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# PROJECTIONS

and **ECONOMIC BASE ANALYSIS**

## SHENANDOAH COUNTY

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SHENANDOAH COUNTY

PROJECTIONS & ECONOMIC BASE ANALYSIS

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This study is one of a series for all economic regions of Virginia. The purpose of the series is to provide a foundation of current and consistent projections useful to public and private organizations which require informed judgements about the future. A general statement of methodology and source materials may be obtained on request from the Division of Planning.

Robert J. Griffis, Economist, Division of Planning, was primarily responsible for this study. The cooperation of local citizens, private firms, and State, local, and federal government agencies is gratefully acknowledged.

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## INTRODUCTION

This is a study of the economy of Shenandoah County. The analysis concentrates on employment and its relationship to population and income. Employment is broken down into its major industry components which are then separately projected to 1970 and 1980. On the basis of these employment estimates, population is also projected.

Table 1 on the next page is the heart of the report. It provides a birds-eye view of the local economy, giving insight to the interrelationships between jobs, population, and income. The area's employment is separated into two categories -- basic and supporting. Basic employment is defined as employment which is in industries which sell most of their goods and services outside of the area. For example, it is assumed that most manufactured products are shipped beyond area boundaries and that such employment will depend on national or regional demand.

Our focus is on basic employment because it is expected to be the primary source of area growth. Supporting employment is defined as employment in industries which find their primary market in the local area. Local government, retail trade, utilities, and banking services generally are supporting except when the area is a regional trading center. In such cases, a portion of the employment in these industries is assigned to the basic category.

	Average Annual Rate of Change			
	1950-60	1960-66	1966-70	1970-80
Population .....	0.3	1.1	1.3	1.2
Labor force, by place of work .	1.6	1.7	3.3	1.2
Unemployment .....	6.1	-13.9	3.1	1.2
Employment, by place of work	1.3	2.5	3.3	1.2
Basic employment .....	...	*	3.0	0.7
Agriculture .....	-4.8	-6.7	-4.0	-3.5
Prep schools <sup>b/</sup> .....	...	...	...	...
Travel trade .....	...	2.9	3.0	3.0
Mining-Quarrying .....	...	...	1.8	0.9
Manufacturing .....	9.1	3.8	5.8	1.6
Food and kindred product	8.0	8.3	1.0	1.0
Textiles .....	-7.1	24.3	1.0	0.5
Apparel .....	19.0	2.2	3.7	2.0
Stone, clay and glass p	7.2	-3.8	1.6	1.5
Other manufacturing <sup>c/</sup> ...	4.0	-3.5	26.8	2.0
Supporting employment ...	...	4.7	3.5	1.5
Per cent of total employment b	...	...	...	...
Labor force as a per cent of p	...	...	...	...
Annual data:				
Per capita income .....	4.2	5.7	...	...
Total income (000).....	4.5	7.2	...	...
Retail sales (000) <sup>f/</sup> .....	5.5	2.2	...	...

Letters and symbols: n.a. = n

a/ The 1950 and 1960 population estimate prepared by the Bureau of Population and Economic

b/ Includes the faculty and st

c/ Major employers in this gro

d/ The reason for the rapid growth expected future employment of approximately 300 at full operation of the Howell Metal Company which will manufacture copper alloy tu

e/ Represents a provisional 19

f/ Because retail sales data were used.

Sources: Virginia Employment Bureau of Population and Economic Research, "Annual Income of Virginia Counties and Cities, 1965" (a Preliminary Report); Virginia State Chamber of Commerce, Industrial Estimates for Virginia Counties and Cities: 1960", Univ

