

3 SOCIOECONOMIC ANALYSIS

A. INTRODUCTION

In this chapter, RKG analyzed the demographic characteristics and economic base of Shenandoah County, including the population growth trends, age distribution, racial composition, household formation and sizes, household incomes, labor force characteristics, unemployment, education attainment levels of residents, workforce occupational skill levels, the employment base and its shift by industry, and labor force dynamics. The socioeconomic analysis is crucial for the County to understand its existing labor force and employment assets, as well as its comparative economic competitiveness and opportunities within the regional economy. This chapter also lays a foundation for RKG's economic development strategies which acknowledge and incorporate the findings from the socioeconomic discussion.

B. MAJOR FINDINGS

The impact of the recession has been more severe on Shenandoah County than the surrounding area in terms of population and household growth. Though the 2007 recession hit the broader Shenandoah Valley region, which is reflected in the declined growth rates of population and households in both Shenandoah County and the surrounding area, the County has not experienced the same recovery. This is particularly true for the central and southern parts of the County.

The net out-migration of the younger workforce combined with the high concentration of the retirees adversely impacts the economic potential for the County. The decrease of the population within the 35- to 54-year-old cohort substantially reduced the County's experienced labor force, which would otherwise provide a solid foundation for the economy. Additionally, the County has the highest concentration of the retiree population aged 65 and older within the broader Shenandoah Valley region, most likely due to relatively affordable living costs and abundant outdoor recreational options.

The median household income of the County is lower than the surrounding region, and it is projected to remain so. The median household income of the County in 2018 is lower than the surrounding areas including the Central Shenandoah Planning District, and the Northern Shenandoah Valley Regional Commission. Lower earnings can be attractive to new businesses seeking to reduce their labor costs. At the same time, the County is surrounded by other lower earning areas which can cause competition for resources and businesses.

The County's labor force is proportionally less educated with lower occupational skills, primarily employed in semi-skilled white-collar and low-skilled blue-collar jobs. Compared to the surrounding region and to the U.S., the County has a smaller share of its total population that have higher degrees and proportionally more residents employed in low-skilled blue-collar jobs. This finding corresponds with the County's low median household income within the region. From an economic development perspective, strong workforce development programs would bolster the County's recruitment effort by providing the infrastructure for residents to build skills.

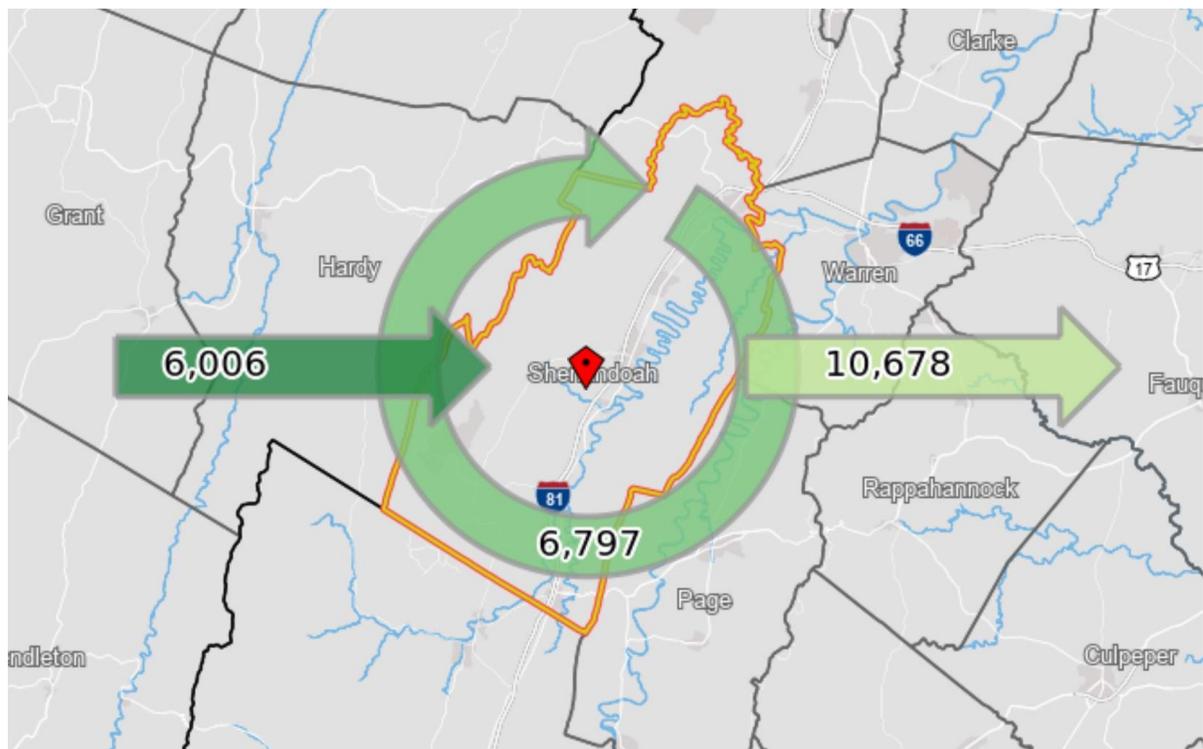
Food Services, Food Manufacturing, and Specialty Trade Contractors are the County's major employment sectors. In 2018, the Food Services, Food Manufacturing, and Specialty Trade Contractors provided the highest numbers of jobs in the County. This reveals that the County's current employment

base largely consists of semi-to-low-skilled jobs. In particular, the food manufacturing industry experienced significant growth within the County over recent years. With the high propensity of semi-to-low skilled workers in the County, this finding further points to the need for a strong, comprehensive workforce development effort to attract higher skilled jobs to the County.

Opportunities exist in semi- to high-skilled white-collar sectors as the County has not been fully capturing the regional growth of employment opportunities in these industries. As of 2018, high-skilled white-collar sectors such as Educational Services, Credit Intermediation and Related Activities, and Management of Companies and Enterprises are among the major employment industries in the Shenandoah Valley region. In addition, Other Information Services is one of the fastest-growing sectors in the region between 2010 and 2018. However, this is not the case for Shenandoah County. Therefore, opportunities exist for the County to promote its economic development if it chooses to tap in these regional growth sectors using strategies such as marketing and improving its labor force, in addition to supporting company recruitment and training. Though it should be noted that sectors like Educational Services, are heavily dependent on population trends and the growth of nearby universities located in surrounding cities.

The County is a net exporter of workers to surrounding employment centers, especially along I-81. Proportionally there are more people who live in Shenandoah County and commute to jobs elsewhere especially along I-81 than people who live, work and spend their wages locally within the County (Map 3-1), most likely indicating that there are not as many diverse job opportunities in the County. The County does attract a small percentage of its works from West Virginia. In addition, the jobs within the County are largely filled by local citizens other than outside residents, suggesting that these jobs are most likely low-skilled based with modest wages not attractive enough to draw additional workers commuting from elsewhere. In other words, Shenandoah County is not a major employment center that can attract people to work and contribute to the local economy by consuming goods and services within the County.

Map 3-1 – Shenandoah County Employment Migration



Source: OnTheMap, U.S.Census Bureau, Center for Economic Studies and RKG Associates, Inc., 2019

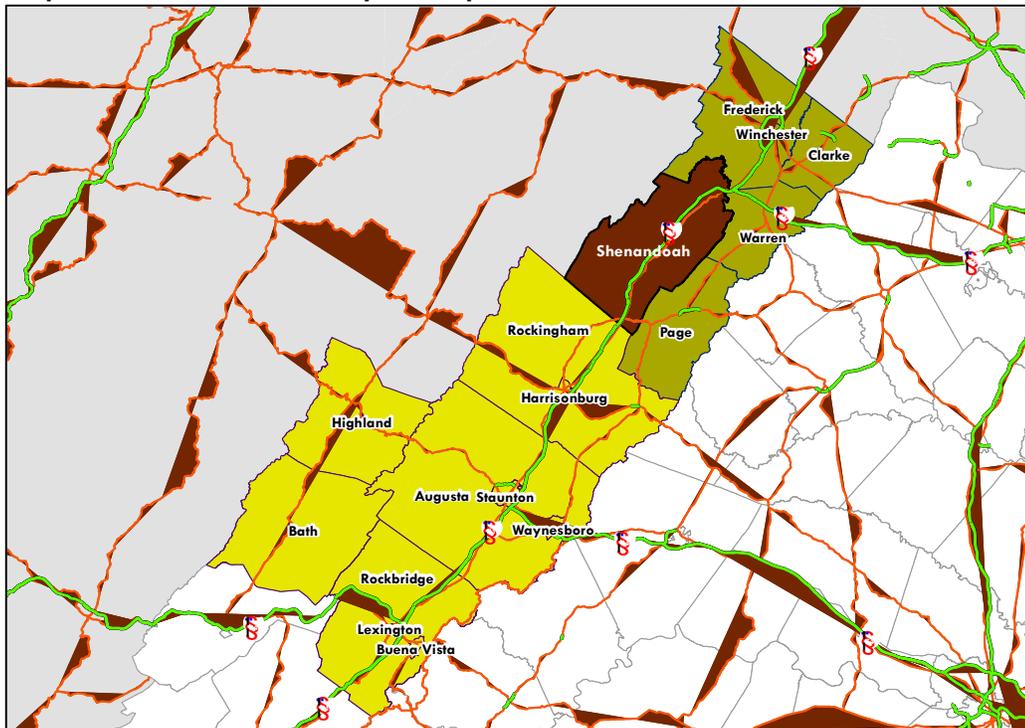
C. METHODOLOGY

1. Geographic Focus of Analysis

Shenandoah County is part of the Northern Shenandoah Valley Regional Commission, which is one of the 23 designated Virginia Planning District Commissions. However, the County has associated itself more with the Central Shenandoah Planning District Commission (CSPSC) in terms of economic development, which is located to the south. Also, Shenandoah County is part of the Shenandoah Valley Partnership which is made up of localities within the CSPSC. In addition, the Central Shenandoah Planning District Commission and Northern Shenandoah Valley Regional Commission are both located within Region 8, which is designated by the Virginia Growth and Opportunity Board in 2016 as part of a regional economic development effort. Therefore, in order to paint a clearer picture of the demographic characteristics and economic base of the County in the context of the Shenandoah Valley region, the analysts examined Shenandoah County, Central Shenandoah Planning District, and the rest of the Northern Shenandoah Valley Regional Commission excluding Shenandoah County (referred in this study as “Northern Shenandoah Valley Regional Commission”). As seen on Map 3-2, the Central Shenandoah Planning District consists of Augusta County, Rockingham County, Harrisonburg City, Staunton City, Rockbridge County, Waynesboro City, Lexington City, Buena Vista City, Bath County, and Highland County. The Northern Shenandoah Valley Regional Commission is comprised of Frederick County, Warren County, Page County, City of Winchester, and Clarke County.

