

ECONOMY

INTRODUCTION

The purpose of this section is to study the County's economy and identify important changes and trends which are occurring locally. The County economy was addressed in the 1973 Plan using data from the 1960s. Both the character of the local economy and the data sources for measuring it have changed since that time.

Because of high unemployment in the 1970s, the County was eligible for Federal designation as an Economic Redevelopment Area. An Overall Economic Development Program was established and designation received in 1977, but no project funding was received. The process encouraged proactive planning as a means of improving the local economy. The 1983 Virginia Department of Economic Development's Community Certification program took this concept further. To meet Virginia requirements, the Shenandoah County Economic Development Council was formed. The County achieved Virginia Community Certification in 1986, only the 15th locality to do so, and recertification has just been received.

The primary economic indicators are employment and income. Five specific analyses are included. First is a labor market analysis which shows in which ways residents are employed, as well as the labor drawing area for local industries. Second, the number and kind of local jobs available are considered in a work source analysis. Third, the economic base of the County is considered, identifying those jobs producing goods and services for sale outside the area. The fourth analysis concerns the County's agricultural economy and its relationship to the total local economy. A study of income is the fifth analysis.

The best available data has been used from a variety of State and Federal agencies. Due to statistical methods and source data, some variation will be evident, however, this has little effect on the larger economic picture.

LABOR ANALYSIS

Labor Force

Labor force refers to the number of persons living in the County who are 16 years of age or older and who are employed or seeking work. Of the two basic labor force components - armed forces and civilian - the military portion consisted of only a small number of persons in 1980. Accordingly, only the civilian labor force is considered in this study. Comparative census figures for 1970 and 1980, as well as the 1988 Virginia Employment Commission (VEC) estimate follow in Table 4-A.

TABLE 4-A
LABOR FORCE DATA

	<u>1970</u>	<u>1980</u>	<u>1990</u>
Total, 16 years and over	16,449	21,418	----
Civilian Labor Force	9,602	13,120	17,334
Employment	9,469	12,575	16,471
Unemployment	133	545	863
Unemployment Rate	1.3%	4.2%	5.0%
Not in labor force	6,847	8,289	----

Sources: Census of Population 1970 and 1980, General Social and Economic Characteristics
Labor Force Estimates, January-December 1990, Virginia Employment Commission

The County civilian labor force was 13,120 in 1980, which represented 61 percent of all citizens 16 years and over. In 1970, the labor force was 9,602, which represented 58 percent of all persons age 16 and over. The civilian labor force estimates for 1990 show an increase of 4,214 persons since 1980. This is a growth rate of 32 percent. The labor force increased both in total and in percentage of the population between 1970 and 1990.

The County fell below Virginia's participation rate of 64 percent in 1980, this may reflect an overall elderly population. Of those persons over 16 and not in the labor force, 3,498 were 65 or older and 1,426 were between the ages of 55 and 64. Those persons 55 and older account for 59 percent of all persons not in the labor force.

The female participation rate of 48 percent in 1980 was higher than the state average of 44 percent. This was also an increase from the 1970 participation rate of 41 percent in Shenandoah County. During this ten year period 1,769 females joined the workforce.

Labor Characteristics

Resident labor characteristics will be presented in the next section. The resident labor force is classified in two different ways by the Bureau of Census. The first is by the industry in which they are employed, such as agriculture, manufacturing, services, etc. The second is by occupation. Managers or clerical workers, for example, are employed in a number of industries.

The data used in this section is from the 1980 Census, later, more recent data from the Bureau of Economic Analysis (BEA) will also be used. The Census material was chosen for this section because it contained greater in-depth data than was available from the BEA. Also, these figures differ somewhat and it was felt that using the Census data would provide a historical perspective along with a needed foundation from which more recent figures can be looked at.

Industry of Employed Residents

Table 4-B shows the growth and change in employment by industry for 1970 and 1980.

TABLE 4-B
INDUSTRY OF EMPLOYED RESIDENTS

	1970		1980		% Change 1970-1980
	Total	Distr.	Total	Distr.	
Total Employment	9,469	100.0%	12,526	100.0%	+ 32.3
Agricultural, Forestry, & Fisheries	812	8.6	814	6.4	+ 0.2
Mining	38	0.4	0	0.0	-100.0
Manufacturing	3,696	39.0	4,440	35.4	+ 20.1
Construction	942	9.9	1,209	9.7	+ 28.3
Transportation, Communication, and other utilities	456	4.8	800	6.4	+ 75.4
Wholesale-Retail Trade	1,580	16.7	1,980	15.8	+ 25.3
Finance, Insurance, Real Estate	235	2.5	387	3.1	+ 64.7
Services	1,515	16.0	2,551	20.4	+ 68.4
Government	195	2.1	345	2.8	+ 76.9

Source: Census of Population 1980, General Social and Economic Characteristics
Census of Population 1970, Economic Characteristics

Between 1980 and 1970, total employment rose 32 percent, but the distribution by industry of employed residents remained essentially the same. Over one-third of those employed worked in the manufacturing sector of the economy. The service sector accounted for 20 percent of those employed, followed by the wholesale and retail industry with almost 16 percent. Of these three industries, only the service industry increased its share from 1970 to 1980. The Government, Transportation, Communication, & Utilities, and Finance, Insurance, & Real Estate sectors also made slight gains during the 70's. Every sector of the economy had a net increase in employment except for Mining which lost all of those employed in the field. Agriculture, Forestry, and Fisheries, while making a slight gain in total employment, decreased in the distribution of employed residents from 8.6 in 1970 to 6.4 percent in 1980.

Of the females working in Shenandoah County 70 percent were employed by either service or manufacturing industries. The manufacturing industry employed 2,035 (39.2%) females and the service industry employed 1,584 (30.5%) females. An additional 893 (17.2%) females were employed in the wholesale and retail sector. Only 2.7 percent (141) worked in agriculture in 1980. This is higher than the State's 0.9 percent for females working in agriculture.

Employment of the County's males was more diverse. The two largest employment sectors were manufacturing 2,405 (32.6%) and wholesale and retail trade with 1,386 (18.8%). These two industries account for 51.4 percent of Shenandoah County males. The construction trade represented 15.7 percent (1,156) of the working males. The service, transportation, communication, & utilities, and agriculture were 13.1%, 8.5%, and 8.4% respectively. These numbers differ from those for all of Virginia. Only 3.2 percent of the entire State's male workers were engaged in agriculture.

Occupation of Employed Residents

The two leading occupation groups for County residents in 1980 were "operatives and kindred" and "craftsmen, foremen and kindred" at 25.3 and 18.4 percent respectively as shown in Table 4-C on the next page. The "professional, technical and kindred" made the greatest increase in distributional share, increasing by 1.7% between 1970 and 1980. "Service workers" and "craftsmen, foremen and kindred" along with "laborers, except farm workers" increased their share by 1.6, 1.5, and 1.5 percent respectively.

All occupations had net increases, with the exception of "farm laborers and foremen" which had a net decrease of 12.9 percent.

