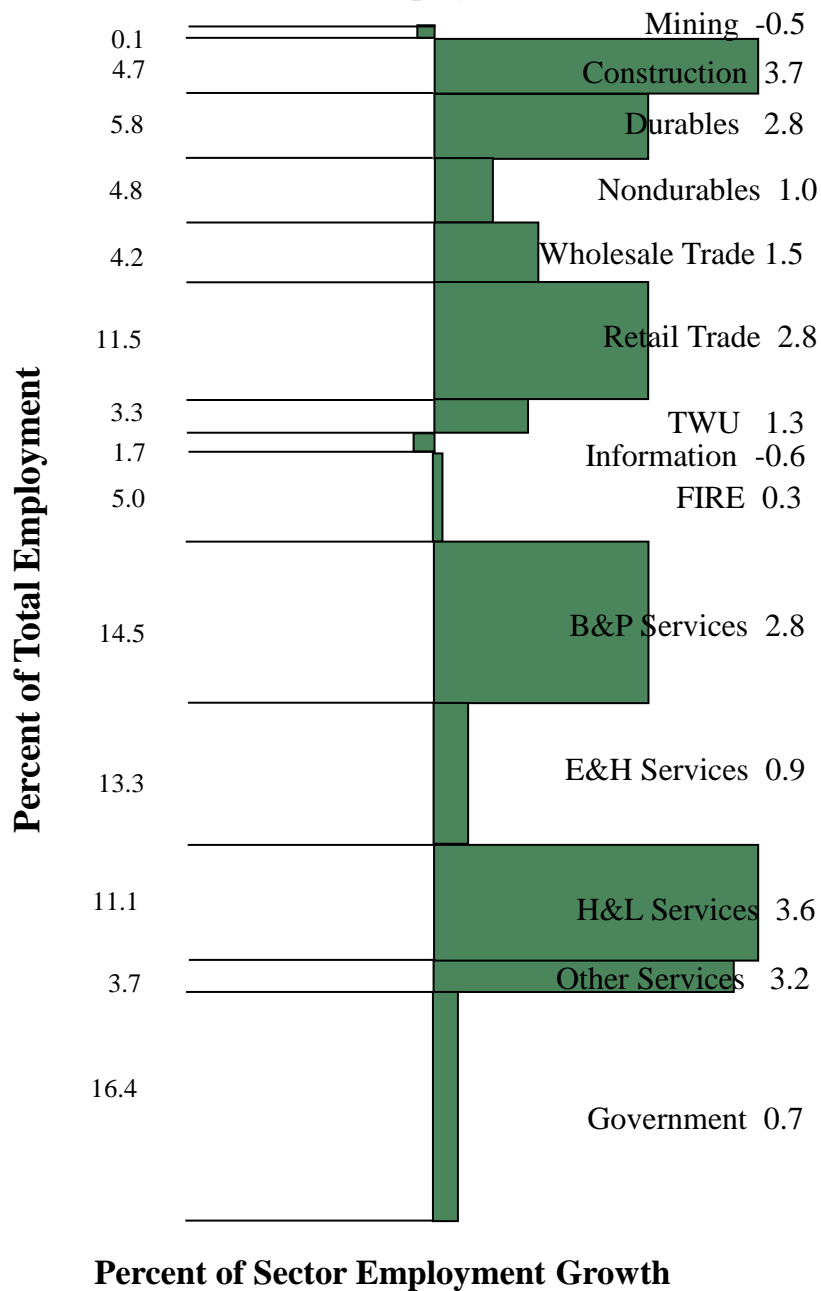
Thirteen of the state's fourteen nonagricultural sectors of the economy experienced employment increases during 2016. The sectors with the strongest employment increases in 2016 were TWU at 4.4 percent, business and professional services at 4.3 percent, and wholesale trade at 3.8 percent.

2016 Employment Highlights

	Year-End*	Percent Change
Total Establishment		
Employment	4,360.2	2.0
Mining	5.6	1.8
Construction	199.8	3.1
Manufacturing	463.0	1.0
Durable Goods	251.2	1.6
Nondurable Goods	211.8	0.3
Wholesale Trade	185.4	3.8
Retail Trade	499.0	1.7
TWU	142.9	4.4
Information	74.2	-3.0
FIRE	221.8	1.1
B&P Services	627.0	4.3
E&H Services	584.8	1.6
H&L Services	474.3	1.7
Other Services	158.1	2.7
Government	724.3	0.8

*thousands of persons

2017 Year-End Employment Trends



2017 EMPLOYMENT SECTOR ANALYSIS

The sector employment analysis presented on this page is based on the new North American Industrial Classification System (NAICS). Seasonally adjusted nonagricultural employment in North Carolina is expected to reach 4,445,400 persons in December 2017, an increase of 2.0 percent over the employment level in December 2016. The state is expected to gain 85,200 net jobs during the year.

