

CHAPTER II

POPULATION AND ECONOMIC ANALYSIS

Introduction

Population and economic trends serve as a fundamental basis for long-term planning. The size, growth and spatial distribution of the population help to determine future land use needs, community facility demands and transportation needs. Economic trends serve as a general forecast for future housing demand, per capita income projections, tax base levels as well as future infrastructure demands. This chapter will address the above along with agricultural data, analysis and conclusions to serve as the basis for the Plan in conformance with the Goals and Objectives.

Population Trends

Data from the U.S. Bureau of the Census (2000) indicates Shelby County's population increased from 17,679 in 1930 to 18,999 in 1970, a 7.5 percent increase. From 1970 to 1980, the population increased by 4,329, a 22.7 percent gain. From 1980 to 1990, the County saw a 6.4 percent increase to 24,824 persons. The 2000 Census found the population of Shelby County to be 33,337, an increase of 34.3 percent over 1990. Table 2-1, Shelby County Population Trends 1930-2000 below, depicts the rapid Shelby County population increases from 1970 to 2000.

Table 2-1 – Shelby County Population Trends 1930 – 2000

Year	Shelby County Population	Percent Change
1930	17,679	-
1940	17,759	<1%
1950	17,912	<1%
1960	18,493	<1%
1970	18,999	<1%
1980	23,328	22.7%
1990	24,824	6.4%
2000	33,337	34.3%

Source: U.S. Bureau of the Census, USA Counties 1996 CD-Rom
U.S. Bureau of the Census, 2000

Population Distribution

The 2000 population for Shelby County was 33,337. According to the U.S. Census, seventy-four percent, or 21,971 (65.9%) persons resided in unincorporated areas; 10,085 (30.3%) resided in Shelbyville, and 1281 (3.8%) persons resided in Simpsonville, the two incorporated areas of the County in the year 2000.

Per Capita Personal Income (PCPI)

Per capita personal income is the total amount of income earned or dispersed to individuals in a given year and includes transfer payments (e.g. Social Security), wages and personal interest income. Total personal income is divided by the total population, which gives a per person measure of the income earned or dispersed to all persons in the economy. The Center for Business and Economic Research at the University of Kentucky describes per capita income as “. . . an overall index of well being or standard of living in an economy” (Berger, 1997). In 1993 the PCPI for Shelby County was \$19,107; Kentucky PCPI was \$16,889 and the US PCPI was \$20,800 (U.S. Department of Commerce, Bureau of Economic Analysis).

Population Projections

The University of Louisville Urban Studies Center, How Many Kentuckians, 1995 Edition, projected the population of Shelby County to increase 18.5% between 1990 and 2000 to 29,438; 9.7% from 2000 to 2010 to 32,313; and 7.3% to 34,700 in 2020. These figures were used in the 1998 Comprehensive Plan. Figures from the 2000 Census, as contained herein, indicate the 2000 population to actually be 33,337 close to the projected population figure of 34,700 for 2020, which points out the difficulty of projecting population increases. Assuming a percentage increase for the next 20 years (2000-2020) in the amount that occurred over the past 20 years, (1980-2000), Shelby County would have 42.9% more people, or a population of 47,639. In order to accommodate 14,302 more residents at 2.3 persons per household (a relatively low figure given the 1990 average of 2.67 persons per household), approximately 6,218 dwelling units will be needed. At ½ acre of land per unit average, the demand for residential land will be 3,109 acres over the next twenty years.

Housing and Building Permit Analysis

Total housing units in the 1990 decennial census was 9,617 (U.S. Census, March 1990). New private housing units authorized by building permits from 1990 (total year) through 2000 totaled 2,311 countywide for a total of approximately 13,000 units in 2000. Table 2-2 on the following page depicts residential building permit data from 1990 through 2000.

Table 2-2 – Private Housing Building Permits 1990 – 2000

Year	Total Number of Private Housing Units Authorized by Permits	Percent Change
1990	235	-
1991	225	-4.2%
1992	312	38.6%
1993	383	22.7%
1994	408	6.5%
1995	380	-6.8%
1996	368	-3.2%
1997	326	-11.4%
1998	434	33.1%
1999	456	5.1%
2000	398	12.7%

Source: U.S. Bureau of the Census, USA Counties, 1996 CD-Rom
Triple S Planning Commission

After the recession of 1989-1991, housing starts jumped over 38 percent to 312 units in 1992. The rise in starts continued until 1995 when demand dropped off slightly. That decline reversed in 1998 and 1999 before dipping again in 2000. However, the number of private housing building permits is still an indicator of a strong local economy.

