

Annual Economic Indicators Report



Year Ended June 30, 2018

Introduction

The attached Table I provides a general indication of the state of Albemarle County's economy in the recent past, and offers an initial look at anticipated economic conditions in the current fiscal year. For comparative purposes, each line in the attached Table I reveals preliminary data for FY 18, as well as corresponding historical figures from FY 14, FY 15, FY 16, and FY 17. The table shows, additionally, projected information for FY 19.

The data in Table I consists of three broad categories. The first category pertains to general economic activity in the County, as revealed by the following local tax revenue streams: Sales Tax, Consumer Utility Tax, Food and Beverage Tax, Transient Occupancy Tax, Inspection Fees, and Other Development Fees. Staff determined that, historically, these revenue streams collectively reflected the overall health of the County's economy since they related directly to a number of important industries including retail, tourism, and construction; these revenue streams as a group, also, historically shadowed movements in the Charlottesville Metropolitan Statistical Area's Gross Domestic Product (GDP).

The second group of data reveals the County's unemployment rate. Corresponding information is presented for the state and U.S. unemployment rates. The third data group in Table I includes information about the total number of jobs in the County. The figures for FY 18 represent *estimates* for the year, due to the Virginia Employment Commission's (VEC's) ongoing reporting lag. In addition to total jobs data, Table I breaks down the information by private sector vs. public sector jobs; federal government, state government, and local government jobs; and jobs by two digit North American Industry Classification System (NAICS) code. Table I presents the data in such a way that annual and multiyear changes in employment numbers in the various sectors are readily apparent.

Results and Projections

General Economic Activity

Between FY 17 and FY 18, some of the preliminary tax revenue data in the streams shown in Table I experienced strong growth, while other revenues remained essentially flat or fell. The increase in Sales Tax revenue (+3.88%) reflects an improvement in the local economy, consistent with solid growth in the jobs base and a drop in the unemployment rate (see further discussion below), as well as the "filling-in" of two major shopping centers in the County. The flat performance of Consumer Utility Tax (-0.06%) reflects especially weak performance in Telecommunications Tax revenue, a situation that likely represents an ongoing movement away from landline telephones to mobile phones, and migration toward communication services such as Skype and FaceTime, which are not subject to taxation. Substantial growth in Food & Beverage Tax revenue (+7.64%) reflects generally strong economic conditions in the County as well as the success of some high-volume chain restaurants in our locality. The slight increase in Transient Occupancy Tax revenue (+1.69%) which, in Table I includes the Transfer to Tourism amount, might reflect an improvement in the local tourist market and, also, might reflect the

