

***Long-Term Industry Trends  
in the Regions of Kansas, 1969-2000:  
Part I—An Industry Focus***

***August 2005***

Arthur P. Hall, Ph.D.  
Executive Director  
Center for Applied Economics  
University of Kansas School of Business  
arthall@ku.edu

Peter F. Orazem, Ph.D.  
Koch Visiting Professor of Business Economics  
University of Kansas School of Business  
pfo@iastate.edu

Prepared for:



## Key Findings

- The East Central region of Kansas—Johnson County and its contiguous counties—is the only region that is consistently competitive with the United States across all private industry sectors. In terms of employment growth, it typically dominates the United States and is the primary economic force keeping Kansas competitive with the Plains region. Two key exceptions exist in the South Central region (Wichita): (1) the per-worker income trends in the manufacturing sector and (2) the employment trends in the construction sector.
- All regions of Kansas, except the North East region, have long-term average annual manufacturing employment growth rates that exceed the growth rate of the Plains region (0.72%). The South West and North Central regions have shown particularly fast manufacturing employment growth, but they started from a small base and per-worker incomes have grown slowly. (The long-term U.S. manufacturing employment growth rate is -0.10%.)
- The North Central region, while not competitive with the East Central region, has demonstrated strong performance in the Finance, Insurance, and Real Estate sector, especially in terms of per-worker earnings.
- The number of farm proprietorships in several Kansas regions has declined faster than the U.S. and Plains average.
- On a per-worker earnings basis, the farm sector in the South West region has significantly out-performed other regions of the state with a lot of commercial farms.
- In all regions of Kansas (as well as the United States and Plains region), state and local government sector employment has grown significantly faster than population. In five of the seven regions of Kansas (unlike the United States and Plains region), state and local government employment has grown significantly faster than total employment, even in the two regions with negative population growth. The two Kansas exceptions are the relatively urban areas, the East Central and South Central regions.

## Report Overview

This report places the current Kansas economy in historical perspective. It also provides a reference for comparing select industry trends of the different regions of Kansas to each other, to the state, to the Plains region, and to the nation. This report is one of a set of seven companion reports that look at long-term economic trends in Kansas from different perspectives.<sup>1</sup> The focus here compares how specific industry sectors have performed in the different regions of Kansas, as illustrated in the charts and tables that comprise the report.

One organizing principle for each of the companion reports is to create metrics that will help evaluate productivity growth in Kansas. The Center for Applied Economics at the University of Kansas School of Business published a report in November 2004 titled “The Kansas Productivity Puzzle.”<sup>2</sup> The report found that Kansas has systematically lagged behind the nation and the Plains region in terms of productivity growth from 1977 to 2001, the years of availability for the necessary data. Furthermore, the productivity lag exists in all industry sectors (except durable goods manufacturing).

Productivity is defined as output per worker over a specific unit of time. Productivity was measured in “The Kansas Productivity Puzzle” by dividing Kansas gross state product (the state equivalent of gross domestic product) by the number of workers in Kansas. This metric effectively defines the market value of Kansas’ annual output of goods and services on a per-worker basis. However, no sub-state equivalent to gross state product exists. Fortunately, wage data may offer a suitable approximation to worker productivity.

Economists have long noted a close relationship between labor productivity and wages, both in theory and in economic data. Firms cannot pay workers more than the value of what they produce, and so compensation levels should closely track increases in average output per worker. Indeed, for the state of Kansas, over the period 1977-2001, the relationship between output per worker and compensation per worker is nearly exact, having a statistical correlation of 98 percent. (See footnote 2.)

## Data and Methods

This report relies on the close correlation in Kansas between per-worker compensation and productivity in order to use the trends in per-worker compensation as a proxy for

---

<sup>1</sup> The companion reports are: “Long-Term Economic Trends in the Regions of Kansas, 1969-2003,” “Long-Term Industry Trends in the Regions of Kansas, 1969-2000: Part II—A Regional Focus,” “Economic Trends Along the Kansas-Nebraska Border, 1969-2003,” “Economic Trends Along the Kansas-Missouri Border, 1969-2003,” “Economic Trends Along the Kansas-Oklahoma Border, 1969-2003,” “Economic Trends Along the Kansas-Colorado Border, 1969-2003.”

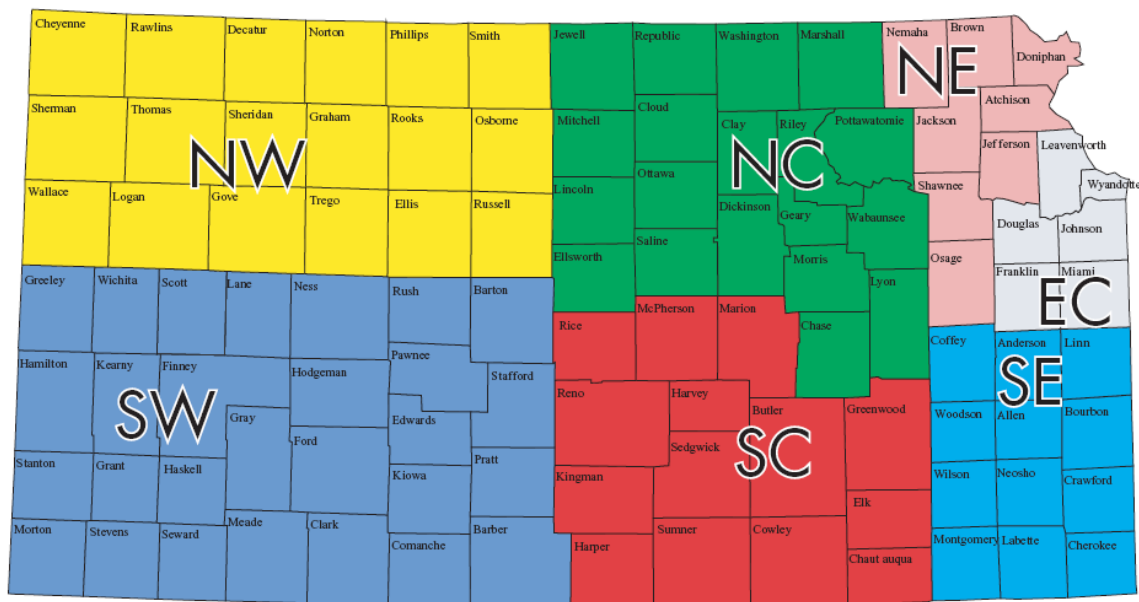
<sup>2</sup> This report is available on-line at: <http://www.cae.business.ku.edu>. For a more academic treatment of the same topic, see: Peter F. Orazem, “Slow Growth and the Kansas Productivity Puzzle,” *Kansas Policy Review*, Vol. 26, No. 2 (Fall 2004), published by the Policy Research Institute of the University of Kansas, and available on-line at: <http://www.ku.edu/pri/publicat/kpr/archive.shtml>

relative productivity trends among the various regions of Kansas. The regional focus requires the use of county-level data.

The primary data for all of the charts and tables contained in this report comes from the U.S. Bureau of Economic Analysis (BEA), Regional Economic Accounts, Local Area Annual Estimates (<http://www.bea.gov/bea/regional/data.htm>). The authors organized the county-level data reported by the BEA into the seven economic development regions defined by the Kansas Department of Commerce (see Figure 1). The sample period ends in 2000 because changes in the composition of the industry sectors reported by the BEA make the data reported after 2000 incomparable with earlier years.

The most appropriate BEA data to use for measuring productivity is gross state product (GSP), because that metric strives to allocate corporate profits, and other measures of value-added, to their proper geographic location. The BEA currently does not have a similar procedure for allocating corporate profits to counties. Instead it measures county-level income by wages and salary disbursements and proprietors' income. For purposes of measuring productivity, using wage and salary disbursements offers the next best metric to GSP. Proprietors' income should be used only when it is unavoidable—and it is unavoidable when conducting industry-specific analysis on a county-level basis, because BEA does not separate, at the industry level, wage and salary disbursements from proprietors' income. For the state of Kansas, over the 1969-2000 sample period, wage and salary compensation, which include employer-paid benefits and social insurance taxes, represent a stable (average) 85 percent share of earnings.

**Figure 1: Economic Development Regions of Kansas as Defined by the Kansas Department of Commerce**



Proprietors' income is not a stable proxy for productivity. First, BEA relies on Internal Revenue Service taxpayer data to estimate proprietorships and proprietor income. This method makes proprietor data more linked to a proprietors' residence than place of business operation. Second, proprietor income is related to the many intricacies associated with income tax law, and may therefore not reflect good measures of value-added per proprietor input.

Another analytical challenge that arises when using county-level data—especially data for specific industries in rural areas—relates to BEA's data-withholding protocols. First, BEA withholds estimates if insufficient data exists upon which to make reliable local-area estimates. No estimates are reported if the local industry sector has fewer than ten employees or less than \$50,000 of current-dollar earnings. Second, BEA withholds estimates when it fears that reporting employment or income figures for a specific locale may compromise the privacy of specific individuals or firms. As a practical matter, such withholding occurs when a county has fewer than three reporting units in an industry or when someone could combine data to reveal confidential information.

To estimate withheld industry-specific county employment and income data, the Center for Applied Economics (CAE) used a consistent procedure that relied as much as possible on complete data sets. The Mining industry in Kansas, which would include oil and gas extraction, has such a large amount of withheld county-specific data that CAE decided not to include it in this report. (Mining represented about two percent of Kansas' employment in 1970 and about one percent in 2000. It represented about 1.4 percent of the Kansas earnings in those years.) Otherwise, CAE replaced industry- and locale-specific withheld data using the following methods:

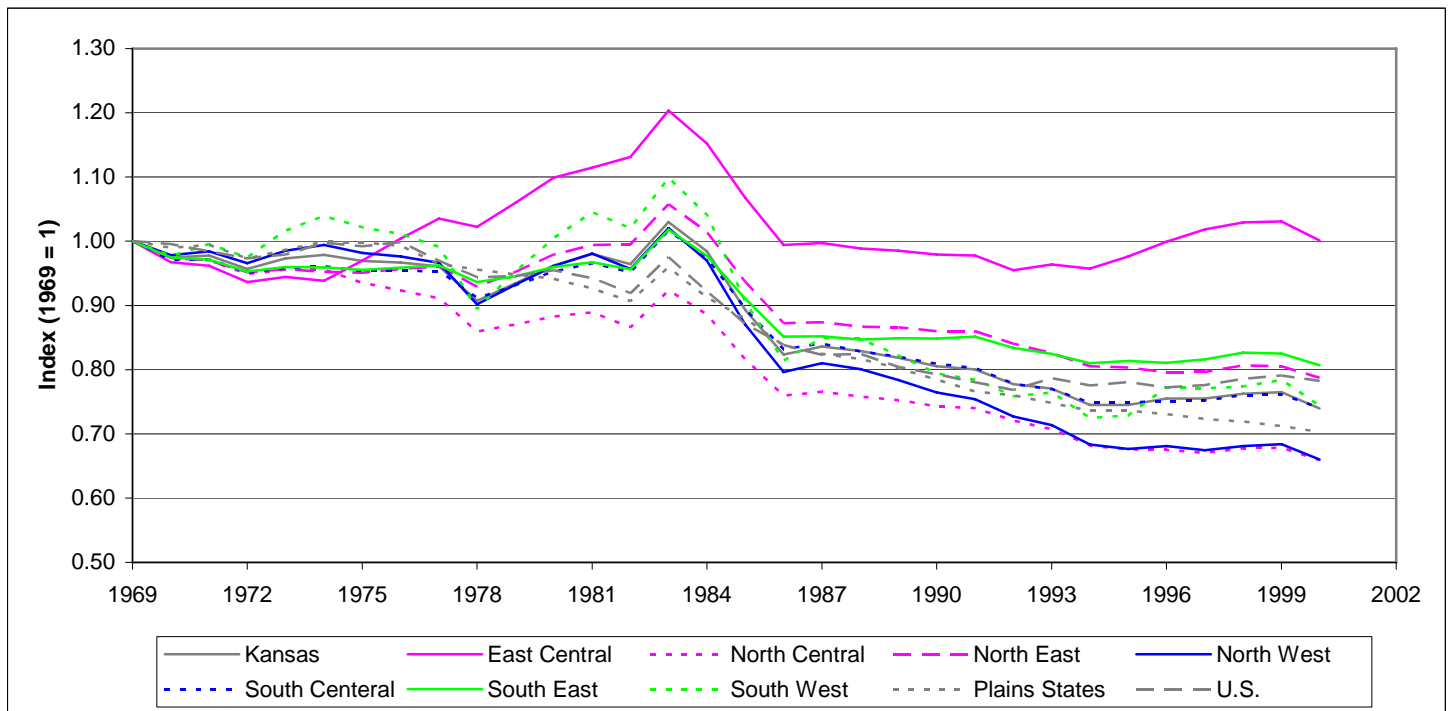
1. When BEA withheld county data and indicated that the missing data implied industry-specific employment of less than 10 people or industry-specific earnings of less than \$50,000, CAE added the data back as five employees or \$25,000 in earnings. Since income figures could be negative, the employment figure replacements are more likely to average out to a reliable estimate than the income figure replacements. In most cases, this type of missing data represents a minuscule share of total regional industry-specific employment or earnings for a given year.
2. When BEA withheld county data for disclosure-avoidance reasons, CAE used the following procedure for replacing the data:
  - a. Determine the exact data gap for a given year/industry (given the procedure used in #1 above) by subtracting the county data from the complete state data. (BEA includes withheld local data in state totals.)
  - b. Allocate the missing data to a county using the county's normalized, annual state share of employment (or earnings) for a specific subset of industries. The subset was defined by subtracting from Total Employment (or Earnings)—by county, by year—those sectors that had no missing data: Farm, Retail Trade, and Government and Government Enterprises.

The missing data allocations were normalized to 100 percent based on the state shares of only the subset of counties that had missing data.

CAE chose the foregoing procedure as the preferred method among the array of other imperfect methods. It has the virtue of (1) relying on variations in the reported data (even though county-level variation may not be due to variation in isolated industry sectors with missing data), (2) assuring that 100 percent of the missing data are allocated, and (3) using a consistent procedure for allocating missing data to those counties that have long-running histories of missing data.

The presumption of the chosen procedure is that the relative county shares will provide a good approximation of the correct weights to use for the final allocation of missing data. Because the Kansas counties are aggregated into Kansas Department of Commerce regions, there is a much higher level of confidence that the missing data are being accurately allocated than if the analysis were being conducted on a county-by-county basis. Odd-looking trends that result for the procedure are noted in relevant places throughout the report.

**Chart 1: Farm Industry—Trends in Full and Part-Time Employment by Region, 1969-2000**

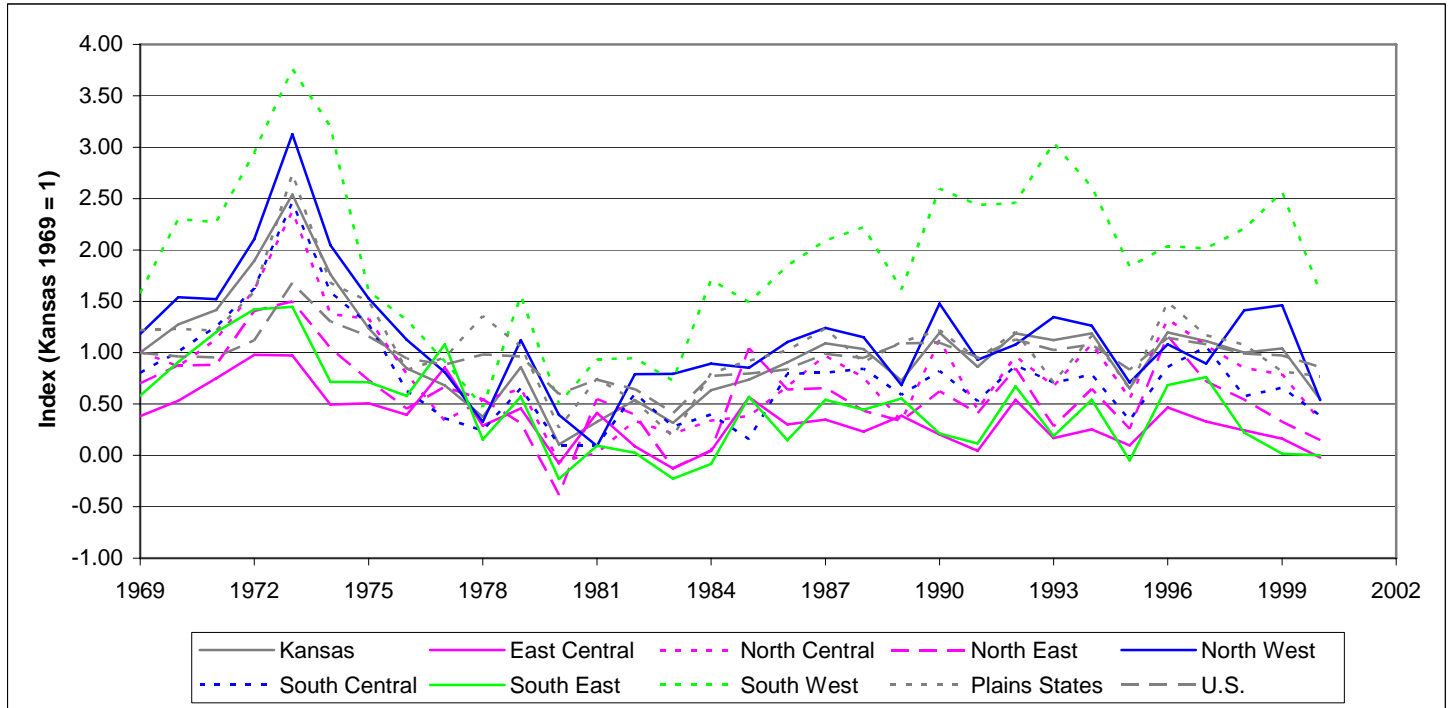


(Note: The Plains states include Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota)

**Comments on Chart 1:**

- Farming employment has steadily decreased in Kansas, the U.S., and the Plains states. The Kansas exception is the East Central region, which has essentially remained flat.
- The employment data used to generate this chart include proprietors, so the East Central farming employment may be explained by “hobby farming” around the suburbs of Kansas City.
- Over the 1969-2000 time period, farming employment in the U.S., Plains States, and Kansas has declined 22%, 30%, and 26%, respectively. The defined regions of Kansas have shown negative growth rates as follows: East Central (0%), North Central (-34%), North East (-21%), North West (-34%), South Central (-26%), South East (-19%), and South West (-26%). See Table 2.