TABLE 1.--ECONOMIC BASE ANALYSIS WITH PROJECTIONS - SHENANDOAH COUNTY

	Values			Per Cent of Virginia			Average Annual Rate of Change			
	March 1950	March 1960	March 1970	March 1950	March 1960	March 1970	1950-60	1960-66	1966-70	1970-80
	21,169 <sup>a/</sup>	21,825 <sup>a/</sup>	23,420 <sup>a/</sup>	0.6	0.6	0.5	0.3	1.1	1.3	1.2
Population .....	21,169 <sup>a/</sup>	21,825 <sup>a/</sup>	23,420 <sup>a/</sup>	0.6	0.6	0.5	0.3	1.1	1.3	1.2
Labor force, by place of work .....	6,609	7,773	8,647	0.5	0.6	0.5	1.6	1.7	3.3	1.2
Unemployment .....	287	522	212	0.3	0.8	0.3	6.1	-13.9	3.1	1.2
Employment, by place of work .....	6,322	7,251	8,435	0.4	0.5	0.5	1.3	2.5	3.3	1.2
Basic employment .....	n.a.	3,593	3,612	...	...	...	...	*	3.0	0.7
Agriculture .....	2,492	1,520	999	1.5	1.4	1.2	1.1	-4.8	-4.0	-3.5
Prep schools <sup>b/</sup> .....	n.a.	88	88	...	...	...	...	...	...	...
Travel trade .....	n.a.	127	151	...	0.6	0.6	...	2.9	3.0	3.0
Mining-Quarrying .....	39	10	51	...	...	...	...	...	1.8	0.9
Manufacturing .....	769	1,848	2,323	0.3	0.7	0.7	9.1	3.8	5.8	1.6
Food and kindred products .....	155	337	546	0.8	1.1	1.7	8.0	8.3	1.0	1.0
Textiles .....	166	79	291	0.4	0.2	0.7	-7.1	24.3	1.0	0.5
Apparel .....	172	979	1,123	1.1	4.2	3.4	19.0	2.2	3.7	2.0
Stone, clay and glass products .....	83	166	131	1.4	2.0	1.1	7.2	-3.8	1.6	1.5
Other manufacturing <sup>c/</sup> .....	193	287	232	...	...	...	4.0	-3.5	26.8	2.0
Supporting employment .....	n.a.	3,658	4,823	...	...	...	...	4.7	3.5	1.5
Per cent of total employment basic .....	n.a.	49.6	42.8	...	105.8	94.5	...	...	...	...
Labor force as a per cent of population ..	31.2	35.6	36.9	79.0	92.5	94.4	...	...	...	...
Annual data:										
Per capita income .....	\$ 959	\$ 1,451	\$ 1,922 <sup>e/</sup>	79.1	78.2	79.7	...	4.2	5.7	...
Total income (000) .....	\$20,295	\$31,664	\$44,901 <sup>e/</sup>	0.5	0.4	0.4	...	4.5	7.2	...
Retail sales (000) <sup>f/</sup> .....	\$12,281	\$21,014	\$23,511	0.6	0.6	0.5	...	5.5	2.2	...

Letters and symbols: n.a. = not available; \* = less than 0.1% but greater than -0.1%.

a/ The 1950 and 1960 population figures are as of April 1 from the U. S. Census of Population. The 1966 population figure is a July 1 estimate prepared by the Bureau of Population and Economic Research of the University of Virginia.  
b/ Includes the faculty and staff of Massanutten Military Academy at Woodstock and Shenandoah Valley Academy at New Market.  
c/ Major employers in this group are printing, machinery, lumber, and furniture.  
d/ The reason for the rapid growth projected for this sector from 1966 to 1970 is the location of two new plants in 1967 which have expected future employment of approximately 300 at full operation. The new plants are Reveline Corporation, a boat manufacturer with expected employment of 200 and the Howell Metal Company which will manufacture copper alloy tubing and is expected to employ 100 persons.  
e/ Represents a provisional 1965 estimate by the Bureau of Population and Economic Research of the University of Virginia.  
f/ Because retail sales data were not available for 1950, 1960, and 1966, corresponding data from the 1948, 1958, and 1963 Censuses of Business were used.

Sources: Virginia Employment Commission; U. S. Bureau of the Census, Census of Business and Census of Population; University of Virginia, Bureau of Population and Economic Research, "Estimates of the Population of Virginia Counties and Cities: July 1, 1967" (October 1967), and "Personal Income of Virginia Counties and Cities, 1965" (a Preliminary Report and Provisional Estimates, August 1967); State of Virginia, Division of Industrial Development; Virginia State Chamber of Commerce, Industrial Directory of Manufacturing in Virginia 1967-68 (1967); John Littlepage Lancaster, "Personal Income Estimates for Virginia Counties and Cities: 1960", University of Virginia, Bureau of Population and Economic Research (1963).