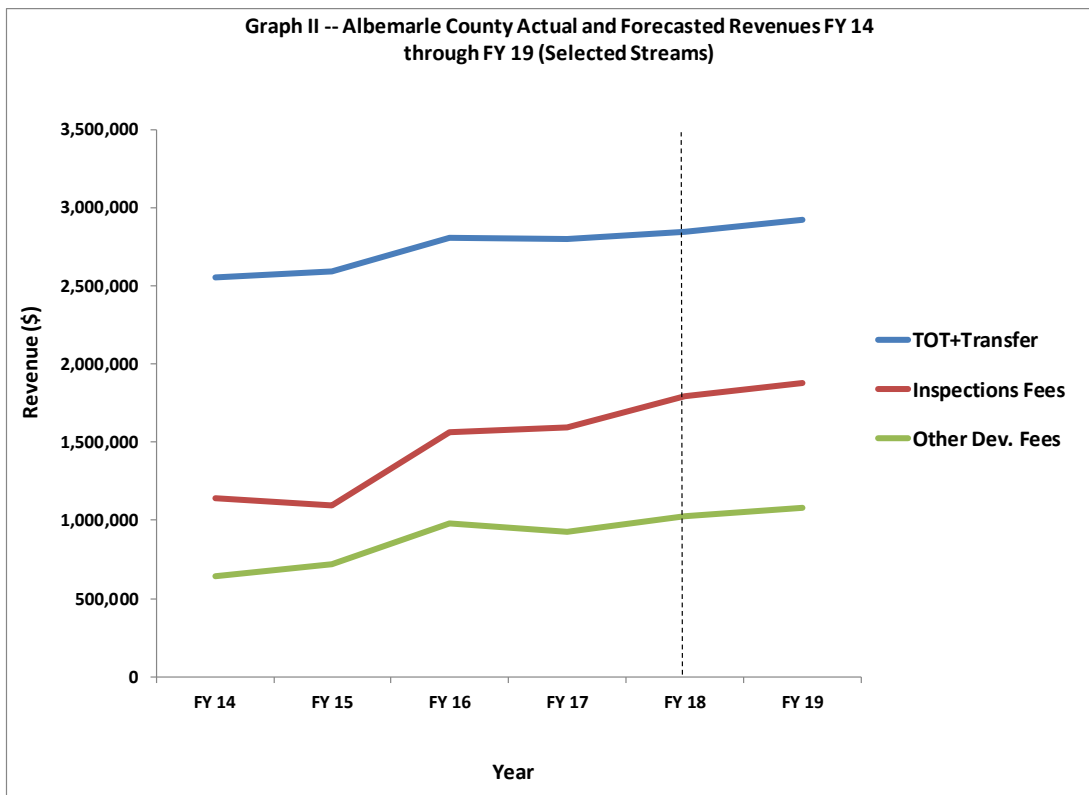
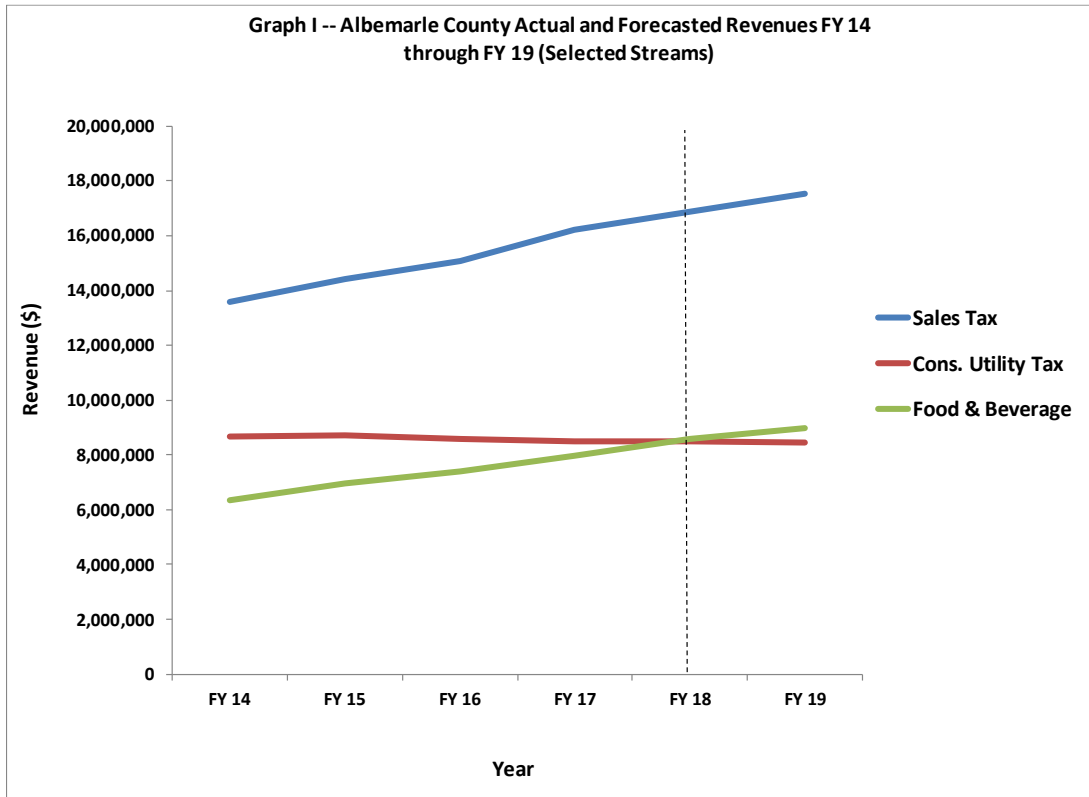
taxation of AirBnb (and AirBnb-type) properties from which the County did not collect revenue in previous years. Note that the growth of new hotel space in the City could be drawing some business away from hotels that are located in the County. Staff believes, however, that solid growth in the region in the next year or two should continue to bump up the County's TOT revenue. Inspections Fees, which relate to *current* new development, jumped substantially (+12.71%) between FY 17 and FY 18. This strong increase reflects the building boom that the County has experienced in the past year. This performance is consistent with the growth in Other Development Fees (+10.47%). This latter revenue stream, however, is related more to *future* development than to *current* development; the robust increase in Other Development fees suggests that Albemarle should continue to experience strength in new construction in FY 19, but the rate of this activity might slow down from the level the County witnessed in FY 18.

The data for the FY 14 to FY 18 time frame reveals the extent to which the County's economy has grown in the past several years and highlights a few points worth considering about the potential direction of Albemarle's economy in coming years. The performance of Sales Tax revenue (+24%) appears to reflect the County's growth as a regional retail hub, while growth in Food & Beverage Tax revenue (+35%) and Transient Occupancy Tax revenue (+11%) during this time period seems to speak to the continuing popularity of the County as a tourism destination. The jump in Inspections Fees revenue (+57%) and Other Development Fees revenue (+59%) suggests a solid, underlying strength to the County's economy during the FY 14 to FY 18 time period. One caveat to these development-related figures is that the County raised fees in FY 16, so not all of the annual growth can be attributed to new development alone. The slight drop in Consumer Utility Tax (-1.92%) appears to reflect technological change rather than any type of slowdown in the County's economy. For the purposes of measuring the performance of the County's economy, staff has concluded that this particular revenue stream has lost its tracking power and will need to be replaced with another revenue variable that offers a better "fit" with changes in local economic conditions.