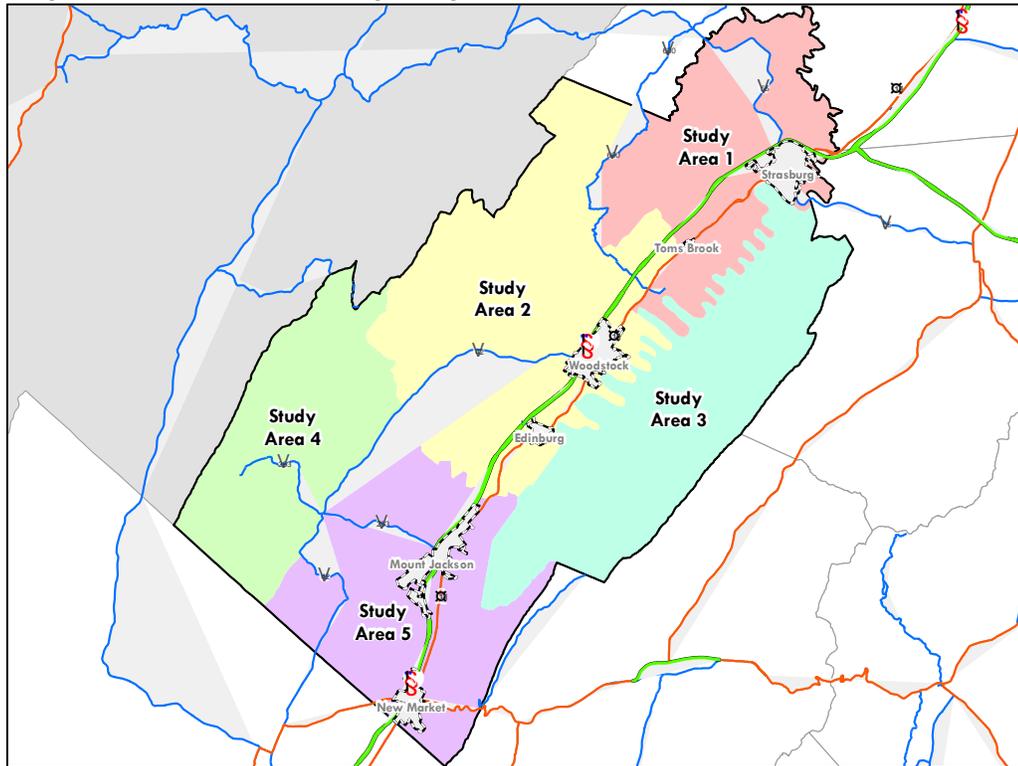
RKG also looked at the five Study Areas (SA) within the County to add more details to the analysis, including SA1-Strasburg/Northern Area, SA2-Woodstock-Edinburg-Central Area, SA3-Fort Valley-Eastern Area, SA4-Basye-Orkney Springs Area, and SA5-Mount Jackson-New Market-Southern Area (Map 3-3).

Map 3-2 – Shenandoah Valley Municipalities



Source: RKG Associates, Inc., 2019

Map 3-3 – Shenandoah County Study Areas



Source: RKG Associates, Inc., 2019

2. Data Sources

The socioeconomic study for the Strategic Economic Development Plan Update includes an analysis of the demographics, workforce and economic metrics. The demographic data came from a third-party data provider ESRI, which projected the 2018 and 2023 data based on the American Community Survey (ACS) 2017 Estimates as well as 2000 U.S. Census records on a variety of population and household topics. The workforce characteristics data came from the U.S. Bureau of Labor Statistics and its Standard Occupation Classifications (SOC) system. Data related to employment industries and workforce dynamics came from the third-party data provider EMSI, Labor Market Analytics, The Quarterly Workforce Indicators (QWI) obtained from the U.S. Census Bureau, as well as *OnTheMap*, an analysis tool provided by the U.S. Census Bureau and the U.S. Department of Commerce with data collected for the Longitudinal Employer-Household Dynamics Program (LEHD).

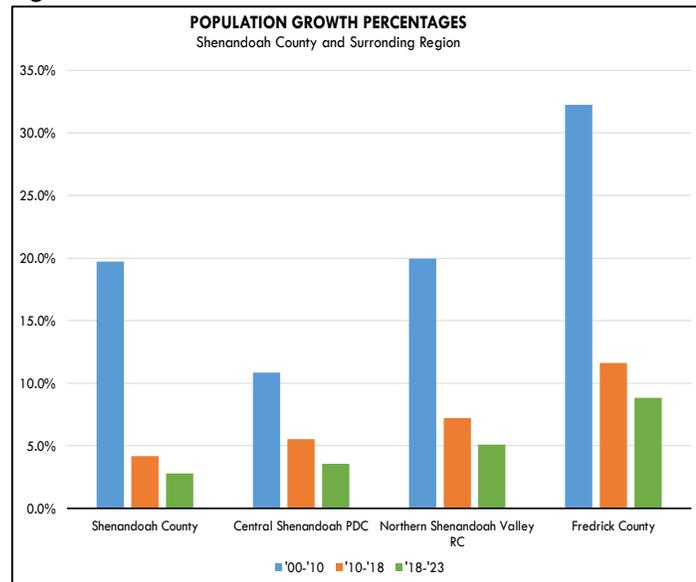
D. DEMOGRAPHIC ANALYSIS

1. Population

- Since 2000, similar to the surrounding region, Shenandoah County has experienced slowing population growth, falling behind the surrounding region after 2010
Shenandoah County gained 6,918 persons between 2000 and 2010 at a rate of 19.7%, faster than the Central Shenandoah Planning District and almost the same pace as the North Shenandoah Regional Commission. However, the County's population growth speed has fallen behind the surrounding areas since 2010 (Figure 3-1) even though the entire region has been experiencing slowing population gains.

The strong population growth pre-Recession in the region largely was driven by investors from the Washington DC and Baltimore markets, particularly near-retirees and retirees. Local real estate professionals reported that The Shenandoah Valley region has been attracting these urban households seeking to find a more pastoral lifestyle while remaining close to the cities. The local commuting pattern data corroborate this, as a large proportion of the County's and the Valley's labor force commute east on I-66 to Loudoun and Fairfax counties.

Figure 3-1



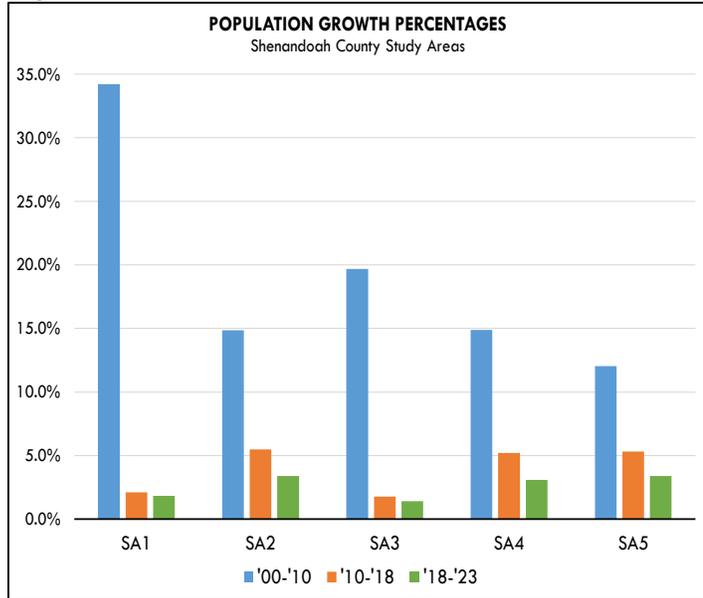
Source: ESRI and RKG Associates, Inc., 2019

That said, Shenandoah County did not experience the same population growth as the rest of the region post-Recession. The overall decline in population growth rate regionally indicates the impact of the exurban migration from the larger markets. However, Shenandoah County also has not experienced the local employment growth as many of its neighbors (especially Harrisonburg/Rockingham and Winchester/Frederick). Simply put, these other areas offer closer proximity to the region's job centers and offer more conveniences and amenities than Shenandoah County.

- Within the County, population growth concentrated in SA1, but it is shifting to SA2, SA4, and SA5 since 2010
Between 2000 and 2018, SA1 has seen the most rapid growth of population, with a speed higher than the County average, especially before 2010. This is most likely because SA1 is in closer proximity to the Washington D.C. metro area and its employment opportunities, and thus is more ideal for out-commuters to live there. However, SA2, SA4, and SA5 have experienced accelerated population growth rates, exceeding the County average during the same period (Figure 3-2).

The shift in growth concentration further reflects the impacts of the out-migration from Washington D.C. and other large metro areas, and how that slow-down impacted the County. That said, the relatively stronger growth rates for the central and southern part of the County since the Recession reveals that there remains a contingent of households that are either working locally or at retirement age that prefer the more rural feel of central and southern Shenandoah County while remaining well connected to local and regional conveniences.

Figure 3-2



Source: ESRI and RKG Associates, Inc., 2019

2. Age

- Similar to the surrounding region, Shenandoah County is getting older, with the highest share of the 65+ population compared to the surrounding areas

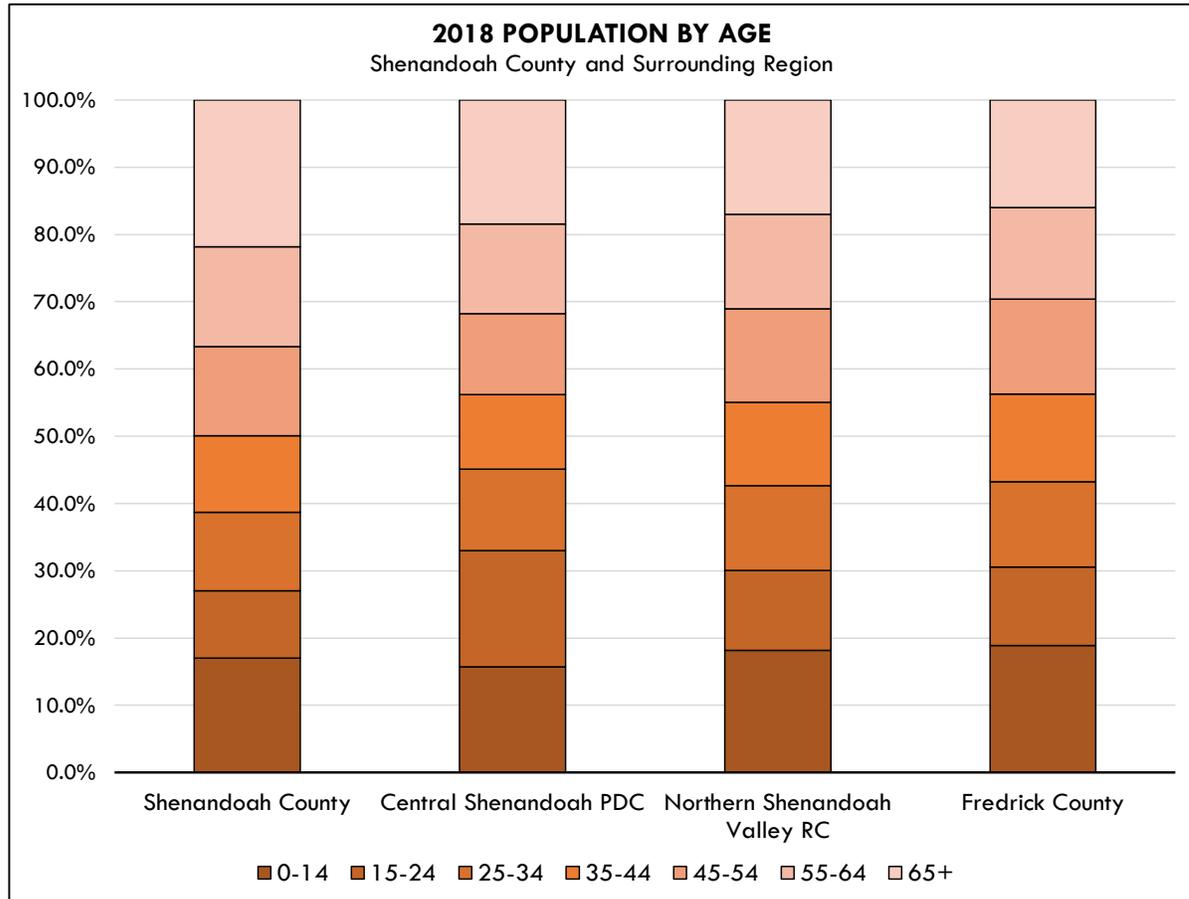
Like surrounding region, Shenandoah County has experienced the largest gain of its population who are 65 years old and above. The 21.8% of County residents that are over 65 years old constitute a larger proportion of the County's residents than both the Central Shenandoah Planning District and Northern Shenandoah Valley Regional Commission (Figure 3-3 and Figure 3-4). The data indicate that the region is aging, and this is even more representative in Shenandoah County. The high concentration of the County's retiree population is likely due to the relatively affordable costs of living (compared to the surrounding communities), abundant and high-quality natural scenery and outdoor recreational resources (for example, national forests and parks, including the Shenandoah National Park) and the suburban/rural lifestyle in the County that many retirees prefer.

