

Urban and Rural Differentiation and Variation in Missouri

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Differentiation of Urban and Rural Areas

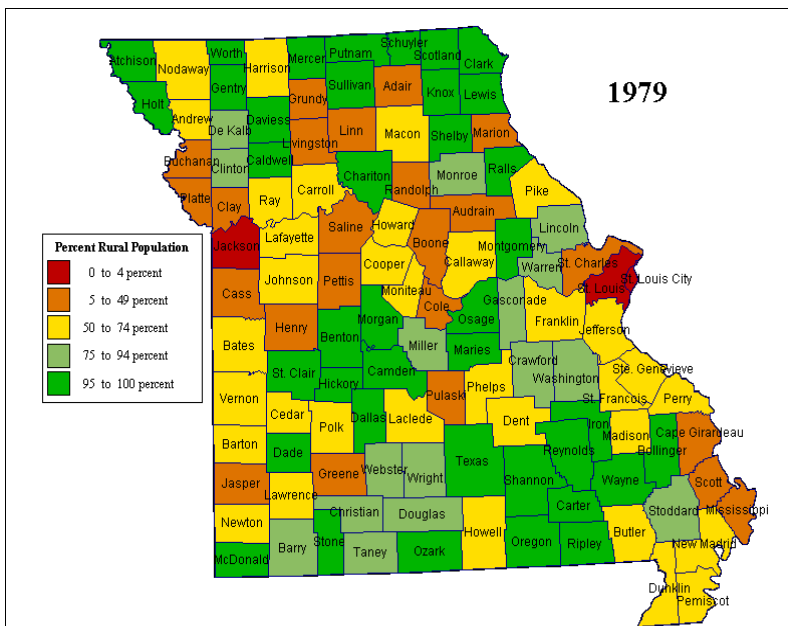
This report examines patterns of variation in urban and rural population, employment, and income in Missouri, both in terms of geographic variation, by county, and over time, between 1979 and 1996. Such an effort necessarily must begin with a systematic method of differentiation between areas characterized as urban, and those characterized as rural. Given the constraints of this reporting format and that the scope of our study encompasses the entire state, we have settled on the county as the lowest feasible level of geographic analysis. The next step is to develop a strategy for the characterization of individual counties as (more or less) urban or rural. For this, we turn to the Census Bureau's definition of urban and rural areas.

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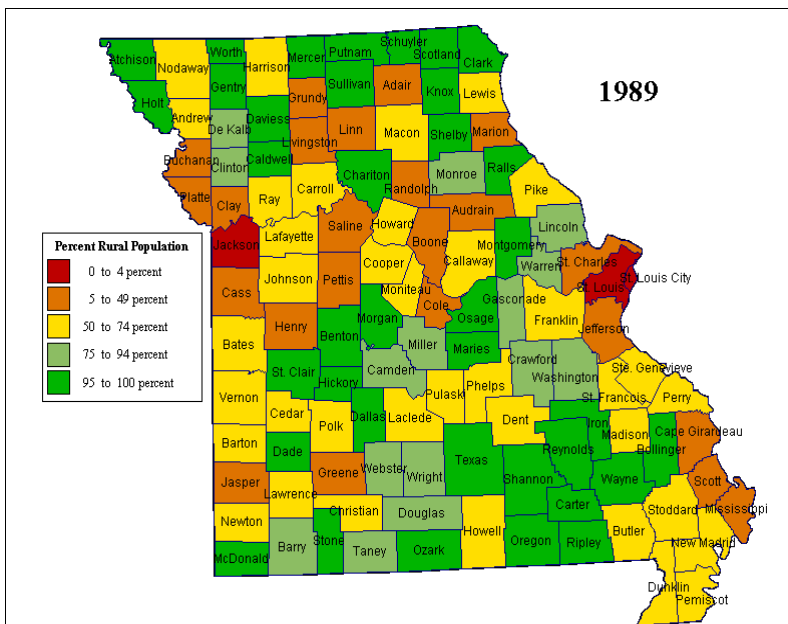
The Census Bureau classifies urban and rural areas in the following way: *Urbanized Areas* are defined as central places with a population of at least 50,000, together with (more or less) contiguous territory having a population density of at least 1000 persons per square mile. *Urban* is defined as Urbanized Areas plus other places outside Urbanized Areas with a population of at least 2,500. Areas not classified as Urban are designated as *Rural*. Rural is divided into *Farm* and *Nonfarm*. Farm population consists of persons in households and housing units on farms, which are places from which at least \$1000 of agricultural products were sold. Nonfarm is the rural population not living on farms.¹

Based upon the percentage of rural population, we classify counties in five groups: those with total rural populations constituting, respectively, 95-100%, 75-94%, 50-74%, 5-49%, and less than 5% of the county's total (i.e. total rural plus total urban) population. By using the four-part Census urban/rural classification scheme, combined with graduated categories scaled by county percentage of total rural population, we can provide

¹ These definitions are adapted from those posted on the Census Bureau's web site, at www.census.gov/population/www/censusdata/ur-def.html.