ECONOMIC ANALYSIS

Introduction

The economic climate in Shelby County has experienced considerable growth and prosperity in the past ten years, consistent with regional, national and global trends. To understand the changes that have been occurring in Shelby County, the following sections focus on the four basic economic elements of an area: agricultural, manufacturing, service trade, retail trade and wholesale trade.

The most recent data available in a consistent format is derived from the U.S. Department of Commerce, Bureau of the Census data sets of the above economic elements. These data sets are considered to be the most consistent, thus the most reliable for planning and trend analysis. The 1997 Economic Census is the most current data available. Data is compiled every five years countywide for the industries for sales/receipts, number of employees and other pertinent data. This data will be compared with the 1992 Economic Census to illustrate trends in the industries. Note: data not adjusted for inflation.

ECONOMIC TRENDS OF SELECTED INDUSTRIES-SHELBY COUNTY

Trends in Service Trade

The service trade (personal services, restaurants, business services, hotels, etc.) increased considerably from 1992 to 1997. Number of establishments rose 177%, receipts rose 209%, payroll rose 146% and employee's rose 122%. Table 2-3 below depicts the trends from 1992 to 1997.

Table 2-3 – Trends in Service Trade 1992 and 1997

Item	1992	1997	Percent Change
Establishments	136	337	177%
Receipts	52,632	162,674	209%
Annual Payroll	19,831	48,810	146%
Employees	1,412	3,132	122%

Source: U.S. Department of Commerce, Census of Service Industries, 1992 and 1997

The dramatic rise in all areas of service industries is consistent with the national and regional trend towards a service-oriented economy. At least part of this increase may be attributed to the fact that the Economic Census no longer tabulates, "Service Trade". The figures above for 1997 are a compilation of figures for the following categories: Professional, Scientific and Technical services; Real Estate Rental and Leasing; Information (Broadcasting and Telecommunications); Health Care and Social Assistance; Arts, Entertainment and Recreation; Education Services; Accommodations and Food Services; and other services. Still these indicate an extremely strong service sector that needs to be addressed in land use planning and zoning regulations as the service industries sector of the economy continues to play a larger role in overall economic development for the County.

Trends in Retail Trade

Retail trade trends from 1992 to 1997 for the county show dramatic increases in payroll and sales. The number of establishments increased by 46%; sales increased by 201%; payroll increased by 122%; and the number of employees increased by 41%. The trends indicate the continued resurgence of the Shelbyville downtown area, establishments selling higher priced items and higher pay for retail workers, as well as an increase in retail trade in newly developed area. Table 2-4 on the following page compares 1992 with 1997.

Table 2-4 – Retail Trade Trends in Shelby County 1992 and 1997

Item	1992	1997	Percent Change
Establishments	133	193	46%
Sales (Millions)	147	442.6	201%
Payroll (Millions)	15.8	35.1	122%
Employees	1,704	2,400	41%

Source: U.S. Department of Commerce, Trends in Retail Trade, 1992 and 1997

Trends in Wholesale Trade

Wholesale trade saw an increase from 1992 to 1997. Sales increased 100.8% (not adjusted for inflation), number of establishments increased by 104.8% and payroll increased by 187.7%. The number of employees employed in Wholesale Trade increased by 40.8% between 1992 and 1997. The reason for this lower than might be expected increase cannot be fully explained, although the use of technology could have impacted this industry. Table 2-5 below compares Wholesale Trade Trends in Shelby County for the years of 1992 and 1997.

**Table 2-5 – Wholesale Trade Trends in Shelby County
1992 and 1997**

Item	1992	1997	Percent Change
Establishments	42	86	104.8%
Sales (Millions)	121.2	243.4	100.8%
Payroll (Millions)	7.3	21.0	187.7%
Employees	508	715	40.8%

Source: U.S. Department of Commerce, Wholesale Trade Trends, 1992 and 1997

Trends in Manufacturing

The manufacturing sector saw across the board an increase in all categories reported. Of particular interest is the 75.6% increase in the number of manufacturing establishments from 1992 to 1997. The total number of employees employed in the manufacturing industry increased by 72.8% from 3,800 in 1992 to 6,568 in 1997 (See Table 2-6 on the following page).

