

Population & Demographic Analysis

The United States Census Bureau conducts a nationwide census every ten years. This census compiles information relating to the socio-economic characteristics of the entire U.S. population. Historically, the Census Bureau publishes the statistics in large comprehensive volumes available in many public libraries. More recently, the 1990 and 2000 data are made available on the internet at www.census.gov. Census data relating to communities in Kansas are also available at www.ipsr.ku.edu/ksdata. Most of the data used in this chapter are taken from these two sources. Additionally, city and county profiles can be accessed by visiting www.citydata.com or www.epodunk.com.

Census data are used to analyze general population characteristics such as, total population trends, median age, and racial and ethnic composition. Population trends in Peabody City will be compared to those in Peabody Township, Marion County and the State of Kansas. Data from Hillsboro and Marion City are also included (as these communities are comparable to Peabody City). Information from these various political units will provide a contextual framework for interpreting the local data.

The demographic information presented in this chapter will provide general guidance regarding the decision-making processes of both public and private organizations. Included among these organizations are: the Peabody City Council, the Marion County Commission, current and future residents, as well as, business owners and potential investors.

Historical Total Population Trends

The overall population change in Peabody City shows a mixed record of marginal growth and decline over the past 50 years. For example, from 1950 to 1960, total population increases by 10.2%; from 1960 to 1970, a 6.5% increase; from 1970 to 1980, an increase of 7.7%; from 1980 to 1990, an 8.5% decrease; and from 1990 to 2000, a 2.6% increase.

As the historical total population data demonstrates, Peabody City sees neither periods of rapid growth nor periods of rapid decline. Rather, the total population tends to stabilize around 1,300 to 1,400 residents. This trend is illustrated below in **Figure 2.1** and **Table 2.1**.

“A successful society is characterized by a rising living standard for its population, increasing investment in factories and basic infrastructure, and the generation of additional surplus, which is invested in generating new discoveries in science and technology.”

~ Robert Trout

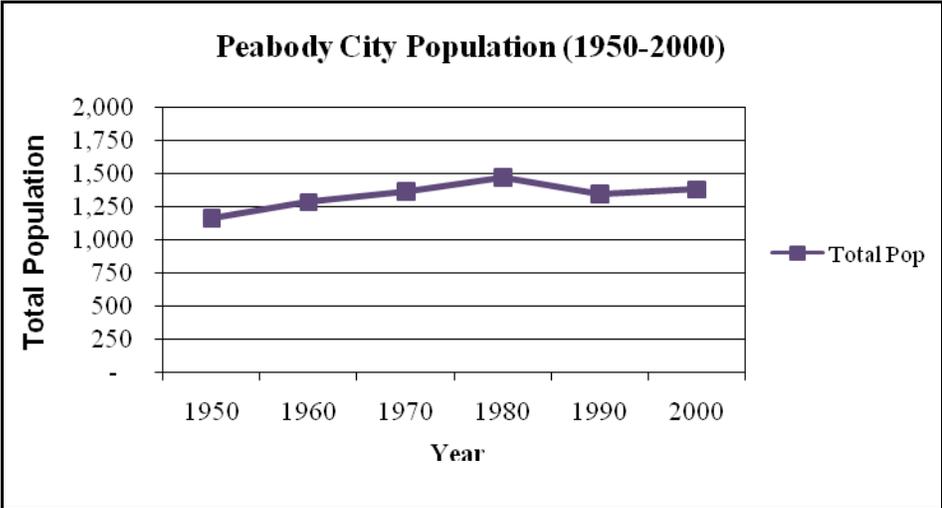


Figure 2.1

Peabody City Population (1950 – 2000)						
Year	1950	1960	1970	1980	1990	2000
Population	1,165	1,284	1,368	1,474	1,349	1,384

Table 2.1

Peabody City is considered part of Peabody Township, drawing economic and social activity from farms and rural areas located outside of the city limits. Therefore, data from Peabody Township is essential to understanding the context of the data for Peabody City.

Peabody Township, like Peabody City, has not experienced periods of rapid growth nor decline over the last 50 years. Instead, total population lingers around 1,550 residents, with approximately 150 Peabody Township residents living outside city limits. Peabody Township’s trend is illustrated below in **Figure 2.2** and **Table 2.2**.