Maps 1 & 2: Percent Total Rural Population of Missouri Counties
Data Source: U.S. Decennial Census, 1980 and 1990



some summary description of the rural and urban character of the state, in terms of its component counties, while avoiding an oversimplified dichotomous classification of counties as either homogeneously “urban” or “rural”, hopefully allowing our study to better reflect the inherent complexity of its subject.

Maps 1 and 2 give the geographic distribution of these categories for 1979 and 1989. There has been little change over that decade in the overall distribution of rural population in the state. A handful of counties have moved from one category to another immediately adjacent category, usually in the direction of smaller rural proportions.

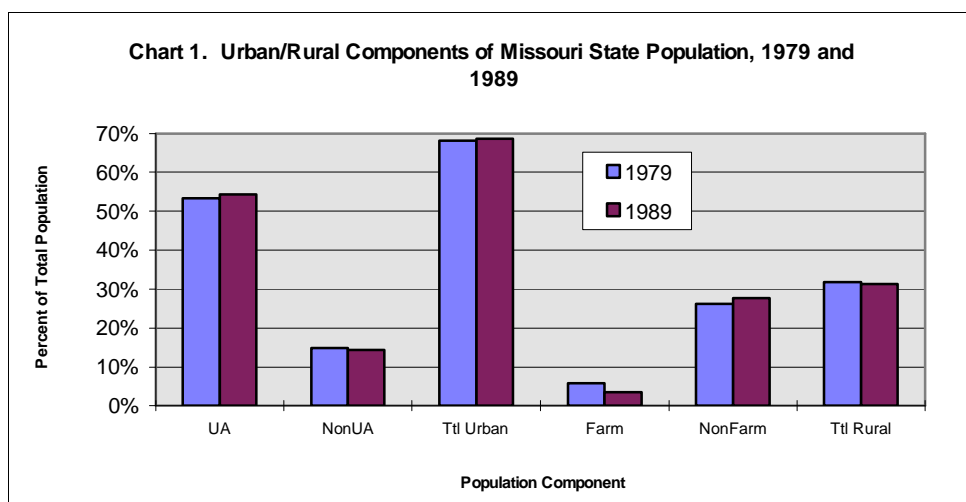
Urban and Rural Components of the State’s Population

Urban and rural population component shares of the total state population, for 1979 and 1989, are presented in Chart 1. Slight changes from 1979 to 1989 can be detected. The proportion of the population living in urbanized areas increased slightly, while the urban population outside urbanized areas shows a slight decline. Overall, the total urban share of total state population increased slightly. The rural population share of the state total decreased slightly; population actually living on farms shows the most significant decline of all components, appearing to have lost perhaps two to three percent of the state total, giving up in

1989 almost half of its 1979 share, while the non-farm population shows a slight increase.

From further examination of Chart 1 we can see that over fifty percent of the state population is living (as of 1989) in urbanized areas, and around another fifteen percent in urban places outside urbanized areas, for a total urban share of almost seventy percent of the state total. The urbanized area population is more than three times the number of the urban population living outside urbanized areas. Population living on farms declined from between six and seven percent of the state total in 1979, to around four percent in 1989. The non-farm rural population comprises almost thirty percent of the state total. In round numbers, we can say that total state population is seventy percent urban and thirty percent rural.