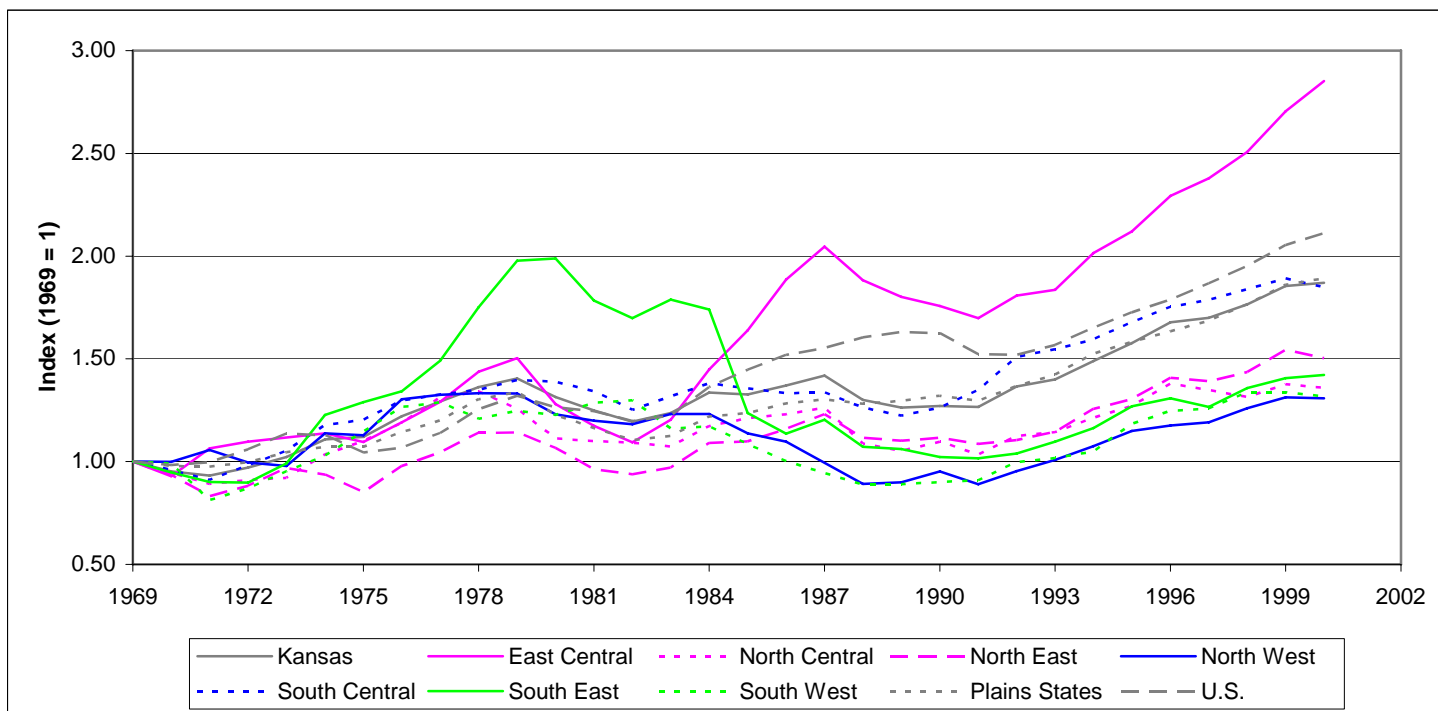
**Chart 2: Farm Industry—Trends in and Relative Levels of Inflation-Adjusted Earnings Per Worker by Region, 1969-2000, Constant 2000 Dollars (includes Proprietors)**



**Comments on Chart 2:**

- The trends in farm earnings per worker (which include both wage and salary employees and proprietors) indicate that farm productivity has not grown over the three decades represented by the data sample. However, in many instances income tax accounting rules available to farm proprietors have the potential to camouflage genuine productivity trends. (Table 3 provides more details about growth trends and income levels.)
- Another factor that influences the trends seen in Chart 2 is the distinction between true working farms and “hobby farms.” The relatively low level of real earnings in the East Central region helps support (in combination with the employment levels illustrated in Chart 1) the notion that this region has a lot of hobby farmers (proprietors).
- The significantly higher level of real earnings per worker in the South West region is indicative of commercial farm operations. The question arises as to why the South West region has out-performed other areas of the state with a high number of commercial farm operations. For example, starting in 1983 (following the recessions of the early 1980s), the South West region has averaged \$34,254 per worker compared with \$17,467 in the North West.
- The spike in farm earnings per worker in 1973 is related to the unique market factors associated with a surge in wheat sales to Russia.

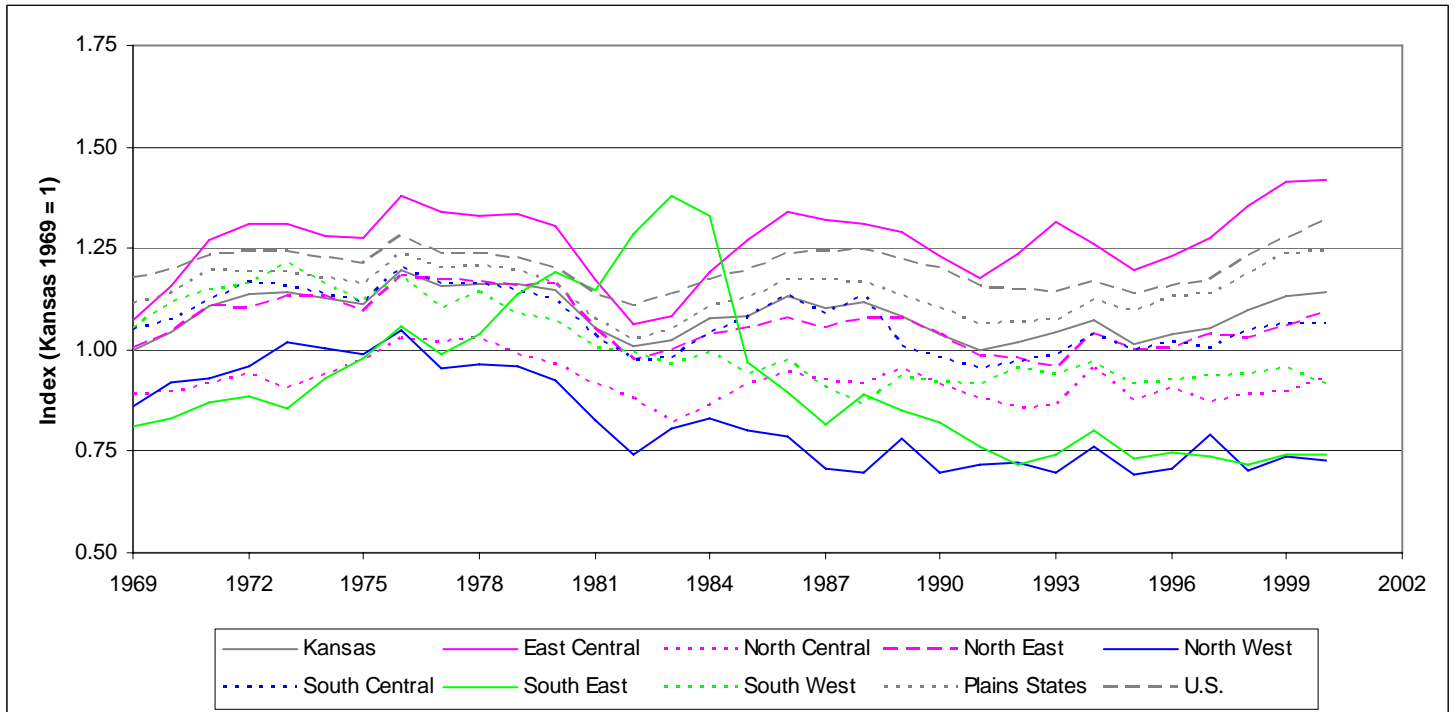
**Chart 3: Construction Industry—Trends in Full and Part-Time Employment by Region, 1969-2000**



**Comments on Chart 3:**

- Over the 1970-2000 period, the strong construction-related employment growth in the East Central region (and the South Central region in the 1990s) has allowed Kansas’ average annual growth rate (2.28%) to surpass the Plains States’ growth rate (2.22%). However, both Kansas and the Plains lag the U.S. average annual growth rate of 2.58%.
- Over the 1990-2000 period, however, Kansas (3.94%) significantly outgrew the U.S. (2.66%) and the Plains (3.67%). This growth was driven by the 4.96% growth rate in the East Central region and the 3.88% growth rate in the South Central region.
- The rapid increase (and decline) in construction employment in the South East region in the late 1970s (and mid-1980s) is based on sound data. During the decade of the 1970s, construction related employment grew in the South East region at an average annual rate of 7.70%, compared with a U.S. rate of 2.54%.
- Missing Data Summary: For certain Kansas counties, BEA has withheld Construction employment data. The procedure used to reallocate this data may create spikes or dips on the chart above that are not representative of the “true” regional trends. BEA’s data set contains pockets of withheld data from 1987-2000, which is mostly concentrated in the North Central region. From 1998 to 2000, all Kansas regions except the East Central region have missing data cells. The allocation procedure distributed the largest share of missing data (a quarter to a third each) to the North West and South West regions. Relative to the baseline of the known data, allocation of the missing data increased reported employment in the North East region by about 5.5% in 1995-1997; the South East region by about 6.5% in 1993-1994; the North West region by 21% in 1998, 15% in 1999, 28% in 2000; and the South West region by 8.5% in 1998, 10.7% in 1999, 12.6% in 2000.

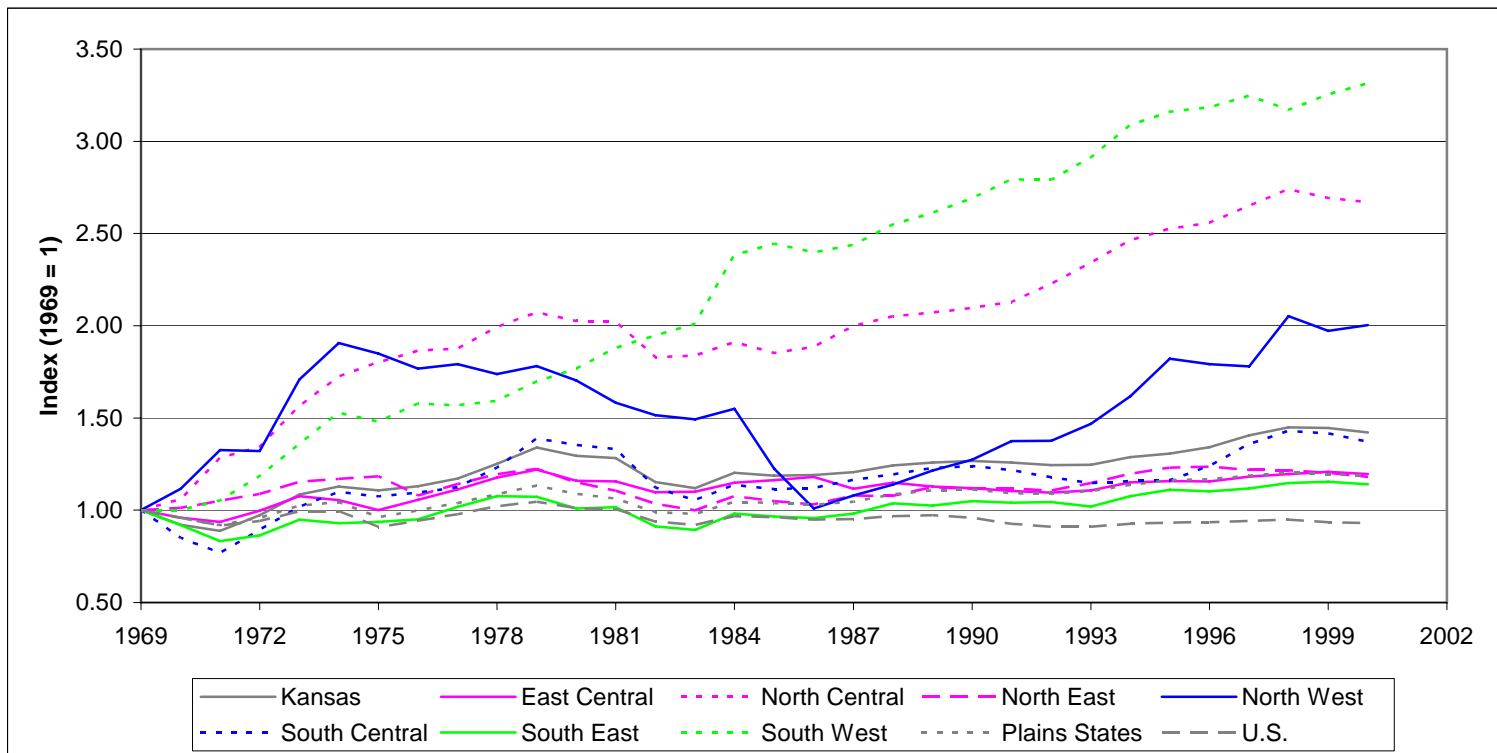
**Chart 4: Construction Industry—Trends in and Relative Levels of Inflation-Adjusted Earnings Per Worker by Region, 1969-2000, Constant 2000 Dollars (includes Proprietors)**



**Comments on Chart 4:**

- The strong demand in construction-related employment in the South East region during the late 1970s and early 1980s and the East Central region over the entire sample period resulted in relatively strong growth in real earnings per worker.
- To the extent that growth in earnings per worker reflects growth in productivity, all regions except the East Central region significantly lag the U.S. and Plains. The strong growth in the East Central region helped keep the overall Kansas 1970-2000 average annual growth rate in line with the Plains at 0.30%, but Kansas' 1990s growth rate lagged the Plains at 0.98%. The North West, South Central, South East, and South West regions all experienced negative 30-year average annual growth rates. See Table 3.
- Missing Data Summary: BEA's data set for Kansas counties has withheld figures for Construction earnings that follow the pattern of withheld employment figures for the Construction sector. Earnings per worker is a ratio of earnings and employment, each component of which may be imprecisely estimated by the procedure used to re-allocate data withheld by BEA. Sections of Chart 4 to view with special caution are: the North East region 1995-1997; the South East region in 1993-1994; the North West region 1998-2000; and the South West region 1998-2000.