- Since 2010, Shenandoah County has been losing its younger workforce and young families, counter to the surrounding cities

Contrary to the gain of the population aged 65 and above between 2010 and 2018, the County has lost its population aged 24 years old and below as well as its Generation X population aged between 35 and 54. The loss of persons 35-54 is impactful from an economic development perspective, as this age cohort comprises a substantial portion of the U.S. workforce. Combining the loss of this mid-career population with a growing retiree base could adversely impact the County's potential to attract labor-intensive industries.

In contrast, the surrounding cities including Harrisonburg City, Staunton City, Waynesboro City, Lexington City, Buena Vista City, and Winchester City have experienced a sizable increase of the population aged between 25 and 44, in addition to the population of young children under 15 years old. When this trend is considered with regional job growth (detailed in the Target Industry Cluster chapter), the data indicate workers within the Shenandoah Valley region prefer communities with greater concentrations of services and amenities.

Figure 3-3



Source: ESRI and RKG Associates, Inc., 2019

3. Racial Composition

- Most Shenandoah County's residents are White, while the Hispanic population has been increasing rapidly

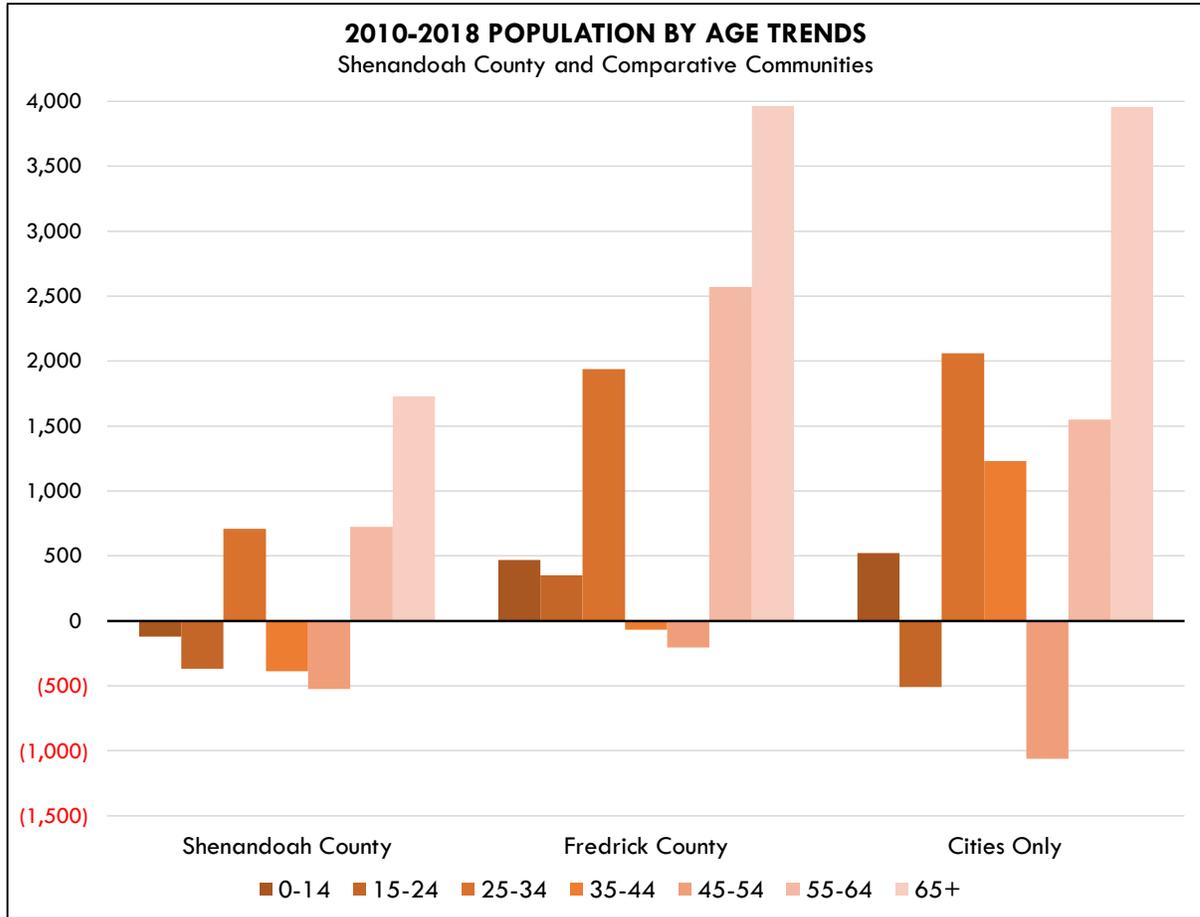
Though the majority (over 90%) of the population in Shenandoah County is White and the Hispanic population only accounts for a small proportion (less than 10%) in 2018, the population of Hispanic Origin has been increasing rapidly. In fact, the Hispanic population accounts for almost half of the new population growth between 2010 and 2018 in the County. The surrounding areas especially the adjacent cities have seen a similar trend. (Figure 3-5 and Table 3-1).

Table 3-1
Distribution by Racial/Ethnic Group (2010 - 2023)
Shenandoah County, Virginia

	Shenandoah County		
	2010	2018	2023
White	93.0%	90.5%	88.5%
Black	1.7%	2.5%	3.2%
American Indian	0.2%	0.3%	0.4%
Asian	0.5%	1.0%	1.2%
Pacific Islander	0.0%	0.0%	0.0%
Some Other Race	2.8%	3.5%	4.1%
Two or More Races	1.6%	2.2%	2.7%
Hispanic Origin	6.1%	7.5%	8.7%

Source: ESRI and RKG Associates, Inc., 2019

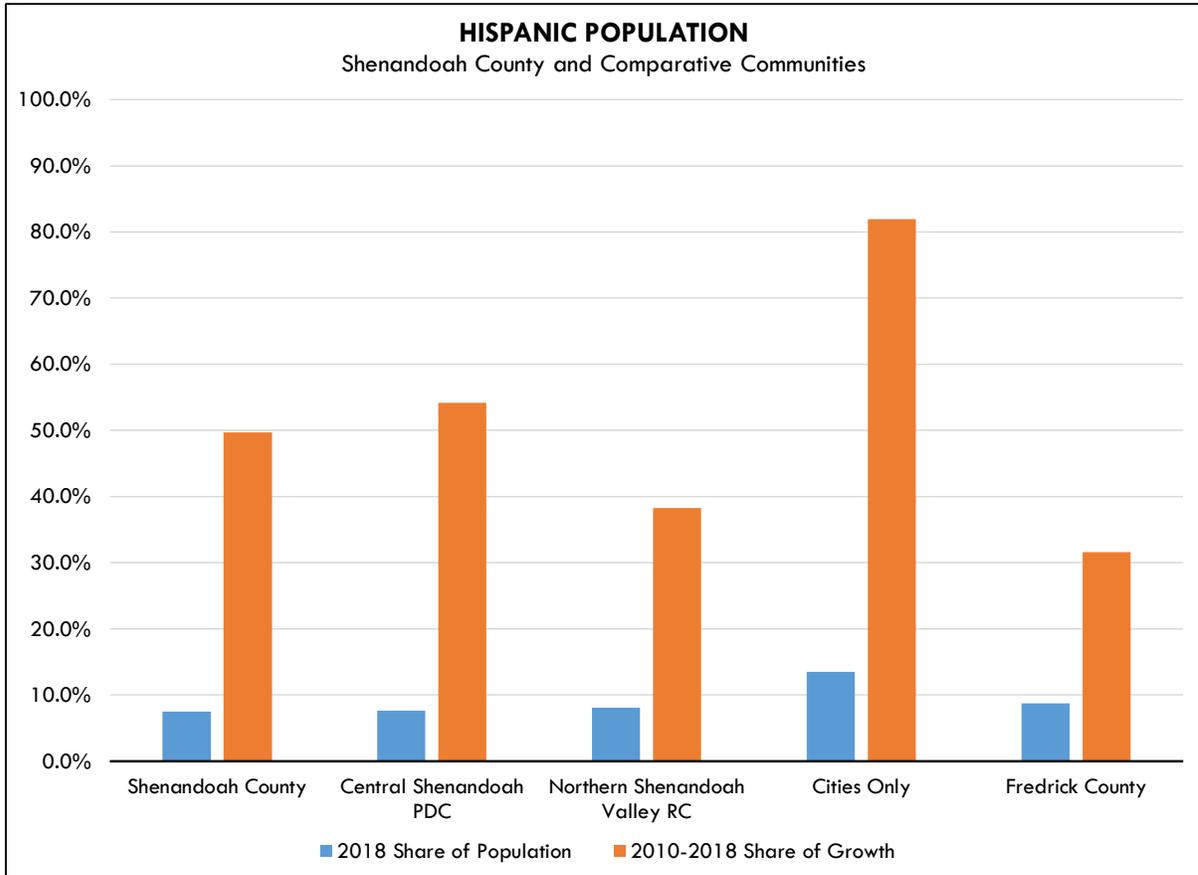
Figure 3-4



Source: ESRI and RKG Associates, Inc., 2019

At a base level, the data indicate that Hispanic workers are moving into the Shenandoah Valley—and Shenandoah County—to take advantage of the types of jobs being created locally (predominantly production-based jobs). Given the substantial increase in Hispanic population and workers, there also most likely are new business opportunities in the County to respond to this new population trend. Opportunities exist to develop new entrepreneurs within the County as well as develop businesses that cater to Hispanic consumers. Finally, the data support anecdotal information from local employers, that there is a growing need for English literacy training in Shenandoah County. Local employers reported that Hispanic workers are comprising larger portions of their employment base. However, they have had challenges promoting some of their Hispanic workers due to language and literacy barriers. A stronger workforce development program around language learning could help strengthen the Shenandoah County workforce.

Figure 3-5



Source: ESRI and RKG Associates, Inc., 2019

4. Households and Household Size

4.1 Households

- Like the population trend, households in Shenandoah County have been expanding slower than the surrounding region
 Shenandoah County has also seen slower household formations than the surrounding region after 2010 compared to the previous decade (Table 3-2). This corroborates the findings from the population analysis, as households are seeking to locate in more amenity-rich communities within the Shenandoah Valley.