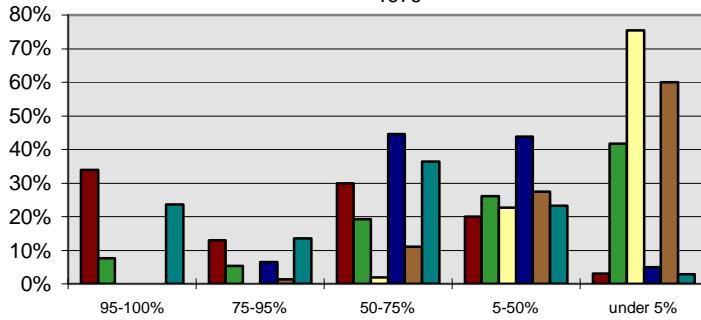
Aggregated category shares of urban/rural component state totals are represented in Chart 2 for 1979 and 1989. Note that while both the urbanized area and urban components of total urban population are included, the farm and non-farm components of the total rural population are omitted. The reason for this can be seen in Chart 3, which displays total state population shares for farm, nonfarm, and total rural components. There is no more than five percent variation between farm and nonfarm components of total rural population, across all county categories, from 1979 to 1989. Thus, we see that little information is provided by the distinction between farm and nonfarm components of rural population, at least in this context.



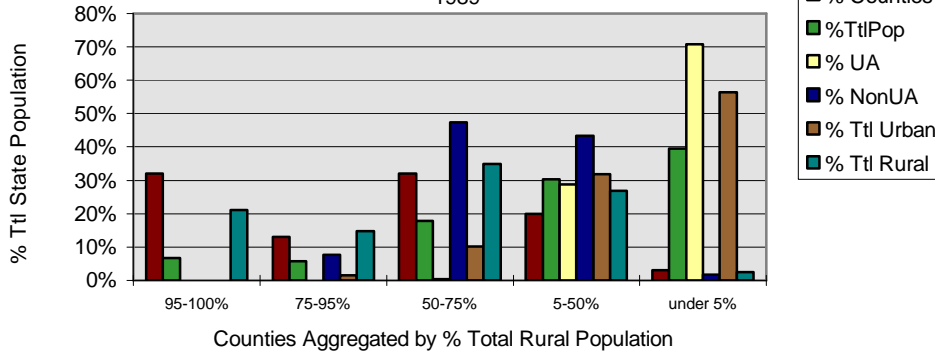
Returning to Chart 2, we find several interesting observations can be drawn from the information contained there. First of all, we can note that the urban/rural component profiles show little variation between 1979 and 1989, suggesting that, over that decade at least, there was little shift in the components of urban/rural population. The only exception to that observation

Data Sources, Charts 1, 2, and 3: U.S. decennial Census, 1980 and 1990

Chart 2. Rural/Urban Population State Shares for Counties Aggregated by % Total Rural County Population
1979



1989



lation to counties with between 5-50% rural population, apparently drawn about equally from its immediately more and less rurally populated neighboring categories.

Directing our attention to the most recent data (1989), we can see that almost half of Missouri's 115 counties at that time were 50-95% rural, in terms of their populations, while almost another third were 95-100% rural. Or to put it another way, nearly five-sixths of Missouri counties have rural populations of fifty percent or greater.

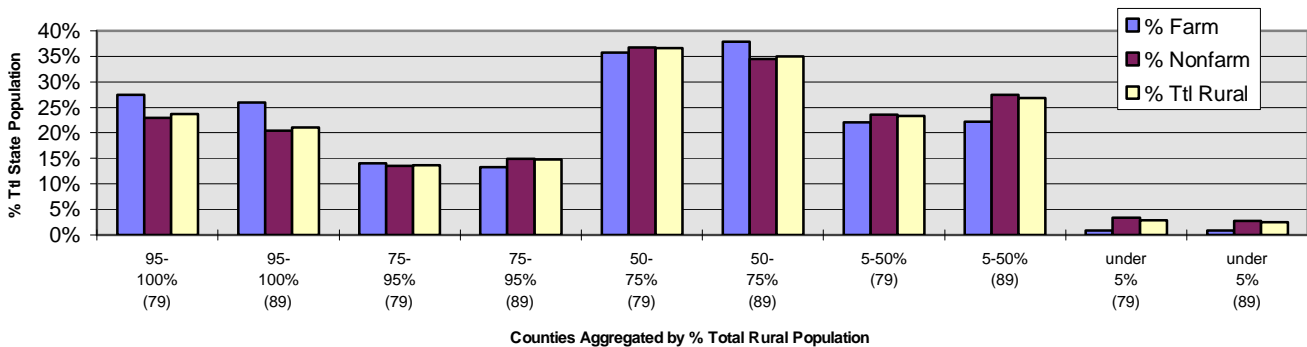
Seventy percent of the Urbanized Area population

might be to note that the urbanized area population of the 50-75% county rural population category, which accounted for perhaps 2 percent of the state total in 1979, had declined to negligibility by 1989, leaving the state's urbanized area population residing almost entirely in counties with under 50% total rural population. We can further observe that the urbanized area population in the 5-50% category has increased from a little over twenty percent in 1979 to just under thirty percent in 1989, while that category has declined over the same period in the under 5% category. This shows us a fairly significant (approaching ten percent) in-migration of the urbanized area popu-

lives in just three percent of Missouri counties, each of which have under 5% rural populations; the remaining thirty percent of the Urbanized Areas population lives in another twenty percent of counties, each with 5-50% rural populations.