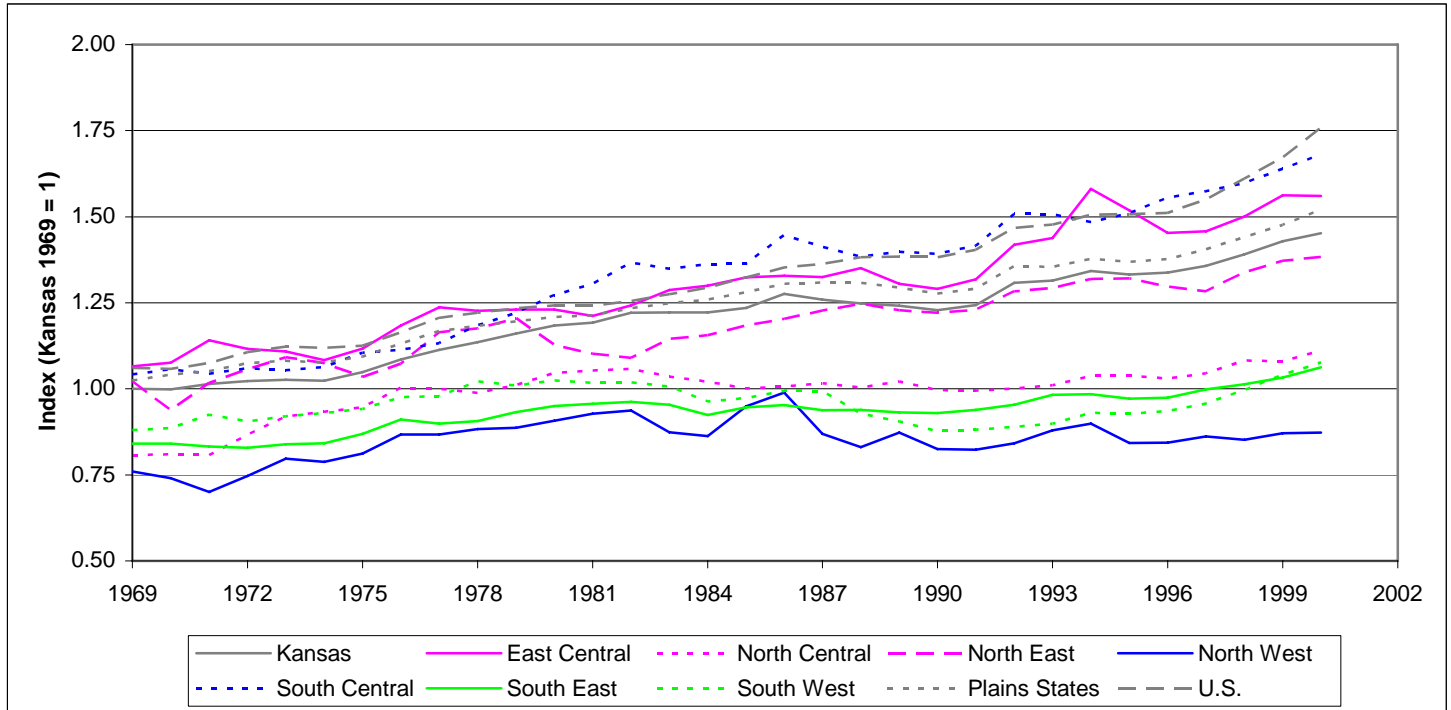
**Chart 5: Manufacturing Industry—Trends in Full and Part-Time Employment by Region, 1969-2000**



**Comments on Chart 5:**

- Over the 1970-2000 period, all regions of Kansas outpace the U.S. with regard to growth in manufacturing employment. All regions, except the North East, track or beat the Plains States with regard to manufacturing employment growth.
- The three fastest growing regions—South West, North Central, and North West—have relatively small numbers of manufacturing workers, which helps explain the high growth rates in terms of percentage increase. In 2000, the figures in Chart 5 show total employment in the South West region as 17,126; the North Central region as 20,624; and the North West as 4,022. By contrast, the East Central and South Central regions have 48,002 and 87,863, respectively. See Table 2.
- Missing Data Summary: For certain Kansas counties, BEA has withheld Manufacturing employment data. The procedure used to reallocate this data may create spikes or dips on the chart above that are not representative of the “true” regional trends. BEA’s manufacturing employment data set contains withheld data for certain counties throughout the data sample, 1969-2000. On average, about 128 manufacturing workers are unallocated between 1969 and 1997, with minimum of 31 workers and a maximum of 253 workers. The data are primarily withheld from the North West and South West regions. The allocation procedure rarely increases the baseline of known data by more than 2% in the North West (except for a 4% in 989) or 1% in the South West. Between 1998 and 2000, the number of manufacturing workers withheld from the reported data jumped to 4,016 in 1998, 4,580 in 1999, and 4,870 in 2000. The North Central region is allocated about 5% of these workers each year from 1998 to 2000; the North East region is allocated about 8% in 1999 and 2000; the North West region is allocated 29% in 1998, 23% in 1999, and 24% in 2000; finally, the South West region is allocated 63% in 1998, 61% in 1999, and 61% in 2000. Relative to the known-data baseline, the 1998-2000 allocations increase the North West manufacturing worker numbers by about 40% and the South West numbers by about 20%. The increase for the North Central and North East regions is about 2-3%.

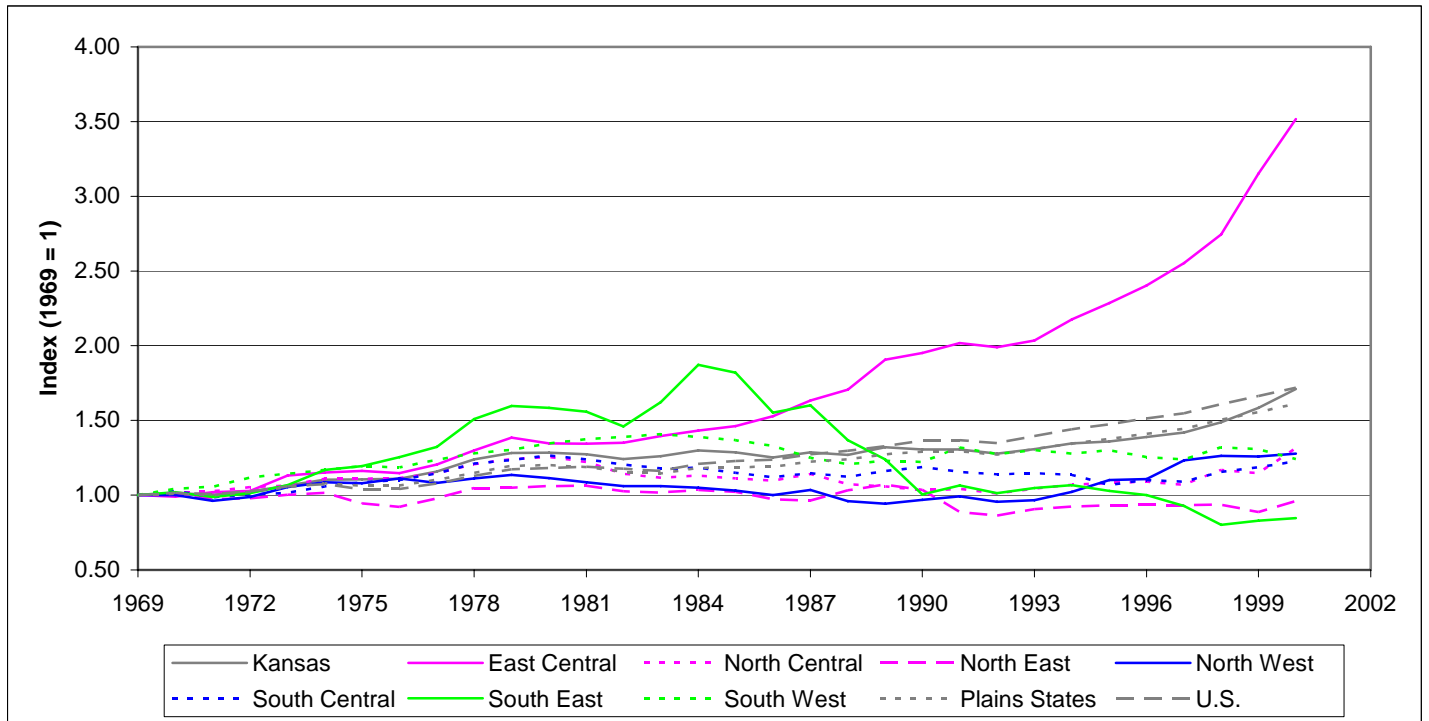
**Chart 6: Manufacturing Industry—Trends in and Relative Levels of Inflation-Adjusted Earnings Per Worker by Region, 1969-2000, Constant 2000 Dollars (includes Proprietors)**



**Comments on Chart 6:**

- The regions of Kansas that have experienced strong manufacturing employment growth—North Central, North West, and South West—significantly lag other regions in terms of both the level and growth of earnings per worker. A research question that follows from this information is to investigate if manufacturers have increased their hiring in these regions in response to the advantageous labor market conditions or whether they were incentivized by government programs to hire in these regions (or both).
- The South Central region is the only Kansas region that is comparable to the U.S. in terms of levels and growth of earnings per worker. Since the South Central region has a strong manufacturing base, this result is consistent with the finding elsewhere that Kansas has matched the U.S. in terms of productivity growth in durable goods manufacturing. Note, however, the 1970-2000 U.S. average annual growth rate of 1.71 percent beat the South Central region rate of 1.56 percent.
- Missing Data Summary: BEA’s data set for Kansas counties has withheld figures for Manufacturing earnings that follow the pattern of withheld employment figures for the Manufacturing sector. Earnings per worker is a ratio of earnings and employment, each component of which may be imprecisely estimated by the procedure used to re-allocate data withheld by BEA. Sections of Chart 6 to view with special caution are: the North West and the South West 1998-2000.

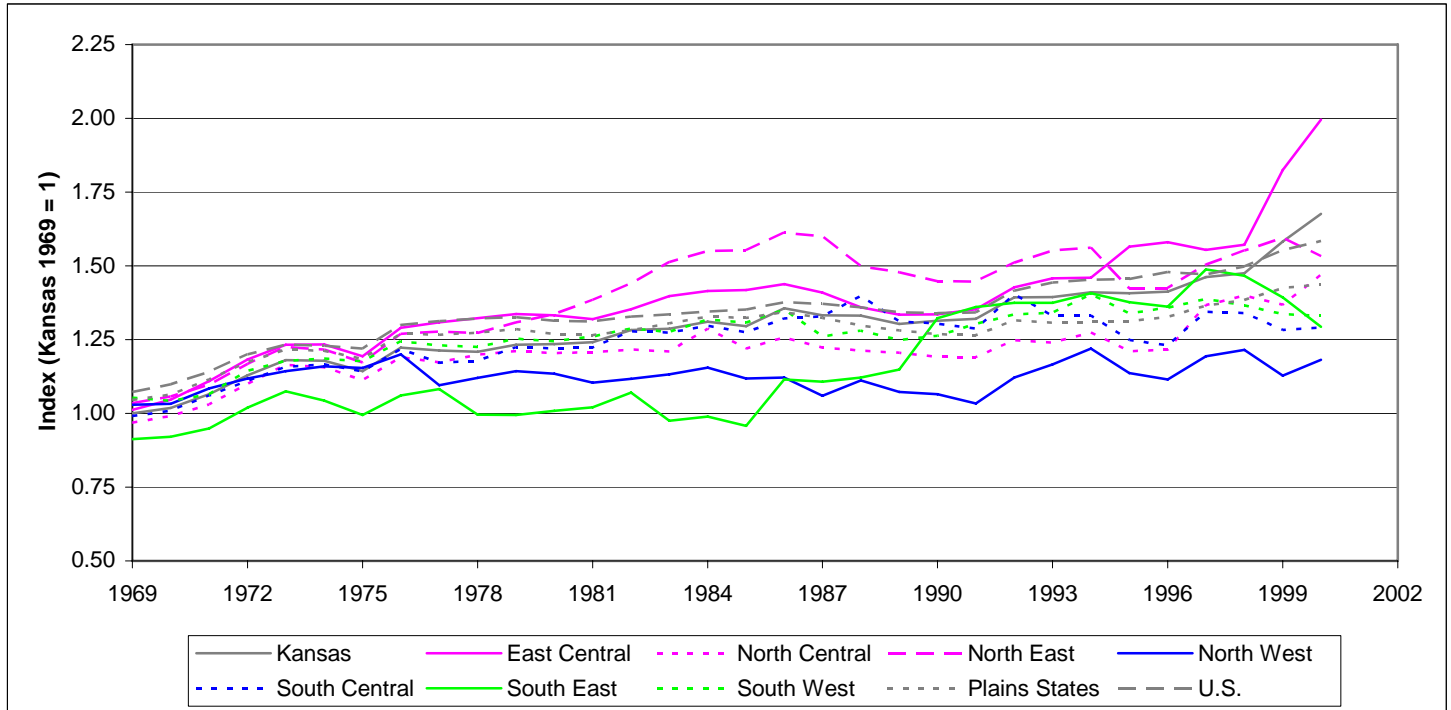
**Chart 7: Transportation and Utility Industry—Trends in Full and Part-Time Employment by Region, 1969-2000**



**Comments on Chart 7:**

- The East Central region’s contribution to employment growth in this industry sector is the only force keeping Kansas competitive with the U.S. On an average annual basis (1970-2000), the East Central region has grown 4.32% while the U.S. has grown 1.77%. After the East Central region, the region with the next highest growth rate is the North Central region (0.85%). The North East and South East regions have negative growth rates, -0.16% and -0.62%, respectively.
- The unique trends seen in the South East region are not related to issues of questionable data.
- Missing Data Summary: For certain Kansas counties, BEA has withheld Transportation and Utility employment data. The procedure used to reallocate this data may create spikes or dips on the chart above that are not representative of the “true” regional trends. BEA’s Transportation and Utility employment data set contains withheld data from 1969 to 1983 that are concentrated in the North Central and South West regions. The average number of workers withheld per year equals 359. The allocation procedure places 75% of the withheld data each year into the South West region, with the exception of 1982 and 1983, when the allocation procedure places all of the withheld data in the South West region. For the years 1984-1997, almost all of the withheld data are concentrated in the South East region, except for in 1988-1990, when the allocation procedure places about 60% of the missing data in the North East region. During the period 1998 to 2000, the average amount of workers withheld from BEA’s data jumps to about 2,500, with only the East Central region not having missing data, and the North East having missing data only in 2000. The North Central region receives most of the allocation—39% in 1998, 32% in 1999, and 53% in 2000; the South East region receives 30% in 1998, 29% in 1999, and 13% in 2000; the North East receives 16% in 2000. Relative to known data baseline, the North Central region employment figures increase by 15.5% in 1998, 12% in 1999, and 22% in 2000; the North West figures increase by 9% in 1997 and 8% in 1998. The South East region known data baseline increases 18% in 1998, 15% in 1999, and 8% in 2000—all of which are low relative to the roughly 36% increase when the South East was the sole source of the missing data.

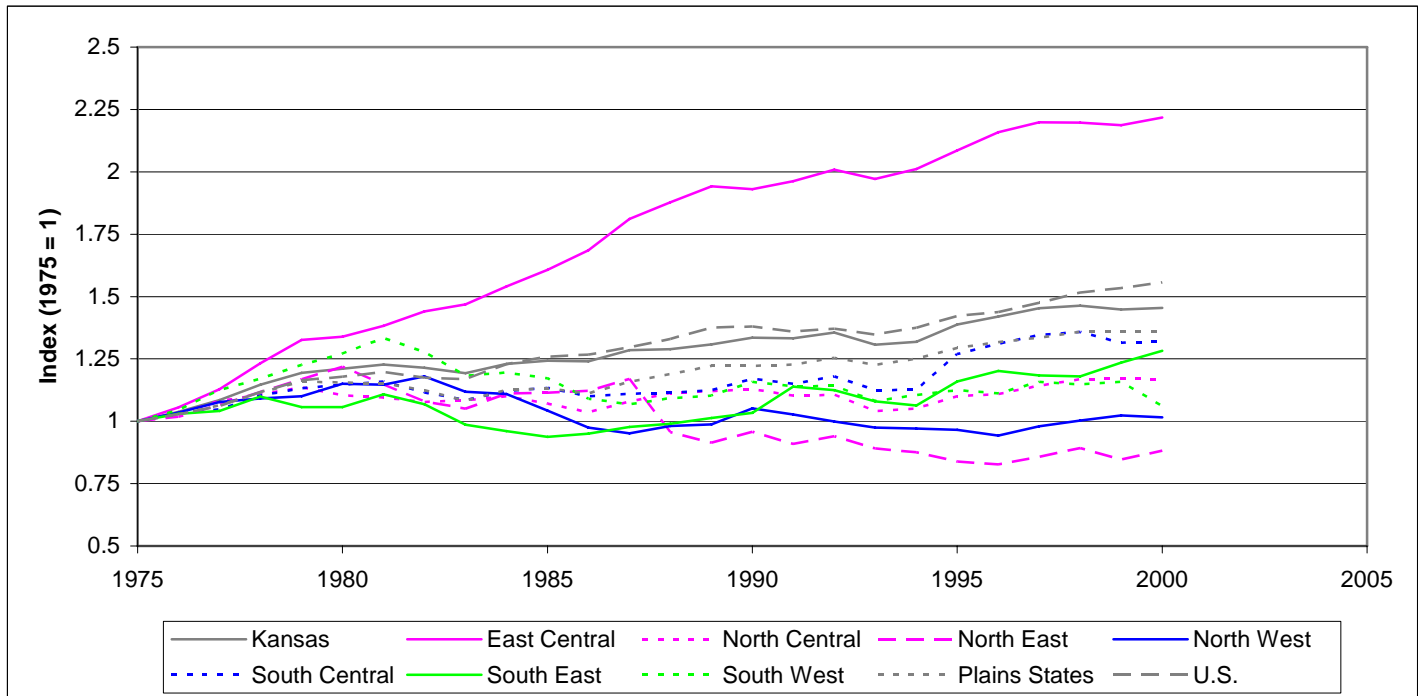
**Chart 8: Transportation and Utility Industry—Trends in and Relative Levels of Inflation-Adjusted Earnings Per Worker by Region, 1969-2000, Constant 2000 Dollars (includes Proprietors)**



**Comments on Chart 8:**

- Given that the North East and South East regions have negative employment growth in this industry sector, these regions continue to compete well against both the U.S. and the Plains States in terms of earnings per worker. This result implies that these regions have experienced solid productivity growth in this sector. In addition, on an average annual basis (1970-2000), the North East has grown 1.24% and the South East has grown 1.14%, compared to the 1.23% growth rate of the U.S. and the 1.0% growth rate of the Plains.
- The strong employment demand in the East Central region seems to have translated into a surge in earnings per worker starting in 1998. The average annual growth rate of the East Central region (1970-2000) is 2.18%.
- Missing Data Summary: BEA’s data set for Kansas counties has withheld figures for Transportation and Utility earnings that follow the pattern of withheld employment figures for the Transportation and Utility sector. Earnings per worker is a ratio of earnings and employment, each component of which may be imprecisely estimated by the procedure used to re-allocate data withheld by BEA. Sections of Chart 8 to view with special caution are: the North Central region 1998-2000; the North West region 1997-1998; the South East region 1998-2000.