Looking to FY 19, projected Sales tax revenue is projected to grow by about 4% over the FY 18 value, while TOT revenue is expected to climb by about 3%, as part of a longer-term trend in this stream. Food & Beverage Tax revenue, meanwhile, is projected to post a healthy increase of about 5%. Consumer Utility Tax should remain essentially flat. Inspection Fees and Other Development fees, however, are forecasted to grow by 4.5% and 5.4% respectively.

Unemployment

According to the most recently available information from the Virginia Employment Commission, Albemarle's average monthly unemployment rate dropped from 3.48% in FY 17 to 3.01% in FY 18. Albemarle's decline (-0.47 pp) parallels the drop in the Virginia rate (-0.57 pp) and national rate (-0.55 pp). The County's 3.01% unemployment rate is below what many economists would consider to be the "frictional" or "full employment" rate of unemployment.



Staff thinks that, based on the past twenty years of unemployment rate data, Albemarle's frictional employment rate likely is somewhere in the vicinity of 3% to 3.5% so, by this traditional measure, the County basically reached full employment in FY 16, remained at full employment in FY 17, and now is experiencing a labor shortage. Anecdotal evidence in the community seems to reinforce the notion that Albemarle is experiencing a labor shortage. For FY 19, the County's unemployment rate is expected to drop to 2.76%; this situation should result in upward pressure on wages and salaries in Albemarle.

Note that the unemployment rate applies only to people who are in the labor force; the number does not capture people who might have become discouraged looking for employment and who have dropped out of the labor force. An interesting phenomenon is that, as the County's economy improved in recent years, this situation should have encouraged some people who dropped out of the labor force during and after the 2007-09 recession to re-enter the labor market and look for work. Such a phenomenon apparently did take place. The County's Labor Force Participation Rate (LFPR) increased from 59.3% in CY 13 to 62.5% in CY 17, according to the American Community Survey 1-Year Data for these two years.¹ The LFPR data, however, contains a 3% margin of error for CY 13, and a 2.6% margin of error for CY 17, so some caution should be exercised in interpreting this information.

Employment

Note that the jobs numbers for Albemarle come from the Virginia Employment Commission's Quarterly Census of Employment and Wages (QCEW) report; are given by place of employment; and include both part-time and full-time positions, as well as both temporary and permanent positions. The nature of this data is such that the numbers can swing substantially from year to year. Changes in the numbers sometimes can be misleading if, for example, employers in the County replace many part-time jobs with full-time positions, or vice-versa. The VEC's jobs numbers, nonetheless, are used as the gauge of the number of positions in the County since no other comprehensive set of jobs data for Albemarle is readily available.

As shown on Table I, the average monthly total number of jobs in the County grew from 54,921 in FY 17 to an *estimated* 56,000 in FY 18, or by 1,079 positions (2%). This result shown in Table I could change, once official numbers for Q4 of FY 18 become available from the VEC in coming months, and might change yet again if the VEC releases any revisions to previously published data. The apparent solid growth in jobs between the two fiscal years, in other words, should be treated as tentative.

Note that if the estimated number of jobs for FY 18 ends up closely approximating the actual number for that year, the gain of 1,079 jobs would represent a very healthy labor market but, nonetheless, would be below the 2,206 jump in the number of jobs that the County experienced between FY 16 and FY 17.

