

3.0 Competitive Position of Foundation Areas

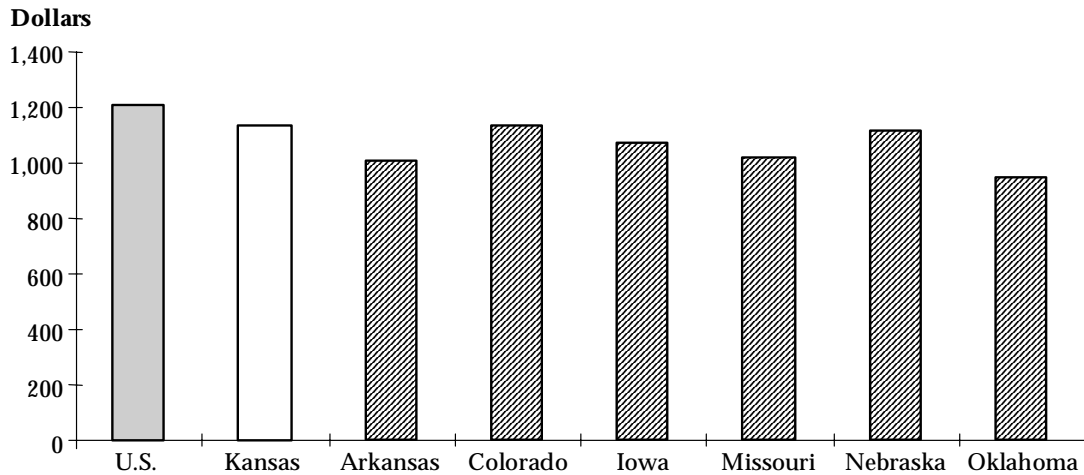
Foundation areas are the building blocks from which economic development success is based. This section will examine six standard foundation areas, comparing various indicators to the U.S. and competitor states. The six areas are: human resources, technology and entrepreneurship, capital availability, infrastructure, tax and regulatory environment, and quality of life. These categories roughly follow those from the Corporation for Enterprise Development (CFED) report card mentioned previously. In addition, some of the indicator concepts from KTEC's Innovation Index are used in this study. Where possible, data from that report has been updated.

Typically, Kansans view competitor states as Arkansas, Colorado, Iowa, Missouri, Nebraska, and Oklahoma, and it is those states against which Kansas is benchmarked. In addition, Section 3.7 provides a case-study comparison of Kansas to North Carolina and Washington as a means of benchmarking Kansas' competitive position to states outside of the Central Plains region. North Carolina was chosen for its rise from a mostly rural and tourist state to one with active technology and finance industries. Washington provides another comparison because of similar importance in aviation and agriculture industries.

3.1 Human Resources

This section focuses on the educational outcomes and resources in Kansas compared to competitor states and the United States.

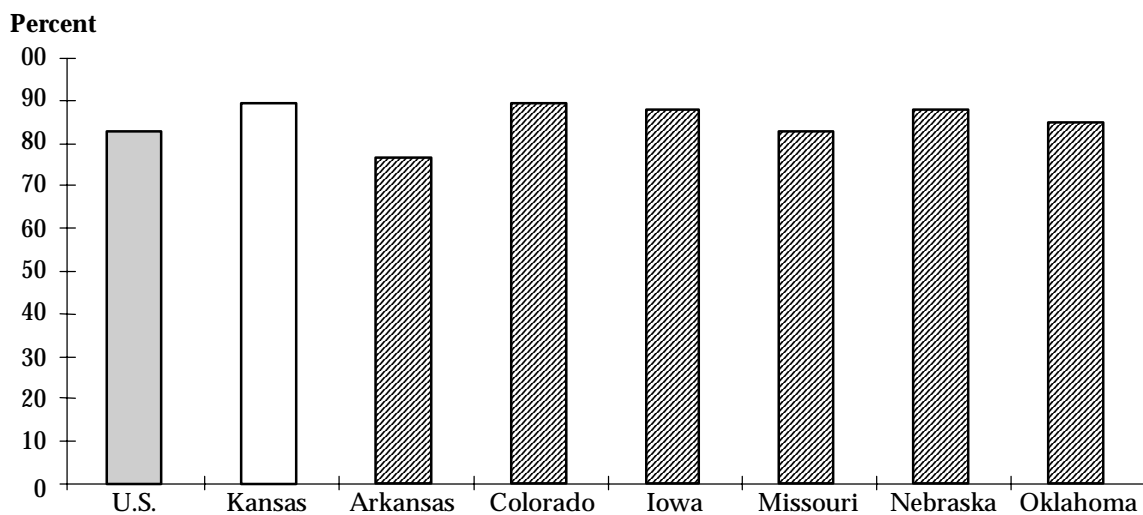
**Figure 3.1 Public K-12 School Expenditures Per Capita
1998**



Source: National Education Association.

- K-12 public school expenditures were slightly lower than the U.S. average in 1998, but on the high end compared to the rest of the region.
- The lower expenditure total compared to the U.S. could be due to lower costs of living in most of Kansas.
- Interviews in Kansas and other data sources support the view of a relatively strong K-12 educational system.

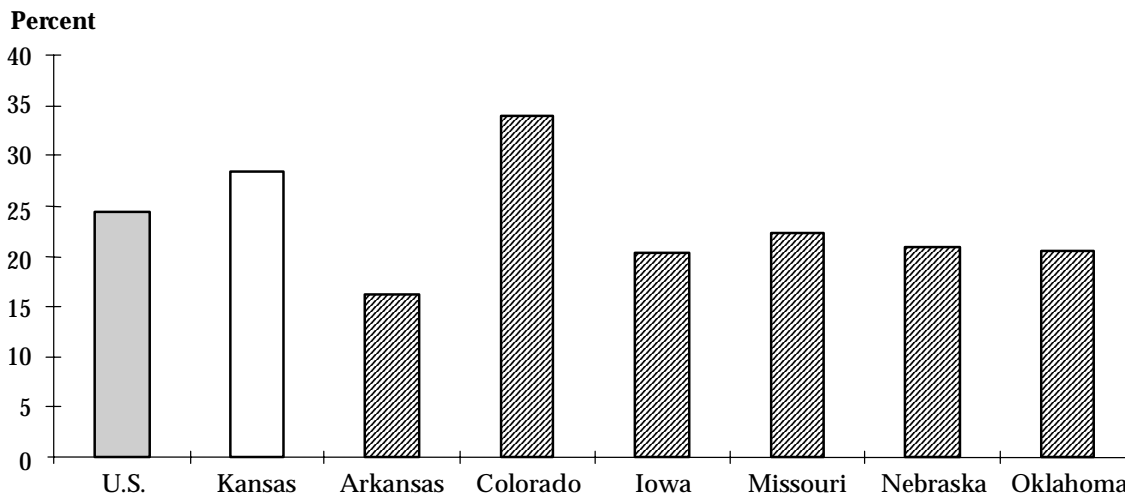
**Figure 3.2 Educational Attainment
Percent of High School Graduate or More, 1998**



Source: U.S. Census Bureau, "Current Population Reports," P20-513.

- In support of the K-12 educational system in Kansas, the state has a higher rate of high school graduates (almost 90 percent) than the U.S. (83 percent), and ranks sixth in the country.
- In the competitor state region, only Colorado has a slightly higher rate of high school graduates.

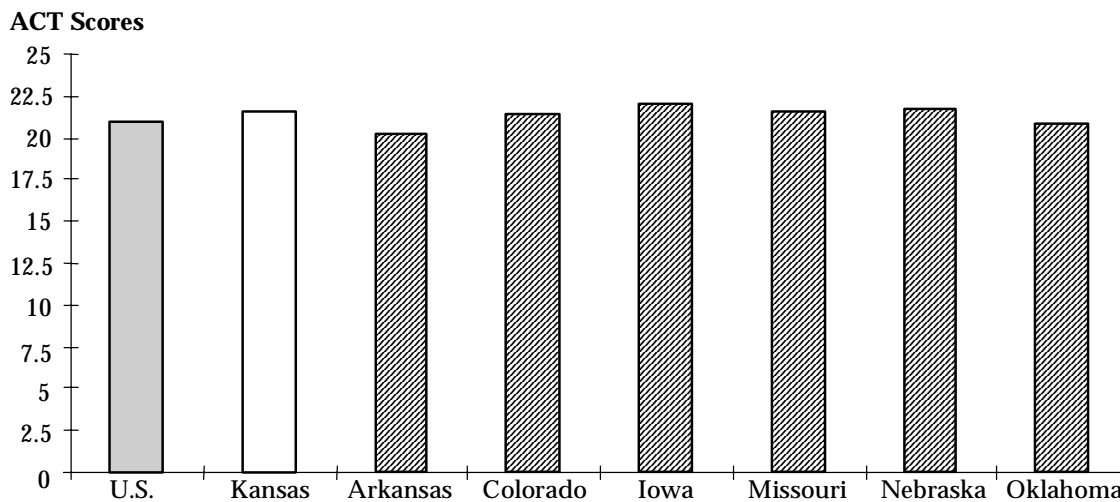
Figure 3.3 Educational Attainment
Percent of Population with Bachelor's Degree or More, 1998



Source: U.S. Census Bureau, "Current Population Reports," P20-513.

- Kansas possesses a relatively high share of people with at least a bachelor's degree (almost 29 percent) compared to the U.S. (24 percent). This confirms information gleaned from local interviews that indicate the strong statewide importance placed on college education.
- Again, Colorado has the highest percentage of people with at least a bachelor's degree, though this may be partially due to immigration. Kansas has a significantly higher percentage than the rest of the competitor states.

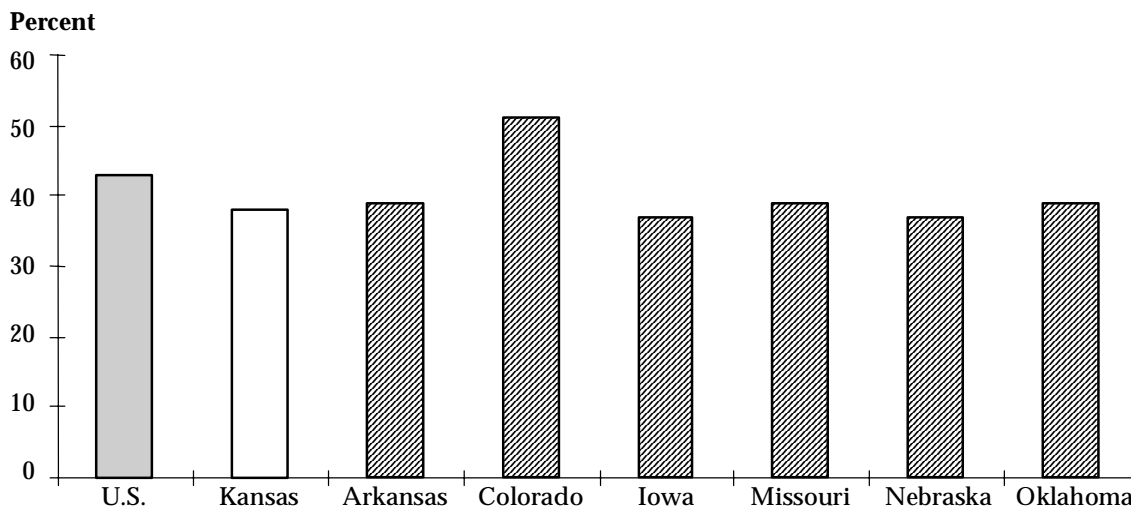
Figure 3.4 Average ACT Scores, 2000



Source: ACT, Inc.

- Kansas high school students perform relatively well on the ACT. The average score in 2000 is slightly higher than the U.S. average score.
- Kansas is also competitive with other states in the region. Only Iowa and Nebraska have slightly higher average scores.

