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DeBusk Veterinary Training Center



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INTRODUCTION

Lincoln Memorial University's DeBusk Veterinary Training Center (DVTC) is located in Lee County, Virginia just two miles south of the Kentucky state-line and two miles north of Tennessee. The facility opened four years ago providing students from around the region with the opportunity to practice veterinary medicine.

This report provides existing conditions and emerging trends of the County for five core socio-economic characteristics and comparison for the surrounding region of Bell County, Kentucky and Claiborne County, Tennessee. The local and regional overviews may provide essential background information to better understand the current conditions in and around Lee County, Va.

This report is structured in the following format:

- I. Demographic Overview
 - a. Lee County
 - b. Surrounding Region
- II. Housing Overview
- III. Economic Overview
 - a. Lee County and Surrounding Region
 - i. Retail Trade
 - ii. Arts, Entertainment, and Recreation
 - iii. Accommodation and Food Service
- IV. Small Businesses and Entrepreneurship
- V. Tourism Market and Commuting Patterns

The report suggests stabilization of the measured performance trends across each of these four core areas. The County's existing unique assets may propel this rural economy forward by attracting investments, increasing tourism, and improving its resident's prosperity, and attracting new talent into the County.

This information was collected and analyzed by Eve Lettau and Ross Hammes. It will serve as auxiliary information for a report lead by Dr. Scott Tate of the Office of Economic Development.

I. DEMOGRAPHIC OVERVIEW

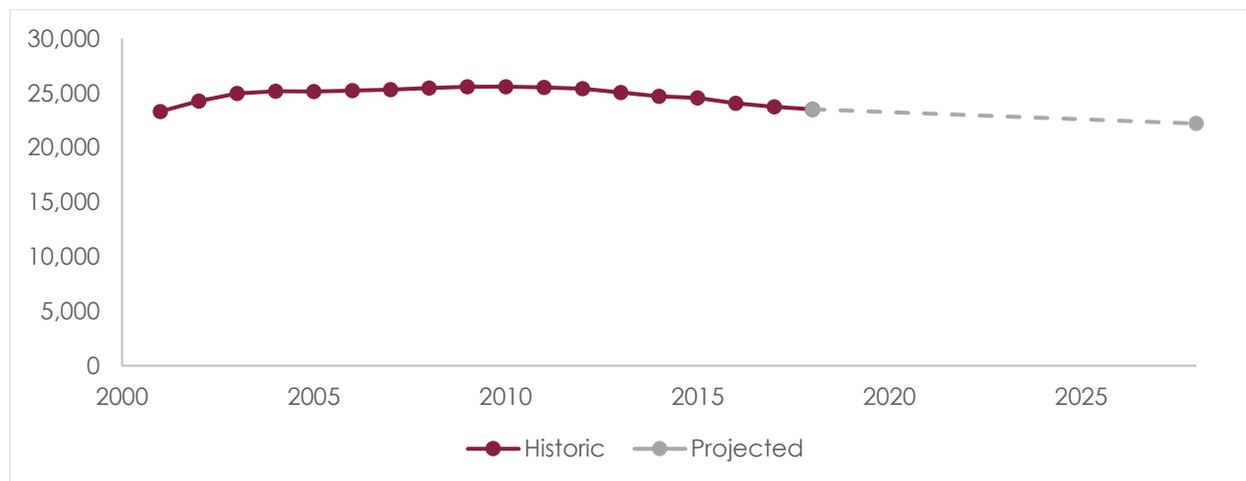
This section will detail demographic change as it relates to population, race, and gender for both Lee County and the surrounding region of Bell County, Kentucky and Claiborne County, Tennessee.

Lee County

Population

Lee County's population is at a similar place today as it was two decades ago. In the past decade, the County has declined in population. However, it is difficult to assume the overall decline as the population spike from 2001 to 2005 is attributable to the opening of Virginia's only federal penitentiary, which houses around 1,500 male inmates. Excluding this group, the County most likely did not see an as much of a population increase as the figure below suggests. This past decrease in population around the turn of the decade may be attributed to the recession of 2007. The current population of Lee County is 24,428 and is projected to further decline to 22,209 in 2028. Figure 1.1 below shows both historic and projected population for Lee County. Further analysis of historic population growth can be found in the appendix.

Figure 1.1 Lee County Population, 2001-2028



Source: EMSI

Population by Age

While the median age in 2000 was 40, it has increased significantly to 44. Historically, Lee was a hub for young professionals in search of employment in industries relating to manufacturing, mining, farming, and rail, in both the pre-war and post-war economy. Employment in both industries provided paid wages that could support families. However, as employment opportunities in Lee decreased young professionals and new families began to look outside of the County for

employment opportunities that better suited their needs. As a result, the median age in Lee is projected to keep rising.

During the 2007 recession, adults between 35-44 and their children left the County in the highest numbers, showing that families migrated out of the County as the number of households within Lee decreased during this period. There has been a considerable increase in the senior citizen population in Lee, which has inflated the median age to 44 years old. Figure 1.2 below shows the County population change by age for the years 2001 and 2018.

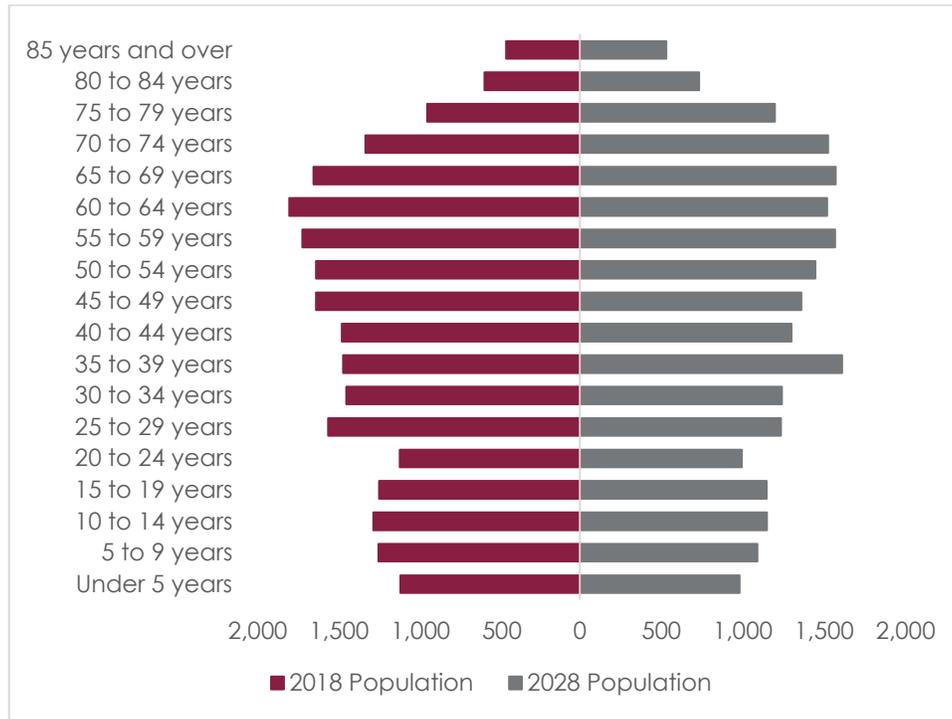
Figure 1.2 Lee County Population Change by Age



Source: EMSI

The population trends seen above are projected to continue. As of 2028, the younger population is expected to decline further while the older generations will continue to age. Figure 1.3 shows the projected population change by age for 2018 and 2028.

Figure 1.3 Lee County Projected Population Change by Age



Source: EMSI

In order to curb the further increase of the median age, the County should seek to attract industries which are themselves attractive to younger generations. Additionally, increasing employment in both its largest and emerging industries may also provide additional economic growth by providing attractive jobs to a younger demographic. Further investment and growth in these industries, amongst others, could also retain graduates and young professionals from many of the nearby community colleges and universities.

Population by Race & Gender

Historically, Lee has been home to Caucasian residents. About 93% of today’s population identifies as white. Minority races make up about 7% of the population. It is difficult to estimate the true diversity of Lee County because the federal penitentiary in Lee houses 7% of the total population. While this may skew any true estimates about race, the County’s race makeup is not projected to change in 2028.

Similar to race, the true gender estimates may differ slightly from what the numbers project. Current estimates suggesting that around 52% of the population is male and 48% is female. However, the gap is smaller with the true population most likely being closer to an even split if the male inmate population is excluded. These gender trends are projected to remain fairly constant in 2028, with a male proportion of 51% and a female proportion of 49%.

Conclusion

From a distance, it seems as if Lee's population has remained stagnant over the past four decades. At face value, this does not bode well for Lee County when considering the challenges that an aging population brings. It becomes clear that Lee's growth is limited and new opportunities must be presented to ensure its recovery. A key growth strategy for the County would be to engage millennials, which account for 18% of the population. In the long-term, the County should seek to implement policies which will create more diversity in age and race. Diversity of this kind will at least help to stabilize the population decline and may even promote population growth.

Region

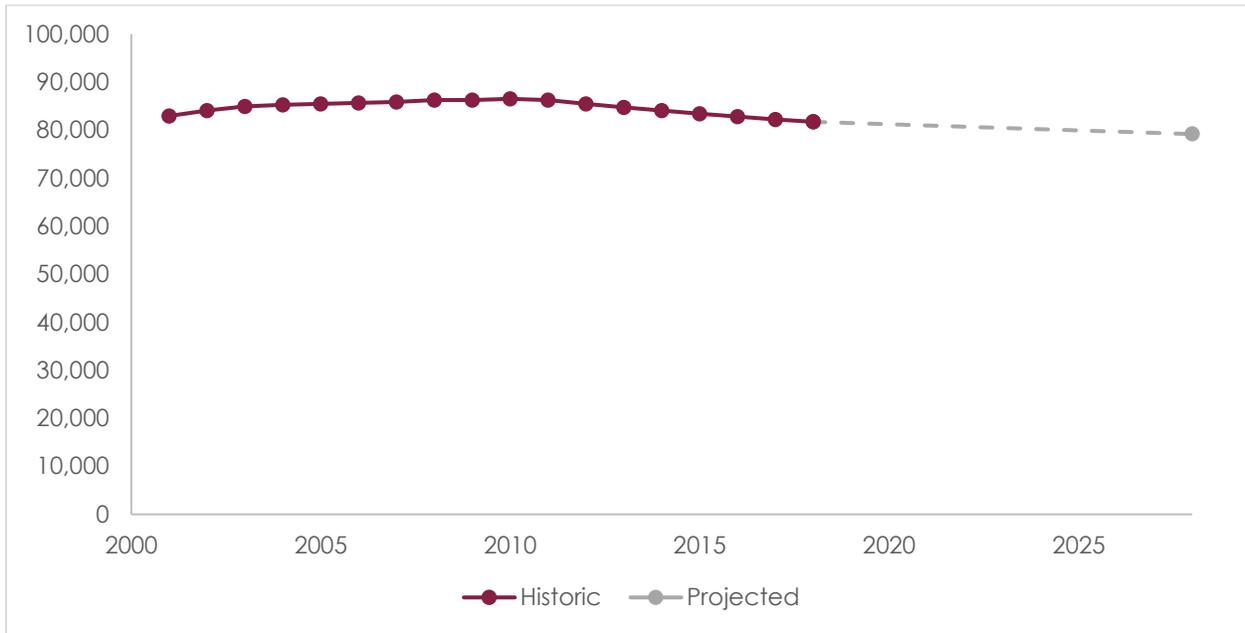
This report will also analyze the broader region of Lee County (VA), Claiborne County (TN), and Bell County (KY).

Population

The demographics of the region are not dissimilar to those of Lee County. As of 2018, the population was about 81,700. This marks a recent decline of 1% since 2001. Since 2010, the overall population has been steadily declining as a result of the most recent recession. As of 2018, there has been an overall decline of 1% from the 2001 population. Lee County is the smallest contributor to the regional population, accounting for just 27% of the total population of the region.

Figure 1.4 below shows both historical and projected regional population data for the years 2001 to 2028. The regional population is also predicted to decline further. In 10 years, the population is predicted to be 79,100, an overall decline of 5% since 2001.