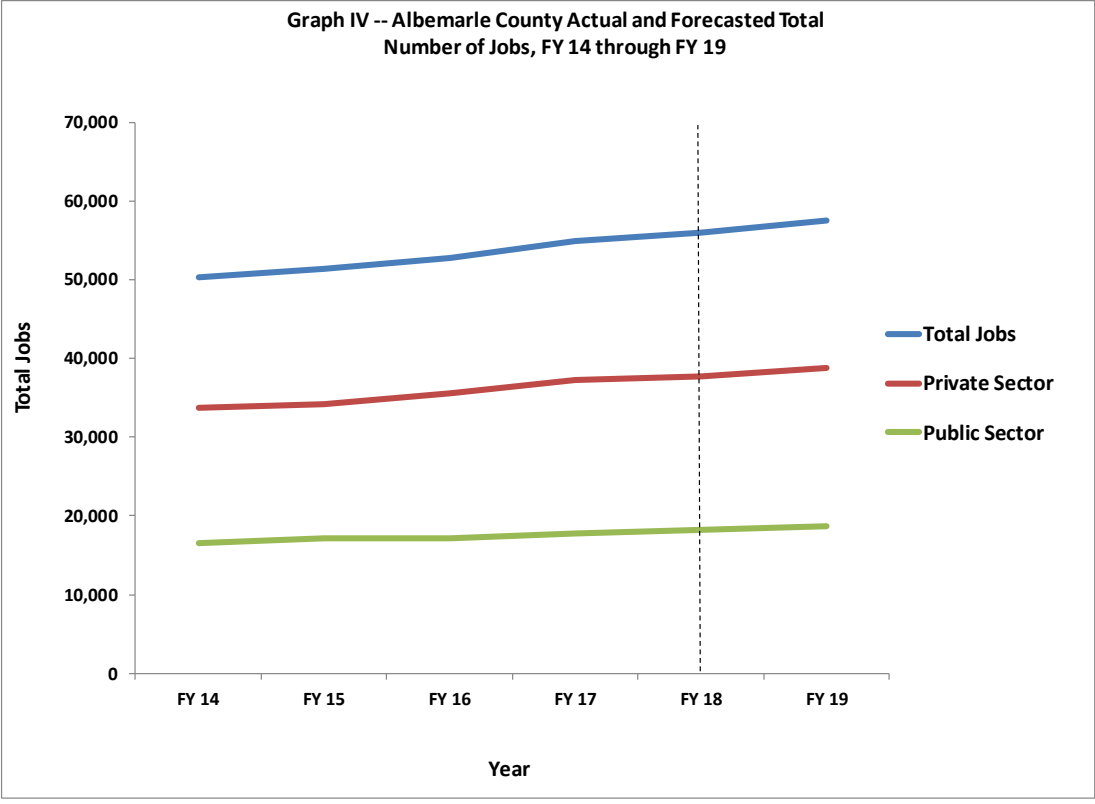
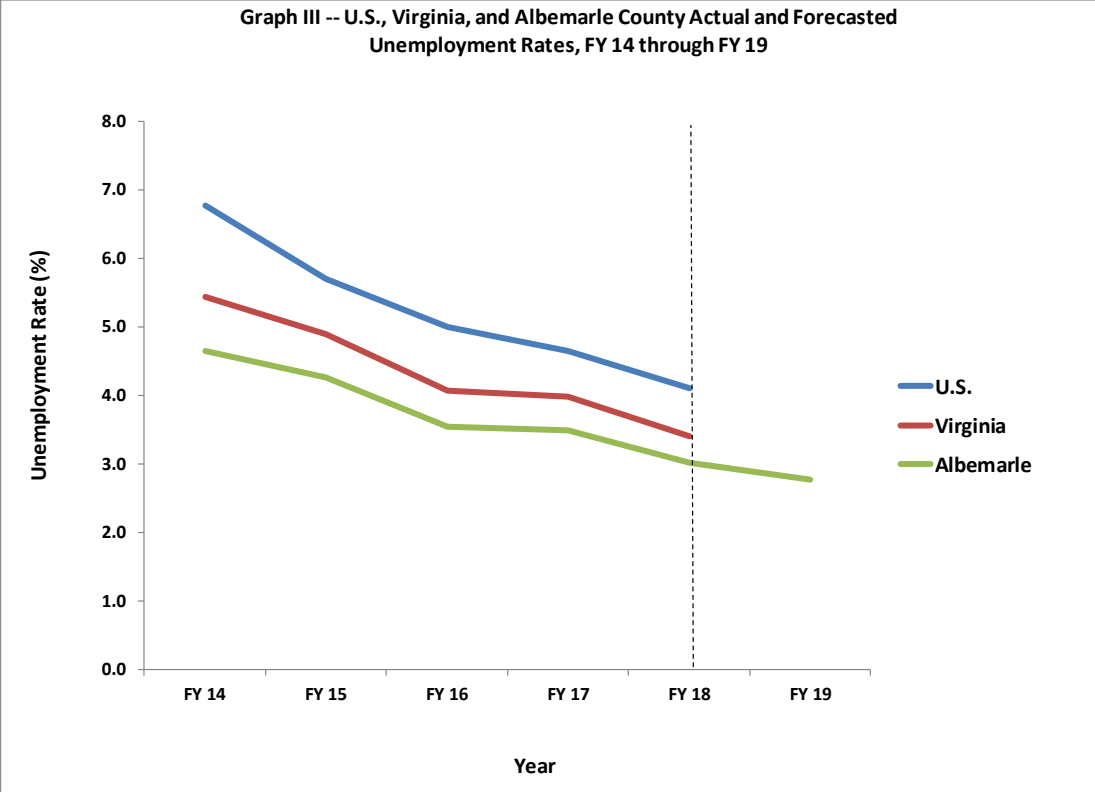


Table I reveals that the private sector generated an estimated 594 positions in FY 18, and that the private sector's share of the total number of jobs in the County came to 67.5% of the jobs base, down slightly from 67.7% in the previous year. In FY 18 the public sector experienced an estimated net increase of 485 positions. The vast majority of this increase came from growth at the State level (+381 or 78.6% of the total growth in public sector positions). Keep in mind that the figures presented in Table I reflect the estimated *monthly averages for the twelve months of the fiscal year*, and do *not* necessarily reveal changes in full-time, permanent positions.

Employment sectors that are estimated to have experienced the largest *increases* in numbers between FY 17 and FY 18 include Accommodation and Food Services (248 jobs); Retail Trade (179 jobs) and Educational Services (141 jobs). Note that the retail and accommodation and food services sectors of the economy traditionally have contained a large number of part-time positions. Sectors that endured *losses*, again in terms of numbers, include Arts, Entertainment, and Recreation (-56 jobs); and Management of Companies (-53 jobs).