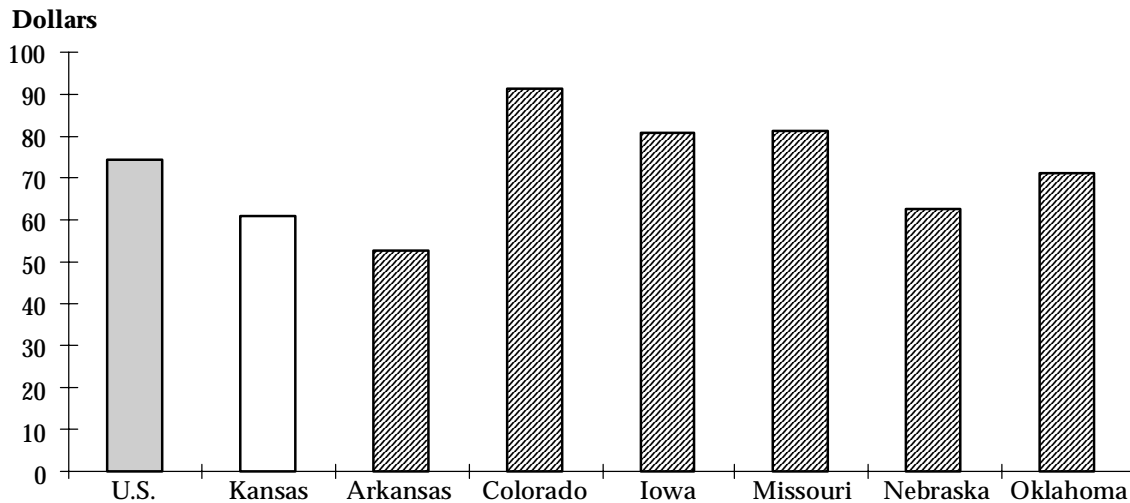
Figure 3.5 Math and Science Degrees as a Percentage of all Degrees Awarded



Source: U.S. Census Bureau, "Current Population Reports," P20-513.

- Kansas does not do as well at graduating students with math and science degrees, which is used as indicator for professional technical workers. 38 percent of all degrees in Kansas are math- or science-oriented, while 43 percent is the U.S. average.
- Colorado stands out as the state with a higher than average rate on this measure (51 percent). Kansas is competitive with the rest of the region.

Figure 3.6 Manufacturing Productivity
Value Added per Production Worker Hour, 1997



Source: 1997 Economic Census.

- Kansas does not measure up well against the U.S. or competitor states in terms of manufacturing productivity (measured as value-added per worker). Kansas only exceeds Arkansas on this measure.
- Overall manufacturing productivity is an indicator of the industry mix of manufacturing firms in the state. This measure suggests that despite the strong aviation presence in Wichita, Kansas' manufacturing activity is concentrated in lower-wage, lower-skill industries, such as food products and rubber products.
- Manufacturing productivity can also be an indicator of the skill level of workers and the available technology. For example, when comparing other transportation equipment wages, Kansas (\$47,667 in 1999) has lower average wages than the U.S. (\$49,228) and even lower average wages than in Washington (\$56,223), another state with a large aviation industry.¹

Conclusion: The combination of higher-than-average college education attainment with lower-than-average math and science degree awards hints that the state does well at educating students through college, but not as well at encouraging them towards high-technology-oriented paths. The disconnect that is often heard in Kansas is of matching up students with jobs. Current industry demands include high-tech and vocational training, often in the form of two-year degrees. In some ways, community colleges and technical schools are better suited for this task, as businesses are able to partner with community colleges to customize training programs. The lower-than-average manufacturing

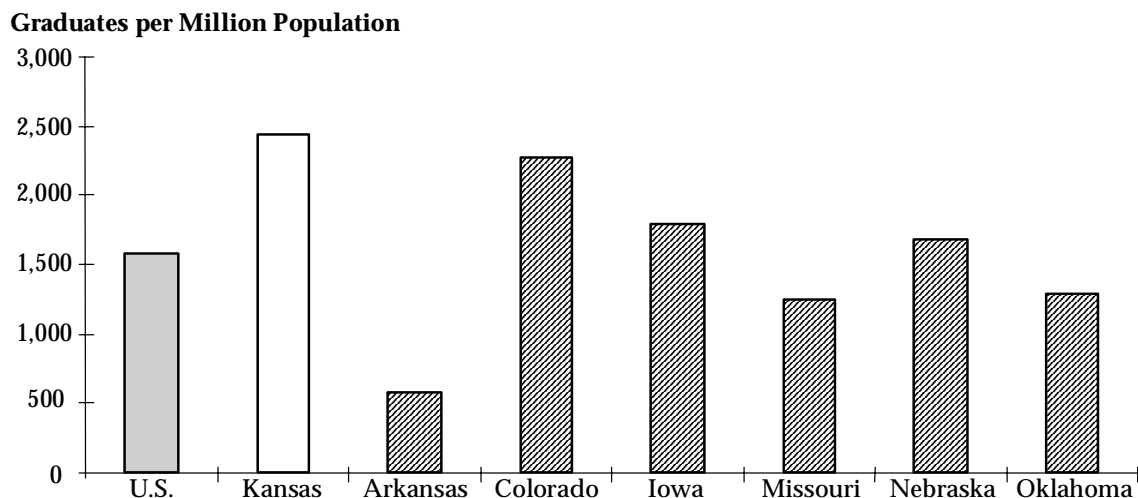
¹Other transportation equipment excludes motor vehicles, but includes aviation manufacturing. Wages are typically considered to be a good proxy for productivity.

productivity is also a concern, though perhaps more aimed at industrial mix rather than skill levels.

■ 3.2 Technology and Entrepreneurship

This section uses a number of measures to capture the technology and entrepreneurship environment of Kansas compared to the U.S. and competitor states.

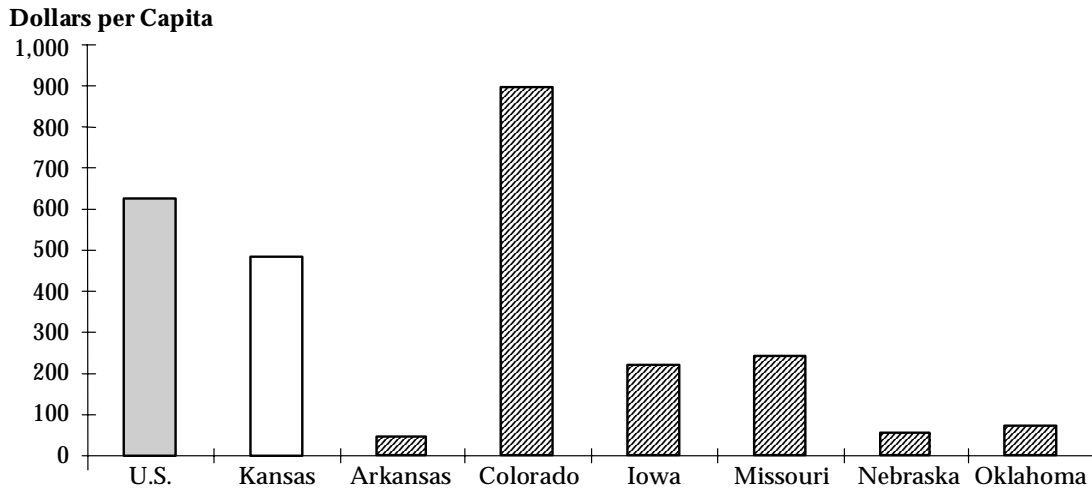
**Figure 3.7 Science and Engineering Graduate Students
1997**



Source: National Science Foundation.

- Although the percentage of undergraduate degrees in Kansas awarded in math and science is relatively small, Kansas does have a relatively large number of science and engineering graduate students on a per capita basis (over 2,400 per million of population). This rate is much higher than that of the U.S. and the competitor states, as Kansas ranks third in the nation. Only Colorado comes close on this measure.
- The issue in Kansas, however, is how many of these graduate students stay in Kansas to work once they finish school? For example, Kansas only ranks 39th in the number of Ph.D. scientists and engineers living in Kansas. Discussions in the state indicate that this is a major issue, and that there is a labor shortage of high-skilled technical workers. Further research is needed to comprehensively understand the mismatch between Kansas engineering and science graduates and the local demand for these workers. For example, are the salaries offered in Kansas below average? Are the high-tech skills required of Kansas jobs different from the skills of high-tech graduate students?

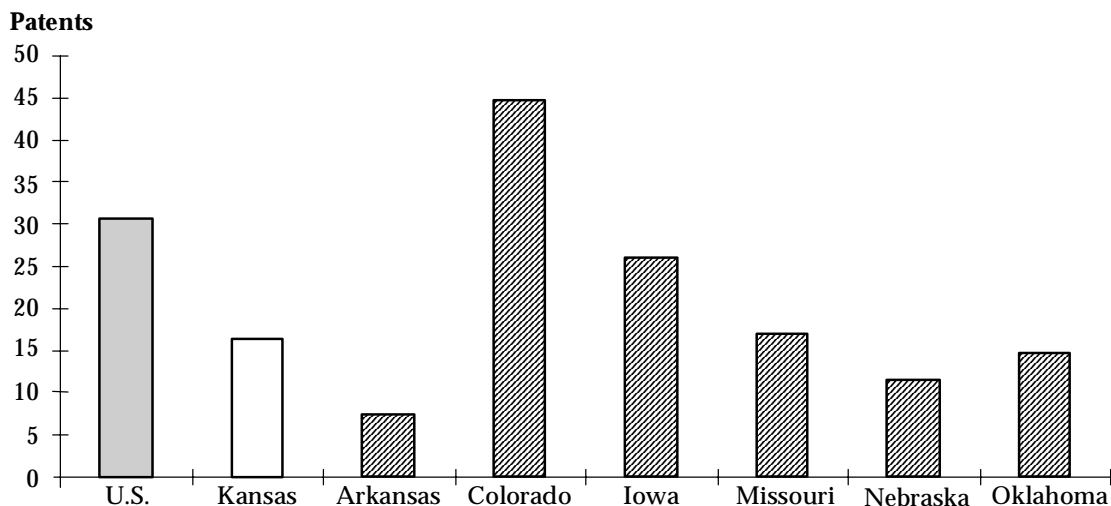
Figure 3.8 Research and Development Spending by Industry
1998



Source: National Science Foundation.

- Kansas spends relatively little on research and development at the industry level compared to the U.S. on a per capita basis. In 1998, Kansas trailed the U.S. by almost \$150 per capita to the U.S. Industry research and development spending is typically concentrated in the transportation equipment, electronics, industrial machinery, pharmaceuticals, and instruments industries.
- Kansas fares much better when compared to the competitor states. Only Colorado is above the U.S. average, while the other states are all less than half the Kansas per capita total.

Figure 3.9 Total Patents Issued per 100,000 Population
1999

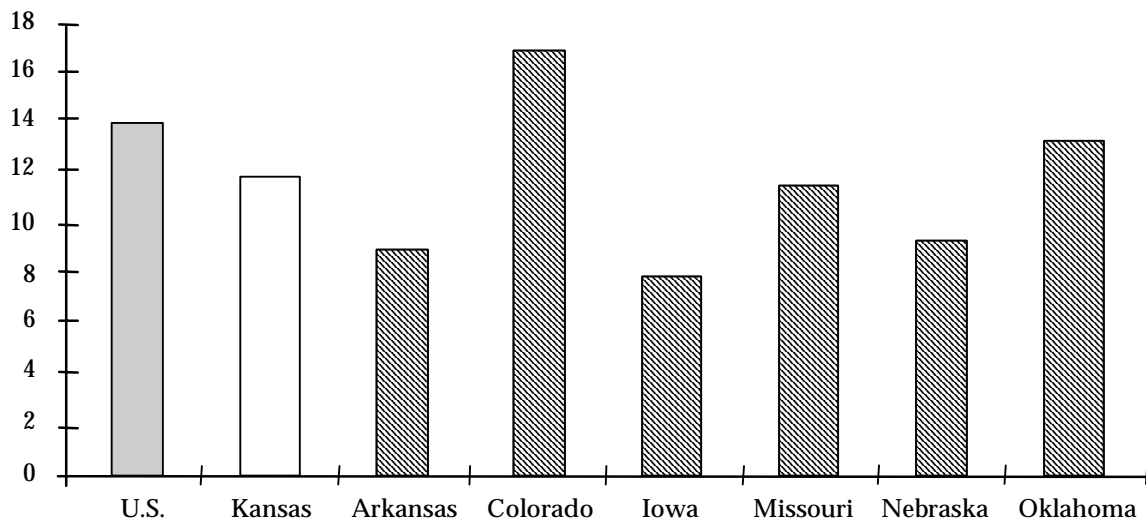


Source: U.S. Patent and Trademark Office.

- Kansas produces a relatively small number of issued patents compared to the U.S. on a per capita basis (almost half the number). Kansas patent activity is fairly typical for the competitor state region, where only Colorado exceeds the U.S. average.