Figure 1.4: Regional Population, 2001-2028

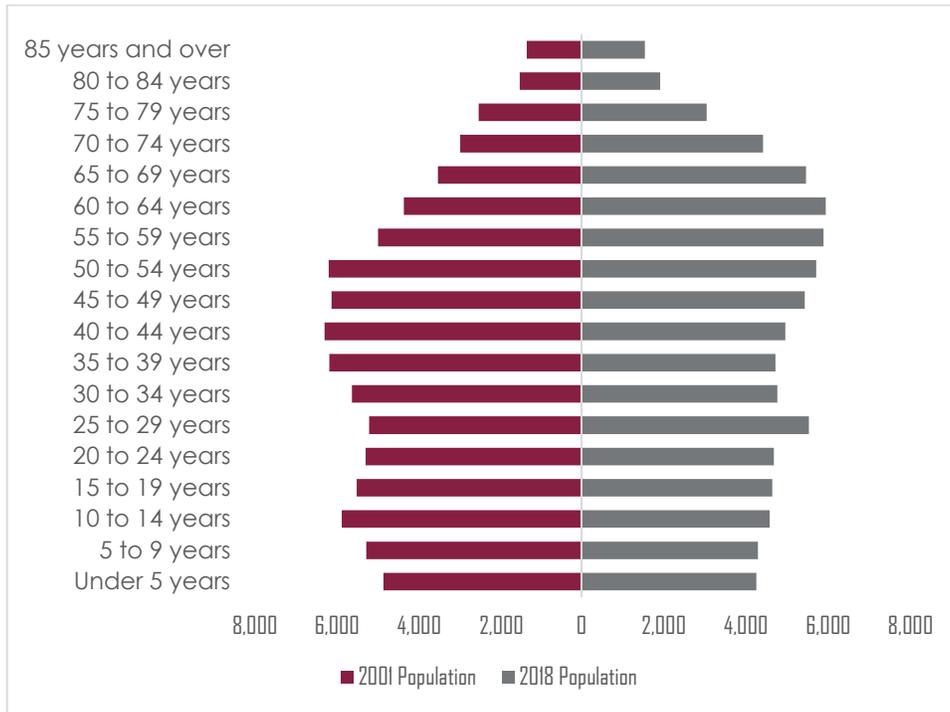


Source: EMSI

Population by Age

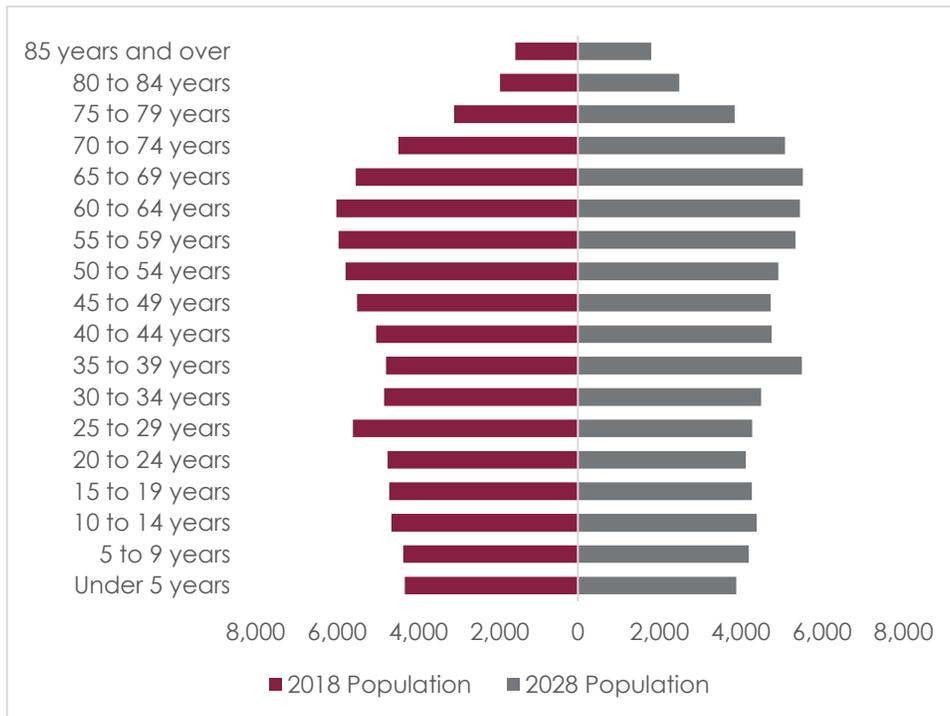
The population of the region has aged significantly since 2001. In 2000 the median age was 38 while the current median age is 43. The population for all ages below 54 declined from 2001 to 2018, with the exception of people ages 25 to 29. This shows that younger people are not moving into the area. Additionally, this aging population trend is predicted to increase in 2028. Figure's 1.5 and 1.6 show the historic and projected regional population by age.

Figure 1.5: Regional Population Change by Age



Source: EMSI

Figure 1.6: Regional Projected Population by Age



Source: EMSI

Population by Race & Gender

While there are some minority groups, 94% of the current population is white. The second largest race is black, non-Hispanic at about 2% of the population. The remaining 4% is made up of two or more races, Hispanic whites, Asian's, and American Indians. Disregarding overall projected population decline, this trend is expected to remain constant.

Currently, the population is split by gender equally at 50% for both male and female. This trend is also expected to remain constant.

Conclusion

Overall, the population demographics of the region are very similar to that of Lee County. However, unlike Lee, the region seems to have a stagnant population. Nevertheless, outmigration of young professionals and lower birthrates will cause the population to slowly shrink. By focusing resources on attracting and retaining young professionals and increasing diversity efforts the regional population will be on its way to vibrant growth.

II. HOUSING OVERVIEW

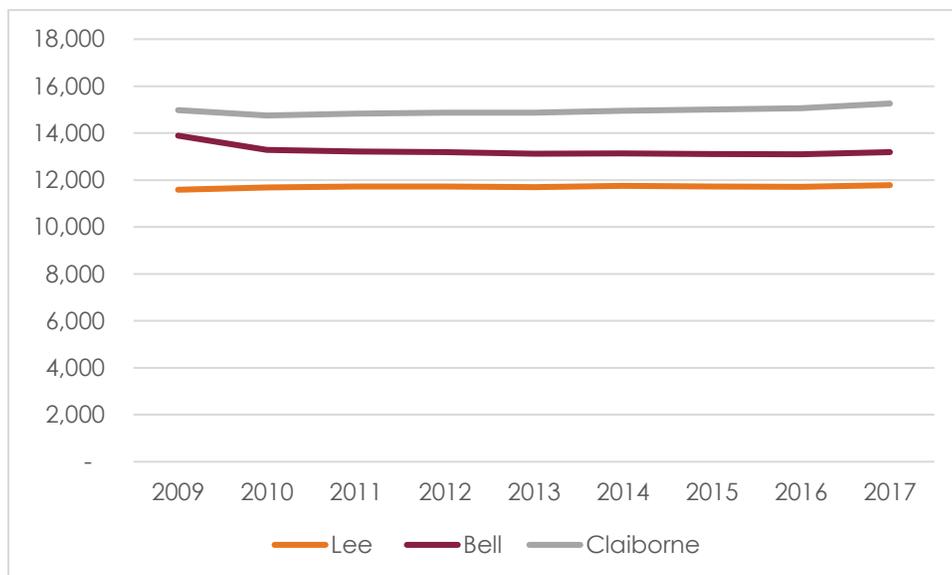
Housing

Changes in specific housing indicators were analyzed to understand the housing environment in Lee County and how it has changed since 2010. This section reports changes in the number of occupied housing units, vacancies, tenure, and type age of housing in Lee County, Virginia, Belle County, Kentucky, and Claiborne County, Tennessee.

Total Housing Units

Lee and Claiborne Counties have seen modest growth in total housing units since 2009. Bell County saw a slight decline in housing units during the same period. Specifically, housing units grew by 1.7% (195 units) and 1.9% (280 units) in Lee and Claiborne Counties, respectively from 2009 to 2017. Bell County experienced a 5% (698 units) decrease in housing units during the same period.

Figure 2.1 Total Housing Units, 2009-2017, Bell County, KY, Claiborne County, TN, and Lee County, VA



Source: American Community Survey, 5-Year Estimates

Vacancy

Total vacancies have increased in Lee County. Alternatively, vacancies in Bell County have decreased and have remained somewhat stable in Claiborne County. Furthermore, Lee County leads the region in total vacancies, followed by Claiborne, and Bell Counties. It is important to note that vacant homes are not necessarily abandoned homes. Rather, certain types of vacancies can be indicative of growing housing demand and the presence of a second or vacation home. For instance, of the 2,504 vacant homes in Lee County in 2017, 1,488 (59%) were seasonal vacancies.

Lee County

Total vacancies in Lee County rose by 29% (561 homes) from 2009 to 2017. This growth in vacant homes is largely due to the growing presence of seasonal or vacation homes in the County. For instance, seasonal vacancies grew by 25% from 1,188 vacancies in 2009 to 1,488 vacancies in 2017. Other vacancies, including abandoned units, also rose in the County during this period. From 2009 to 2016, other vacancies stayed somewhat stable. Other vacancies, however, more than doubled from 2016 to 2017. For instance, other vacancies rose by 123% from 251 units in 2016 to 569 units in 2017. Real estate-related vacancies, including unoccupied rental houses, unoccupied houses for sale, and recently sold unoccupied houses, have seen some fluctuations during this time period, but have stayed with 18-26% of total vacancies. Overall, real estate-related vacancies have fallen by 11% (13 units) from 2009 to 2017. Table 2.1 shows changes in vacancies in Lee County.

Table 2.1 Vacancies by Type, 2009-2017, Lee County, VA

	Total Vacancy	Other Vacancies		Seasonal Vacancies		Seasonal Vacancies	
		Other Vacancy, Incl. Abandoned Houses	% Other Vacancies	Seasonal Vacancy	% Seasonal Vacancies	Real-Estate Vacancy	% Real-Estate Vacancies
2009	1,943	255	13%	1,188	61%	500	26%
2010	1,850	237	13%	1,263	68%	350	19%
2011	1,723	255	15%	1,162	67%	306	18%
2012	1,891	210	11%	1,276	67%	405	21%
2013	2,050	285	14%	1,401	68%	364	18%
2014	2,155	275	13%	1,454	67%	426	20%
2015	2,283	223	10%	1,540	67%	520	23%
2016	2,436	251	10%	1,720	71%	465	19%
2017	2,504	569	23%	1,488	59%	447	18%
% Change 2009-2017	29%	123%	-	25%	-	-11%	-

Source: American Community Survey, 5-Year Estimates

Bell County

The vacancy landscape in Bell County has changed considerably since 2009. Data suggest, however, that it is changing for the better. For instance, total vacancies in Bell County fell by 20% (539 units) from 2009 to 2017. During this same period, “other” vacant homes (including abandoned properties) fell by 63% from 1,864 units in 2009 to 697 units in 2017. Seasonal and real estate vacancies have increased since 2009. For instance, seasonal vacancies rose by 47% from 179 units in 2009 to 263 units in 2017. Similarly, real estate vacancies at nearly double the rate of seasonal

vacancies, rising 87% (544 units) from 2009 to 2017. Table 2.2 shows changes in vacancies in Bell County.

Table 2.2 Vacancies by Type, 2009-2017, Bell County, KY

	Total Vacancy	Other Vacancies		Seasonal Vacancies		Real Estate Vacancies	
		Other Vacancy, Incl. Abandoned Houses	% Other Vacancies	Seasonal Vacancy	% Seasonal Vacancies	Real-Estate Vacancies	% Real-Estate Vacancies
2009	2,670	1,864	70%	179	7%	627	23%
2010	2,382	1,561	66%	156	7%	665	28%
2011	2,578	1,386	54%	217	8%	975	38%
2012	2,314	1,103	48%	197	9%	1014	44%
2013	2,006	450	22%	260	13%	1296	65%
2014	1,956	281	14%	284	15%	1391	71%
2015	2,021	241	12%	342	17%	1438	71%
2016	2,120	385	18%	314	15%	1421	67%
2017	2,131	697	33%	263	12%	1171	55%
% Change 2009-2017	-20%	-63%	-	47%	-	87%	-

Source: American Community Survey, 5-Year Estimates

Claiborne County

Vacant housing conditions remained largely static in Claiborne County from 2009 to 2017. During this period, total vacancies stayed within 200 units of the 2009 value, changing by only 5 units from 2009 to 2017, overall. There was more change when considering the composition of vacancies in Claiborne County, although this growth/decline remained under 15%. Seasonal vacancies fell by 12% (60 units) from 2009 to 2017. Additionally, real estate vacancies fell by 5% (27 units) during this period. Alternatively, “other” vacancies rose by 8% (92 units) during this period, possibly suggesting a slight increase in abandoned units. Table 2.3 shows changes in vacancies in Claiborne County.

	Total Vacancy	Other Vacancies		Seasonal Vacancies		Real Estate Vacancies	
		Other Vacancy, Incl. Abandoned Houses	% Other Vacancies	Seasonal Vacancy	% Seasonal Vacancies	Real- Estate Vacancies	% Real- Estate Vacancies
2009	2,260	1,198	53%	510	23%	552	24%
2010	2,239	1,148	51%	544	24%	547	24%
2011	2,058	1,085	53%	620	30%	353	17%
2012	2,170	1,241	57%	610	28%	319	15%
2013	2,312	1,237	54%	623	27%	452	20%
2014	2,259	1,214	54%	578	26%	467	21%
2015	2,296	1,369	60%	538	23%	389	17%
2016	2,271	1,338	59%	479	21%	454	20%
2017	2,265	1,290	57%	450	20%	525	23%
% Change 2009- 2017	0%	8%	-	-12%	-	-5%	-

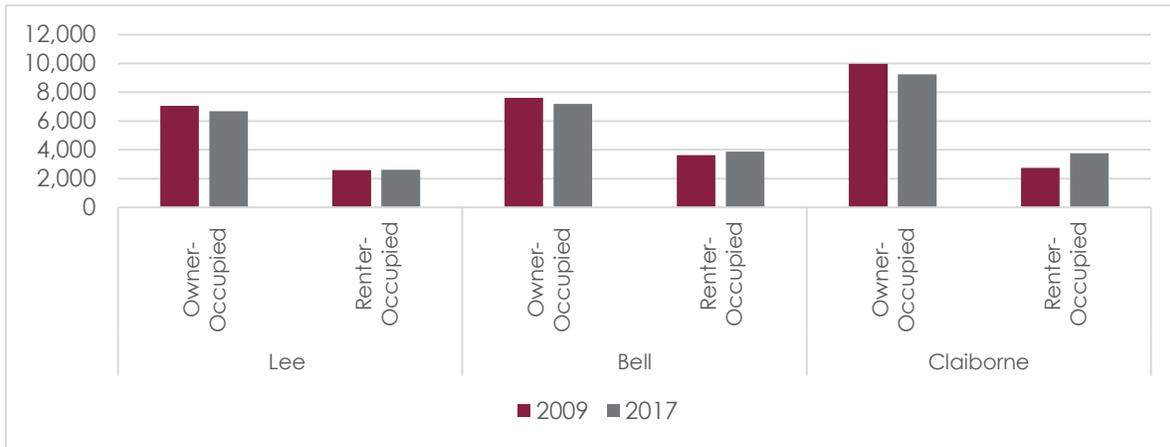
Table 2.3: Vacancies by Type, 2009-2017, Claiborne County, TN

Source: American Community Survey, 5-Year Estimates

Tenure

Home ownership is changing in Lee, Bell, and Claiborne Counties. From 2009 to 2017, home ownership fell in each of the three counties, at somewhat similar rates. For instance, homeownership fell by 5.3% (375 units) in Lee County, 5.4% (410 units) in Bell County, and 7.4% (740 units) in Claiborne County. Alternatively, there has been an increase in rental units in each county, although at varying extents. Lee County saw an increase of only 9 rental units from 2009 to 2017. Bell and Claiborne Counties, however, saw much more growth in rental units. From 2009 to 2017, for instance, Bell County saw a 6.9% (251 unit) increase in rental units and Claiborne County saw a 36.9% increase in rental units. Figure 2.2 shows changes in housing tenure from 2009 to 2017.