Those counties with 5-50% rural populations display the most balanced proportions, accounting for around twenty percent of total counties, and thirty percent of total, urban and rural populations.

Chart 3. State Shares of Rural Population Components for Counties Aggregated by % Total Rural Population
1979 and 1989



Variation in Urban and Rural Growth Rates

Charts 4 through 8 present annual growth rates (1979-89) for total population, employment, and real personal income for all Missouri counties. Each individual rural population category is presented in a separate chart. Charts 9 through 13 present the same information, but for the period 1989-96.² Along the horizontal axis of each chart, counties are ordered by decreasing total population (for the respective base year). This presentation of the data allows us to make growth rate comparisons for counties within each rural population category, between different categories for the same time period, and between the same categories in different time periods.

One of the most notable features of this presentation is the clear and consistent downward trend within each category, for all three measures, for all categories, in both time periods. In some cases the trend, while slight, nevertheless remains noticeable. In other words, at least within the rural population county categories as we have defined them, lower total population tends to correlate with lower growth rates for total population, employment, and income. As a matter of further interest, while it is not illustrated, this same general pattern is present among all counties, uncategorized.

Looking at categories over the 1979-89 period (Charts 4 through 8), we can also easily see that counties in the 95-100% rural population category display a significantly higher incidence of low and negative growth rates, compared to the other categories. Interestingly, however, the category displaying the least degree of low to negative growth rates would appear to be the adjacent category, for counties with 75-95% rural populations. In addition, we can observe that the 95-100% (Chart 4) and the 50-75% (Chart 6) categories display considerably more variation among

their constituent counties than do the 75-95% (Chart 5) and the 5-50% (Chart 7) categories.

Finally, looking at the three counties which constitute the category with under 5% rural population (Chart 8), which also constitute the core counties of the state's two major metropolitan areas (St. Louis and Kansas City), we see relatively low growth rates for Jackson County, and dramatically opposed positive and negative rates for St. Louis County, and St. Louis City, respectively. These contrasts are better understood by looking at the growth rates for St. Charles, Clay, and Platte counties, in the 5-50% category. The relatively high growth rates also displayed by these metropolitan area periphery counties, in combination with the data in Chart 8, confirm a persistent pattern of declining population in the urban core, contrasted with a steadily increasing suburban population.

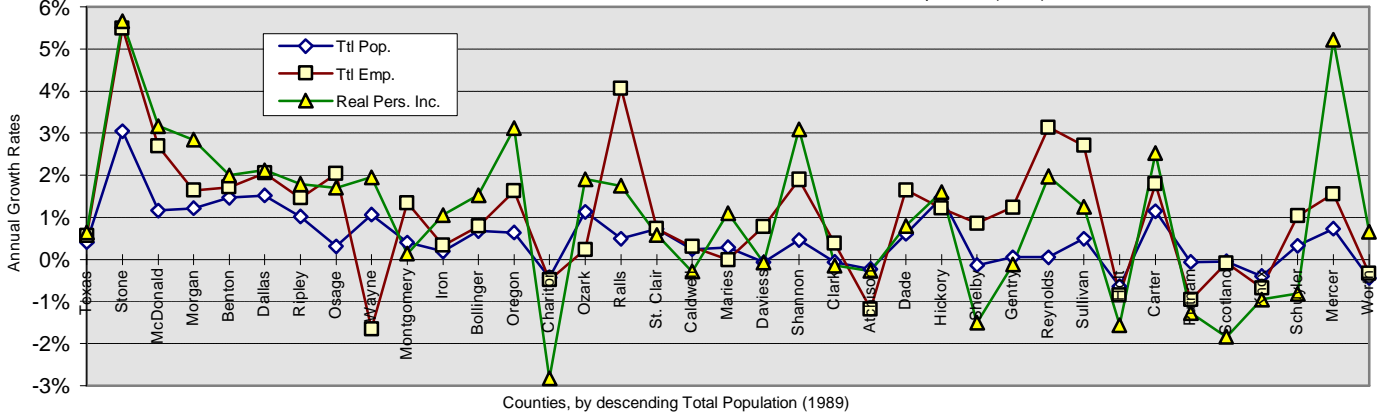
Turning our attention to 1989-96 period (Charts 9 through 13), we can detect a noticeable flattening of the declining trend in growth rates associated with population decrease, indicating more even although, on average, lower growth among all counties throughout this later period. Growth rate variation among counties within the 95-100% (Chart 9) and the 50-75% (Chart 11) remains greater than for the 75-95% (Chart 10) and 5-50% (Chart 12) categories. The 75-95% category continues to display the most consistently positive growth, while for urban core and suburban periphery counties, (see both Charts 12 and 13), there is also a noticeable leveling of growth rates.

