ECONOMIC ANALYSIS

The study of the economy of Frederick County involves many factors. This chapter examines the change in employment sectors, the role of small business and top employers. Change in Frederick County's economy, undoubtedly, is evident in this chapter; however, the strong signs of stability with appropriate diversity are particularly noteworthy.

RECENT EMPLOYMENT COMPARISONS AND TRENDS

An analysis of the employment segments reveals minimal overall change in the Frederick County economy since 2011. While the absolute number of employment change is significant for some of the largest employers, 4 of the top employers in 2005 remain ten years later. Health Care and Social Assistance and Accommodation and Food Services employment are the two new arrivals to the top employer list. The growth of Winchester Medical Center and Frederick County's population remain likely reasons for its rise. Overall, retail trade displayed the largest growth of the top employers (+1,677). Manufacturing's overall net increase is noteworthy given its decrease in the Commonwealth overall.

Sector	2009	Sector	2019
Manufacturing	4,037	Manufacturing	5,999
Educational Services	2,930	Transportation and Warehousing	3,726
Retail Trade	2,801	Retail Trade	3,638
Retail Trade Construction	2,542	Educational Services	3,222
Accommodation and Food Services	1,875	Construction	2,898
Health Care and Social Assistance	1,609	Accommodation and Food Services	2,388

Looking into the next twenty years, population increase and continued economic forces will likely influence Frederick County's economy and its largest employment sectors. Established manufacturing clusters in food, plastics, metals, and printing combined with an emerging concertation of back-office users should likely their employment levels remain stable and/or increase due to 45-minute drive-time labor supply of more than 330,000 professionals and central East Coast location. Retail, construction, and healthcare growth fueled by population growth will gain additional employment and likely rise in its role within the economy. Joining the national and state trends, Frederick County will diversify further via professional and creative services and headquarters and back-office employment. Information and communication technology, engineering, cyber security, data centers and back-office operations likely lead this surge.

Although the major employment players remain mostly the same, their impact on the

community has clearly changed. Viewing the growth in net new establishments provides an alternative view on the role of the larger employment segments. The growth in the number of manufacturing establishments is a prime example. This fact along with overall positive employment growth in this sector demonstrates a very positive evolving manufacturing sector. The future of Frederick County's economy shines bright given manufacturing's noted large multiplier impact and above average wage:

Overall, Frederick County boasted nearly 2,000 establishments in 2019, an additional 336 since 2009 Service based businesses; education and health services (+189) and financial services (+52) produced the largest net gain in new establishments since 2009. These sectors collectively employ just about 70 percent of the employees of manufacturing sector. Advancing twenty years, health care and professional service entities will likely continue to add to their totals furthering Frederick County's diversification into a manufacturing/service-based economy.

Sector	2009	Sector	2019
Trade, transportation, and utilities	357	Trade, transportation, and utilities	387
Construction	276	Education and Health Services	386
Professional and business services	265	Professional and business services	283
Education and Health Services	197	Construction	226
Other Services	123	Other Services	175
Leisure and hospitality	122	Leisure and hospitality	151
Financial Services	98	Financial Services	128
Manufacturing	91	Manufacturing	104

SMALL BUSINESS

A discussion about any economy would be incomplete without reviewing the role of small businesses. Their importance to a community's long term economic success cannot be overstated. In the United States overall, they employ nearly half of all private sector employees. They generated 60 to 80 percent of net new job annually over the last decade.

The definition of small business varies widely. For this chapter's purpose, small business will

be identified as those employers with less than 19 employees.

The impact of small business can be viewed by total number of businesses and total number of employees within these businesses. In 2020, 85% of all employers in Frederick County had less than 19 employees. Conversely, small business in Frederick County employ 20% of all employees. Given the number of arrival/increase of large employers like Amazon, Navy Federal Credit Union, Trex and Valley Health Systems, the ability of small business to hold their role in Frederick County's economy is integral to Frederick County's economic success.

Employers by Size of Establishment

	Frederick County	Virginia			
0 to 4 employees	1,154	187,416			
5 to 9 employees	262	38,189			
10 to 19 employees	225	26,710			
20 to 49 employees	176	18,273			
50 to 99 employees	57	6,159			
100 to 249 employees	27	3,405			
250 to 499 employees	14	1,035			
500 to 999 employees	***	330			
1000 and over employees	***	239			
	1,920	281,756			

Employment by Size of Establishment

	Frederick County	Virginia
0 to 4 employees	1,550	242,220
5 to 9 employees	1,742	253,076
10 to 19 employees	3,032	361,580
20 to 49 employees	5,404	547,266
50 to 99 employees	3,980	424,971
100 to 249 employees	3,611	509,016
250 to 499 employees	4,693	355,425
500 to 999 employees	***	226,021
1000 and over employees	***	640,210
	31,122	3,559,785

Note: Asterisks (***) indicate non-disclosable data.