Table 3-2
Demographic Characteristics - Household Formation Trends
Shenandoah County vs Central Shenandoah Planning District (2000 - 2023)

	2000				2010				2018				2023				Change '00 - '23			Change '10 - '18			Change '18 - '23							
	Count	Chge	Ann %	Percent	Count	Chge	Ann %	Percent	Count	Chge	Ann %	Percent	Count	Chge	Ann %	Percent	Count	Chge	Ann %	Percent	Count	Chge	Ann %	Percent	Count	Chge	Ann %	Percent		
																													% of Tot.	Count
Shenandoah County	14,296	17,076	17,539	17,950	3,654	25.6%	1.1%	19.4%	2,780	19.4%	1.1%	15.0%	1,433	5.0%	2.7%	411	2.3%	24,800	28,516	29,949	31,016	6,216	25.1%	1.1%	15.0%	3,716	5.0%	2.7%	411	2.3%
Augusta County	25,365	29,177	31,041	32,423	7,058	27.8%	1.2%	15.0%	3,812	15.0%	1.2%	15.0%	1,864	6.4%	6.4%	1,382	4.5%	13,123	15,988	17,619	18,632	5,509	42.0%	1.8%	21.8%	2,865	21.8%	10.2%	1,013	5.7%
Rockingham County	9,707	10,480	11,064	11,497	1,790	18.4%	0.8%	8.0%	773	8.0%	0.8%	8.0%	584	5.8%	5.8%	433	3.9%	8,486	9,555	9,765	9,910	1,424	16.8%	0.7%	12.6%	1,069	12.6%	2.2%	145	1.5%
Harrisonburg City	8,319	8,903	9,305	9,672	1,353	16.3%	0.7%	7.0%	584	7.0%	0.7%	7.0%	402	4.5%	4.5%	367	3.9%	2,232	2,237	2,259	2,258	26	1.2%	0.1%	5	0.2%	1.0%	(11)	0.0%	
Staunton City	2,547	2,603	2,535	2,463	(84)	-3.3%	-0.1%	56	2.2%	(68)	-2.6%	(72)	-2.8%	(54)	-2.5%	(43)	-2.0%	2,053	2,162	2,108	2,065	12	0.6%	0.0%	109	5.3%	(29)	-2.7%	(25)	-2.4%
Roanoke County	1,131	1,081	1,052	1,027	(104)	-9.2%	-0.4%	(50)	-4.4%	(29)	-2.7%	(25)	-2.4%	(25)	-2.4%	(25)	-2.4%	97,763	110,702	116,697	120,963	23,200	23.7%	1.0%	13.2%	12,939	13.2%	5.4%	4,266	3.7%
Highland County																		CSPD Total				23,200	23.7%	1.0%	13.2%	12,939	13.2%	5.4%	4,266	3.7%

Source: ESRI and RKG Associates, Inc., 2019

Table 3-3
Demographic Characteristics - Household Formation Trends
Shenandoah County vs Northern Shenandoah Valley Regional Commission (2000 - 2023)

	2000				2010				2018				2023				Change '00 - '23			Change '10 - '18			Change '18 - '23								
	Count	Chge	Ann %	Percent	Count	Chge	Ann %	Percent	Count	Chge	Ann %	Percent	Count	Chge	Ann %	Percent	Count	Chge	Ann %	Percent	Count	Chge	Ann %	Percent	Count	Chge	Ann %	Percent			
																													% of Tot.	Count	Chge
Shenandoah County	14,296	17,076	17,539	17,950	3,654	25.6%	1.1%	19.4%	2,780	19.4%	1.1%	15.0%	1,433	5.0%	2.7%	411	2.3%	22,097	28,864	32,033	34,828	12,731	57.6%	2.5%	30.6%	6,767	30.6%	11.0%	2,795	8.7%	
Frederick County	12,087	14,085	14,619	15,006	2,919	24.1%	1.0%	16.5%	1,998	16.5%	1.0%	16.5%	534	3.8%	3.8%	387	2.6%	9,305	9,746	9,704	9,707	402	4.3%	0.2%	441	4.7%	0.2%	(57)	-0.6%		
Warren County	10,001	10,607	10,892	11,039	1,038	10.4%	0.5%	6.1%	606	6.1%	0.5%	6.1%	285	2.7%	2.7%	147	1.3%	4,942	5,509	5,774	5,962	1,020	20.6%	0.9%	567	11.5%	4.8%	188	3.3%		
Page County	4,942	5,509	5,774	5,962	1,020	20.6%	0.9%	6.1%	606	6.1%	0.9%	6.1%	265	4.8%	4.8%	188	3.3%	NSVRC Total	58,432	68,811	73,082	76,542	18,110	31.0%	1.3%	17.8%	10,379	17.8%	6.2%	3,460	4.7%
City of Winchester																															
Clarke County																															

Source: ESRI and RKG Associates, Inc., 2019

- Within Shenandoah County, the Central (SA2) and Southern (SA5) portions of the County have experienced the fastest household formations since 2010

Household formation data within the County follows population growth data (Table 3-3). The areas of Woodstock, Mount Jackson, and Basye have experienced the highest percentage increases in Shenandoah County within the last decade. Strasburg has experienced the largest absolute increase of any study area during the study period. This resonates with the previous finding that SA2, SA4, and SA5 are becoming the new growth destinations especially after 2010, though historically the economic and population growths in the County concentrated in SA1 due to its proximity to the Washington D.C. metro area. A possible factor that contributed to this new shift is the relative housing affordability in SA2, SA4, and SA5, as SA1 is a comparatively well-established residential community and has comparably higher housing values due to its regional location advantages.

Table 3-3
Demographic Characteristics - Household Formation Trends
Shenandoah County Submarket Areas (2000 - 2023)

					Change '00 - '23			Change '00 - '10		Change '10 - '18		Change '18 - '23	
	2000	2010	2018	2023	Count	% of Tot. Chge	Ann % Chge	Count	Percent	Count	Percent	Count	Percent
Shenandoah County	14,296	17,076	17,539	17,950	3,654	25.6%	1.1%	2,780	19.4%	463	2.7%	411	2.3%
SA1 Strasburg/Northern Area	3,922	5,161	5,195	5,266	1,344	34.3%	1.5%	1,239	31.6%	34	0.7%	71	1.4%
SA2 Woodstock-Edinburg-Central Area	5,319	6,149	6,398	6,585	1,266	23.8%	1.0%	830	15.6%	249	4.0%	187	2.9%
SA3 Fort Valley-Eastern Area	843	998	1,001	1,011	168	19.9%	0.9%	155	18.4%	3	0.3%	10	1.0%
SA4 Basye-Orkney Springs Area	969	1,141	1,181	1,213	244	25.2%	1.1%	172	17.8%	40	3.5%	32	2.7%
SA5 Mt. Jackson-New Market-Southern Area	3,243	3,627	3,764	3,875	632	19.5%	0.8%	384	11.8%	137	3.8%	111	2.9%

Source: ESRI and RKG Associates, Inc., 2019

4.2 Household Size

- Shenandoah County household size has been growing, but at a slower pace than the surrounding cities

Between 2000 and 2023, the average household size in Shenandoah County has been steadily rising from 2.42 in 2000 to a projected 2.48 in 2023. Compared to the surrounding areas, the average household size of the County has remained in the middle throughout the two decades. In comparison, the surrounding cities such as Harrisonburg City and the City of Winchester have experienced a rapid increase in the average household size during the same period of time (Table 3-4 and Table 3-5).

The data echo the previous discussion that the surrounding cities have been attracting more family households than Shenandoah County, most likely due to housing affordability, access to services and amenities, and the more urban lifestyles.
- SA4 average household size has reversed course and surpassed the remaining study areas after 2010, indicating the growth of new family households

Within Shenandoah County, the average household size in SA4 shrank between 2000 and 2010, possibly indicating a loss of family households. In comparison, the average household size in SA1 increased the most (1.7%), exceeding the County average growth rate (0.4%) during the same period of time. However, since 2010, the average household size in SA4 has grown by 1.8%, surpassing the remaining study areas and the County average (1.6%) (Table 3-6).

This suggests that the majority of the new family households in the County concentrated in SA1 during the last decade due to its proximity to employment centers. However, since 2010, SA4 has instead been attracting larger households within the County. This finding resonates with the previous discussion that SA4, along with SA2 and SA5 has been emerging as the new growth

destination for living, most likely due to its relative housing affordability, particularly for residents that are working in Harrisonburg/Rockingham County.

Table 3-4
Demographic Characteristics - Average Household Size
Shenandoah County vs Central Shenandoah Planning District (2000 - 2023)

	2000	2010	2018	2023	Change '00 - '23	
					Actual Chge.	% of Tot. Change
Shenandoah County	2.42	2.43	2.47	2.48	0.06	2.5%
Augusta County	2.56	2.49	2.49	2.50	(0.06)	-2.3%
Rockingham County	2.61	2.57	2.57	2.57	(0.04)	-1.5%
Harrisonburg City	2.53	2.59	2.60	2.61	0.08	3.2%
Staunton City	2.19	2.15	2.15	2.15	(0.04)	-1.8%
Rockbridge County	2.43	2.32	2.32	2.32	(0.11)	-4.5%
Waynesboro City	2.31	2.34	2.35	2.35	0.04	1.7%
Lexington City	2.06	2.00	2.00	1.99	(0.07)	-3.4%
Buena Vista City	2.38	2.40	2.41	2.42	0.04	1.7%
Bath County	2.34	2.16	2.14	2.12	(0.22)	-9.4%
Highland County	2.24	2.15	2.16	2.16	(0.08)	-3.6%

Source: ESRI and RKG Associates, Inc., 2019

Table 3-5
Demographic Characteristics - Average Household Size
Shenandoah County vs Northern Shenandoah Valley Regional Commission (2000 - 2023)

	2000	2010	2018	2023	Change '00 - '23	
					Actual Chge.	% of Tot. Change
Shenandoah County	2.42	2.43	2.47	2.48	0.06	2.5%
Frederick County	2.64	2.68	2.69	2.70	0.06	2.3%
Warren County	2.57	2.62	2.64	2.65	0.08	3.1%
Page County	2.46	2.45	2.46	2.47	0.01	0.4%
City of Winchester	2.28	2.38	2.41	2.42	0.14	6.1%
Clarke County	2.50	2.50	2.52	2.53	0.03	1.2%

Source: ESRI and RKG Associates, Inc., 2019

Table 3-6
Demographic Characteristics - Average Household Size
Shenandoah County Submarket Areas (2000 - 2023)

	2000	2010	2018	2023	Change '00 - '23		Change '00 - '10		Change '10 - '18		Change '18 - '23	
					Actual Chge.	% Chge.	Count	Percent	Count	Percent	Count	Percent
Shenandoah County	2.42	2.43	2.47	2.48	0.06	2.5%	0.01	0.4%	0.04	1.6%	0.01	0.4%
SA1 Strasburg/Northern Area	2.42	2.46	2.50	2.51	0.09	3.7%	0.04	1.7%	0.04	1.6%	0.01	0.4%
SA2 Woodstock-Edinburg-Central Area	2.44	2.44	2.48	2.49	0.05	2.0%	0.00	0.0%	0.04	1.6%	0.01	0.4%
SA3 Fort Valley-Eastern Area	2.41	2.43	2.47	2.48	0.07	2.9%	0.02	0.8%	0.04	1.6%	0.01	0.4%
SA4 Basye-Orkney Springs Area	2.32	2.26	2.30	2.31	(0.01)	-0.4%	(0.06)	-2.6%	0.04	1.8%	0.01	0.4%
SA5 Mt. Jackson-New Market-Southern Area	2.42	2.43	2.47	2.48	0.06	2.5%	0.01	0.4%	0.04	1.6%	0.01	0.4%

Source: ESRI and RKG Associates, Inc., 2019

5. Household Income

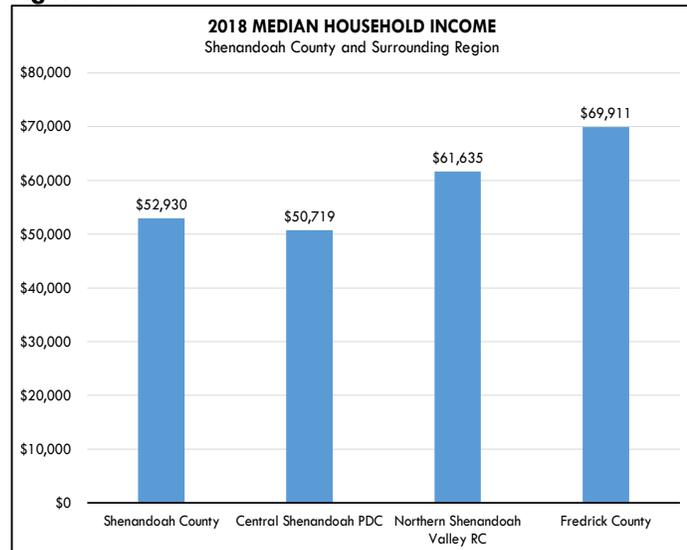
- Household incomes are relatively lower in Shenandoah County compared to the surrounding region and are projected to remain so

The median household income of the County in 2018 is \$52,930, slightly higher than the Central Shenandoah Planning District, but much lower than the Northern Shenandoah Valley Regional Commission (\$61,635) and Fredrick County (\$69,911). In addition, the median household income in 2023 in the County is projected to remain almost the same as 2018, while the surrounding region is poised to see noticeable median household income gains, especially in the Northern Shenandoah Valley Regional Commission (Figure 3-6 and Figure 3-7).

