



**PINAL PROJECTIONS STUDY  
TASK 5: EMPLOYMENT TO POPULATION  
BALANCE IN METROPOLITAN AREAS**

**DRAFT WHITE PAPER**

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**JANUARY 28, 2008**

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## EXECUTIVE SUMMARY

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This white paper transmits the results of an analysis of long-term trends in employment-to-population ratios in the tri-county study area, including Maricopa, Pinal and Pima counties, and as compared to a set of case study metropolitan areas and selected constituent counties. The analysis involves the assessment of trends in total population, total employment, employment change by sector, and in basic versus non-basic employment. It also includes the outlook for employment growth in Pinal County based on the experiences of other similar fast-growing edge counties.

With the assistance of the staff of the Central Arizona Association of Governments, five metropolitan areas were selected for analysis including:

- Denver – Aurora MSA
- Orlando – Kissimmee MSA
- Atlanta – Sandy Springs – Marietta MSA
- Dallas – Fort Worth – Arlington MSA
- Los Angeles – Long Beach – Riverside – San Diego CSA

Case study counties within the five metropolitan areas were chosen through an exhaustive review of employment and population data for the period of 1970 through 2005. Based on this information, and other criteria about the nature of each county, the following emerging case study “edge” counties were selected:

- Collin County, Texas
- Denton County, Texas
- Cobb County, Georgia
- DeKalb County, Georgia
- Gwinnett County, Georgia
- Adams County, Colorado
- Arapahoe County, Colorado
- Seminole County, Florida
- San Bernardino County, California
- Riverside County, California

Within the three county study area the data shows very different growth experiences. Maricopa and Pima counties have experienced relatively balanced growth in population and employment, however the rate of growth in Maricopa County has been much greater. Due to the surge in housing development over the past five years, Pinal County has experienced population growth nearly equal to that of Maricopa County on a relative basis, but the growth in employment has lagged significantly.

Data for many of the case study counties shows even greater rates of population growth than has been experienced in Maricopa County. With the exceptions of San Bernardino and Riverside Counties in California and DeKalb County, Georgia, all of these counties were smaller or similar in size in 1970 to Pinal County today, and had similarly low employment to population ratios. As these counties grew, they all experienced even greater increases in employment than in population. Overall, the case study counties had employment to population ratios of only about 0.31 in 1970, but increased to over 0.54 by 2005. The 2005 ratios tended to still be much lower than in the central counties of each metropolitan area, but the gap between the “edge” counties and the central counties narrowed significantly over time.

Annual growth data shows a definite positive correlation between population and employment growth, albeit with a much greater level of variability in employment growth. In general, the data shows strong periods of population growth following strong periods of employment growth as the case study counties emerged. This has not been the case in Pinal County up to this point, as population growth has accelerated without significant employment growth. The evidence suggests that this is not likely to continue in the future.

Based on the experiences of the case study counties, continued population growth in Pinal County will be dependent upon growth in employment. These trends indicate that the employment to population ratio in Pinal County should increase from about 0.25 in 2005 to about 0.50 by 2050, if population growth is to be sustained.

Along with the increase in employment growth in the case study counties, came shifts in the structure of their economies. In general, the counties tended to be less concentrated in basic industries and public administration over time. With maturity, the economies of the case study counties experienced strong increases in the services, finance, insurance and real estate and transportation sectors of the economy. It is expected that this trend will be repeated in Pinal County as more and more services are provided locally to support the increasing population base. However, at the present time Pinal County remains well below Maricopa and Pima Counties in terms of the level of non-basic employment per capita.

# ***1.0 INTRODUCTION***

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This report presents findings of an analysis of employment and population growth for case study counties chosen from five metropolitan areas, along with the tri-county study area of Maricopa, Pima and Pinal counties. The purpose of this employment and population growth analysis is twofold: 1) investigate case study edge counties' population and employment experiences with urbanization from metropolitan expansion 2) and examine what the case study counties' experiences suggest for Pinal County's population and employment outlook, compared to Maricopa and Pima Counties. This report, in conjunction with other research for the Pinal County Projections Study, will provide CAAG with defensible population, households, and employment projections.

## **1.1 Scope**

The scope of the report includes analyses of population and employment growth for case study counties chosen from five metropolitan areas and the tri-county study area of Maricopa, Pima, and Pinal Counties. The analysis of population growth in the study counties involves an assessment of trends of population change and growth. The analysis of employment involves the assessment of trends in total employment, employment indices, employment change by sector, and the examination of basic versus non-basic employment. The analysis of population and employment continues with an investigation of the employment to population ratios in the study areas. It concludes with the outlook for population and employment in Pinal County via a review of case study edge county experiences.

## **1.2 Report Organization**

Section 2.0 details the selection of the case study edge counties. The section begins with a description of the metropolitan statistical areas considered and why and how they are used. The section ends with a brief explanation of the thought process employed to choose the case study counties from within these metropolitan areas.

Section 3.0 investigates case-study county and tri-county study area population and employment trends. The analysis includes an assessment of the trends in total employment and population, growth in employment and population indexed to a base year, and the annual percent change in employment and population growth from 1970 to 2005.

Section 4.0 presents employment to population ratios for case-study central counties, case-study edge counties, and the tri-county study area. The analysis includes a discussion of the probable causes of increases and decreases in employment to population ratios in these areas.

Section 5.0 examines the employment structure of the case-study central counties, case-study edge counties, and the tri-county study area. The analysis is an assessment of trends in SIC sector data from 1970-2000 and NAICS sector data for 2005. A presentation of non-basic employment-to-employment ratios concludes the section.

## 2.0 CASE STUDY COUNTY SELECTION

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One of the goals of the Pinal County Projections Study is to provide defensible projections of population, households, and employment. The goal of Task 5 of the study is to examine case-study edge counties and evaluate what their experiences with employment and population change suggest for the future of Pinal County. Achieving the goal of Task 5 requires carefully selecting case study counties to develop inferences from their experiences. This section explains the approach used in selecting the case study counties relevant to Pinal County.

### 2.1 Metropolitan Areas Considered

With the assistance of the staff of the Central Arizona Association of Governments, five metropolitan areas were selected from an original list of seven. All seven metropolitan areas have experienced high levels of growth in which urbanization was expanding into previously suburban or exurban areas. However, some of the characteristics of the metropolitan areas made them a poor comparison with the tri-county study area. The five metropolitan areas or combined statistical areas chosen include:

- Denver – Aurora MSA (Adams, Arapahoe, Broomfield, Clear Creek, Denver, Douglas, Elbert, Gilpin, Jefferson, and Park Counties)
- Orlando – Kissimmee MSA (Lake, Orange, Osceola, and Seminole Counties)
- Atlanta – Sandy Springs – Marietta MSA (Barrow, Bartow, Butts, Carroll, Cherokee, Clayton, Cobb, Coweta, Dawson, DeKalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Haralson, Heard, Henry, Jasper, Lamar, Meriwether, Newton, Paulding, Pickens, Pike, Rockdale, Spalding, and Walton Counties)
- Dallas – Fort Worth – Arlington MSA (Collin, Dallas, Delta, Denton, Ellis, Hunt, Johnson, Kaufman, Parker, Rockwall, Tarrant, and Wise Counties)
- Los Angeles – Long Beach – Riverside – San Diego CSA (Los Angeles, Orange, Riverside, San Bernardino, and San Diego Counties)

### 2.2 Case Study County Selection Process

Case study counties within the five metropolitan areas were chosen through an exhaustive review of employment and population change over time and proximity to central business counties. Characteristics of viable case study counties included: 1) rapid population and employment growth over the thirty-year period 2) rapid urbanization because of metropolitan expansion 3) structural industry change due to urbanization 4) “edge counties” locations that were at the outskirts of metropolitan areas and the leading edge of growth.<sup>1</sup>

The majority of the metropolitan areas considered were comprised of many counties that cannot today, or historically, be considered “edge counties.” Some of the counties are many miles away from the central business county, the county possessing the central business district(s), or some semblance of the metropolitan area’s urbanization. Some counties possess employment and population levels too small and/or have been stagnant or declining. Still, other counties have sizable populations, but not as a result of urbanization pressure from the central metropolitan county. We would not consider these counties to be representative of the future of Pinal County.

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<sup>1</sup> Land, Robert E. and Simmons, Patrick A., “Edge Counties: Metropolitan Growth Engines,” *Fannie Mae Foundation Census Note #11*, June 2003

Based on all of the available information the following counties chosen for their adherence to the criteria mentioned above include:

- Collin County, Texas
- Denton County, Texas
- Cobb County, Georgia
- DeKalb County, Georgia
- Gwinnett County, Georgia
- Adams County, Colorado
- Arapahoe County, Colorado
- Seminole County, Florida
- San Bernardino County, California
- Riverside County, California

Figure 2-1 displays the tri-county study area and the metropolitan areas for the case studies. Center counties (Denver County, Colorado, Fulton County, Georgia, Dallas County, Texas, Orange County, Florida, and Los Angeles, Orange, and San Diego Counties, California) are colored beige. Edge counties are colored green. The remaining counties are colored purple.



## 3.0 POPULATION AND EMPLOYMENT TRENDS

The purpose of this section is to present and assess population and employment trends for the case study counties and for the tri-county study area. The assessment consists of the analysis of data represented in graphs and tables for the case study edge counties, case study central counties, and the tri-county study area.

### 3.1 Population and Employment Levels

Table 3-1 indicates population growth has been sizable in all three counties of the study area over the analysis period. The central counties, Maricopa and Pima, have each experienced different growth patterns. Maricopa County's population change has been more robust with increases at least 15 percent in each five-year period, despite the increasing base. Pima County has been growing at a slightly declining percentage rate of a smaller base over the same period. This caused Maricopa County's population to increase by a factor of 3.75, while Pima County's population increased by a factor of 2.63. These trends are evident in the plots of total population shown in Figure 3-1. Pinal County has recently experienced very large increases in population, increasing by a factor of 3.50 since 1970 and by 2.06 just since 1990. Over the last fifteen years, 1990-2005, Pinal County has seen increasingly larger additions of population as illustrated by the strong curvature of its annual total population plot shown in Figure 3-2.

**TABLE 3-1**  
**TRI-COUNTY STUDY AREA POPULATION\***  
**1970 – 2005**

Year	Maricopa		Pima		Pinal	
	Total	%Δ	Total	%Δ	Total	%Δ
1970	971,228	-	351,667	-	68,579	-
1975	1,253,900	29.10%	459,700	30.72%	83,800	22.19%
1980	1,509,175	20.36%	531,443	15.61%	90,918	8.49%
1985	1,828,748	21.18%	602,647	13.40%	103,230	13.54%
1990	2,122,101	16.04%	666,957	10.67%	116,397	12.76%
1995	2,598,183	22.43%	768,212	15.18%	145,863	25.32%
2000	3,072,149	18.24%	843,746	9.83%	179,727	23.22%
2005	3,638,481	18.43%	925,000	9.63%	240,044	33.56%

Source: U.S. Census Bureau

\*Decade years represent April 1st estimates

A different story emerges from employment figures shown in Table 3-2. Employment growth differed across the tri-county study area. Maricopa County has experienced the most robust growth over time. Figure 3-3 shows a highly positive trend in Maricopa County employment with dips coinciding with macroeconomic slowdowns. Pima County experienced a slower but steady change in total employment over time. Following a protracted period of sluggishness, Pinal County's employment began on an upward trending growth pattern from the early 1980's onward (Figure 3-4). The growth pattern appears more volatile with spurts of large increases in employment followed by extended periods of stagnant or declining employment.

**TABLE 3-2**  
**TRI-COUNTY STUDY AREA EMPLOYMENT**  
**1970 – 2005**

Year	Maricopa		Pima		Pinal	
	Total	%Δ	Total	%Δ	Total	%Δ
1970	430,590	-	144,257	-	25,984	-
1975	541,909	25.85%	180,791	25.33%	31,451	21.04%
1980	790,529	45.88%	234,749	29.85%	31,902	1.43%
1985	1,047,620	32.52%	293,041	24.83%	33,680	5.57%
1990	1,235,513	17.94%	321,710	9.78%	41,577	23.45%
1995	1,469,468	18.94%	384,604	19.55%	50,455	21.35%
2000	1,891,817	28.74%	444,366	15.54%	50,262	-0.38%
2005	2,188,301	15.67%	486,165	9.41%	59,809	18.99%

Source: Bureau of Economic Analysis

The scale of population and employment change is noticeably different among the counties. Maricopa County’s five-year addition of over 15 percent from 2000 to 2005 resulted in over 550,000 new residents. Likewise, the county’s growth in employment generated nearly 300,000 new jobs or about 0.55 jobs per capita. Maricopa’s strength overshadows Pinal County’s weaker performance. In the same period, Pinal County’s population increased by over 60,000 residents while employment increased by less than 10,000 jobs or about 0.17 jobs per capita. Pinal’s unbalanced growth has fueled its transition from a rural county into a bedroom community.

The experience for edge counties in other quickly growing metropolitan areas has been different. Tables 3-3 and 3-4 display population and employment data for ten case study edge counties chosen from five metropolitan areas, respectively. The data show an array of population and employment growth alternatives. In general, strong population growth has been accompanied by strong employment growth. Figures 3-5 through 3-8 illustrate these trends annually over the thirty-five year period for the case study counties. Due to their absolute size, San Bernardino and Riverside Counties are shown on separate charts from the other case study counties.

Table 3-3 presents case study population data. The population experience shows the case study counties falling into three categories: high, medium, and low growth. High-growth counties, Collin County, Texas, Denton County, Texas, and Gwinnett County, Georgia saw thirty-five years of strong growth; Gwinnett County averaged as high as 39 percent growth every five years. Medium-growth counties, Cobb County, Georgia, Arapahoe County, Colorado, and Riverside County, California, and Seminole County, Florida saw thirty-five years of medium growth; county five year growth ranged on average from 18 percent to 24 percent. More limited growth occurred in the lower growth counties of DeKalb County, Georgia, Adams County, Colorado, and San Bernardino County, California, where county average five-year growth ranged from 9 percent to 16 percent. These groupings offer a range of experiences for evaluating Pinal County.

The counties that were in high, medium, or low growth categories in population are also in corresponding high, medium, and low growth categories in employment. Table 3-4 presents employment data for the case study counties. Pinal County’s employment change, when compared with its population change, has been much lower than the case study counties. Edge counties from several metropolitan areas, most of which are not growing as quickly as the tri-county study region, demonstrate that slower employment growth is not likely to not continue in Pinal County. Periods of extremely to moderately strong population growth coincide with stronger employment growth.