- Patents issued can be used as an indicator of research development with a focus on private sector markets. The low value on this indicator suggests a potential lack of technological entrepreneurship in the state.²

**Figure 3.10 Employer Firm Formation Rates
1998**

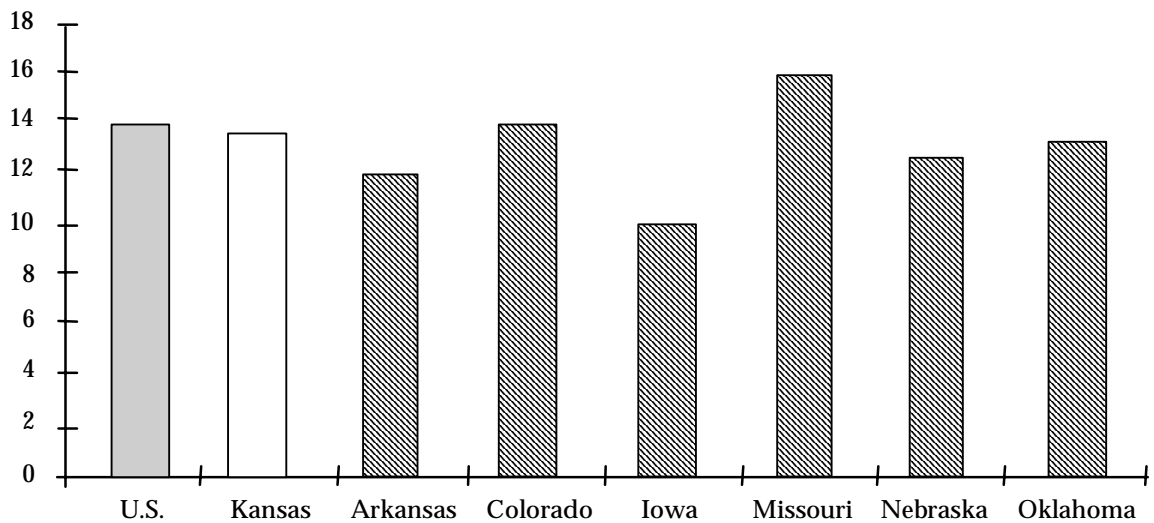


Source: U.S. Small Business Administration.

- Employer firm formation rates measure the percentage of new employer-based firms per state compared to total existing firms. The rate of firm formation in Kansas was relatively low in 1998, below the U.S. average, and ranked 32nd in the country. In terms of competitor states, however, Kansas trails only Colorado, which has a very high rate of firm formation, and Oklahoma.
- According to the CFED report, Kansas ranks only 37th in new business job growth, which indicates that Kansas had relatively few new firms in 1998 and that the average size of these firms was relatively small.

²Note that patents are not a direct economic development indicator and there are multiple reasons, such as when R&D centers to Kansas manufacturers are located elsewhere, why this value could be misleading in terms of its relationship to actual productive economic activity.

**Figure 3.11 Employer Firm Termination Rates
1998**



Source: U.S. Small Business Administration.

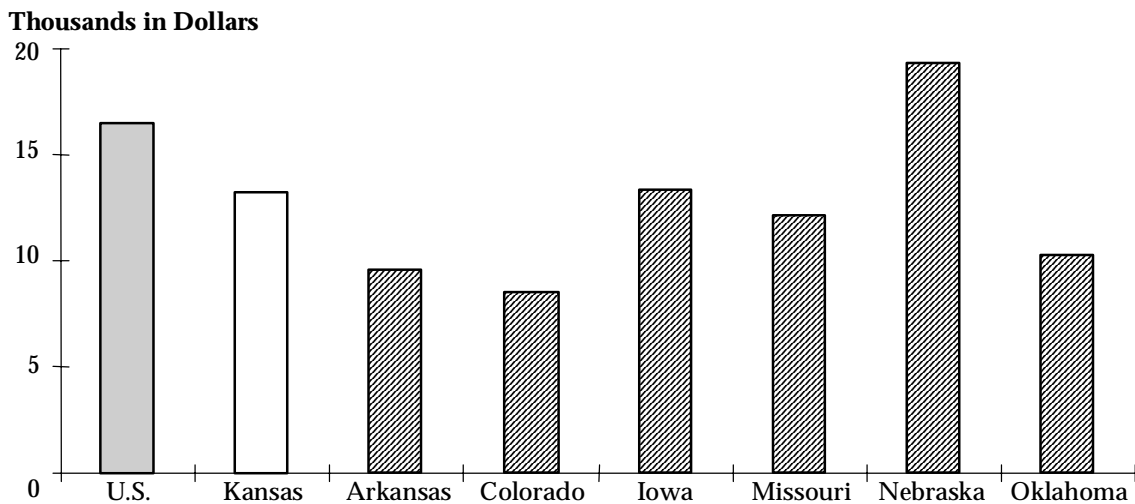
- In terms of firm termination rates, Kansas ranks roughly even with the U.S. and is ranked 28th. Except for Colorado and Missouri, Kansas has a higher rate of firm terminations than the competitor states.
- The combination of relatively low firm formation rates and average firm termination rates is a negative indicator for entrepreneurship in Kansas.

Conclusion: Kansas' competitive position in the technology and entrepreneurship areas is mixed, but overall not a strength. On the one hand, the state does well at graduating science and engineering students, but doesn't do as well at keeping them in Kansas. Kansas has fairly average rates of business formation and termination, and a low level of patents issued and R&D spending compared to the U.S. This suggests the potential for stronger state and local government support programs aimed at small start-up firms.

■ 3.3 Capital Availability

This section looks at three measures of capital availability per capita in Kansas: commercial bank and savings deposits, commercial and industrial loans, and venture capital investments.

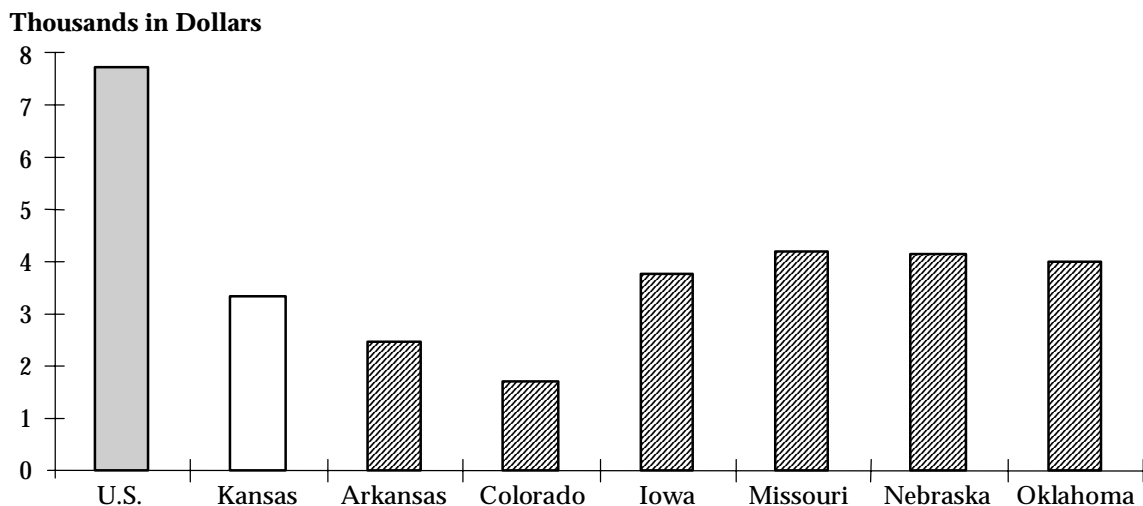
**Figure 3.12 FDIC Commercial Bank and Savings Deposits Per Capita
1999**



Source: Federal Deposit Insurance Corporation.

- Kansas held a relatively small amount of commercial bank and savings deposits per capita compared to the U.S. in 1999. Kansas fares better against the rest of the region, where only Nebraska, with a significant number of financial services institutions, has significantly higher deposit value per capita.
- This measure may be indicative of financial institution consolidations and the departure of Kansas banks to other states. The current concern is that out-of-state control of banking outlets may restrict access to capital locally.

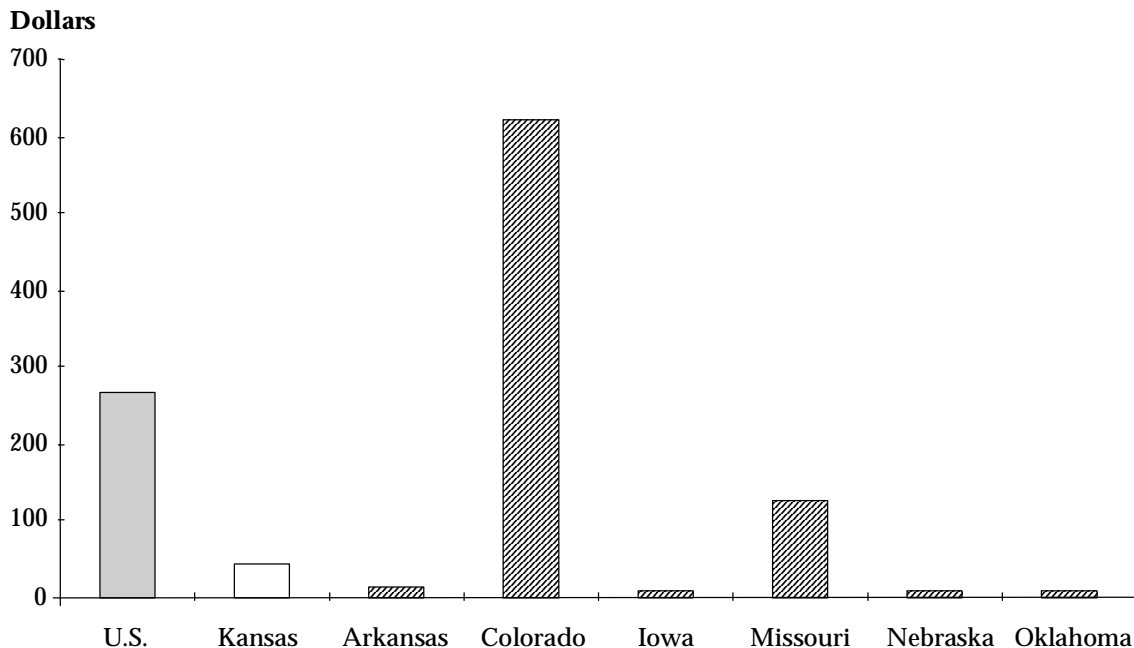
**Figure 3.13 Value of Commercial and Industrial Loans per Worker
1999**



Source: Federal Deposit Insurance Corporation.

- In 1999, Kansas had roughly half as many commercial and industrial loans per worker compared to the U.S. in 1999. Again, Kansas does somewhat better when measured against its competitor states.
- In a traditional macroeconomic sense, loans can be a measure of investment activity. The low number of loans in Colorado is surprising, especially given the vibrant economy and relatively large investments in venture capital. One may assume that Colorado must do much of its investment loans with out-of-state banks.

**Figure 3.14 Venture Capital Investments Per Capita
1999 to Q2 2000**



Source: PriceWaterhouseCoopers, Financial Times.

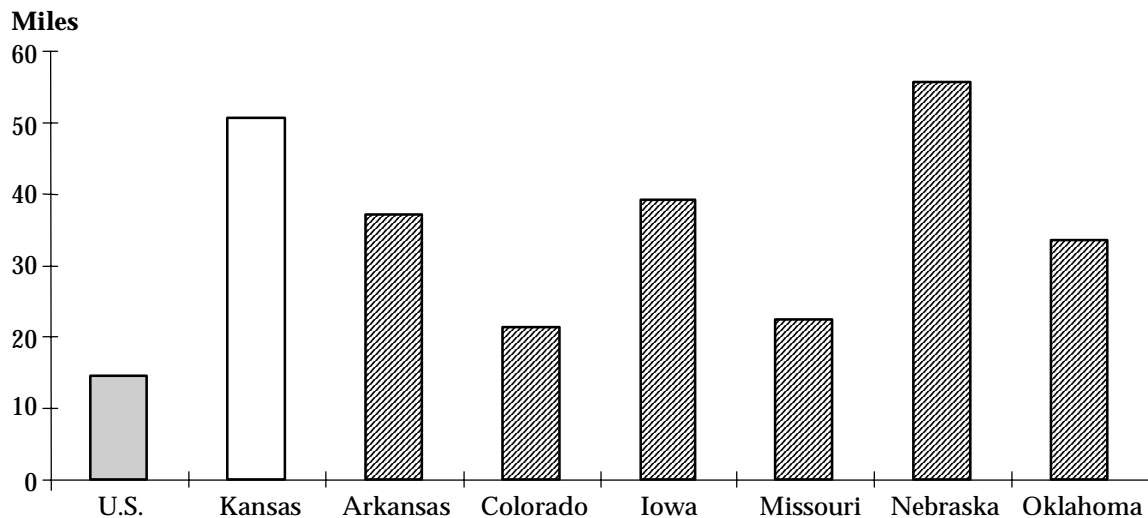
- This measure attempts to capture venture capital activity. The indicator suggests that Kansas has relatively low activity in venture capital compared to the U.S., with only \$44 per capita of funding versus \$265 at the U.S. level, measured from the beginning of 1999 to the end of the second quarter of 2000.
- This is not a relatively small value compared to most of Kansas' competitor states. Only Missouri and Colorado (with \$624 per capita) have higher levels of venture capital investments.
- This is currently a major issue in Kansas, as KTEC, Kansas, Inc. and KCCI have pursued legislation in support of state-level seed capital development with hopes of spurring more high-technology firm development and growth. The issue remains unresolved at this time.