**Table 2-6 – Census of Manufacturing Data in Shelby County
1992 and 1997**

Item	1992	1997	Percent Change
Establishments	41	72	75.6%
> 20 Employees	27	46	70.4%
Total Employees	3,800	6,568	72.8%
Payroll	\$93,200	\$196,047	110.4%
Production Hours	6,000	10,242	70.7%
Wages	\$64,600	\$131,509	103.6%
Value Added by Manufacture	\$316,200	\$581,299	83.8%
Value of Shipments	\$651,600	\$1,380,183	111.8%
Capital Expenditures	\$24,800	\$65,457	163.9%

Source: U.S. Department of Commerce, Census of Manufacturing, 1992 and 1997

The manufacturing sector is a major contributor to the economic base of Shelby County. As this industry continues to make its comeback in the United States, Shelby County needs to plan for possible manufacturing operations to locate in the county in the coming 20 year horizon of this plan. Interstate access, quality of life, reasonable wages and sufficient land suited for industries are all attractive to corporate decisions on plant locations.

AGRICULTURE AND DEVELOPMENT

Introduction

Future viability of agriculture within the county will be contingent, in large part, to the ability of local officials to incorporate agriculture within the larger development plans of the county. In particular, farmers need to become partners in the development plan of Shelby County. Agriculture can be hindered or enhanced by the path of development efforts. Several areas of concern are: (1) The pressure of growth on agriculture; (2) Potential conflicts between farm and non-farm residents; and (3) Including agriculture in economic development.

The Pressure of Growth on Agriculture

Population growth, spurred by residential or industrial development, places pressure on agriculture. Development raises the price of land, thereby making it more difficult for future generations to farm. Because of its prime location within the “Golden Triangle” of I-75, I-64 and I-71, Shelby County can expect to experience growth into the next century. Population projections for the next two decades indicate that Shelby County will continue to grow at a rapid rate. To reduce the pressure on land values, policies can be developed to encourage the preservation of farmland.

Potential Conflicts between Farm and Non-Farm Residents

Traditional agricultural areas that experience population and commercial growth inevitably experience conflicts between the town and the farm communities. Agriculture production often produces by-products that are inconvenient to residents, such as odors from animal waste or slow moving traffic when farm machinery uses the roads. At the same time, development often results in inconveniences for farmers, such as trash discarded in farm fields and rising land values from development pressure. The result is often conflict and misunderstandings between residents and farmers. This is particularly true in cases where development takes place near or next to farms. New residents often do not understand agricultural production or the problems farmers face in making a living. Land use plans need to recognize the potential for conflict over alternative uses of land.

Including Agriculture in Economic Development

Many counties ignore agriculture in their attempts to attract new industries or promote business from within, even where agriculture provides a firm foundation for the economy. Instead of trying to enhance the linkage between agriculture and the local economy, some counties seek industries that may be at odds with agricultural production. Industries that have negative impacts on the environment, particularly on water resources, can adversely affect farming. In addition, large-scale development can increase the changes of flooding from runoff from roads, driveways and parking lots. Proper land use planning can avert all of these problems.

Agricultural Statistics

Agriculture is a big part of the local economy in Shelby County. Table 2-7 on the following page provides data from the 1992 and 1997 Census of Agriculture as performed by the U.S. Department of Agriculture. The market value of products sold decreased from \$59.8 million in 1992 to \$56.2 million in 1997, a 6.0% drop. However, the per farm average of market value of products sold increased by 10.2% over the same period, from \$36,400 to \$40,100. This in part can be attributed to the decrease in the number of farms during the time period from 1992 to 1997. The number of farms decreased by 11.5% or 1,640 in 1992 to 1,399 in 1997 which can be contributed to the decrease in value of products sold. The average farm size increased just slightly from 140 acres in 1992 to 142 acres in 1997, a 1.4% increase. These numbers although in some cases indicate decreases still indicate that agriculture is a vibrant, productive part of the local economy. Development appears to be affecting agriculture, as the statistics reflect.

