

Annual Economic Indicators Report



Year Ended June 30, 2017

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 17, as well as corresponding historical figures from FY 13, FY 14, FY 15, and FY 16. The table shows, additionally, projected information for FY 18.

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 17 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 16 and FY 17, 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 robust increase in Sales Tax revenue (+7.53%) 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 opening of a major shopping center in the County. The flat performance of Consumer Utility Tax (-0.70%) 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 (+7.49%) reflects generally strong economic conditions in the County as well as the opening of some high-volume chain restaurants in our locality. The flattening of Transient Occupancy Tax revenue (-0.35%) which, in Table I includes the Transfer to Tourism amount, might reflect a lull or, alternately, might reflect the growth of new hotel space in the

City of Charlottesville in the past year or so. The idea is that the new hotel space in the City might 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 bump up the County's TOT revenue. Inspections Fees, which relate to *current* new development, were up slightly (+2%) between FY 16 and FY 17. This small increase suggests that the substantial growth in new construction that has taken place in recent years might be peaking. This theory is consistent with the drop in Other Development Fees (-5%) since this latter revenue stream is related more to *future* development than to *current* development.

The data for the FY 13 to FY 17 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 (+29%) and Transient Occupancy Tax revenue (+15%) during this time period seems to speak to the continuing popularity of the County as a tourism destination. The jump in Inspections Fees revenue (+44%) and Other Development Fees revenue (+51%) suggests a solid, underlying strength to the County's economy during the FY 13 to FY 17 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 (-2%) 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 18, projected Sales tax revenue is projected to grow by about 4% over the FY 17 value, while TOT revenue is expected to climb by about 7%, 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 decline precipitously, by 24% and 42% respectively. These steep drops reflect the substance of recent conversations with staff from the Department of Community Development. In the opinion of CDD staff, the residential construction market is likely reaching its saturation point while, simultaneously, there does not appear to be any new major non-residential development on the horizon. The potential drop-off in the rate of construction represents a headwind for Albemarle's economy in the next year or so but, by itself, does not necessarily mean that the local economy overall will slow down. Indeed, as noted in the employment section of this report, growth in the overall jobs base in FY 18 should remain quite solid, a situation that reflects the County's likely continuing along a path of economic expansion in the near-term.

Unemployment

According to the most recently available information from the Virginia Employment Commission, Albemarle's average monthly unemployment rate dipped slightly from 3.54% in FY 16 to 3.48% in FY 17. Albemarle's slight decline (-0.06 pp) parallels the drop in the Virginia rate (-0.09 pp) and national rate (-0.35 pp). The County's 3.48% 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 and remained at full employment in FY 17. For the current fiscal year, the County's unemployment rate is expected to be essentially flat; the forecasted average monthly rate for FY 18 equals 3.42%.

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 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 60.8% in CY 12 to 62.5% in CY 16, according to the American Community Survey 1-Year Data for these two years.¹ The LFPR data, however, contains a roughly two percent margin of error for CY 12 and CY 16, 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 jumped from 52,715 in FY 16 to an *estimated* 55,349 in FY 17, or by 2,635 positions (5%). This dramatic result shown in Table I could change, once official numbers for Q4 of FY 17 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 jump 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 17 ends up closely approximating the actual number for that year, the estimated gain of 2,635 jobs would be far the biggest increase between any two consecutive years during the FY 13 to FY 17 time period.

Table I reveals that the private sector generated an estimated 2,109 positions in FY 17, and that the private sector's share of the total number of jobs in the County came to 68.1% of the jobs base, up slightly from 67.5% in the previous year. In FY 17 the public sector experienced an estimated net increase of 526 positions. Nearly all of this increase came from growth at the State level (510 or 4.1%). 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 16 and FY 17 include Retail Trade (1,007 jobs); Health Care and Social Assistance (412 jobs); and Accommodation and Food Services (391 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 the greatest *losses*, again in terms of numbers, include Management of Companies (80 jobs); Finance and Insurance (48 jobs); and Administration and Support (39 jobs).