The data suggest that households in Shenandoah County are earning less compared to the surrounding region, and this situation is projected to continue through 2023. Given the correlation between education attainment (discussed in the next section of this chapter) and income, is it consistent to see lower wage rates as well.

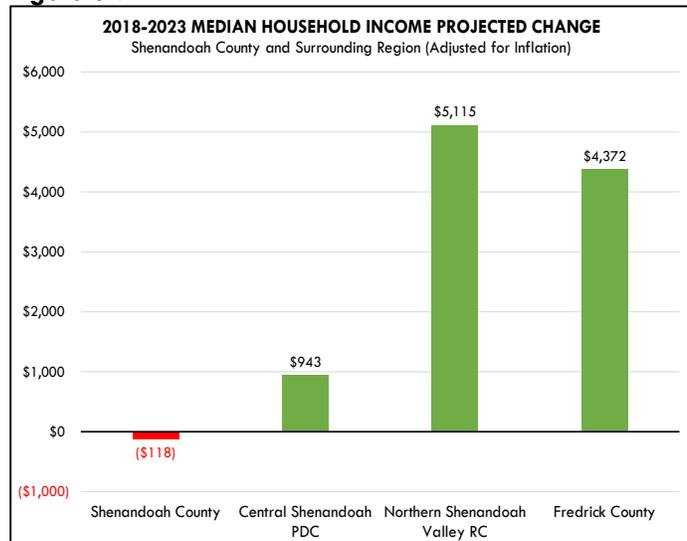
The Northern Shenandoah Valley Regional Commission and Fredrick County have higher median household incomes most likely because they are closer to the Washington D.C. metro area and have been attracting long-distance commuters to the Northern Virginia area for years. However, this regional advantage has not been captured by Shenandoah County fully as it is located further away from the major employment base. The disparity in income levels also reflects the likely employment growth for the region. Other parts of Shenandoah Valley have had greater success attracting mid-level and higher-paying jobs (both production and service-based) since 2010.

Figure 3-6



Source: ESRI and RKG Associates, Inc., 2019

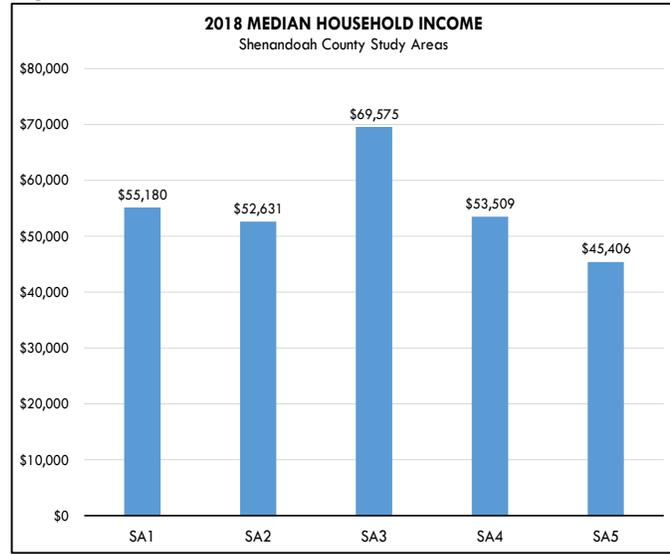
Figure 3-7



Source: ESRI and RKG Associates, Inc., 2019

- Within the County, SA3 has the highest median household income SA3, which comprises the Fort Valley Area, historically has been a high-income area. The area offers a unique lifestyle and has attracted more affluent residents seeking that lifestyle. Development in this part of Shenandoah County also is more challenging due to zoning regulations and community preference, keeping the amount of development below other areas of Shenandoah County. Thus, SA3 has the highest median household income of \$69,575 within the County in 2018, which is higher than the County average and almost the same as the Fredrick County level (Figure 3-8).

Figure 3-8



Source: ESRI and RKG Associates, Inc., 2019

In comparison, SA5 has the lowest median household income of \$45,406 in 2018, which is lower than the Central Shenandoah Planning District figure. This suggests that even though SA5 is among the several study areas that have been attracting new growth in recent years, currently it is still behind the rest of the County in terms of household wealth. As mentioned, this area has become attractive as a less expensive alternative to living in Harrisonburg/Rockingham County while maintaining a more rural lifestyle.

E. ECONOMIC BASE ANALYSIS

Demographic characteristics such as age cohort distribution and household incomes can have a substantial impact on a local economy, particularly as they relate to spending patterns and available labor force – both are major economic drivers. However, further analysis of the economic base of Shenandoah County, including characteristics of its labor force and the existing industries can provide a greater understanding of the County’s economy. The analysis that follows sets the foundation for the target industry analysis chapter in this report.

1. Labor Force Participation

- The Shenandoah County labor force has grown, but at a slower rate than the surrounding region The County’s labor force increased between 2007 and 2017 like the rest of Shenandoah Valley, but at a slower pace. The County gained 825 people in its labor force between 2007 and 2012, increasing by 4.1%, and added another 193 between 2012 and 2017. In comparison, Frederick County and the Northern Shenandoah Valley Regional Commission have experienced escalating growth rates of their labor force, and the growth rates are higher than the Shenandoah County average especially after 2012 (Table 3-7). This finding corroborates the previous demographic analysis.

Table 3-7
Labor Force Analysis
Shenandoah County vs Surrounding Region (2007 - 2017)

	Year	Labor Force	Employment	Unemployment	Unemployment Rate
Shenandoah County	2007	20,009	19,372	637	3.2
	2012	20,834	19,508	1,326	6.4
	2017	21,027	20,282	745	3.5
Frederick County	2007	41,122	39,905	1,217	3.0
	2012	43,479	40,967	2,512	5.8
	2017	46,296	44,818	1,478	3.2
PDC	2007	144,214	140,145	4,069	2.8
	2012	144,271	135,232	9,039	6.3
	2017	144,222	138,841	5,381	3.7
RC	2007	101,455	98,094	3,361	3.3
	2012	103,294	96,245	7,049	6.8
	2017	105,886	101,974	3,912	3.7
Actual Change & Percent Change					
Shenandoah County	'07 - '12	825	136	689	N/A
	% '07 - '12	4.1%	0.7%	108.2%	N/A
	'12 - '17	193	774	(581)	N/A
	% '12 - '17	0.9%	4.0%	-43.8%	N/A
Frederick County	'07 - '12	2,357	1,062	1,295	N/A
	% '07 - '12	5.7%	2.7%	106.4%	N/A
	'12 - '17	2,817	3,851	(1,034)	N/A
	% '12 - '17	6.5%	9.4%	-41.2%	N/A
PDC	'07 - '12	57	(4,913)	4,970	N/A
	% '07 - '12	0.0%	-3.5%	122.1%	N/A
	'12 - '17	(49)	3,609	(3,658)	N/A
	% '12 - '17	0.0%	2.7%	-40.5%	N/A
RC	'07 - '12	1,839	(1,849)	3,688	N/A
	% '07 - '12	1.8%	-1.9%	109.7%	N/A
	'12 - '17	2,592	5,729	(3,137)	N/A
	% '12 - '17	2.5%	6.0%	-44.5%	N/A

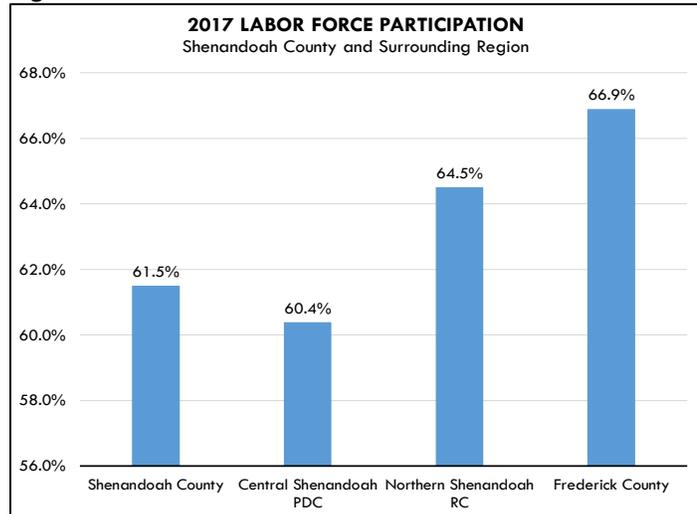
Source: U.S. Bureau of Labor Statistics and RKG Associates, Inc., 2019

- Despite the growth in the labor force, the County's labor force participation is low

Though the labor force in Shenandoah County has expanded after the recession, the labor force participation rate of 61.5% is comparatively lower than most of the surrounding areas (Figure 3-9).

The data suggest that though the number of people who have a job or are currently looking for a job has increased in the County, around 40% of the total population do not have a job

Figure 3-9



Source: U.S. Bureau of Labor Statistics and RKG Associates, Inc., 2019

or are not seeking employment opportunities. This percentage is higher than the Frederick County and the Northern Shenandoah Valley Regional Commission levels, echoing the fact that Shenandoah County has a high concentration of the retiree population who are not counted in the labor force. This data further exemplifies the impact of the County's loss of the primary working-aged cohort, Generation X (those generally born between 1965 and 1982).

2. Unemployment Rates

- Shenandoah County unemployment levels have paralleled the regional performance

Unemployment in Shenandoah County has remained on the higher end of the other Shenandoah Valley communities but has followed similar patterns. The County has had the second-highest unemployment rate regionally since 2007 (Figure 3-10). The County's workforce experienced similar spikes in unemployment due to the National Recession as well.

This finding reveals how connected the Shenandoah economy is amongst all its communities. The economic downturn has similar effects on workers despite the differing size and focus of the individual counties' and cities' economies. Simply put, the Shenandoah Valley workforce is interlinked regardless of which jurisdiction a worker lives or works.

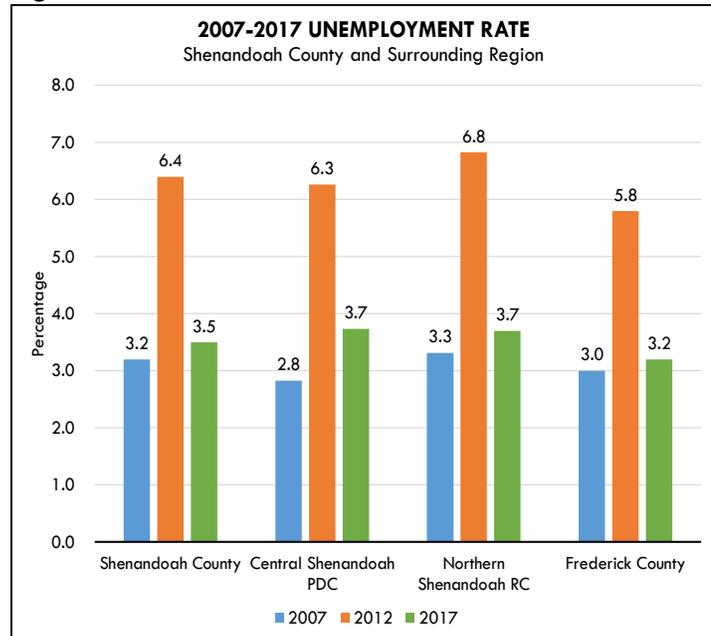
- None of the regional study areas have returned to pre-Recession levels
The National Recession negatively impacted Shenandoah County and the entire Valley marketplace between 2007 and 2012. The County's unemployment rate doubled from 3.2% in 2007 to 6.4% in 2012. Since the Recession, the unemployment rate of the County and its surrounding jurisdictions have fallen as the market has reversed. As of August 2019, according to the Federal Reserve Economic Data, Shenandoah County has a 2.4% unemployment rate.