Conclusion: While surmising that capital availability as an issue in Kansas is a difficult proposition, the three indicators in this section suggest that Kansas may have capital availability problems for both traditional financing and venture capital financing. Two potential implications are a lack of funds available for start-up high-tech firms and a movement of major financial services out of the state. However, it should not be overlooked that, according to the CFED report, Kansas ranks first in the availability of Small Business Investment Company (SBIC) financing.

■ 3.4 Infrastructure

This section looks at infrastructure from a few different points of view: transportation facilities, telecommunications, and Internet access. The transportation analysis focuses on highways because this is clearly the most important mode in Kansas, though airport deficiencies were also mentioned in local interviews.

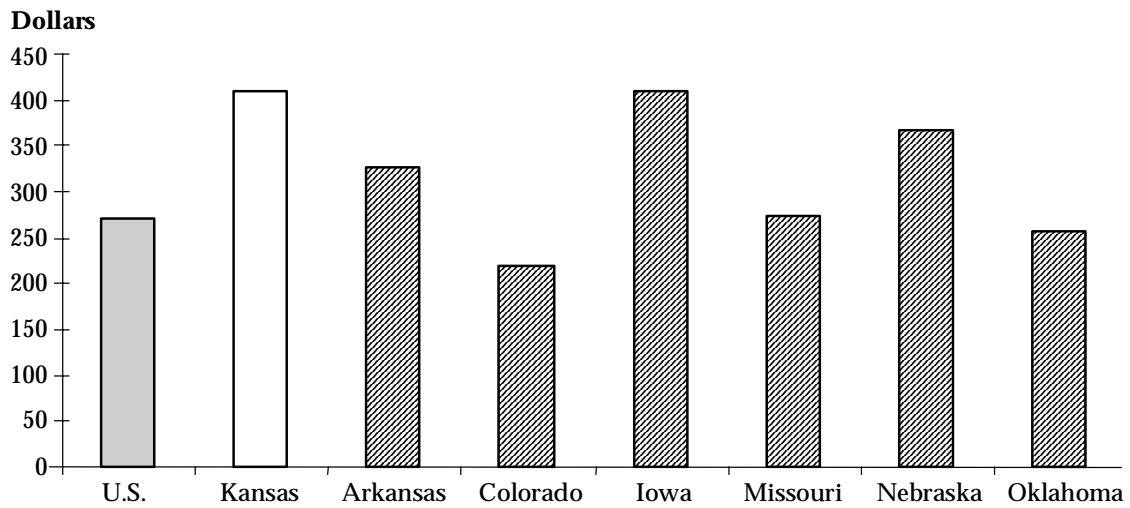
**Figure 3.15 Highway Mileage per 1,000 Population
1997**



Source: U.S. Federal Highway Administration, "Highway Statistics."

- Kansas rates very well in terms of highway mileage per capita. The state has more than three times as many highway miles per capita than the U.S. average. By itself, this is a positive indicator for transportation infrastructure; however, it may also be viewed as a result of highway miles in Kansas traveling through sparsely populated regions in the state.
- Kansas is very competitive with the other states in the region on this measure. Only Nebraska has more highway miles per capita.

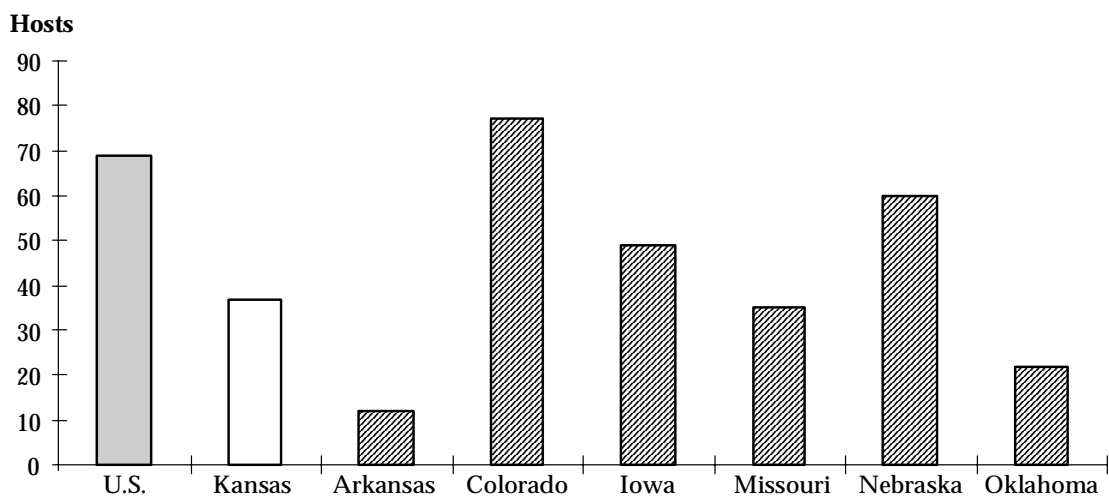
Figure 3.16 State Highway Disbursements Per Capita
1997



Source: U.S. Federal Highway Administration, "Highway Statistics."

- Kansas scores high marks on state highway disbursements per capita, with almost \$150 more spent per capita than the U.S. average in 1997. This likely reflects budget priority decisions to emphasize highway maintenance and the recent comprehensive highway program.
- In addition, Kansas ranks first among the competitor states in highway disbursements per capita. While this measure is an input not an outcome, it does indicate that the state takes highway maintenance and development seriously.

Figure 3.17 Internet Connectivity
Hosts per 1,000 Population, 1998



Source: Matrix Information and Directory Services/KTEC.

- Kansas did not rank highly on Internet connectivity in 1998, measured by Internet hosts per capita. Kansas had 37 hosts per 1,000 population, roughly half the U.S. average.
- On this measure, Kansas ranks ahead of Arkansas, Missouri, and Oklahoma, but behind Colorado, Iowa, and Nebraska.
- In a recent report produced jointly by the National Telecommunications and Information Administration and the Economics and Statistics Administration, , Kansas ranked 15th nationally in terms of the percent of households with Internet access in 2000. At 43.9 percent of all households, Kansas ranked second in the region, trailing only Colorado.³ Internet infrastructure may be best measured by connectivity rather than the number of hosts.

Conclusion: By most indicators, Kansas' highway system ranks highly. This supports the findings from local interviews that report little to no problems with the highway system. However, according to the CFED report, Kansas ranks 48th in highway deficiency, measured by the percent of highways in poor condition. An efficient, well-maintained transportation system can be an important factor for business productivity and attraction, especially for wholesale trade and distribution activities, one of the target industries identified by KDOC&H. Telecommunications and Internet connection infrastructure is more mixed, though Kansas does rank 10th in digital infrastructure according to the CFED. Metro areas within Kansas appear to be relatively well-served, but sections of rural Kansas may still face broadband Internet connectivity challenges. Kansas also has a relatively large amount of fiber optic as a percent of total cable, but while this speaks of infrastructure, it may not be the best indicator of broadband Internet connectivity opportunities. Further research in this area is needed to make definitive conclusions.⁴

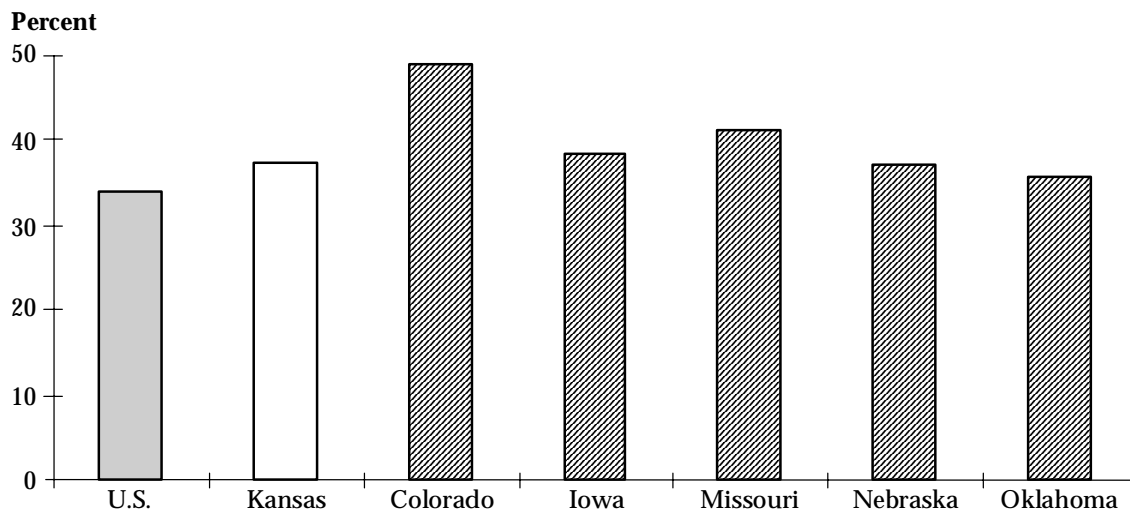
■ 3.5 Tax and Regulatory Environment

The tax and regulatory environment of a state can be important factors for business competitiveness, business attraction, and migration decisions. This section provides indicators measuring tax burdens for individuals and businesses. Much of the material for this section is from the Kansas, Inc. sponsored research study “Business Taxes and Costs: A Cross-State Comparison, 1999 Update” prepared by the Policy Research Institute (formerly the Institute for Public Policy and Business Research) at the University of Kansas.

³This study found that at the U.S. level, central city (12.2 percent) and urban households (11.8 percent) are much more likely to have high-speed Internet access than rural areas (7.3 percent).

⁴A recently completed report by the Kansas Corporation Commission outlines advanced services connections in Kansas and is profiled in the Issues Identification paper of this strategic plan. The basic finding is that small, rural areas have significantly fewer opportunities for broadband Internet connections than larger, urban areas.

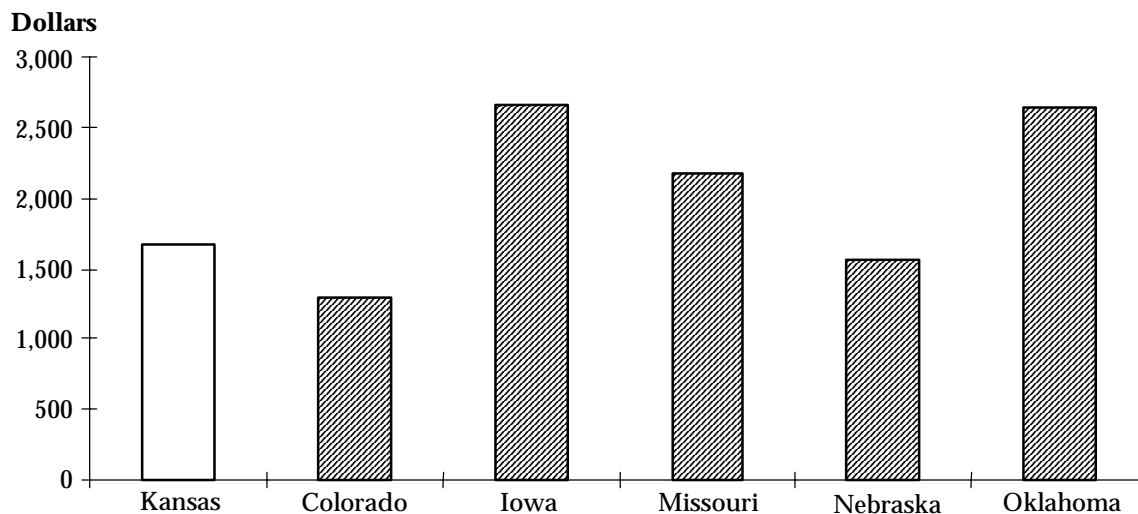
Figure 3.18 Individual Income Taxes as a Percent of State Revenue
1998



Source: Kansas, Inc., IPPBR, University of Kansas.