'Zero; no employment' typically represents new startup firms or sole proprietorships.

Source: Virginia Employment Commission, Economic Information & Analytics,

Quarterly Census of Employment and Wages (QCEW), 2nd Quarter (April, May, June) 2020

Small businesses will retain the vast majority of employment in Frederick County. As such, entrepreneurship/small business development should remain one of the pinnacles of

Frederick County's economic development. It is a beacon indicating when a community has an ideal business climate – when all physical and soft infrastructure is in place to allow new companies to grow and the community to self-sustain economic growth. The community's undeveloped entrepreneurial culture has often been highlighted in studies as a hurdle to continue economic growth.

CURRENT TOP EMPLOYERS

Over ten years ago, Frederick County's economy was chiefly led by major manufacturers and local government entities. Manufacturers established deep roots due to the area's immense access to the East Coast, Virginia's favorable cost of business, and Frederick County's productive workforce.

Frederick County School Board	Educational Services	1000 and over employees
County of Frederick	Executive, Legislative, and Other General	500 to 999
	Government Support	employees
U.S. Department of Homeland Defense	Administration of Economic Programs	500 to 999
		employees
Kraft Foods	Food Manufacturing	250 to 499
		employees
Lord Fairfax Community College	Educational Services	250 to 499
		employees
H.P. Hood, Inc.	Food Manufacturing	250 to 499
		employees
Navy Federal Credit Union	Credit Intermediation and Related Activities	250 to 499
		employees
The Home Depot	Building Material and Garden Equipment and	250 to 499
	Supplies Dealers	employees
Shockey Brothers, Inc.	Nonmetallic Mineral Product Manufacturing	250 to 499
		employees
Westminster Canterbury	Nursing and Residential Care Facilities	250 to 499
		employees

Today, the make-up of the largest employers is quite more diverse than 2020. While manufacturers still hold several slots in the top ten, many service base employers, like Navy Federal, Home Depot and Department of Homeland Defense, have provided a more diverse economy than 10 years ago. These new additions provide enhanced stability during instance of plant closures and national economic downturns.

Frederick County School Board	Educational Services	1000 and over employees
Navy Federal Credit Union	Management of Companies and Enterprises	1,000 and over employees
U.S. Department of Homeland Defense	Administration of Economic Programs	1,000 and over employees
Trex Company Inc & Subsid	Plastics and Rubber Products Manufacturing	500 to 999 employees
County of Frederick	Executive, Legislative, and Other General Government Support	500 to 999 employees
H.P. Hood, Inc.	Food Manufacturing	500 to 999 employees
The Home Depot	Building Material and Garden Equipment and Supplies Dealers	500 to 999 employees
Lord Fairfax Community College	Educational Services	250 to 499 employees
Fisher Scientific Company	Chemical Manufacturing	250 to 499 employees
Martin's Food Market	Food and Beverage Stores	250 to 499 employees

FUTURE BUSINESS GROWTH

In 20 years, the top employer listing may contain many of the same names, but likely they will be joined by some of the employers of tomorrow. Third partyanalyses have indicated a strong likelihood of success toward other business service operations, life science entities and defense/advance security-oriented businesses. The full list follows below.

CURRENT WORKFORCE DRAW

Frederick County's labor supply is drawn from a 45-mile radius and includes the counties of Shenandoah, Page, Clarke, Warren, Loudoun in Virginia, and the counties of Berkeley, Hampshire, Hardy, Jefferson, and Morgan in West Virginia and Washington County, Maryland.

The largest major occupation group in the Workforce Draw Area is Office and Administrative Support Occupations, employing 34,103 workers. The next-largest occupation groups in the region are Sales and Related Occupations (29,792 workers) and Transportation and Material Moving Occupations (29,761).

APPENDIX II - BACKGROUND ANALYSIS AND SUPPORTING STUDIES

High location quotients (LQs) indicate occupation groups in which a region has high concentrations of employment compared to the national average. The major groups with the largest LQs in the region are Transportation and Material Moving Occupations (LQ = 1.24), Sales and Related Occupations (1.08), and Educational Instruction and Library Occupations (1.07).

Occupation groups in the Workforce Draw Area with the highest average wages per worker are Management Occupations (\$110,100), Legal Occupations (\$101,000), and Computer and Mathematical Occupations (\$90,300).

The unemployment rate in the region varied among the major groups from 1.8% among Healthcare Practitioners and Technical Occupations to 11.4% among Personal Care and Service Occupations.