During the course of the *FY 14 to FY 18* time period, the total number of jobs is estimated to have grown by 5,754 positions, or 11.45%. The private sector accounted for 4,127 of these jobs, or about 72% of the total growth. With regard to the public sector, the rate of growth in the number of jobs during this time period was more modest than was the performance in the private sector. The number of public sector positions in Albemarle increased by 1,627 or 9.8%.

The NAICS sectors that experienced the largest *increases* in jobs between FY 14 and FY 18 include Health Care and Social Assistance (1,000 jobs); Retail Trade (984 positions); and Educational Services (983 jobs). The sectors that experienced *declines* in employment numbers included Management of Companies (-152 positions); Wholesale Trade (-16 jobs); and Administration and Support (-12 positions).

For FY 19, staff projects that the County will experience a net gain of 1,494 jobs, for an average monthly total number of jobs of 57,493. The projected increase of 1,494 jobs (2.67%) suggests that the jobs base will continue to grow at a respectable rate. This FY 19 result would be consistent with a growing U.S. economy. Note that the October 2018 *Wall Street Journal* survey of economists reveals an average expected annualized rate of growth in GDP of about 2.5% at the national level for the four quarters comprising FY 19.² In FY 19 the private sector in Albemarle is expected to grow by 1,042 jobs while the public sector is expected to increase by 452 jobs in FY 19. The NAICS sectors that are projected to *gain* the largest number of positions include Accommodation and Food Services (278 jobs); Retail Trade (271 positions); and Educational Services (250 jobs). Only two sectors of the County's economy are expected to experience outright declines in FY 19: Management of Companies (49 positions); and Admin. and Support (3 jobs).

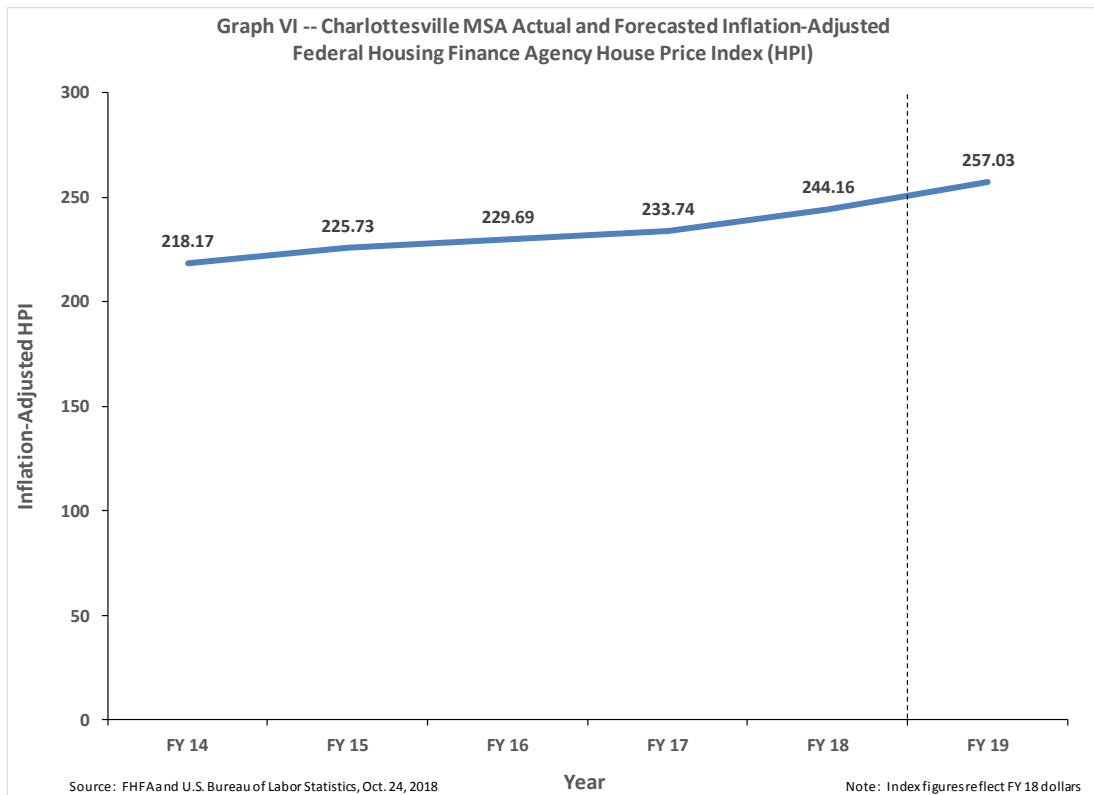
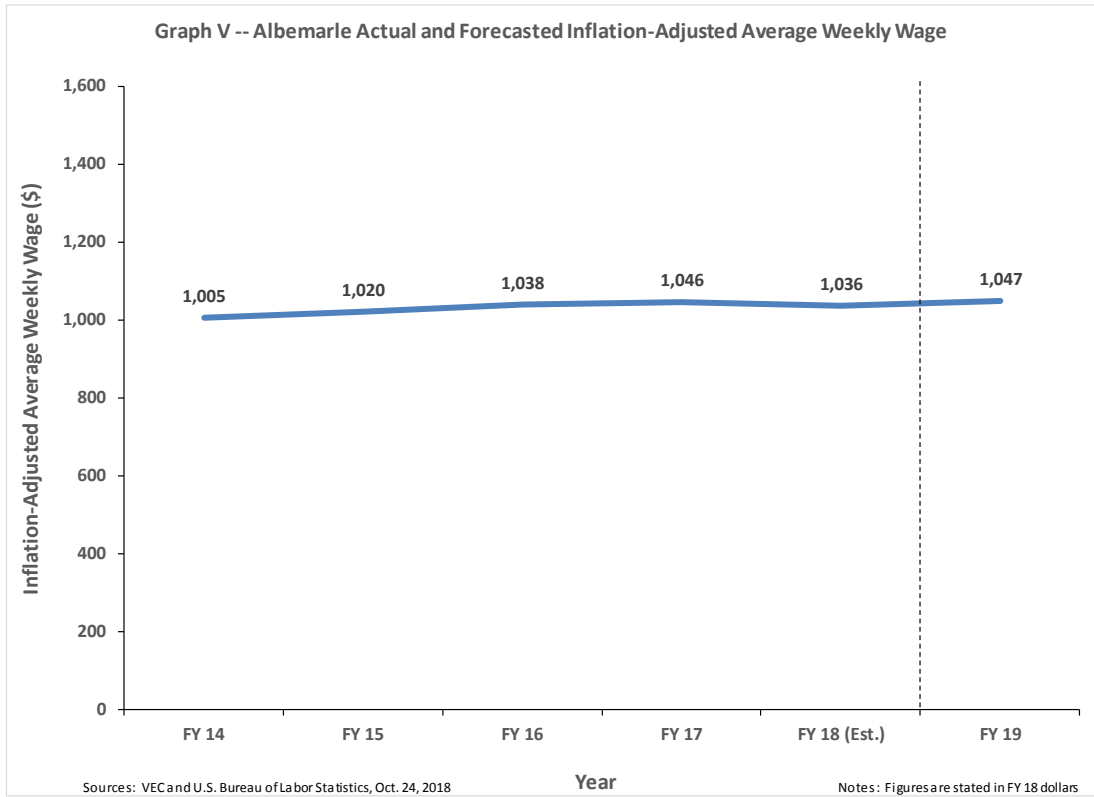
Inflation-Adjusted Average Weekly Wage