PROJECTIONS AND ECONOMIC BASE ANALYSIS

General - The population of Shenandoah County grew by 0.3% a year during the 1950's, while from 1960 to 1966 it has grown by 1.1% annually. As indicated in Table 4, the greater growth rate experienced in the 1960's as compared to the 1950's is due to a reversal of migration patterns. As the table shows (Part A, page 14) there was a net out-migration of almost 1,400 persons from the county during the decade of the 1950's, while from 1960 to 1966 there has been a net in-migration of nearly 700 persons (Part B, page 15). As Table 2 indicates, much of the county's population growth from 1950 to 1960 occurred in and around the larger towns while some of the more rural areas of the county remained stable or lost population (1960 is the latest year for which town and magisterial district population figures are available).

The most important of the county's basic industries is manufacturing which accounted for approximately two-thirds of the basic jobs and more than one-fourth of total county employment in March 1966. Other basic employers are agriculture, travel trade, and the county's two prep schools (Massanutten Military Academy and Shenandoah Valley Academy). Supporting-type industries which are dependent on the basic industries accounted for approximately 57% of employment in March 1966.

An analysis of 1960 commuting patterns (which are the latest commuting figures available) shows that a little more than 20% of the resident workers commuted to jobs outside of the county. (See Table 5). Of the more than 1,600 out-commuters, about one-third worked in Warren County -- most of this number at the American Viscose Plant in Front Royal<sup>1/</sup>.

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<sup>1/</sup> In 1960 there were 512 chemical workers listed as residing in Shenandoah County while the chemical industry provided only 35 jobs within the county. Thus it was assumed that most of the county's chemical workers were employed at the American Viscose Plant in Front Royal which is the closest major chemical firm.

in industries not previously represented (i.e., primary metals and transportation equipment). The projected manufacturing growth will serve to lower the proportion of female employment in the manufacturing sector since the greater portion of the new jobs anticipated will be in industries which employ mainly males.

Based on announced new plant locations and expansions as of December 1967, recent trends in local industries, and projected State and national trends in locally represented industries, manufacturing employment is projected to grow by 5.8% annually from 1966 to 1970 and 1.6% a year from 1970 to 1980. This projection assumes relatively modest growth in existing industries and does not allow for any large new plant locations in the existing industries or in other industries not represented.

Agriculture - Approximately 1,000 persons were employed in agricultural jobs in Shenandoah County in March 1966. This number rises seasonally by 300-400 in the fall harvest months each year. The major sources of farm income in Shenandoah County are poultry and poultry products (chiefly turkeys, eggs, and broilers) and livestock and livestock products (mainly cattle, calves, and hogs). Other important income producers are dairy products (whole milk) and fruits and nuts (apples, peaches, and cherries). Shenandoah County is among the leading agricultural counties in Virginia and in 1964 ranked 10th in overall farm products sales, 4th in sales of fruits and apples, 2nd in poultry and in turkeys, and 7th in livestock, cattle, and eggs. As Table 6 indicates, the county's commercial farms compared about equally with those in the State in 1964, although Shenandoah did have a slightly higher proportion of part-time farms. Farm employment declined by 4.8% annually from 1950 to 1960 and by 6.7% a year from 1960 to 1966. A further decline, at about the same rate as anticipated for the State is projected -- 4% annually from 1966 to 1970 and 3.5% a year from 1970 to 1980.

Travel Trade - An estimated 150 persons were employed in the county's travel trade sector in 1966. This estimate is based on the county's above average retail sales (in comparison with the State) and assumptions regarding employment in hotels and motels, the county's caves and caverns, restaurants, and gasoline service stations<sup>1/</sup>. The county experiences some "corridor" type travel business resulting from the major highways which cut through it (Route 11 and Interstate 81). Travelers are also attracted to the county to view its many scenic mountain drives and such attractions as its limestone caverns (two of the most famous are Battlefield Crystal Caverns near Strasburg and Shenandoah Caverns near New Market). Other attractions are the camping facilities and hiking trails found in the George Washington National Forest, and the good hunting and fishing found there and in other parts of the county. Another factor bringing travelers to the county is visitations to the two prep schools. A growing source of travel trade employment and tourist income to the county is Bryce's Mountain Resort at Basye which has drawn many winter visitors to its skiing facilities over the past few years. Travel trade employment grew by 2.9% annually from 1960 (the earliest year for which figures are available) to 1966. Employment in travel trade is projected to continue to grow by 3% annually from 1966 to 1980, although it could receive a boost from the opening of Interstate 66 which will extend from Washington, D. C. to a connection with Interstate 81 just north of Strasburg, in the mid 1970's.