**TABLE 3-3  
CASE STUDY COUNTY POPULATION  
1970 - 2005**

YEAR	Texas		Georgia			Colorado		Florida	California	
	Collin	Denton	Cobb	DeKalb	Gwinnett	Adams	Arapahoe	Seminole	San Bernardino	Riverside
<b>TOTAL:</b>										
1970	66,920	75,633	196,793	415,387	72,349	185,789	162,142	83,692	682,233	456,916
1975	99,300	106,300	249,600	477,900	118,500	218,800	220,000	138,800	719,900	528,600
1980	144,576	143,126	297,718	483,024	166,815	245,944	293,292	179,752	895,016	663,199
1985	204,221	211,105	372,905	518,161	253,023	266,973	369,021	231,458	1,072,242	825,685
1990	264,036	273,644	447,745	546,174	352,910	265,038	391,572	287,521	1,418,380	1,170,413
1995	352,738	338,819	527,784	615,181	467,292	313,439	446,821	331,587	1,576,773	1,373,034
2000	491,675	432,976	607,751	665,865	588,448	363,857	487,967	365,196	1,709,434	1,545,387
2005	660,926	554,994	663,528	713,679	726,790	402,219	529,305	401,291	1,964,511	1,945,392
<b>PERCENT CHANGE:</b>										
1970	-	-	-	-	-	-	-	-	-	-
1975	48.39%	40.55%	26.83%	15.05%	63.79%	17.77%	35.68%	65.85%	5.52%	15.69%
1980	45.60%	34.64%	19.28%	1.07%	40.77%	12.41%	33.31%	29.50%	24.33%	25.46%
1985	41.26%	47.50%	25.25%	7.27%	51.68%	8.55%	25.82%	28.77%	19.80%	24.50%
1990	29.29%	29.62%	20.07%	5.41%	39.48%	-0.72%	6.11%	24.22%	32.28%	41.75%
1995	33.59%	23.82%	17.88%	12.63%	32.41%	18.26%	14.11%	15.33%	11.17%	17.31%
2000	39.39%	27.79%	15.15%	8.24%	25.93%	16.09%	9.21%	10.14%	8.41%	12.55%
2005	34.42%	28.18%	9.18%	7.18%	23.51%	10.54%	8.47%	9.88%	14.92%	25.88%

Source: U.S. Census Bureau

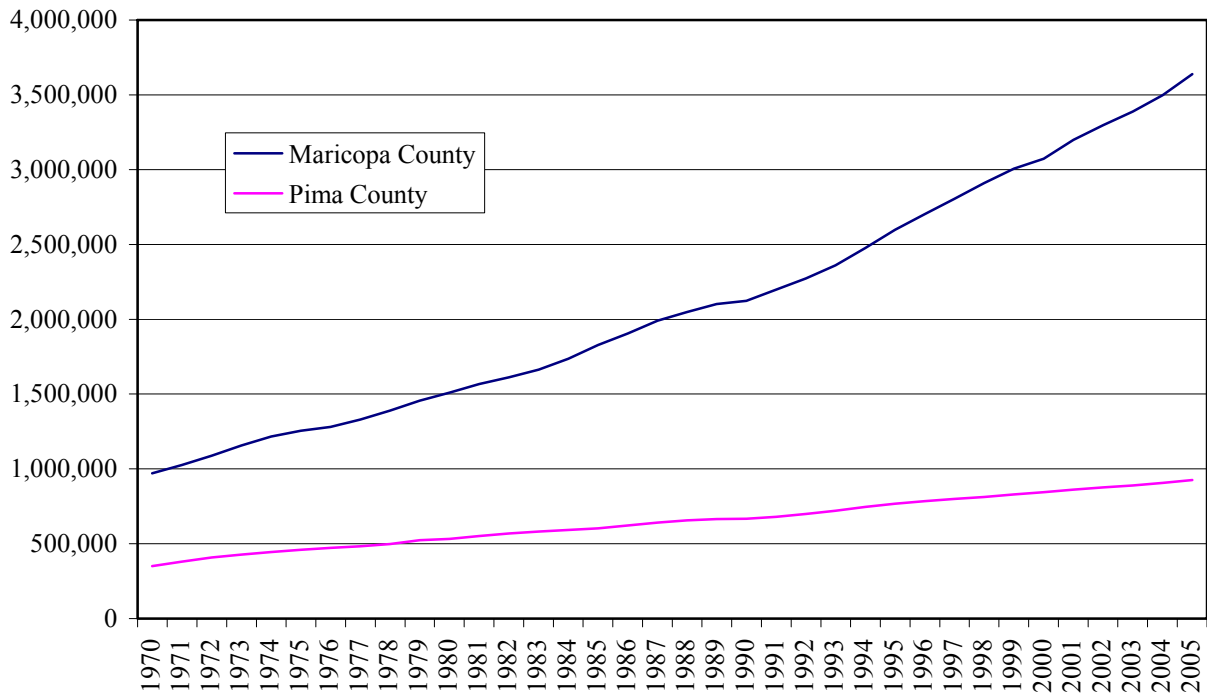
\* Decade years represent April 1st estimates

**TABLE 3-4  
CASE STUDY COUNTY EMPLOYMENT  
1970 – 2005**

YEAR	Texas		Georgia			Colorado		Florida	California	
	Collin	Denton	Cobb	Dekalb	Gwinnett	Adams	Arapahoe	Seminole	San Bernardino	Riverside
<b>TOTAL:</b>										
1970	18,445	26,387	74,689	153,801	17,513	49,231	50,861	23,447	247,450	171,340
1975	26,430	35,587	88,151	175,146	32,276	75,080	89,882	38,470	274,274	199,073
1980	39,128	51,303	123,203	251,657	59,086	99,992	136,530	61,752	345,939	264,819
1985	75,700	77,297	192,309	324,915	119,697	112,993	200,958	96,061	418,169	321,877
1990	117,342	99,331	249,326	349,641	182,741	122,347	240,606	122,251	555,328	455,859
1995	161,786	128,905	317,594	375,146	266,843	151,228	301,497	143,126	593,968	513,371
2000	247,878	164,595	395,911	414,230	352,764	190,044	392,607	186,654	722,006	662,404
2005	358,391	203,878	422,883	426,516	388,354	209,795	407,179	226,883	853,915	834,979
<b>PERCENT CHANGE:</b>										
1970	-	-	-	-	-	-	-	-	-	-
1975	43.29%	34.87%	18.02%	13.88%	84.30%	52.51%	76.72%	64.07%	10.84%	16.19%
1980	48.04%	44.16%	39.76%	43.68%	83.06%	33.18%	51.90%	60.52%	26.13%	33.03%
1985	93.47%	50.67%	56.09%	29.11%	102.58%	13.00%	47.19%	55.56%	20.88%	21.55%
1990	55.01%	28.51%	29.65%	7.61%	52.67%	8.28%	19.73%	27.26%	32.80%	41.63%
1995	37.88%	29.77%	27.38%	7.29%	46.02%	23.61%	25.31%	17.08%	6.96%	12.62%
2000	53.21%	27.69%	24.66%	10.42%	32.20%	25.67%	30.22%	30.41%	21.56%	29.03%
2005	44.58%	23.87%	6.81%	2.97%	10.09%	10.39%	3.71%	21.55%	18.27%	26.05%

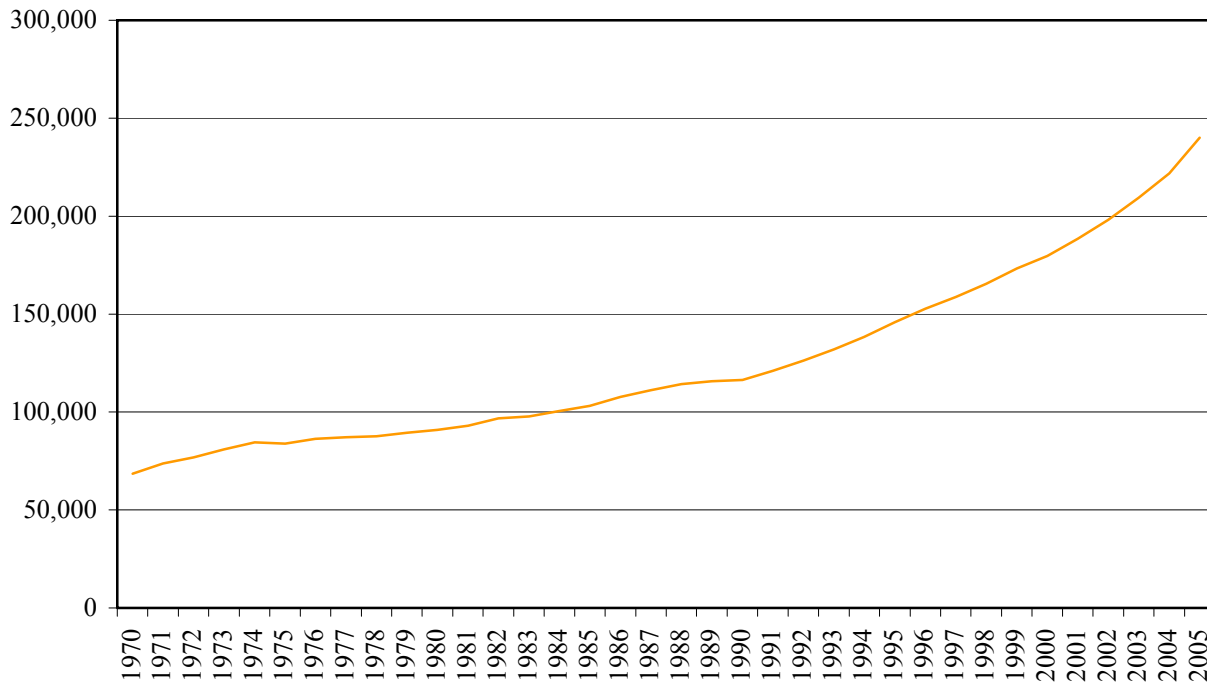
Source: Bureau of Economics Analysis

**FIGURE 3-1  
MARICOPA AND PIMA COUNTY POPULATION  
1970 – 2005**



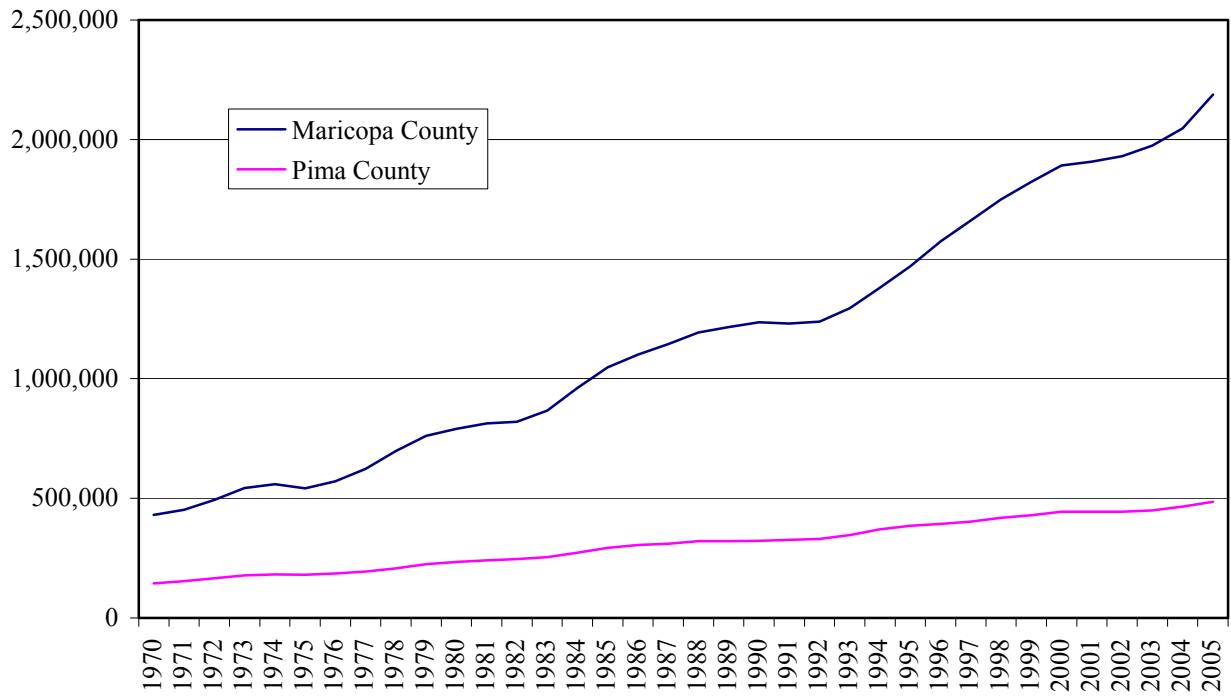
Source: U.S. Census Bureau.

**FIGURE 3-2  
PINAL COUNTY POPULATION  
1970 – 2005**



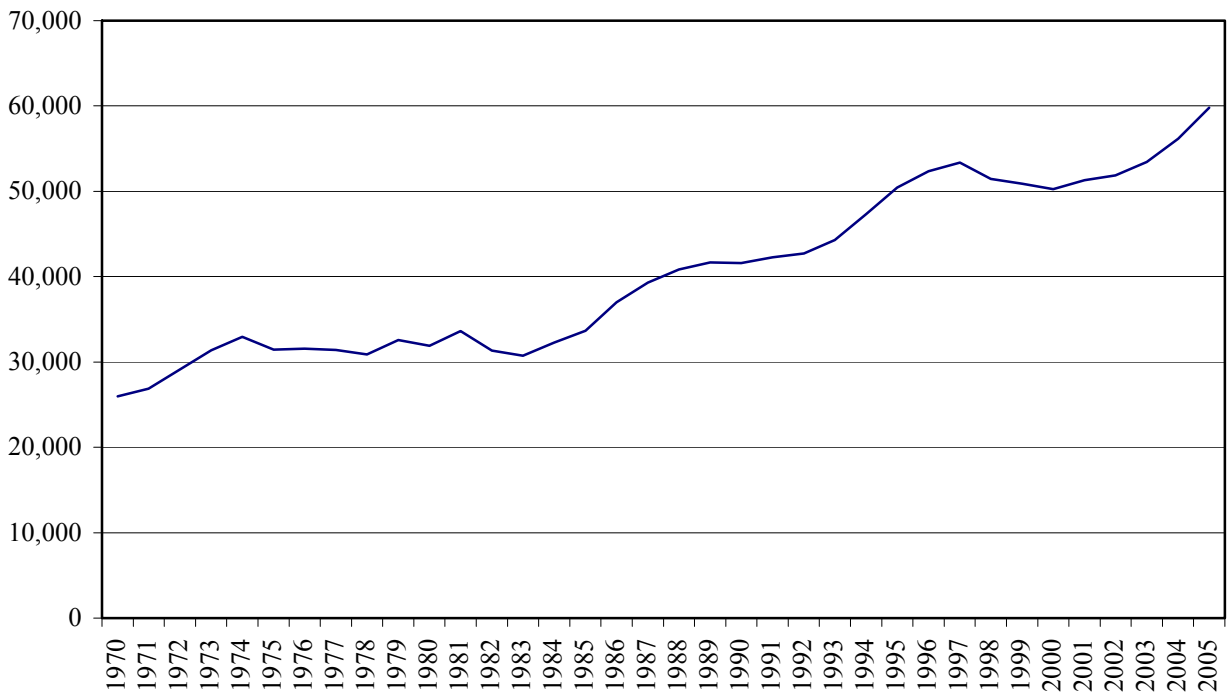
Source: U.S. Census Bureau.