The average weekly wage reveals the general wage level in Albemarle County's employment base. The data comes from the Virginia Employment Commission, and is weighted by the relative number of positions in each of the NAICS employment sectors shown in Table I (and on Graph V, below). The average weekly wage is included in this report in an attempt to gauge the direction and pace at which income is changing in the region. Note that the average weekly wage can be influenced by sharp changes in the number of jobs in any particular sector, as well as any sudden changes in the wages paid in that sector or other sectors. For these reasons, caution should be exercised in interpreting changes in the average weekly wage (especially in the case of FY 18, since the figure shown for that fiscal year reflects an *estimate* of the final number, rather than the *actual* result).

This metric, nonetheless, can give us an idea about the performance of income in Albemarle County over time. The data from the VEC, unfortunately, is stated in nominal terms, i.e., does *not* take inflation into account so, for the purposes of this report, the VEC data is adjusted for inflation, using the Consumer Price Index for all Urban Consumers (CPI-U), from the U.S. Department of Labor's Bureau of Labor Statistics. The inflation-adjusted figures presented in Table I (and on Graph V, below), in other words, reveal changes in the *real* average weekly wage. Figures shown in the table are in FY 18 dollars. Between FY 17 and FY 18, the real average weekly wage apparently decreased from \$1,046 to \$1,036 (\$10 or 1%). This result means that, after taking inflation into account, the "average" job in Albemarle paid about 1% less in FY 18 than it did in FY 17. Note that, during the FY 14 to FY 18 time period, the inflation-adjusted average weekly wage did increase (by about \$31 or 3%) but this performance was essentially flat. This result reflects the subdued wage growth that has existed in the United States since the end of the "Great Recession" in 2009. For FY 19, staff expects that the current labor shortage in Albemarle County should result in upward pressure on wages and salaries. Staff expects that the real average weekly wage will rise to \$1,047 (\$12 or 1.12%) in FY 19.

Inflation-Adjusted House Price Index

Each quarter, the U.S. Federal Housing Finance Agency (FHFA) publishes an index number for housing values in each Metropolitan Statistical Area (MSA) of the United States. This House Price Index (HPI) figure is based on a "repeat sales" methodology and generally is thought to offer one of the most accurate measures of housing price levels for a metropolitan area. The FHFA data cited in this report reflects "all transactions" (sales as well as refinancings) and is not seasonally-adjusted. Note that, despite the "all transactions" designation, only data from sales or refinancings that involve "conforming" mortgages are included in the HPI.³ Note, also, that the HPI data is *not* broken down by cities or counties within each MSA so, for the Charlottesville MSA, information is not available separately for the County of Albemarle.