Advanced Manufacturing

Niche Industry Targets

Plastic products | Engineered Wood Products | Fabricated Metal Products | Bioscience | Supportive Logistics Consulting & Trucking Operations

Headquarters & Back Office

Niche Industry Targets

Corporate Headquarters | Back Office | Service Centers

Professional & Creative Services

Niche Industry Targets

Information & Communication Technology | Data Centers | Cybersecurity | Engineering

Agribusiness & Food Processing

Niche Industry Targets

Specialty Food & Beverages | Packaged Foods | Perishable Foods | Beverages & Breweries Over the next 10 years, the fastest growing occupation group in the Workforce Draw Area is expected to be Healthcare Support Occupations with a +2.0% year-over-year rate of growth. The strongest forecast by number of jobs over this period is expected for Healthcare Support Occupations (+2,646 jobs) and Food Preparation and Serving Related Occupations (+2,377).

Frederick County, VA's Workforce Draw Area 2020Q3¹									
	Current						Year History	10-Year	Forecast
Occupation	Empl	Mean Annual Wages ²	LQ	Unempl	Unempl Rate	Employmer Change	Ann %	Empl Growth	Ann % Growth
Office and Administrative Support	34,103	\$39,100	0.93	1,917	4.3%	-1,870	-1.1%	-703	-0.2%
Sales and Related	29,792	\$38,600	1.08	2,093	5.8%	-1,961	-1.3%	-23	0.0%
Transportation and Material Moving	29,761	\$37,100	1.24	2,587	6.9%	2,652	1.9%	2,293	0.7%
Food Preparation and Serving Related	22,479	\$25,900	1.01	3,176	10.9%	-1,286	-1.1%	2,377	1.0%
Management	17,557	\$110,100	0.93	473	2.3%	745	0.9%	1,019	0.6%
Healthcare Practitioners and Technical	17,447	\$81,700	1.05	355	1.8%	1,814	2.2%	1,799	1.0%
Educational Instruction and Library	17,282	\$58,300	1.07	912	4.8%	-132	-0.2%	1,254	0.7%
Production	17,280	\$40,100	1.03	1,257	5.9%	193	0.2%	-523	-0.3%
Business and Financial Operations	13,775	\$75,200	0.86	479	2.6%	1,140	1.7%	1,263	0.9%
Construction and Extraction	12,953	\$45,800	0.97	1,676	7.6%	277	0.4%	1,018	0.8%
Healthcare Support	11,818	\$30,300	0.93	565	3.8%	602	1.1%	2,646	2.0%
Installation, Maintenance, and Repair	11,476	\$49,600	1.05	715	4.0%	390	0.7%	738	0.6%
Building and Grounds Cleaning and Maintenance	9,560	\$30,200	1.01	778	6.1%	-376	-0.8%	977	1.0%
Personal Care and Service	8,071	\$30,300	1.07	1,266	11.4%	-599	-1.4%	1,033	1.2%
Computer and Mathematical	7,458	\$90,300	0.85	288	2.3%	658	1.9%	1,129	1.4%
Protective Service	6,425	\$48,200	1.03	237	2.8%	-93	-0.3%	390	0.6%

APPENDIX II - BACKGROUND ANALYSIS AND SUPPORTING STUDIES

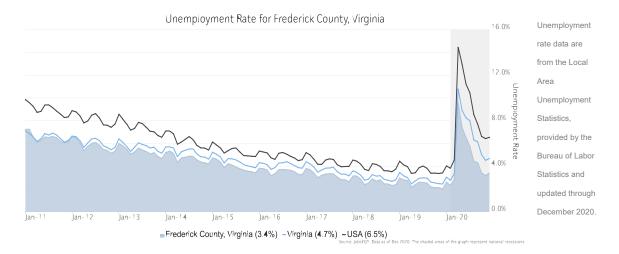
Community and Social Service	4,954	\$51,000	0.99	101	2.0%	145	0.6%	864	1.6%
Arts, Design, Entertainment, Sports, and Media	4,031	\$53,700	0.79	381	7.0%	-258	-1.2%	161	0.4%
Architecture and Engineering	3,880	\$85,800	0.78	142	2.6%	315	1.7%	165	0.4%
Life, Physical, and Social Science	2,040	\$73,600	0.80	73	2.7%	281	3.0%	187	0.9%
Legal	1,884	\$101,000	0.78	46	2.0%	84	0.9%	157	0.8%
Farming, Fishing, and Forestry	1,497	\$32,900	0.79	121	7.6%	31	0.4%	42	0.3%
Total - All Occupations	285,522	\$50,700	1.00	19,638	5.3%	2,753	0.2%	18,263	0.6%

Source: <u>JobsEQ®</u> - Data as of 2020Q3 unless noted otherwise - Note: Figures may not sum due to rounding.

- 1. Data based on a four-quarter moving average unless noted otherwise.
- 2. Wage data are as of 2019 and represent the average for all Covered Employment
- 3. Data represent found online ads active within the last thirty days in the selected region; data represents a sampling rather than the complete universe of postings. Ads lacking zip code information but designating a place (city, town, etc.) may be assigned to the zip code with greatest employment in that place for queries in this analytic. Due to alternative county-assignment algorithms, ad counts in this analytic may not match that shown in RTI (nor in the popup window ad list).