**FIGURE 3-3  
MARICOPA AND PIMA COUNTY EMPLOYMENT  
1970-2005**



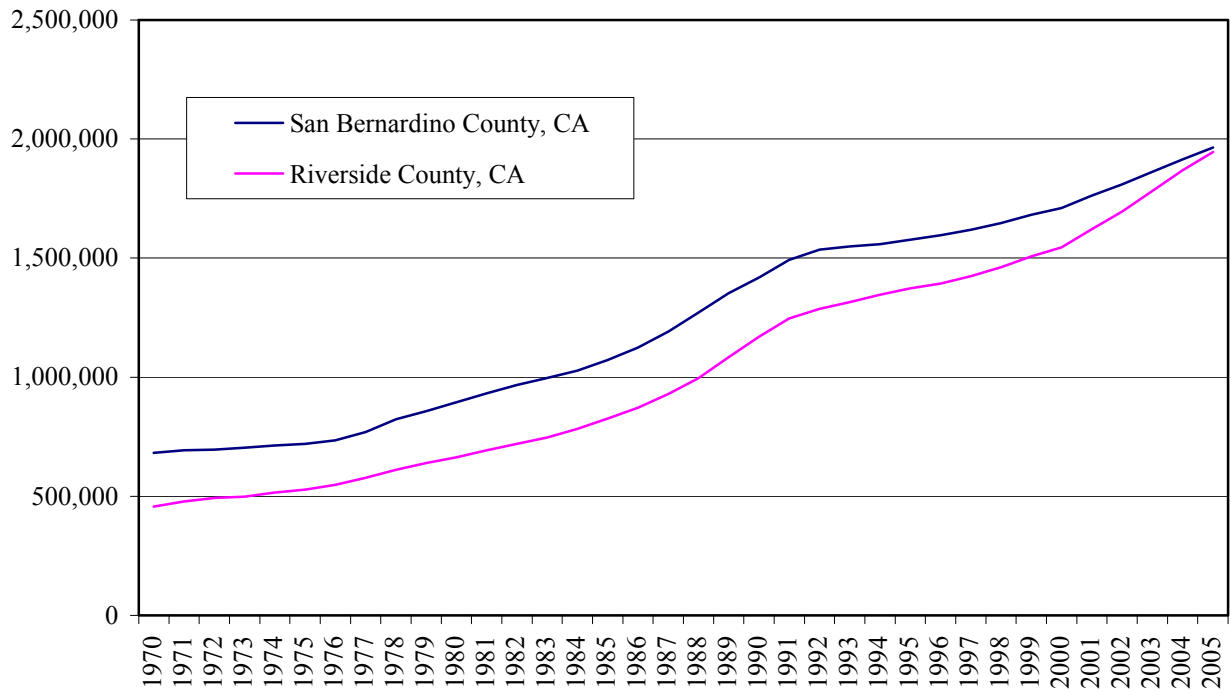
Sources: Bureau of Economic Analysis

**FIGURE 3-4  
PINAL COUNTY EMPLOYMENT  
1970-2005**



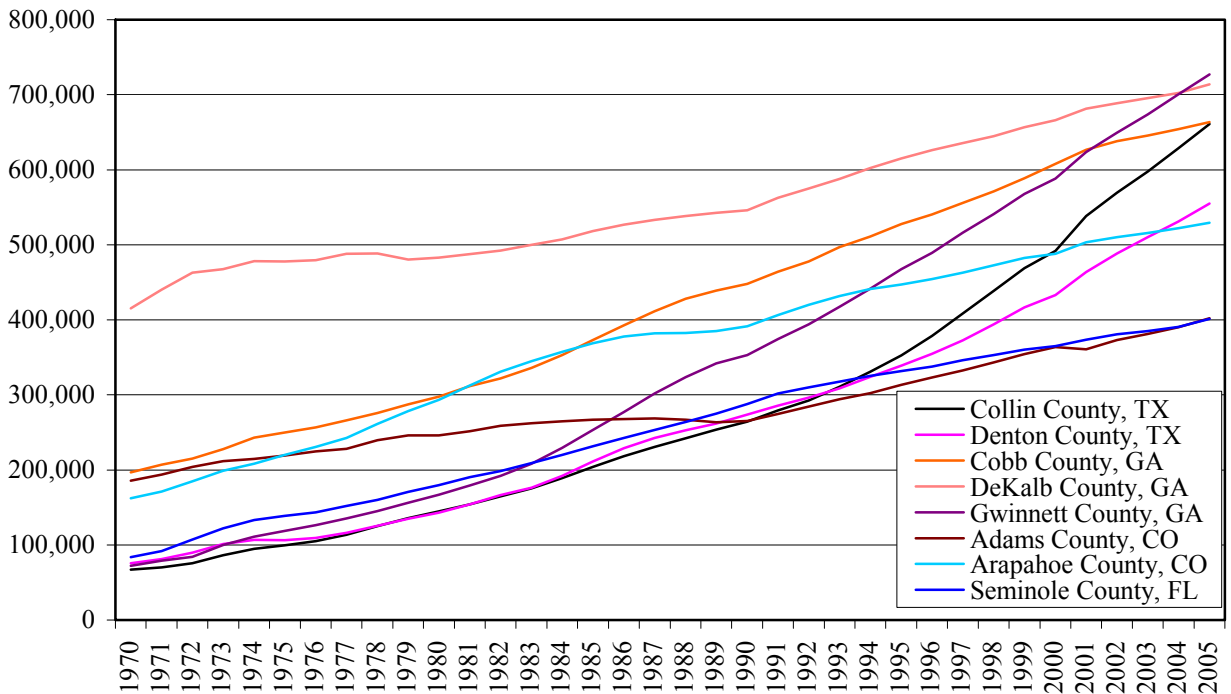
Source: Bureau of Economic Analysis

**FIGURE 3-5  
CASE STUDY COUNTY POPULATION  
1970-2005**



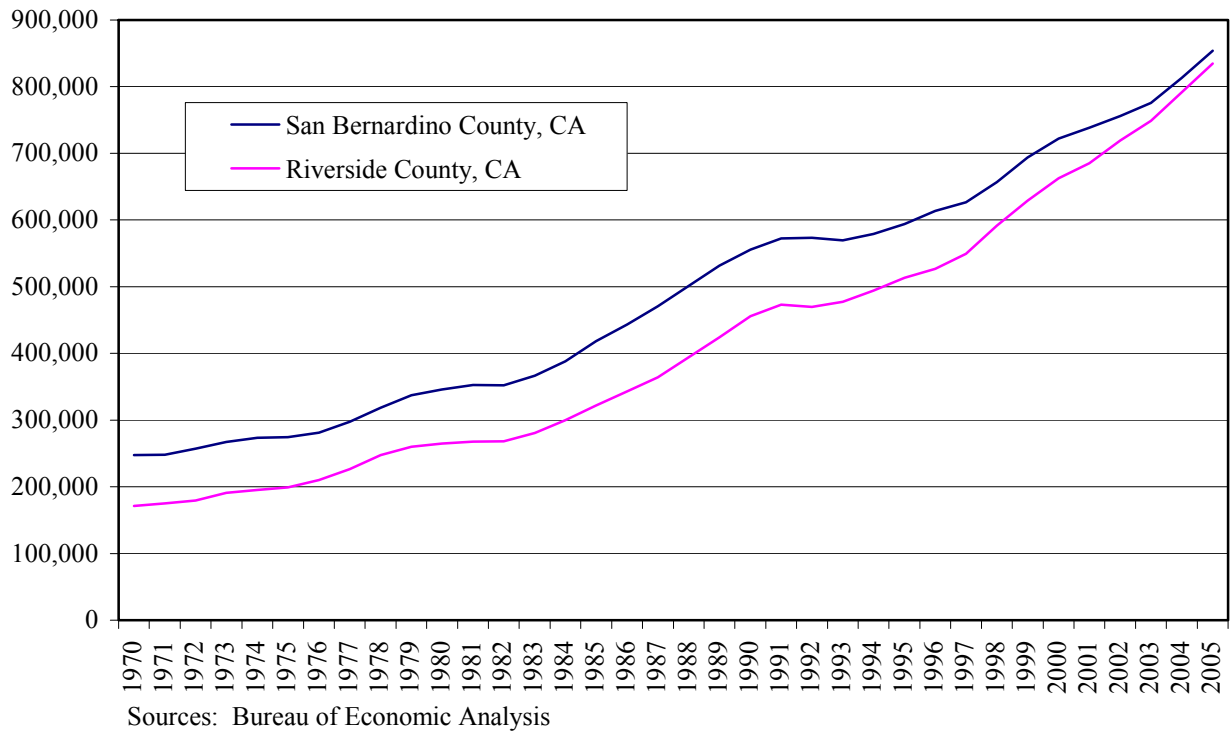
Source: U.S. Census Bureau.

**FIGURE 3-6  
CASE STUDY COUNTY POPULATION  
1970-2005**

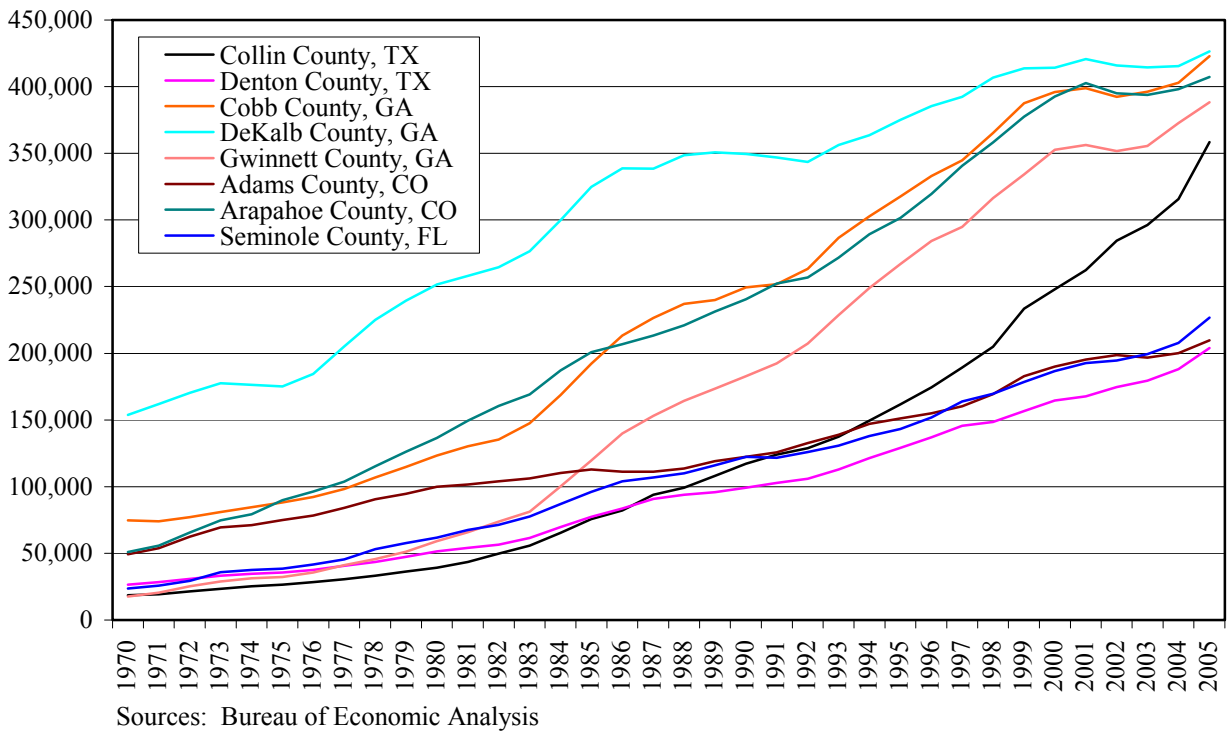


Source: U.S. Census Bureau.

**FIGURE 3-7  
CASE STUDY COUNTY EMPLOYMENT  
1970-2005**



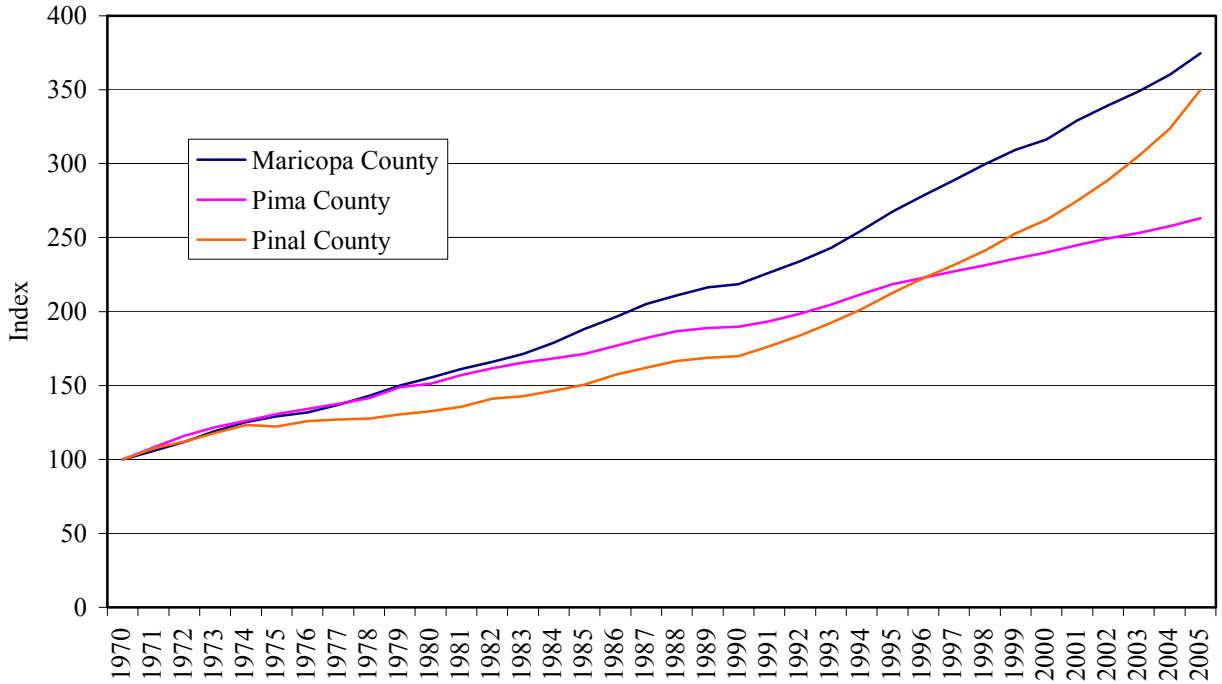
**FIGURE 3-8  
CASE STUDY COUNTY EMPLOYMENT  
1970-2005**



### 3.2 Growth Indices

This section examines growth in population and employment indexed to 1970 levels. Indexing population and employment permits comparison of growth across counties of different sizes.

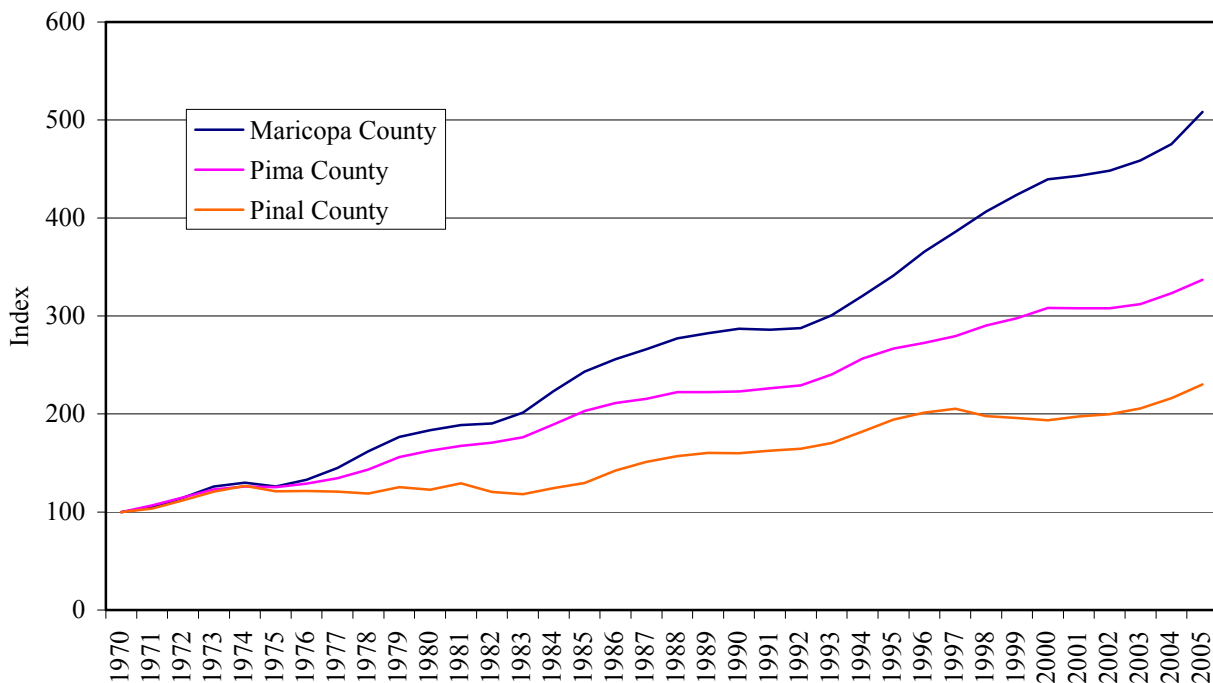
**FIGURE 3-9**  
**TRI-COUNTY POPULATION INDICES**  
**(1970 = 100)**



Source: U.S. Census Bureau.