TABLE 4-C
OCCUPATION OF EMPLOYED RESIDENTS

<u>Occupation</u>	1970		1980		<u>% Change 1970-1980</u>
	<u>Total</u>	<u>Distr.</u>	<u>Total</u>	<u>Distr.</u>	
Total employed, 16 years and over	9,469	100.0%	12,575	100.0%	+ 32.8
Professional, technical and kindred	671	7.1	1,103	8.8	+ 64.4
Managers and administrators, non-farm	663	7.0	925	7.4	+ 39.5
Sales workers	415	4.4	596	4.7	+ 43.6
Clerical and kindred	955	10.1	1,390	11.1	+ 44.2
Craftsmen, foremen and kindred workers	1,602	16.9	2,310	18.4	+ 44.2
Operatives and kindred	2,952	31.1	3,186	25.3	+ 7.9
Laborers, except farm	526	5.6	905	7.1	+ 72.1
Farmers and farm managers	332	3.5	350	2.8	+ 5.4
Farm laborers and foremen	396	4.2	345	2.7	- 12.9
Service workers	957	10.1	1,465	11.7	+ 53.0

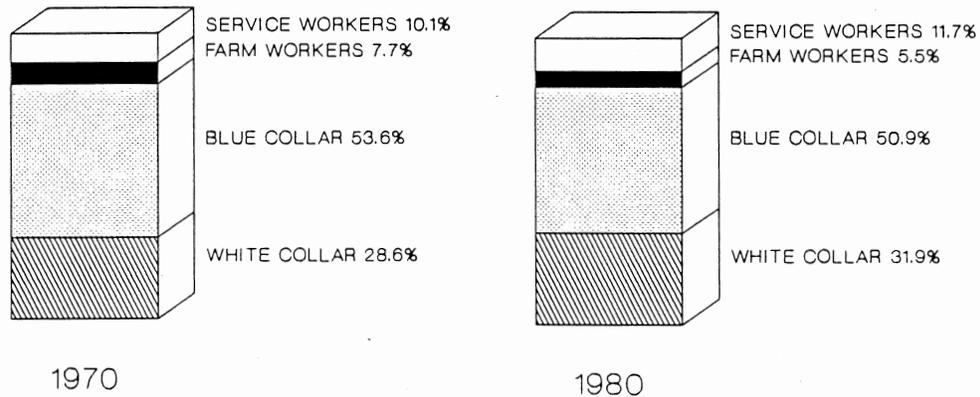
Source: Census of Population 1970 and 1980, General Social and Economic Characteristics

Among Shenandoah County's working males, the largest occupation group in 1980 included craftsmen, foremen, and kindred workers. There were 2,007 such male workers, accounting for 27.2 percent of the male workforce.

Of the County's female workers 27 percent were employed in operatives and kindred. This category included 1,382 female workers in 1980 and was the largest occupation group among females.

In Figure 4-A, next page, these occupations are broken into four basic groups. This figure shows how the occupational groups have shifted in the ten years between the censuses. While there has been net growth in all occupational groups, employment has drifted away from agriculture blue collar and moved toward the service and white collar fields.

FIGURE 4-A
GROUPED RESIDENT EMPLOYMENT



SOURCE: General Social and Economic Characteristics
U.S. Census Bureau, 1970 & 1980

White collar occupations include managerial and professional specialty, plus technical, sales, and administrative support. Blue collar occupations include precision production, craft, and repair, plus operations, fabrications, and laborers. Farming also includes forestry and fishing. Service covers all service jobs. White collar jobs increased by 3.3 percent over 1970, but the 1980 average of 31.9 percent is well below the state average of 54.8. Shenandoah County was 22.9 percentage points below the State average in 1980 but was only 20.3 percentage points below the State's 1970 average of 48.9 percent.

Neither the industry distribution or the occupational distribution changed significantly between 1970 and 1980. There was a shift from blue collar and agriculture sectors to white collar and service sectors of the economy. This could be a result of job movement by residents or by the recent immigrants to the County.

Unemployment

During the early 1980's Shenandoah County's unemployment rates were above the state's average. In 1980 Virginia's unemployment rate was 5.0 and Shenandoah County's was 6.3 percent. By 1987 the County's unemployment rate had decreased to 3.0 percent while the State posted 4.4 percent that same year. In 1987 and 1989 the County's average was below that for Virginia, but in 1990 the County's average was above Virginia. In Table 4-D, the years 1987 to 1991 are shown giving the monthly unemployment rate along with the yearly averages for the planning district and the state.

Shenandoah County's unemployment rate, like other areas, varies with the seasons of the year. The County's unemployment is highest in the winter months (January-March) and lowest in the late summer and early autumn. It is particularly low in August, September, and October, when agricultural crops are being harvested and processed.

TABLE 4-D
UNEMPLOYMENT RATES

	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>
January	5.2%	3.2%	3.6%	7.8%	7.1%
February	3.7	3.0	4.5	4.1	7.7
March	3.6	3.6	3.7	5.0	7.7
April	3.7	2.8	2.3	3.8	5.9
May	2.3	3.5	3.3	5.3	5.2
June	2.4	2.8	2.5	6.0	---
July	3.7	3.2	3.3	4.2	---
August	2.3	3.5	1.9	4.5	---
September	1.3	2.8	3.4	4.7	---
October	2.4	3.3	3.0	2.9	---
November	2.5	4.6	5.2	4.7	---
December	2.6	4.6	6.6	6.6	---
Average for Year:					
Shenandoah Co.	3.0	3.4	3.6	5.0	---
Planning District	4.3	4.3	4.5	6.0	---
Virginia	4.4	3.8	3.8	4.2	---

Sources: Labor Force Estimates, January 1984 - May 1991, Virginia Employment Commission

Regional Labor Pool

In 1990, there was an estimated population of 163,470 people living within a 30-mile radius of Woodstock, which includes parts of Clarke, Fauquier, Warren, Rappahannock, Page, Rockingham, Hardy, Hampshire, and Frederick counties, the City of Winchester, as well as a substantial portion of Shenandoah County.

It is estimated that a work force of 128,499 persons 16 years or older lived within the 30-mile radius in 1990, including 63,024 males and 65,475 females. Of those, it is projected that 48,150 males and 37,583 females participated in the labor force, using the 1989 national participation rate. The "Estimated Labor Pool", shown in Table 4-E on the next page, refers

to those persons between the ages of 16 and 55. People over 55 quite possibly may not be a likely source of labor for a new industry, since they would be close to retirement and may not be interested in a new employer.

For 1990, the average labor pool of unemployed seeking work for Shenandoah and surrounding counties was 7,135 or 5.4 percent of the 131,510 total civilian labor force. One important source of potential labor is females, age 25 to 54, who are not currently in the labor force, but who may be encouraged to join it should the right job opportunity come along. Within a 30-mile radius of Woodstock, there were approximately 36,044 females ages 25 to 54, of which 9,840 (27.3%) were not be part of the labor force.

TABLE 4-E
1990 REGIONAL LABOR POOL

Population of Labor Drawing Area (within a 30-mile radius):

Shenandoah County	=	31,636
Surrounding Areas	=	131,834
Total = 163,470		
	Males	= 80,194
	Females	= 83,276

Labor Force Participation:	Persons 16 and Over	In Labor Force	1989 National Participation Rate
Males	63,024	48,150	76.4%
Females	65,475	38,583	57.4%

Estimated Labor Pool, Ages 16 to 55: 1990 Estimated	Males	Females	Total
	44,505	46,188	90,693

Females, Age 25 to 54:	Total	=	36,044
	Not in Labor Force	=	9,840 (27.3%)

Source: Lord Fairfax Planning District Commission

WORK SOURCE ANALYSIS

Jobs in Shenandoah County

As reported by the Bureau of Economic Analysis (BEA), in 1989 Shenandoah County had 16,783 jobs, up from 12,843 jobs in 1980 for an increase of 30.7 percent since 1980. (See Table 4-F, next page.) Wage and salary employment grew at a faster rate (28.5%) during this nine year period than the total number of proprietors (18.3%). While the number of farm proprietors fell by 5.4 percent, non-farm proprietors posted a 31.8 percent increase, representing 556 new proprietors.