Figure 2.2: Vacancies by Type, 2009 and 2017, Lee County, VA, Bell County KY, and Claiborne County, TN

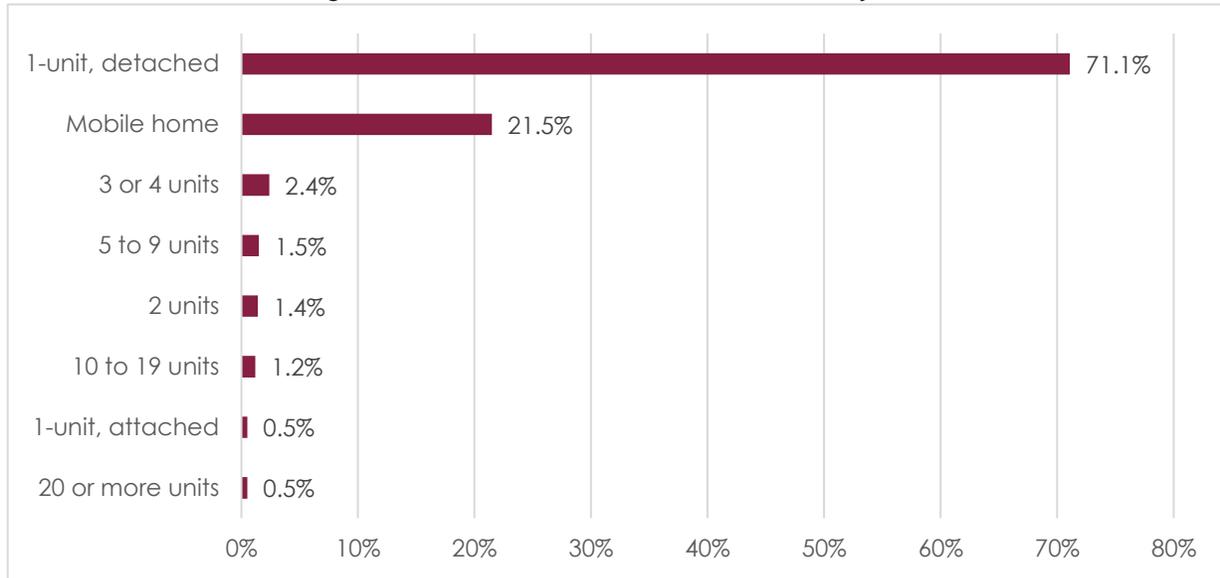


Source: American Community Survey, 5-Year Estimates

Units-in-Structure

One-unit, detached homes account for the vast majority of housing in Lee County. In 2017, one-unit homes accounted for 71.1% of all units in the County. Mobile homes have the second-largest stake of housing units in Lee County, accounting for 21.5% of total units-in-structure for 2017. Data suggest that there is a very limited supply of housing beyond single family/one-unit homes and mobile homes. For instance, multi-family homes of any scale account for only 8% of total units. Of the small number of multifamily homes in the County, structures with 3-4 (2.4%) units are most common, followed by structures with 5-9 units (1.5%), duplexes (1.4%), and structures with 10-19 units (1.2). The remainder of structures (one-unit attached and 20 or more unit structures) account for less than one percent of the County's housing stock. Figure 2.3 shows a more detailed view of units-in-structure for Lee County.

Figure 2.3 Units-in-Structure, 2017, Lee County, VA

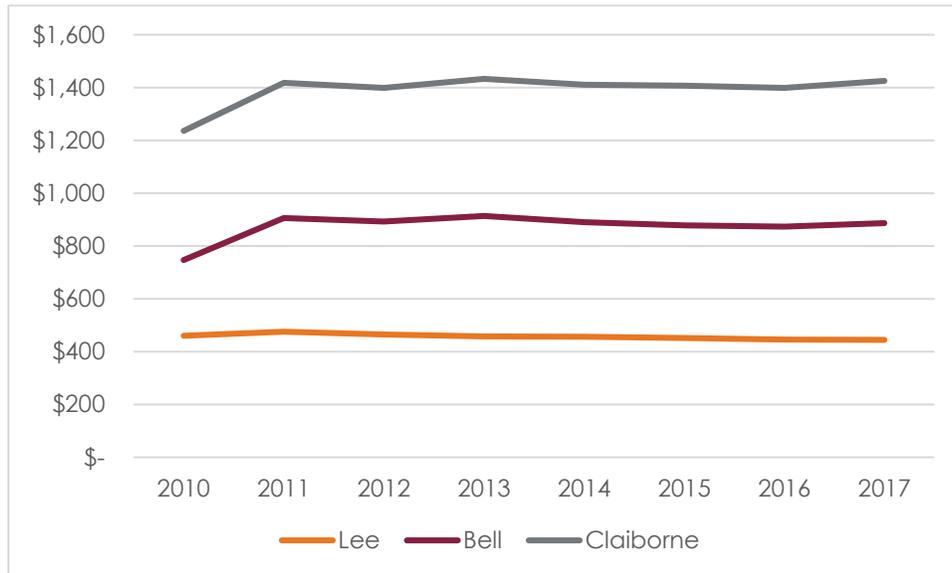


Source: American Community Survey, 5-Year Estimates

Monthly Housing Costs

Bell County had the lowest median monthly housing costs in the region (\$441.57), while Claiborne County had the highest for 2017 (\$539). Lee County had a median monthly housing cost of \$444.68 for the same year. Housing costs have seen real-dollar changes since 2009, with increases for Bell and Claiborne Counties and a slight decrease for Lee County. For instance, Claiborne County saw a real-dollar monthly housing cost increase of \$49.95 (10.2%) while Bell County saw a more considerable real-dollar increase of \$154.64 (53.9%) from 2010 to 2017. Alternatively, Lee County saw a slight real-dollar decline in median monthly housing costs, falling by \$15.33 from \$460.01 in 2009 to \$444.68 in 2017. Figure 2.4 illustrates real-dollar changes in median monthly housing costs for Lee, Bell, and Claiborne Counties.

Figure 2.4: Median Monthly Housing Costs in Jan. 2019 Dollars, 2009- 2017, Lee County, VA, Bell County KY, and Claiborne County, TN

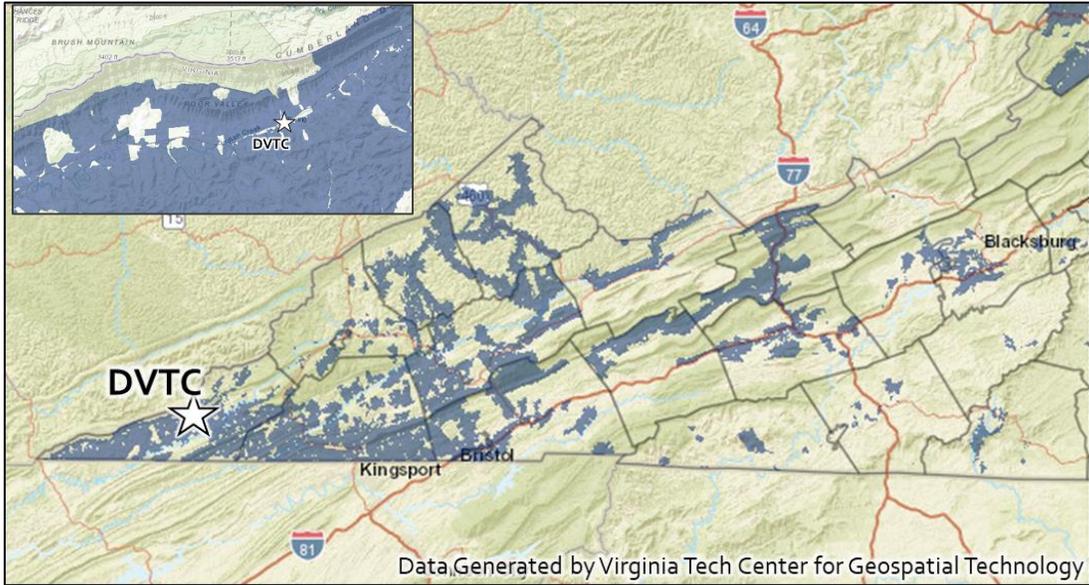


Source: American Community Survey, 5-Year Estimates

Broadband Infrastructure

Figure 2.5 below shows the coverage of fiber optic cable wired internet infrastructure throughout the region. Lee County has better fiber optic cable than any other part of Southwest Virginia. It is comparable to more urban areas such as Bristol (VA) and Blacksburg (VA). Fiber optic connections are preferable to DSL or standard cable connections because it can reach much faster speeds necessary for big data operations. Fiber optic internet is much faster than even the highest-speed copper internet connections, with options available that range from 5 Mbps to 100 Gbps. These speeds are optimal for business and student productivity. In addition to being fast, this method is also reliable because it is resistant to interference from heavy machinery, electromagnetism, and inclement weather. This allows the user to connect to the cloud and access terabytes of data at any moment with little delay. Finally, this method is more secure and resistant to hacking than any other form of internet access, which can save a company millions of dollars.

Figure 2.5 Fiber Optic Coverage Surrounding DeBusk Veterinary Training Center



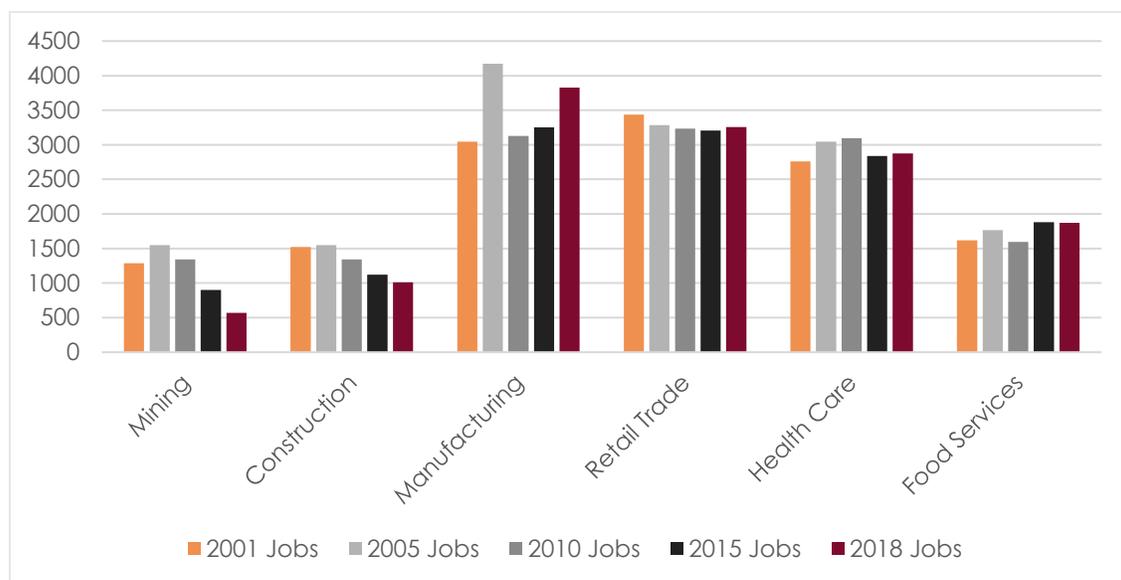
III. ECONOMIC OVERVIEW

Region

Overview

Lee County’s economy has always relied on manufacturing. Over recent years, heavy industry sectors have plateaued, offering fewer employment opportunities than ever before. Figure 3.1 below highlights some of the traditionally large sectors which include manufacturing, healthcare, construction, and retail. Lee’s economy has experienced a tremendous level of reorganization in the past two decades.

Figure 3.1 Region’s Largest Sectors by Employment (2001- 2018)



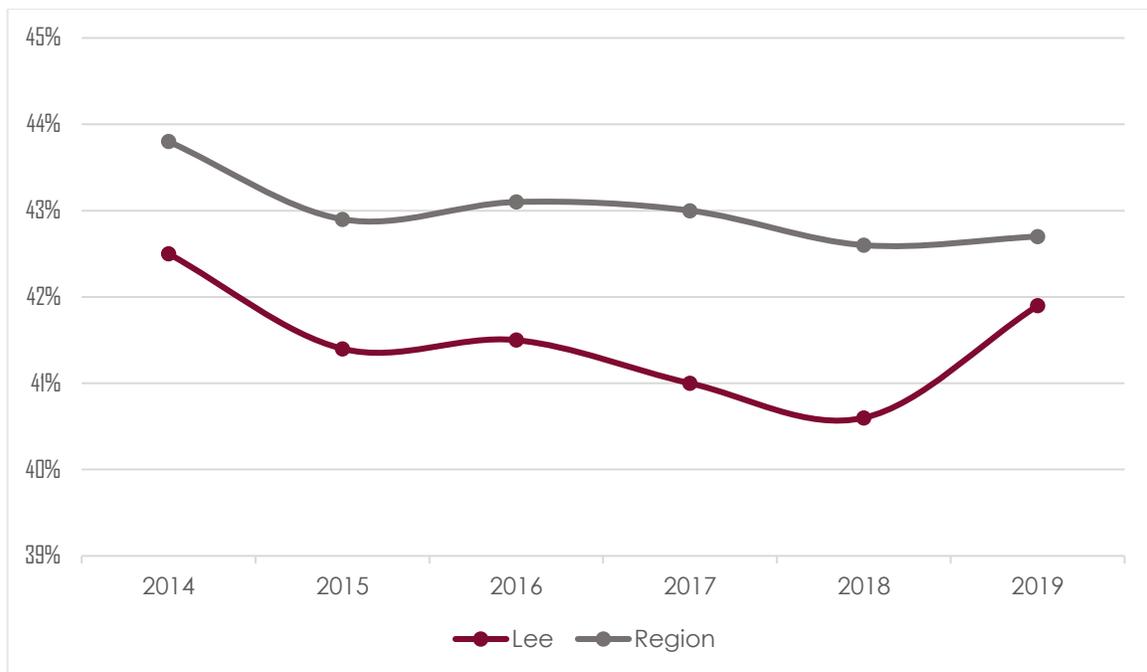
Source: Virginia Labor Market Information

Lee was once one of the largest manufacturing communities in the region, due to its location at the convergence of several local and regional rail lines. In the past 40 years, however, offshoring, outsourcing, rising labor costs, and increasing regulations imposed on manufacturers have shifted jobs overseas, reducing employment in this sector. Today, Lee and the surrounding counties are aligning its economic priorities toward emerging industry sectors such as retail trade; arts, entertainment, and recreation; and accommodation and food services. Lee’s economy is changing, but evidence suggests that some change may be good. Growth in high paying industries could raise revenues and attract young professionals. As of 2018, according to the U.S. Census, median household income has remained just over \$31,000 over the past decade. This coincides with EMSI data which estimate the weighted average median hourly wages for each worker is around \$15.36. The median family income has risen from \$41,000 to \$45,000 over that same time period. Additionally, 21% live below the poverty line in Lee County.