Figure 3-9 illustrates population growth indexed to 1970 levels for the tri-county study area. The picture is telling. Maricopa County, as inferred from its population trend, is the fastest growing in the region. Its growth pattern became unique when Pima County began to lag behind from 1979-1980 onward. Maricopa's growth pattern then became approximately linear and strongly positive from 1990 onward. Pima County experienced, on average, approximately linear growth, though it was more moderate compared to Maricopa County. The most significant feature, however, is Pinal County's growth. Indexing the series allows us to see that the growth taking place is extremely strong and has become increasingly stronger over time. Pinal County surpassed Pima County in the mid 1990's, now rivals Maricopa County as the strongest growth county in the study area over the thirty-five year period.

**FIGURE 3-10**  
**TRI-COUNTY EMPLOYMENT INDICES**  
**(1970 = 100)**

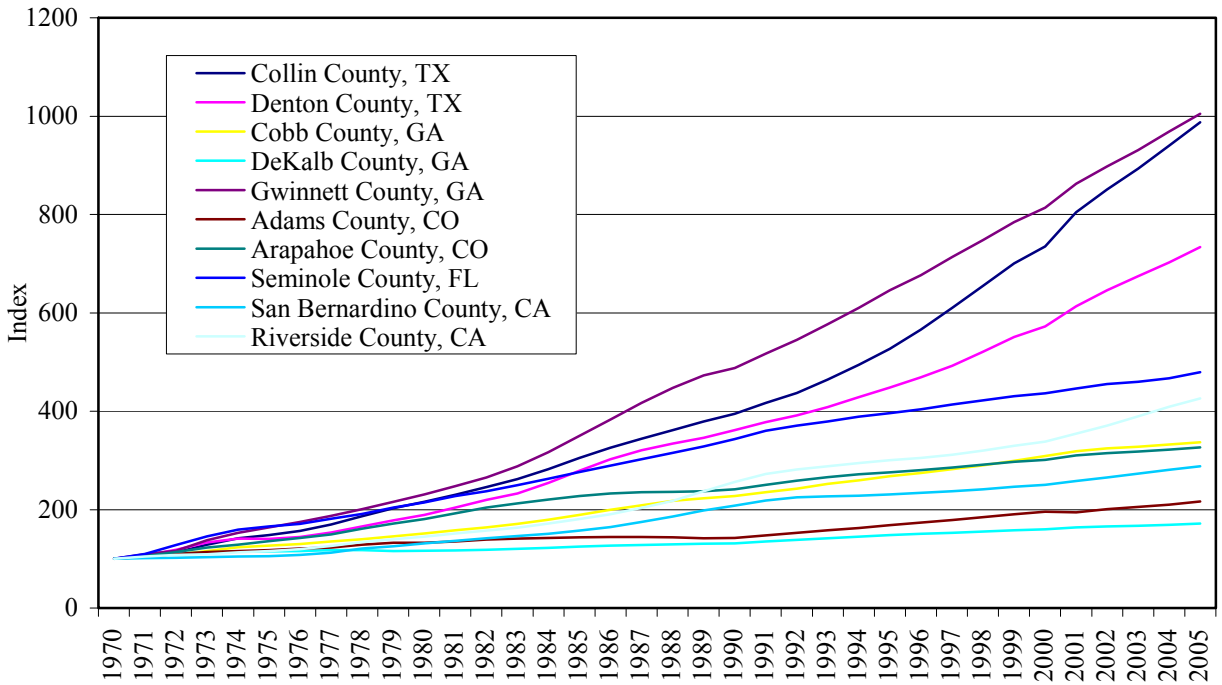


Sources: Bureau of Economic Analysis

Figure 3-10 presents tri-county study area indexed employment growth. In the mid 1970's Maricopa, Pima, and Pinal Counties diverged on to very different growth paths. Maricopa County's employment growth was the most impressive of the three counties. The series trended positively with minor and brief stagnant periods coinciding with macroeconomic slowdowns. The strongest and longest-sustained period of growth occurred throughout the 1990's, with a brief slowdown in the early 2000's from which the county quickly rebounded. Pima County's trend is similar though at a slower rate. Pima County employment trended with a slope less than Maricopa County; stagnant periods lasted longer, and the correction after the slowdown of the early 2000's was much less pronounced. Pinal County's trend generally parallels Pima County though at a lower rate. In Pinal County growth rates were lower, stagnant periods lasted even longer, and the rebound after the early 2000's slowdown was even slower than in Pima County.

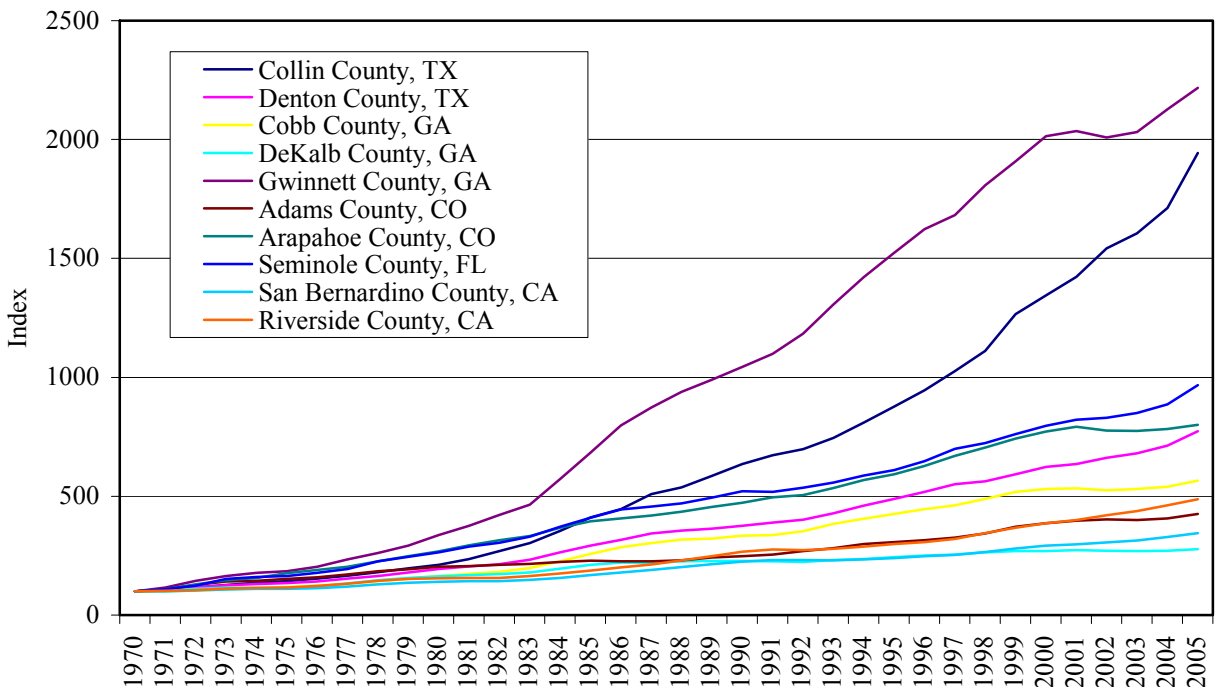
On average, the experiences of the case study counties were similar to Maricopa and Pima Counties. Population indices, like the trends in the level of population, exhibit a varied history that leans heavily toward sustained high growth (Figure 3-11). The counties labeled "high growth" from the previous section saw population indices ranging from about 630 percent to just above 900 percent. "Medium growth" counties experienced population growth indexed to 1970 of almost 400 percent to about 870 percent. "Low growth" counties saw population indices range from 71 percent to just above 325 percent over the thirty-five year period.

**FIGURE 3-11**  
**CASE STUDY POPULATION INDICES**  
**(1970 = 100)**



Source: U.S. Census Bureau.

**FIGURE 3-12**  
**CASE STUDY EMPLOYMENT INDICES**  
**(1970 = 100)**



Sources: Bureau of Economic Analysis

Employment growth in the case study counties has been even more impressive. Figure 3-12 illustrates employment indices that, like population, exhibit a varied history but lean heavily toward high growth. Collin County, Texas and Gwinnett County, Georgia, the counties that experienced the greatest population growth, experienced the greatest employment growth too. Indeed, in relative terms these two counties experienced employment growth roughly double the rate of population growth. Interestingly, several counties experienced double, or more than double the level of growth in employment relative to population. The average ratio of employment growth to population growth across the case study counties was approximately 1.73:1. This trend bodes well for future employment growth in Pinal County.

The high, medium, and low growth classification becomes less consistent in terms of employment growth indexed to 1970. For example, Denton County, Texas, a high population growth area with 672 percent growth in employment since 1970, moved to the medium growth category, while Seminole County, Florida with 867 percent growth in employment since 1970, but only medium population growth, moved to the high growth category. Overall, high growth counties experienced a range of employment growth between 867 percent and 2,117 percent, medium growth counties experienced a range of growth between 387 percent and 700 percent, and low growth counties experienced between 177 percent and 326 percent.

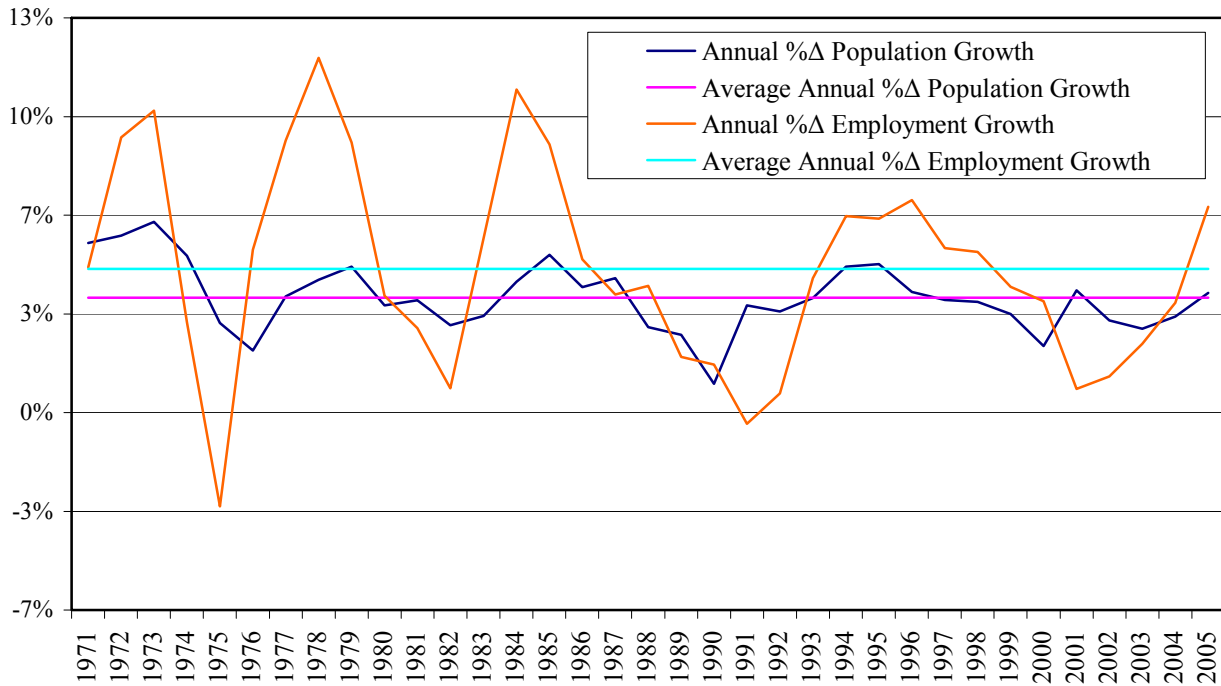
Pinal County has been experiencing population growth that is significantly larger than employment growth, though this experience is not unique. In fact, many counties that eventually experienced employment growth nearly two times that of population growth experienced prolonged periods of higher population growth with limited employment growth early on. Collin County, Texas, for example, experienced about a ten-year period of greater population growth than employment growth. Collin County is now one of the fastest growing case study edge counties in terms of employment.

The evidence suggests that case study edge counties experienced an array of population and employment growth patterns. The growth patterns lean heavily towards high population and employment gains relative to the base year. Despite several counties experiencing early periods of low employment growth relative to population growth, the case studies generally progressed to employment growth rates that well exceed their population growth rates. It would be reasonable to expect that Pinal County, a newly burgeoning edge county, could expect a future similar to the case study counties' history.

### 3.3 Annual Change

Thus far, this section has presented trends in population employment levels, and growth over time indexed to a base year. Evidence suggests the average case study edge county experiences large employment and population growth, with especially strong employment growth as area matures. As case study counties evolved, the spread between employment and population growth tends to grow. Investigating the annual percent change in employment and population growth compared to the average annual percent change in employment and population growth exposes the spread and volatility of the two series.

**FIGURE 3-13**  
**ANNUAL PERCENT CHANGE AND AVERAGE ANNUAL PERCENT CHANGE**  
**MARICOPA COUNTY**



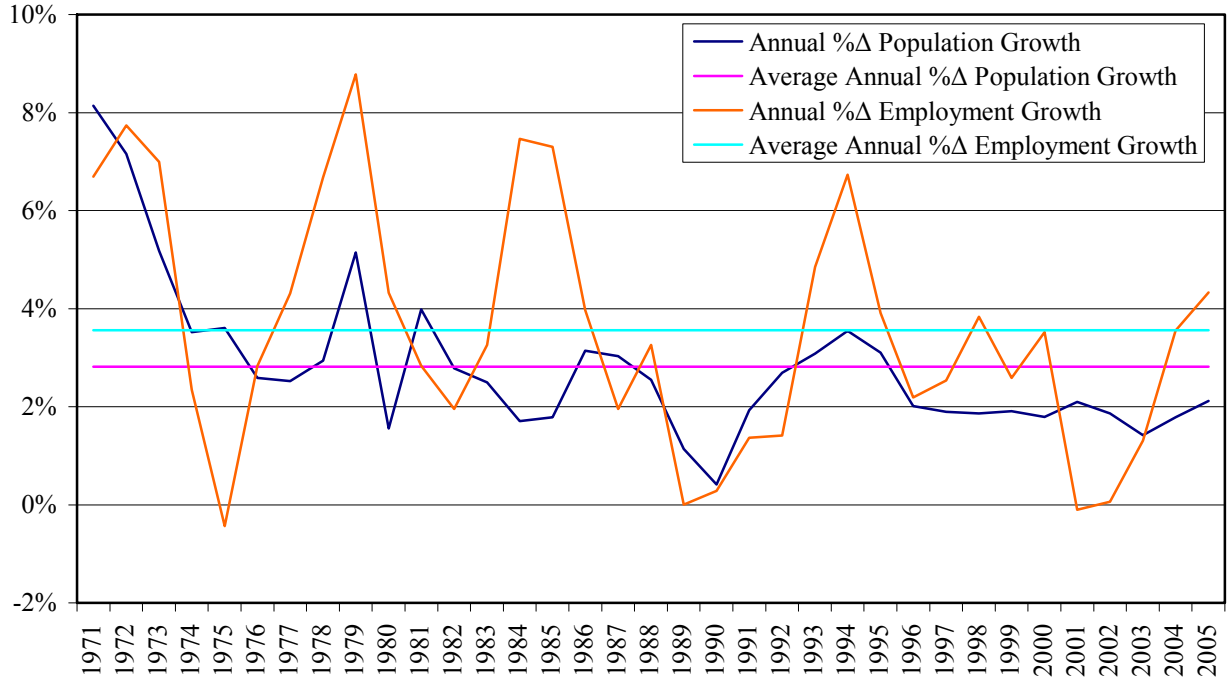
Sources: U.S. Census Bureau, Bureau of Economic Analysis

The plot of the annual percent change in Maricopa County's population and employment growth is shown in Figure 3-13. The first striking feature is the volatility of employment growth over time relative to population. The peak of employment volatility occurred in the early 1970's and became less volatile over time. The negative annual percent change in the 1970's precedes an impressive rebound with employment growing by 5 percent to 12 percent, while population growth ranged from 2 percent to 4 percent. After the 1980's, annual employment growth typically fluctuated between 0 percent and 8 percent. Average annual percent change in employment and population were approximately 4.81 percent and 3.85 percent, respectively over the thirty-five year period.