- Kansas collects a relatively large share of total state revenues from its individual income taxes (37.5 percent) compared to the U.S. average (34 percent).
- However, among competitor states, Kansas collects the lowest share of state revenues from individual income taxes. Clearly, this region of the country relies more heavily upon individual income taxes and less on sales taxes than the U.S. average, which tends to make the tax system more progressive.

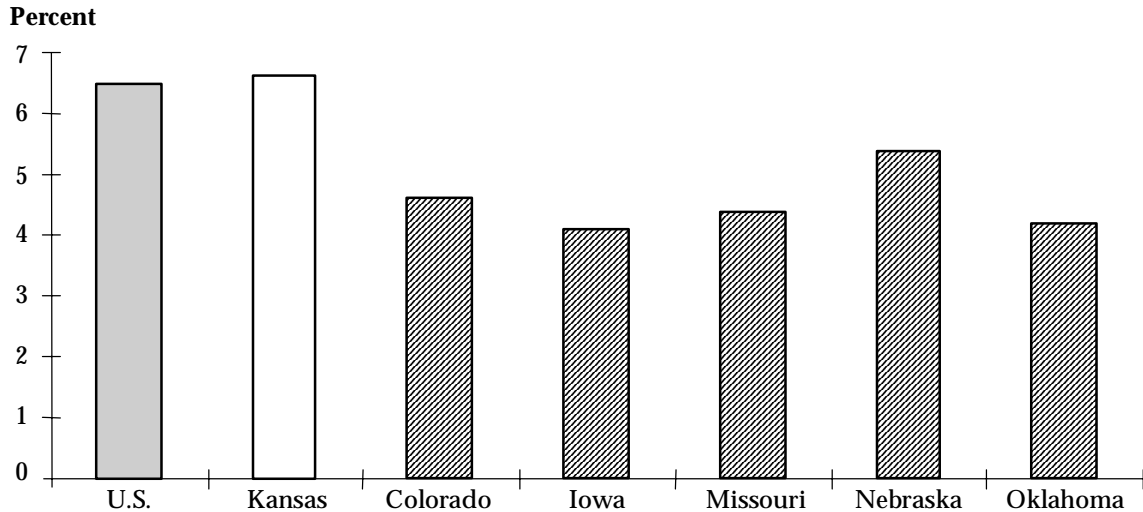
Figure 3.19 State Income Tax for a Representative Family
1999



Source: Kansas, Inc., IPPBR, University of Kansas.

- The analysis, performed in the study for Kansas, Inc., looked at the state income tax for a representative family of four with \$55,000 of income. On this indicator, Kansas is competitive with the other states in the region, as only Colorado and Nebraska would have a lower income tax burden.

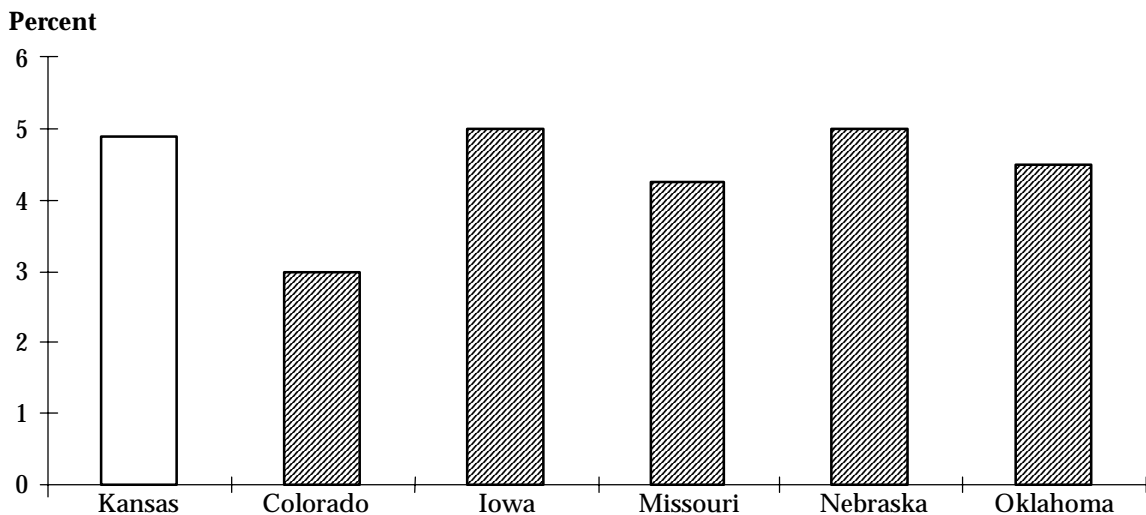
Figure 3.20 Corporate Income Taxes as a Percent of State Revenue
1998



Source: Kansas, Inc., IPPBR, University of Kansas.

- Kansas collects 6.6 percent of state revenues through the corporate income tax, slightly ahead of the U.S. average, and well above the shares for the competitor states.
- This measure indicates that Kansas relies disproportionately on corporate income taxes as a revenue tool compared to the region. This supports claims in other studies and local interviews about the relatively high corporate income taxes in the state.

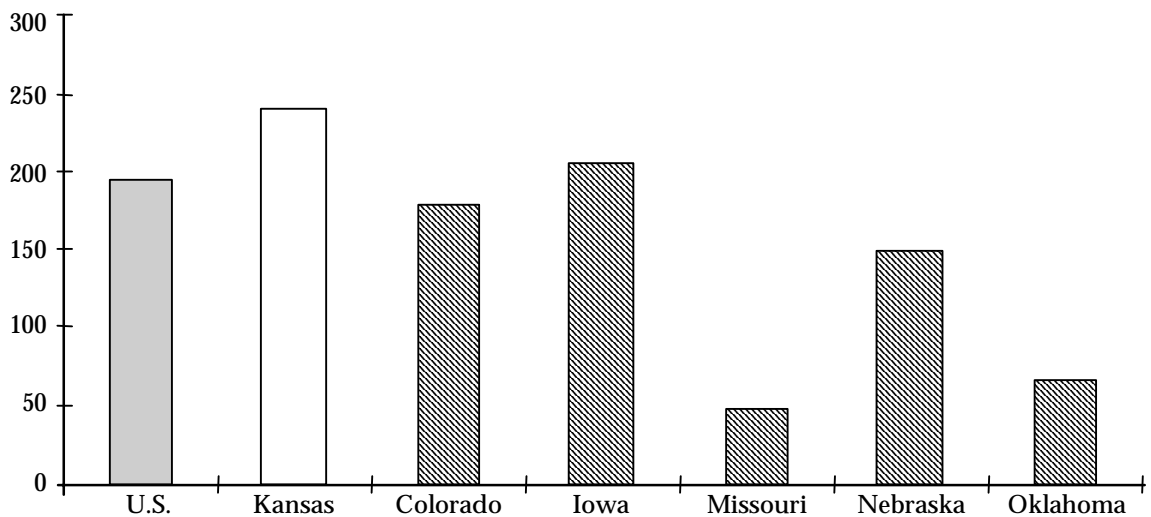
Figure 3.21 State Sales Tax Rate
1999



Source: Kansas, Inc., IPPBR, University of Kansas.

- The state sales tax rate is also on the high side for the region, roughly the same as Iowa and Nebraska (five percent), and higher than Colorado, Missouri, and Oklahoma.
- State and local sales taxes, as a percent of personal income, have been rising since 1980 (not shown), and in 1996 was above the share at the U.S. level and the rest of the region.

**Figure 3.22 County Per Capita Property Tax Revenue
1997**

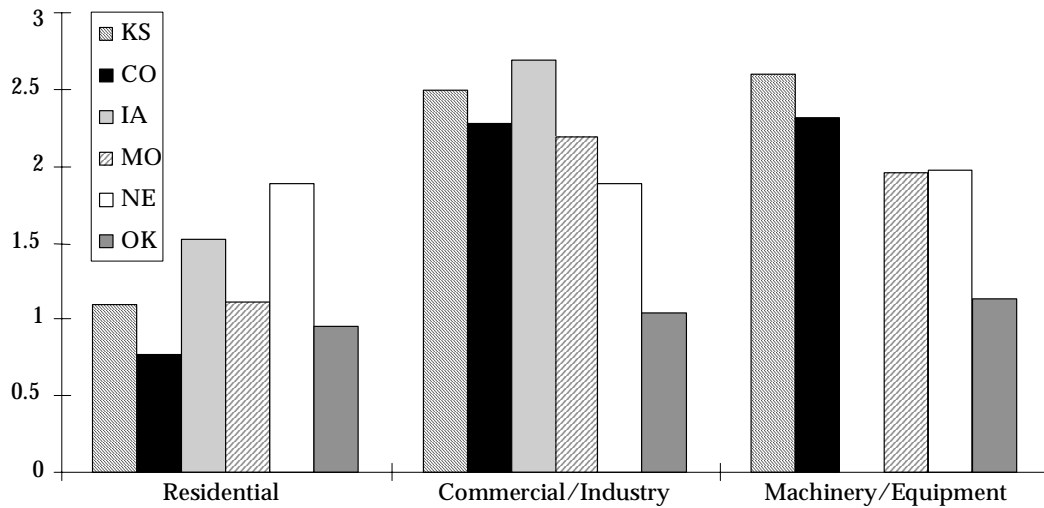


Source: U.S. Census Bureau, Finances of County Governments 1997.

- According to the U.S. Census Bureau, property taxes account for 81 percent of local tax revenues in Kansas. The above graphic demonstrates that Kansas counties have higher than average per capita property tax revenues than the U.S. and all competitor states.⁵
- Per capita general revenues vary greatly by county size. For example, counties with 150,000 to 249,999 people collect just over half the per capita revenues of counties with 10,000 to 24,999 people and roughly a third of counties with less than 10,000 population.

⁵This data was prepared by the Kansas Public Finance Center at Wichita State University.

Figure 3.23 Effective Local Property Tax Rates

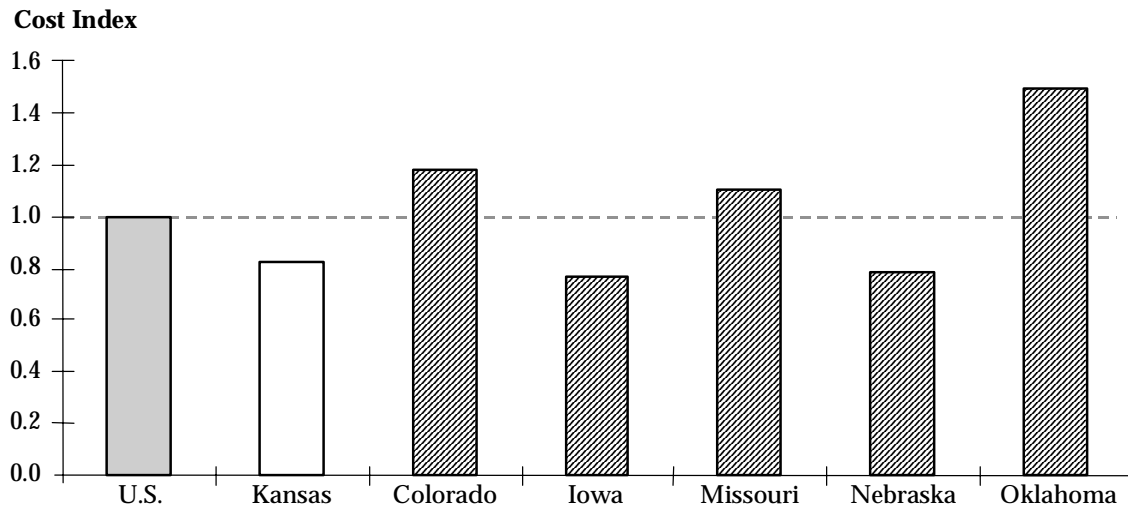


Source: Kansas, Inc., IPPBR, University of Kansas.

- Property tax rates vary considerably by state and type of tax. Compared to the rest of the region, Kansas has fairly reasonable residential property tax rates.
- Commercial and industrial property tax rates are higher than every comparison state except for Iowa.
- Kansas has higher property tax rates for machinery and equipment than any other state in the region. Notice that Iowa has a zero tax rate for this type of property. In addition, a recent survey for the Kansas, Inc. publication *A Kansas Vision for the 21st Century* found that 80 percent of manufacturers felt that the property tax on machinery and equipment had a negative effect on their investment and expansion decisions.⁶

⁶It should be noted that property tax credits are available (especially for new businesses to Kansas) that can reduce or eliminate the machinery and equipment property tax. Conversely, this can punish mature or stranded industries that do not qualify for the credit.