Labor Force

As shown in Figure 3.2 below, the labor force participation rate has gradually declined since 2011. As the labor force declines, the unemployment rate has risen over the past decade from 7% to 12%. This rate does not compare nationally, which has changed from 5% to 6% over that same time period. This means that this region has seen greater employment loss compared to the national average. Employment also dropped from 48% to 40% during that time period, a trend that has been continuing for the past few decades. Labor force participation rate also decreased from 52% to 45%, meaning that fewer residents are available for work in the County which may be due to the aging and retiring population. Much of the labor force at risk of retiring. The national average for an area this size is 6,780 people, while Lee has 8,420 people 55 years or older. This accounts for about one-third of the total population of Lee.

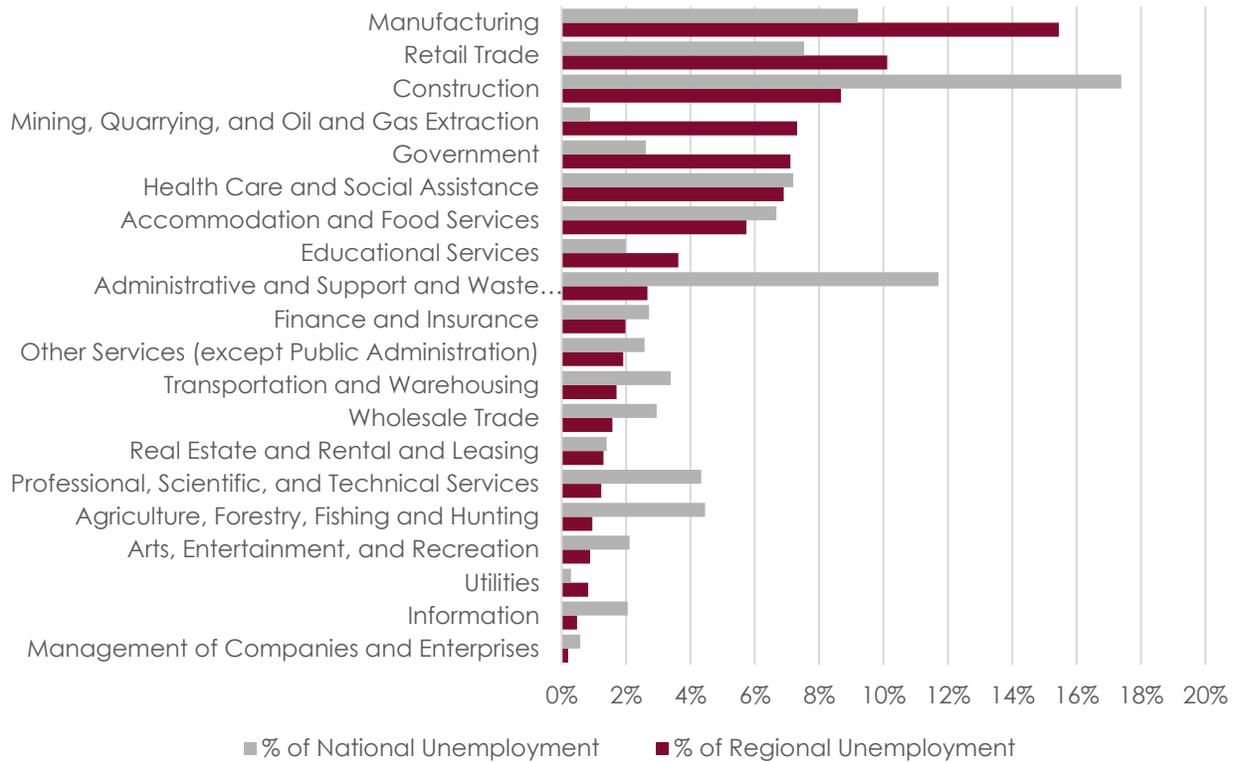
Figure 3.2 Labor Force Participation Rate in Region (2014-2019)



Source: U.S. Decennial Census, US Census Bureau 2014-2019

The declining industry trends in Lee combined with its aging workforce will likely result in higher unemployment and lower workforce participation. The total employment for the three county areas is 1,460. More recently, unemployment within Lee has been adversely affected by external factors such as nationwide recessions and shift in societal trends. In addition, Lee's unemployment by industry sector is not distributed like the national average. For instance, as seen in Figure 3.3, a majority of the unemployment is in industries like manufacturing, construction, and mining, while the national trends expect more employment in industries such as retail trade and services.

Figure 3.3 Unemployment Percentage by Industry Sector

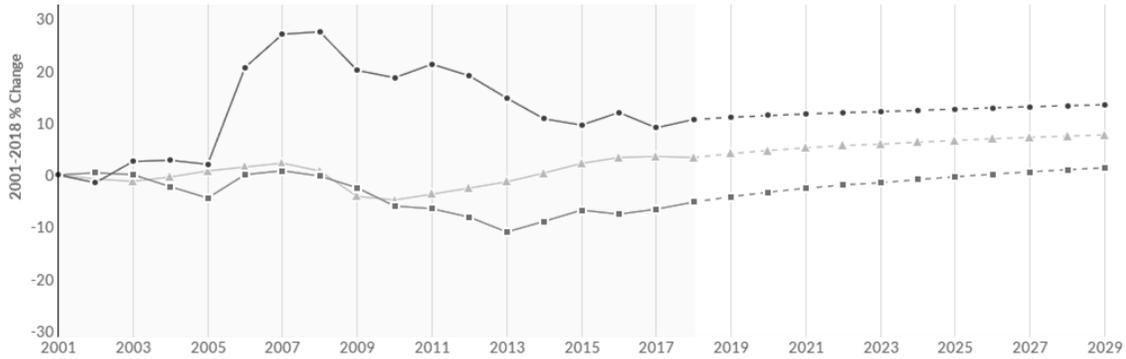


Source: EMSI

Retail Trade (Lee County and Surrounding Region)

Retail is a large part of any local economy and Lee is no exception. This industry has gained 10% of employment (70 workers) at its 65 establishments since 2001, according to Virginia LMI. The number of establishments doubled over that time period 27 to 65. Examples of these establishments include gas stations, grocery stores, and Walmart (the County’s largest private employer). Figure 3.4 shows this steady trickle of employment over the past 18 years compared to the surrounding unemployment of the three county area. Both the figure and recent QCEW data shows that the market could adjust to this new equilibrium and remain at 750 employees to make retail trade the most secure industry moving forward.

Figure 3.4 Retail Trade Sector Job Change (2001-2018)



	Region	2001 Jobs	2018 Jobs	Earnings	Change	% Change
●	Lee County	666	737	\$26,416	71	10.7%
●	Region	3,439	3,259	\$28,074	-180	-5.2%
●	US	15,919,227	16,450,796	\$37,626	531,569	3.3%

Source: EMSI

While this could be due to Lee’s stagnating population numbers, there is evidence that a larger trend is at play. Nationally, the retail trade has lost its footing to online retailers because online retail has low labor costs and overhead. This downward trend is echoed by IBISWorld, which forecasts a continued decline for consumer retailers stores in rural areas. Locally, there has been comparable employment and wage growth in this sector since the turn of the century. Opportunities in this industry may propel the region forward to where it needs to go. Additionally, there are some threats from external challenges as many retail positions such as cashiers or customer service representatives are low paying.

Figure 3.5 Retail Trade Business Locations (Lee, VA; Claiborne, KY; Bell, TN)



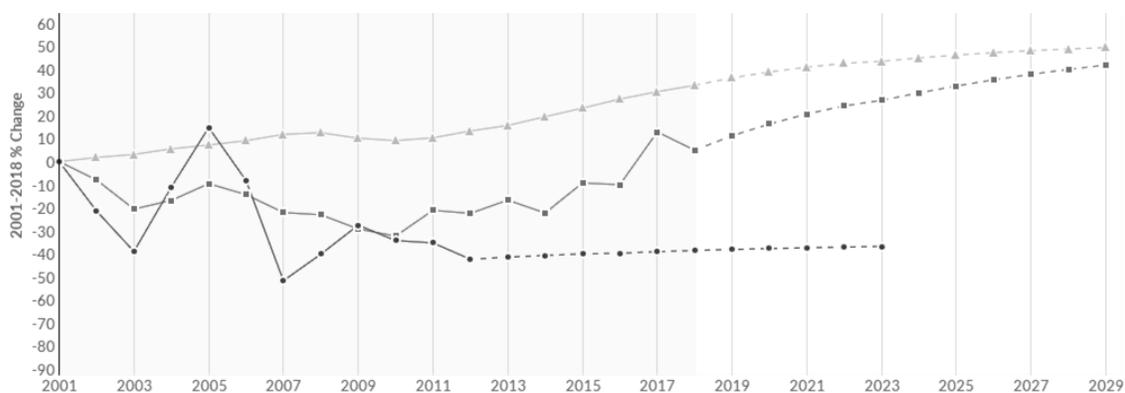
Source: EMSI, DatabaseUSA Business Location Dataset, 2019

Arts, Entertainment, and Recreation (Lee County and Surrounding Region)

Lee’s arts, entertainment, and recreation sector was once the core of the economy. Employers in this sector include Tazewell Speedway in New Tazewell (TN), Spearhead Trails in Pennington Gap (VA), Wilderness Road State Park in Ewing (VA), and various golf courses. Some regional and national trends have pushed Lee’s market toward other sectors of employment such as jobs in these service-oriented sectors. Many citizens in the manufacturing sector have lost their jobs over the past two decades, giving Lee a wealthy stock of talent supply that could fill positions in this sector.

Figure 3.6 illustrates the total change in employment in this sector at the County level as it compares to the regional and national trends. According to Virginia Market Labor information, the industry has reduced by one-third of its former glory over the last fifteen years. However, there is an expected gradual growth in this industry due to varying reasons attributable to new tourism and recreation indicates in the region of former residents.

Figure 3.6 Arts, Entertainment, and Recreation Sector Job Change (2001-2018)



	Region	2001 Jobs	2018 Jobs	Earnings	Change	% Change
●	Lee County	22	13	\$12,461	-9	-40.9%
●	Region	123	129	\$23,289	6	4.9%
●	US	2,124,561	2,827,280	\$40,637	702,719	33.1%

Source: EMSI

This loss of traditional manufacturing and mining jobs is concerning to smaller communities such as Lee because these positions have been the highest paying employment opportunities for those lacking higher education or professional degrees. The loss of these jobs can lead to the outmigration of families who are unable to find comparable employment in the County. In Lee, this has been the case, as employment in this sector has experienced continued reductions with little evidence to show that these jobs are trickling out of the County and remaining in the surrounding region.

However, if an increase in tourism and external support were to occur, there are potential for new

opportunities to flourish. With that being said, the median annual earnings for jobs in this sector are far less than the jobs that have supported this region such as manufacturing and mining.

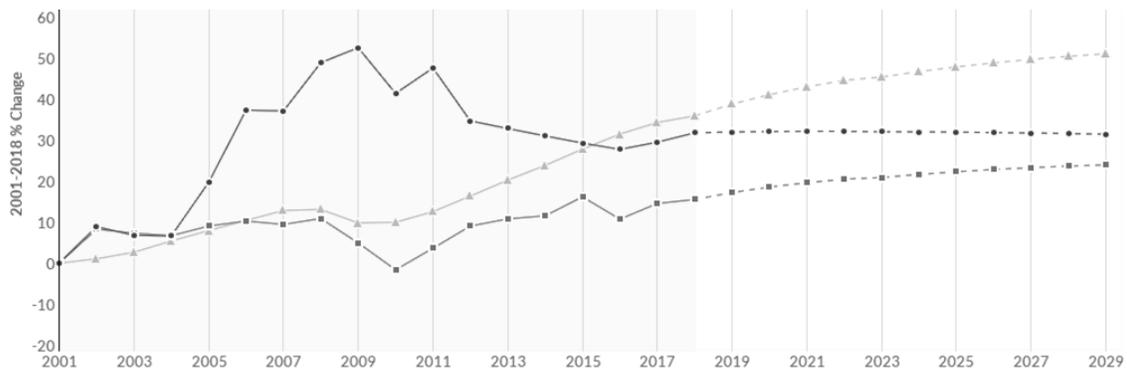
Figure 3.7 Arts, Entertainment, and Recreation Business Locations (Lee, VA; Claiborne, KY; Bell, TN)



Source: EMSI, DatabaseUSA Business Location Dataset, 2019

Accommodation and Food Service (Lee County and Surrounding Region)

Figure 3.8 Accommodation and Food Service Sector Job Change (2001-2018)