One-third of the wage and salary employment in Shenandoah County in 1989 was in the manufacturing sector with 5,584 jobs. The service sector provided 3,072 jobs, and wholesale and retail trade had 2,780. These three industries account for 68% of all the jobs in Shenandoah County in 1989. Of these three industries the service sector had a 57.0 percent increase over 1980. The manufacturing sector posted a 37.8 percent increase and the wholesale and retail industries increased 25.3 since 1980.

Several manufacturing employers in Shenandoah County employ over 500 persons; including Aileen, Inc., producing women and misses clothing; Judds, Inc., doing commercial printing, Automotive Industries making fabricated textile products; and Rocco Farm Foods, a poultry processor.

With 18 percent of the County's jobs, the service industry is both the second largest employer and the second fastest growing sector of the economy. Examples of employment in this sector include hospitals and physicians' practices, nursing homes, motels, beauty salons, auto repair shops, and amusement facilities. Most of the employment is provided in the medical field. Shenandoah County Memorial Hospital employs 700 to 800 persons and Skyline Terrace Nursing Home employs between 50 to 100 persons. Bryce Resort also supplies between 50 and 100 jobs.

Figures 4-B and 4-C give graphic comparison of Shenandoah County's employment and income changes by industry for the years 1980 and 1989 on pages 4-11 and 4-12.

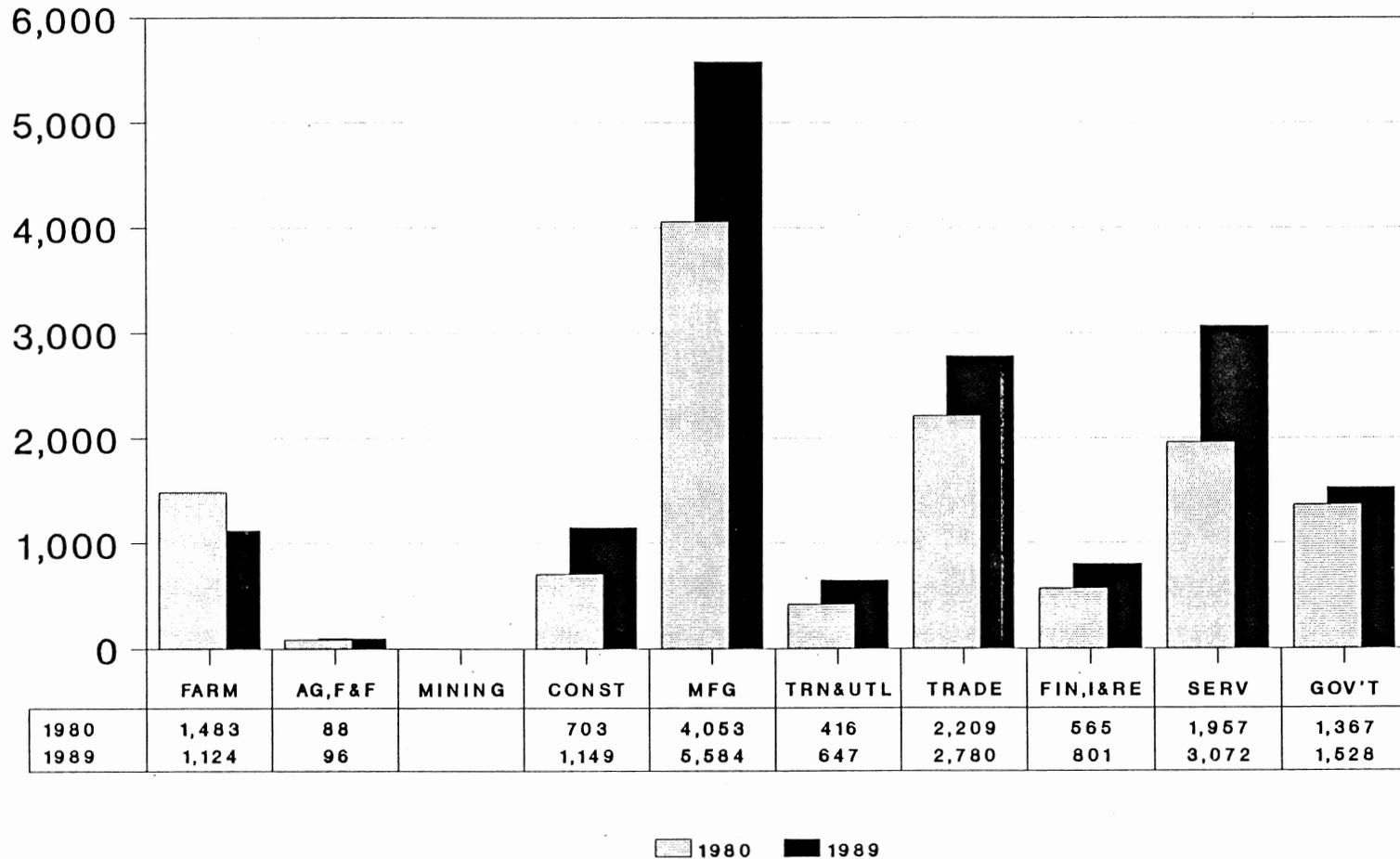
TABLE 4-F
SHENANDOAH COUNTY EMPLOYMENT AND INCOME BY INDUSTRY: 1980 & 1989

<u>Industry Classification</u>	<u>No. of Employees</u>		<u>Percent Change</u>	<u>Personal Earnings by Major Industry Classification (\$1,000)</u>		<u>Percent Change</u>
	<u>1980</u>	<u>1989</u>		<u>1980</u>	<u>1989</u>	
Total - Farm and Non-Farm	12,843	16,783	30.7%	\$ 125,805	274,392	126.1%
Farm - total	1,483	1,124	-24.2%	4,135	8,904	115.3%
Non-farm - total	11,360	15,659	37.8%	121,670	275,488	126.4%
Private - subtotal	9,993	14,131	41.4%	107,782	246,995	129.2%
Agriculture, Forestry and Fisheries	88	96	9.1%	605	1,233	103.8%
Mining	---	---	n/a	353	260	-26.3%
Contract Construction	703	1,149	63.4%	8,392	22,515	168.3%
Manufacturing	4,053	5,584	37.8%	51,446	120,245	133.7%
Transportation & Public Utilities	416	647	55.5%	6,701	16,450	145.5%
Wholesale and Retail Trade	2,209	2,780	25.8%	19,439	36,931	90.0%
Finance, Insurance and Real Estate	565	801	41.8%	4,198	8,015	90.9%
Services	1,957	3,072	57.0%	16,648	41,346	148.4%
Government - subtotal	1,367	1,528	11.8%	13,888	28,493	105.2%
Federal	163	146	-10.4%	2,400	3,649	52.0%
Military	116	177	52.6%	378	1,122	196.8%
State & Local	1,088	1,205	10.8%	11,110	23,722	113.5%