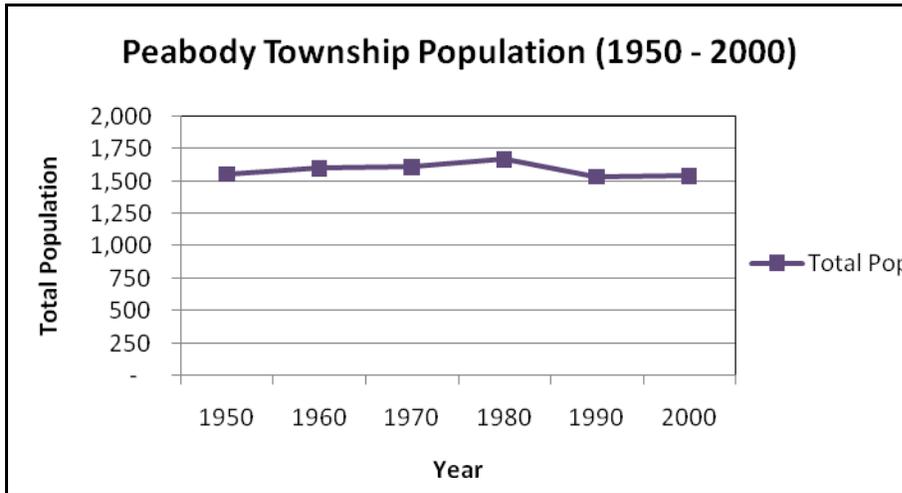


Figure 2.2

Peabody Township Population (1950 – 2000)						
Year	1950	1960	1970	1980	1990	2000
Population	1,558	1,599	1,612	1,617	1,535	1,544

Table 2.2

It is evident the growth trends in Peabody City closely align with the trends in Peabody Township. This is expected as the Peabody City population represents about 90% of the total population of Peabody Township. Marion City and Hillsboro City are communities within Marion County considered comparable to Peabody City. These communities further illustrate general population trends in Marion County, thereby providing a greater understanding of trends in Peabody.

Marion, the county seat, is about 14 miles from Peabody and is viewed as a competitor of Peabody City. Over the last 50 years, Marion, like Peabody, has not experienced periods of rapid growth or decline in total population. Instead, Marion’s total population remains stable around 1,900 to 2,100 residents. Population trends in Marion are illustrated below in **Figure 2.3** and **Table 2.3**.

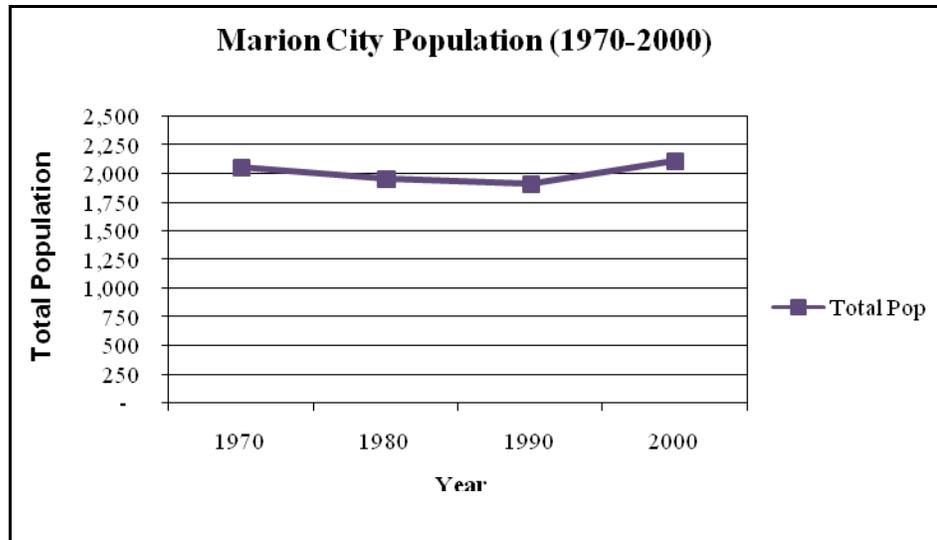


Figure 2.3

Year	1970	1980	1990	2000
Population	2,052	1,951	1,906	2,110

Table 2.3

Hillsboro, home of Tabor College (www.tabor.edu), has approximately twice as many residents as Peabody, but Peabody residents view it as a chief competitor. Like Peabody, Hillsboro has not experienced periods of rapid growth or decline in total population over the last 50 years. Instead, Hillsboro’s total population remains stable around 2,600 to 2,800 residents. Population trends in Hillsboro are illustrated below in **Figure 2.4** and **Table 2.4**.