Prep Schools - The faculty and staff of Massanutten Military Academy and Shenandoah Valley Academy totaled 88 persons in 1966, the same number as in 1960. Employment at the schools is assumed to remain at its present level through 1980.

Mining and Quarrying - Roughly 50 persons were employed in this sector in 1966. The employment is about evenly divided between two firms which quarry and produce mainly crushed limestone and various other limestone products. Employment

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<sup>1/</sup> All of hotel and motel employment, all of caves and caverns employment, 50% of gasoline service station employment, and 25% of restaurant employment have been included. These estimates were based on a comparison of local employment, sales receipts, and population with similar measures for the State.

in mining-quarrying is expected to show only a modest growth in future years, with an increase to 55 workers by 1970 and 60 workers by 1980.

Supporting Employment - This category consists of contract construction, wholesale and retail trade<sup>1/</sup>, finance, insurance and real estate, local government, and services<sup>1/</sup> -- all of which are considered locally oriented industries. Approximately 4,800 persons were employed in these supporting-type industries in March 1966. The county's supporting industry sector makes up a relatively high proportion of total employment compared to other more self-contained areas of the State -- as indicated in Table 1, supporting employment comprises almost 60% of total county employment. This may be explained by the large number of county residents who commute to jobs outside of the county -- as mentioned previously more than 20% of the resident workers were employed outside of the county in 1960. These out-commuters require and stimulate the supporting-service sectors locally while not being included in local employment totals which are by place of work. A reflection of this influence has been the rapid growth in the supporting sector in the 1960's while basic employment has remained almost stable. The result has been that the supporting sector has become an increasingly larger proportion of total employment.

Based on an expected increase in basic jobs locally and assuming the continued availability of jobs to the out-commuters, supporting employment is projected to grow by 3.5% annually from 1966 to 1970 and 1.5% annually from 1970 to 1980.

Population - With local basic employment opportunities expected to increase, especially male jobs which will grow more than in the past, and assuming the

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<sup>1/</sup> The basic portion of these industries has been deducted from the supporting employment total.

continued availability of relatively high paying jobs to the county's out-commuters<sup>1/</sup>, population is expected to grow by 1.3% annually from 1966 to 1970 (slightly faster than the 1960 to 1966 experience) and 1.2% a year from 1970 to 1980. The county's recent population growth has been somewhat independent of local employment developments since the county has not been able to provide jobs in sufficient number and at wage levels adequate to employ all its male workers. As a consequence, there has been a relatively large number of out-commuters. The fact that in the 1960's the county has been able to keep its natural increase (the difference between births and deaths) and attract a small amount of in-migration, has been partly due to the availability of relatively high paying jobs for males within commuting distance. The population projections above are based on the consideration that more male jobs will be available locally without a decrease in the jobs within commuting distance<sup>1/</sup>, and would require that the county continue to maintain its natural increase while at the same time attracting a small amount of annual in-migration.

Income - The county's per capita income was \$1,922 in 1965 according to provisional estimates by the Bureau of Population and Economic Research of the University of Virginia. This figure represented approximately 80% of the State average figure, slightly higher than the 78% it represented in 1960 and the 79% it represented in 1950. As these comparisons indicate, Shenandoah County's income has grown slightly faster than it has in the State over the past fifteen years.

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<sup>1/</sup> Although employment at the American Viscose Plant in Front Royal, which is the major source of jobs to Shenandoah's out-commuters, has been declining in recent years, it is expected to grow over the projection period, so it should be a continuing source of employment to Shenandoah residents. Also, manufacturing developments in the Winchester Area and in Martinsburg, West Virginia (where a General Motors parts warehouse will begin operation in the spring of 1968 with expected employment of 1,300 workers) should provide a continuing source of relatively higher paying manufacturing-type jobs to Shenandoah County residents who wish to out-commute.