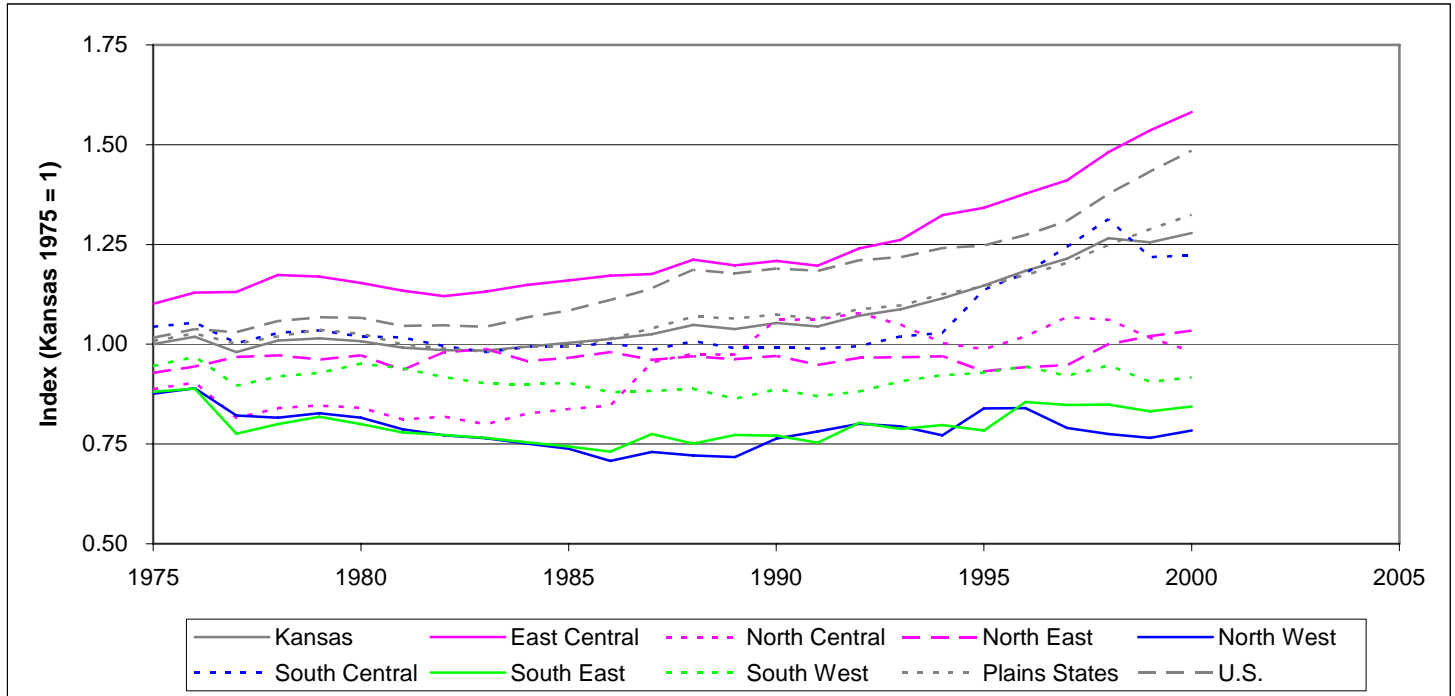
**Chart 9: Wholesale Trade Industry—Trends in Full and Part-Time Employment by Region, 1975-2000**



**Comments on Chart 9:**

- The data for this industry sector begins in 1975. BEA adopted revised industry classifications starting in that year which created a systematic discontinuity in the trend lines for the Wholesale Trade industry, so we excluded pre-1975 data from the analysis of this sector. A reclassification in 1988 may also explain the sharp drop for the North East region in that year.
- As with other sectors, the East Central region is the only economic force keeping Kansas competitive with the U.S. and Plains. See Tables 2 and 3 for greater detail.
- Missing Data Summary: For certain Kansas counties, BEA has withheld Wholesale Trade employment data. The procedure used to reallocate this data may create spikes or dips on the chart above that are not representative of the “true” regional trends. In the 1981-1984 period, the procedure for allocating missing data increases the North East baseline by about 9-10%. From 1985-1997, the average missing data are 84 people, with no missing data from 1992-1995. The regions with missing data are the North Central and South West regions. In no instance does the missing data allocation increase the known data baseline in the North Central region by more than 1.25% (or 0.75% in the South West). After 1997, the only issues associated with missing data concern the sudden decline in 2000 for the South West, or the up tick in the North East. The South West receives 75% of the missing data allocation; the North East receives 17%; and the South Central receives 8%. The increase in the known-data baseline due to the allocation of withheld data is 2% for the North East and 8.4% for the South West.

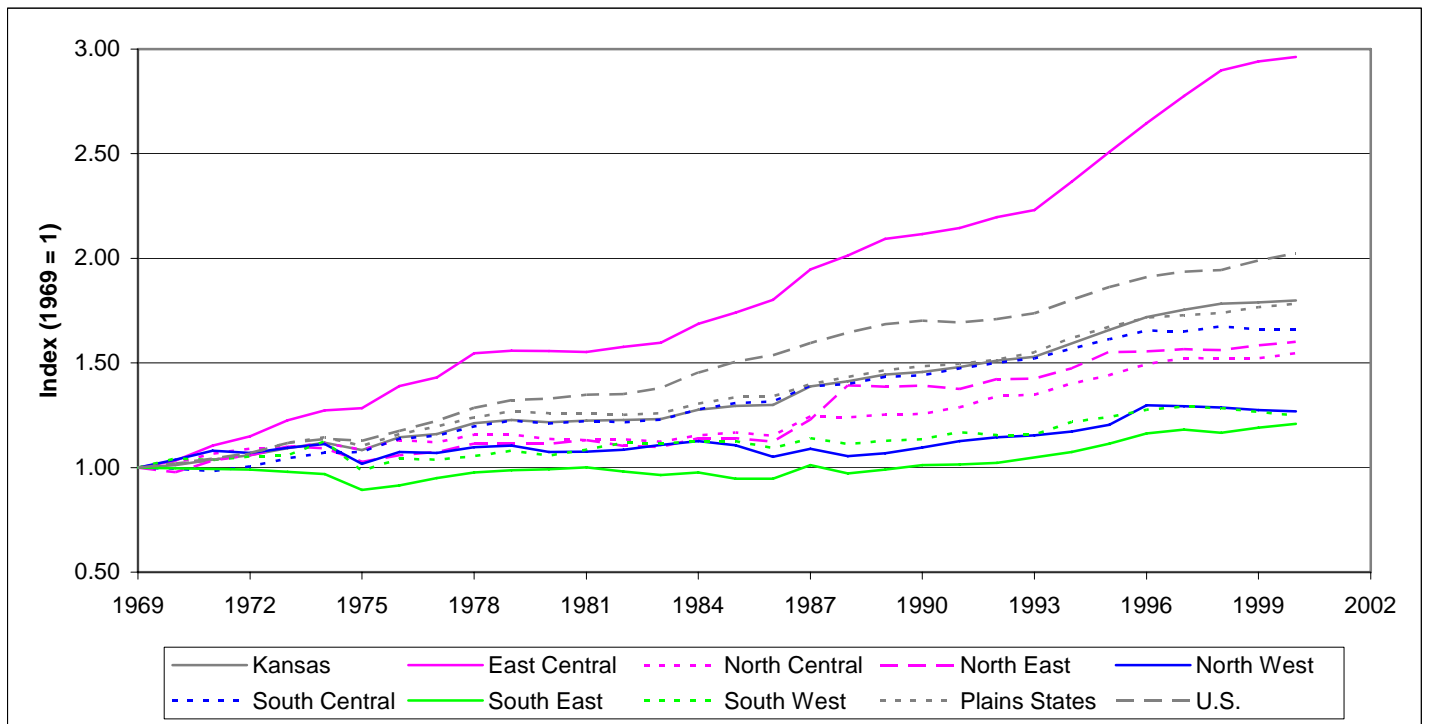
**Chart 10: Wholesale Trade Industry—Trends in and Relative Levels of Inflation-Adjusted Earnings Per Worker by Region, 1975-2000, Constant 2000 Dollars (includes Proprietors)**



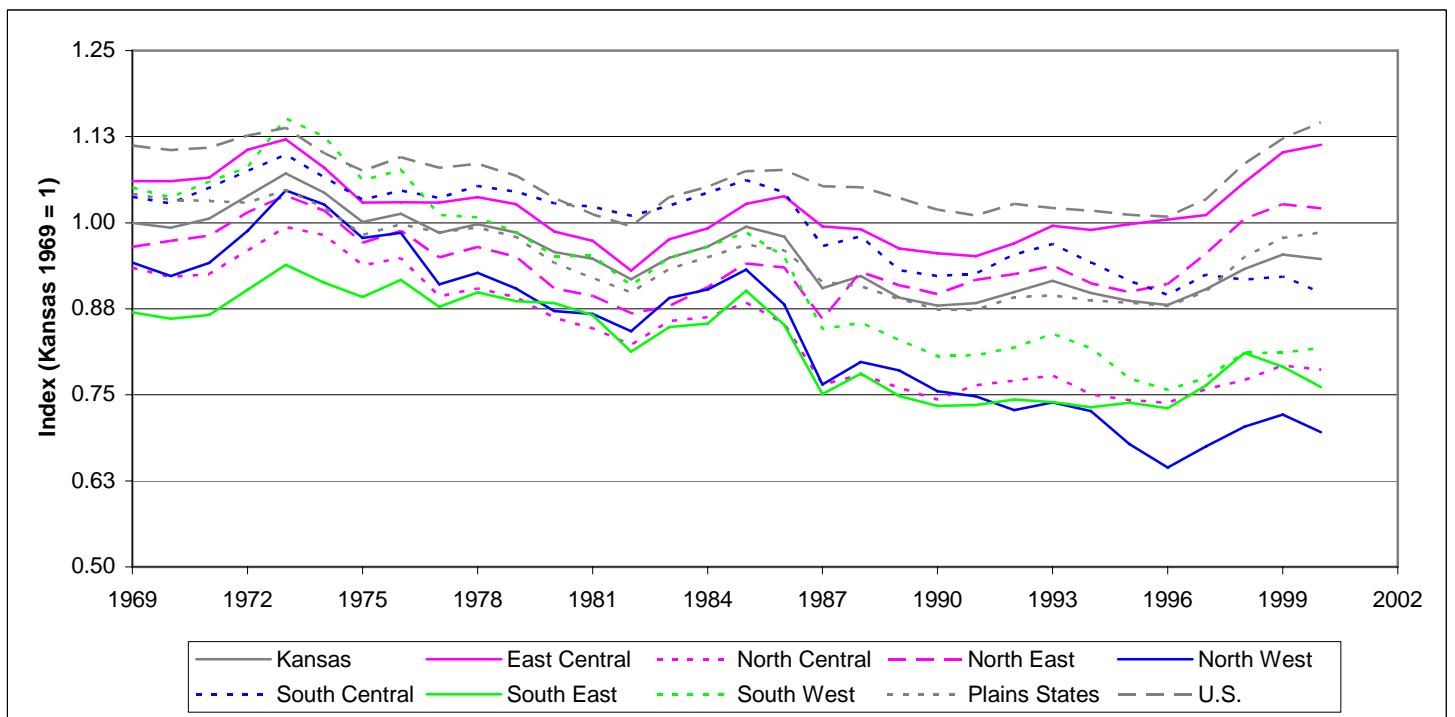
**Comments on Chart 10:**

- The strong demand in the East Central region has translated into earnings levels that are higher than those in the U.S., but the earnings per worker are growing more slowly than in the U.S. On an average annual basis, earnings per worker in the East Central region grew 1.59% from 1980-2000 and 2.72% from 1990-2000. The respective U.S. rates are 1.67% and 2.24%.
- The South Central region experienced a surge in both employment and earnings per worker starting in 1994. However, the drop off starting in 1998 makes it too early to know if this industry sector will become a source of increased productivity growth for the South Central region.
- Missing Data Summary: BEA’s data set for Kansas counties has withheld figures for Wholesale Trade earnings that follow the pattern of withheld employment figures for the Wholesale Trade sector. Earnings per worker is a ratio of earnings and employment, each component of which may be imprecisely estimated by the procedure used to re-allocate data withheld by BEA. Sections of Chart 10 to view with special caution are: North East 1981-1984; North East and South West in 2000.

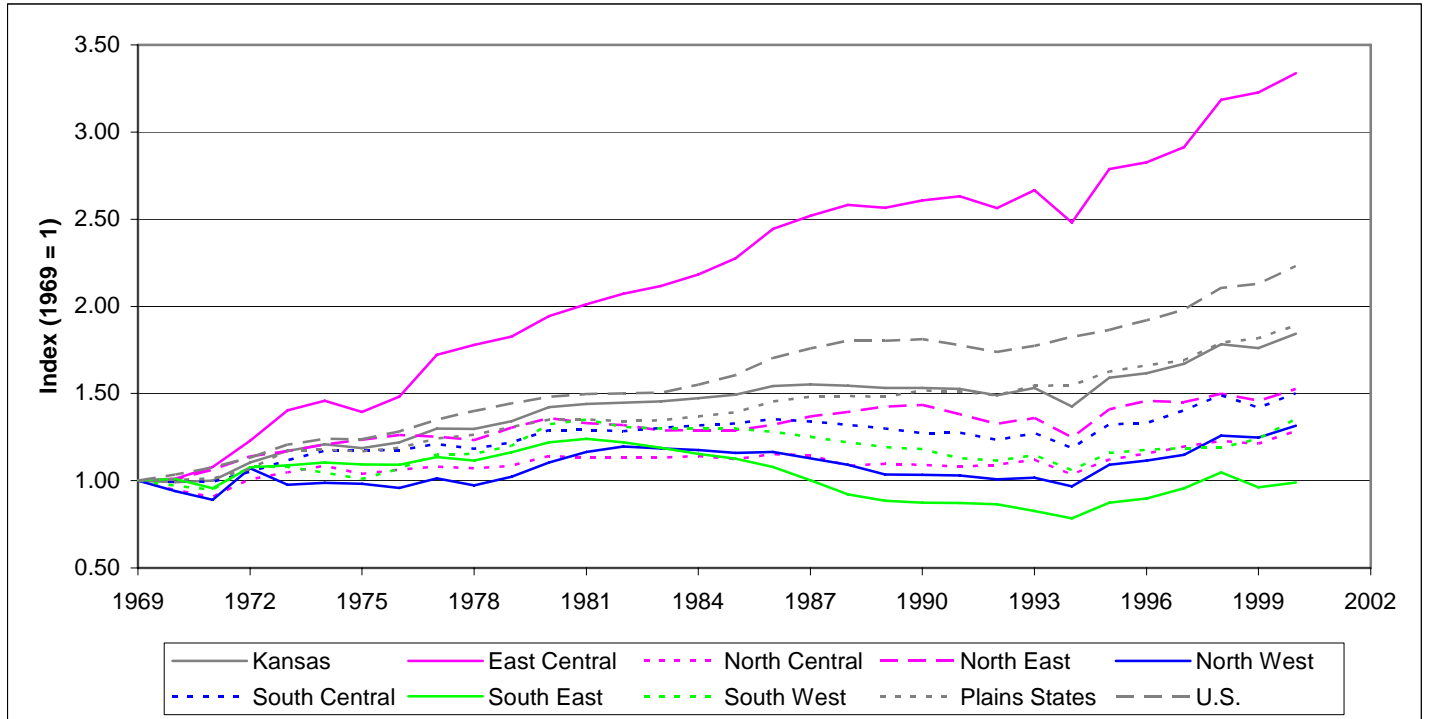
**Chart 11: Retail Trade Industry—Trends in Full and Part-Time Employment by Region, 1969-2000**