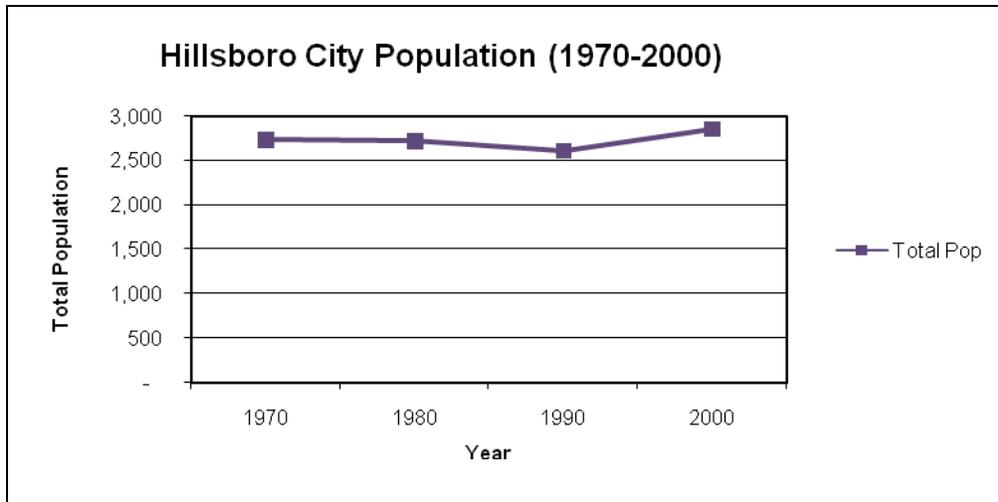


Figure 2.4

Hillsboro City Population (1970 – 2000)				
Year	1970	1980	1990	2000
Population	2,730	2,717	2,613	2,854

Table 2.4

By comparing the growth trends in Peabody City to those for Marion and Hillsboro, it is evident that all three of these communities have very similar growth patterns. This is expected as all three cities are job-based economies located within a rural county.

It is important to note, that total population trends in Peabody, Marion and Hillsboro do not coincide with Marion County trends. Instead of a stable population with marginal growth and decline from year to year, Marion County’s total population exhibits persistent decline since 1950. Population trends in Marion County are illustrated below in **Figure 2.5** and **Table 2.5**.

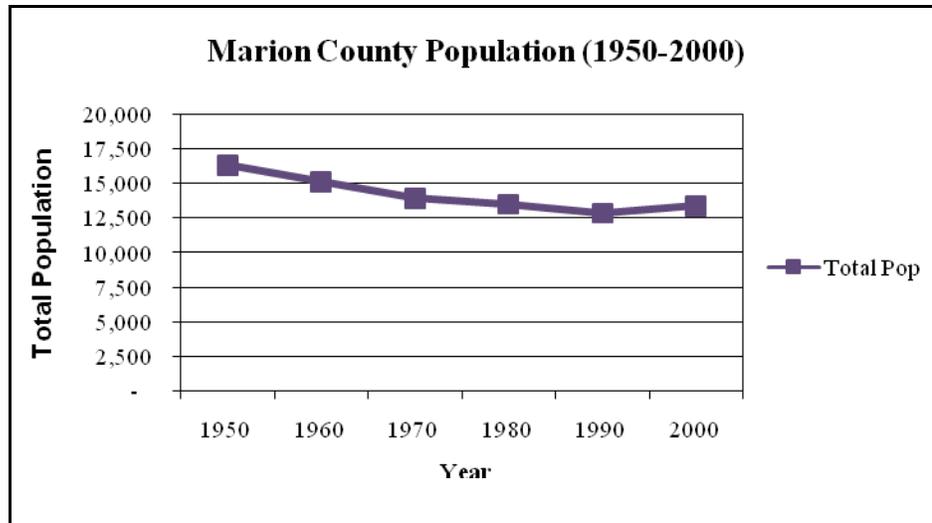


Figure 2.5

Marion County Population (1950 - 2000)						
Year	1950	1960	1970	1980	1990	2000
Population	16,307	15,153	13,935	13,522	12,888	13,361