Despite these limitations, the FHFA home price index offers a measure by which to compare general changes in the value of housing in Albemarle over time, since the County represents a substantial portion of the Charlottesville area's housing stock. As was the case with the average weekly wage, the figures cited in this report have been adjusted for inflation and are stated in terms of FY 18 dollars.

The reason why the HPI is an important piece of data is that changes in the index can serve as a *rough proxy* for changes in area residents' *net worth* over time since, in the United States, primary residences represent most households' single biggest asset by dollar value.⁴ As shown on Table I (and on Graph VI, above) between FY 17 and FY 18, the Charlottesville MSA's inflation-adjusted FHFA HPI rose from 233.74 to 244.16 (an increase of 10.42 points, or 4.66%). This result suggests that, if all else were held constant, the net worth of many Albemarle residents increased between the two years. This information, when coupled with the average weekly wage data above, however, raises potential questions about housing affordability for prospective purchasers. For FY 19, staff expects the FHFA HPI to increase in real terms to 257.03 (growth of about 5.3%) but, as noted previously, this index reflects transactions activity in the entire Charlottesville MSA, not just the County of Albemarle.

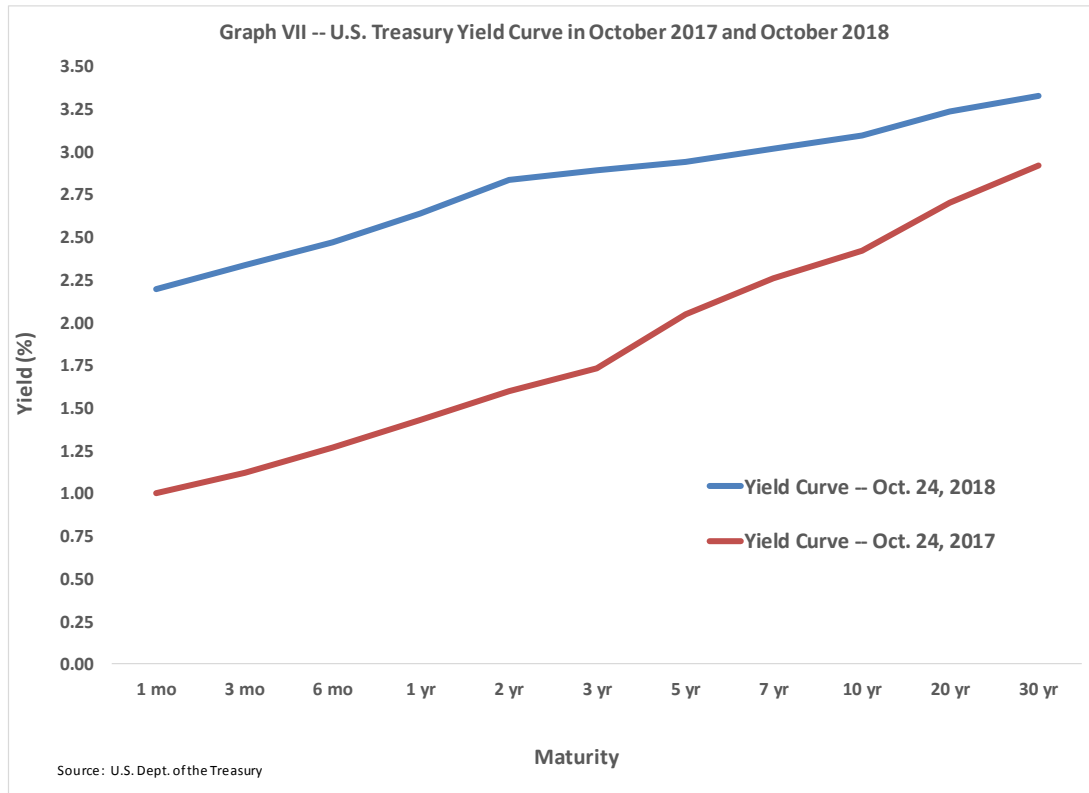
Conclusions

The data presented on Table I indicates that the County's economy, as represented by the *collective* performance of selected revenue streams, grew at a fairly strong pace between FY 17 and FY 18. The 0.47 pp decline in Albemarle's unemployment rate between FY 17 and FY 18 suggests that the County's economy continued to grow this past year. The FY 18 rate of 3.01% appears to be at least nominally consistent with full employment. A substantial increase in Albemarle's jobs base between FY 17 and FY 18 (+1,079 positions, or +1.96%) implies that economic conditions were robust between these years. This piece of information, along with the recent decline in the County's unemployment rate, reinforces the relatively healthy picture of Albemarle's economy suggested by the revenue stream data in Table I.

An unexpected drop in the inflation-adjusted average weekly wage between FY 17 and FY 18 might reflect a statistical fluke although, as a general observation, wage growth in the County has remained subdued since the end of the "Great Recession." A rise in the inflation-adjusted FHFA HPI for the Charlottesville area reinforces the notion that the County's economy has experienced fundamental strength in the past year but, when taking into account the wage data cited previously, there exist potential questions about the direction of housing affordability.