--- Date Suppressed

Source: Bureau of Economic Analysis, Personal Income by Major Source and Earnings by Major Industry for 1980, 1989. April 1991

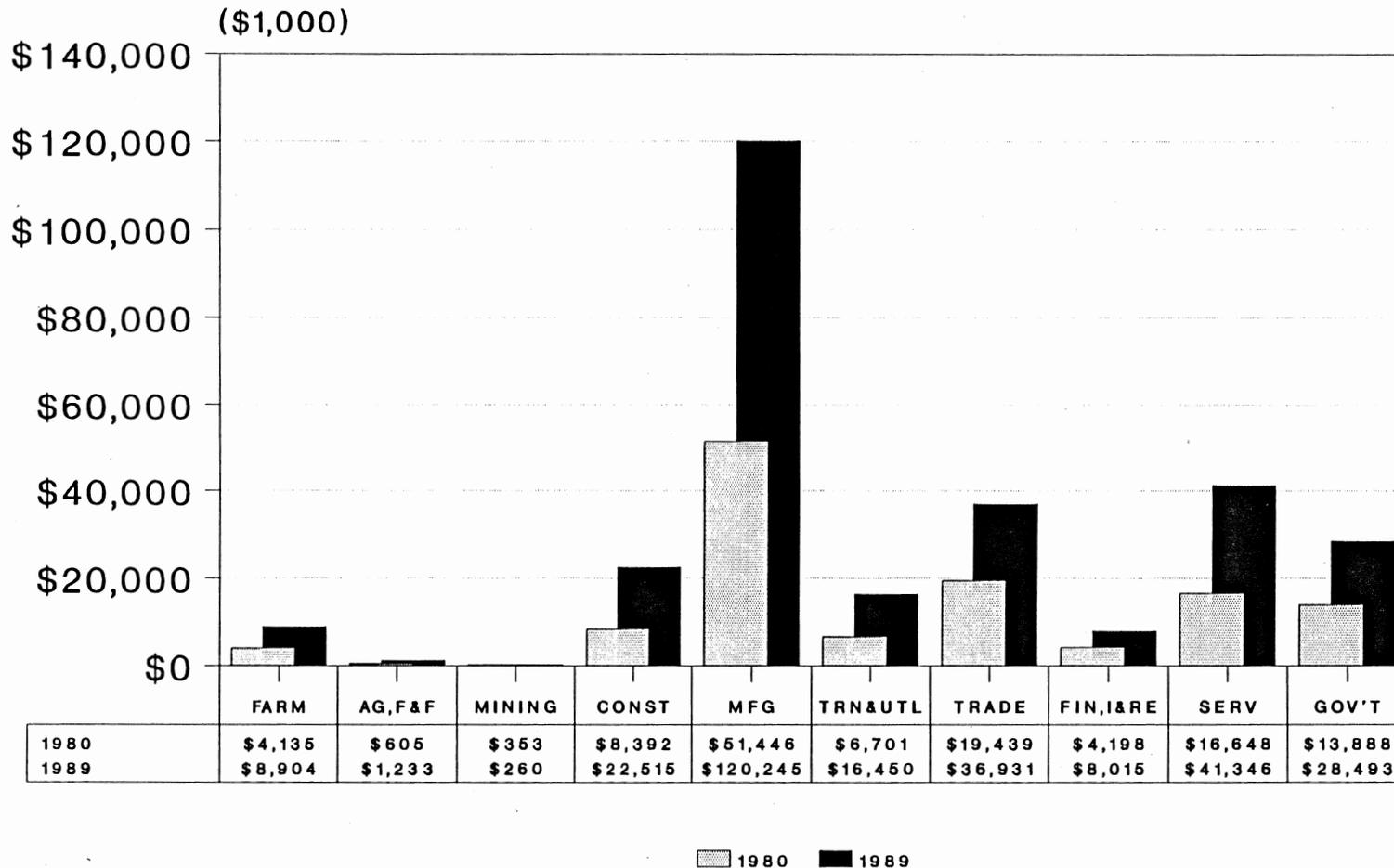
FIGURE 4-B
EMPLOYMENT BY INDUSTRY
SHENANDOAH COUNTY: 1980 & 1989



4-11

Source: Bureau of Economic Analysis,
 April, 1991

FIGURE 4-C
INCOME BY INDUSTRY
SHENANDOAH COUNTY: 1980 & 1989



4-12

Source: Bureau of Economic Analysis,
 April, 1991

Wholesale and Retail Trade provide 16.6 percent of all jobs in the County. Government accounts for 9.1 percent (1,528) jobs, most of which (1,205) are in state and local governments. Farm employment fell by 359 jobs (24.2 percent) from 1980 to 1989. Employment is shifting away from farm and related industries to the service and manufacturing sectors of the economy.

All industries posted increases in personal earnings except for Mining which decreased by 26.3 percent. Overall, incomes rose by 126.1 percent while employment rose by 30.7 percent between 1980 and 1989.

The Non-Farm sector rose by 126.4 percent and the Private sector posted a 129.2 percent increase. Farm income showed a 115.3 percent increase although employment decreased by 24.2 percent.

The industries with the largest increase in income are construction (168.3%), service (148.4%), transportation (145.5%), and manufacturing (133.7%). Government incomes overall rose by 105.2 percent. The small number of persons employed in the Military saw an increase of 196.8 percent, while State and Local government incomes rose by 113.5 percent.

Incomes by industry have followed the same trend that employment has over this nine year period. Incomes are rising faster in the construction, service and manufacturing industries than in the farm and agriculture-related industries. This will likely be a continuing trend in the future.

Commuting Patterns

Commuting data is not yet available from the 1990 Census, and is not expected until 1993 or 1994. As of 1980, approximately 75.2 percent of the 11,814 workers who reported their place of work indicated that they lived and worked within Shenandoah County.

There were 1,324 commuters coming into Shenandoah County in 1980. Almost half of these commuters were from Rockingham County (641). The Counties of Page (126) and Warren (196) accounted for 24% of all in-commuters. The City of Winchester (22) and Frederick County (118) represented just over 10% of the commuters to Shenandoah County. See Table 4-G on the next page for a summary of 1980 commuting data.

Only 24.8 percent (2,926) of Shenandoah County's employed residents worked outside the County in 1980. Thirty-four percent (1,003) of those out-commuters went to the Winchester-Frederick County area. Another 21 percent (635) of the out-commuters went to Harrisonburg-Rockingham County area.

Since there were 1,324 in-commuters and 2,926 out-commuters, Shenandoah County experienced a net loss of 1,602 workers in 1980. A major portion of them went to the City of Winchester (-528), and Warren County (-374). Net gains came from Rockingham County (+192) and from West Virginia (+41).