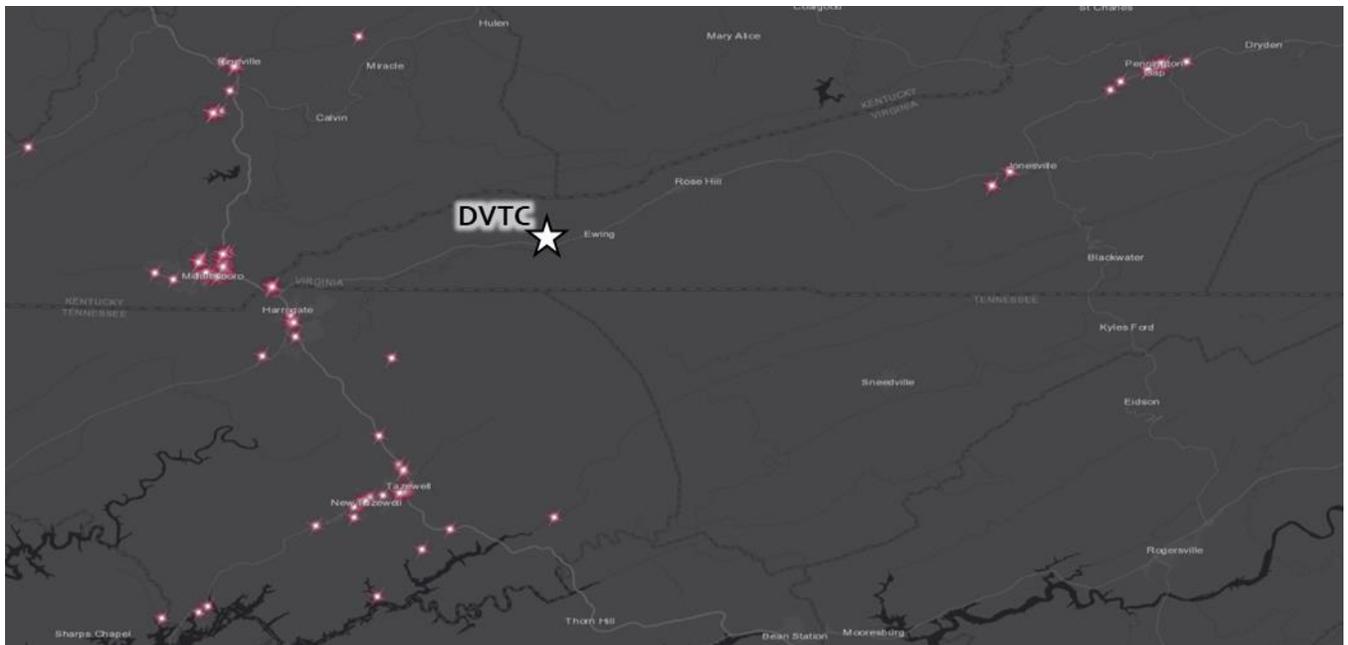


	Region	2001 Jobs	2018 Jobs	Earnings	Change	% Change
●	Lee County	224	295	\$14,072	71	31.7%
●	Region	1,620	1,871	\$14,636	251	15.5%
●	US	10,293,480	13,990,842	\$24,542	3,697,362	35.9%

Source: Virginia Labor Market Information

Accommodation and Food Service is comprised of establishments that provide customers with lodging, campgrounds, meals, and beverages. This sector has gradually risen in the County since the beginning of the century. This industry includes cooks, servers, and other restaurant workers in this region which typically make minimum wage or less and rely on tips to compensate for their lower pay. While there has been a slight increase in jobs, the number of jobs in this sector is below the national average by a large margin. In addition, approximately two-thirds (63%) of these workers are females and two-thirds (65%) are below the age of 35. Similar to the retail trade and arts/entertainment industry sectors, the accommodation and food services sector relies heavily on consumer spending from eating out, shopping, and engaging in entertainment. All of these sectors require the consumers to have extra money to spend on leisure activities which directly links to the local unemployment and worker earnings and cost of living from within the region and the tourism which is drawn into the region from outside.

Figure 3.9 Accommodation and Food Services Business Locations (Lee, VA; Claiborne, KY; Bell, TN)

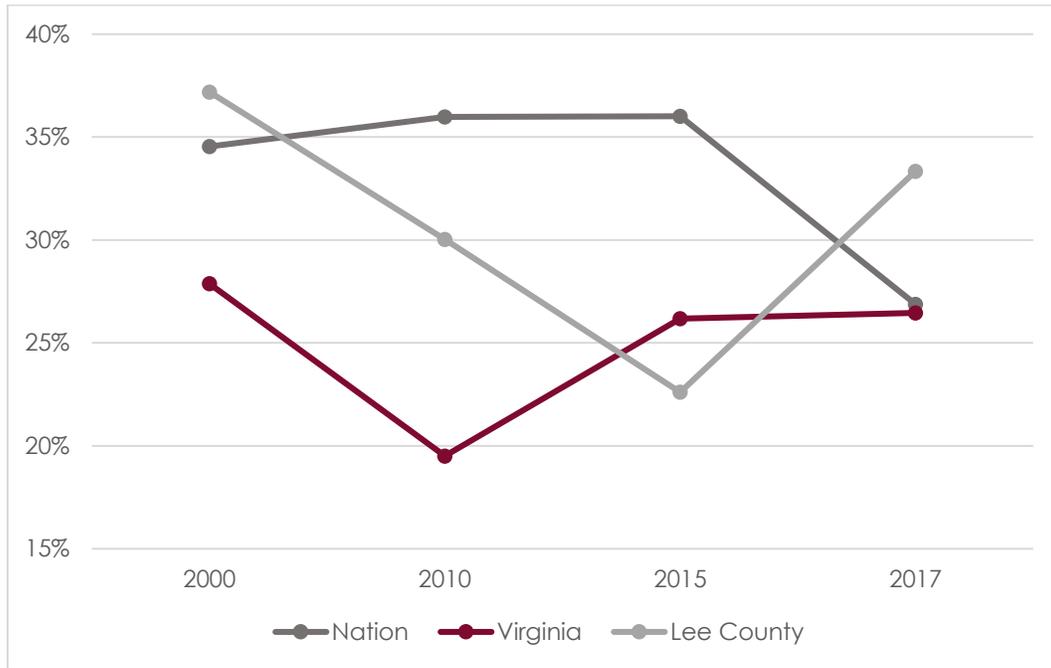


Source: EMSI, DatabaseUSA Business Location Dataset, 2019

IV. SMALL BUSINESSES AND ENTREPRENEURSHIP

The acceleration of young and firms is key to attracting new growth to Lee County. Figure 4.1 shows the percentage of job creation by young companies (aged 5 or younger) for Lee County, Virginia, and the Nation. The most recent information show for Lee County shows that approximately 33% of job creation is from young firms (aged 5 or younger). As a result, Lee has a higher proportion of job growth and expansion by start-up firms than Virginia as a whole. Lee relies less on job creation from older, more established firms than the state and nation. It is important to note that while young firms do create rapid growth, they tend to be more volatile than older, more established firms. Lee should attempt to accelerate the growth of young start-ups while working to further expand older, already established firms.

Figure 4.1 Job Creation by Young Companies (5 Years Old or Less)



Source: Quarterly Workforce Indicators (QWI), U.S. Census Bureau

High STEM employment may also be indicative of a thriving business climate because highly successful start-up's employ a higher amount of STEM-related employees. These types of jobs often attract workers because they have a higher median wage. The current proportion of STEM-related workers in Lee County is 45% less than the national average. This indicates that the County has significant room for start-up growth and development.

There are 42 businesses that have opened in the past 2 years according to DatabaseUSA's Business establishment data. The establishments range in size from 1 or 2 employees to 90 employees at one of the local grocery stores equating to about 400 new jobs. Table 4.1 shows the business size based on the industry type for establishments that have opened since January of 2016. All of these businesses are classified within the service sector. Table 4.2 is the number of startup firms that have opened in Lee County over the last 2.5 years. Startups are defined by the Virginia Employment Commission as not being a prior establishment with employment insurance account, privately owned, and having less than 250 employees.

Table 4.1 New Businesses in Lee County with Number of Jobs Created (Jan. 2016-present)

General Description	Estimate
Supermarkets	90
Golf Courses & Country Clubs	40
Transportation Services	40
Pharmacies	30
Law Offices	30
Insurance Agencies	30

Social Advocacy Organizations	30
Convenience Stores/Gas Stations	20
Florists	20
Crop Production	15
Automotive Parts Stores & Tire Dealers	15
Multifamily Housing Construction	10
Tax Preparation Services	10
Electronics Stores	7
Home Health Care Services	7
Consumer Lending Services	6
Farm Supply Wholesalers	5
Physician Offices	5
HVAC Contractors	5
Truck, Utility Trailer, and RV Rentals	5
Crude Petroleum Extraction	4
Speech Therapy Offices	4
Radio Stations	4
Nail Salons	3
Water Supply Systems	3

Source: EMSI

Table 4.2 Startup Firms by Quarter (April 2015-present)

Year	Lee County Startup Firms	VA Startups (in thousands)
2015.2	10	3.7
2015.3	6	3.4
2015.4	10	3.0
2016.1	6	3.8
2016.2	13	4.3
2016.3	4	3.4
2016.4	13	3.4
2017.1	6	3.8
2017.2	15	4.0
2017.3	9	2.7
2017.4	4	3.1
2018.1	4	4.0
2018.2	6	4.1

Source: Virginia Employment Commission, Quarterly Census

Lee County has the potential for a strong business climate. Existing new job growth as a result of young businesses and start-ups indicate the County has a positive business climate. In order to promote further growth, the County should enact policies to accelerate the growth of young firms, to expand older firms, and to attract new STEM and tech jobs. Additionally, the County could strengthen start-up and entrepreneurship programs to create and attract start-ups for economic growth and expansion.

V. TOURISM MARKET AND COMMUTING PATTERNS

Tourism Market

Lee County has an opportunity to leverage its cultural and recreational amenities to attract tourists. A 2017 survey of tourism in greater Southwest Virginia indicated a 6.3% increase in tourist trips to the region from 2016 to 2017, suggesting a growing demand within the region. Additionally, the report estimated that visitors spent roughly \$580 on travel-related purchases per trip. Tourism-related state and local tax revenue increased by 6% within the region, accumulating \$65.7 million from 2016 to 2017. In Lee County specifically, tourism revenues increased by 4%, totaling \$12.6 million for 2017. Additionally, tourism-related taxes generated \$919,400 in revenue for 2017, marking a 5.3% increase from 2016. Table 5.1 details average visitor spending for the region.

Table 5.1 Visitor Spending in Southwest Virginia

	Per Trip Spending
Average Visitor Spending	\$580
One-Half of Visitors (~48%)	<\$250
One-Third of Visitors (~32%)	\$250-\$750
One-Fifth (~20%)	>\$750

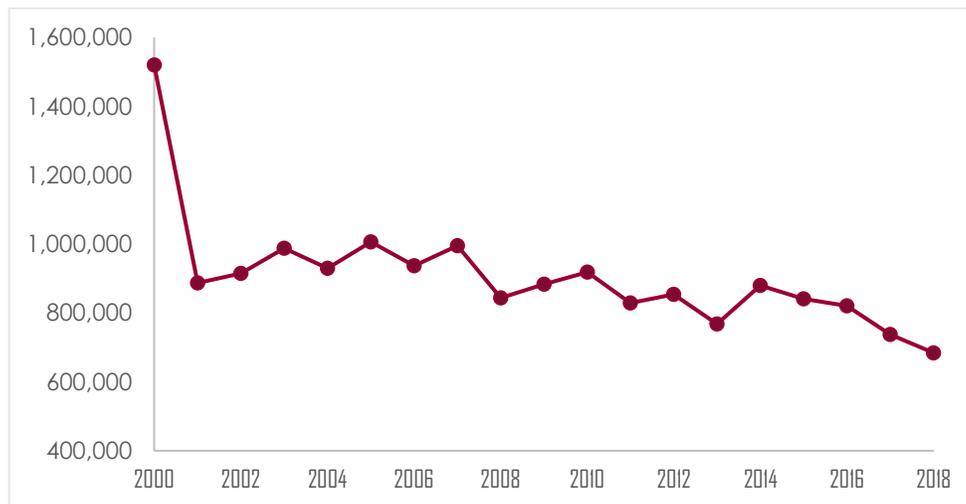
Visitors typically stayed for 3 nights with approximately two-thirds (62%) of tourists visiting in the months between September and February. Approximately 9 out of 10 visitors (90%) reached Southwest Virginia by vehicle while only one out of ten chose to fly. Two out of three respondents used information provided via the internet and social media to plan their trip, while one out of every three respondents used information provided by friends and relative. The mySWVA and Heart of Appalachia websites provide extensive information on the extensive destination and adventure points of interest found in Southwest Virginia.

Approximately half (47%) of survey respondents said they came to the Southwest Virginia for friends and family. The remaining half (53%) of respondents primarily came to visit various parks, historical amenities, commercial activities, and artisanal resources in the region. The same study noted that approximately 8% traveled north into the region from North Carolina and another 5% traveled from West Virginia. Meanwhile, 37% of those visiting Southwest Virginia are come from other parts of Virginia. Of those respondents who visited from Virginia, approximately one-quarter (22%) came from the Roanoke-Lynchburg area and one-quarter (24%) came from Richmond or Norfolk-Newport News. Demographics of these visitors suggested that the average age of tourists to the Southwest Virginia was 40 years old with more than 40% of the visitors being between the ages of 25 and 44 years old. Approximately 63% were married and 38% had children with an average traveler group size of approximately 3 people. A majority of visitors (66%) had an annual household median income below \$100,000.

Recreational Assets

Lee County has a number of natural and cultural assets. For instance, Lee County plays host to the a portion of the Cumberland Gap National Historic Park and the Wilderness Road State Park. The Cumberland Gap National Historic Park offers exhibits related to historic settlement and outdoor recreation opportunities. The park is located in Lee, Bell, and Claiborne Counties and contributes tremendously to tourism in each of these counties. Park admission, as shown in figure 5.1, however, has been in decline since 2014. For instance the park attracted 684,191 in 2018, compared to 843,893 visitors in 2008.

Figure 5.1 Visitors to the Cumberland Gap National Historic Park



Source: US National Parks Service

The Wilderness Road State Park is yet another outdoor attraction within Lee County. The park offers hiking trails, primitive camping, and various historical programs. While the park is far more regional in scale compared to the Cumberland Gap National Park, it still plays an important role in attracting out-of-region tourists. Similar to the nearby National Park, however, admissions are falling for the Wilderness Road State Park as well. While only four years of data are available, the park had 53,832 fewer guests when compared to 2016 statistics.