Figure 3.24 Worker Compensation Costs Index



Source: Kansas, Inc., IPPBR, University of Kansas.

- Worker compensation costs, on the other hand, are relatively low. Based on an index with the U.S. at 1.0, Kansas measures at 0.82, according to the Kansas, Inc. sponsored tax study.
- Kansas also fares well on this measure with the competitor states, below the rate of Colorado, Missouri, and Oklahoma.

Conclusion: The Kansas tax system, like most state tax systems, relies most heavily upon individual income taxes and sales taxes. The tax burden varies by tax and by the comparison area but is roughly average, ranked 24th in state tax revenue as a percent of personal income.⁷ The state does seem to collect a disproportionate amount of revenues from corporate income taxes. The regulatory environment and business climate, while difficult to quantify, seems to be a positive in Kansas, with few complaints mentioned during local interviews. The Kansas, Inc.-sponsored tax study found that in general, Kansas offers a competitive business cost climate with relatively low labor, land, gas, and construction costs. One potential concern is inconsistent treatment by the state on property tax abatements. For example, businesses looking to move to Kansas are frequently offered abatements, partially to remove the impacts of higher-than-average equipment property taxes. Mature Kansas industries not expecting major expansions, on the other hand, typically still have to pay full property taxes.⁸ In addition, these abatements are targeted at manufacturing, and warehousing operations, but some exporting new economy and service sector industries are not eligible. The state's R&D tax credit, which had expired was renewed by the 2001 Kansas Legislature. Finally, interviews in Kansas have indicated that the oil and gas industry, which operates under tight

⁷ "Summary of State and Local Tax Structure," Kansas Public Finance Center, Wichita State University.

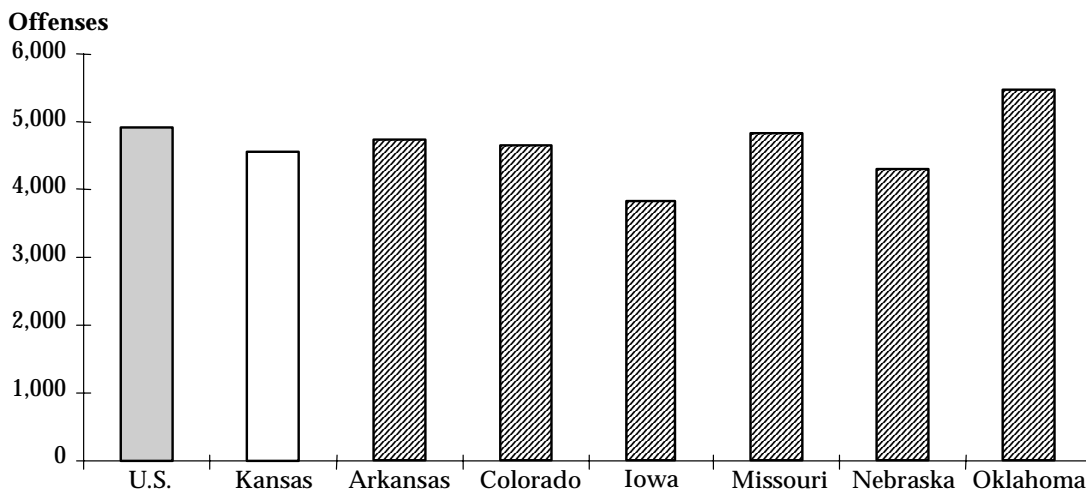
⁸ This is not entirely true as some Kansas firms are eligible for a 15 percent corporate income tax credit on property taxes.

margins, faces an unfairly high tax burden, an artifact from the oil boom of the early 1980s.

■ 3.6 Quality of Life

The quality of life for a region is difficult to measure quantitatively. However, the economic development literature continues to highlight the importance of this elusive foundation area for business retention and attraction. This section highlights a few indicators that try to capture quality of life issues in Kansas.

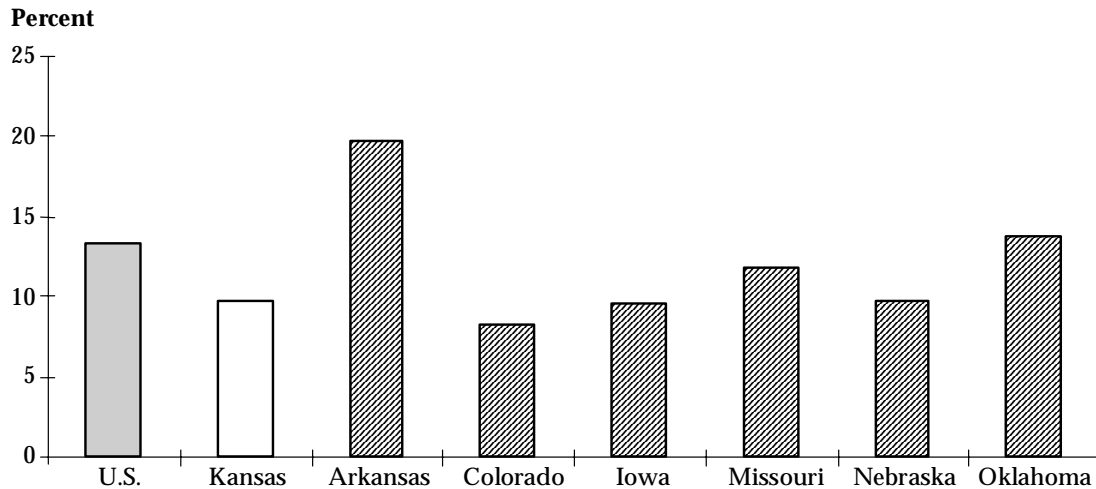
Figure 3.25 Crime Rates per 100,000 Population
1997



Source: U.S. Federal Bureau of Investigation.

- The crime rate in Kansas is slightly lower than the U.S. average and competitive with most of the states in the region.
- Crime rates are one of the most commonly used quality of life indicators and the data implies that Kansas fares well on this measure, and therefore, enjoys a relatively safe environment.

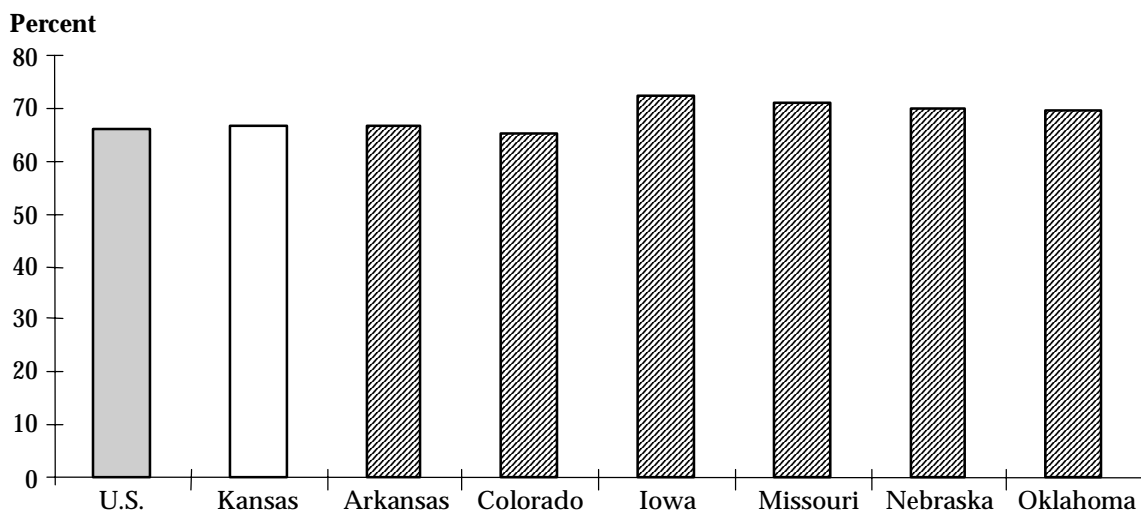
**Figure 3.26 Percent of Persons Below the Poverty Level
1997**



Source: U.S. Census Bureau, Current Population Reports, P60-201.

- Relatively few persons live below the poverty line in Kansas compared to the U.S.—under 10 percent in 1997, compared with over 13 percent in the U.S.
- Kansas is fairly comparable to other states in the region, with Colorado having the lowest rate and Arkansas the highest rate of poverty.

**Figure 3.27 Home Ownership Rates
1998**

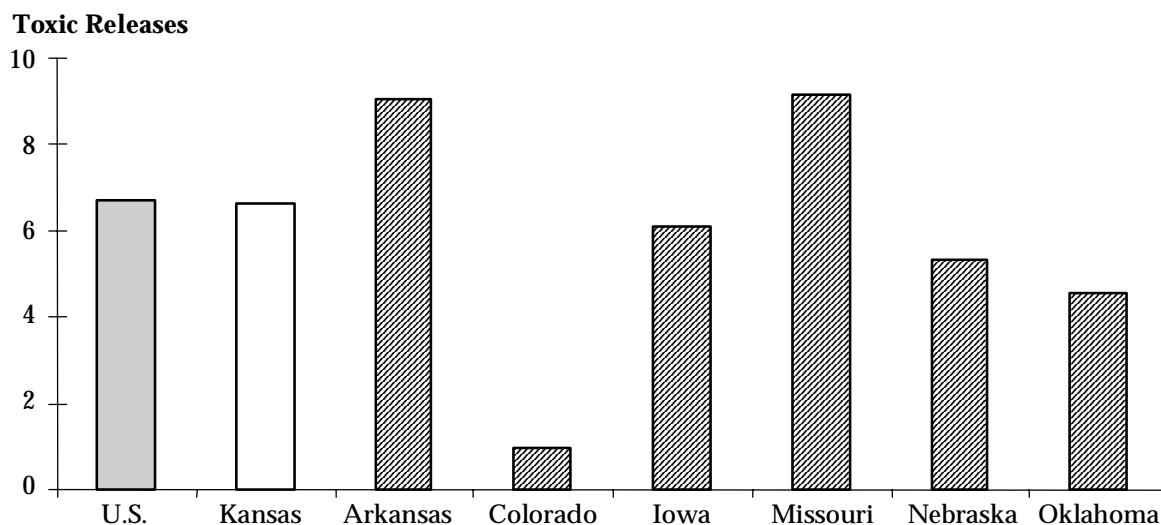


Source: U.S. Census Bureau.

- Kansas has a slightly higher home ownership rate than the U.S. average, and is competitive with the rest of the region. Iowa has the highest rate of home ownership at 72 percent.

- A significant housing issue not highlighted by home ownership rates is the availability of affordable housing, especially in rural areas. For example, in rural Kansas, the appraised value of homes can be as low as 65 to 70 percent of the construction costs, which creates difficulty for individuals trying to obtain financing for new housing.

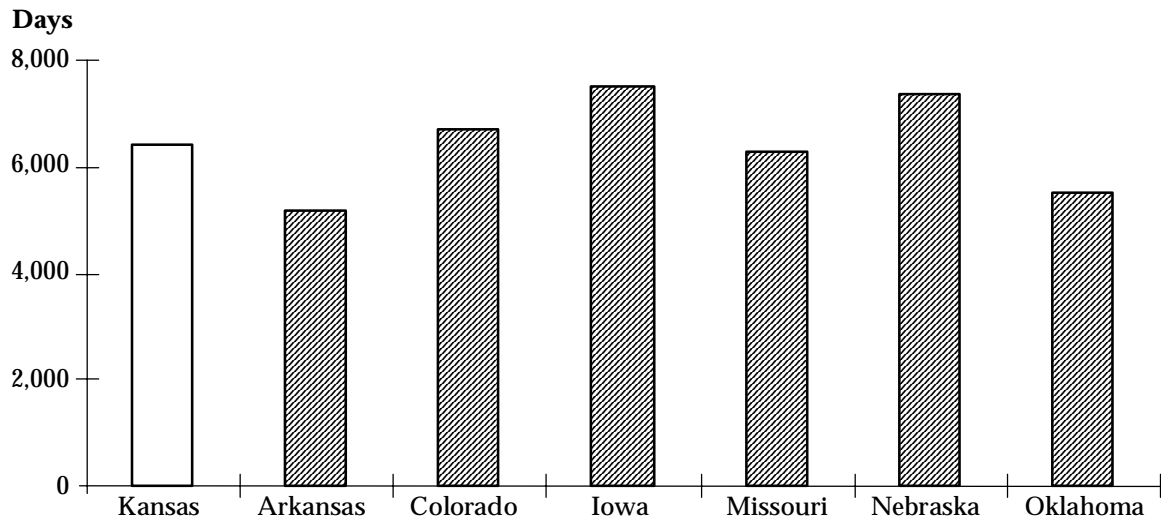
Figure 3.28 Toxic Releases per 1,000 Population
1996



Source: Environmental Protection Agency, "1996 Toxic Release Inventory."