TABLE 4-G
1980 COMMUTING PATTERNS

	In-commuters From	Out-commuters To	Net
Clarke County	0	-10	-10
Frederick County	+118	-453	-335
Page County	+126	-90	+36
Warren County	+196	-570	-374
Winchester City	+22	-550	-528
Outside LFPD-within Va.	+771	-1,054	-283
Alexandria	0	-44	-44
Fairfax City	0	-33	-33
Fairfax County	+42	-181	-139
Falls Church	0	-36	-36
Harrisonburg	0	-186	-186
Prince William County	+11	-8	+3
Rockingham County	+641	-449	+192
Other in Virginia	+77	-117	-40
Washington D.C.	0	-88	-88
Maryland	+19	-39	-20
West Virginia	+72	-31	+41
Other States, Countries	<u>0</u>	<u>-41</u>	<u>-41</u>
TOTAL	+1,324	-2,926	-1,602

Source: U.S. Bureau of the Census, unpublished data, 1980

From the commuter data, it can be seen that many of Shenandoah County's workers are employed in the Winchester-Frederick County Area and the Harrisonburg-Rockingham Area. Warren County employed 19 percent of Shenandoah County's residents and 13 percent commuted to the Washington D.C. Area. These areas offer higher paying jobs, for skilled workers. These commuters might choose to work locally if they could find comparable jobs and wages. This commuting pattern is helped by the existence of interstate 81 running north and south and interstate 66 running directly into the Washington D.C. Metro area.

ECONOMIC BASE ANALYSIS

Basic and Supporting Employment

The County's employment is divided into basic and non-basic or supporting employment. Basic employment industries are selling most of their goods and services outside the County. Industries such as manufacturing, farming and the Federal government, along with the military, are considered basic industries. All of these industries are subject to national and regional demands. The supporting sector markets their goods and services locally. These industries are wholesale and retail trade, construction, finance, insurance, real estate, and most services along with local and routine state governments functions. Most supporting industries rely upon the basic industries and local economy rather than regional and national markets.

About 43.5 percent of Shenandoah County's employment in 1989 is in basic industries. The manufacturing sector accounts for almost 77 percent of the County's basic employment. Table 4-H on the next page, shows that supporting industries provided employment for 56.5 percent of the County in 1989. In 1980, the supporting industries supplied 53.6 percent. Since 1980, 2,600 jobs have been added to the supporting industries which is an increase of almost 38 percent. The basic industry on the other hand added 1,340 new jobs or a 22.5 percent increase in the nine years.

The ratio of basic employment to supporting employment increased from 1:1.15 in 1980 to 1:1.30 in 1989. This may reflect an underlying demand for more support services as a result of basic employment growth.

Preparatory schools such as Massanutten Military Academy and Shenandoah Valley Academy are basic industry for the County, since the students are primarily from outside the area.

A percentage of Shenandoah County's retail, motel, and tourist attractions are also considered basic. The local population alone would not support the level of such facilities. According to 1988 Travel in Virginia, the attractions of Bryce Mountain Ski Resort, Endless Caverns, Shenandoah Caverns, New Market Battlefield Park, George Washington National Forest and the Shenandoah River are responsible for \$46,894,000 in revenues. This emphasizes the importance tourism plays in Shenandoah County's economy. A total of 162 travel and tourism employees are considered as basic employment in 1989.

TABLE 4-H
BASIC VS. SUPPORTING EMPLOYMENT

	1980		1989	
	<u>Number</u>	<u>%</u>	<u>Number</u>	<u>%</u>
Employment in County	12,843	100.0	16,783	100.0
Basic	5,958	46.4	7,298	43.5
Manufacturing	4,053	31.6	5,584	33.3
Farming	1,571	12.2	1,220	7.3
Preparatory Schools	97	0.8	97	0.6
Travel/Tourism Trade	110	0.9	162	1.0
Nursing Homes	127	1.0	235	1.4
Supporting	6,885	53.6	9,485	56.5

Sources: Employment by Type and Broad Industrial Sources, Bureau of Economic Analysis
Covered Employment and Wages, Virginia Employment Commission
General Social and Economic Characteristics, U.S. Bureau of the Census 1980.

There are several nursing and rest homes in the County. These are Susan B. Miller Nursing Home, Skyline Terrace Nursing Home, Shenandoah Valley Village and Life Care Center of New Market. Since most of the residents of these homes are from outside the area, a share of their employment is considered basic.

Trends in the County's Economic Base

In the past, agriculture has provided much of the County's economic base, but in recent years, while the rest of the County's economic base has diversified and expanded, farming as a percentage of the economic base has declined. In 1980, 6.4 percent of the workforce worked in the agricultural sector of the economy. This was a decrease from 8.4 percent in 1970 and recent trends show that is continuing to decline. Despite this, Shenandoah County remains one of Virginia's top agricultural Counties.

The tourism industry plays a major role in the economy. In 1980, the county had revenues of just over ten million dollars. Revenues have increased to over 46 million dollars in 1988. Tourism should continue to increase in the future.

Manufacturing showed significant growth among the County's basic industries during the 1970's and 80's. It has continued to increase in both percentage share and in net employees. Manufacturing and agriculture are becoming more integrated. The majority of the agricultural sector produces poultry which is processed by food companies located in Shenandoah County.

AGRICULTURAL ECONOMY

Since Shenandoah County is a rural area as opposed to a urbanized area, an analysis of the agricultural economy is vital to understand how it relates to Shenandoah County's economy as a whole. This section will attempt to show the relationship between the agricultural sector and the rest of the County's economy.

Market Value of Crops

Shenandoah County is one of the top ten agricultural counties in Virginia. The backbone of Shenandoah County's agricultural economy is poultry and poultry products. This industry is integrated with local growers operating small farms. The revenues of poultry and poultry products (\$24,468,000) represent 54 percent of the total revenues from agricultural products in 1987. Together with cattle and calves, dairy products, and other livestock, poultry and related products accounted for over 92 percent of total agricultural revenues. (See Table 4-I on the following page.)

The total market value of all agricultural products sold equaled \$44,963,000 by 1987. This was an increase of \$2,483,000 (5.8 percent) from 1982 and a total increase of \$15,079,000 (50.5 percent) since 1978. While these figures indicate a substantial rise, most of it can be attributed to the inflation of food prices rather than an increase in farm production. In table 4-I on the next page net dollar values are given for comparison.

TABLE 4-I
MARKET VALUE OF AGRICULTURAL PRODUCTS SOLD

(in \$1,000)	<u>1978</u>	<u>1982</u>	<u>1987</u>
Total Market Value of All Products Sold	\$29,884	\$42,480	\$44,963
Livestock, Poultry, and Their Products	\$26,665	\$38,381	\$41,439
Poultry and Poultry Products	15,450	22,345	24,468
Dairy Products	4,278	5,678	5,663
Cattle Caves	5,505	7,981	9,326
Hogs & Pigs	915	1,521	888
Sheep, Lambs, and wool	402	661	861
Other Livestock and Poultry	115	195	233
Crops	\$3,219	\$4,099	\$3,524
Grains	784	1,098	455
Hay, Silage, and Field Seeds	483	437	660
Nursery/Greenhouse Products	---	28	71
Fruits, Nuts, and Berries	1,930	2,510	2,294
Other Crops	---	26	44

Note: "----" = "Not Available" or "Withheld to avoid disclosure of information about individual farms". Data included in "Other" category.

Source: Census of Agriculture, 1978, 1982, 1987

With 62,000 acres of pasture, raising livestock is also particularly well-suited to the County. "Cattle and Calf" production is its second leading agricultural industry. The revenues from the sale of "Cattle and Calves" in 1987 was \$9,326,000. "Dairy Products" with \$5,663,000 in revenues ranks third of Shenandoah County's agricultural products, and ninth of all Virginia counties.