Figure 3-14 shows a similar comparison for Pima County. The volatility of the annual percent change in employment is again a standout feature. Annual growth in employment typically fluctuated between 0 percent and 8 percent with periods of increasing growth rates and declining growth rates occurring in approximately five-year cycles. Annual population growth stagnated in the mid 1990's to 2 percent, dipped with the slowdown of the early 2000's, and then trended slightly upward again. Average annual

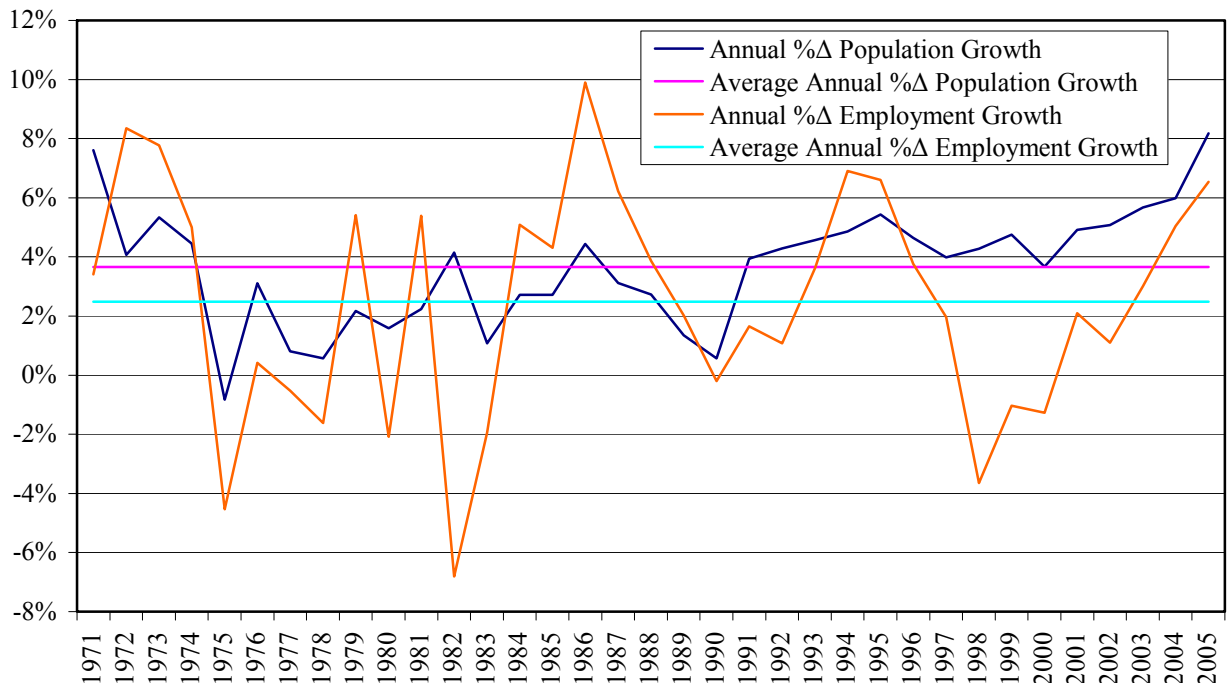
percent change in employment and population were approximately 3.56 percent and 2.8 percent, respectively over the 35-year period.

**FIGURE 3-14**  
**ANNUAL PERCENT CHANGE AND AVERAGE ANNUAL PERCENT CHANGE**  
**PIMA COUNTY**



Sources: U.S. Census Bureau, Bureau of Economic Analysis

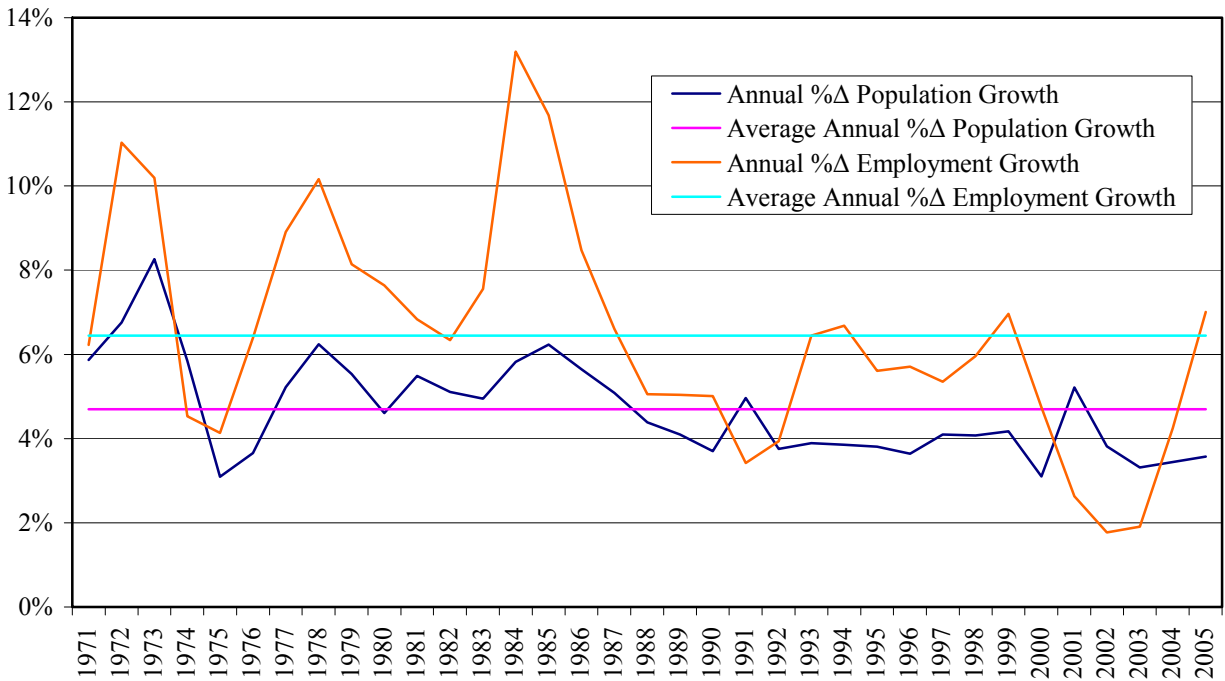
**FIGURE 3-15**  
**ANNUAL PERCENT CHANGE AND AVERAGE ANNUAL PERCENT CHANGE**  
**PINAL COUNTY**



Sources: U.S. Census Bureau, Bureau of Economic Analysis

Pinal County's experiences, as illustrated in Figure 3-15, are very different from its neighboring central counties' experiences. Volatility does not appear as bounded, with the annual percent change in employment ranging from 6 percent to -6 percent. A feature of the annual percent change in employment that is more prevalent than in Maricopa or Pima County is the magnitude of losses in employment (different from declines in growth). Pinal County typically has losses in employment during economic slowdowns. A notable exception was the brief recession of 2001. Pinal County's annual growth in population and employment has increased considerably since 2002, reflecting the emergence of the area. Average annual percent change in employment and population are approximately 2.48 percent and 3.66 percent over the thirty-five year period. The reversal in the larger average annual percent change in population rather than employment is unique among all of the other counties analyzed, including the case study counties.

**FIGURE 3-16**  
**ANNUAL PERCENT CHANGE AND AVERAGE ANNUAL PERCENT CHANGE**  
**CASE STUDY COUNTIES**



Sources: U.S. Census Bureau, Bureau of Economic Analysis

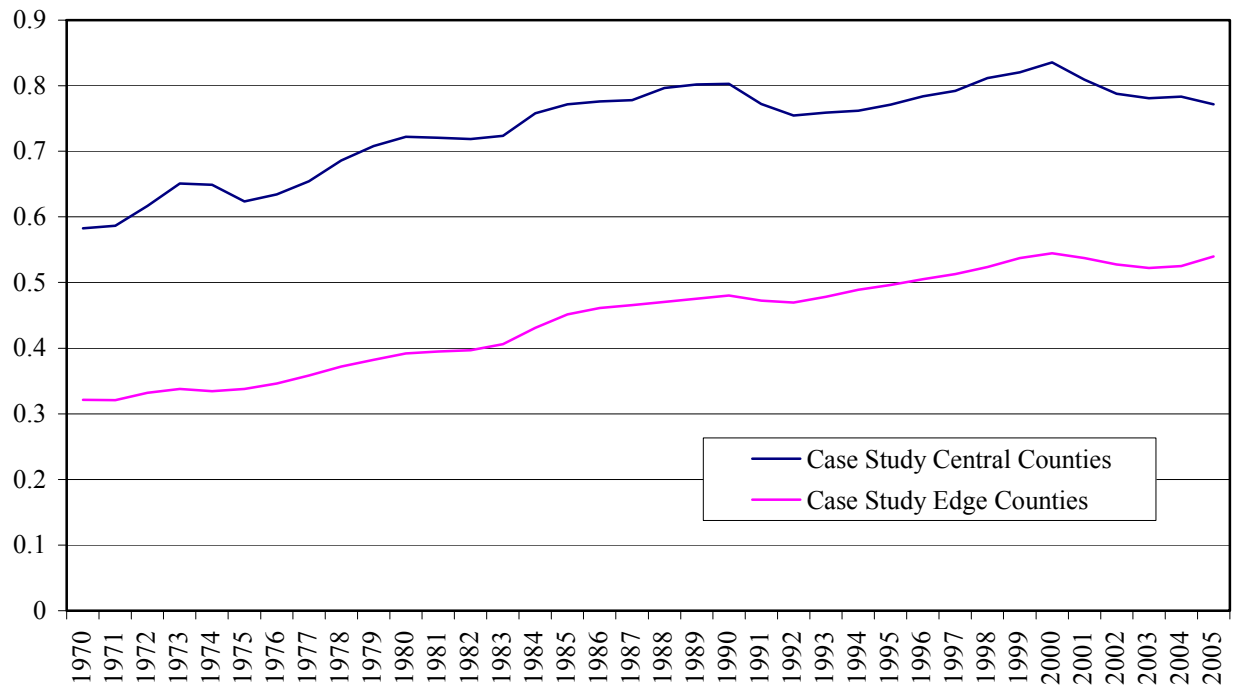
Figure 3-16 presents the average case study edge county's average growth patterns. The annual percent change in employment noticeably exceeds the annual percent change in population. The volatility of annual population growth subsides over time and coincides with lower annual employment growth and volatility. In comparison to the tri-county area, the case study county's average growth patterns more closely resemble Maricopa County's growth patterns. Positive and negative swings in population growth are closely followed by similar swings in employment growth. Average annual percent change in employment and population since 1970 among the case study counties are approximately 6.44 percent and 4.70 percent, respectively. The examination of the annual percent change in employment and population corroborates the earlier findings. Employment growth dominates population growth over time in emerging counties.

## 4.0 EMPLOYMENT-TO-POPULATION RATIOS

The purpose of this section is to present how employment-to-population ratios have been trending over time in case study edge counties, case study central counties, and in the tri-county study area. The experiences of the case study counties lead to the development of an outlook for Pinal County.

Table 4-1 presents average employment-to-population ratios for case study edge counties and case study central counties, as well as the corresponding ratios for the tri-county study area. The trends in per capita employment coincide with inferences made from an assessment of case study edge county total population and employment trends, indices, and annual percent changes: employment growth exceeds population growth hence, the employment per capita ratio increases over time. Moreover, the trend for the edge case study county average is more robust over time than the central county's average trend. The range of average change in the per capita ratio for central counties (case study central counties and Maricopa and Pima Counties) is 3.75 percent to 4.77 percent. Case study edge counties have the largest average five-year change at 7.85 percent, while Pinal County's average five year change in the per capita employment ratio has been negative at -5.46 percent.

**FIGURE 4-1**  
**AVERAGE EMPLOYMENT-TO-POPULATION RATIOS**  
**CASE STUDY CENTRAL AND EDGE COUNTIES**



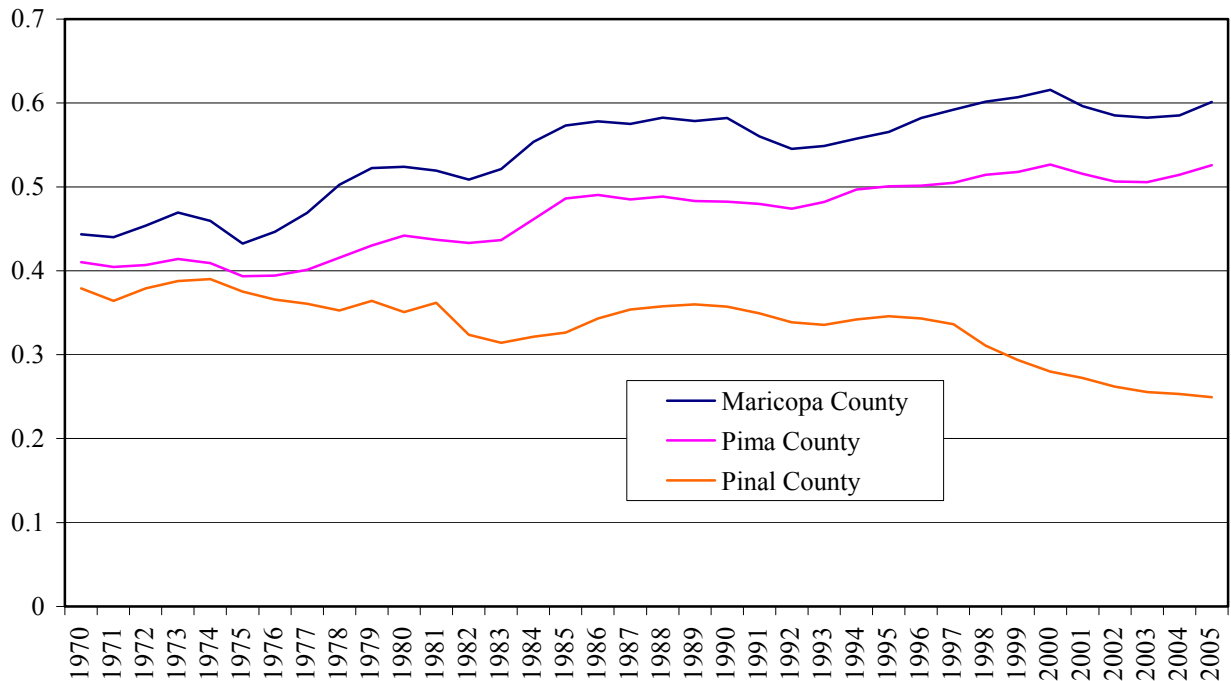
Sources: U.S. Census Bureau, Bureau of Economic Analysis

Figures 4-1 and 4-2 illustrate these trends. The first graph shows both edge and central counties' ratios trending higher over time. The trends exhibit expected vulnerability during periods of economic slowdowns. The distance between the two series declines slightly over time. Over the thirty-five year period, the case study edge counties' ratio approximates where case study central counties' ratio began. The second graph is equally powerful. Maricopa County's employment-to-population ratio, though below the average for the case study central counties, is the strongest among the tri-county study region.