**Chart 12: Retail Trade Industry—Trends in and Relative of Levels of Inflation-Adjusted Earnings Per Worker by Region, 1969-2000, Constant 2000 Dollars (includes Proprietors)**



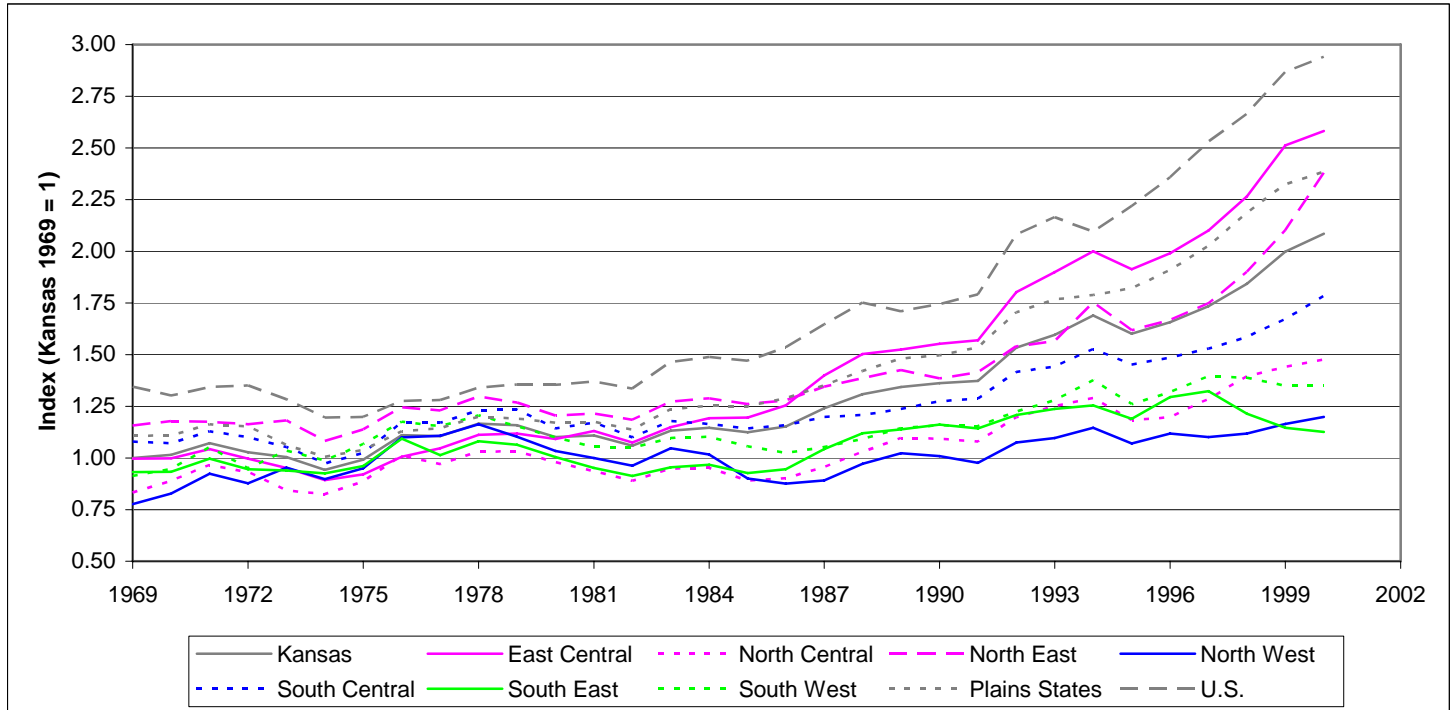
**Chart 13: Finance, Insurance, & Real Estate Industry—Trends in Full and Part-Time Employment by Region, 1969-2000**



**Comments on Chart 13:**

- Much of the employment growth of the East Central region in this industry sector dates back to the 1970-1980 period, when the region experienced average annual growth rate of 6.74%, which was almost double the U.S. growth rate of 3.64%. The average annual growth rate for the region from 1970-2000 was 4.06% compared with the U.S. growth rate of 2.59%.
- The North East region (1.4%) has outperformed the South Central region (1.37%) over the 1970-2000 period. However, from 1990 to 2000, the South Central region grew much faster, 1.64 percent versus 0.62 percent.
- Kansas seems to have experienced a systematic downward spike in 1994 in this industry sector. More research is needed to determine if this is a data problem (perhaps a BEA redefinition) or a true economic phenomenon.
- Missing Data Summary: For certain Kansas counties, BEA has withheld Finance, Insurance, & Real Estate employment data. The procedure used to reallocate this data may create spikes or dips on the chart above that are not representative of the “true” regional trends. BEA’s data set contains missing employment data for Kansas counties from 1989 to 2000. From 1989 to 1996, 122 people, concentrated in the South West region, are represented by the missing data. The number of workers not allocated in 1998 surges to 4,203; the allocation procedure places 78% of that sum in the East Central region. In the years 1997, 1999, 2000 the average number of workers represented by the missing data equals 515. Significant known-data baseline adjustments occurred in the North West in 1997 (6.2%); East Central in 1998 (7.6%); and the South West in 1998, 1999, 2000 (16.2%, 6.4%, 4%).

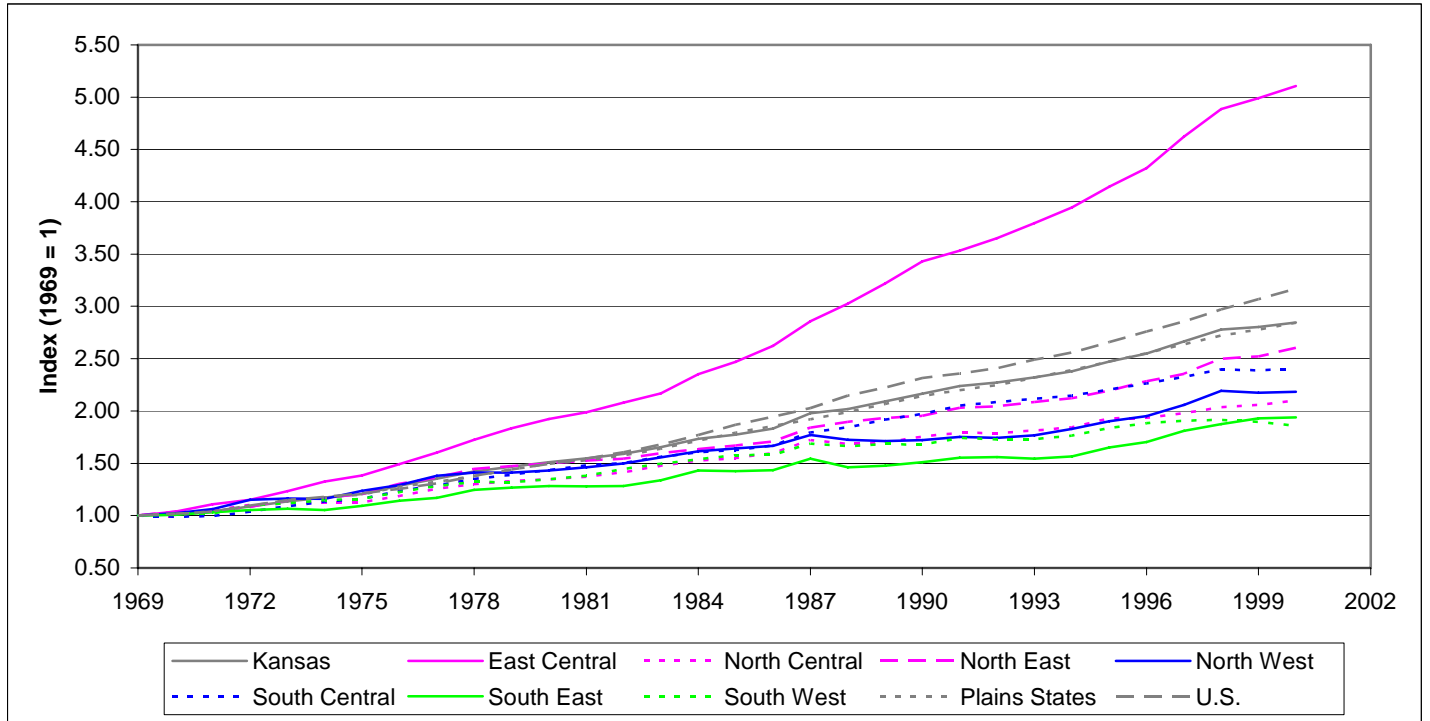
**Chart 14: Finance, Insurance, & Real Estate Industry—Trends in and Relative Levels of Inflation-Adjusted Earnings Per Worker by Region, 1969-2000, Constant 2000 Dollars (includes Proprietors)**



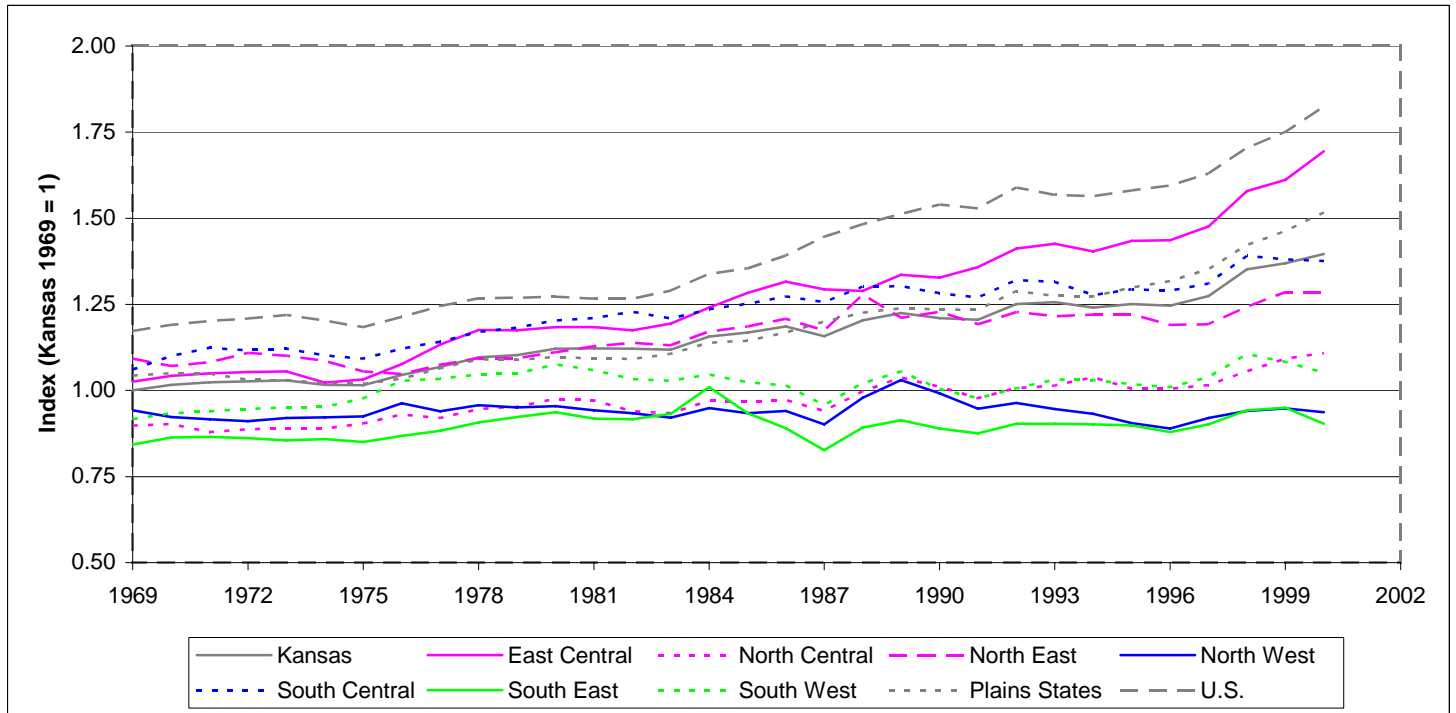
**Comments on Chart 14:**

- The East Central region lags the U.S. in the level of earnings per worker in this industry sector, but it is catching up. Over the 1970-2000 period, on an average annual basis, average earnings in the East Central region have grown 3.22% compared to 2.75% for the U.S. and 2.59% for the Plains region.
- For the decade of the 1990s, the North East region is the strongest performer in this industry sector, with an average annual growth rate of 5.57% compared to the East Central rate of 5.22% and the U.S. rate of 5.35%. See Table 3 for more detail.
- Missing Data Summary: BEA’s data set for Kansas counties has withheld figures for Finance, Insurance, & Real Estate earnings that follow the pattern of withheld employment figures for the Finance, Insurance, & Real Estate sector. Earnings per worker is a ratio of earnings and employment, each component of which may be imprecisely estimated by the procedure used to re-allocate data withheld by BEA. Sections of Chart 14 to view with special caution are: the North West region in 1997; the East Central region in 1998; and the South West region in 1998-2000.

**Chart 15: Professional Services Industry—Trends in Full and Part-Time Employment by Region, 1969-2000**

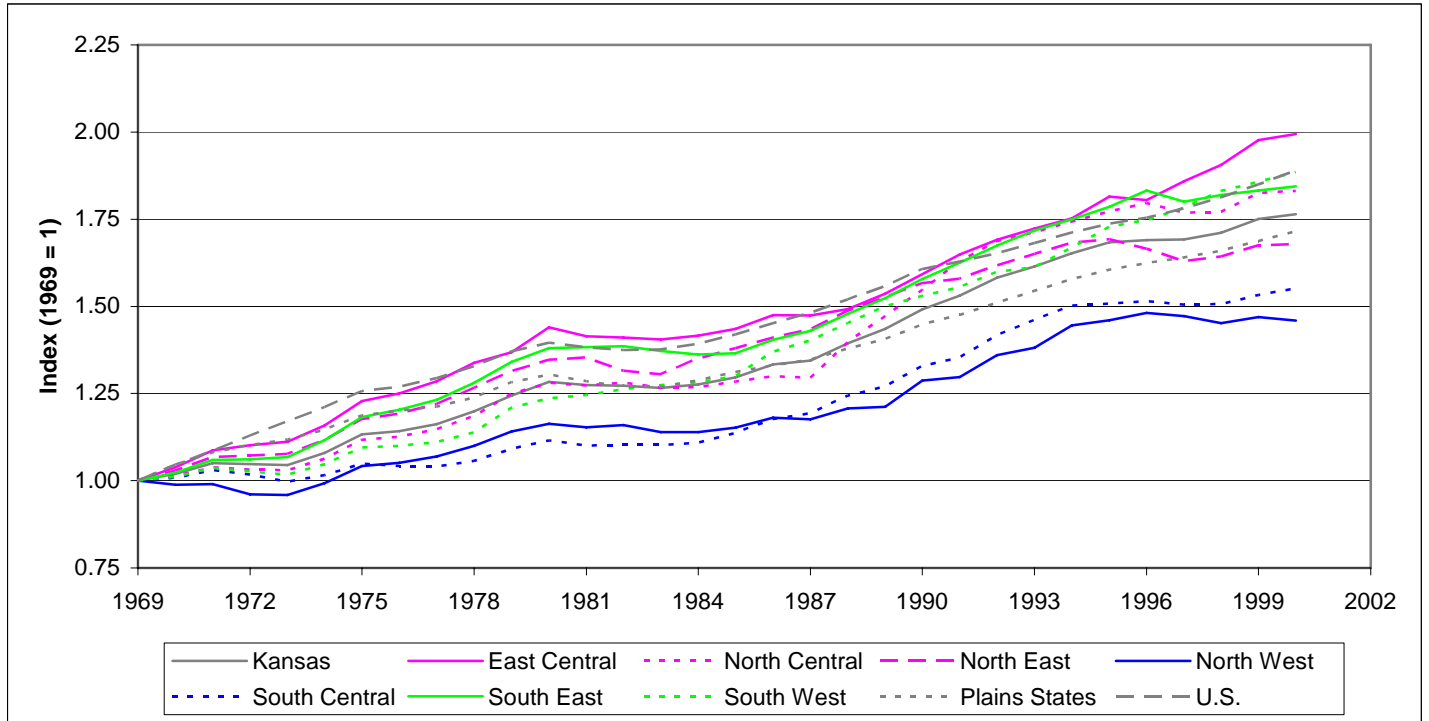


**Chart 16: Professional Services Industry—Trends in and Relative Levels of Inflation-Adjusted Earnings Per Worker by Region, 1969-2000, Constant 2000 Dollars (includes Proprietors)**



**Comments on Charts 15 and 16:** The sharp discontinuities in the South East region from 1984 to 1990 may be a result of the procedure used to allocate employment and earnings data withheld by BEA. See Tables 2 and 3 for more details on growth rates.