- Kansas has the same rate of toxic releases per capita as the U.S. There is much variation within the region, however, as Colorado has very few toxic releases and Arkansas and Missouri have relatively large amounts of toxic releases.

**Figure 3.29 Heating and Cooling Degree Days
1997**



Source: U.S. National Oceanic and Atmospheric Administration, "Comparative Climatic Data."

- Kansas has roughly an average number of days requiring heating or cooling compared to the competitor states. Arkansas, Missouri, and Oklahoma have fewer and Colorado, Iowa, and Nebraska have more. In other words, according to this measure, the climate of Kansas is neither an advantage or disadvantage.⁹

Conclusion: These quality of life measures do not indicate any serious problems for Kansas. At the same time, there are no measures that stand out as exceptional for the state. Additional measures that would be useful to analyze, if readily available, would capture the quality and quantity of cultural and recreational opportunities. Local interviews indicate that most people are happy with the quality of life in Kansas. The CFED report gives Kansas good marks for voting rates, charitable giving, and children's health. Still, there are emigration trends for the younger workforce. This may simply be related to available jobs and a lack of major metropolitan areas.

■ 3.7 Comparison to North Carolina and Washington

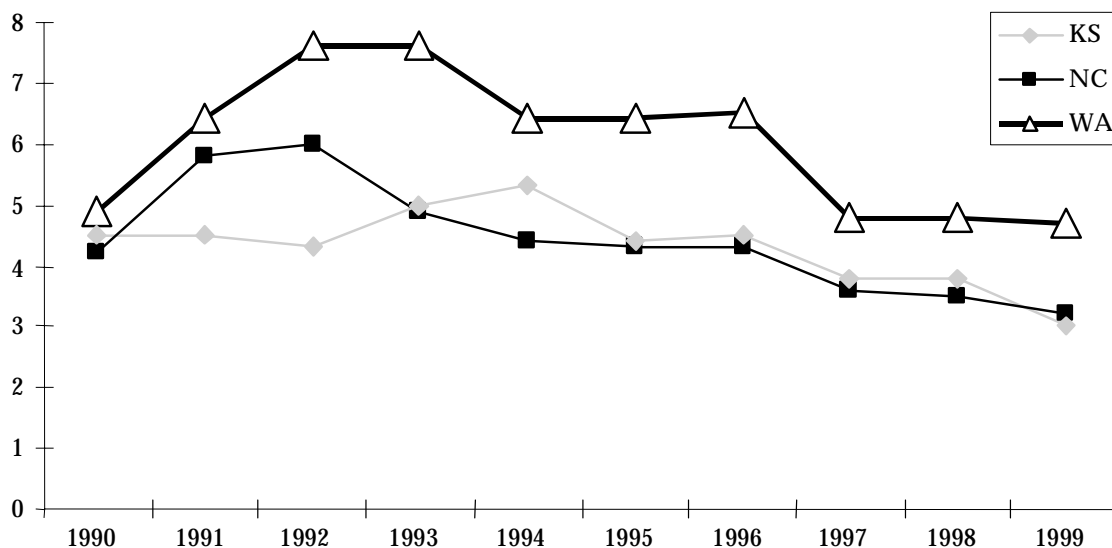
In addition to comparing Kansas to the U.S. and other Central Plains states, it can be useful to benchmark Kansas to other states in the U.S. beyond the region. This can be important for a number of reasons, one of which is that it emphasizes that Kansas' economy competes with states around the country and with nations throughout the

⁹A degree day is defined as every degree above or below 65. For example, if a day had an average temperature of 80 degrees, it would count as 15 cooling degree days. Each day's degrees are then summed for a total number of degree days per year.

world. North Carolina was chosen as one competitor state because, like Kansas, the state has traditionally had a largely agriculture-based economy. Over the past few decades, however, the state has made a name for itself in economic development. One reason is because of Research Triangle Park and the high-tech business development related to it.

The state of Washington is the other non-plains comparison state. Washington, like Wichita, is home to a significant aviation industry. Washington has also benefited in recent years from a high-tech boom concentrated in Seattle, partially driven by the success of Microsoft, while maintaining a strong agricultural industry, best known for apple production. The analysis that follows first compares Kansas against these two states on a few economic performance indicators, such as unemployment rates and high-tech manufacturing growth. It then examines selected foundation area data for the three states, including venture capital investments and educational attainment.

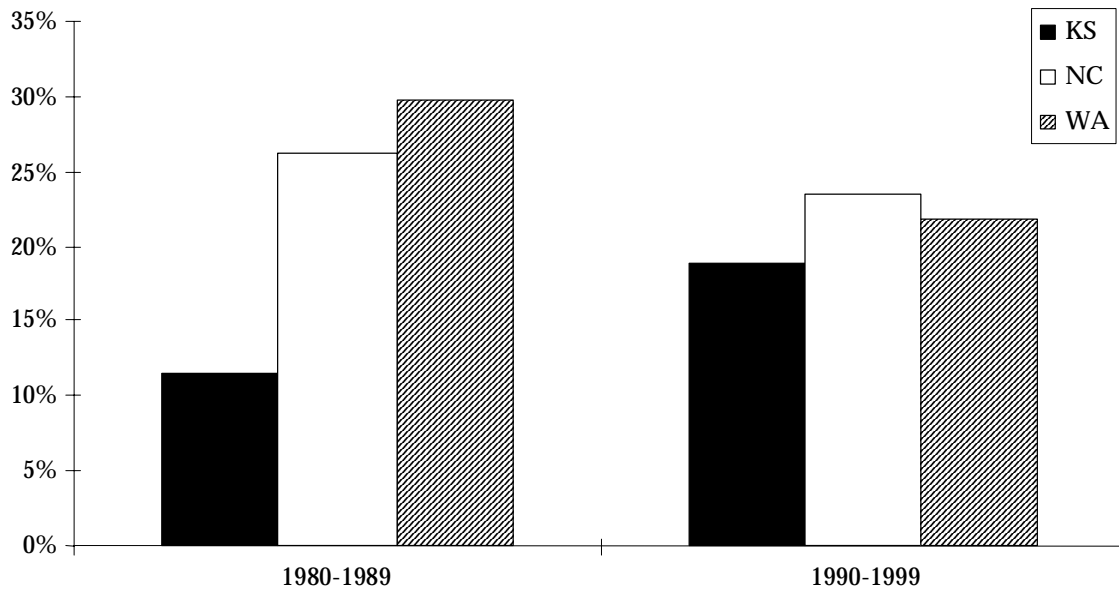
**Figure 3.30 Unemployment Rates
1990-1999**



Source: Bureau of Labor Statistics.

- In terms of unemployment rates, Kansas had the lowest unemployment rate of the three states in 1999, though North Carolina was just slightly higher. Over the past decade, Washington's unemployment rate was higher in every year than the rate in either Kansas or North Carolina. All three states have trended down since 1994.
- Interestingly, the unemployment rate in Kansas and North Carolina has been virtually identical in every year since 1995, but varied considerably from 1991 to 1994, as the timing of the recession differed.

**Figure 3.31 Employment Growth
1980-1989, 1990-1999**

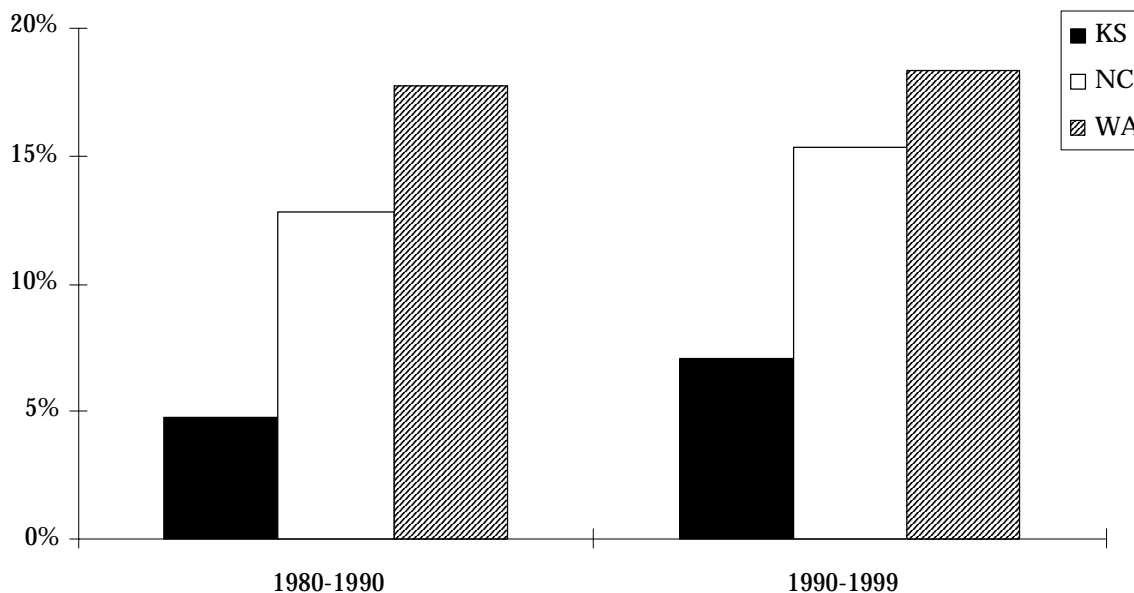


Source: U.S. Bureau of Economic Analysis.

- Employment growth has been slower in Kansas than in North Carolina or Washington in each of the last two decades. In the 1980s, the rate of growth in the two comparison states was twice the rate in Kansas.
- Despite growth at a rate faster than the U.S., Kansas' employment growth trailed both North Carolina and Washington over the 1990s. One reason may be the extremely low rates of unemployment in Kansas, an indicator of labor shortages, stunting economic growth.¹⁰ Another factor is the slow rate of population growth shown.

¹⁰ Note that North Carolina also had low unemployment rates.

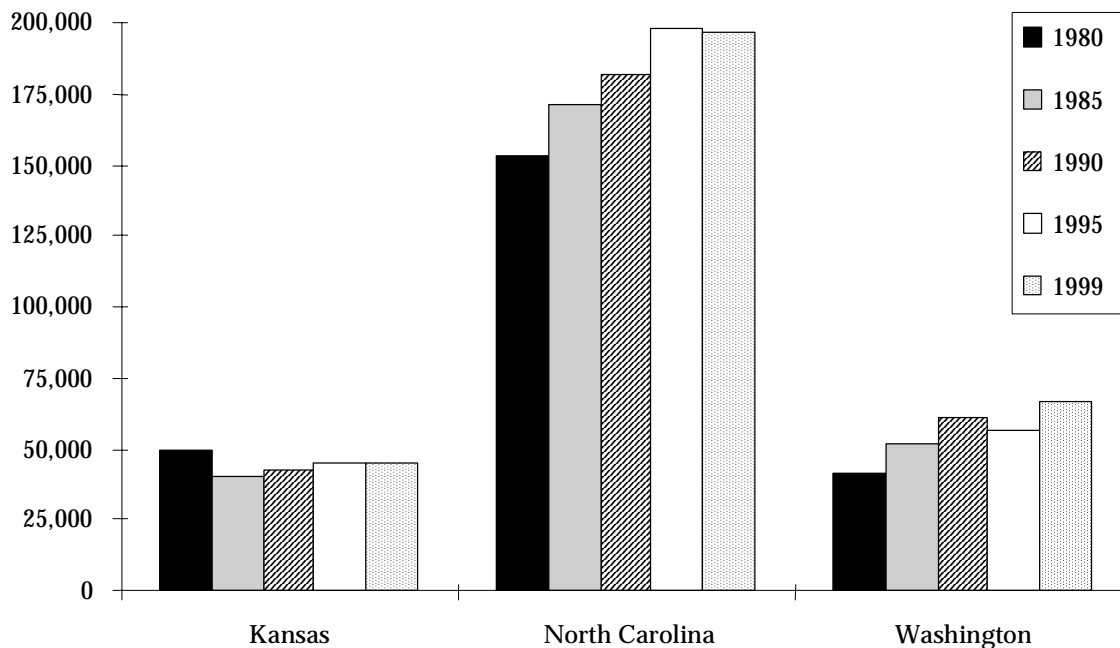
Figure 3.32 Population Growth
1980-1990, 1990-1999



Source: U.S. Census Bureau.