Maricopa County’s trend is similar to the central county’s average trend in terms of volatility over time; with similar declines during economic slowdowns. Pima County’s ratio is a scaled down version of Maricopa’s ratio, while Pinal County’s ratio over time is very different.

The variance among case study edge county employment-to-population ratios has increased over time (Table 4-2). In 1970, the edge counties had an employment-to-population ratio ranging from 0.24 to 0.38. By 2005, the range increased to 0.37 to 0.77. Denton County, Texas, was close to average in 1970 at 0.35, but rose very little leaving it with the lowest ratio in 2005 at 0.37. Arapahoe County, Colorado was slightly below average in 1970 at 0.31, but in 2005 it had the highest ratio at 0.77. The tri-county study area also experienced an increase in the range of ratios. In 1970, ratios for Maricopa, Pima, and Pinal Counties ranged from 0.38 to 0.44. By 2005, the range increased to 0.25 to 0.60. Maricopa County had a ratio of 0.44 in 1970 and 0.60 in 2005, the highest in the tri-county area over the thirty-five year period. Pinal County had a ratio of 0.38 in 1970 but fell to 0.25 in 2005, the lowest in the tri-county area over the thirty-five year period.

**FIGURE 4-2**  
**EMPLOYMENT-TO-POPULATION RATIOS**  
**TRI-COUNTY STUDY AREA**



Sources: U.S. Census Bureau, Bureau of Economic Analysis

Pinal County’s employment-to-population ratio, although similar to Maricopa and Pima counties in the beginning, declined markedly over time, as shown in Figure 4-1. Also, slowdowns appear to affect the ratio in Pinal County more adversely than any other county in the study. Indeed, the appreciation in Maricopa and Pima Counties’ ratio after the slowdown of the early 1980’s did not translate into a robust appreciation in Pinal County’s ratio. For the remainder of the 1980’s and the first half of the 1990’s, Pinal County’s ratio hovered between 0.32 and 0.36. Strong economic growth in the 1990’s did not induce a rise in Pinal County’s ratio either in fact just the opposite happened. From 1995 onward, Pinal County’s ratio declined precipitously due to very rapid population growth, even as other counties’ ratios were appreciating significantly. From 1995 to 2005, the employment-to-population ratio declined from 0.35 to 0.25.

**TABLE 4-1**  
**EMPLOYMENT-TO-POPULATION RATIOS**  
**1970-2005**

Year	Case Study Counties					Tri-County Study Area					
	Central Counties		Edge Counties			Maricopa		Pima		Pinal	
	Ratio	Percent Change	Ratio	Percent Change	Ratio	Percent Change	Ratio	Percent Change	Ratio	Percent Change	
1970	0.583	-	0.321	-	0.443	-	0.410	-	0.379	-	
1975	0.624	7.02%	0.338	5.18%	0.432	-2.52%	0.393	-4.13%	0.375	-0.95%	
1980	0.722	15.84%	0.392	15.98%	0.524	21.20%	0.442	12.32%	0.351	-6.51%	
1985	0.772	6.87%	0.452	15.20%	0.573	9.36%	0.486	10.08%	0.326	-7.02%	
1990	0.803	4.05%	0.480	6.40%	0.582	1.63%	0.482	-0.80%	0.357	9.48%	
1995	0.771	-3.99%	0.496	3.26%	0.566	-2.86%	0.501	3.79%	0.346	-3.16%	
2000	0.835	8.33%	0.545	9.78%	0.616	8.88%	0.527	5.20%	0.280	-19.15%	
2005	0.772	-7.60%	0.540	-0.87%	0.601	-2.33%	0.526	-0.20%	0.249	-10.91%	
Average		4.36%		7.85%		4.77%		3.75%		-5.46%	

Source: U.S. Census Bureau, Bureau of Economic Analysis

**TABLE 4-2**  
**EMPLOYMENT-TO-POPULATION RATIOS**  
**1970-2005**

YEAR	Texas		Georgia			Colorado		Florida	California		Average
	Collin	Denton	Cobb	DeKalb	Gwinnett	Adams	Arapahoe	Seminole	San Bernardino	Riverside	
<b>TOTAL:</b>											
1970	0.276	0.349	0.380	0.370	0.242	0.265	0.314	0.280	0.363	0.375	0.321
1975	0.266	0.335	0.353	0.366	0.272	0.343	0.409	0.277	0.381	0.377	0.338
1980	0.271	0.358	0.414	0.521	0.354	0.407	0.466	0.344	0.387	0.399	0.392
1985	0.371	0.366	0.516	0.627	0.473	0.423	0.545	0.415	0.390	0.390	0.452
1990	0.444	0.363	0.557	0.640	0.518	0.462	0.614	0.425	0.392	0.389	0.480
1995	0.459	0.380	0.602	0.610	0.571	0.482	0.675	0.432	0.377	0.374	0.496
2000	0.504	0.380	0.651	0.622	0.599	0.522	0.805	0.511	0.422	0.429	0.545
2005	0.542	0.367	0.637	0.598	0.534	0.522	0.769	0.565	0.435	0.429	0.540
<b>PERCENT CHANGE:</b>											
1970	-	-	-	-	-	-	-	-	-	-	-
1975	-3.43%	-4.04%	-6.95%	-1.02%	12.52%	29.50%	30.24%	-1.07%	5.04%	0.43%	6.12%
1980	1.68%	7.07%	17.17%	42.16%	30.04%	18.48%	13.94%	23.95%	1.45%	6.03%	16.20%
1985	36.96%	2.15%	24.62%	20.36%	33.56%	4.10%	16.98%	20.81%	0.90%	-2.37%	15.81%
1990	19.89%	-0.86%	7.98%	2.09%	9.46%	9.07%	12.83%	2.45%	0.39%	-0.09%	6.32%
1995	3.20%	4.81%	8.06%	-4.74%	10.28%	4.52%	9.81%	1.52%	-3.79%	-4.00%	2.97%
2000	9.92%	-0.08%	8.26%	2.01%	4.98%	8.25%	19.24%	18.41%	12.12%	14.64%	9.78%
2005	7.56%	-3.37%	-2.17%	-3.93%	-10.87%	-0.14%	-4.39%	10.62%	2.91%	0.13%	-0.36%

Source: U.S. Census Bureau, Bureau of Economic Analysis, Bureau of Labor Statistics

**TABLE 4-3**  
**EMPLOYMENT-TO-POPULATION RATIO OUTLOOK**  
**PINAL COUNTY**

Year	Ratio
2005	0.249
2010	0.269
2015	0.290
2020	0.312
2025	0.337
2030	0.363
2035	0.392
2040	0.423
2045	0.456
2050	0.492

Source: Applied Economics 2008

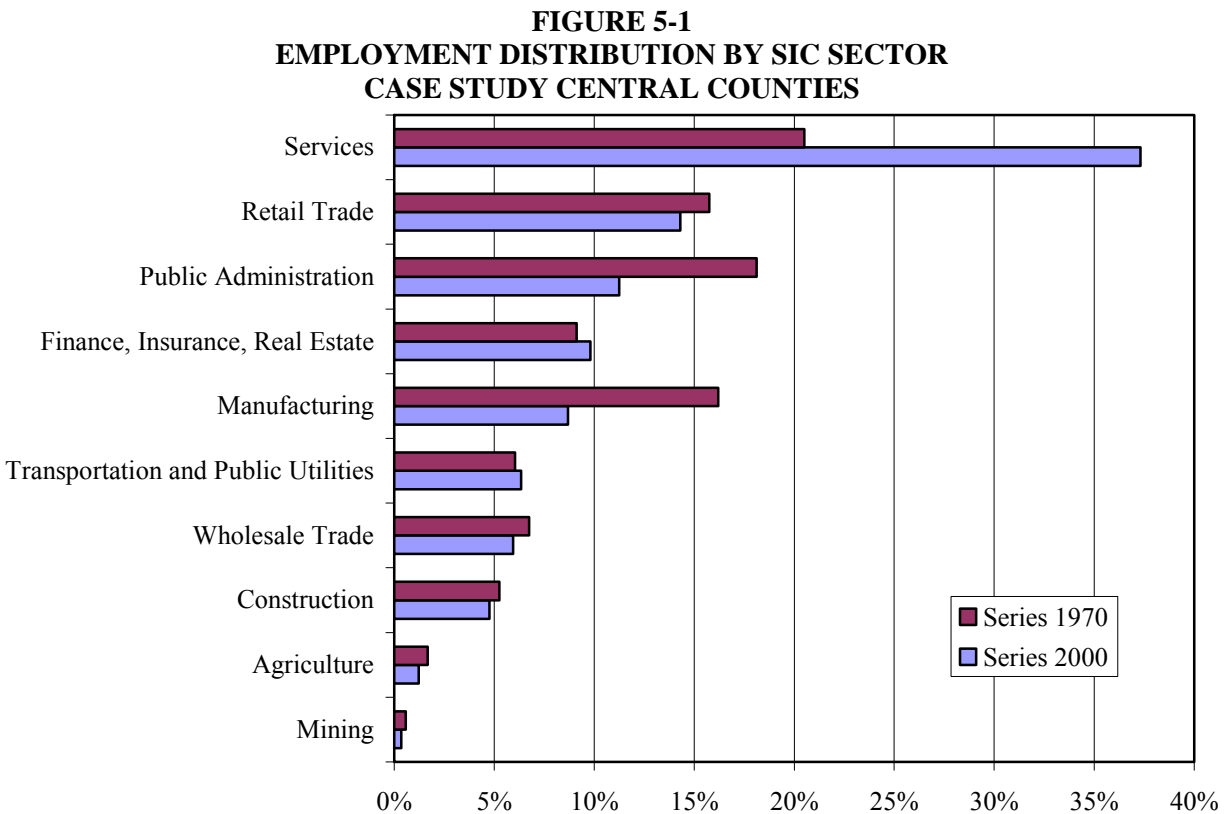
This research indicates that Pinal County’s employment per capita ratio will likely appreciate over time as urbanization drives greater employment growth. Table 4-3 displays data for the projected change that could take place in Pinal County’s per capita ratio over time, based on the experiences of the case study edge counties. Based on the experiences in case study areas, growth in the employment-to-population ratio is reasonably expected to rise approximately 7.85 percent every five years. This would result in the employment-to-population ratio for Pinal County increasing from about 0.25 in 2005 to about 0.49 by 2050.

## 5.0 ECONOMIC STRUCTURE

The purpose of this section is to examine the industrial structure of the economies of the case study counties and the tri-county area to observe how changes in economic structure, employment and population growth coincide. Employment is broken down by SIC sector, NAICS sector, and by basic and non-basic categories to assess change occurring in the study areas.

### 5.1 SIC Industry Trends

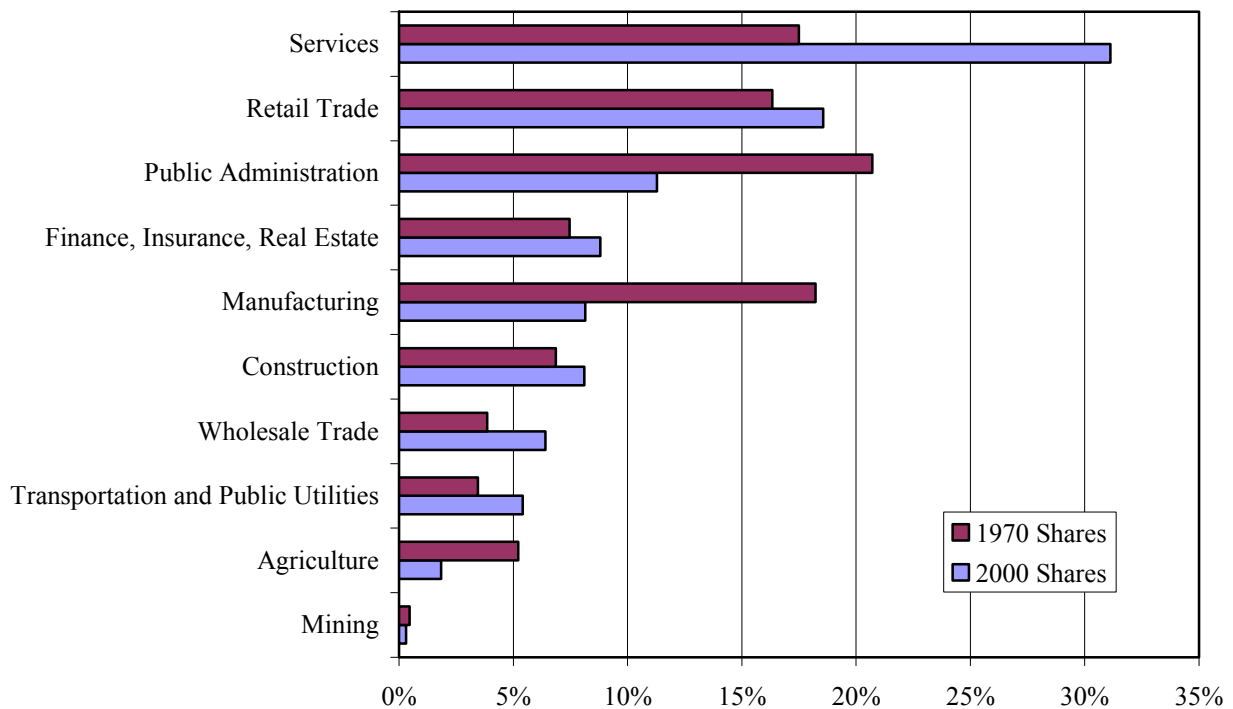
Figure 5-1 illustrates the change in case study central counties SIC-based sector share of employment from 1970 to 2000. Public administration and manufacturing sectors experienced large declines in their shares of employment, while services increased. Finance related industries, retail trade, wholesale trade, transportation and public utilities, and construction experienced only minor increases or declines. Mining and agriculture remained very small shares of total employment.



Source: Bureau of Economic Analysis, Bureau of Labor Statistics

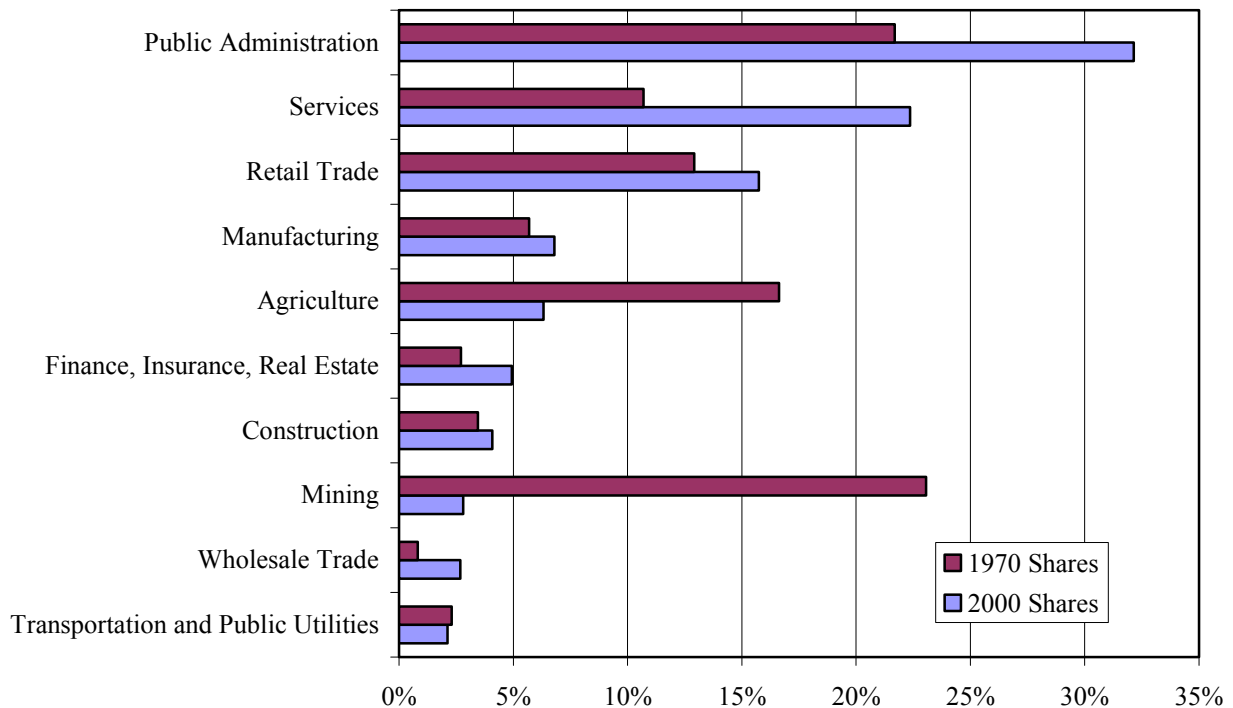
The change in the economic structure of the case study edge counties economic structure is similar. Figure 5-2 demonstrates that in 1970 the edge counties were predominantly manufacturing and public administration based. Construction and retail trade, fueled by urbanization, grew. However, thirty years later their structure resembles the central county’s average structure. By 2000, the rise in the service sector at the expense of manufacturing is obvious. However, public administration also declined. Finance related industries, wholesale trade, and transportation and public utilities increased, approaching central county percentages. Construction and retail trade remained higher than central county averages. Predictably, the mining and agricultural sectors in edge counties declined as a share of total employment, much more closely resembling the economic structure of the case study central counties.