Retail Sales - The county's retail sales were \$23,511,000 in 1963. Sales volume grew by 5.5% a year from 1948 to 1958 and 2.2% annually from 1958 to 1963. As shown in Table 8, Shenandoah's per capita retail sales figure was \$1,054 in 1963, which represented 93% of the State average figure. A comparison of per capita incomes and per capita sales in relation to the State figures indicates above average sales. Most of these sales would be accounted for by the retail portion of the county's travel trade industry, which was mentioned earlier.

TABLE 2.--POPULATION, SHENANDOAH COUNTY, 1950-1967

	(April) 1950	(April) 1960	(July) 1961	(July) 1962	(July) 1963	(July) 1964	(July) 1965	(July) 1966	(July) 1967
Shenandoah County	21,169	21,825	22,030	21,932	22,301	22,479	23,365	23,420	23,413
<u>Minor Civil Divisions</u>									
Ashby District	4,047	3,829							
Mount Jackson Town	732	722							
Da is District	4,927	5,314							
Strasburg Town	2,022	2,428							
Johnston District	2,373	2,429							
Toms Brook Town (Part) <sup>a/</sup>	137	137							
Woodstock Town (Part) <sup>b/</sup>	620	649							
Lee District	2,791	3,005							
New Market Town	701	783							
Madison District	3,163	3,206							
Edinburg Town	533	517							
Stonewall District	3,868	4,042							
Toms Brook Town (Part) <sup>a/</sup>	119	107							
Woodstock Town (Part) <sup>b/</sup>	1,196	1,434							

<sup>a/</sup> Parts of Toms Brook Town are in Johnston District and in Stonewall District.

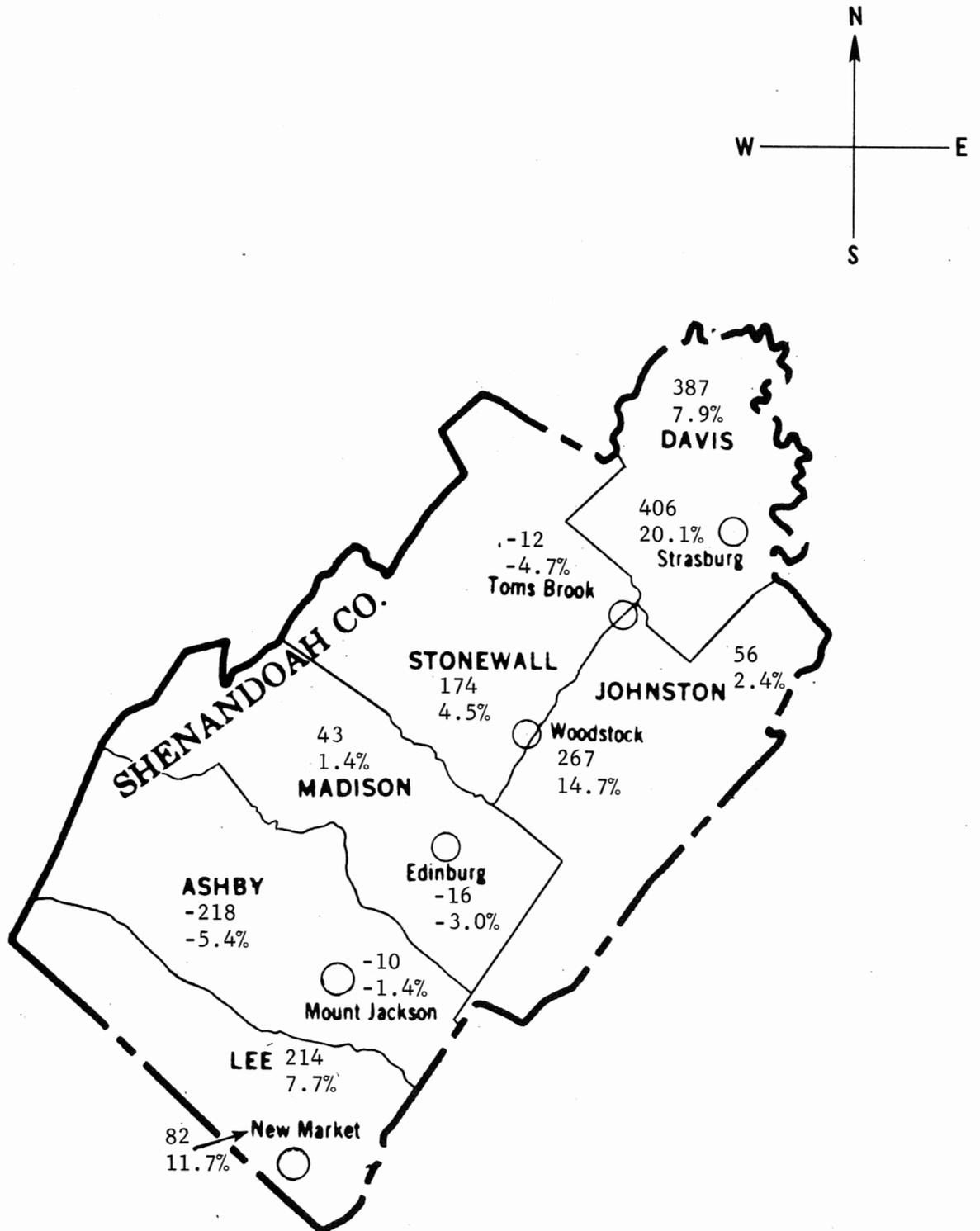
<sup>b/</sup> Parts of Woodstock Town are in Johnston District and in Stonewall District.