The raising of hogs & pigs and sheep, lambs, and wool is increasing in Shenandoah County. The market values of hogs and pigs in 1987 was \$888,000, while the market value of sheep, lamb and wool was \$861,000.

While not responsible for a large percentage of the total agricultural sales, the growing of crops is also important in Shenandoah County. The largest section of "Crops" was "fruits, nuts and berries". In 1987 "Crops" were responsible for \$3.5 million with "fruit, nuts and berries" accounting for \$2.3 million.

Farm Income

In Table 4-J, shows the relationship of farm income to total personal income in Shenandoah County. The percentage over a ten year span have fluctuated between 2.83 to a negative .17. Generally the ratio have been between one and two percent. In 1979, the percentage was 2.83, but in during the 1980's the percentages have become more variable.

TABLE 4-J
FARM INCOME IN SHENANDOAH COUNTY

	<u>Farm Income</u>	<u>Total Personal Income</u>	<u>Farm/Total</u>
1979	\$6,104,000	\$215,320,000	2.83%
1980	4,135,000	236,503,000	1.75%
1981	3,156,000	257,200,000	1.23%
1982	3,450,000	273,969,000	1.26%
1983	- 515,000	302,797,000	-0.17%
1984	5,802,000	337,970,000	1.72%
1985	3,456,000	359,603,000	0.96%
1986	9,277,000	421,354,000	2.20%
1987	7,967,000	460,530,000	1.73%
1988	8,164,000	494,134,000	1.65%
1989	8,904,000	528,248,000	1.69%

Source: Personal Income by Major Sources, Bureau of Economic Analysis, April 1991

Even though the County's farm income percentages have fluctuated, they have usually been twice as high as the States percentage (Table 4-K). It can be seen that both the State and Shenandoah County's percentages have declined in recent years, but the relationship in Shenandoah County is diminishing at a slower pace.

TABLE 4-K
FARM INCOME VS. TOTAL PERSONAL INCOME
BY PLACE OF RESIDENCE

Farm Income/Total Personal Income

	<u>Shenandoah</u>	<u>Virginia</u>	<u>Shenandoah/Virginia</u>
1979	2.83%	0.95%	2.98
1980	1.75%	0.53%	3.30
1981	1.23%	0.87%	1.41
1982	1.26%	0.51%	2.47
1983	-0.17%	0.18%	N/A
1984	1.72%	0.66%	2.61
1985	0.96%	0.39%	2.46
1986	2.20%	0.46%	4.78
1987	1.73%	0.54%	3.20
1988	1.65%	0.60%	2.75
1989	1.69%	0.57%	2.97

Source: Personal Income by Major Sources, Bureau of Economic Analysis, April 1991

Farm Employment

In Shenandoah County farm employment is almost 4 times greater than the State as a whole. Farm as well as total employment include both laborers and proprietors. In 1989 the farm employment was 14.0 percent (Table 4-L, next page) of Shenandoah County's total employment. This is well above the State's 3.0 percent for the same year.

TABLE 4-L
FARM EMPLOYMENT VS. TOTAL EMPLOYMENT BY PLACE OF WORK

	Farm Employment/Total Employment		
	<u>Shenandoah</u>	<u>Virginia</u>	<u>Shenandoah/Virginia</u>
1984	18.49%	4.76%	3.88
1985	17.40%	4.36%	3.99
1986	14.85%	3.76%	3.95
1987	13.77%	3.38%	4.07
1988	14.27	3.26%	4.38
1989	14.02%	3.01%	4.66

Source: "Employment by type and Broad Industrial Sources", Bureau of Economic Analysis, April 1991

Farm employment in Shenandoah County has declined since the early 1980's (See Table 4-M). In 1989, there were 2,353 persons employed in the farming industry. Of these 870 were farm proprietors and 1,124 were laborers. Only a small percentage are covered by unemployment insurance, thus the industry total is relatively small. In the early 1980's about 20 percent of all employment in the County was in farming compared to 14.0 percent in 1989. The 1989 figure is slightly above the 1987 figure which was the lowest in the ten year span shown.

TABLE 4-M
FARM EMPLOYMENT IN SHENANDOAH COUNTY

	<u>Farm Proprietors</u>	<u>Farm Laborers</u>	<u>All Farm Employment</u>	<u>Total Employment</u>	<u>Farm/Total</u>
1979	1,037	1,423	2,460	13,081	18.81%
1980	1,016	1,483	2,490	12,843	19.46%
1981	1,063	1,515	2,578	12,900	19.98%
1982	1,118	1,571	2,089	12,815	16.30%
1983	1,147	1,593	2,740	13,094	20.93%
1984	1,093	1,524	2,617	14,151	18.49%
1985	1,052	1,466	2,518	14,469	17.40%
1986	961	1,297	2,258	15,204	14.85%
1987	908	1,209	2,223	16,147	13.77%
1988	889	1,212	2,348	16,456	14.27%
1989	870	1,124	2,353	16,783	14.02%

Source: Employment by Type and Broad Industrial Sources, Bureau of Economic Analysis, April 1991

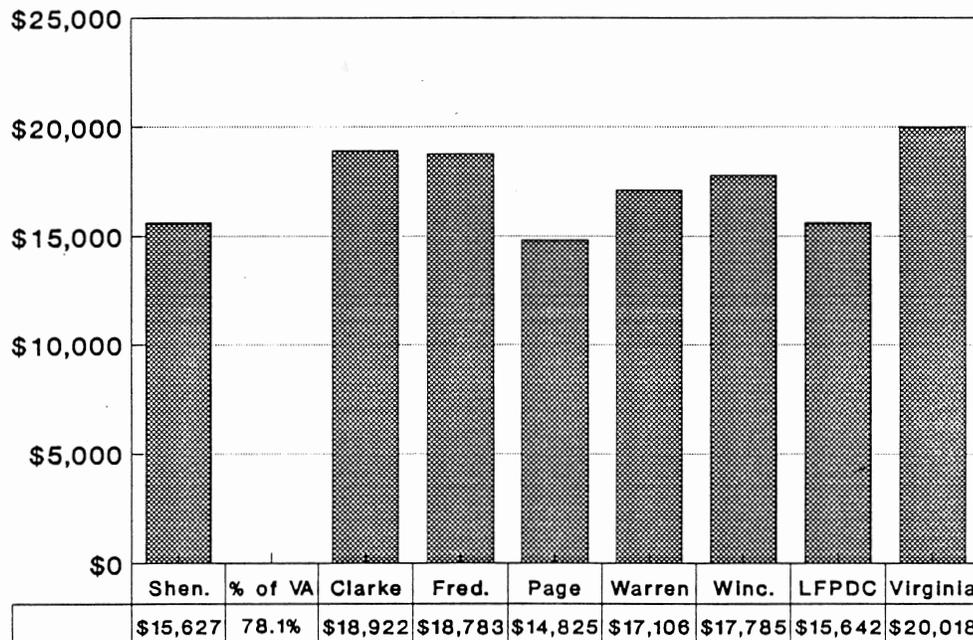
INCOME ANALYSIS

Income and Wages

Income information is not yet available from the 1990 Census. Data in this section is obtained from the 1980 Census, and from adjusted incomes from Virginia tax returns.

The 1980 Census calculated the median family income for Shenandoah County residents in 1979 to be \$15,627 (Figure 4-D). This was comparable to the median for the Lord Fairfax Planning District, which was \$15,642, while the State's median was higher at \$20,018.