All that said, the overall size of the Shenandoah County (21,027 people) and the greater Valley region (250,108 people) labor force reveals there are not many unemployed people locally (745 people) or throughout the Valley (9,293 people). From an economic development perspective, the lack of available labor force could be concerning for a labor-intensive business/industry, particularly one that has specialized labor force needs.

3. Education Attainment

A highly educated workforce can be an advantage for a community looking to attract new businesses and bolster economic growth. While education attainment requirements vary by industry, an educated and skilled workforce is attractive to semi/highly-skilled and professional service sectors. An educated

Figure 3-10



Source: U.S. Bureau of Labor Statistics and RKG Associates, Inc., 2019

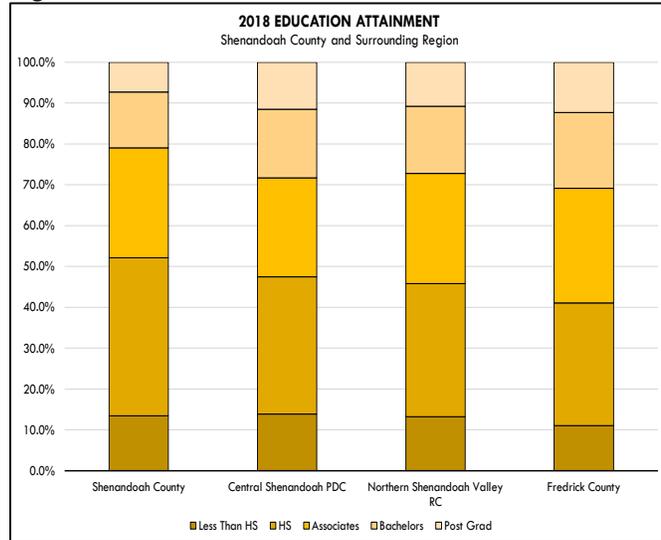
workforce also typically correlates with higher-paying jobs which can ultimately increase spending within the local economy.

- Education attainment levels for adults over 25-years old are comparatively lower in Shenandoah County than the surrounding region

Similar to median household incomes (discussed earlier), education attainment levels for adult residents in Shenandoah County are comparatively lower than the surrounding region. Over 50% of the County's adult population has a high school degree or less, and this percentage is higher than the Central Shenandoah Planning District, Northern Shenandoah Valley Regional Commission, and Fredrick County. The County also has less than 10% of its total adult population who has a post-graduate degree, below than the surrounding region (Figure 3-11).

The data resonate with the previous discussion that there are more people with lower education attainment levels employed in lower-paying and lower-skilled jobs living in Shenandoah County compared to the surrounding region. Thus, there is an opportunity for more robust workforce training programs to build the labor force in jobs being sought by existing businesses and prospects. This finding was corroborated through interviews with local employers, who noted that finding entry-level workers locally is relatively easier than mid-level and executive workers. It should be mentioned that due to the low unemployment rate environment, it is still challenging to find qualified entry level workers as well.

Figure 3-11



Source: ESRI and RKG Associates, Inc., 2019

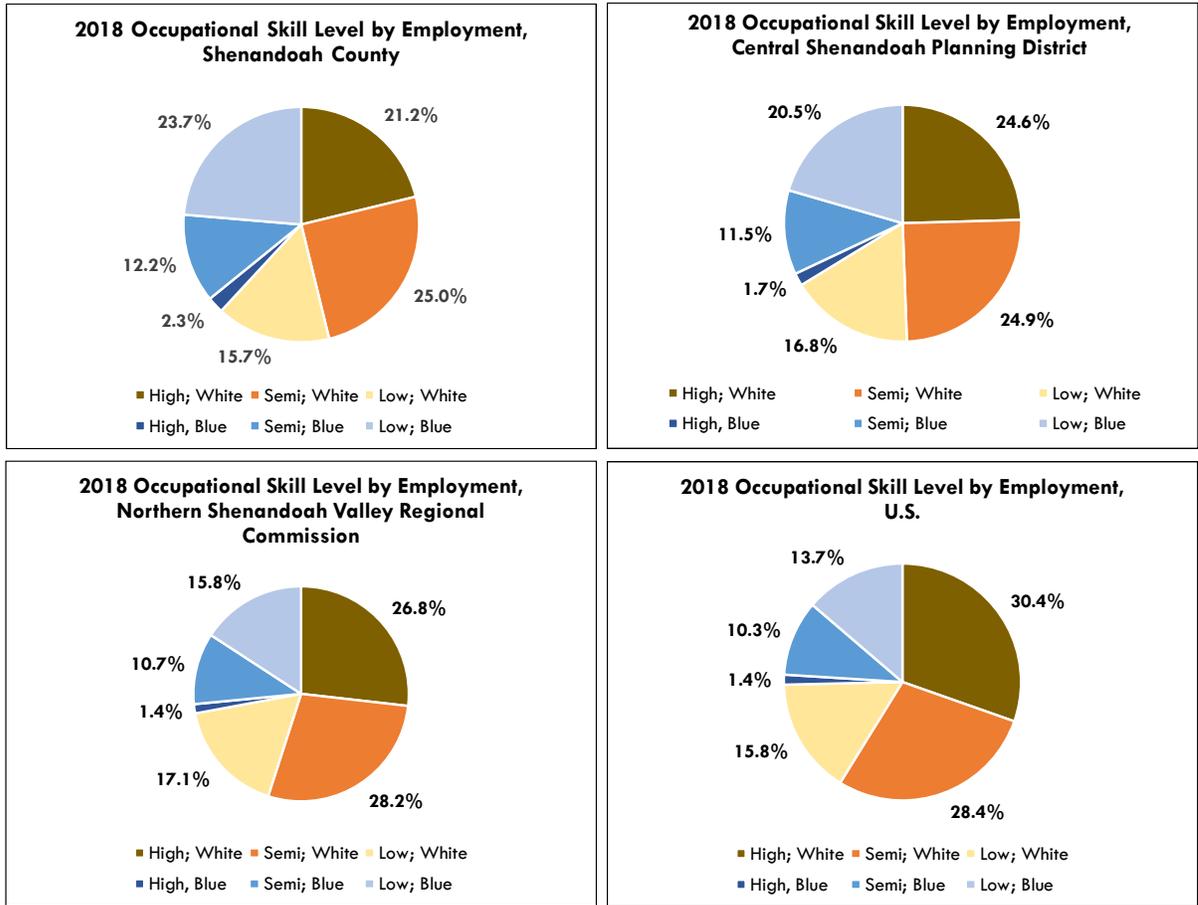
4. Occupational Skill Level

In addition to the educational attainment level, the occupation skill level of a workforce is also important for a community seeking to attract new businesses and promote economic development, as a workforce with high occupation skill levels is crucial to a local economy and attractive to company opportunities. This is because a well-educated worker that lacks the appropriate skills for a particular job is as ineffective as a less educated worker that lacks the appropriate skills. RKG Associates examined the skill levels of the labor force in Shenandoah County, Central Shenandoah Planning District, Northern Shenandoah Valley Regional Commission, and the U.S. as a whole using U.S. Bureau of Labor Statistics Standard Occupation Classifications (SOC) data. These groupings were derived from the consultant's knowledge regarding the skill and educational requirements of general occupational categories. Although it is difficult to group occupational categories in this manner with great precision, the results provide some indication of the distribution and diversity of skills available within the labor force. The occupational categories and their descriptions are as follows:

- 1) Highly-Skilled White Collar (HSWC) – a professional position requiring a college degree, with supervisory/ management responsibility or specialized training while working within a white-collar work environment. EXAMPLES: lawyers, registered nurses, school teachers
 - 2) Highly-Skilled Blue Collar (HSBC) – a trade or non-professional position requiring less than an advanced degree, but some post-secondary education, a certificate, or specialized training or skill while working within a blue-collar work environment. EXAMPLES: production supervisors, carpenters
 - 3) Semi-Skilled White Collar (SSWC) – a professional position requiring less than an advanced degree, but some post-secondary education, a certificate, or specialized training or skill while working within a white-collar work environment. EXAMPLES: administrative assistants, correctional officers
 - 4) Semi-Skilled Blue Collar (SSBC) – a trade position requiring less than an advanced or trade school degree but requiring some specialized training or skill, while working within a blue-collar environment. EXAMPLES: tool setters and operators, machinists
 - 5) Low-Skilled White Collar (LSWC) – a position within a white-collar work environment requiring no degree or formal schooling beyond high school but requiring some on-the-job training. EXAMPLES: food preparation, retail sales
 - 6) Low-Skilled Blue Collar (LSBC) – a position within a trade profession requiring no advanced degree or formal schooling but requiring some on-the-job training. EXAMPLES: truck/delivery service drivers, laborers
- Occupational skill levels in the County are lower than regional and national levels
In addition to lower educational attainment levels, the jobs in Shenandoah County also require lower occupational skill levels compared to the surrounding region. The County has the highest share of low-skilled blue-collar occupations (23.7%), and the lowest share of high-skilled white-collar occupations (21.2%) when compared to the Central Shenandoah Planning District, Northern Shenandoah Valley Regional Commission, and the U.S. (Figure 3-12). These low-skilled blue-collar jobs usually require low educational attainment levels, offer lower pays, creating less household wealth, and are more vulnerable to economic declines.
 - White-collar jobs have been increasing at a slower pace than the surrounding region and the U.S.
Despite a decrease of blue-collar jobs of all skill levels in the County, high-skilled white-collar jobs have been increasing only at 14.9% between 2001 and 2018, compared to 20.6% in the Central Shenandoah Planning District, 50.1% in the Northern Shenandoah Valley Regional Commission, and 29.9% on a national level. In addition, opposite to the growth of semi-skilled white-collar jobs in the surrounding region and in the U.S. as a whole, the County has seen a 3.8% loss of such jobs (Figure 3-13).

The data indicate that though the County's employment base and economic structure have been slowly shifting towards sectors that have more value addition, higher skill requirements, and higher pays, the County still has proportionally more lower-skilled jobs compared to the surrounding region and the U.S. as a whole, which has limited the economic growth in the County.