Table 5.1 Wilderness Road State Park Visitors

Year	Number of Visitors
2015	118,588
2016	172,252
2017	173,874
2018	120,051

Source: VA Department of Recreation and Conservation

While the State and National Parks play an important role in attracting visitors and tourists, the County has a number of other offerings. For instance, the town of Pennington Gap has seen an increase in visitors from its development of ATV trails. Additionally, the County is also known for its fishing, boating, horseback, birding, and hiking trails. While tourism revenues are lower than other communities in Southwest Virginia, data suggests that the region is building momentum in its efforts to incentivize tourism. Additionally, targeted marketing of existing amenities within the County could play a role in attracting students to the Vet Center.

Commuting Patterns

According to the 2015 census, there were approximately 8,900 individuals in 2015 either working or living in Lee County with around 3,950 (44%) of the individuals working in Lee County. Approximately, 1,270 (14%) commuted into the County. The remaining 2,677 (30%) workers are residents of the County. Meanwhile, approximately, 4,966 (56%) of individuals commute out of the County for work. The table below highlights the estimated number of Lee County workers by their location of residence in 2015. Workers from these locations specifically totaled around 80% of the 1,270 estimated workers commuting into the County with the remaining 20% coming from a multitude of areas. The table also includes approximated drive time in hours to the Southwestern tip of county and state.

Table 5.3 Inbound Commuter Home Locations

Home Location (MSA)	% Lee's Inbound Workers	Driving Time to DVTC
Kingsport-Bristol, TN-VA	37.7%	80 min
Big Stone Gap, VA	34.2%	60 min
Johnson City, TN	2.9%	90 min
Knoxville, TN	2.6%	90 min
Middlesboro, KY	2.6%	20 min
Virginia Beach-Norfolk, VA	2.2%	7 hours
Richmond, VA	1.8%	6.5 hours
London, KY	1.5%	90 min
Blacksburg-Radford, VA	1.3%	3 hours
Morristown, TN	1.3%	60 min
Bluefield, WV-VA	1.2%	3 hours
Roanoke-Lynchburg, VA	1.2%	4.5 hours

Source: U.S. Census Bureau. Longitudinal-Employer Household Dynamics Origin-Destination Employment Statistics, 2002-2015

VI. APPENDIX

Lee County Historic Population Trends

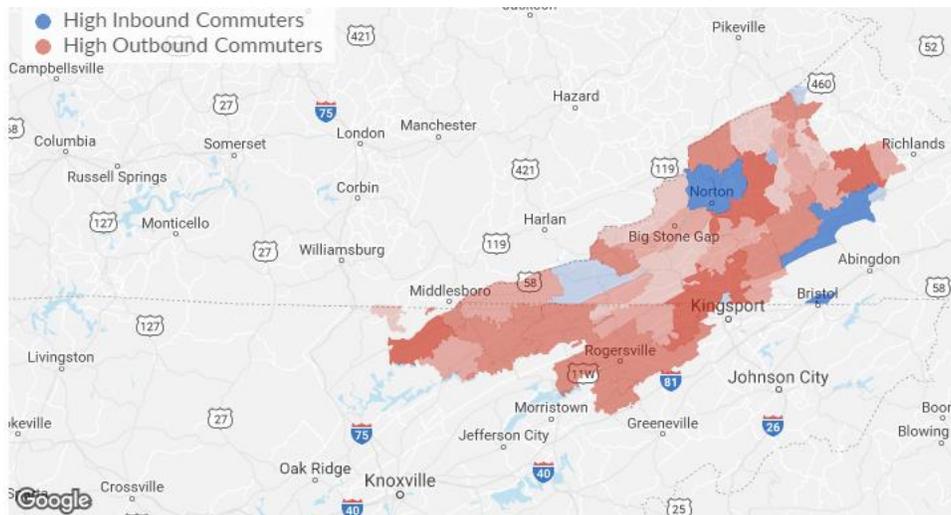
Historically, Lee's population has been static. Established in 1783 from Russell County, Lee was named after Light Horse Harry Lee, the then Governor of Virginia and the son of the Confederate Army General, Robert E. Lee. The County has three incorporated towns which include Jonesville, St. Charles, and Pennington Gap, in the order in which they were established. It was not until the influence of regional and national rail that this small county would transform into the economy it is today. An economy that was influenced by the agricultural and mining industries. New Deal legislation and the resolution of the Second World War may be credited for Lee's reinvigorated population, growing by 19,000 people from 1900 until the close of the 1940's. The County grew from about 20,000 people in 1900 to 39,000 by that time period. However, this mark in history was the last major population boom for the County that has been declining in population since and now reaches numbers closer to what it saw a century ago.

Aside from that major population boom, 1980 marked the last minor population rise within the County from 20,300 to almost 26,000. Since then population in Lee and the entire region has stayed stagnant. Since 1990, Lee's population growth has reduced by over 10%, which is less than the County's historic high decline that occurred from 1950 to 1980. This recent stagnation, however, is not representative of Lee's current population that is both capable and hardworking. In the past two decades, the County has worked to attract a new wave of young professionals through growth of specific economic sectors such as e-jobs (IT), healthcare, and professional services. While the population has remained static for the past two decades, the County is hoping for a second resurgence.

Lee County Labor Shed

Understanding where talent in the region works compared to where they live can help optimize decision making. The estimated labor shed includes the immediate counties surrounding Lee based on the mean travel time to work of 25 minutes and driving at 50 miles per hour. This means that the average commuter drives approximately 25 miles to work. This number was used to select the bordering counties within 25 miles from the exterior parameter communities in the County. Half of residents drive this distance to work and one-quarter of the population drives for 30 minutes to an hour to their place of employment. Of the employees living within Lee County, 47% of resident workers are coming from their home in Jonesville, 32% from Pennington Gap, 6% from Rose Hill, 6% from Ewing, and the remaining 9% are scattered throughout the County. Figure 6.1 illustrates the Lee County labor shed.

Figure 6.1 Lee County Labor Shed



Source: EMSI

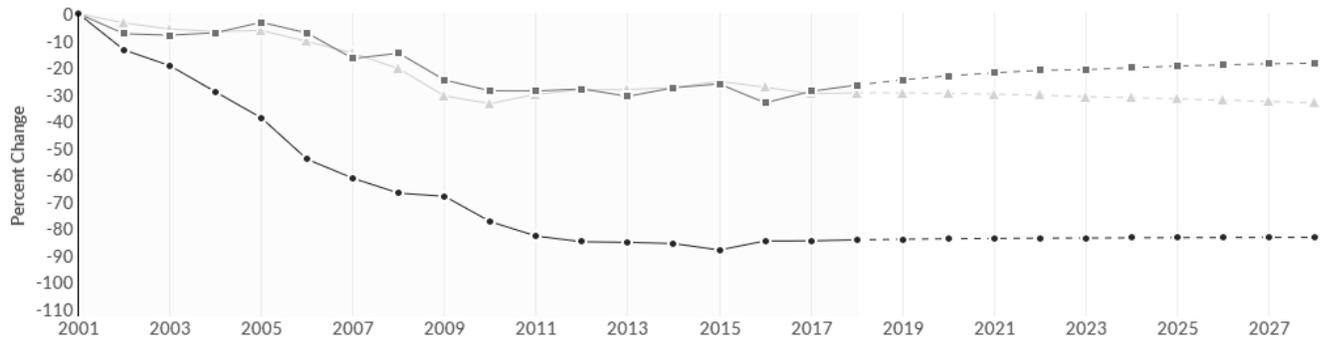
Notable Industries in Lee County

Manufacturing

Lee's manufacturing sector once made up the core of its economy. Historically, this industry accounted for over one-third of the local economy in terms of employment. In the past 17 years, however, Lee's manufacturing industry has been reduced by 84% in terms of employment to less than 100 jobs at only 10 establishments. These include employers such as the American Concrete Group, Powell Valley Printing, and Pullin Ink. This large loss is due in part to trade agreements and new foreign markets emerging, and some regional and national trends that have pushed Lee's market toward other sectors of employment. On the brightside, many of the workers in this field that have lost their jobs over the past two decades are skilled machine operators, assemblers, fabricators, and welders, giving Lee a wealthy stock of talent supply in this area as new industry trends in the factory setting may emerge in this rural County.

Figure 6.2 illustrates the total change in employment in the manufacturing sector at the County level as it compares to the regional and state trends. According to Virginia Market Labor information, the industry has reduced by one-fifth of its former glory. Furthermore, there has not been growth elsewhere in this industry, since it has declined nationwide, albeit to different extents and for varying reasons.

Figure 6.2 Manufacturing Change (2001-2018)



	Region	2001 Jobs	2018 Jobs	Change	% Change
●	Lee County	621	98	-523	-84.2%
●	LENOWISCO	1,762	1,293	-469	-26.6%
●	Virginia	35,786	25,240	-10,546	-29.5%

Source: EMSI

This loss of manufacturing jobs is concerning to smaller communities such as Lee because these positions have been the highest paying employment opportunities for those lacking higher education or professional degrees. Additionally, the loss of manufacturing jobs can lead to the outmigration of families unable to find comparable employment. In Lee this has been the case as employment in this sector has experienced continued reductions with little evidence to show that these jobs are trickling out of the County and remaining in the surrounding region. However, there has been recent news of a new furniture manufacturing plant called England Furniture, which will open soon and expected to bring around 80 new jobs, doubling Lee County’s employment in this sector over a short period of time.

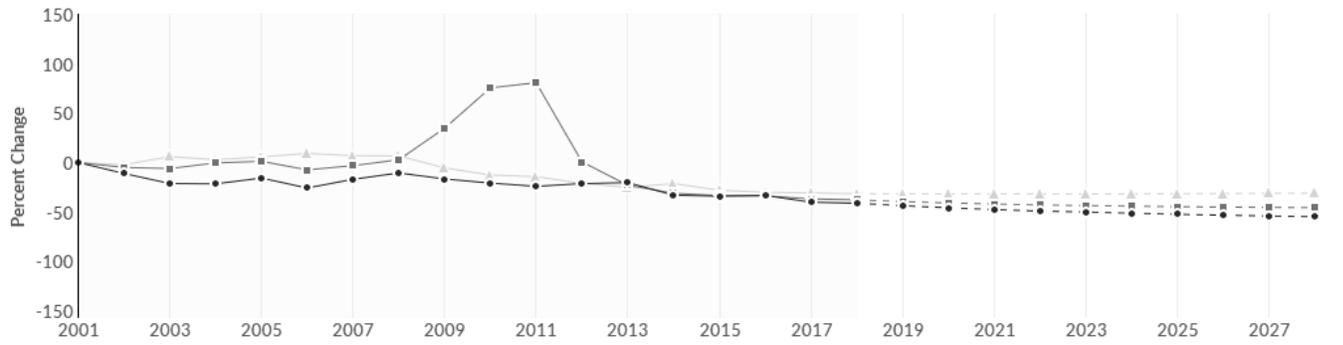
Construction

Lee’s construction industry accounts for 7% of the County’s economy in terms of employment. This industry’s growth over the past decade has been stifled by the recessionary implications of the housing market crisis of late 2007. As depicted in Figure 6.3, employment in this sector was reduced by 41% or 250 workers from 2001 to 2018. The number of establishments has grown from 15 to 26 and includes employers such as Glass Inc. (excavators), Elk Knob Inc., Estes Brothers Construction, and Old Virginia Hand Hewn Log Homes Inc.

IBISWorld forecasts growth for the overall sector, especially in the commercial and consumer contracting subsectors. While this may be truer in urban areas seeing more investment and development, Lee County and its neighboring counties and cities could be an exception of the sort.

Economic recovery and continued commercial and residential growth and statewide infrastructure investment will benefit this sector.

Figure 6.3 Construction Service Sector Change (2001-2018)



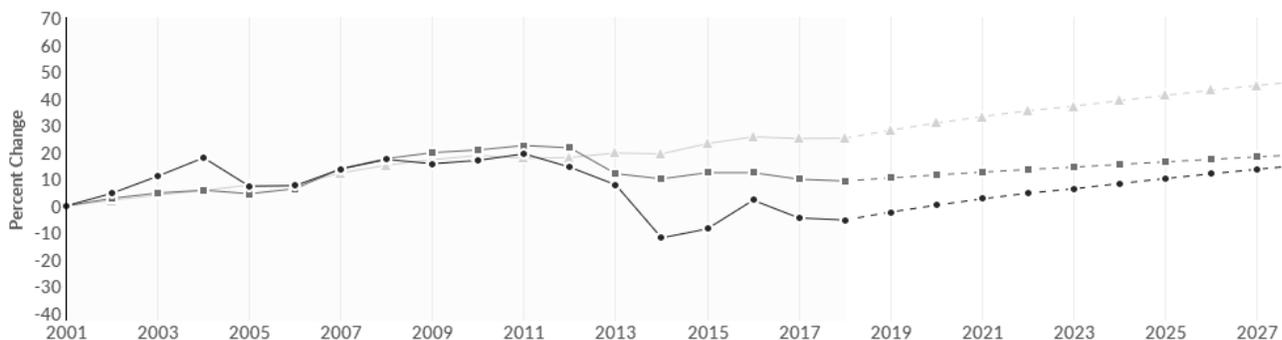
	Region	2001 Jobs	2018 Jobs	Change	% Change
●	Lee County	602	354	-248	-41.2%
■	LENOWISCO	1,678	1,044	-634	-37.8%
▲	Virginia	8,412	5,759	-2,653	-31.5%

Source: EMSI

Healthcare

Lee’s healthcare industry was growing until the closure of the Lee County Medical Center in 2013 which accounted for one-fifth of the total workers in this industry. There are 700 jobs across 200 locations which include nursing and rehabilitation centers, counseling centers, and clinics. Figure 6.4 compares decline in employment for the healthcare industry to the regional and state trends. While this sector has leveled off over the previous years, new employment could be on the horizon with the purchase of the Lee County Regional Medical Center by the private corporation, Americore Health, however, the opening of this center is pending due to financial setbacks.