FIGURE 4-D
MEDIAN FAMILY INCOME IN 1979



SOURCE: Census of Population & Housing 1980, Summary Tape STF3A

Table 4-N, on the next page, shows the median adjusted gross income of Shenandoah County residents as indicated on married couples' returns for 1980, 1985, and 1989.

For this nine year span, Shenandoah County's median adjusted gross income is lower than the LFPDC median, and below the State average. However, during this time period, the County has gained as a percentage of the State, rising from 75.3 percent in 1980 to 78.4 percent by 1989.

TABLE 4-N
 MEDIAN ADJUSTED GROSS INCOME ON MARRIED COUPLE RETURNS

	<u>1980</u>	<u>% of State</u>	<u>1985</u>	<u>% of State</u>	<u>1989</u>	<u>% of State</u>
Shenandoah County	\$16,375	75.3	\$22,141	74.8	\$28,719	78.4
Clarke County	\$19,632	90.3	\$27,045	91.3	\$36,117	98.6
Frederick County	\$18,815	86.6	\$26,046	88.0	\$33,971	92.7
Page County	\$15,344	70.5	\$20,592	69.5	\$26,089	71.2
Warren County	\$18,212	83.8	\$24,793	83.7	\$32,301	88.2
Winchester	\$19,559	90.0	\$25,088	84.7	\$32,151	87.8
Planning District	\$17,787	81.8	\$24,018	81.1	\$31,324	85.5
NOVA PDC	\$32,517	149.6	\$45,128	152.4	\$56,765	155.0
Virginia	\$21,735	100.0	\$29,610	100.0	\$36,630	100.0

Source: Distribution of Virginia Adjusted Gross Income by Income Class, 1980, 1985, 1989, Center for Public Service

In Table 4-O next page, 10.8 percent of Shenandoah County's married returns had adjusted gross incomes below \$10,000 while the State was 9.9 percent. In Shenandoah County, 13.5 percent of the married returns had incomes of \$50,000 or more. The State's percentage of families with incomes greater than 50,000 was 31.7 in 1989.

During this six year period, the percent of change has shifted from the low income brackets to higher income brackets in both the married returns and all returns. Overall, the increase in married returns was 48.4 percent and 40.4 percent for all returns.

As reported by the Bureau of Economic Analysis, per capita personal income in Shenandoah County in 1989 was \$17,568 (see Figure 4-E, page 4-25) which is 92.6 percent of the State's 1989 per capita income of \$18,979.

In 1985, the County had a per capita income of \$12,786 and the State had a per capita income of \$14,477. The County's per capita income increased 37.4 percent between 1985 and 1989, well above the State's increase of 31.1 percent.

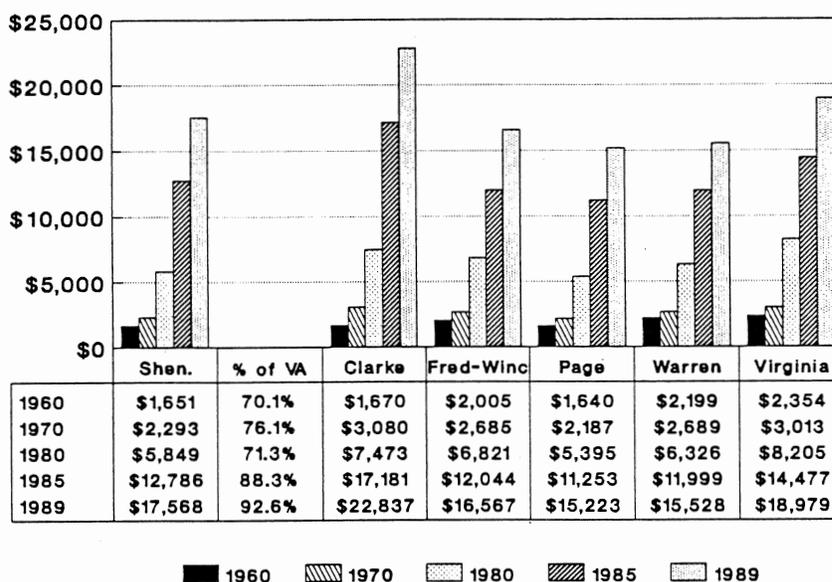
The 1960, 1970 and 1980 census per capita personal incomes are also provided on Figure 4-E showing the base from which there has been a rapid increase.

TABLE 4-O
ADJUSTED GROSS INCOME
SHENANDOAH COUNTY, VIRGINIA

		AGI (\$)		PERCENTAGE DISTRIBUTION OF RETURNS BY AGI CLASS (\$000)										
		Total (000)	Median Per Return	Less Than 5.0	5.0 To 9.9	10.0 To 14.9	15.0 To 19.9	20.0 To 24.9	25.0 To 29.9	30.0 To 39.9	40.0 To 49.9	50.0 To 74.9	75.0 Or More	
ALL RETURNS														
1983	27,800	11,287	183,156	13,165	17.2	21.9	17.3	13.2	10.8	8.0	7.2	2.5	1.4	0.5
1984	27,900	11,714	200,722	13,963	16.2	20.3	17.0	13.6	10.6	8.5	8.4	2.8	1.8	0.7
1985	28,100	12,123	220,676	14,316	16.2	18.6	17.6	12.2	10.5	8.5	9.6	3.5	2.4	0.9
1986	28,500	12,292	244,167	15,422	14.7	17.5	16.8	12.3	10.5	8.7	10.6	4.7	3.0	1.2
1987	29,100	12,938	282,218	16,783	13.9	15.5	16.3	12.3	10.2	8.7	11.8	5.7	3.9	1.6
1988	29,600	12,788	301,802	17,733	12.1	15.1	15.8	13.2	9.7	8.8	12.4	6.6	4.9	2.0
1989	N/A	12,613	311,326	18,479	12.0	14.2	15.0	13.1	9.6	8.6	13.0	7.2	5.6	2.2
% Change 83-89		11.7	70.0	40.4	-30.2	-35.2	-13.3	-0.8	-11.1	7.5	80.6	188.0	300.0	340.0
MARRIED RETURNS														
1983	27,800	6,263	134,396	19,354	7.0	13.4	15.2	16.4	16.0	12.7	11.7	4.2	2.5	0.9
1984	27,900	6,377	146,163	20,776	6.4	11.5	13.5	16.2	15.7	13.7	14.1	4.7	3.1	1.1
1985	28,100	6,501	160,323	22,141	5.6	10.5	13.6	13.9	15.1	13.4	16.3	6.2	4.1	1.4
1986	28,500	6,579	177,295	23,778	5.3	9.8	11.3	13.0	14.1	13.3	17.8	8.2	5.3	1.9
1987	29,100	6,832	206,141	25,986	4.2	7.6	11.0	11.4	13.1	13.4	19.7	10.1	6.8	2.7
1988	29,600	6,647	221,532	27,756	2.7	6.9	9.9	12.0	11.6	13.0	20.7	11.6	8.7	3.4
1989	N/A	6,645	228,742	28,719	4.1	6.7	8.9	10.6	11.2	12.0	21.0	12.7	9.9	3.6
% Change 83-89		6.1	70.2	48.4	-41.4	-50.0	-41.4	-35.4	-30.0	-5.5	79.5	202.4	296.0	300.0

Sources: Distribution of Virginia Adjusted Gross Income Class and Locality, 1983-89
John L. Knapp and Robert W. Cox, Center for Public Service, Charlottesville, Virginia. July, 1991

FIGURE 4-E
PER CAPITA PERSONAL INCOME



SOURCE: Census of Population 1960, 1970 & 1980, General Social & Economic Characteristics Personal Income by Major Source and Earnings by Major Industry, BEA, April 1991

The average weekly wage paid to workers by industries in Shenandoah County during the first quarter of 1990 was \$313 (Table 4-P), according to the Virginia Employment Commission. That represents a 71.0 percent increase over the first quarter of 1980. The industrial group paying the highest wages included transportation, communication, and utility firms, which paid a weekly average of \$430. Manufacturing and finance, insurance, and real estate were the next highest paying \$366 and \$313 per week respectively.