**FIGURE 5-2  
EMPLOYMENT DISTRIBUTION BY SIC SECTOR  
CASE STUDY EDGE COUNTIES**



Source: Bureau of Economic Analysis, Bureau of Labor Statistics

**FIGURE 5-3  
EMPLOYMENT DISTRIBUTION BY SIC SECTOR  
PINAL COUNTY**



Source: Bureau of Economic Analysis, Bureau of Labor Statistics

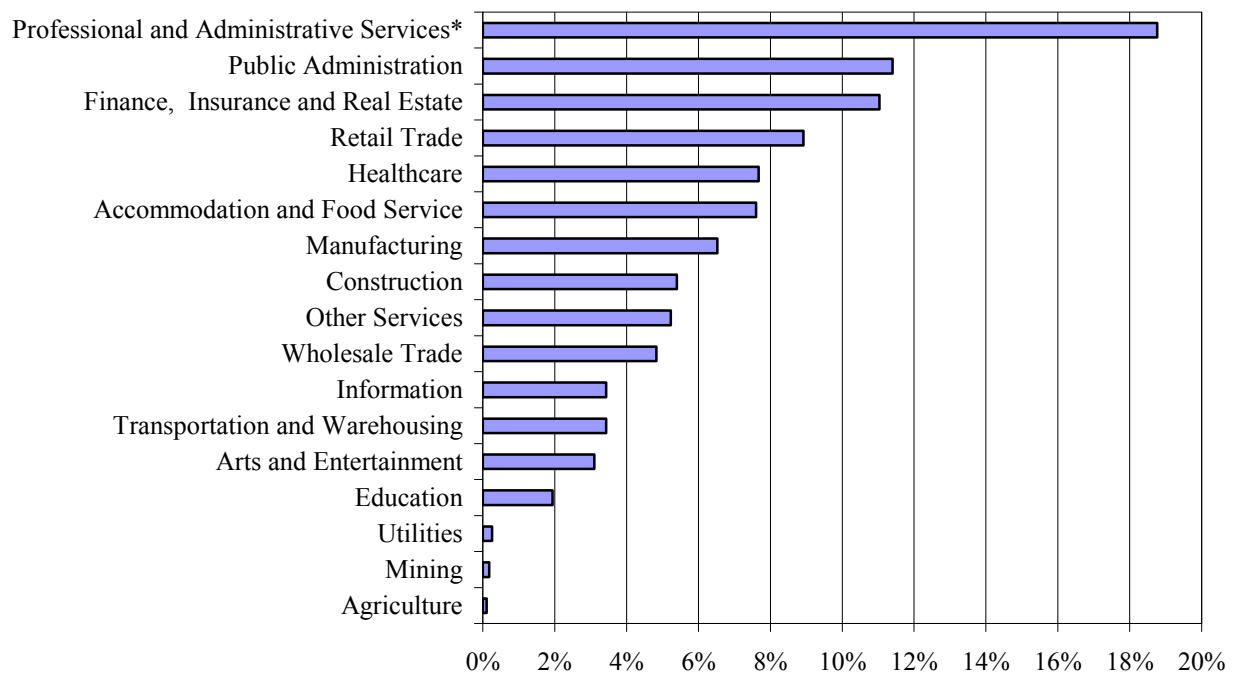
Figure 5-3 exhibits Pinal County’s employment distribution. In 1970, the county was rural and employment in mining and agriculture accounted for over a third of total employment. Public administration and retail trade also accounted for over a third of employment. Services and manufacturing sectors remained small features of the economy. Thirty years later, mining and farming account for a little more than 5percent of total employment. Public administration, services, and retail trade account for two-thirds of all employment within the county. Other industries have seen small increases in share of employment. If Pinal County’s future mirrors the case study edge counties, we would expect to see Public Administration decline as a percent of total employment. We would also expect the Finance, Insurance and Real Estate, Wholesale Trade and Transportation sectors of the economy to expand significantly.

## 5.2 NAICS Industry Trends

NAICS sector share data provides a refined look at the industries that comprise the economies of study area and case study counties. Main components of SIC sectors are considered as separate industries using NAICS. NAICS sector definitions include more detail within services and include the information sector that was not defined by the SIC system. However, there does not exist a one-to-one relationship between certain SIC sectors and NAICS sectors, so it is not possible to directly compare to earlier data for all sectors.

Figure 5-4 illustrates central county sector shares for 2005. Similar to SIC data from Figure 5-2, Public Administration makes up slightly more than 10 percent of employment, much less than in Pinal County currently. The industries dominating the central county average include Professional, Scientific, and Technical Services; Retail Trade; Administrative Support; Waste Management and Remediation Services; Healthcare and Social Assistance; and Accommodation and Food Services. Utilities, mining, and agriculture are all small fractions of total employment. A striking feature of the central county average economy is its industrial diversification.

**FIGURE 5-4  
EMPLOYMENT DISTRIBUTION BY NAICS SECTOR 2005  
CASE STUDY CENTRAL COUNTIES**

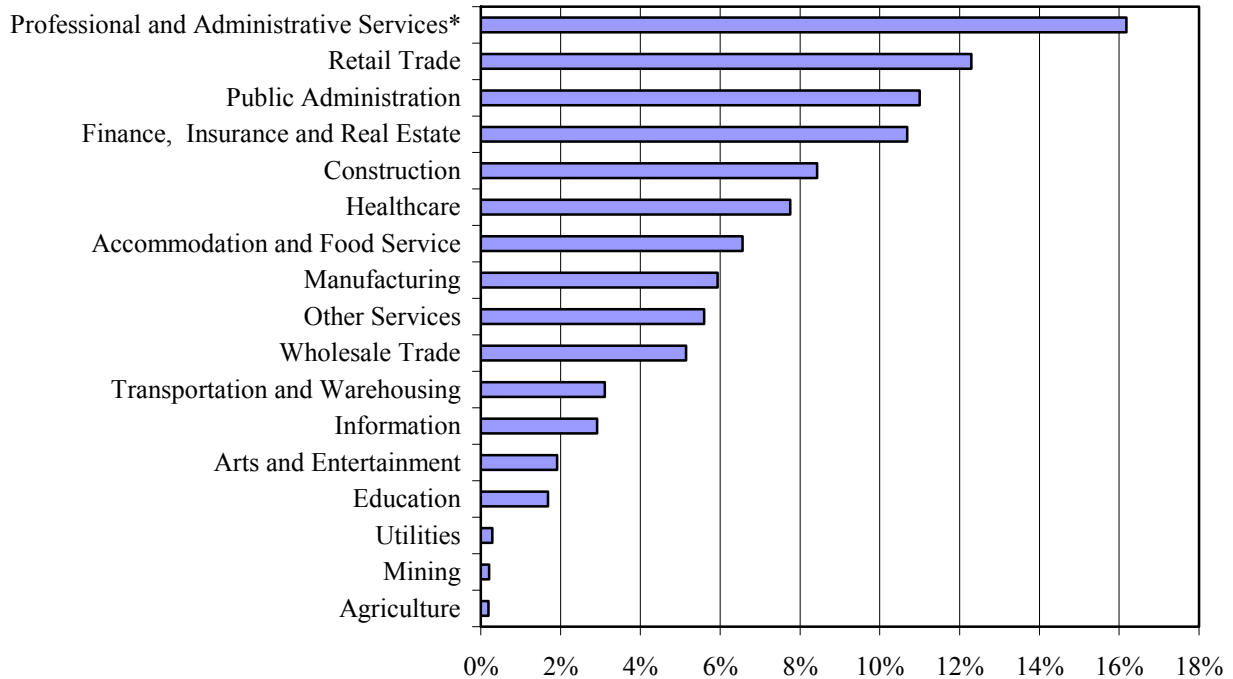


Sources: Bureau of Economic Analysis, Bureau of Labor Statistics

\*Includes professional and scientific services, administrative support and management services.

Figure 5-5 displays the edge county's average sector share, which is similar to the central county's average. Sectors figuring to play key roles in an area transforming from suburban to urban such as Construction and Retail Trade are more prominent in Figure 5-5 than in Figure 5-4. SIC 1970 and 2000 data illustrated that over time the sectors shares of total employment in edge counties adjusted to a distribution similar to central counties. These figures reinforce that finding.

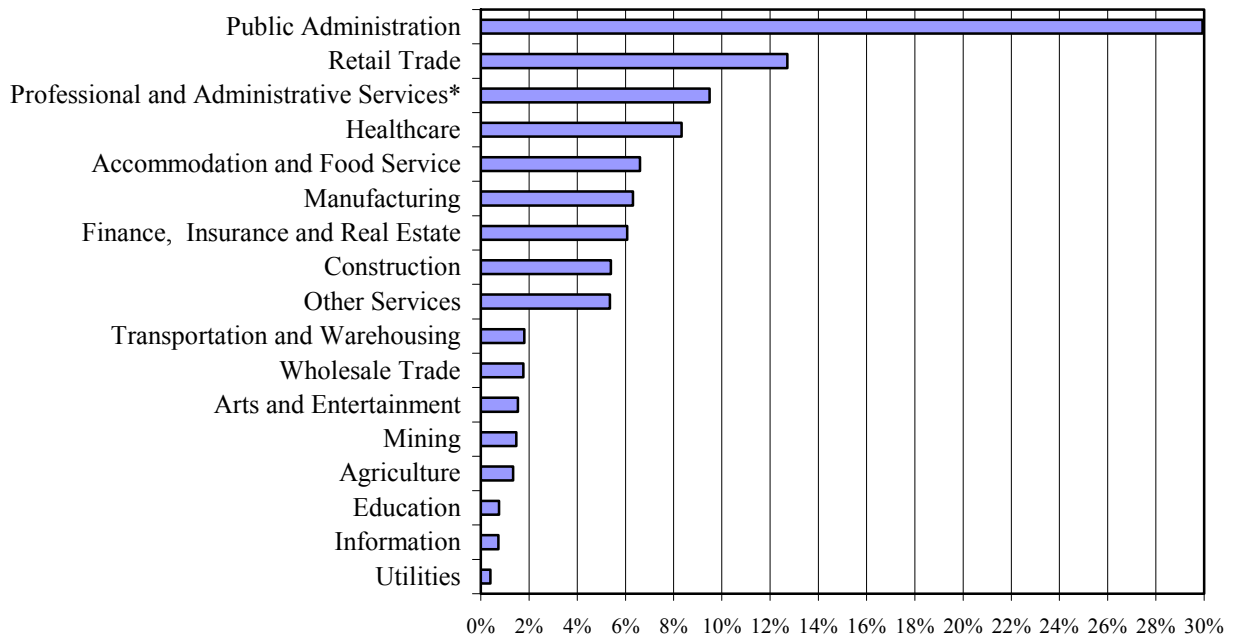
**FIGURE 5-5  
EMPLOYMENT DISTRIBUTION BY NAICS SECTOR 2005  
CASE STUDY EDGE COUNTIES**



Sources: Bureau of Economic Analysis, Bureau of Labor Statistics

\*Includes professional and scientific services, administrative support and management services.

**FIGURE 5-6  
EMPLOYMENT DISTRIBUTION BY NAICS SECTOR 2005  
PINAL COUNTY**



Sources: Bureau of Economic Analysis, Bureau of Labor Statistics

\*Includes professional and scientific services, administrative support and management service

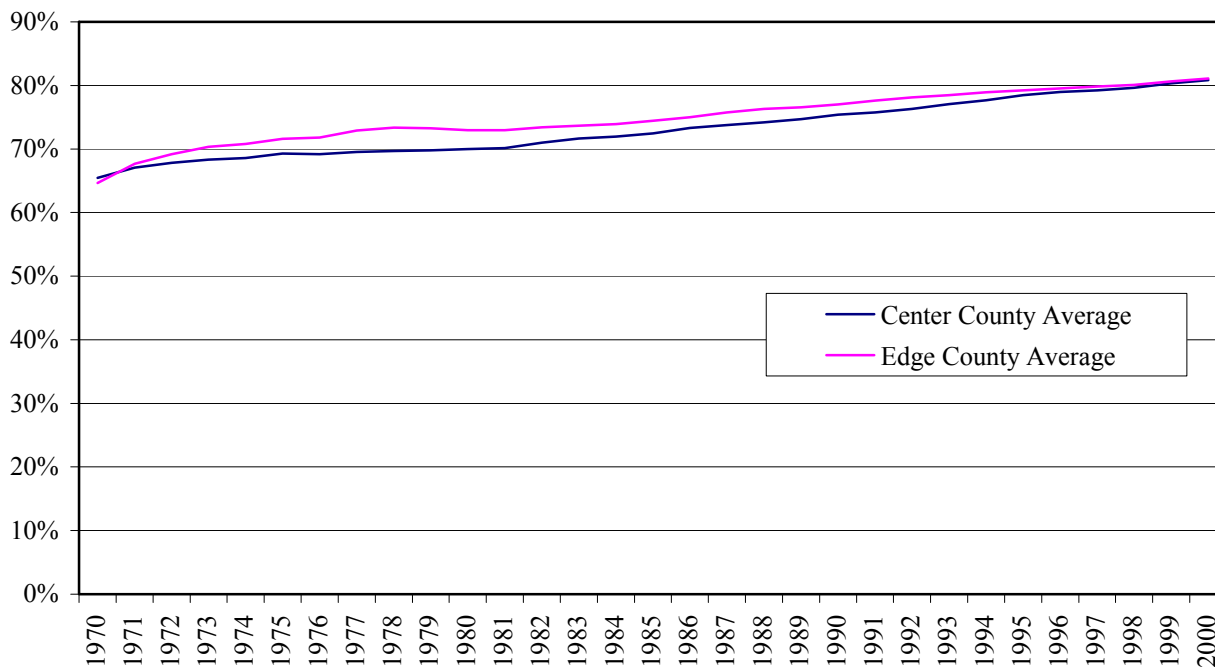
Pinal County’s employment distribution is, as with earlier SIC data, very different from the typical now more developed edge county. Figure 5-6 shows the most significant sector is Public Administration, a result dependent upon large government land ownership and management (State and Bureau of Land Management). It appears there has been little change in the distribution of employment across sectors since 2000, however the case studies suggest that the distribution will change significantly as Pinal County grows.