Possibilities of further analysis . . .

BEA county estimates for employment and personal income, as presented here, are also available at major industry levels of sectoral disaggregation. Future issues of this report series may build on this analysis at the sectoral level, looking at patterns of variation for urban and rural areas in sectoral employment and income, as well as other available variables of related interest. In the interim, readers are invited to study Charts 4 through 8, and 9 through 13, in accordance with their own interests.

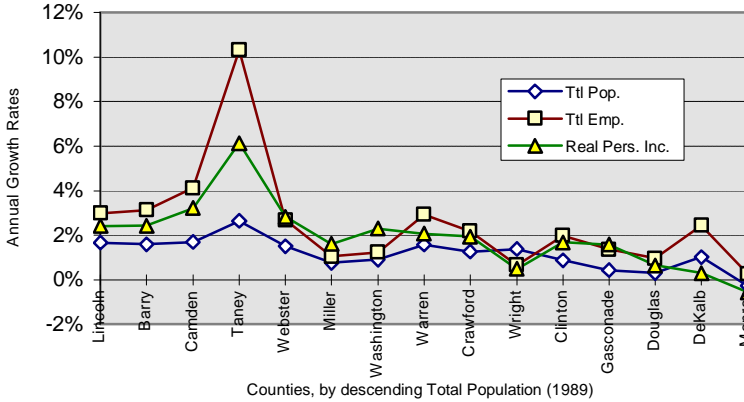
² Note that these growth rates are calculated for 1989-96 for population growth, based on estimates from the Census Bureau and the State Demographers's office, while the employment and income growth rates are calculated for the period 1989-95, based on available data from the BEA's regional estimates program.

Chart 9. 1989-96 Growth Rates for Counties with 95-100% Total Rural Population (1989)



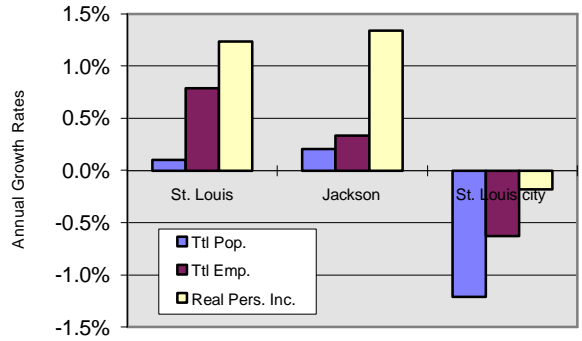
Counties, by descending Total Population (1989)

Chart 10. 1989-96 Growth Rates for Counties with 75-95% Total Rural Population (1989)