**Chart 17: State and Local Government Industry—Trends in Full and Part-Time Employment by Region, 1969-2000**

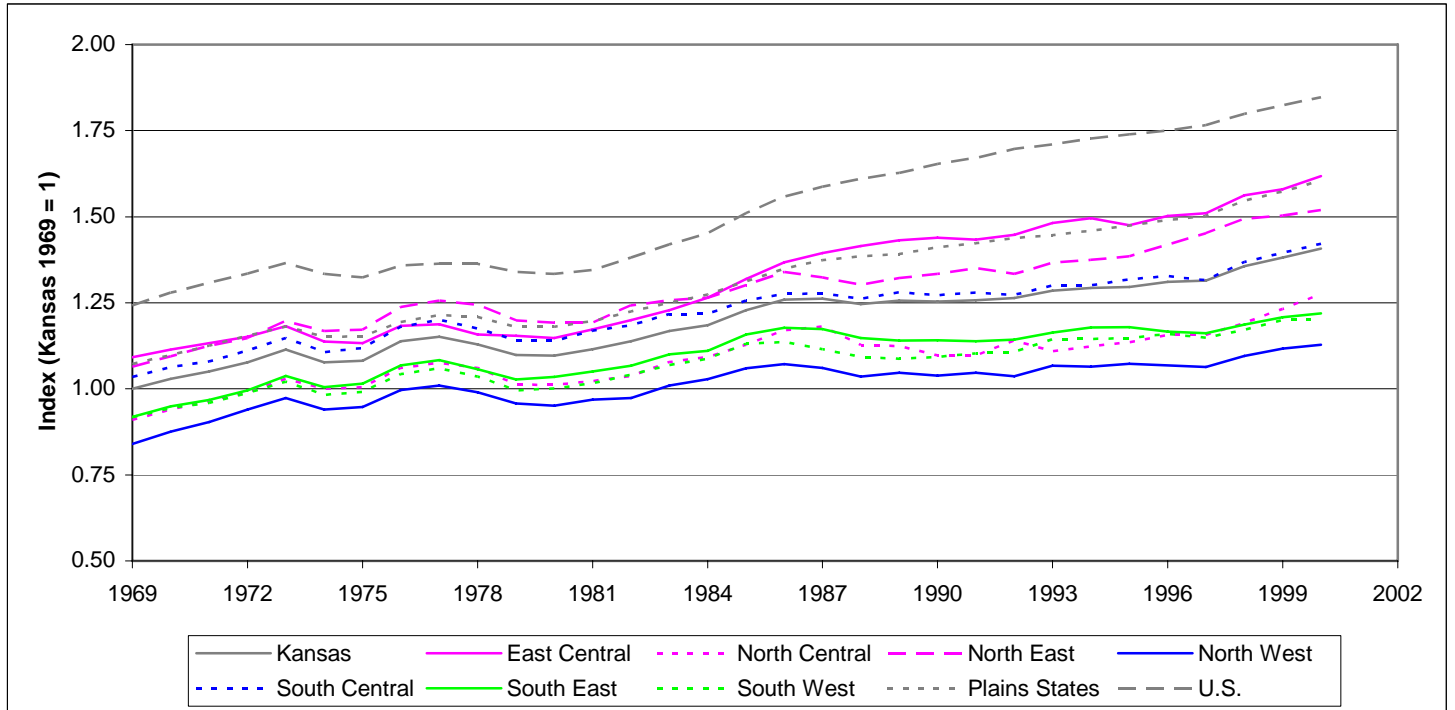


**Comments on Chart 17:**

- State and Local Government employment has grown steadily in each region since 1969. The North East and North West regions demonstrated a declining trend starting in 1996 and 1997, respectively.
- One way to evaluate the growth of government employment is to compare it to the population these workers support. The table below compares the 1970-2000 average annual growth rate of: state and local government employment, population, total employment. Except for the urban regions of Kansas—East Central and South Central—state and local government employment has grown significantly faster than total employment, even in the two regions with negative population growth. State and local government employment growth has grown significantly faster than population in all regions.

Region	State & Local Government	Population	Total Employment
Kansas	1.85	0.60	1.87
East Central	2.20	1.35	3.39
North Central	1.99	0.06	1.02
North East	1.64	0.28	1.37
North West	1.31	-0.56	0.84
South Central	1.45	0.67	1.65
South East	1.98	-0.11	0.94
South West	2.10	0.47	1.26
Plains States	1.66	0.55	1.76
United States	1.99	1.09	2.03

**Chart 18: State and Local Government Industry—Trends in and Relative Levels of Inflation-Adjusted Earnings Per Worker by Region, 1969-2000, Constant 2000 Dollars**



**Table 1: Regional Share (%) of Estimated Employment and Earnings for Each Industry**

(Note: 1970 and 1980 were years of economic recession in the U.S.)

	<b>Employment</b>				<b>Earnings</b>			
	<b>1970</b>	<b>1980</b>	<b>1990</b>	<b>2000</b>	<b>1970</b>	<b>1980</b>	<b>1990</b>	<b>2000</b>
<b>Farm</b>								
Kansas	100	100	100	100	100	100	100	100
East Central	5.61	6.45	6.87	7.64	2.34	-4.68	1.16	-0.31
North Central	19.72	18.11	18.22	17.59	13.37	-10.73	17.15	10.87
North East	9.09	9.26	9.72	9.68	6.24	-33.41	5.06	2.63
North West	14.68	14.60	13.88	13.04	17.69	54.21	17.17	12.91
South Central	18.71	18.59	18.86	18.79	14.82	17.56	12.96	13.36
South East	11.45	11.42	12.06	12.48	8.16	-24.61	2.15	-0.02
South West	20.74	21.59	20.39	20.78	37.39	101.65	44.34	60.55
<b>Construction</b>								
Kansas	100	100	100	100	100	100	100	100
East Central	23.47	23.43	33.25	36.70	26.00	26.70	39.51	45.61
North Central	12.98	11.06	11.27	9.49	11.14	9.30	9.94	7.71
North East	11.65	9.61	10.39	9.53	11.67	9.73	10.39	9.14
North West	4.99	4.45	3.56	3.33	4.41	3.59	2.40	2.12
South Central	28.02	29.35	27.61	27.46	28.80	28.73	26.06	25.53
South East	8.26	12.56	6.67	6.31	6.58	13.05	5.29	4.11
South West	10.64	9.53	7.24	7.19	11.41	8.91	6.41	5.77
<b>Manufacturing</b>								
Kansas	100	100	100	100	100	100	100	100
East Central	27.71	23.84	23.50	22.40	29.87	24.78	24.67	24.08
North Central	5.90	8.01	8.48	9.63	4.79	7.08	6.87	7.37
North East	9.18	7.42	7.36	6.93	8.63	7.07	7.31	6.60
North West	1.62	1.75	1.34	1.88	1.20	1.34	0.90	1.13
South Central	39.22	44.43	41.59	41.01	41.55	47.76	47.14	47.46
South East	12.64	9.87	10.47	10.16	10.66	7.92	7.92	7.44
South West	3.72	4.68	7.27	7.99	3.30	4.05	5.19	5.93

**Table 1 (Cont.): Regional Share (%) of Estimated Employment and Earnings for Each Industry**  
 (Note: 1970 and 1980 were years of economic recession in the U.S.)

	<b>Employment</b>				<b>Earnings</b>			
	<b>1970</b>	<b>1980</b>	<b>1990</b>	<b>2000</b>	<b>1970</b>	<b>1980</b>	<b>1990</b>	<b>2000</b>
<b>Transportation and Utilities</b>								
Kansas	100	100	100	100	100	100	100	100
East Central	23.54	25.28	36.08	49.65	24.18	27.29	36.66	59.09
North Central	10.70	10.41	8.42	8.18	10.41	10.16	7.63	7.17
North East	16.08	13.34	12.82	9.08	16.70	14.45	14.11	8.31
North West	4.32	3.79	3.24	3.27	4.38	3.49	2.63	2.30
South Central	25.32	24.59	22.74	17.93	25.09	24.31	22.56	13.81
South East	10.55	12.92	8.07	5.19	9.53	10.56	8.12	4.00
South West	9.49	9.66	8.63	6.70	9.71	9.74	8.29	5.32
<b>Wholesale Trade</b>	<b>1970</b>	<b>1980</b>	<b>1990</b>	<b>2000</b>	<b>1970</b>	<b>1980</b>	<b>1990</b>	<b>2000</b>
Kansas	100	100	100	100	100	100	100	100
East Central	26.28	30.41	39.78	41.94	27.42	34.81	45.67	51.86
North Central	10.26	9.82	9.10	8.65	9.46	8.20	9.18	6.65
North East	10.52	11.36	8.11	6.86	9.78	10.96	7.48	5.54
North West	3.45	5.23	4.34	3.85	3.50	4.23	3.15	2.36
South Central	35.31	26.64	24.68	25.57	36.50	26.96	23.27	24.47
South East	6.20	5.23	4.64	5.28	5.53	4.15	3.40	3.49
South West	7.98	11.31	9.34	7.85	7.82	10.68	7.87	5.63
<b>Retail Trade</b>	<b>1970</b>	<b>1980</b>	<b>1990</b>	<b>2000</b>	<b>1970</b>	<b>1980</b>	<b>1990</b>	<b>2000</b>
Kansas	100	100	100	100	100	100	100	100
East Central	21.14	26.52	30.11	34.13	22.58	27.34	32.72	40.09
North Central	13.55	12.54	11.57	11.54	12.57	11.29	9.78	9.58
North East	10.62	10.06	10.48	9.78	10.41	9.50	10.69	10.54
North West	6.11	5.27	4.48	4.20	5.67	4.80	3.85	3.09
South Central	28.37	28.71	28.56	26.66	29.36	30.84	29.96	25.28
South East	9.57	7.93	6.75	6.54	8.30	7.32	5.64	5.25
South West	10.64	8.96	8.04	7.16	11.11	8.91	7.37	6.18
<b>Finance, Insurance, Real Estate</b>	<b>1970</b>	<b>1980</b>	<b>1990</b>	<b>2000</b>	<b>1970</b>	<b>1980</b>	<b>1990</b>	<b>2000</b>
Kansas	100	100	100	100	100	100	100	100
East Central	23.86	31.96	39.78	42.30	23.49	31.67	45.37	52.39
North Central	11.49	9.67	8.59	8.40	10.08	8.60	6.89	5.95
North East	13.27	12.49	12.23	10.81	15.41	13.67	12.43	12.34
North West	4.66	3.82	3.31	3.50	3.80	3.59	2.45	2.01
South Central	30.44	27.49	25.19	24.65	32.14	28.53	23.57	21.09
South East	8.40	7.08	4.70	4.43	7.73	6.46	4.01	2.39
South West	7.88	7.49	6.20	5.91	7.35	7.48	5.28	3.83

**Table 1 (Cont.): Regional Share (%) of Estimated Employment and Earnings for Each Industry**  
 (Note: 1970 and 1980 were years of economic recession in the U.S.)

	<b>Employment</b>				<b>Earnings</b>			
	<b>1970</b>	<b>1980</b>	<b>1990</b>	<b>2000</b>	<b>1970</b>	<b>1980</b>	<b>1990</b>	<b>2000</b>
<b>Professional Services</b>								
Kansas	100	100	100	100	100	100	100	100
East Central	21.08	26.13	32.52	36.82	21.62	27.57	35.67	44.68
North Central	12.55	11.35	10.34	9.42	11.14	9.88	8.63	7.47
North East	12.02	11.61	10.57	10.72	12.67	11.51	10.73	9.87
North West	4.98	4.66	3.91	3.77	4.52	3.96	3.21	2.53
South Central	32.24	31.36	30.03	27.86	34.90	33.66	31.83	27.45
South East	8.29	7.07	5.81	5.67	7.04	5.91	4.27	3.67
South West	8.83	7.83	6.81	5.74	8.11	7.51	5.65	4.32
<b>State &amp; Local Government</b>								
Kansas	100	100	100	100	100	100	100	100
East Central	24.21	26.66	25.36	26.85	26.22	27.90	29.11	30.87
North Central	14.21	14.25	14.83	14.83	12.98	13.15	12.97	13.43
North East	13.00	13.52	13.52	12.25	13.83	14.70	14.38	13.22
North West	6.42	6.00	5.72	5.48	5.46	5.21	4.73	4.39
South Central	24.02	21.12	21.65	21.35	24.83	21.94	21.97	21.56
South East	8.30	8.90	8.76	8.64	7.66	8.39	7.97	7.49
South West	9.83	9.55	10.17	10.59	9.03	8.72	8.86	9.05
<b>Federal Government (including Military)</b>								
Kansas	100	100	100	100	100	100	100	100
East Central	20.49	24.54	29.11	31.44	24.72	29.18	34.64	38.27
North Central	38.25	39.72	33.04	27.82	35.82	38.07	32.47	26.02
North East	12.17	7.48	7.84	8.82	14.20	7.96	8.04	9.05
North West	2.17	2.26	2.26	2.29	1.56	1.70	1.52	1.61
South Central	20.01	18.81	19.99	22.14	18.74	17.78	18.34	19.97
South East	3.57	3.71	3.59	3.44	2.58	2.71	2.23	2.20
South West	3.33	3.48	4.17	4.05	2.38	2.60	2.77	2.88
<b>Total of All Industry Groups</b>								
Kansas	100	100	100	100	100	100	100	100
East Central	20.99	24.13	28.90	32.79	22.88	27.07	31.99	39.91
North Central	14.38	12.80	11.99	11.19	12.34	11.15	10.73	9.04
North East	11.26	10.36	10.19	9.72	11.39	10.18	10.02	9.17
North West	5.74	5.30	4.60	4.23	5.14	3.86	3.54	2.65
South Central	28.75	29.38	28.18	26.98	29.83	31.98	29.58	27.61
South East	9.16	8.66	7.31	6.95	7.85	7.44	5.78	4.96
South West	9.73	9.37	8.82	8.13	10.57	8.31	8.37	6.66

**Table 2: Estimated Employment Figures and Growth Rates by Industry for Defined Regions, Selected Years**

(Note: 1970 and 1980 were years of economic recession in the U.S.)

Farm	1970	1980	1990	2000	Average Annual Growth Rate (%)				
					1970	1980	1990	2000	1970-2000
Kansas	102,512	101,257	84,717	77,846	*	-0.12	-1.77	-0.84	-0.91
East Central	5,749	6,530	5,818	5,948	*	1.28	-1.15	0.22	0.11
North Central	20,219	18,336	15,438	13,690	*	-0.97	-1.71	-1.19	-1.29
North East	9,322	9,374	8,232	7,538	*	0.06	-1.29	-0.88	-0.71
North West	15,046	14,782	11,757	10,150	*	-0.18	-2.26	-1.46	-1.30
South Central	19,176	18,819	15,981	14,626	*	-0.19	-1.62	-0.88	-0.90
South East	11,741	11,559	10,221	9,719	*	-0.16	-1.22	-0.50	-0.63
South West	21,259	21,857	17,270	16,175	*	0.28	-2.33	-0.65	-0.91
Plains States	776,513	738,622	615,573	551,621	*	-0.50	-1.81	-1.09	-1.13
U.S.	3,961,000	3,798,000	3,153,000	3,113,000	*	-0.42	-1.84	-0.13	-0.80
<b>Construction</b>	<b>1970</b>	<b>1980</b>	<b>1990</b>	<b>2000</b>	<b>1970</b>	<b>1980</b>	<b>1990</b>	<b>2000</b>	<b>1970-2000</b>
Kansas	47,452	65,508	63,367	93,221	*	3.28	-0.33	3.94	2.28
East Central	11,136	15,351	21,072	34,209	*	3.26	3.22	4.96	3.81
North Central	6,158	7,245	7,140	8,844	*	1.64	-0.15	2.16	1.21
North East	5,526	6,295	6,585	8,885	*	1.31	0.45	3.04	1.60
North West	2,366	2,914	2,256	3,101	*	2.11	-2.53	3.23	0.91
South Central	13,297	19,228	17,498	25,595	*	3.76	-0.94	3.88	2.21
South East	3,921	8,231	4,228	5,885	*	7.70	-6.44	3.36	1.36
South West	5,048	6,244	4,588	6,703	*	2.15	-3.03	3.86	0.95
Plains States	353,079	442,806	475,962	682,410	*	2.29	0.72	3.67	2.22
U.S.	4,398,800	5,654,200	7,261,800	9,446,300	*	2.54	2.53	2.66	2.58

**Table 2 (Cont.): Estimated Employment Figures and Growth Rates by Industry for Defined Regions, Selected Years**

(Note: 1970 and 1980 were years of economic recession in the U.S.)