During the course of the *FY 13 to FY 17* time period, the total number of jobs is estimated to have grown by 4,854 positions, or 9.61%. The private sector accounted for 4,298 of these jobs, or about 89% of the total growth. With regard to the public sector, growth in jobs during this time period was modest. The number of public sector positions in Albemarle increased by 556, or 3.25%.

The NAICS sectors that experienced the largest *increases* in jobs between FY 13 and FY 17 include Retail Trade (1,510 positions); Health Care and Social Assistance (1,281 jobs); and Accommodation and Food Services (691 jobs). The sectors that experienced the sharpest *declines* in employment numbers included Management of Companies (145 positions); Wholesale Trade (94 jobs); and Public Administration (59 positions).

For FY 18, staff projects that the County will experience a net gain of 1,194 jobs, for an average monthly total number of jobs of 56,543. This result was generated by a set of multivariate regression models that take into account the historical correlations that exist between the number of jobs in the County in one year and the values of certain economic and financial variables in previous years. The projected increase of 1,194 jobs (2.16%) suggests that the jobs

base will continue to grow at a respectable rate. This FY 18 result would be consistent with a modestly growing U.S. economy. Note that the October 2017 *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 18.²

In FY 18 the private sector in Albemarle is expected to grow by 924 jobs while the public sector is expected to increase by 269 jobs in FY 18. The NAICS sectors that are projected to *gain* the largest number of positions include Health Care and Social Assistance (232 jobs); Retail Trade (227 positions); and Educational Services (222 jobs). Only two sectors of the County's economy are expected to experience outright declines in FY 18: Wholesale Trade (35 positions); and Construction (23 jobs). Note that the relatively small projected decline in the number of positions in construction, compared with the anticipated plummet in Inspection Fees, has to do, at least in part, with the fact that the VEC tallies construction jobs by the *jurisdictional locations of construction companies' home offices*. The expected drop in new development clearly will affect firms that are headquartered in Albemarle but, also, will impact companies located outside of the County. A drop in construction activity in the County, in other words, would not show up entirely in Albemarle's construction sector jobs numbers but, rather, would be distributed among the construction jobs figures in a variety of different localities, including the City of Charlottesville, the counties adjacent to Albemarle, and a number of localities outside of the region. A detailed examination of historical Inspections Fees and Construction sector data offers additional explanations for the seeming disparity between projected revenues and jobs.³

Conclusions

The data presented on Table I reveals that the County's economy, as represented by various revenue streams, continued to grow at a moderate pace. The preliminary FY 16 to FY 17 collective performance of Sales Tax, Consumer Utility Tax, Food & Beverage Tax, TOT, Inspections Fees, and Other Development Fees, suggests that general business conditions were reasonably robust last year, a condition that staff expects to continue in FY 18, with the sole exception that new development is expected to decline.

The County's essentially flat unemployment rate between FY 16 and FY 17 offers some evidence that the County's economy essentially has recovered from the aftermath of the "Great Recession." The 3.48% unemployment rate in FY 17 is consistent with a level that staff thinks represents "frictional unemployment." Note that the projected FY 18 average monthly unemployment rate of 3.42% would be indicative of a continuation of the strength of the County's labor market that existed in FY 17.

An estimated huge jump in Albemarle's jobs base between FY 16 and FY 17 (2,635 positions, or 5%) represents aggressive, and perhaps not sustainable, growth in the County's jobs base. As

noted above, however, a substantial portion of the increase in jobs was concentrated in sectors that contain large numbers of part-time positions. Final FY 17 jobs numbers from the Virginia Employment Commission, furthermore, do not yet exist. The projected increase in the number of jobs for FY 18 is relatively robust (1,194 or 2.16%) and would be consistent with expected conditions in the U.S. economy. This projection, however, is based in part on the performance of Albemarle's jobs base in FY 17, and might change as additional information about that year becomes available from the Virginia Employment Commission. Note that the forecasted numbers contained in this report reflect staff's thinking about the near-term prospects for Albemarle's economy, based on the best information currently available. This forecast is consistent with the fairly optimistic responses of the economists queried in the *Wall Street Journal* survey cited above, and with the general tenor in the financial media regarding the current and near-term health of the global and U.S. economies.^{4,5,6}