TABLE 4-P
AVERAGE WEEKLY WAGES PAID IN SHENANDOAH COUNTY
COVERED EMPLOYMENT FOR 1ST QUARTER 1970, 1980, 1985, 1990

	1970	1980	1985	1990
Agricultural, Forestry, Fisheries	\$---	\$145	\$167	\$227
Construction	\$70	\$152	\$187	\$310
Manufacturing	\$91	\$205	\$253	\$366
Transportation, Communication				
Utilities	\$139	\$240	\$329	\$430
Wholesale & Retail Trade	\$86	\$156	\$174	\$236
Finance, Insurance, Real Estate	\$85	\$177	\$218	\$313
Services	\$73	\$142	\$160	\$210
Average	\$90	\$183	\$219	\$313

Source: Covered Employment and Wages, First Quarter, 1970, 1980, 1985, 1990, Virginia Employment Commission

During the third quarter of 1990, the average weekly wage per worker in Shenandoah County was \$313. The Lord Fairfax Planning District had an average weekly wage of \$350 and the State average was \$428. Table 4-Q also compares wages paid in Shenandoah County to those paid in Arlington and Fairfax Counties, illustrating the reason why some workers commute to the Northern Virginia metropolitan area:

TABLE 4-Q
AVERAGE WEEKLY WAGES: 3RD QUARTER, 1990

Shenandoah County	\$313
Lord Fairfax PDC	\$350
Arlington County	\$606
Fairfax County	\$543
Virginia	\$428

Source: Employment and Wages, 3rd Quarter, 1990, Virginia Employment Commission

Components of Income

The income of Shenandoah's residents has been increasing rapidly in recent years. Between 1980 and 1989, total personal income in the County increased by 123.4 percent, and per capita income increased by 105 percent (See Table 4-R on the next page). This increase is slightly above that of average for the Planning District, and nearly 12 percent higher than the State's average increase.

The increase in Shenandoah County has been due primarily to an increase in net labor and proprietors' income by place of residence, which includes total earnings by place of work, less personal contributions for social security, and an adjustment for place of residence to account for commuting wage earners. This category grew by 121.7 percent between 1980 and 1989, accounting for 67 percent of the increase in total personal income.

Two factors significantly affect the local economy in terms of personal income. One is income from dividends, interest, and rent, and the other is transfer payments. Both categories grew substantially in the County; transfer payments decreased as percentage of the total personal income.

Transfer payments include retirement and disability benefits; unemployment insurance benefits; and medical, educational, and public assistance benefits. Retirement benefits are the biggest source of transfer payments.

In 1989, 13.5 percent of the total personal income of Shenandoah's residents was from transfer payments. This percentage has decreased from 16.1 percent in 1980, but has remained above the State's and the Planning District's percentage share.

TABLE 4-R
COMPONENTS OF PERSONAL INCOME

	1980		1989		% Increase 1980-1989
	<u>1,000</u>	<u>Distr.</u>	<u>1,000</u>	<u>Distr.</u>	
Shenandoah County					
Net Labor and Propr.					
Income	160,915	68.0%	356,798	67.5%	121.7
Dividends, Interest & Rent	37,410	15.8%	100,241	19.0%	168.0
Transfer Payments	38,178	16.1%	71,209	13.5%	86.5
Total Personal Income	236,503	100.0%	528,248	100.0%	123.4
Per Capita Income (\$1)	8,568	---	17,568	---	105.0
Planning District					
Net Labor and Propr.					
Income	772,784	69.6%	1,741,470	68.4%	125.4
Dividends, Interest & Rent	165,067	14.9%	460,525	18.1%	179.0
Transfer Payments	172,546	15.5%	342,457	13.5%	98.5
Total Personal Income	1,110,397	100.0%	2,544,452	100.0%	129.1
Per Capita Income (\$1)	8,361	---	16,884	---	101.9
Virginia					
Net Labor and Propr.					
Income	38,288,138	72.6%	82,050,173	71.1%	114.3
Dividends, Interest & Rent	7,083,659	13.4%	19,155,297	15.8%	170.4
Transfer Payments	7,381,938	14.0%	14,556,743	13.1%	197.2
Total Personal Income	52,753,735	100.0%	115,762,213	100.0%	119.4
Per Capita Income (\$1)	9,827	---	18,979	---	93.1

Source: Personal Income by Major Sources, Bureau of Economic Analysis, April 1989

SUMMARY

Approximately 44 percent of the jobs in the County are in the industries which provide the County's economic base. Those "basic" industries are industries which sell the majority of their goods and services outside the County, thus bringing to the County money from other areas. Much of the County's basic employment is in manufacturing.

The manufacturing sector of the economy has increased in employment but its distribution to total employment has remained the same. The real change is in the service sector. Significant increases in employment and in total distribution have occurred in recent years. One area this can be seen in is the tourism trade that has developed in Shenandoah County.

Changes in the occupational distribution of the County's residents indicate a shift from blue collar to white collar. This trend may be due somewhat to recent in-migrants to the County, particularly those who have moved into the County from the Washington, D.C. Metro Area but still commute back to high-skill, high-pay jobs.

The economy of Shenandoah County is becoming less dependent on farming as a primary source of income and employment for residents. However, agriculture is still more important in Shenandoah County than in most of the rest of Virginia.

Historically, Shenandoah's unemployment rate has primarily been higher than the State and the Planning District. From early 1987 to 1990, Shenandoah's yearly average unemployment rate has been lower than both the State's and the Lord Fairfax Planning District's. This reflects the success of the County's decade of economic development work.

The income of Shenandoah's residents has historically been lower than the average of the Planning District, and of the State average. It is considerably lower than in the Northern Virginia/D.C. metropolitan area, providing an incentive to some workers to commute. However, in recent years income in Shenandoah County has risen faster than the State average.

The County's relationship to the regional, state, national and global economy has become increasingly important since 1973. Economic analysts agree that a locality's economic viability in the 1990's and into the 21st century depends upon a quality work force in terms of basic education, continuing education to upgrade skills and a positive work ethic. The Shenandoah County Economic Development Council's activities have benefited the local economy, and its efforts--in concert with other local, regional and State programs--should be continued with the goal of improving the quality of the County's economy.

This section of the plan should be maintained on a more regular basis as economic data becomes available. Workforce and income data from the 1990 census is expected by 1992. Achieving the goal of a "diverse and viable local economy" will produce a growing tax base which is important to the implementation of the comprehensive plan strategies.