	1970	1980	1990	2000	Average Annual Growth Rate (%)				
					1970	1980	1990	2000	1970-2000
<b>Manufacturing</b>									
Kansas	138,745	195,185	191,073	214,257	*	3.47	-0.21	1.15	1.46
East Central	38,452	46,530	44,895	48,002	*	1.93	-0.36	0.67	0.74
North Central	8,185	15,642	16,196	20,624	*	6.69	0.35	2.45	3.13
North East	12,740	14,483	14,055	14,853	*	1.29	-0.30	0.55	0.51
North West	2,242	3,420	2,558	4,022	*	4.31	-2.86	4.63	1.97
South Central	54,418	86,718	79,470	87,863	*	4.77	-0.87	1.01	1.61
South East	17,542	19,256	19,999	21,768	*	0.94	0.38	0.85	0.72
South West	5,166	9,136	13,900	17,126	*	5.87	4.29	2.11	4.08
Plains States	1,249,063	1,419,777	1,452,414	1,550,043	*	1.29	0.23	0.65	0.72
U.S.	19,687,400	20,781,100	19,694,200	19,114,800	*	0.54	-0.54	-0.30	-0.10
<b>Transportation &amp; Utilities</b>									
Kansas	58,109	73,636	74,812	97,940	*	2.40	0.16	2.73	1.76
East Central	13,680	18,614	26,992	48,625	*	3.13	3.79	6.06	4.32
North Central	6,216	7,667	6,299	8,013	*	2.12	-1.95	2.44	0.85
North East	9,344	9,826	9,590	8,897	*	0.50	-0.24	-0.75	-0.16
North West	2,509	2,793	2,424	3,202	*	1.08	-1.41	2.82	0.82
South Central	14,716	18,106	17,011	17,557	*	2.09	-0.62	0.32	0.59
South East	6,130	9,515	6,040	5,083	*	4.49	-4.44	-1.71	-0.62
South West	5,514	7,115	6,456	6,563	*	2.58	-0.97	0.17	0.58
Plains States	421,080	501,685	539,749	673,739	*	1.77	0.73	2.24	1.58
U.S.	4,865,500	5,672,100	6,550,600	8,244,400	*	1.55	1.45	2.33	1.77

**Table 2 (Cont.): Estimated Employment Figures and Growth Rates by Industry for Defined Regions, Selected Years**  
 (Note: 1970 and 1980 were years of economic recession in the U.S. Wholesale Trade data before 1975 was too unreliable to use.)

	1970	1980	1990	2000	Average Annual Growth Rate (%)				
					1970	1980	1990	2000	1980-2000
<b>Wholesale Trade</b>									
Kansas	*	68,602	75,613	82,389	*	*	0.98	0.86	0.92
East Central	*	20,860	30,076	34,551	*	*	3.73	1.40	2.56
North Central	*	6,739	6,884	7,129	*	*	0.21	0.35	0.28
North East	*	7,794	6,135	5,649	*	*	-2.37	-0.82	-1.60
North West	*	3,586	3,280	3,169	*	*	-0.89	-0.34	-0.62
South Central	*	18,277	18,665	21,067	*	*	0.21	1.22	0.71
South East	*	3,586	3,508	4,353	*	*	-0.22	2.18	0.97
South West	*	7,760	7,065	6,471	*	*	-0.93	-0.87	-0.90
Plains States	*	513,630	543,215	603,869	*	*	0.56	1.06	0.81
U.S.	*	5,741,700	6,720,500	7,584,100	*	*	1.59	1.22	1.40
<b>Retail Trade</b>									
Kansas	165,914	199,323	238,711	294,810	*	1.85	1.82	2.13	1.93
East Central	35,079	52,865	71,868	100,607	*	4.19	3.12	3.42	3.57
North Central	22,479	24,998	27,622	34,007	*	1.07	1.00	2.10	1.39
North East	17,619	20,045	25,027	28,833	*	1.30	2.24	1.43	1.66
North West	10,134	10,504	10,701	12,390	*	0.36	0.19	1.48	0.67
South Central	47,063	57,233	68,169	78,590	*	1.98	1.76	1.43	1.72
South East	15,885	15,810	16,123	19,269	*	-0.05	0.20	1.80	0.65
South West	17,655	17,868	19,201	21,114	*	0.12	0.72	0.95	0.60
Plains States	1,207,528	1,495,905	1,762,767	2,117,391	*	2.16	1.66	1.85	1.89
U.S.	13,698,800	17,883,900	22,885,500	27,222,300	*	2.70	2.50	1.75	2.32

**Table 2 (Cont.): Estimated Employment Figures and Growth Rates by Industry for Defined Regions, Selected Years**

(Note: 1970 and 1980 were years of economic recession in the U.S.)

	1970	1980	1990	2000	Average Annual Growth Rate (%)				
					1970	1980	1990	2000	1970-2000
<b>Finance, Insurance, Real Estate</b>									
Kansas	61,930	88,788	95,715	115,154	*	3.67	0.75	1.87	2.09
East Central	14,775	28,374	38,075	48,710	*	6.74	2.98	2.49	4.06
North Central	7,117	8,588	8,218	9,675	*	1.90	-0.44	1.65	1.03
North East	8,216	11,091	11,708	12,450	*	3.05	0.54	0.62	1.40
North West	2,886	3,392	3,168	4,036	*	1.63	-0.68	2.45	1.12
South Central	18,849	24,407	24,109	28,380	*	2.62	-0.12	1.64	1.37
South East	5,204	6,283	4,498	5,096	*	1.90	-3.29	1.26	-0.07
South West	4,883	6,653	5,939	6,807	*	3.14	-1.13	1.37	1.11
Plains States	491,606	661,252	742,915	926,264	*	3.01	1.17	2.23	2.13
U.S.	6,125,400	8,756,000	10,714,600	13,193,800	*	3.64	2.04	2.10	2.59
<b>Professional Services</b>									
Kansas	168,591	251,879	360,806	474,558	*	4.10	3.66	2.78	3.51
East Central	35,545	65,805	117,345	174,743	*	6.35	5.95	4.06	5.45
North Central	21,155	28,587	37,299	44,682	*	3.06	2.70	1.82	2.52
North East	20,272	29,243	38,136	50,873	*	3.73	2.69	2.92	3.11
North West	8,391	11,729	14,112	17,890	*	3.41	1.87	2.40	2.56
South Central	54,361	78,984	108,367	132,207	*	3.81	3.21	2.01	3.01
South East	13,984	17,814	20,976	26,913	*	2.45	1.65	2.52	2.21
South West	14,883	19,717	24,571	27,250	*	2.85	2.23	1.04	2.04
Plains States	1,306,741	1,929,489	2,763,964	3,668,363	*	3.97	3.66	2.87	3.50
U.S.	17,021,800	24,982,600	38,670,600	52,990,800	*	3.91	4.47	3.20	3.86

**Table 2 (Cont.): Estimated Employment Figures and Growth Rates by Industry for Defined Regions, Selected Years**

(Note: 1970 and 1980 were years of economic recession in the U.S.)

State & Local Government	1970	1980	1990	2000	Average Annual Growth Rate (%)				
					1970	1980	1990	2000	1970-2000
Kansas	128,699	162,027	188,247	222,760	*	2.33	1.51	1.70	1.85
East Central	31,160	43,201	47,746	59,815	*	3.32	1.01	2.28	2.20
North Central	18,288	23,093	27,908	33,033	*	2.36	1.91	1.70	1.99
North East	16,735	21,904	25,455	27,298	*	2.73	1.51	0.70	1.64
North West	8,264	9,728	10,759	12,200	*	1.64	1.01	1.26	1.31
South Central	30,914	34,213	40,751	47,567	*	1.02	1.76	1.56	1.45
South East	10,682	14,416	16,484	19,256	*	3.04	1.35	1.57	1.98
South West	12,656	15,472	19,144	23,591	*	2.03	2.15	2.11	2.10
Plains States	858,698	1,070,880	1,189,414	1,408,546	*	2.23	1.06	1.71	1.66
U.S.	9,947,000	13,280,000	15,281,000	17,977,000	*	2.93	1.41	1.64	1.99
<b>Total Employment</b>	<b>1970</b>	<b>1980</b>	<b>1990</b>	<b>2000</b>	<b>1970</b>	<b>1980</b>	<b>1990</b>	<b>2000</b>	<b>1970-2000</b>
Kansas	1,017,405	1,312,137	1,483,043	1,771,218	*	2.58	1.23	1.79	1.87
East Central	213,533	316,645	428,571	580,797	*	4.02	3.07	3.09	3.39
North Central	146,339	167,958	177,882	198,267	*	1.39	0.58	1.09	1.02
North East	114,529	135,904	151,126	172,094	*	1.73	1.07	1.31	1.37
North West	58,414	69,589	68,167	74,974	*	1.77	-0.21	0.96	0.84
South Central	292,459	385,479	417,974	477,880	*	2.80	0.81	1.35	1.65
South East	93,170	113,593	108,480	123,180	*	2.00	-0.46	1.28	0.94
South West	98,961	122,969	130,843	144,026	*	2.20	0.62	0.96	1.26
Plains States	7,515,685	9,250,310	10,616,657	12,695,961	*	2.10	1.39	1.80	1.76
U.S.	91,281,600	114,231,200	139,380,900	166,758,800	*	2.27	2.01	1.81	2.03

**Table 3: Estimated Earnings Per Worker and Growth Rates by Industry for Defined Regions, Selected Years**

(Note: 1970 and 1980 were years of economic recession in the U.S.)

Farm	Actual Dollars				Inflation-Adjusted Dollars ( 2000 = 100)				Average Annual Real Growth Rate (%)				
	1970	1980	1990	2000	1970	1980	1990	2000	1970	1980	1990	2000	1970-2000
Kansas	5,840	956	16,192	9,055	21,212	1,770	19,845	9,055	*	-21.99	27.34	-7.55	-2.80
East Central	2,437	(693)	2,737	(362)	8,849	(1,283)	3,354	(362)	*	n/a	n/a	n/a	n/a
North Central	3,958	(567)	15,241	5,596	14,375	(1,049)	18,680	5,596	*	n/a	n/a	-11.36	-3.10
North East	4,008	(3,452)	8,439	2,462	14,558	(6,387)	10,343	2,462	*	n/a	n/a	-13.37	-5.75
North West	7,038	3,551	20,033	8,966	25,562	6,572	24,553	8,966	*	-12.70	14.09	-9.58	-3.43
South Central	4,626	904	11,126	6,440	16,802	1,673	13,636	6,440	*	-20.60	23.35	-7.23	-3.15
South East	4,162	(2,062)	2,892	(12)	15,116	(3,815)	3,544	(12)	*	n/a	n/a	n/a	n/a
South West	10,529	4,504	35,215	26,385	38,241	8,334	43,160	26,385	*	-14.13	17.88	-4.80	-1.23
Plains States	5,638	2,395	16,501	12,827	20,475	4,431	20,224	12,827	*	-14.19	16.40	-4.45	-1.55
U.S.	4,409	5,369	14,830	14,289	16,012	9,935	18,177	14,289	*	-4.66	6.23	-2.38	-0.38
<b>Construction</b>	<b>1970</b>	<b>1980</b>	<b>1990</b>	<b>2000</b>	<b>1970</b>	<b>1980</b>	<b>1990</b>	<b>2000</b>	<b>1970</b>	<b>1980</b>	<b>1990</b>	<b>2000</b>	<b>1970-2000</b>
Kansas	8,812	19,019	25,939	35,038	32,003	35,193	31,791	35,038	*	0.95	-1.01	0.98	0.30
East Central	9,761	21,669	30,820	43,550	35,449	40,096	37,774	43,550	*	1.24	-0.59	1.43	0.69
North Central	7,563	15,986	22,882	28,488	27,468	29,579	28,045	28,488	*	0.74	-0.53	0.16	0.12
North East	8,831	19,253	25,936	33,583	32,074	35,625	31,789	33,583	*	1.06	-1.13	0.55	0.15
North West	7,785	15,356	17,451	22,366	28,274	28,414	21,389	22,366	*	0.05	-2.80	0.45	-0.78
South Central	9,056	18,617	24,480	32,585	32,888	34,448	30,004	32,585	*	0.46	-1.37	0.83	-0.03
South East	7,016	19,751	20,559	22,809	25,481	36,547	25,198	22,809	*	3.67	-3.65	-0.99	-0.37
South West	9,453	17,774	22,972	28,126	34,334	32,888	28,155	28,126	*	-0.43	-1.54	-0.01	-0.66
Plains States	9,625	19,283	27,540	38,073	34,957	35,682	33,755	38,073	*	0.21	-0.55	1.21	0.28
U.S.	10,107	19,946	30,111	40,434	36,708	36,908	36,905	40,434	*	0.05	0.00	0.92	0.32

**Table 3 (Cont.): Estimated Earnings Per Worker and Growth Rates by Industry for Defined Regions, Selected Years**

(Note: 1970 and 1980 were years of economic recession in the U.S.)

	Actual Dollars				Inflation-Adjusted Dollars ( 2000 = 100)				Average Annual Real Growth Rate (%)				
	1970	1980	1990	2000	1970	1980	1990	2000	1970	1980	1990	2000	1970-2000
<b>Manufacturing</b>													
Kansas	8,752	20,369	31,918	46,235	31,787	37,691	39,120	46,235	*	1.72	0.37	1.69	1.26
East Central	9,432	21,175	33,510	49,691	34,258	39,182	41,071	49,691	*	1.35	0.47	1.92	1.25
North Central	7,107	17,997	25,884	35,385	25,811	33,302	31,724	35,385	*	2.58	-0.48	1.10	1.06
North East	8,223	19,397	31,734	44,047	29,864	35,891	38,894	44,047	*	1.86	0.81	1.25	1.30
North West	6,493	15,610	21,448	27,798	23,583	28,884	26,287	27,798	*	2.05	-0.94	0.56	0.55
South Central	9,273	21,896	36,177	53,504	33,677	40,515	44,340	53,504	*	1.87	0.91	1.90	1.56
South East	7,377	16,351	24,141	33,840	26,794	30,255	29,588	33,840	*	1.22	-0.22	1.35	0.78
South West	7,768	17,629	22,763	34,300	28,212	32,621	27,899	34,300	*	1.46	-1.55	2.09	0.65
Plains States	9,127	20,800	33,187	48,415	33,147	38,489	40,675	48,415	*	1.51	0.55	1.76	1.27
U.S.	9,279	21,390	35,923	56,019	33,699	39,580	44,028	56,019	*	1.62	1.07	2.44	1.71
<b>Transportation &amp; Utilities</b>													
Kansas	9,480	22,552	36,255	56,666	34,430	41,730	44,436	56,666	*	1.94	0.63	2.46	1.67
East Central	9,737	24,344	36,833	67,442	35,364	45,045	45,144	67,442	*	2.45	0.02	4.10	2.18
North Central	9,223	22,006	32,868	49,657	33,495	40,720	40,284	49,657	*	1.97	-0.11	2.11	1.32
North East	9,845	24,420	39,919	51,821	35,756	45,187	48,926	51,821	*	2.37	0.80	0.58	1.24
North West	9,609	20,724	29,389	39,934	34,897	38,346	36,021	39,934	*	0.95	-0.62	1.04	0.45
South Central	9,393	22,300	35,972	43,646	34,113	41,263	44,089	43,646	*	1.92	0.66	-0.10	0.82
South East	8,566	18,434	36,473	43,714	31,111	34,110	44,703	43,714	*	0.92	2.74	-0.22	1.14
South West	9,704	22,741	34,819	44,979	35,245	42,080	42,675	44,979	*	1.79	0.14	0.53	0.82
Plains States	9,905	23,179	34,977	48,560	35,975	42,889	42,869	48,560	*	1.77	0.00	1.25	1.00
U.S.	10,230	24,005	36,954	53,582	37,153	44,418	45,293	53,582	*	1.80	0.20	1.69	1.23

**Table 3 (Cont.): Estimated Earnings Per Worker and Growth Rates by Industry for Defined Regions, Selected Years**  
 (Note: 1970 and 1980 were years of economic recession in the U.S. Wholesale Trade data before 1975 was too unreliable to use.)