Note: The net numerical and percentage changes in population from 1950 to 1960 for each magisterial district and the major towns are shown on the County map reproduced on the following page.

Sources: U. S. Bureau of the Census, Census of Population, 1950 and 1960; University of Virginia, Bureau of Population and Economic Research, "Estimates of the Population of the Counties and Cities of Virginia as of July 1, . . .", 1961 through 1967.

Map 1

POPULATION CHANGE, 1950-60, SHENANDOAH COUNTY



Note: The figures on the map above represent the net numerical and percentage changes in population for the magisterial districts and major towns from 1950 to 1960.

TABLE 3.--COUNTY, TOWN, AND MAGISTERIAL DISTRICT POPULATION DENSITIES  
(Persons Per Square Mile) 1960

	<u>Population (1960 Census)</u>	<u>Land Area In Square Miles</u>	<u>Density</u>
Shenandoah County	21,825	507.0	43.0
<u>Magisterial Districts</u>			
Ashby District	3,829	96.0	39.9
Davis District	5,314	67.2	79.1
Strasburg	2,428	0.6	4,046.7
Remainder of District	2,886	66.6	43.3
Johnston District	2,429	90.6	26.8
Woodstock (Part)	649	0.4	1,622.5
Remainder of District	1,780	90.2	19.7
Lee District	3,005	69.2	43.4
Madison District	3,206	88.2	36.3
Stonewall District	4,042	95.8	42.2
Woodstock (Part)	1,434	1.7	843.5
Remainder of District	2,608	94.1	27.7

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Source: U. S. Bureau of the Census, Areas of Virginia: 1960, Area Measurement Reports, GE-20, No. 48, January, 1967.

TABLE 4

POPULATION CHANGE FACTORS, SHENANDOAH COUNTY AND THE STATE

Part A: 1950-1960

	<u>Virginia</u>	<u>Shenandoah County</u>
Population		
April 1, 1960	3,954,429	21,825
April 1, 1950	3,318,680	21,169
Net change	635,749	656
Rate	19.2%	3.1%
Components of change		
Births	945,502	4,480
Deaths	311,955	2,450
Natural increase <sup>a/</sup>	633,547	2,030
Rate	19.1%	9.6%
Net migration	2,202	-1,374
Rate	0.1%	- 6.5%
Net civilian migration	n.a.	-1,238
Rate	n.a.	- 5.8%

n.a. = not available.

a/ Births minus deaths.

Source: U. S. Bureau of the Census, Components of Population Change, 1950 to 1960, for Counties, Standard Metropolitan Statistical Areas, State Economic Areas, and Economic Subregions (Series P-23, No. 7, November 1962).