Table 2.5

Consistent with the state and national trends moving toward urbanization, Marion County is losing its rural farm population due to a variety of economic factors; including: migration to metropolitan areas, lower birth rates, and lack of job availability in rural areas. This persistent decline in total population is in contrast to the relative stability of total population seen in the job-based economies of Peabody, Marion and Hillsboro. Therefore, as these three small towns remain relatively stable, Marion County is losing its rural farm population; and consequently, its total population persistently declines.

Age Structure

Population pyramids are used to show the age structure of a community. Each bar on the pyramid represents a five year age group, also known as an age cohort. The male population in each age group is shown on the left of the pyramid and females shown on the right. The first bar on the bottom of the pyramid represents the number of children in the “0 to 4” age group. The age cohorts increase in five year increments until reaching the “85 and older” age group.

The population pyramid for Peabody City is shown below in **Figure 2.6**. This population pyramid reveals three significant trends. First, there are relatively few young children aged zero to four years old. This indicates there are relatively few young families in the community. The second trend reveals college-aged youth leave Peabody. Lastly, there is a significant aged population, especially females over 85 years old, likely due to the assisted living facilities located in Peabody.

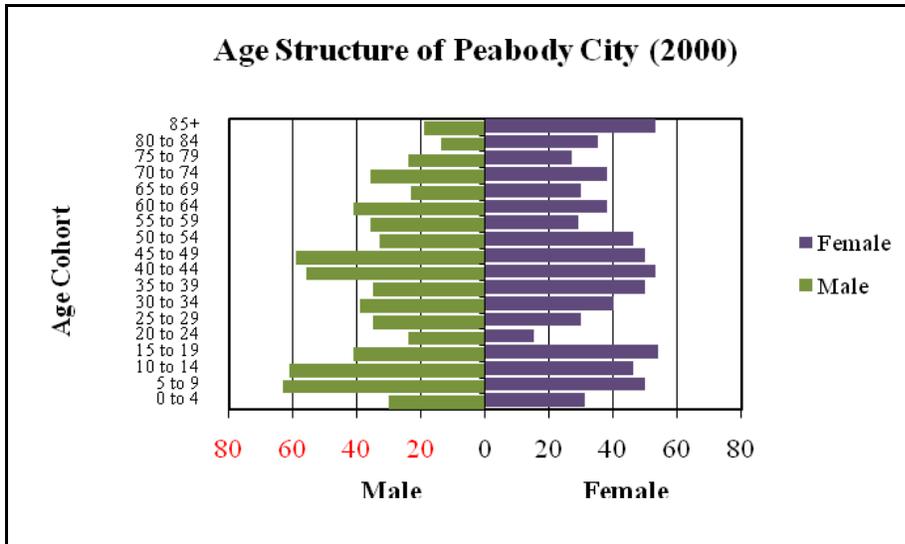


Figure 2.6

The population pyramid for Marion County is illustrated below in **Figure 2.7**. This population pyramid reveals the same trends as those found in Peabody’s population pyramid.