Looking forward to the end of FY 19, the County's economic prospects appear to be good. Assuming that, in FY 19, U.S. Gross Domestic Product (GDP) grows at the 2.5% average annualized rate forecasted by economists in the October 2018 *Wall Street Journal* survey, staff expects the County's unemployment rate will drop to around 2.8%, and that the jobs base will end FY 19 about 2.7% over the final FY 18 level.

This outlook for the County's economy is tempered, however, by potential headwinds. If the global macroeconomic picture were to take a turn for the worse, this situation obviously could have a negative effect on the U.S. economy and, by extension, the economy of Albemarle County. Economists have identified some foreseeable scenarios which could induce a turn in the global macroeconomic picture. In one scenario, a sudden correction in, say, global equities markets could induce a slowdown or a recession. In a second scenario, the yield curve for U.S. Treasuries, which has been flattening during the course of the past year (as shown on Graph VII below), might invert, i.e., short-term borrow rates might rise above the rates on longer-term borrowing, thereby helping to induce either a slowdown or an outright recession.⁵ In a third scenario, trade frictions between the United States and its trading partners, particularly China, could erupt into an all-out trade war, which clearly would have severe implications for the global economic picture in the intermediate- and longer-term.⁶ Finally, elevated levels of corporate debt in the U.S., and general debt in emerging markets, conceivably could generate problems for the U.S. and global economies if companies and countries experienced difficulty in making payments on the high levels of debt that they have acquired in recent years and, as a result, were to precipitate a financial crisis.⁷



1. The Labor Force Participation Rate equals all non-institutionalized, civilian people, aged 16 or older, who either are (a) employed, or (b) unemployed but looking for work, divided by the total non-institutionalized, civilian population.

Source: U.S. Census Bureau's "American FactFinder" website, accessed October 18, 2018:

https://factfinder.census.gov/faces/nav/jsf/pages/guided_search.xhtml

2. To review the survey, please see <http://projects.wsj.com/econforecast/#ind=gdp&r=20>

3. Conforming mortgages include only mortgages that are eligible to for purchase by Fannie Mae or Freddie Mac. Generally, these mortgages must be under a certain dollar value, which varies by metropolitan area.

4. See Table 3, p. 18 of the *Federal Reserve Bulletin*, September 2017 (Vol. 103, No. 3). This table, which contains data from the 2016 *Survey of Consumer Finance*, reveals that, at the time of the survey, 63.7% of respondents owned their primary residence and the median value of this owned asset was \$185,000. This amount was greater than the conditional median value of any other owned asset class.

5. The theoretical reason why an inverted yield curve likely would induce a slowdown, or perhaps a recession, is that lending institutions tend to borrow funds for relatively short terms, but lend funds to consumers and businesses for relatively long terms. If the interest rate on short-term funds were to rise above the rate on long-term funds, the result would be that lending institutions would experience a squeeze on their profit margins and, holding everything else equal, would choose to cut back on lending. Credit tends to be the lifeblood of the economy, so the drop in lending activity ultimately would result in a slowdown or outright drop in economic activity. Based on empirical evidence, this theory seems to have some validity: Since 1955, an inverted yield curve has preceded all recessions and, additionally, an inverted yield curve on only one occasion has erroneously predicted a recession. (In this last case, however, the inverted yield curve *did* foreshadow a *slowdown*). For more information about the inverted yield curve phenomenon, please see, "Monetary Cycles, Financial Cycles, and the Business Cycle," (Federal Reserve Bank of New York, Staff Report No. 421, January 2010). This paper examines the relationship between changes in the slope of the yield curve and changes in real economic activity. The paper is available at the following link:

https://www.newyorkfed.org/research/staff_reports/sr421.html

6. See, for example, the comments made by Citigroup's Chief Economist, Willem Buiter, regarding the possible damage that would result from U.S. – China tariffs:

<https://www.cnbc.com/2018/04/18/tariffs-would-cause-a-serious-trade-war-citigroup-economist.html>

See also the comments made by the Director-General of the World Trade Organization, Roberto Azevedo, regarding the damage to the global economy that would result from a U.S. – China trade war:

<http://www.bbc.com/news/business-43564714>

Note the warning issued by the International Monetary Fund's Chief Economist, Maurice Obstfeld, with respect to the effect that rising trade tensions between the U.S. and China could have on global economic growth:

<https://www.cbsnews.com/amp/news/imf-trade-tensions-threaten-strong-global-growth/>

7. The risks posed to the U.S. and global economies by elevated levels of corporate debt and emerging market debt was as a topic of discussion during one session of the National Association for Business Economics (NABE) conference in Boston, MA, September 29 through October 2, 2018. At this session ("Corporate Debt, Student Loans, Auto Loans, or EM [Emerging Markets]: Which is the Next Subprime?") a plurality of economists in attendance indicated that, of the four choices presented, emerging market debt and high levels of corporate debt posed the two biggest risks in the coming year.