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 9, 2017:

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. The explanation cited in the text might help explain the quirky relationship of the Construction sector historical jobs data and the Inspection Fees historical data. From Table I, for example, note that when Inspection Fees rose between FY 13 and FY 14, the number of construction sector jobs actually declined. Then, between FY 14 and FY 15, fees dropped by about 4%, but jobs rose by about 13%. Subsequently, between FY 15 and FY 16 fees jumped (in part because of a change in the rates for inspection services), but the number of jobs fell. Only between FY 16 and FY 17 did the two pieces of data move in the same direction.

General Economic Activity	FY 13	FY 14	FY 15	FY 16	FY 17 Prelim.
Inspection Fees (\$)	1,109,099	1,141,119	1,096,180	1,561,081	1,593,209

Employment (3)	FY 13	FY 14	FY 15	FY 16	FY 17 Est. (4)
Construction	2,393	2,328	2,621	2,401	2,464

Part of the explanation for this unexpected performance, as mentioned in the text, might involve how the VEC reports the jobs data; another possibility involves the nature of the data itself, i.e., the numbers include both part-time and full-time jobs. A third explanation is that, although construction might slow down or speed up in Albemarle, firms based *in the County* might be working on projects in *other* localities, where the ongoing volume of activity is quite different in any given year from that in Albemarle. A fourth explanation for the quirky relationship between fee revenue and construction jobs might be that the jobs numbers are “sticky” in the sense that companies might not change the number of positions in their firms right away in response to changing economic conditions but, rather, might wait several quarters before making changes in employment levels.

There is some historical evidence that these explanations do influence the construction jobs numbers in ways such that the jobs numbers do not always line up neatly with the Inspection Fees revenue. In the table below, each row shows the number of construction jobs in the County in each of the fiscal years from FY 94 through FY 17 (CJOBS_t) as well as the number of jobs in the prior fiscal year (CJOBS_{t-1}). Each row, likewise, shows the value of inspection fees in the fiscal year (INSPECT_t) and in the prior fiscal year (INSPECT_{t-1}). Note that, if there were a strong correlation between inspection fees revenue and jobs, we certainly would expect to see that correlation in, say, the traumatic years around the 2007-09 Recession. Note, however, that there appears to be something of a lag, or at least a disconnect, between fee revenues and the number of jobs during that era.

Year	CJOBS _t	CJOBS _{t-1}	INSPECT _t	INSPECT _{t-1}
2016/17	2464	2401	1593209	1561081
2015/16	2401	2621	1561081	1096180
2014/15	2621	2328	1096180	1141119
2013/14	2328	2393	1141119	1109099
2012/13	2393	2356	1109099	1086105
2011/12	2356	2394	1086105	993184
2010/11	2394	2580	993184	932729
2009/10	2580	2865	932729	853193
2008/09	2865	3444	853193	652188
2007/08	3444	3503	652188	746680
2006/07	3503	3385	746680	801678
2005/06	3385	3028	801678	840986
2004/05	3028	3003	840986	782854
2003/04	3003	2925	782854	826162
2002/03	2925	2924	826162	802325
2001/02	2924	2886	802325	771279
2000/01	2886	2795	771279	740232
1999/00	2795	2566	740232	762847
1998/99	2566	2377	762847	708689
1997/98	2377	2315	708689	661306
1996/97	2315	2150	661306	574292
1995/96	2150	2041	574292	600646
1994/95	2041	1998	600646	638250
1993/94	1998	1755	638250	526985

Between FY 06 and FY 07, i.e., right before the Great Recession, fees *dropped* from \$801,678 to \$746,680 (or by 7%). The jobs numbers between those two years, however, *rose* from 3,385 to 3,503 (or by better than 3%). In the period between FY 07 and FY 08, during the depths of the Great Recession, fees fell from \$746,680 to \$652,188 (13%) and the number of jobs did fall during this period of extreme economic trauma, declining from 3,503 to 3,444 (2%). Note,

however, that between FY 08 and FY 09, the fees numbers jumped up, moving from \$652,188 to \$853,193 (31%) but firms based in the County apparently decided not to increase staff and, in fact, the number of jobs *dropped* precipitously, going from 3,444 to 2,865 (17%). This evidence suggests that there can be a lag between changes in economic conditions, as represented by fee revenue, and the willingness of firms to add or subtract jobs.