TABLE 4

POPULATION CHANGE FACTORS, SHENANDOAH COUNTY AND THE STATE

Part B: 1960-1966

	<u>Virginia</u>	<u>Shenandoah County</u>
Population		
July 1, 1966	4,535,961	23,420
April 1, 1960	3,954,429	21,825
Net change	581,352	1,595
Rate	14.7%	7.3%
Components of change		
Births	592,652	2,553
Deaths	224,080	1,620
Natural increase <sup>a/</sup>	368,572	933
Rate	9.3%	4.3%
Estimated net-migration (including military)	212,960	662
Rate	5.4%	3.0%

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a/ Births minus deaths.

Source: U. S. Bureau of the Census, Census of Population 1960; University of Virginia, Bureau of Population and Economic Research, "Estimates of the Population of the Counties and Cities of Virginia as of July 1, 1966;" Virginia State Department of Health, Statistical Annual Report of the Virginia Department of Health, 1960 through 1965; the 1960 figures for births and deaths were obtained by subtracting the cumulative totals through March as appearing in the Vital Statistics Monthly Report for March 1960, from the annual figure which appeared in the Statistical Annual Report ... for 1960; the 1966 birth and death figures were taken from the Vital Statistics Monthly Report for June 1966, prepared by the Virginia State Department of Health.

TABLE 5

PLACES OF WORK FOR SHENANDOAH COUNTY RESIDENTS, 1960

<u>Item</u>	<u>Shenandoah County</u>	
	<u>Number</u>	<u>% of Total</u>
Total resident workers reporting a place of work <sup>a/</sup>	7,765	100.0
Places of work reported:		
Shenandoah County	6,153	79.2
Out-commuters	1,612	20.8
Warren County	531	6.8
Harrisonburg-Rockingham Area	340	4.4
Winchester-Frederick Area	311	4.0
Other Virginia Counties and Cities <sup>b/</sup>	53	0.7
West Virginia Counties and Cities <sup>c/</sup>	4	0.1
Elsewhere	373	4.8

IN-COMMUTERS TO SHENANDOAH COUNTY

<u>Residence</u>	<u>Number</u>
Winchester City	8
Warren County	87
Frederick County	53
Rockingham County	165
Harrisonburg City	25
Page County	26
Hardy County, West Virginia	<u>4</u>
Total	368

Total out-commuters = 1,612  
 Total in-commuters = 368  
 Net out-commuters = 1,244

<sup>a/</sup> Resident workers not reporting a place of work totaled 227.

<sup>b/</sup> Includes Page County, Clarke County, Rappahannock County, Fauquier County and Madison County.

<sup>c/</sup> Includes Hardy County, West Virginia.

Source: U. S. Bureau of the Census, 1960 Census of Population (unpublished tabulations based on a 25% sample).

TABLE 6

FARMS BY ECONOMIC CLASS (VALUE OF FARM PRODUCTS SOLD)  
FOR SHENANDOAH COUNTY AND THE STATE, 1964

<u>Type and Class of Farm</u>	<u>Shenandoah County</u>		<u>State of Virginia</u>	
	<u>Number</u>	<u>Per Cent of All Farms</u>	<u>Number</u>	<u>Per Cent of All Farms</u>
All farms	1,131	100.0	80,354	100.0
Commercial farms	587	51.9	46,218	57.5
Class I	35	3.1	1,784	2.2
Class II	39	3.4	2,976	3.7
Class III	75	6.6	5,536	6.9
Class IV	113	10.0	9,882	12.3
Class V	175	15.5	12,462	15.5
Class VI	150	13.3	13,578	16.9
Other farms	544	48.1	34,136	42.5
Part-time <sup>a/</sup>	328	29.0	20,089	25.0
Part-retirement <sup>b/</sup>	213	18.8	13,988	17.4
Abnormal <sup>c/</sup>	3	0.3	59	0.1

Note: Class sizes are as follows: I - Sales of \$40,000 or more; II - Sales of \$20,000 to \$39,999; III - Sales of \$10,000 to \$19,999; IV - Sales of \$5,000 to \$9,999; V - Sales of \$2,500 to \$4,999; and VI - Sales of \$50 to \$2,499.

a/ Farms with sales of \$50 to \$2,499 in which the operator was under 65 years of age and worked off the farm more than 100 days or had nonfarm income greater than the value of farm products sold.

b/ Farms with sales of \$50 to \$2,499 in which the operator was 65 years of age or over.

c/ Institutional farms and Indian reservations.