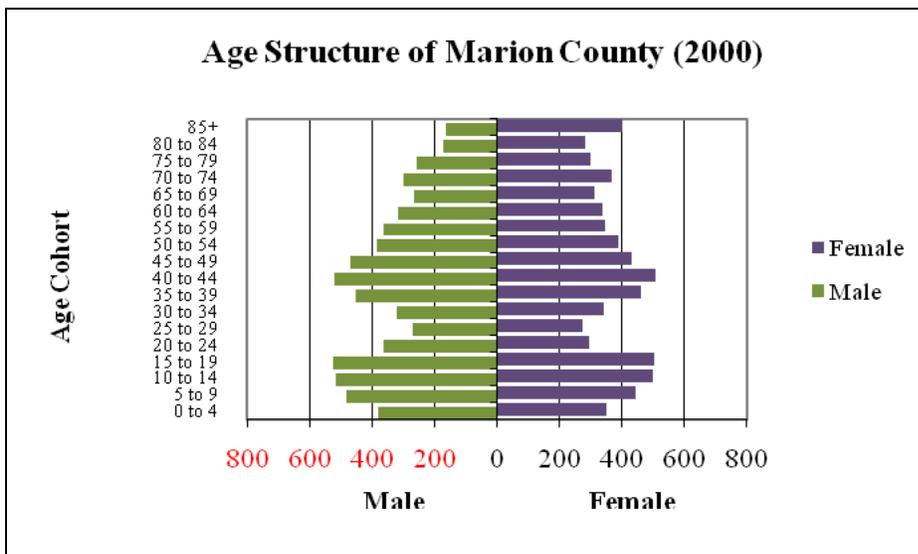


Figure 2.7

The median age is a statistic used to describe the age structure of a community. Half of the population is older than the median age and half is younger than the median age. The median age in Peabody is 42 years. This is similar to the median age of Marion (42) and Marion County (41). However, it is significantly higher than the median age of Hillsboro (38), Kansas (35) and the U.S. (35).

Rural populations tend to have higher median ages (around 40 years old) than the state and nation. This usually indicates there is a significant aged population. However, there are counties in western Kansas that have some of the highest median ages in the country (over 45 years old), indicating a severely declining population base. The median ages in Peabody, Marion City and Marion County are, therefore, expected. The discrepancy in Hillsboro's median age is likely due to the college-aged persons at Tabor College.

Information from the 1990 Census reveals the trend of aging baby boomers. Peabody's median age in the 1990 Census is 39 years old, a significantly lower median age than that in the 2000 Census. This trend is exhibited throughout the other units of analysis and will likely continue on into the future as baby boomers continue to age.

3 trends

- *few young children*
- *college-aged youth leave*
- *significant aged population*

Racial & Ethnic Composition

If there is a substantial minority population within a community, it is necessary to perform a special study of that population. Generally, if a minority population does not comprise over ten percent of the total population, no special studies are performed.

The population of Marion County is predominately white and non-Hispanic. According to the 2000 Census, Peabody City and Township are both 95.8% white; Marion is 97.6% white; Hillsboro, 97.5% white; and Marion County is 97% white. The lack of racial diversity in Marion County is consistent with the fact that Kansas is less racially diverse than the U.S. The rural nature of Marion County merely amplifies this state trend. The racial composition of Peabody is illustrated below in **Figure 2.8** and **Table 2.6**.

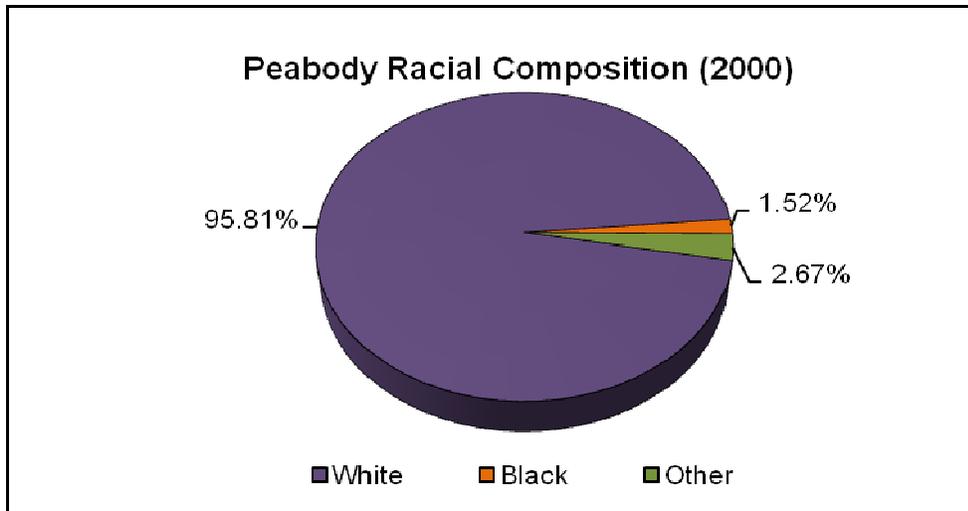


Figure 2.8

Peabody City Population		%
Total	1,384	
White	1,326	95.81%
Black	21	1.52%
Other	37	2.67%

Table 2.6

In defiance of both state and national trends, every unit of analysis in Marion County, except Hillsboro City (due to Tabor College), is less racially diverse in 2000 than in 1990. The racial compositions for 1990 and 2000 are presented in **Tables 2.7a** and **2.7b** below.