### 5.3 Basic and Non-Basic Employment

The average edge county experience suggests Pinal County’s employment-to-population ratio will become more balanced over time, possibly outstripping the pace seen in Maricopa and Pima Counties. Moreover, the distribution of employment by sector should begin to approximate the distribution seen in the case-study edge counties. The question is how will the change over time affect the share of basic and non-basic employment within the economy?

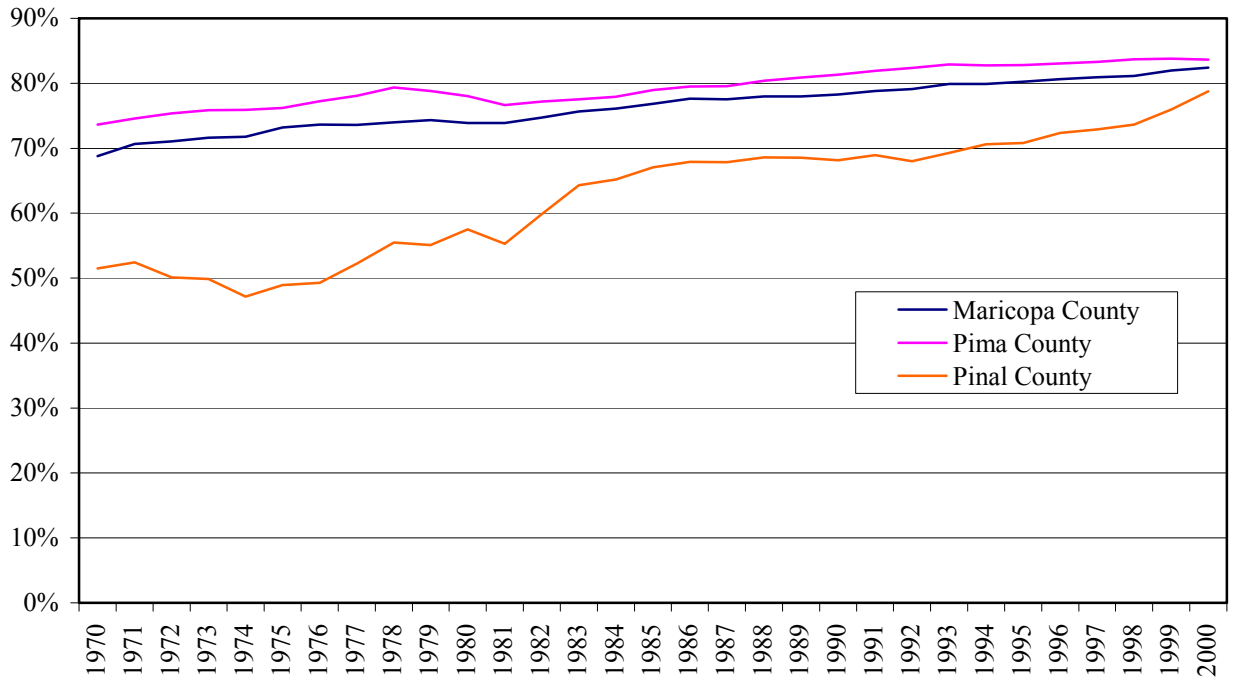
Figure 5-7 details the change in basic and non-basic industry shares in case study center and edge counties. For this analysis, Agriculture/Farming, Mining, Utilities, Manufacturing, Wholesale Trade, and Federal/State Government were classified as basic, while all other sectors were classified as non-basic. Figure 5-7 shows that the trend of the both sets of case study counties that is very similar. In 1970, nearly two-thirds of their economies were non-basic, increasing over time to four-fifths non-basic. The culprit of the major decline in basic industry was the loss in the manufacturing and simultaneous gain in the service sectors across all counties.

**FIGURE 5-7  
NON-BASIC EMPLOYMENT-TO-TOTAL EMPLOYMENT RATIO  
CASE STUDY COUNTIES**



Sources: Bureau of Economic Analysis, Bureau of Labor Statistics

**FIGURE 5-8  
NON-BASIC EMPLOYMENT-TO-TOTAL EMPLOYMENT RATIO  
TRI-COUNTY STUDY AREA**

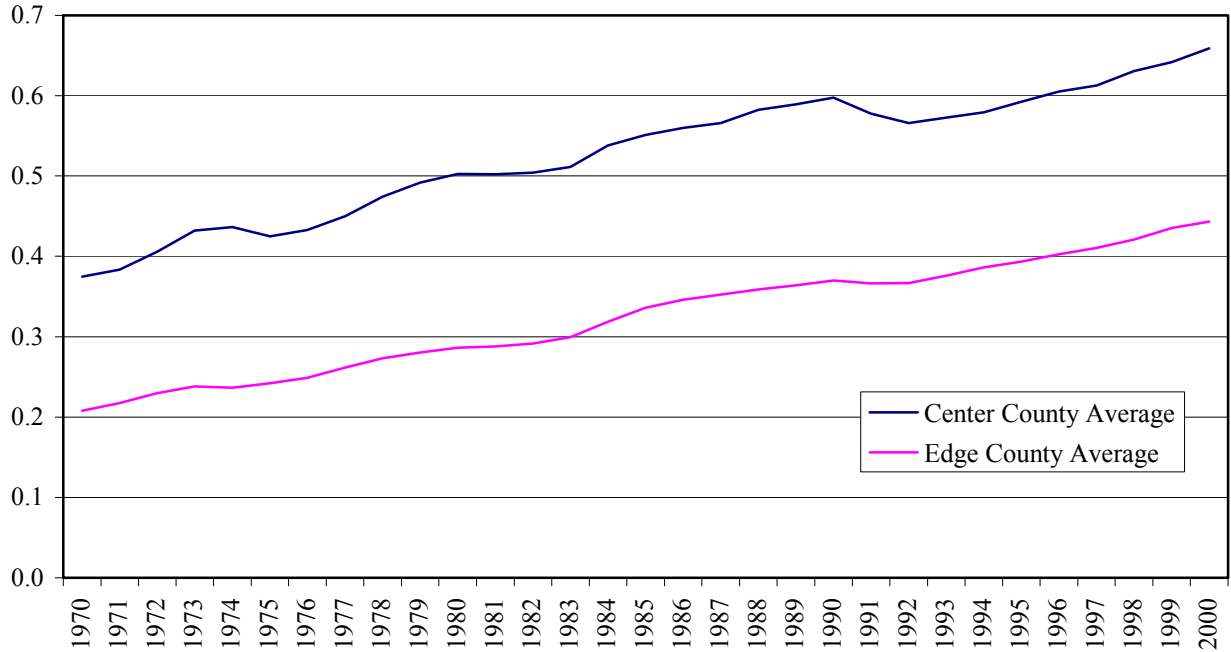


Sources: Bureau of Economic Analysis, Bureau of Labor Statistics

The trend in basic versus non-basic employment is similar in Pima and Maricopa Counties. Non-Basic employment slowly trends upward over time with approximately 80 percent of employment allocated to non-basic industries in 2000. Pinal County's experience, the result of the county's burgeoning urbanization, is different from the average edge county. While the case study counties had strong manufacturing sectors in 1970, Pinal County's economy was dominated by mining. The precipitous decline in basic industries in Pinal County, led by the mining sector, left basic sectors with only about a 20 percent share of total employment, compared to a high of just over 50 percent in the early to mid 1970's.

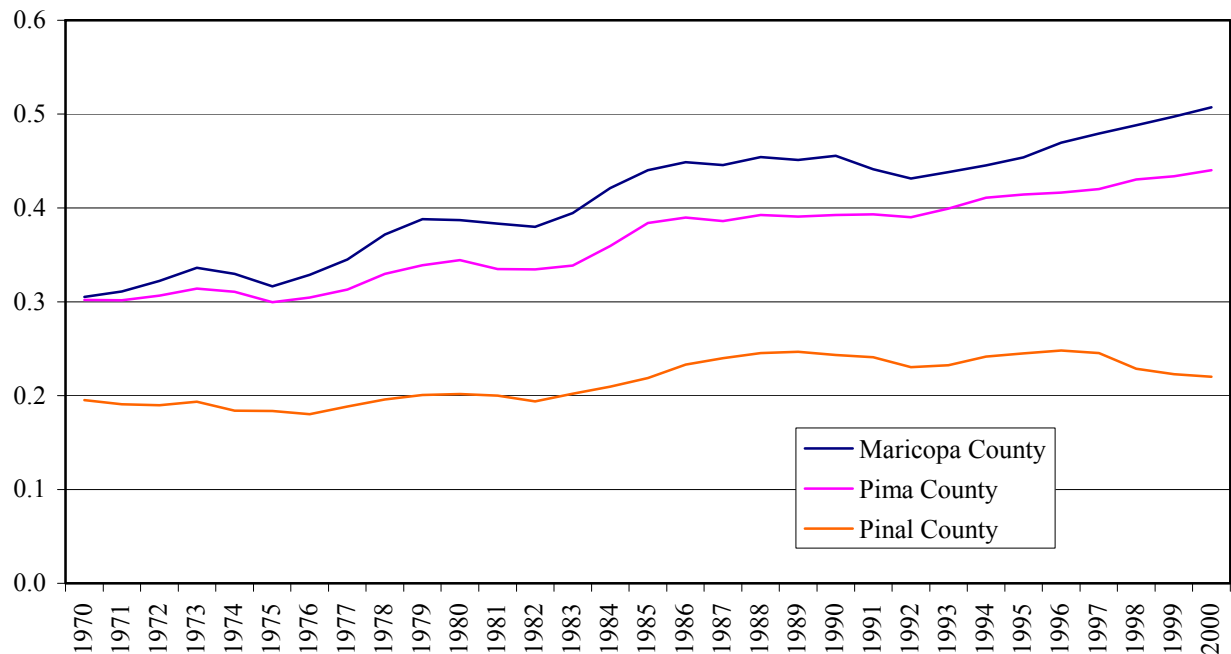
While the global factors that caused the manufacturing sector to decline nationwide were different than the causes for decline in the mining industry, the net result for Pinal County in 2005 is the same. However, Pinal County's economy has not shown growth in finance related industries, professional and administrative services, or construction the way the other edge counties have, and public administration remains a larger than average share of the total. The case study evidence suggests that the increase in non-basic employment share is likely to continue as the area develops, although the mix of employment by non-basic sector may change.

**FIGURE 5-9  
NON-BASIC EMPLOYMENT-TO-POPULATION RATIO  
CASE STUDY COUNTIES**



Sources: U.S. Census Bureau, Bureau of Economic Analysis, Bureau of Labor Statistics

**FIGURE 5-10  
NON-BASIC EMPLOYMENT-TO-POPULATION RATIO  
TRI-COUNTY STUDY AREA**



Sources: U.S. Census Bureau, Bureau of Economic Analysis, Bureau of Labor Statistics

Case study central and edge counties' non-basic employment-to-population ratios are depicted above. As with the employment-to-population ratios in Figure 4-1, edge counties exhibit a similar upward linear trend that mimics the behavior of the center counties. The center county average begins at 0.37 in 1970 and rises to 0.66 in 2000, an average five-year gain of just above 10 percent (Table 5-1). The edge county average began at approximately 0.21 in 1970, increasing to 0.44 in 2000. Growth in the non-basic employment-to-population ratio in the edge counties was more robust, with an the average five-year change in the ratio of 13.53 percent.

Dispersion in the range of non-basic employment-to-population ratios has increased over time. In 1970, the edge counties had a non-basic employment-to-population ratio ranging from 0.15 to 0.25. By 2005, the range had increased to 0.31 to 0.71. Gwinnett County, Georgia, a high growth county, had the lowest ratio in 1970 at 0.15, but in 2000 its ratio was very close to the average. Arapahoe County, Colorado was slightly below average in 1970 at 0.20, but in 2000 it had the highest ratio at 0.71. The experience in the tri-county study area has been similar; the range in 1970 was 0.20 to 0.30 and increased by 2005 to 0.22 to 0.51. Maricopa County maintained the highest ratio over the entire period, from 0.31 in 1970 to 0.51 in 2005. Pinal County's ratios were the lowest throughout the period and changed the least, from 0.20 in 1970 to 0.22 in 2000.

**TABLE 5-1  
NON-BASIC EMPLOYMENT-TO-POPULATION RATIOS  
1970 - 2000**

Year	Case Study Counties				Tri-County Study Area					
	Center Counties		Edge Counties		Maricopa		Pima		Pinal	
	Ratio	Percent Change	Ratio	Percent Change	Ratio	Percent Change	Ratio	Percent Change	Ratio	Percent Change
1970	0.374	-	0.208	-	0.305	-	0.302	-	0.195	-
1975	0.425	13.48%	0.242	16.35%	0.316	3.69%	0.300	-0.78%	0.184	-5.85%
1980	0.502	18.21%	0.286	18.30%	0.387	22.38%	0.345	14.99%	0.202	9.85%
1985	0.551	9.71%	0.336	17.47%	0.440	13.74%	0.384	11.41%	0.219	8.48%
1990	0.598	8.41%	0.370	10.08%	0.456	3.54%	0.392	2.23%	0.243	11.22%
1995	0.592	-0.84%	0.394	6.33%	0.454	-0.43%	0.414	5.63%	0.245	0.64%
2000	0.659	11.23%	0.443	12.63%	0.507	11.79%	0.440	6.25%	0.220	-10.08%
Average		10.03%		13.53%		9.12%		6.62%		2.38%

Source: U.S. Census Bureau, Bureau of Economic Analysis

**TABLE 5-2  
NON-BASIC EMPLOYMENT-TO-POPULATION RATIOS  
1970 - 2000**

Year	Texas		Georgia			Colorado		Florida	California		Average
	Collin	Denton	Cobb	DeKalb	Gwinnett	Adams	Arapahoe	Seminole	San Bernardino	Riverside	
<b>TOTAL:</b>											
1970	0.172	0.253	0.201	0.253	0.146	0.166	0.201	0.196	0.239	0.252	0.208
1975	0.185	0.254	0.259	0.265	0.181	0.225	0.302	0.220	0.262	0.266	0.242
1980	0.197	0.268	0.309	0.377	0.235	0.276	0.356	0.264	0.282	0.298	0.286
1985	0.272	0.273	0.375	0.465	0.320	0.300	0.438	0.332	0.289	0.297	0.336
1990	0.339	0.282	0.429	0.494	0.355	0.336	0.509	0.350	0.299	0.308	0.370
1995	0.364	0.301	0.480	0.485	0.409	0.364	0.576	0.362	0.294	0.299	0.394
2000	0.413	0.310	0.531	0.508	0.442	0.405	0.709	0.436	0.332	0.348	0.443
<b>PERCENT CHANGE:</b>											
1970	-	-	-	-	-	-	-	-	-	-	-
1975	7.92%	0.41%	28.89%	4.67%	23.72%	35.45%	50.50%	12.20%	9.64%	5.33%	17.87%
1980	6.19%	5.45%	19.22%	42.24%	29.85%	22.52%	18.03%	19.88%	7.67%	12.27%	18.33%
1985	38.51%	2.09%	21.34%	23.32%	35.94%	8.90%	22.85%	25.91%	2.44%	-0.34%	18.10%
1990	24.52%	3.21%	14.44%	6.41%	10.86%	11.70%	16.15%	5.25%	3.58%	3.78%	9.99%
1995	7.45%	6.58%	12.00%	-1.84%	15.43%	8.43%	13.31%	3.48%	-1.64%	-3.18%	6.00%
2000	13.28%	2.90%	10.57%	4.64%	7.95%	11.20%	23.00%	20.40%	12.91%	16.42%	12.33%

Source: U.S. Census Bureau, Bureau of Economic Analysis, Bureau of Labor Statistics