Occupation employment data are estimated via industry employment data and the estimated industry/occupation mix. Industry employment data are derived from the Quarterly Census of Employment and Wages, provided by the Bureau of Labor Statistics and currently updated through 2020Q2, imputed where necessary with preliminary estimates updated to 2020Q3. Wages by occupation are as of 2019 provided by the BLS and imputed where necessary. Forecast employment growth uses national projections from the Bureau of Labor Statistics adapted for regional growth patterns.

The unemployment rate for Frederick County, Virginia was 3.4% as of December 2020. The regional unemployment rate was lower than the national rate of 6.5%. One year earlier, in December 2019, the unemployment rate in Frederick County, Virginia was 2.0%.



As the table shows below, Frederick County possesses a diverse and ample labor force within its draw area.

Summary ¹								
	Frederick County, Virginia	Virginia	USA	Frederick County, Virginia	Virginia	USA		
	Percent Value							
Economic								
Labor Force Participation Rate and Size (civilian population 16 years and over)	64.6%	65.2%	63.2%	44,524	4,356,868	163,555,585		
Prime-Age Labor Force Participation Rate and Size (civilian population 25-54)	84.8%	83.6%	82.1%	28,338	2,788,406	104,634,905		
Armed Forces Labor Force	0.2%	1.8%	0.4%	107	120,385	1,073,907		
Veterans, Age 18-64	6.3%	8.1%	4.6%	3,254	420,632	9,143,042		
Veterans Labor Force Participation Rate and Size, Age 18-64	81.4%	83.0%	76.6%	2,649	348,936	7,003,778		
Median Household Income ²	_	_	_	\$78,002	\$74,222	\$62,843		
Per Capita Income	_	_	_	\$35,123	\$39,278	\$34,103		
Educational Attainment, Age 25-64								
No High School Diploma	9.3%	8.7%	10.9%	4,196	392,543	18,550,150		
High School Graduate	31.5%	22.9%	25.7%	14,212	1,029,408	43,627,868		
Some College, No Degree	20.4%	19.4%	20.7%	9,209	874,977	35,174,790		
Associate's Degree	10.0%	8.3%	9.1%	4,539	374,819	15,526,064		
Bachelor's Degree	16.8%	23.6%	21.2%	7,590	1,062,466	35,997,848		
Postgraduate Degree	12.0%	17.1%	12.3%	5,424	770,727	20,961,560		
Social	Social							
Poverty Level (of all people)	6.2%	10.6%	13.4%	5,229	865,691	42,510,843		
Households Receiving Food Stamps/SNAP	4.4%	8.2%	11.7%	1,394	259,639	14,171,567		
Enrolled in Grade 12 (% of total population)	1.4%	1.4%	1.4%	1,206	114,768	4,422,344		

Source: JobsEQ®

COMMUTING PATTERNS

The Winchester-Frederick County community is the regional economic epicenter for the Northern Shenandoah Valley region. One reason for this statement is found in the area's commuting patterns. More workers (3,302) commute into Winchester-Frederick County than commute out, positioning the community as an economic center of the Northern Shenandoah Valley. 60% of working individuals in Winchester-Frederick County live in Winchester-Frederick County (JobsEq 2020Q3).

The benefits of our community having a large "live where you work" population is enormous.

- Promotes linkage between employers and community.
- Reduces commuting costs, thus increasing a household's disposable income.
- Reduces employee turnover, training, and recruitment costs.
- Makes our community a more attractive place for businesses to locate and expand.



TAXABLE SALES

The retail sector is important, though, as retail activity reflects the general health of a local economy. Retail sales also produce sales tax dollars, which support municipal service provision. In Frederick County the overall value of taxable sales grew from \$860 million to nearly \$1.4 billion in unadjusted dollars, currently.

The growth of Frederick County's economy once again became apparent when examining the top taxable sales categories over the past 20 years. In 2010, general merchandise stores topped all taxable sales with a total of nearly \$209 million. Fast forward to 2020, general merchandise stores still topped all taxable sales, but the total exceeded \$340 million, a 64% increase.

Sector	2010	Sector	2020
General Merchandise Stores	\$209,662,481	General Merchandise Stores	\$344,240,938
Food and Beverage Stores	\$154,331,080	Food and Beverage	\$188,189,903
Food Services and Drinking Places	\$68,315,444	Merchant Wholesalers, Durable Goods	\$100,440,867
Merchant Wholesalers, Durable Goods	\$64,263,033	Building Material and Garden Equipment and Supplies Dealers	\$100,894,684
Gasoline Stations	\$47,565,980	Food Services and Drinking Places	\$92,926,581