- In both the 1980s and 1990s, Kansas' population growth was significantly less than that of both North Carolina and Washington. This correlates to the earlier point about economic and demographic activity switching to the South and West.
- North Carolina and Washington population grew well ahead of the U.S. (roughly nine percent) in each time period, with Washington experiencing over 18 percent growth from 1990 to 1999. Population growth, including immigrants, and job opportunities are part of what allows an economy to grow.

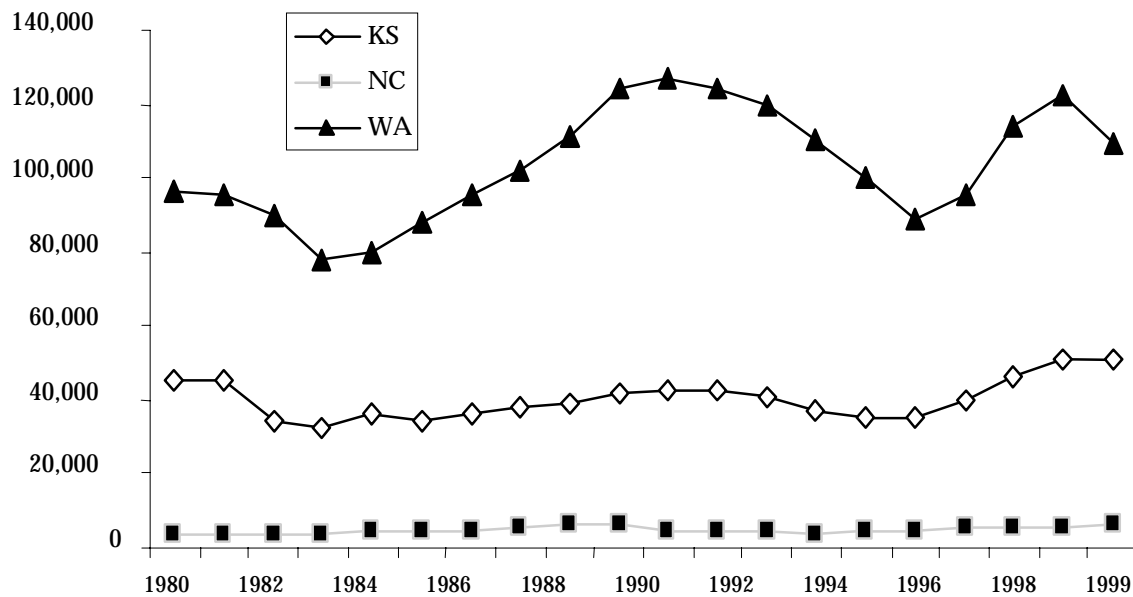
Figure 3.33 High-Tech Manufacturing Employment



Source: U.S. Bureau of Economic Analysis.

- High-tech manufacturing employment is broadly defined here with the following industries: industrial machinery and equipment, electronics, advanced instruments, and chemicals. This indicator attempts to measure both the level and growth of manufacturing industries that tend to be high-tech, high-value-added, and high-wage.
- North Carolina stands out as having a much larger high-tech manufacturing base of employment than Kansas or Washington. North Carolina has over 50,000 employees in industrial machinery, electronics, and chemicals.
- Both Washington and North Carolina have upward sloping trends in high-tech manufacturing, while the peak of employment in Kansas was in 1980. These industries don't capture the sectors of manufacturing growth in Kansas that were concentrated in transportation equipment, food products, and rubber and plastics.
- In terms of per capita high-tech manufacturing employment, North Carolina had almost 26 workers per 1,000 in population in 1999 compared to almost 17 high-tech manufacturing workers in Kansas and 11.5 in Washington. The trend since 1990 is downward for all three states, indicating that population has grown faster than high-tech manufacturing employment.

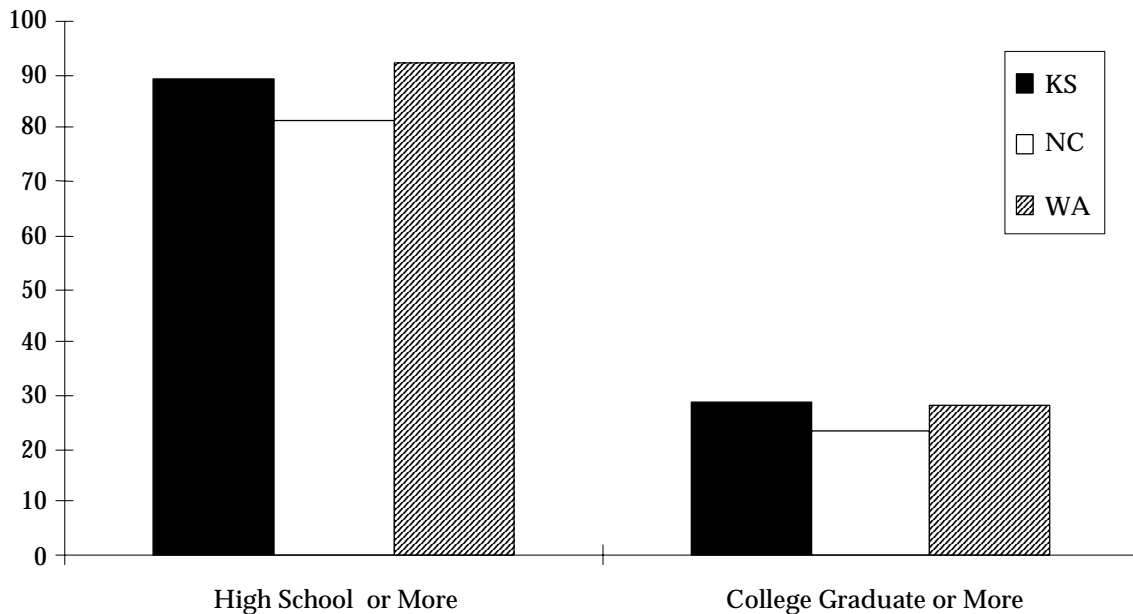
**Figure 3.34 Other (Aviation) Transportation Equipment Employment
1980-1999**



Source: U.S. Bureau of Economic Analysis.

- Other (non-motor vehicle) transportation equipment employment from 1980 to 1999 shows three very different stories. North Carolina has a very small other transportation equipment industry compared to Kansas and Washington, and has seen very little change over the last 20 years.
- Kansas had over 50,000 employees in other transportation equipment, most of them related to aviation in the Wichita area. Overall, the trend line is fairly flat, with a downturn in the early 1980s and a strong revival in the past five years.
- Washington has the largest other transportation equipment industry of the three states, but has experienced substantial volatility. The volatility roughly corresponds to U.S. business cycles as demonstrated with the low point in the early 1980s, the gradual rise through the rest of the decade, the fall in the early 1990s, and the subsequent expansion in the late 1990s. The one exception being the large decline from 1998 to 1999, a loss of over 13,000 jobs.

Figure 3.35 Educational Attainment
1998



Source: U.S. Census Bureau, "Current Population Reports," P20-513.

- Kansas performs relatively well on educational attainment, measured for both high school graduates and college graduates. On both indicators, Kansas has a higher proportion of educated persons than North Carolina. Kansas has a slightly lower rate of high school graduates than Washington, but a slightly higher rate of college graduates.
- Kansas also performs relatively well on the ACT (see table on the following page), above the U.S. average and well above North Carolina, though slightly below Washington.¹¹
- These two educational indicators are strong building blocks for a potentially well-qualified, productive labor force in Kansas. As has been shown earlier in the report, however, keeping the youth that are educated in Kansas in the state is a serious challenge.

¹¹Note that the SAT is the more commonly used college entrance exam in North Carolina and Washington.

Table 3.1 Comparing Kansas to North Carolina and Washington on Selected Indicators

State	Average ACT Scores ¹	Venture Capital Investments per Capita ²	Poverty Rate ³	Crime Rate per 100,000 Population ⁴
Kansas	21.6	44	9.7	4,564
North Carolina	19.5	199	11.4	5,492
Washington	22.4	400	9.2	5,926

¹ACT, Inc.

²PriceWaterhouseCoopers, Financial Times.

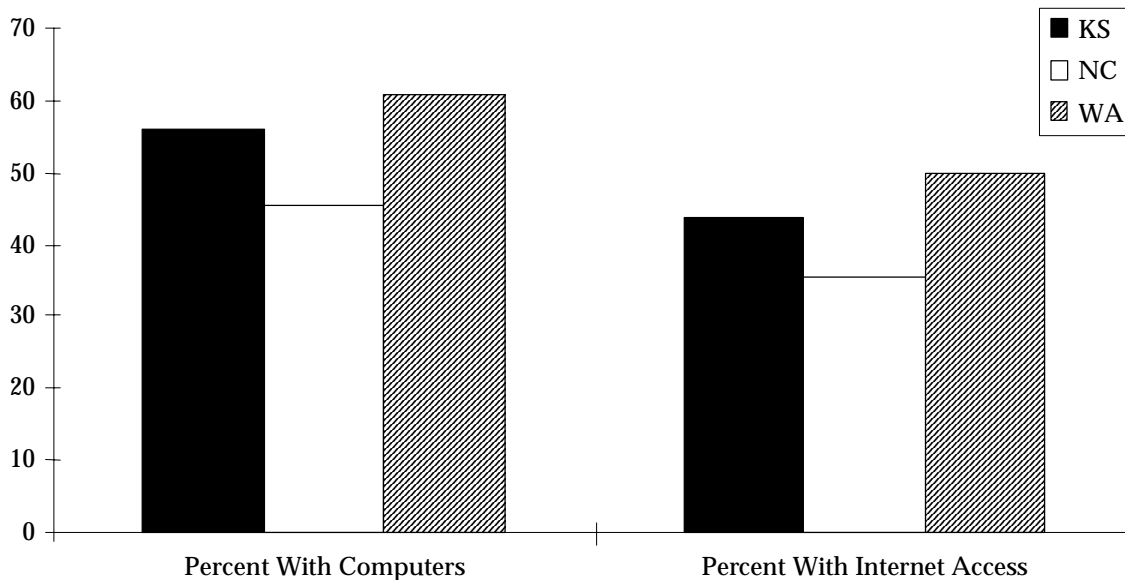
³U.S. Census Bureau, Current Population Reports, P60-201.

⁴U.S. Federal Bureau of Investigation.

- There are major differences in venture capital investments per capita for the three states.¹² Kansas has less than one-fourth of the venture capital investments per capita in North Carolina and trails Washington by an even larger margin.
- Venture capital investments are often an important component to the funding of high-tech, high-growth start-up firms, and a deficiency in this area puts Kansas at a competitive disadvantage for this type of activity.
- The percent of persons below the poverty level is relatively low in Kansas, less than the U.S. average (13.3 percent) and North Carolina. Washington, despite its higher unemployment rate, has a slightly lower poverty rate than Kansas, but this is not seen as an area of concern for Kansas.
- The crime rate, a frequently-used quality of life indicator, is lower in Kansas than in North Carolina or Washington. This may be related to the relative lack of metro areas in the state, which often corresponds with higher rates of crime.

¹²Venture capital investments were measured from the start of 1999 through the second quarter of 2000.

**Figure 3.36 Percent of Household Computer Ownership and Internet Access
2000**



Source: National Telecommunications and Information Administration and Economic and Statistics Administration.

- In terms of computer ownership and Internet access, Kansas ranks very favorably against North Carolina. The state trails Washington, however, on both of these measures.
- What this does not illustrate, unfortunately, is the percent of households with access to high-speed Internet connections, which, based on U.S. trends presented earlier, is likely a larger issue in rural parts of Kansas.

Summary. While Kansas has a very low unemployment rate, it has not experienced the rapid employment growth exhibited in North Carolina and Washington. In fact, the low unemployment rate is actually seen as a debilitating economic indicator corresponding to low population growth and indications of labor shortages mentioned in meetings around the state. Kansas does not have the high-tech manufacturing base of North Carolina or a software industry like Washington. In addition, the state lacks the venture capital market of these comparison states to flourish in the development of high-tech start-up firms. Kansas does rank well on educational measures, computer ownership, and poverty and crime rates.