A slightly more rigorous analysis used data from the table above and employed a basic multivariate regression approach to measure the correlation between the fees and employment numbers shown in the table. The preliminary results of this exercise, *which did not control for other variables that might be relevant to explaining changes in the jobs numbers*, seem to indicate that there is about a one-year lag between the level of Inspections Fees revenue and the number of construction jobs. (This analysis also appears to show that there exists a very strong correlation between the number of jobs in one year, and the number of jobs in the next). These preliminary results together suggest that, if the forecasted drop in Inspections Fees did take place in FY 18, the jobs numbers most likely would not follow suit in any major way in FY 18, especially if the *overall* economy remained healthy in that fiscal year.

```
. reg cjobst cjobst1 inspectt inspectt1
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Source	SS	df	MS	Number of obs =
Model	3606177.3	3	1202059.1	F(3, 20) = 48.45
Residual	496230.536	20	24811.5268	Prob > F = 0.0000
Total	4102407.83	23	178365.558	R-squared = 0.8790
				Adj R-squared = 0.8609
				Root MSE = 157.52

cjobst	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
cjobst1	.8083637	.0716872	11.28	0.000	.6588268 .9579006
inspectt	-.0010119	.0002998	-3.37	0.003	-.0016373 -.0003864
inspectt1	.0010101	.0003469	2.91	0.009	.0002864 .0017338
_cons	579.2928	225.2077	2.57	0.018	109.5178 1049.068

```
. reg cjobst cjobst1 inspectt inspectt1
```

Source	SS	df	MS	Number of obs =
Model	3598645.38	3	1199548.46	F(3, 18) = 54.96
Residual	392872.484	18	21826.2491	Prob > F = 0.0000
Total	3991517.86	21	190072.279	R-squared = 0.9016
				Adj R-squared = 0.8852
				Root MSE = 147.74

cjobst	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
cjobst1	.7973307	.0681641	11.70	0.000	.6541234 .9405381
inspectt	-.0018772	.0004871	-3.85	0.001	-.0029004 -.0008539
inspectt1	.0017496	.0004894	3.58	0.002	.0007215 .0027777
_cons	724.1121	232.869	3.11	0.006	234.8725 1213.352

Note that the first regression used the full data set; the second regression excluded the two most recent years of data, since the fee revenue in these two years was heavily impacted by a change in the fee structure. For further information about this preliminary analysis, please contact Steven A. Allshouse, Dept. of Finance.

4. As an example of the sentiment regarding the strength of the global economy, see the October 9, 2017 article in the *Wall Street Journal*, "OECD Indicators Show U.K., Russia as Weak Spots: Global economy is set for strong growth into 2018."

<https://www.wsj.com/articles/oecd-indicators-show-u-k-russia-as-weak-spots-1507543246>

5. Another encouraging sign about the U.S. economy is that a recent revision to Q2 CY 17 Gross Domestic Product was slightly higher than originally announced. See the September 28, 2018 article on Bloomberg.com:

<https://www.bloomberg.com/news/articles/2017-09-28/u-s-second-quarter-growth-revised-upward-to-3-1-annual-pace>

6. One measure of confidence in the strength of the U.S. economy is suggested by the re-entry of workers into the U.S. labor market. See the October 6, 2017 article of Bloomberg.com, "Americans are Pouring Back into the Workforce, Jobs Data Shows."

<https://www.bloomberg.com/news/articles/2017-10-06/americans-are-pouring-back-into-the-workforce-jobs-data-show>

This situation seems to suggest that workers are confident that, if they re-enter the labor market, they not only will be able to find employment but, also, will be able to remain employed in the long-term.