1990 Racial Composition						
Population Segment	Kansas Population	%	U.S. Population	%	Peabody City Population	%
All Races	2,477,521		248,709,874		1,349	
White Only	2,231,986	90.09%	199,686,070	80.29%	1,297	96.15%
Black Only	143,076	5.77%	29,986,061	12.06%	43	3.19%
All Other	102,459	4.14%	19,037,743	7.65%	9	0.67%

Table 2.7a

2000 Racial Composition						
Population Segment	Kansas Population	%	U.S. Population	%	Peabody Population	%
All Races	2,688,418		281,421,906		1,384	
White Only	2,313,944	86.07%	211,460,626	75.14%	1,326	95.81%
Black Only	154,198	5.74%	34,658,190	12.32%	21	1.52%
All Other	220,276	8.19%	35,303,090	12.54%	37	2.67%

Table 2.7b

Ethnically, Peabody City and Township are both 97.2% non-Hispanic; Marion is 98.6% non-Hispanic; Hillsboro is 98.5%; and Marion County 98.1% non-Hispanic. Given the ethnic and racial characteristics of Peabody, planning efforts are based on a white, non-Hispanic population. The ethnic composition of Peabody is presented in **Figure 2.9** and **Table 2.8** featured below.

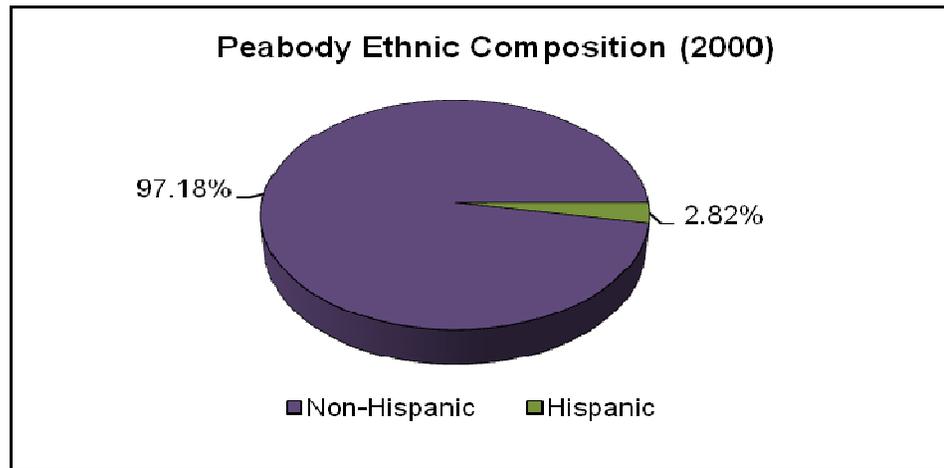


Figure 2.9

Peabody City Population		%
Total	1,384	
Non-Hispanic	1,345	97.18%
Hispanic	39	2.82%

Table 2.8

Consistent with both state and national trends, every unit of analysis in Marion County is more ethnically diverse in 2000 than in 1990. The ethnic compositions for 1990 and 2000 are illustrated in **Tables 2.9a** and **2.9b**.

1990 Ethnic Composition					
Population Segment	Peabody City	Peabody Township	Marion City	Hillsboro City	Marion County
Non-Hispanic	1,331	1,517	1,861	2,597	12,770
Hispanic	18	18	9	16	118
Total	1,349	1,535	1,870	2,613	12,888

Table 2.9a

2000 Ethnic Composition					
Population Segment	Peabody City	Peabody Township	Marion City	Hillsboro City	Marion County
Non-Hispanic	1,345	1,500	2,081	2,811	13,104
Hispanic	39	44	29	43	257
Total	1,384	1,544	2,110	2,854	13,361

Table 2.9b

Other Indicators

Indicators provide a context for population projections by suggesting trends in the population. Consideration of indicators is vital for interpreting the output from statistical population projection models. The information presented in this section is especially significant because it incorporates trends that post-date the 2000 Census (data now eight years old).

A) School Enrollment

School enrollment trends provide insight into broader population trends. School enrollment statistics from both Peabody City and Marion County show significant decline over the last eight years. These trends are provided in **Figure 2.10**.