Figure 6.4 Healthcare Sector Change (2001-2018)



	Region	2001 Jobs	2018 Jobs	Change	% Change
●	Lee County	716	679	-37	-5.2%
●	LENOWISCO	3,945	4,310	365	9.3%
●	Virginia	12,957	16,220	3,263	25.2%

Source: EMSI

Although little is known about the future fate of the hospital, the current trends in the healthcare industry are clear. Although a majority of the workers in this industry are aides and assistants that do not require a degree and pay around \$10 an hour, healthcare has proven itself to be a steady source for employment and creates a demand for educational programs and certifications. Lee’s steady decline as a health care center for the Southwestern region of Virginia has led to a need for a new regional medical facility to not only improve the healthcare access for residents but also to provide more jobs that provide benefits.

Despite widespread uncertainty regarding legislative healthcare reform, the hospital and healthcare industry is expected to have continued growth. *IBISWorld*, projects steady growth—due to the growing healthcare needs of the baby-boomer generation, the primary age group in the County. While population projections for Lee and the Southwestern region of the state do not forecast growth that other parts of the state are predicted to see in the coming decades, mild growth and an aging population should ensure the expansion of the healthcare industry once the deals with the new facility operators are finalized.

Educational Attainment

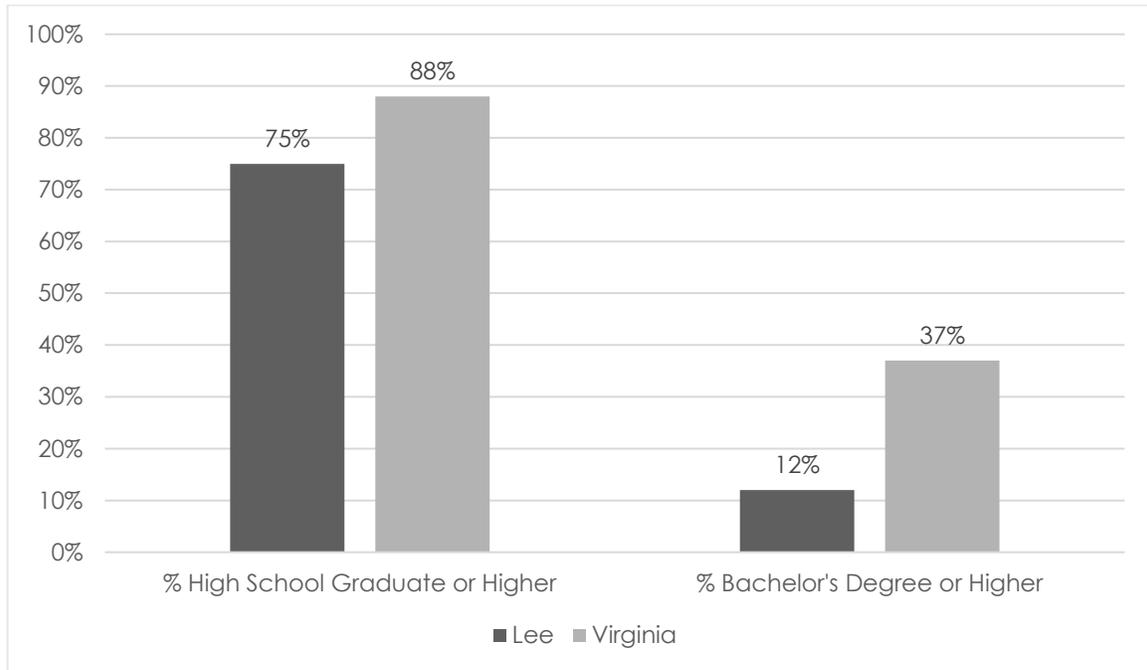
Overall educational attainment for Lee is lower than the state of Virginia for all segments. High school graduation (measured as a percentage of total population) is much lower than the state’s rate. Educational attainment for higher levels of education (i.e. bachelor’s degree or higher) is also low in Lee, with a rate lower than 12%, when compared to the state average of 37%. Nonetheless, Lee County has improved over the past 7 years in terms of educational attainment rates for both high school and bachelor’s degree or higher which compares to other counties in the region.

The following factors likely resulted in the lower levels of educational attainment for the County: (1) lower enrollment levels for ages 18 to 24 years old; (2) higher unemployment; (3) majority of children living in poverty; (4) a high percentage of children in single parent households; and (5) majority of parents did not receive a higher education.

Figure 6.5 shows that the level of educational attainment for Lee County in 2017 is lower than that for the state of Virginia. The percentage of high school completion for total population is more similar between Lee County and the state as opposed to percentage completion for higher levels of

education like a bachelor's degree (or higher) which is much lower, with the state average being higher.

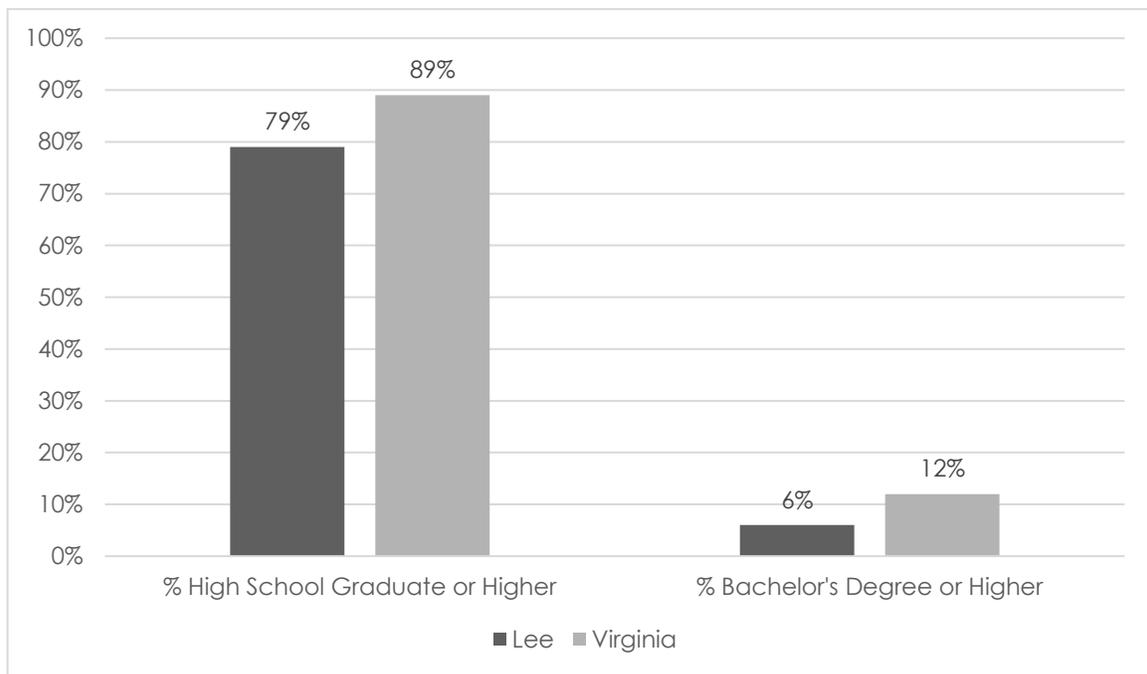
Figure 6.5 Comparative Educational Attainment, as a Percentage of Total Population Lee County vs. Virginia (2018)



Source: EMSI

Figure 6.6 focuses on the younger working age group of 18 to 24 years old. Only 6% of this population segment have finished a bachelor's degree or some form of college/associate degree by the time they are 25. This compares unfavorably with the state average, where twice as many of the same age group has college education. This is concerning as many studies suggest that adults after this age are unlikely to go back to school and earn a higher education.

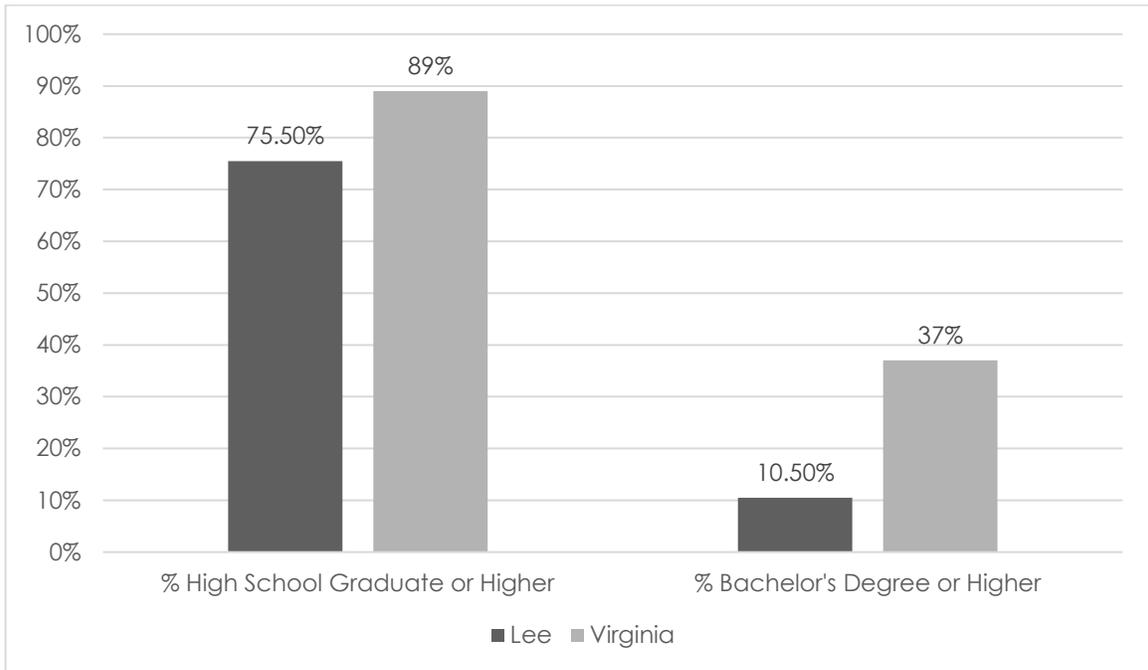
Figure 6.6 Educational Attainment Population 18 to 24 years old in Lee County and Virginia (2016)



Source: US Bureau of Census

Figure 6.7 focuses on the population segment aged 25 years and over. Here, the same pattern of lower educational attainment in the County exists. When adding up the attainment for the higher levels, around 11% of this working age group has a college education or higher in Lee County. For the state of Virginia, this is a much higher sum of 37%. When comparing educational attainment at various levels between the County and the Virginia average, the differences are remarkably higher for higher educational attainment levels. This is likely due to job opportunities requiring more technical skills than degrees. Being that this is a larger age cohort, it is no surprise that there are more with a bachelor's degree or higher as compared to those under the age of 25.

Figure 6.7 Educational Attainment, Population 25 years and older in Lee County and Virginia (2016)



Source: US Bureau of Census

Educational Services

Table 6.1 summarizes the largest educational institutions in Lee County and their number of graduates for 2017. This is based on data from EMSI. Where Lincoln Memorial University is only 15 minutes away from its location in Ewing of Lee County, many other institutions are more than an hour away. These institutions may serve as feeder institutions for students from these institutions seeking a higher degree, in veterinary medicine after earning degrees in fields translatable to medical fields such as life sciences. Similar to opportunities for post-baccalaureate degrees, community colleges can be feeder institutions for students entering fields pertaining to life sciences after earning certificates or an associate’s degree.

Table 6.1 Four-year Institutions Less than 100 Minutes from DBVTC in 2017

Institution	Minutes from DVTC	Associate's	Bachelor's	Master's	Doctor's	Total Completions
Lincoln Memorial University	15	15%	21%	42%	23%	1,112
U. Va- Wise	80	0%	100%	0%	0%	286
University of Tennessee	90	0%	68%	22%	8%	7,103

East Tennessee State University	100	0%	69%	21%	9%	3,444
South College	100	29%	17%	19%	25%	598

Table 6.2 showcases the two closest community colleges with their most recent total completions with the breakdown of completion type similar to what is shown in the table above. In addition, each intuition shows the estimated driving time in minutes from the DeBusk Veterinary Training Center.

Table 6.2 Community Colleges Less than 60 Minutes from DBVTC in 2017

Institution	Minutes from DVTC	Certifications	Associate's Degree	Total Completions
Walters State Community College	30	57%	43%	1,306
Mountain Empire Community College	60	57%	43%	683

Public School Quality

The over-all quality of public schools for Lee County has been improving over the past few years at its two high schools, two middle schools, and six elementary schools. However, it still fares, versus the state average in areas such as proficiency assessments and college & career readiness.

Table 6.3 shows that the academic proficiency levels of Lee County's public schools are lower than the average proficiency levels for Virginia. The County public school system showed improvements in reading and writing proficiency. However, this was offset by worsening proficiency levels for math, while proficiency in science and social studies has remained the same.

Table 6.3 Comparative Proficiency Assessments, Virginia vs. Lee County (School Year 2015 to 2018)

Assessment	Lee			Virginia		
	2015-'16	2016-'17	2017-'18	2015-'16	2016-'17	2017-'18
Reading Proficiency	78%	78%	79%	80%	80%	79%
Math Proficiency	81%	80%	79%	80%	79%	78%
Science Proficiency	81%	82%	81%	83%	82%	81%
Social Studies Prof.	82%	84%	83%	86%	86%	84%
Writing Proficiency	62%	75%	72%	77%	79%	79%

Conclusion

Lee County has achieved improvements in both its levels of educational attainment and high school graduation rates. However, its overall educational performance still needs a lot of improvement, as it does not compare to other counties in Virginia. One of the County's weakness is the low percentage of its population that has a bachelor's degree or higher, where data suggests that three times more people earn a four-year college degree or higher. This has had a big impact on the employability of the County's workforce and the ability to further attract investments into the area.