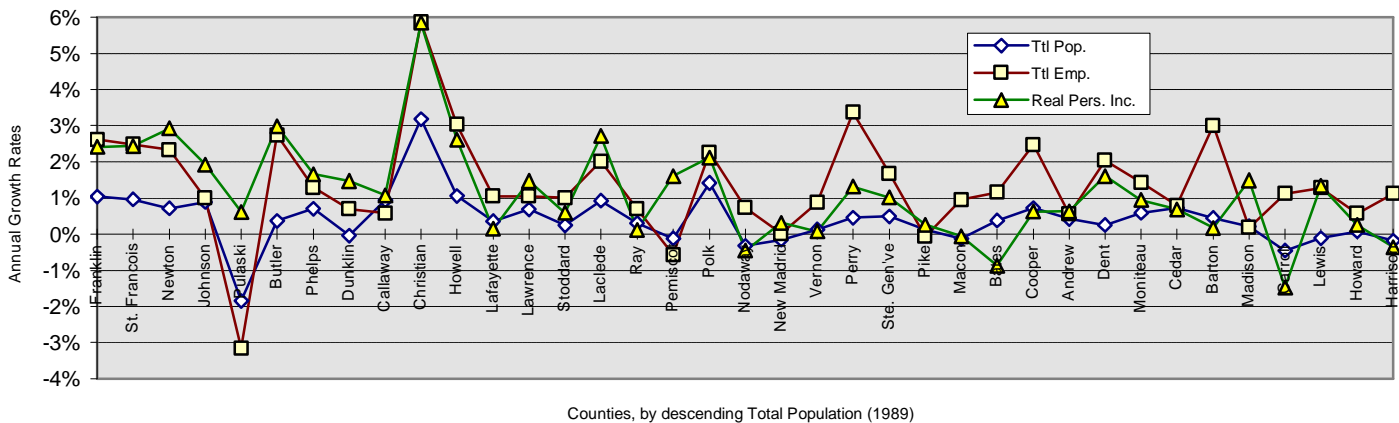
Counties, by descending Total Population (1989)

Chart 13. 1989-96 Growth Rates for Counties with under 5% Total Rural Population (1989)



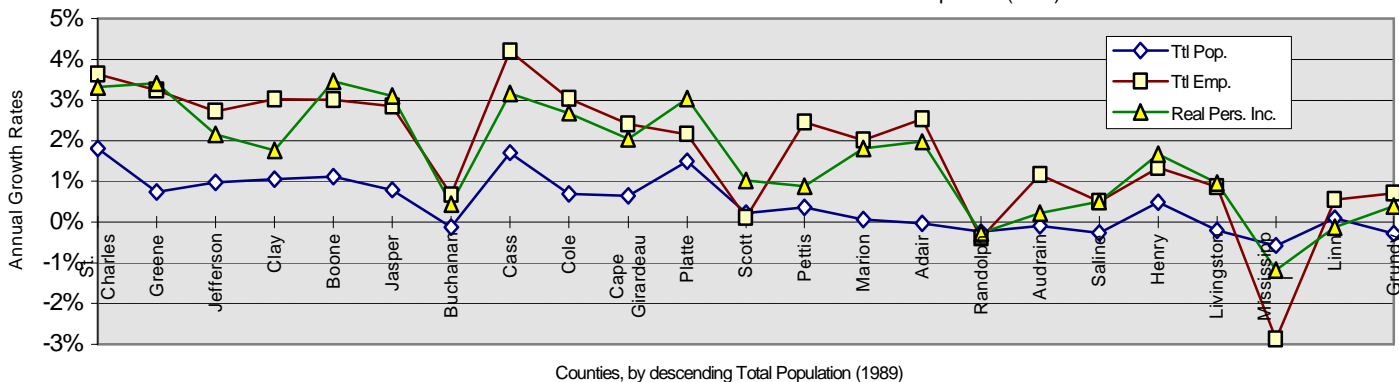
Counties, by descending Total Population (1989)

Chart 11. 1989-96 Growth Rates for Counties with 50-75% Total Rural Population (1989)



Counties, by descending Total Population (1989)

Chart 12. 1989-96 Growth Rates for Counties with 5-50% Total Rural Population (1989)



Counties, by descending Total Population (1989)

Data Sources

Figures enumerating the urban and rural populations of the state and its counties are drawn from the 1980 and 1990 decennial census. 1990 decennial census data were obtained from the 1990 Census Lookup at the Bureau's website (www.census.gov). 1980 data were obtained from the Missouri State Census Data Center (MSCDC) data archive (www.oseda.missouri.edu/data.html), utilizing their exploration and extraction applications.

Total and sectoral employment and income estimates by county from 1969 to 1995 are from the Regional Economic Information Service (REIS) of the Bureau of Economic Analysis maintained by the Social Science Data Center on the University of Virginia's web site (www.lib.virginia.edu/socsci/reis).

1996 population estimates by county are produced through the joint efforts of the state demographer's office and the Census Bureau, also obtained from the MSCDC web site (www.oseda.missouri.edu/graphics/mo/datatabs/co96smry.html).

Data obtained from the above sources and used as the basis for this report are available for download in wk1 spreadsheet format. Look for download links on the same page where this report is published on the CEI web server.