	Actual Dollars				Inflation-Adjusted Dollars ( 2000 = 100)				Average Annual Real Growth Rate (%)				
	1970	1980	1990	2000	1970	1980	1990	2000	1970	1980	1990	2000	1980-2000
<b>Wholesale Trade</b>													
Kansas	*	19,638	30,991	46,121	*	36,338	37,984	46,121	*	*	0.44	1.96	1.20
East Central	*	22,481	35,579	57,040	*	41,598	43,607	57,040	*	*	0.47	2.72	1.59
North Central	*	16,395	31,236	35,441	*	30,337	38,284	35,441	*	*	2.35	-0.77	0.78
North East	*	18,952	28,564	37,296	*	35,068	35,009	37,296	*	*	-0.02	0.63	0.31
North West	*	15,897	22,470	28,261	*	29,416	27,541	28,261	*	*	-0.66	0.26	-0.20
South Central	*	19,874	29,214	44,129	*	36,774	35,806	44,129	*	*	-0.27	2.11	0.92
South East	*	15,595	22,682	30,432	*	28,857	27,799	30,432	*	*	-0.37	0.91	0.27
South West	*	18,545	26,103	33,075	*	34,316	31,993	33,075	*	*	-0.70	0.33	-0.18
Plains States	*	20,006	31,604	47,757	*	37,018	38,735	47,757	*	*	0.45	2.12	1.28
U.S.	*	20,775	34,999	53,552	*	38,442	42,897	53,552	*	*	1.10	2.24	1.67
<b>Retail Trade</b>													
Kansas	4,893	9,260	12,842	16,953	17,770	17,134	15,739	16,953	*	-0.36	-0.85	0.75	-0.16
East Central	5,226	9,546	13,955	19,915	18,980	17,664	17,104	19,915	*	-0.72	-0.32	1.53	0.16
North Central	4,538	8,336	10,855	14,076	16,481	15,424	13,304	14,076	*	-0.66	-1.47	0.57	-0.52
North East	4,797	8,746	13,092	18,266	17,423	16,184	16,046	18,266	*	-0.73	-0.09	1.30	0.16
North West	4,545	8,433	11,031	12,448	16,508	15,604	13,521	12,448	*	-0.56	-1.42	-0.82	-0.94
South Central	5,064	9,946	13,472	16,075	18,392	18,403	16,511	16,075	*	0.01	-1.08	-0.27	-0.45
South East	4,241	8,543	10,715	13,621	15,402	15,808	13,132	13,621	*	0.26	-1.84	0.37	-0.41
South West	5,108	9,202	11,766	14,640	18,551	17,028	14,421	14,640	*	-0.85	-1.65	0.15	-0.79
Plains States	5,093	9,106	12,772	17,639	18,497	16,849	15,654	17,639	*	-0.93	-0.73	1.20	-0.16
U.S.	5,448	10,018	14,876	20,501	19,785	18,538	18,232	20,501	*	-0.65	-0.17	1.18	0.12

**Table 3 (Cont.): Estimated Earnings Per Worker and Growth Rates by Industry for Defined Regions, Selected Years**

(Note: 1970 and 1980 were years of economic recession in the U.S.)

	Actual Dollars				Inflation-Adjusted Dollars ( 2000 = 100)				Average Annual Real Growth Rate (%)				
	1970	1980	1990	2000	1970	1980	1990	2000	1970	1980	1990	2000	1970-2000
<b>Finance, Insurance, Real Estate</b>													
Kansas	4,634	9,867	18,428	34,587	16,830	18,258	22,586	34,587	*	0.82	2.15	4.35	2.43
East Central	4,563	9,778	21,016	42,836	16,571	18,092	25,758	42,836	*	0.88	3.60	5.22	3.22
North Central	4,063	8,775	14,790	24,498	14,758	16,237	18,127	24,498	*	0.96	1.11	3.06	1.70
North East	5,384	10,799	18,734	39,467	19,553	19,983	22,961	39,467	*	0.22	1.40	5.57	2.37
North West	3,779	9,272	13,660	19,882	13,723	17,157	16,742	19,882	*	2.26	-0.24	1.73	1.24
South Central	4,893	10,242	17,243	29,601	17,772	18,951	21,134	29,601	*	0.64	1.10	3.43	1.72
South East	4,260	9,002	15,719	18,682	15,473	16,658	19,266	18,682	*	0.74	1.47	-0.31	0.63
South West	4,322	9,849	15,675	22,396	15,697	18,224	19,212	22,396	*	1.50	0.53	1.55	1.19
Plains States	5,061	10,500	20,263	39,563	18,381	19,429	24,835	39,563	*	0.56	2.49	4.77	2.59
U.S.	5,946	12,132	23,620	48,764	21,596	22,449	28,950	48,764	*	0.39	2.58	5.35	2.75
<b>Professional Services</b>													
Kansas	5,377	11,645	18,967	26,827	19,529	21,547	23,247	26,827	*	0.99	0.76	1.44	1.06
East Central	5,514	12,290	20,801	32,554	20,027	22,741	25,494	32,554	*	1.28	1.15	2.47	1.63
North Central	4,773	10,135	15,842	21,293	17,335	18,754	19,417	21,293	*	0.79	0.35	0.93	0.69
North East	5,666	11,541	19,257	24,696	20,578	21,354	23,602	24,696	*	0.37	1.01	0.45	0.61
North West	4,884	9,913	15,555	17,994	17,739	18,343	19,065	17,994	*	0.34	0.39	-0.58	0.05
South Central	5,819	12,498	20,103	26,436	21,135	23,126	24,639	26,436	*	0.90	0.64	0.71	0.75
South East	4,567	9,732	13,944	17,361	16,586	18,008	17,090	17,361	*	0.83	-0.52	0.16	0.15
South West	4,940	11,174	15,745	20,198	17,942	20,675	19,298	20,198	*	1.43	-0.69	0.46	0.40
Plains States	5,554	11,393	19,368	29,146	20,172	21,082	23,738	29,146	*	0.44	1.19	2.07	1.23
U.S.	6,297	13,215	24,137	35,038	22,868	24,453	29,584	35,038	*	0.67	1.92	1.71	1.43

**Table 3 (Cont.): Estimated Earnings Per Worker and Growth Rates by Industry for Defined Regions, Selected Years**

(Note: 1970 and 1980 were years of economic recession in the U.S.)

State & Local Government	Actual Dollars				Inflation-Adjusted Dollars ( 2000 = 100)				Average Annual Real Growth Rate (%)				
	1970	1980	1990	2000	1970	1980	1990	2000	1970	1980	1990	2000	1970-2000
Kansas	6,118	12,796	22,092	30,401	22,219	23,678	27,077	30,401	*	0.64	1.35	1.16	1.05
East Central	6,624	13,388	25,359	34,946	24,058	24,774	31,080	34,946	*	0.29	2.29	1.18	1.25
North Central	5,587	11,803	19,331	27,536	20,291	21,841	23,693	27,536	*	0.74	0.82	1.51	1.02
North East	6,507	13,913	23,498	32,800	23,633	25,743	28,800	32,800	*	0.86	1.13	1.31	1.10
North West	5,205	11,099	18,295	24,351	18,905	20,538	22,423	24,351	*	0.83	0.88	0.83	0.85
South Central	6,323	13,297	22,421	30,692	22,964	24,605	27,480	30,692	*	0.69	1.11	1.11	0.97
South East	5,644	12,071	20,096	26,332	20,497	22,336	24,631	26,332	*	0.86	0.98	0.67	0.84
South West	5,617	11,680	19,254	25,971	20,402	21,613	23,599	25,971	*	0.58	0.88	0.96	0.81
Plains States	6,531	13,768	24,856	34,658	23,719	25,475	30,464	34,658	*	0.72	1.80	1.30	1.27
U.S.	7,609	15,563	29,138	39,881	27,635	28,798	35,712	39,881	*	0.41	2.18	1.11	1.23
<b>All Industries</b>	<b>1970</b>	<b>1980</b>	<b>1990</b>	<b>2000</b>	<b>1970</b>	<b>1980</b>	<b>1990</b>	<b>2000</b>	<b>1970</b>	<b>1980</b>	<b>1990</b>	<b>2000</b>	<b>1970-2000</b>
Kansas	6,520	13,531	22,162	31,501	23,680	25,038	27,162	31,501	*	0.56	0.82	1.49	0.96
East Central	7,108	15,179	24,531	38,345	25,816	28,088	30,066	38,345	*	0.85	0.68	2.46	1.33
North Central	5,592	11,787	19,825	25,428	20,309	21,810	24,299	25,428	*	0.72	1.09	0.46	0.75
North East	6,598	13,300	21,783	29,732	23,963	24,610	26,698	29,732	*	0.27	0.82	1.08	0.72
North West	5,833	9,857	17,071	19,730	21,183	18,239	20,923	19,730	*	-1.49	1.38	-0.59	-0.24
South Central	6,767	14,731	23,256	32,237	24,575	27,259	28,504	32,237	*	1.04	0.45	1.24	0.91
South East	5,589	11,636	17,518	22,476	20,300	21,530	21,471	22,476	*	0.59	-0.03	0.46	0.34
South West	7,086	11,992	21,020	25,785	25,735	22,190	25,763	25,785	*	-1.47	1.50	0.01	0.01
Plains States	6,898	13,817	22,913	33,053	25,053	25,566	28,083	33,053	*	0.20	0.94	1.64	0.93
U.S.	7,549	15,894	26,561	39,007	27,415	29,409	32,555	39,007	*	0.70	1.02	1.82	1.18

## **Industry Definitions Related to the Data Used in this Report** (Provided by U.S. Bureau of Economic Analysis)

**Farm Earnings** is comprised of the net income of sole proprietors, partners and hired laborers arising directly from the current production of agricultural commodities, either livestock or crops. It includes net farm proprietors' income and the wages and salaries, pay-in-kind, and supplements to wages and salaries of hired farm laborers; but specifically excludes the income of non-family farm corporations.

**Farm Employment** is the number of workers engaged in the direct production of agricultural commodities, either livestock or crops; whether as a sole proprietor, partner, or hired laborer.

**Mining (SIC definition):** This SIC division includes all establishments primarily engaged in mining. The term mining is used in the broad sense to include the extraction of minerals occurring naturally: solids, such as coal and ores; liquids, such as crude petroleum; and gases such as natural gas. The term mining is also used in the broad sense to include quarrying, well operations, milling (e.g., crushing, screening, washing, flotation), and other preparation customarily done at the mine site, or as a part of mining activity.

Exploration and development of mineral properties are included. Services performed on a contract or fee basis in the development or operation of mineral properties are classified separately but within this division.

**Construction (SIC definition):** This SIC division includes establishments primarily engaged in construction. The term construction includes new work, additions, alterations, reconstruction, installations, and repairs. Construction activities are generally administered or managed from a relatively fixed place of business, but the actual construction work is performed at one or more different sites. If a company has more than one relatively fixed place of business from which it undertakes or manages construction activities and for which separate data on the number of employees, payroll, receipts, and other establishment-type records are maintained, each such place of business is considered a separate construction establishment.

Three broad types of construction activity are covered: (1) building construction by general contractors or by operative builders; (2) heavy construction other than building by general contractors and special trade contractors; and (3) construction activity by other special trade contractors.

**Manufacturing (SIC definition):** The manufacturing SIC division includes establishments engaged in the mechanical or chemical transformation of materials or substances into new products. These establishments are usually described as plants, factories, or mills and characteristically use power driven machines and materials handling equipment. Establishments engaged in assembling component parts of

manufactured products are also considered manufacturing if the new product is neither a structure nor other fixed improvement. Also included is the blending of materials, such as lubricating oils, plastics resins, or liquors.

**Transportation and Public Utilities (SIC definition):** This SIC division includes establishments providing, to the general public or to other business enterprises, passenger and freight transportation, communications services, or electricity, gas, steam, water or sanitary services. (This division is referred to as "Transportation, Communications, Electric, Gas, and Sanitary Services" in the *Standard Industrial Classification Manual*.)

For many of the industries in this division, the establishments have activities, workers, and physical facilities distributed over an extensive geographic area. For this division, the establishment is represented by a relatively permanent office, shop, station, terminal, or warehouse, etc. that is either (1) directly responsible for supervising such activities or (2) the base from which personnel operate to carry out these activities.

**Wholesale Trade (SIC definition):** This SIC division includes establishments or places of business primarily engaged in selling merchandise to retailers; to industrial, commercial, institutional, farm, construction contractors, or professional business users; or to other wholesalers; or acting as agents or brokers in buying merchandise for or selling merchandise to such persons or companies.

**Retail Trade (SIC definition):** This SIC division includes establishments engaged in selling merchandise for personal or household consumption and rendering services incidental to the sale of the goods. In general, retail establishments are classified by kind of business according to the principal lines of commodities sold (groceries, hardware, etc.), or the usual trade designation (drug store, cigar store, etc.). Some of the important characteristics of retail trade establishments are: the establishment is usually a place of business and is engaged in activities to attract the general public to buy; the establishment buys or receives merchandise as well as sells; the establishment may process its products, but such processing is incidental or subordinate to selling; the establishment is considered as retail in the trade; and the establishment sells to customers for personal or household use. Not all of these characteristics need be present and some are modified by trade practice.

**Finance, Insurance, and Real Estate (SIC definition):** This SIC division includes establishments operating primarily in the fields of finance, insurance, and real estate. Finance includes depository institutions, non-depository credit institutions, holding (but not predominantly operating) companies, other investment companies, brokers and dealers in securities and commodity contracts, and security and commodity exchanges. Insurance covers carriers of all types of insurance, and insurance agents and brokers. Real estate includes owners, lessors, lessees, buyers, sellers, agents, and developers of real estate. Establishments primarily engaged in the construction of buildings for sale (operative builders) are classified in Construction.

**Professional Services (SIC definition):** This SIC division includes establishments primarily engaged in providing a wide variety of services for individuals, business and government establishments, and other organizations. Hotels and other lodging places; establishments providing personal, business, repair, and amusement services; health, legal, engineering, and other professional services; educational institutions; membership organizations, and other miscellaneous services, are included. (Establishments which provide specialized services closely allied to activities covered in other divisions are classified in such divisions.)

# KANSAS, INC.

Created by the 1986 Legislature, Kansas, Inc. is an independent, objective, and non-partisan agency designed to conduct economic development research and analysis with a goal of crafting policies and recommendations to insure the state's ongoing competitiveness for economic growth. This is achieved through these primary activities: 1) developing and implementing a proactive and aggressive research agenda; 2) identifying and promoting strategies and policies from the research; 3) conducting evaluation reviews and oversight of programs; and, 4) collaboration with economic development entities and outreach to potential partners. Kansas, Inc. is designed to be a public private partnership with expectations that state investments are leveraged with other funds to maintain a strong research portfolio.

A 17-member Board of Directors co-chaired by the Governor and a private sector representative governs Kansas, Inc. Nine Board members are representatives from identified industries in the private sector and other members are: the Secretary of Commerce, Legislative leadership, the Kansas Board of Regents, and a representative from labor.

---

---

## BOARD OF DIRECTORS

### CO-CHAIRS

**Governor Kathleen Sebelius**  
Topeka

**Patti Bossert**  
Key Staffing, Topeka

### MEMBERS

**Stan R. Ahlerich**  
Ahlerich Farms, Winfield

**Gene Argo**  
American Rodeo Company, Hays

**Rep. Tom Burroughs**  
State Representative, Kansas City

**Secretary Howard Fricke**  
Kansas Department of Commerce, Topeka

**Rep. Lana Gordon**  
State Representative, Topeka

**Donna Johnson**  
Pinnacle Technology, Lawrence

**Sen. Laura Kelly**  
State Senator, Topeka

**Wil Leiker**  
AFL- CIO, Topeka

**Lawrence L. McCants**  
First National Bank, Goodland

**Sen. Stephen Morris**  
Senate President, Hugoton

**Reginald Robinson**  
Kansas Board of Regents, Topeka

**Donald P. Schnacke**  
Donald P. Schnacke, P.A., Topeka

**Paul Stephenson**  
PDS Company, Wichita

**Stephen L. Waite**  
Kansas Calvary, El Dorado

---

---

### KANSAS, INC. STAFF

**Stan R. Ahlerich**  
Interim President

**Debby Fitzhugh**  
Director of Operations

**Dan Korber**  
Senior Research Analyst



632 SW Van Buren, Suite 100  
Topeka, KS 66603  
(785) 296-1460  
(785) 296-1463 (fax)  
[www.kansasinc.org](http://www.kansasinc.org)  
[ksinc@ink.org](mailto:ksinc@ink.org)



University of Kansas School of Business  
Summerfield Hall, 1300 Sunnyside Avenue  
Lawrence, KS 66045-7585  
[www.cae.business.ku.edu](http://www.cae.business.ku.edu)  
(785) 864-5134