In the short term, the County should continue to pursue any workforce training program for residents who have lower educational attainment levels. This may be in coordination with major employers, workforce development boards, and economic development authorities. In the medium term, the County needs to work towards increasing the level of its population who are high school and college graduates to attract new employers that require these levels of education. To do so, it needs to address socio-economic factors like poverty, income inequality, and factors pertaining to health which will be addressed below. Beyond high school, the County can also continue to look at opportunities of partnering with its major colleges like Lincoln Memorial University, to address the usual constraints on education such as affordability, time, and a lower skill set.

Overall Health

The quality of health in Lee County is low, when compared to other counties in Virginia. In 2018, Lee is ranked in the 4th (or last) quadrant among all other counties in Virginia, for both health outcomes and health factors. This ranking, however, has improved by six places over the past seven years.

A composite of indicators measured the overall quality of health in Lee. These are broken down into (1) health outcomes and (2) health factors. These measures are based on factors used by the Health Rankings and Roadmaps website, which is a federal county-level health-initiative program undertaken by the Robert Wood Johnson Foundation.

Table 6.4 shows the health indicators and corresponding ranking of Lee County (among the counties in Virginia) under each major heading. The County rank decreased in terms of its access to health boosting opportunities and access to health care facilities (due to the loss of a major health care providers such as the Lee County Medical Center in 2013).

Table 6.4 Health Indicators & Ranking for Lee County, 2018)

	Rank (out of 133 VA Counties)
Health Outcomes	119

Length of Life	117
Quality of Life	114
Health Factors	131
Health Behaviors	129
Clinical Care	132
Social & Economic Factors	128
Physical Environment	132

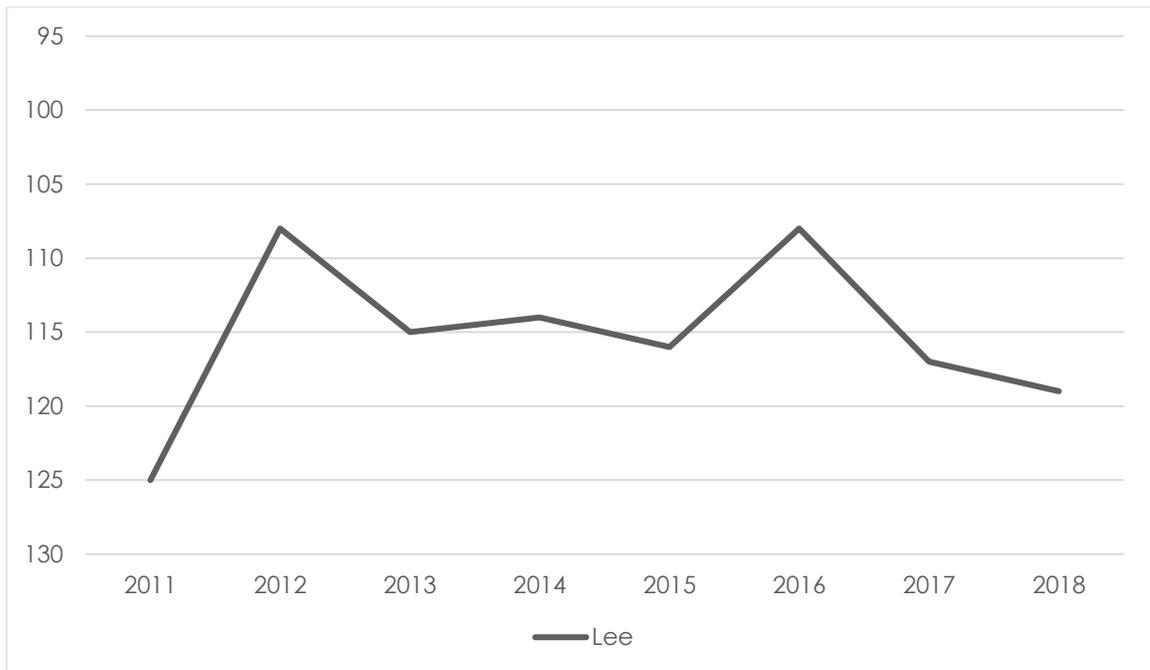
Source: *Health Rankings & Roadmaps*

In continuing its positive trend performance for health indicators, the County needs to address many health-related concerns from its access to behavioral health facilities to clinics to the lack of healthy food options in this rural area as many rural areas like this are deemed as “food deserts” due to the low quantity of quality, nutrient-rich food options. This may help combat issues such as higher obesity rates and may help prevent heart disease which is high in this region. In addition, drugs and alcohol are a large concern with Lee County ranking lowest in terms of drug and alcohol related crimes and disease. Lastly, Lee scores low in terms of access to health care which may soon change with the recent purchase of the previous, sole medical center in the immediate area.

Health Outcomes

Figure 6.8 shows that over the past seven years, the rank of Lee County in the Virginia Health Rankings has improved by 6 levels, from 125 to 119. However, Lee County’s current ranking of 119 (out of 133) for “Health Outcomes” category still places it in the bottom quadrant, among the state’s counties. The health outcome rating measures both: (1) length of life (accounting for 50% of the rating) and (2) quality of life (50%).

Figure 6.8 Lee County Health Outcomes Ranking Virginia Health Rankings (out of 133)



Source: Health Rankings & Roadmaps

Length of Life

For 2018, Lee County ranks 117 (out of 133 counties in Virginia) in terms of length of life. This number even compares to the mortality rate of some developing countries, just to give an example of how poorly this area scores on this mark.

Quality of Life

Table 6.5 shows that Lee ranks 114 (out of 133 counties in Virginia) in terms of quality of life. This was an improvement of fourteen places, from a rank of 128 in 2011. However, the County still compares unfavorably with the state average, across all indicators. Quality of life is measured in terms of (1) poor or fair health; (2) poor physical health days; (3) poor mental health days; and (4) low birthweight.

- **Poor or fair health.** In 2018, the percentage of adults reporting fair or poor health (age-adjusted) for Lee County is 20%. This is 4% higher (worse) than the Virginia average and 8% worse than the rate for the Top US performers. This percentage has remained stagnant since the study period began.
- **Poor physical health days.** In 2018, the average number of physically unhealthy days reported in the past 30 days for Lee County is 4 days. This is higher than the state and the Top US performers' average of 3 days. This number has remained stagnant since the study period began.

- **Poor mental health days.** In 2018, Lee County reported 4 mentally unhealthy days in the past 30 days, versus 3 days for Virginia and the upper 10% of counties in the U.S. This number has remained stagnate since the study period began.
- **Low birthweight.** In 2018, a higher percentage of live births in the County had low birthweight, compared to the state and to the top US performers. 10% of the live births in Lee County had a low birthweight, versus only 8% in Virginia and 6% for the Top US performers. This percentage has remained stagnate since the study period began.

Table 6.5 Quality of Life Indicators Lee County versus Virginia & Top 10% US Performers (2018)

Health Indicators	Lee County	Rank (out of 133 counties)	Virginia	Top 10% US Performers
Quality of Life		114		
Poor or fair health	20%		16%	12%
Poor physical health days	4.2		3.2	3.0
Poor mental health days	4.1		3.2	3.1
Low birthweight	10%		8%	6%

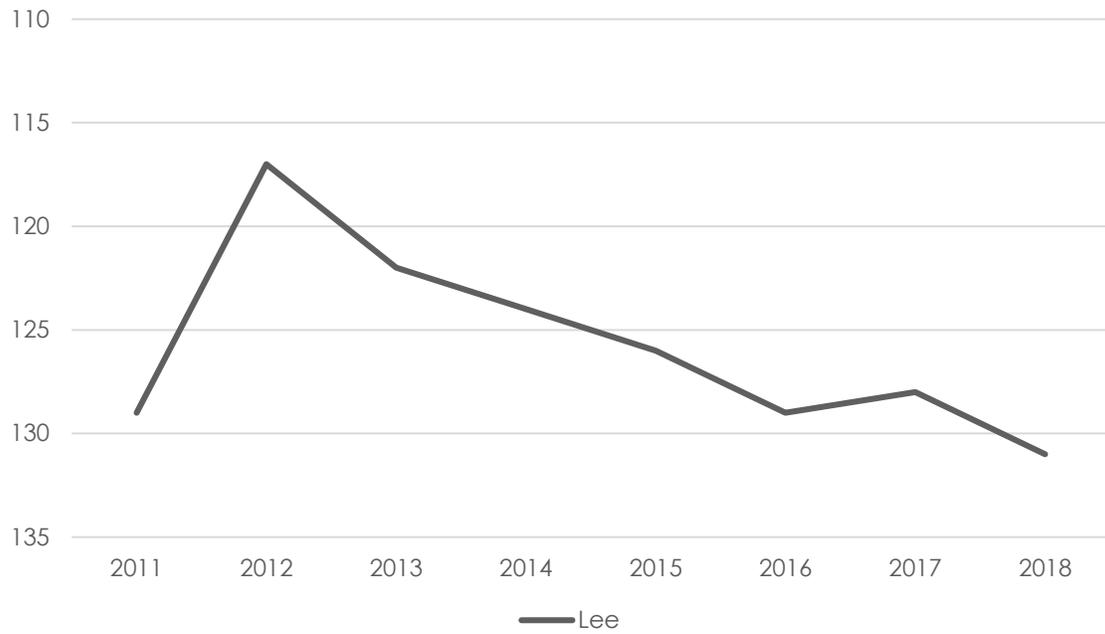
Source: Health Rankings & Roadmaps

Health Factors

Figure 6.9 shows a slight decrease in the County’s ranking for health factors, from a rank of 129 in 2011 to a worse ranking of 131 in 2018. This places the County within the lowest ranking quadrant in the state.

The following indicators were used to measure the overall rating for the County’s Health Factors: (1) health behaviors; (2) clinical care; (3) social & economic factors; and (4) physical environment.

Figure 6.9 Lee County Health Factors Ranking Virginia Health Rankings (out of 133)



Source: Health Rankings & Roadmaps

Health Behaviors

Table 6.6 shows the County’s ranking for Health Behaviors and its various components. The County received an overall ranking of 129 (out of 133 counties) for health behaviors in 2018. This ranking stayed the same as it did in 2011 at 129, improving to 124 in 2014, before decreasing back to 129 in 2016. This ranking included measurement of health behaviors such as: (1) tobacco use; (2) diet and exercise; (3) alcohol and drug use; and (4) sexual activities.

Table 6.6 Health Behavior Indicators in Lee County in comparison with VA & Top U.S. Performers

Health Behavior Indicators	Lee County	Rank (out of 133 counties)	Virginia	Top 10% US Performers
Health Behaviors		129		
Adult smoking	22%		15%	14%
Adult obesity	32%		28%	26%
Food environment index	8.1		8.9	8.6
Physical inactivity	36%		22%	20%
Access to exercise opportunities	36%		83%	91%
Excessive drinking	16%		17%	13%
Alcohol-impaired driving deaths	21%		31%	13%
Sexually transmitted infections	116.2		424.4	145.5
Teen births	51		21	15

Source: Health Rankings & Roadmaps, 2017

Clinical Care

Table 6.7 shows that in 2018, Lee County had a similar ranking (out of 133 counties) for clinical care, which ranks as the second worst county inn Virginia for access to patient care such as the number of physicians or mental health providers regarding the total population. Clinical care is measured in terms of: (1) access to care; and (2) quality of care. The County has a poor performance ranking for clinical care is likely due to a lower ratio of medical practitioners to its population. These low percentages are likely due to the absence of major medical facilities in the area with the next closest hospital, Lonesome Pine Hospital, being 30 minutes away in Big Stone Gap.

Table 6.7 Clinical Care Indicators in Lee County in comparison with VA & Top U.S. Performers (2017)

Clinical Care Indicators	Lee County	Rank	Virginia	Top 10% US Performers
Clinical Care		132		
Uninsured	13%		10%	6%
Primary care physicians	4,120:1		1,320:1	1,030:1
Dentists	4,840:1		1,490:1	1,280:1
Mental health providers	970:1		680:1	330:1
Preventable hospital stays	82		43	56
Diabetes monitoring	84%		87%	91%
Mammography screening	52%		64%	71%

Source: Health Rankings & Roadmaps

Socio-Economic Factors

Lee County has seen a drop from its ranking of 115 in 2011 to 128 today. This comes as no surprise with a higher poverty rate, lower educational attainment, increasing rates of unemployment, and inadequate social support facility access as compared to other counties in the state. This can be seen in Table 6.8. While Lee’s graduation rate has increased, and unemployment has decreased, its poverty level and income disparities remain as some of the most telling factors for the County’s low performance based on the metrics provided by County Health Rankings & Roadmaps. One important discrepancy not accounted for in this study is that these numbers are based on estimates from prior census collections and most recent labor market information projections which do not fare well for Lee due to its loss of major employers over the last two decades, however, the margin of error from data availability limitations and the low total population counts in this county may not paint as dim of a light as this study suggests. Nonetheless, improvements are happening which is a positive based on Lee’s history.

Table 6.8 Socio-economic Factors in Lee County in comparison with VA & Top U.S. Performers (2017)

Socio-economic Factors	Lee County	Rank	Virginia	Top 10% US Performers
Socio-economic Factors		128		
High School Graduation	76%		86%	95%
Some College	47%		70%	72%
Unemployment	6.8%		14%	12%
Children in Poverty	38%		14%	12%
Income Inequality	5		4.8	3.7
Children in Single Household	27%		30%	20%
Social Associations	6.5		11.2	22.1

Source: Health Rankings & Roadmaps

Conclusion

Lee County has not improved in terms of its ranking for both Health Outcomes and Health Factors based on the Health and Rankings roadmap as its ranking is still in the bottom quadrant when compared to all other Virginia counties. Lee County may continue to work on various health programs which can help address the weaknesses in its health sector. These include reform of unhealthy health behaviors such as adult smoking, adult obesity, physical inactivity, alcohol impaired driving, and missing out on preventive medical screening. The County should also address the resident's physical access to and psychological attitude toward, good nutritional awareness, by evaluating its performance in the Food Environment Index. If the County continues to institute significant improvements in education, poverty, income inequality, and crime, there may be corresponding improvements in health indicators which may lead to more prosperity overall.