Over this eight year period, school enrollment for Peabody City declines 23%, with an average annual decline of about 3%. For this same period, Marion County’s school enrollment declines 16%, with an average annual decline of about 2%. This trend of declining school enrollment indicates a trend of decline in the total population for both Peabody and Marion County.

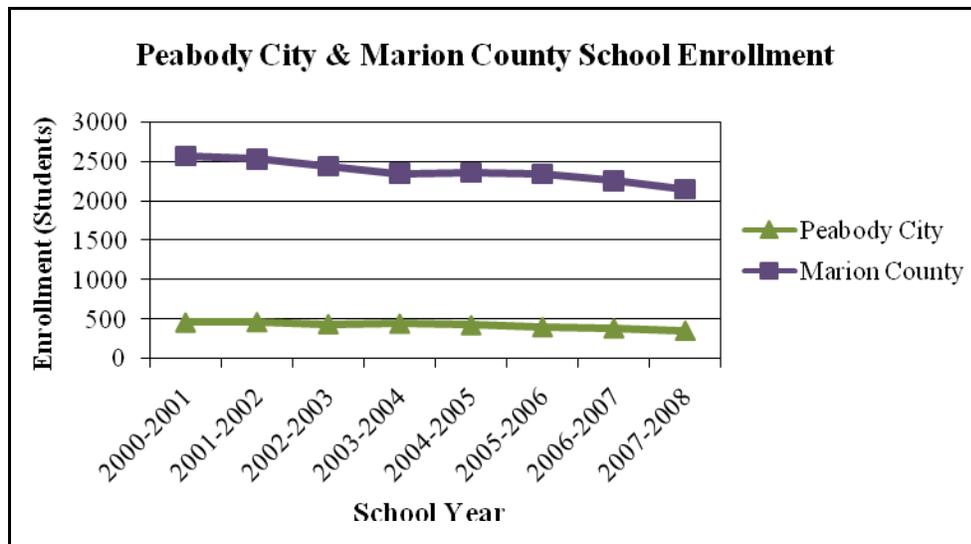


Figure 2.10

B) Residential Building Permits

Residential building permit trends also provide insight into population trends. If a community experiences significant growth, the number of residential building permits will increase as additional residents require additional housing units. However, a small number of residential building permits indicate a lack of significant population growth. Peabody has issued no residential building permits since 2002. While this trend indicates there has been no significant population growth in Peabody, it does not necessarily indicate any significant decline in population. **Table 2.10** presents data regarding residential building permits.

“No residential building permits issued since 2002”

Single-family new house construction building permits:
1996: 1 building, cost: \$85,000
1997: 0 buildings
1998: 0 buildings
1999: 2 buildings, average cost: \$62,500
2000: 2 buildings, average cost: \$62,500
2001: 3 buildings, average cost: \$88,300
2002: 2 buildings, average cost: \$70,000
2003: 0 buildings
2004: 0 buildings
2005: 0 buildings
2006: 0 buildings

Table 2.10

Both school enrollment and residential building permits, show trends of decline and non-growth (respectively) in Peabody. This is the context within which population projections are made.

Population Projections

Population projections are the basis of comprehensive planning, because a community must know how many people it is planning for before it can devise a plan. The process of creating a population projection is simple. First, historical census data are plugged into statistical models that calculate the estimated population of the community in the future. Analysts must then properly interpret the output (projections) from the statistical models, considering all known trends and indicators. It should be noted, that these statistical models assume past trends continue into the future. Furthermore, all statistical models contain some degree of error. Consequently, the projections are not exact

predictions; rather, they are ball-park estimates that suffice as the basis of planning efforts.

The following projections cover a 20 year time period—to the year 2030—and provide a range of possible future population levels (a low-end estimate, a mid-range estimate and a high-end estimate). This range of projections is useful because unforeseen events may affect future population levels.

There are three possible scenarios for Peabody over the next 20 years. The first being, the community will enter a period of marginal population decline due to a combination of job loss, decline in household size, less school-aged children and a reduction in the number of people willing to commute long distances to work. Given this scenario, a low-end estimate of approximately 1,200 residents in 2030 is projected. The second and more likely scenario, based on historical trends, is Peabody will not experience any significant growth or decline, but will remain stable with approximately 1,350 residents in 2030. The third scenario is Peabody experiences a period of marginal population increase ignited by strategic investments and favorable economic factors, bringing more people to Peabody. This high-end estimate is approximately 1,485 residents in 2030. All three scenarios are illustrated below in **Figure 2.11** and **Table 2.11**.