Source: U. S. Bureau of the Census, 1964 Census of Agriculture.

TABLE 7.--MAJOR MANUFACTURING FIRMS<sup>a/</sup> IN SHENANDOAH COUNTY, 1967

<u>Name of Firm</u>	<u>Location</u>	<u>Year Established</u>	<u>Product or Major Activity</u>	<u>Approximate Employment Spring 1967</u>
<u>Firms Established Prior to 1950</u>				
Valley Milk Products Corp.	Strasburg	Pre-1950	Dairy products	20, <sup>b/</sup>
Textron, Inc.	New Market	Pre-1950	Processed poultry	250-500 <sup>b/</sup>
Bowman Apple Products Co., Inc.	Mount Jackson	Pre-1950	Apple products	60-300*
National Fruit Product Co., Inc.	Strasburg	Pre-1950	Apple products	5-35*
Strasburg Textile Mills, Inc.	Strasburg	Pre-1950	Broadwoven fabrics	75
McKinney & McKinney, Inc.	Woodstock	Pre-1950	Wood products	1-20 <sup>b/</sup>
Shenandoah Publishing House, Inc.	Strasburg	Pre-1950	Newspaper	65
Dominion Limestone, Division of Chemstone Corp.	Strasburg	Pre-1950	Lime	85
FMC Corp., Florida Division	Woodstock	Pre-1950	Food products machinery	50
<u>Firms Established Between 1950 and 1959</u>				
Blue Bell, Inc.	Woodstock	1952	Work clothing	250-500 <sup>b/</sup>
Blue Ridge Poultry and Egg Co., Inc.	Edinburg	1953	Processed poultry and eggs	240
Edinburg Manufacturing Corp.	Edinburg	1954	Children's knitwear	200, <sup>b/</sup>
Strasburg Manufacturing Co., Inc.	Strasburg	1955	Women's knitted blouses	250-500 <sup>b/</sup>
New Market Manufacturing Co.	New Market	1957	Knitted sportswear	100-250 <sup>b/</sup>
<u>Firms Established From 1960 Through 1967</u>				
Aileen, Inc.	Woodstock	1960	Knitwear, cutting and shipping plant	100-250 <sup>b/</sup>
Frye Furniture Industries, Inc.	Strasburg	1962	Bedroom suites	35
Shenandoah County Manufacturing Co., Inc.	Edinburg	1962	Knitwear fabric	275
Stitching Unlimited, Inc.	Strasburg	1965	Apparel	100**
Woodstock Manufacturing Corp.	Woodstock	1966	Sportswear - dresses	60**
Howell Metal Co.	New Market	(Summer) 1967	Copper alloy tubing	100**
Reveline Corp.	Strasburg	(Summer) 1967	Boat building	200**

\* Seasonal.

\*\* Expected employment at full operation.

a/ Includes only firms which had 20 or more employees in the Spring of 1967. For new firms, only those expected to employ 20 or more at full operation have been included. For seasonal firms, only those reaching 20 or more employment at their annual peak have been included.

b/ Employment has been shown as a range to avoid violation of the Disclosure Law.

Sources: Virginia Employment Commission; Virginia Division of Industrial Development; Virginia State Chamber of Commerce, Industrial Directory of Manufacturing in Virginia 1967-68 (1967); contact with particular firms listed in some cases.

TABLE 8

RETAIL SALES COMPARISON, SHENANDOAH COUNTY AND THE STATE, 1963

	<u>Shenandoah County</u>	<u>State of Virginia</u>	<u>Shenandoah County as a Per Cent of Virginia</u>
Population (1963)	22,301	4,237,473	0.5
Retail sales volume (000)	\$23,511	\$4,790,120	0.5
Per capita retail sales	\$ 1,054	\$ 1,130	93.3

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Sources: U. S. Bureau of the Census, 1963 Census of Business, University of Virginia, Bureau of Population and Economic Research, "Estimates of the Population By Color For the Counties and Cities of Virginia as of July 1, 1963."