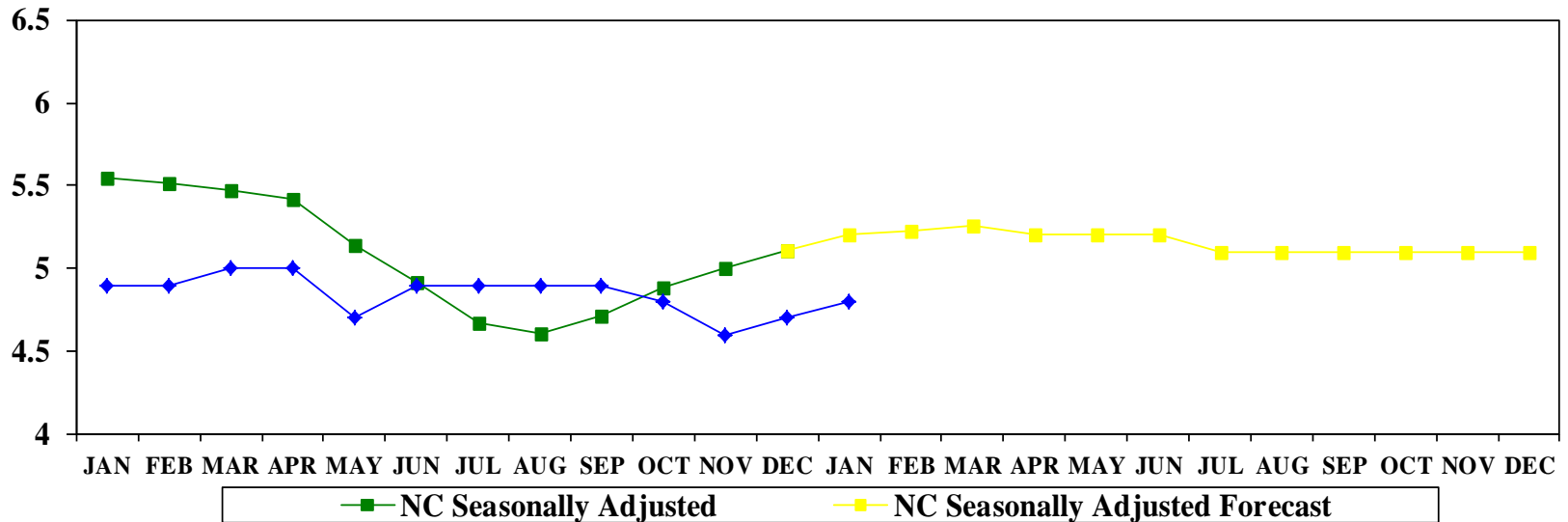
Twelve of the state's fourteen nonagricultural sectors of the economy are expected to experience employment increases during 2017. The sectors with the strongest employment increases in 2017 are construction at 3.7 percent, hospitality and leisure services at 3.6 percent, and other services at 3.2 percent.

2017 Employment Highlights

	Year-End*	Percent Change
Total Establishment		
Employment	4,445.4	2.0
Mining	5.6	-0.5
Construction	207.3	3.7
Manufacturing	472.2	2.0
Durable Goods	258.3	2.8
Nondurable Goods	213.9	1.0
Wholesale Trade	188.1	1.5
Retail Trade	513.1	2.8
TWU	144.7	1.3
Information	73.8	-0.6
FIRE	222.5	0.3
B&P Services	644.4	2.8
E&H Services	589.9	0.9
H&L Services	491.3	3.6
Other Services	163.1	3.2
Government	729.6	0.7

*thousands of persons

2016-2017 NORTH CAROLINA UNEMPLOYMENT RATE



FORECAST reports historical seasonally adjusted monthly unemployment rates for North Carolina and the United States and forecasts the seasonally adjusted monthly unemployment rate for North Carolina. The seasonal adjustment accounts for variations in labor market conditions that cause regular fluctuations in the unemployment level each month.

The graph at the top of this page provides a summary of the monthly unemployment rates for 2016 and 2017. The solid green line represents the North Carolina seasonally adjusted historic unemployment rate. The seasonally adjusted unemployment rate for the United States is represented by the solid blue line. The North Carolina seasonally adjusted unemployment rate forecast is represented by the solid yellow line. The seasonally adjusted rates for the United States and North Carolina can be compared directly and provide more reliable estimates than the unadjusted rates.

The United States started 2016 with an unemployment rate of 4.9 percent, which has remained fairly consistent through October. North Carolina started the year with a 5.6 percent rate of unemployment, which declined dramatically to 4.7 percent in July, and then increased to 5.1 percent in December. By December of 2017 the North Carolina unemployment rate is expected to remain around 5.1 percent.