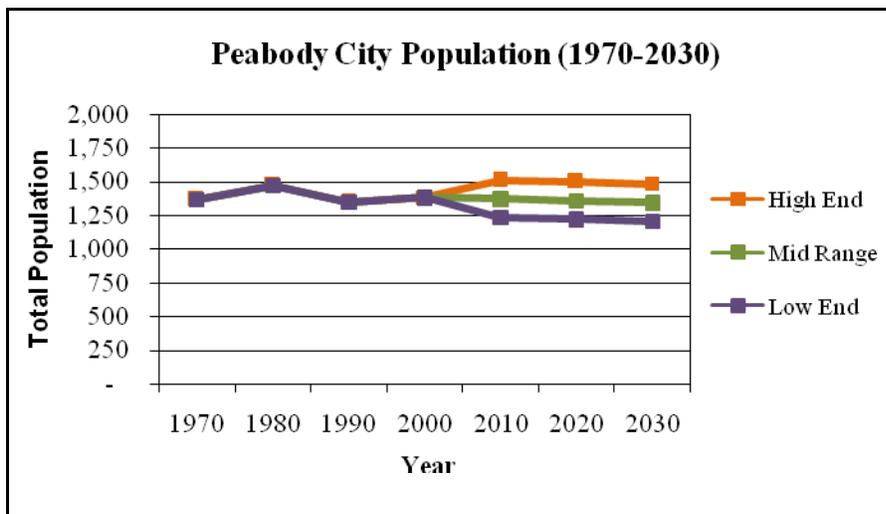


Figure 2.11

Year	High End	Mid Range	Low End
2010	1,513	1,375	1,237
2020	1,500	1,362	1,224
2030	1,485	1,347	1,209

Table 2.11

The following are projections for future total populations in the respective units of analysis in 2030; including a confidence interval, which can be added to or subtracted from the estimate to calculate the high and low end estimates: Peabody Township (1451, +/-113); Marion (2085, +/- 230); Hillsboro (2861, +/- 233). Based on this data, it is evident the trend of population stability applies to the three job-based economies under analysis (Peabody, Marion and Hillsboro).

This trend of population stability is significantly different from the Marion County projection, which shows a persistent decline into the foreseeable future as the county continues to lose its rural population. Therefore, the low-end estimate is expected to be most accurate for Marion County in 2030. This trend is illustrated below in **Figure 2.12** and **Table 2.12**.

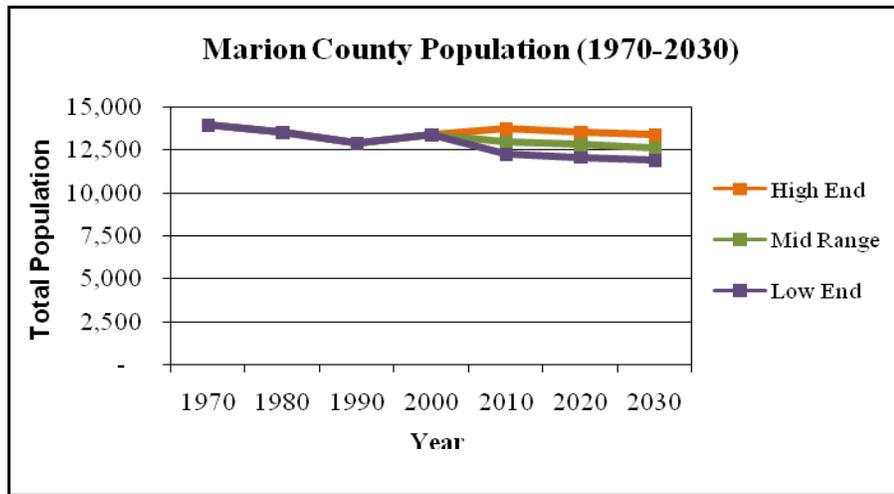


Figure 2.12

Year	High End	Mid Range	Low End
2010	13,736	12,996	12,256
2020	13,550	12,810	12,070
2030	13,370	12,630	11,890

Table 2.12