Figure 3-12



Source: U.S. Bureau of Labor Statistics Standard Occupation Classifications and RKG Associates, Inc., 2019

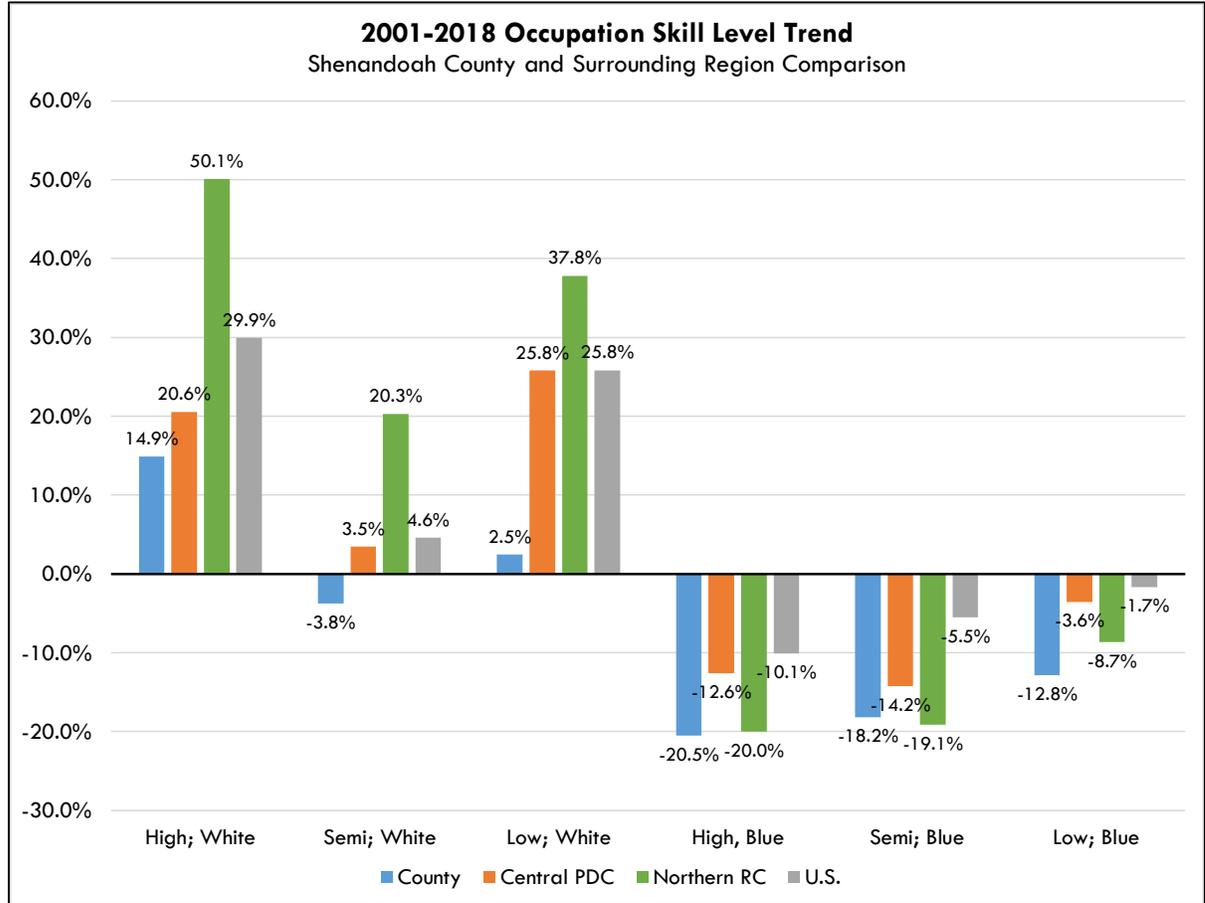
5. Employment Shift by Industry

RKG utilized the employment data by NAICS industry sector from The Quarterly Workforce Indicators (QWI) obtained from the U.S. Census Bureau for the employment shift analysis. The analysts compared the changes in employment by industry between 2010 and 2017 in Shenandoah County, Central Shenandoah Planning District, and Northern Shenandoah Valley Regional Commission. The purpose is to gain a more in-depth understanding of how the 2007 recession impacted the County's economy by industry, the health of the various industry sectors in the County, and how well they have recovered from the recession, as employment is an important indicator for such study.

- More industries in the County have been hit by the recession compared to the surrounding region
 9 out of 20 NAICS industry sectors have experienced a loss of employment in the County between 2010 and 2017. These sectors include Construction, Manufacturing, Transportation & Warehousing, Professional Services, Administrative & Waste Management, Health Care & Social Assistance, Arts & Entertainment, and Other Services. This is compared to only one industry sector in Northern Shenandoah Valley Regional Commission and five in Central Shenandoah Planning District during the same period. The data indicate that almost half of the industry sectors in Shenandoah County have been negatively impacted by the recession, which is more severe than the impact on the surrounding region. In addition, the recession impact on the County's employment has continued for a long time, even ten years after the recession (Table 3-8),

meaning it takes the County longer to recover from the economic recession due to its vulnerable economic base.

Figure 3-13



Source: U.S. Bureau of Labor Statistics Standard Occupation Classifications and RKG Associates, Inc., 2019

- Low-skilled industry sectors have been impacted the most by the recession in the County**
 Low-skilled industry sectors, especially the Retail Trade, Accommodation and Food Service, and Agriculture, Forestry, Fishing, and Hunting have experienced the greatest employment percentage losses among all NAICS industries in the County. In contrast, these sectors have grown in the surrounding marketplace. Most specifically, agriculture, forestry, fishing, and hunting employment is down in Shenandoah County for this time period, while growing in the surrounding jurisdictions. It should be noted, that these numbers come from a different source than the numbers referenced in Chapter 5. The number displayed in this chapter are accounting for multiple sectors outside of just agriculture.

Table 3-8
Employment Shifts by Industry
Shenandoah County, Virginia, 2010-2017

Industry	2010	2017	Chg. 10'-17'	% Chg.
All NAICS Sectors	11,979	12,060	81	0.7%
Agriculture, Forestry, Fishing and Hunting	148	84	(64)	-43.2%
Mining, Quarrying, and Oil and Gas Extraction	0	0	0	0.0%
Utilities	80	70	(10)	-12.5%
Construction	566	602	36	6.4%
Manufacturing	3,036	3,069	33	1.1%
Wholesale Trade	290	269	(21)	-7.2%
Retail Trade	1,432	1,293	(139)	-9.7%
Transportation and Warehousing	382	483	101	26.4%
Information	359	257	(102)	-28.4%
Finance and Insurance	241	224	(17)	-7.1%
Real Estate and Rental and Leasing	106	103	(3)	-2.8%
Professional, Scientific, and Technical Services	234	296	62	26.5%
Management of Companies and Enterprises	231	263	32	13.9%
Administrative and Support and Waste Management and Remediation Services	224	230	6	2.7%
Educational Services	1,595	1,426	(169)	-10.6%
Health Care and Social Assistance	1,117	1,321	204	18.3%
Arts, Entertainment, and Recreation	58	116	58	100.0%
Accommodation and Food Services	1,061	982	(79)	-7.4%
Other Services (except Public Administration)	328	427	99	30.2%
Public Administration	492	534	42	8.5%

Northern Shenandoah Valley Regional Commission, Virginia, 2010-2017

Industry	2010	2017	Chg. 10'-17'	% Chg.
All NAICS Sectors	54,197	66,156	11,959	22.1%
Agriculture, Forestry, Fishing and Hunting	336	367	31	9.2%
Mining, Quarrying, and Oil and Gas Extraction	0	0	0	0.0%
Utilities	155	209	54	34.8%
Construction	2,975	3,413	438	14.7%
Manufacturing	7,658	9,311	1,653	21.6%
Wholesale Trade	1,585	1,805	220	13.9%
Retail Trade	8,038	8,435	397	4.9%
Transportation and Warehousing	2,622	3,143	521	19.9%
Information	548	493	(55)	-10.0%
Finance and Insurance	1,557	2,490	933	59.9%
Real Estate and Rental and Leasing	518	595	77	14.9%
Professional, Scientific, and Technical Services	1,820	2,477	657	36.1%
Management of Companies and Enterprises	487	1,403	916	188.1%
Administrative and Support and Waste Management and Remediation Services	2,549	2,915	366	14.4%
Educational Services	4,661	8,089	3,428	73.5%
Health Care and Social Assistance	8,765	10,316	1,551	17.7%
Arts, Entertainment, and Recreation	1,018	1,154	136	13.4%
Accommodation and Food Services	4,888	5,234	346	7.1%
Other Services (except Public Administration)	1,740	1,872	132	7.6%
Public Administration	1,996	2,181	185	9.3%

Central Shenandoah Planning District Commission, Virginia, 2010-2017

Industry	2010	2017	Chg. 10'-17'	% Chg.
All NAICS Sectors	105,402	114,798	9,396	8.9%
Agriculture, Forestry, Fishing and Hunting	862	1,646	784	91.0%
Utilities	116	76	(40)	-34.5%
Construction	419	498	79	18.9%
Manufacturing	5,324	6,559	1,235	23.2%
Wholesale Trade	20,053	18,105	(1,948)	-9.7%
Retail Trade	3,393	4,153	760	22.4%
Transportation and Warehousing	12,900	12,131	(769)	-6.0%
Information	4,657	6,367	1,710	36.7%
Finance and Insurance	2,343	1,595	(748)	-31.9%
Real Estate and Rental and Leasing	1,780	1,928	148	8.3%
Professional, Scientific, and Technical Services	1,083	1,195	112	10.3%
Management of Companies and Enterprises	2,370	3,308	938	39.6%
Administrative and Support and Waste Management and Remediation Services	1,206	1,315	109	9.0%
Educational Services	2,488	3,247	759	30.5%
Health Care and Social Assistance	14,302	16,221	1,919	13.4%
Arts, Entertainment, and Recreation	14,783	16,156	1,373	9.3%
Accommodation and Food Services	1,306	1,216	(90)	-6.9%
Other Services (except Public Administration)	9,516	11,724	2,208	23.2%
Public Administration	2,468	2,933	465	18.8%

Source: QWI & RKG Associates, Inc., 2019

The net employment growth data further reinforces the demographic findings about population and household growth. While Shenandoah County has experienced a net job increase, the pace of growth remains behind the rest of the region. That said, the employment data indicate the County has experienced better growth in mid- and higher-wage jobs (i.e. manufacturing) but has not experienced the same income growth as other communities. This indicates that Shenandoah County has not been successful at having higher-wage workers live in the County over the more developed areas of the Valley (i.e. Harrisonburg and Winchester). From an economic development perspective, creating the critical mass of residential development that will warrant greater services locally could help the County capture more of these local workers.

6. Unemployment by Industry

Though the employment shift data reflect how the 2007 economic downturn impacted the different industry sectors in the County, they do not reveal current labor force availability in the County and in the surrounding region. As mentioned, the number of unemployed residents of Shenandoah County and the region are comparatively low, making recruitment in some labor dependent industries a challenge. RKG used the 2018 unemployment data by industry sector obtained from EMSI, Labor Market Analytics to analyze the currently available labor force and employment demands by industry sector.

Understanding the depth of existing labor availability is valuable information for existing and potential employers interested in expansion in Shenandoah County. Similarly, industry sectors that plan to enter the County without immediately available trained labor will need additional resources including skill training and employee recruitment to support their local growth. Based on the analysis results, the low unemployment and small labor force, Shenandoah County will need to provide robust job training services to attract medium and large-scale companies to the county.

- Employment opportunity demand is the highest for the Manufacturing sector, followed by Retail Trade and Health Care, and Social Assistance
Within the greater Shenandoah Valley marketplace, the Manufacturing sector has the most unemployed labor force totaling 1,209 currently unemployed workers (Table 3-9). The Retail Trade sector has the second-highest total unemployment in the County and the surrounding region. Currently, the County and the surrounding region combined can immediately support Retail Trade employers with 739 available workers. Health Care and Social Assistance comes in third place, with 669 unemployed workers in the labor force who can readily support new Health Care and Social Assistance employers.

Locally, Shenandoah County has fewer than 500 persons unemployed that are actively seeking jobs. While a low unemployment is a positive for the community as a whole, it creates challenges for business growth and recruitment. The three largest unemployment sectors for the region are Manufacturing (159 unemployed residents), Retail Trade (58 unemployed residents), and Health Care and Social Assistance (54 unemployed residents). Ultimately, this data indicates that job growth within the County will require a combination of existing labor, workforce training for residents to 'cross over', and attracting workers from other areas. Given the concentrations elsewhere in the region, the County will have to be competitive to draw companies over sites closer to the population centers of Harrisonburg and Winchester.