Table 2-7 – Trends in Agriculture in Shelby County 1992 and 1997

Item	1992	1997	Percent Change
Number of Farms	1,640	1,399	-11.5%
Average Farm Size (acres)	140	142	1.4%
Market Value of Products Sold – Total (millions)	\$59.8	56.2	-6.0%
Average Market Value of Products Sold per Farm (\$1,000's)	\$36.4	40.1	10.2%
Percent from Crops	54.9%	59%	4.1%
Percent from Livestock	45.1%	41%	-4.1%
Operators by Principal Occupation: Farming	45.7	43.0	-5.9%
Other	54.3	57.0	5.0%
Farms with Sales Greater than \$10,000	751	620	-17%

Source: U.S. Department of Agriculture, 1992 and 1997 Census of Agriculture

Agriculture and development do not have to be at odds with each other. As mentioned earlier, agriculture and the local economy are linked together in important ways. Development can benefit both farmers and townspeople. However, in planning for this development, the role of agriculture in the community must be recognized. Development strategies need to be sensitive to potential impacts new industries or residential growth can have on the farm community. The protection and preservation of farm industries should be considered within any development plan, as would be the case of any other industry within the county.

Analysis, Conclusion and Projections

Shelby County in total is growing at a much faster rate than anticipated by previous projections and plans. As an example, Woods & Poole Economics, Inc., projected in 1998 that the population of Shelby County would reach 33,000 persons in the year 2011. The 2000 census, performed by the U.S. Department of Commerce, found the population to be 33,337. As stated earlier, using past growth rates to project population (see population projection section), Shelby County can expect to have a population of 47,639 by the year 2020. To accommodate that population increase, 6,218 additional dwelling units would be needed at 2.3 persons per household. If each of those additional dwelling units consumes ½ acre of land, the 3,019 acres of residential land will be demanded over the next 20 years. Most of this land will be consumed at the expense of agricultural lands undoubtedly. Thus, a decrease in the number of farms can be expected during that same period.

If similar increases in commercial and industrial uses are projected over the next twenty years as have been seen over the past several, then Shelby County will grow fairly dramatically in these

sectors. Assuming that service, retail, wholesale and manufacturing sectors see the same types of increases for the 10 year period between 1997 and 2007 that they saw from 1992 to 1997 (using 10 years rather than 7 to factor in slowing economic growth), there will be 667 new service trade establishments, 89 new retail establishments, 90 new wholesale establishments and 57 new manufacturing facilities. These figures can be translated to land demand using certain assumptions. If it is assumed that each service trade establishment will (on average) consume .25 acres of land, then 166.75 acres will be needed by 2007 and perhaps beyond (if there is an economic downturn or if the growth rate slows) to accommodate this sector's growth. Assuming each of the wholesale and retail establishments will on average demand .5 acres, then 89.5 acres will be needed for those sectors by 2007. Thus a total of 256.25 acres will be demanded by service, retail and wholesale establishments under these assumptions by 2007. For manufacturing facilities, more acres per facility are needed. If it is assumed that each facility will use on average 10 acres, then 570 acres will be needed to satisfy industrial demand by 2007 and beyond depending on economic conditions.

The figures above reflect raw demand data based on the assumptions made. These demand figures do not take into considerations for market factors and changes to economic circumstances. For instance, when dealing with residential demand figures, if a plan provides only that amount of land as the demand analysis provides, supply equals demand. In such a market, prices for land go up. A "sellers market" has been created. Additionally the figures for the economic sectors just project demand through 2007 when this plan has a planning horizon or planning period of 20 years. In order to address these variables, it is common to use a multiplier (demand times that number) to decrease the impacts that these factors have. A multiplier of 2 has been chosen for this plan. This figure was chosen as one that accounts for the variable factors cited but yet does not encourage a sprawling pattern of development. The final demand figures per category, adjusted using the multiplier, are reflected in Table 2-8 below.

**Table 2-8 – Land Demand by Category in Shelby County
2000 to 2020**

Land Use Category	Raw Demand (acres)	Demand Adjusted (acres)
Residential	3,019	6,038
Service Trade	166.75	333.5
Retail/Wholesale Trade	89.5	179.0
Manufacturing	570.0	1,140

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