Table 3-9
2018 Unemployment by Industry Sector
Shenandoah County & Surrounding Region, Virginia

Sector	Shenandoah	Central	Northern	TOTAL
	County	Shenandoah PDC	Shenandoah RC	
Agriculture, Forestry, Fishing and Hunting	5	54	23	82
Mining, Quarrying, and Oil and Gas Extraction	1	10	6	17
Utilities	2	7	5	14
Construction	38	305	196	539
Manufacturing	159	666	384	1,209
Wholesale Trade	18	177	92	287
Retail Trade	58	402	279	739
Transportation and Warehousing	29	263	165	457
Information	27	68	26	121
Finance and Insurance	13	90	127	230
Real Estate and Rental and Leasing	6	59	26	91
Professional, Scientific, and Technical Services	13	135	106	254
Management of Companies and Enterprises	3	21	17	41
Administrative and Support and Waste Management and Remediation Services	28	268	274	570
Educational Services	6	188	126	320
Health Care and Social Assistance	54	376	239	669
Arts, Entertainment, and Recreation	3	15	25	43
Accommodation and Food Services	24	192	98	314
Other Services (except Public Administration)	20	115	78	213
Government	29	207	138	374
No Previous Work Experience/Unspecified	55	299	239	593

Source: EMSI, Labor Market Analytics and RKG Associates, Inc., 2019

7. Regional Employment by Industry

In addition to identifying the local employment trends within Shenandoah County, it is also crucial to understand the existing major employment industries and the fastest-growing employment sectors in the regional economy. As the surrounding region has stronger economic performances and more employment opportunities, the County can tap into these regional strengths to propel its economic development by sharing some of the employment opportunities in the region. RKG Associates assessed the specific industries (3-digit NAICS) within the larger industry sectors (2-digit NAICS) to better understand the local-regional economic relationship.

- The County's economy has several consistencies with the regional market
In the broader region including Shenandoah County, Central Shenandoah Planning District and Northern Shenandoah Valley Regional Commission, Food Services and Drinking Places, Food Manufacturing, and Specialty Trade Contractors are the top three major employment industry sectors, contributing over 38,000 jobs in total. Within Shenandoah County, these sectors are also the second, first and fifth largest employment industries respectively (Table 3-10).
- Food Manufacturing is strong locally and regionally.
In addition to being a high growth sector regionally, Manufacturing also has a large presence in the Shenandoah Valley. The Food Manufacturing industry constitutes a large portion of that in both Shenandoah County (i.e. Andros) and within the surrounding marketplace. Preserving and expanding this industry should be a priority for Shenandoah County.
- Potential opportunities exist in Educational Services, Ambulatory Health Care, Hospitals, and Professional, Scientific and Technical Services
In addition to Food Services, Manufacturing and Specialty Trade Contractors, sectors such as Educational Services, Ambulatory Health Care Services, Hospitals, and Professional, Scientific and Technical Services are also the major regional employment sectors. These sectors usually

provide higher-skilled and higher-pay jobs creating more wealth and requiring higher educational attainment levels. However, most of them are ranked only between the 10th and the 20th place in terms of their existing presence and scale in the County.

This suggests that opportunities exist for the County to tap into higher-skilled and higher-paying employment sectors to bolster its economic base. In addition, Health Care and Social Assistance is one of the several industries that have the largest unemployment in the County as discussed. This can be an opportunity for the County to introduce more Ambulatory Health Care, potential to expand Hospital services in partnership with Valley Health, and other Health Care and Social Assistance employment opportunities. Moreover, the high concentration of the retiree population in the County also need more health care services and facilities to meet the increasing demands.

Table 3-10
2018 Largest Regional Employment Industries
Shenandoah County, Central Shenandoah PDC & Northern Shenandoah RC

Industry	Jobs	SC Rank
Food Services and Drinking Places	18,471	2
Food Manufacturing	10,540	1
Specialty Trade Contractors	9,655	5
Educational Services	9,417	25
Ambulatory Health Care Services	9,359	16
Administrative and Support Services	9,120	8
Hospitals	8,465	10
Professional, Scientific, and Technical Services	7,788	12
General Merchandise Stores	6,378	15
Nursing and Residential Care Facilities	6,050	4
Warehousing and Storage	5,547	38
Social Assistance	5,328	9
Accommodation	4,948	17
Religious, Grantmaking, Civic, and Professional Organizations	4,708	11
Food and Beverage Stores	4,455	18

Source: EMSI and RKG Associates, Inc. 2019

- Credit Intermediation and Related Activities and Management of Companies and Enterprises experienced major growth in the region behind
 Industry sectors including Credit Intermediation and Related Activities, and Management of Companies and Enterprises are among the sectors that have seen the largest employment growth between 2010 and 2018 in the Shenandoah Valley region after the recession. This was supported by the Navy Federal Credit Union call center opening in Frederick County. However, they are ranked after the 30th place within the County in terms of employment growth during the same period (Table 3-11).

Given Shenandoah County’s quality of life amenities and existing technology infrastructure in the towns along I-81, there is potential for the County to tap into smaller, niche firms within these industries. Growth in these industries would bring more semi-/high-skilled white-collar jobs that can contribute more to the local economy. The County can consider promoting the presence of these industries as part of its economic development strategy.

Table 3-11
2010-2018 Largest Growth Regional Employment Industries
Shenandoah County, Central Shenandoah PDC & Northern Shenandoah RC

Industry	Growth	SC Rank
Food Services and Drinking Places	3,161	33
Educational Services	2,433	80
Warehousing and Storage	2,018	12
Ambulatory Health Care Services	1,953	13
Professional, Scientific, and Technical Services	1,751	19
Credit Intermediation and Related Activities	1,267	83
Administrative and Support Services	1,170	7
Social Assistance	1,163	3
Food Manufacturing	846	2
Nursing and Residential Care Facilities	681	10
Management of Companies and Enterprises	643	62
Support Activities for Agriculture and Forestry	583	23
Plastics and Rubber Products Manufacturing	426	1
Crop Production	412	67
Beverage and Tobacco Product Manufacturing	403	17

Source: EMSI and RKG Associates, Inc. 2019

- Beverage Manufacturing is growing quickly locally and regionally
Shenandoah County has been successful at attracting tourism-related production in spirit production locally (Table 3-13). The County has attracted wineries, breweries and a distillery. This economic growth trend has long been established regionally, particularly with wineries in the I-66 and I-81 corridor. Continued efforts to grow this production sector will enhance employment opportunities, preserve some agricultural land, and continue to grow the County's tourism market.

8. Inflow/Outflow and Labor Force Efficiency

As seen on Map 3-3, Shenandoah County is a net exporter of workers, as 6,006 workers living elsewhere commute to the County for work compared to 10,678 County residents commuting to jobs elsewhere every day. At a base level, this finding is not surprising given Winchester/Frederick County and Harrisonburg/Rockingham County are the regional economic centers for Shenandoah Valley. These areas of 'critical mass' are attractive to companies that seek access to larger labor pools and locations that are convenient to their vertical and horizontal supply chains. Thus, it is reasonable that Shenandoah County will have more working residents leaving the County than persons from outside the County coming to work locally.

At a more strategic level, there may be opportunities for local businesses to tap into this outflow of workers by offering competitive employment opportunities closer to home. As noted in the previous section, there are several industries that are growing faster regionally than locally. The County's economic development effort should include focused engagement with companies in these industries to determine the potential to recruit similar operations to Shenandoah County.

Table 3-12
2010-2018 Fastest Growth Regional Employment Industries
Shenandoah County, Central Shenandoah PDC & Northern Shenandoah RC

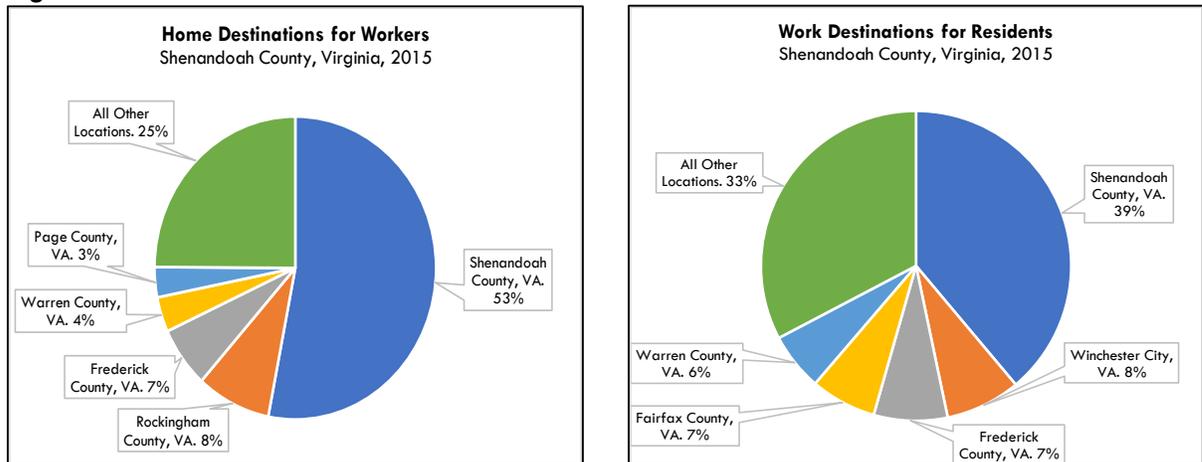
Industry	% Change	SC Rank
Air Transportation	133.2%	76
Support Activities for Agriculture and Forestry	94.9%	12
Beverage and Tobacco Product Manufacturing	89.2%	3
Motion Picture and Sound Recording Industries	75.2%	39
Apparel Manufacturing	71.9%	76
Warehousing and Storage	57.2%	8
Transit and Ground Passenger Transportation	54.3%	37
Other Information Services	49.8%	76
Credit Intermediation and Related Activities	44.0%	53
Crop Production	40.0%	60
Educational Services	34.8%	50
Nonmetallic Mineral Product Manufacturing	29.4%	32
Professional, Scientific, and Technical Services	29.0%	29
Management of Companies and Enterprises	28.7%	42
Social Assistance	27.9%	7

Source: EMSI and RKG Associates, Inc. 2019

9. Employee and Employer Location

The amount of time spent commuting to and from work can impact the overall quality of life of a household, as well as have an economic impact on a community if dollars spent during the day are not spent in the local economy. 53.1% of the workers employed in Shenandoah County are local residents that live in the County, 8.5% come from Rockingham County, followed by 6.5% commuting from Frederick County. Warren County (3.7%), Page County (3.2%), Harrisonburg City (2.7%) and Winchester City (2.3%) are also among the top six home destinations for people working within the County (Figure 3-14). Additionally, many workers from West Virginia come to Shenandoah County for work. In 2015, Hardy County, WV and Berkeley County, WV made up 1.5% and 1.0% respectively, of

Figure 3-14



Source: OnTheMap, U.S.Census Bureau, Center for Economic Studies and RKG Associates, Inc., 2019

all employees within Shenandoah County. Therefore, businesses seeking to relocate part of their operations in Shenandoah County will be utilizing a relatively local labor force to fill their positions.

As noted, only 38.9% of the County residents work locally. The work destinations of the County residents who work elsewhere include Winchester City (7.8%), Frederick County (7.7%), Fairfax County (6.9%), Warren County (6.0%), Loudoun County (3.9%), Rockingham County (3.5%), Prince William County (2.3%), Harrisonburg City (1.7%), Henrico County (1.3%) and all other locations (19.9%) (Figure 3-14). This finding corroborates the observation that Shenandoah County is part of a larger market economy. I-81 bridges the surrounding communities including Winchester City and Harrisonburg City, and connects to I-66 and further east to the Washington D.C. metro area. These two arterials connect major regional labor force and employment center, and it explains why the employment locations for the County's residents who work elsewhere spread along these two economic lifelines in the region. Therefore, it is not surprising that parcels closer to I-81 will be more attractive to potential companies and institutions that plan to locate to Shenandoah County.