

KCCED COUNTY DATABASE MANUAL:

"How to Use the KCCED County Database to Your Advantage"

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FORWARD

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The purpose of the KCCED County Database is to provide communities and counties in Kansas with information that will enable them to better understand their economic and social environment. It should be noted that this data set is not exhaustive. The economic and social variables contained in the database were selected to provide a picture of the overall trends for the county. Since funds were limited and did not allow for the generation of new data sources, the variables selected were already collected, updated and maintained by either the University of Kansas or Kansas State University. This is the first edition of the database. The KCCED plans to include more variables in future editions as collection procedures and funds permit.

It is hoped that the KCCED County Database will serve as a useful source of information. Further reproduction of the data presented in the KCCED County Database is permissible on condition that the source is cited. For those wishing to conduct a more exhaustive analysis of their county, additional information may be obtained by contacting the sources cited in this manual. The KCCED through the Institute for Public Policy and Business Research at the University of Kansas and the Kansas Center for Rural Initiatives at Kansas State University has access to additional data and can provide technical assistance, data analysis and survey support.

Special thanks to the staff at the Kansas Center for Community Economic Development that worked hard to make the KCCED County Database a reality and this manual possible: Jennifer Dam, Research Assistant, KCCED/KU; Arlene Slocum, Computer Programmer, IPPBR; Beth Tatarko, Assistant Director, KCCED/KSU; and, John Lavin, Research Assistant, KCCED/KSU. Guidance was also provided by the Co-Directors of KCCED: Dr. Charles Krider, KU and Dr. Marvin Kaiser, KSU.

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"How to Use the KCCED County Database to Your Advantage"

INTRODUCTION

Data analysis is crucial for the identification of a community's strengths, weaknesses, opportunities and threats. Since changes in the socio-economic make up of a community are subtle, they are often not recognized unless data is available to be examined. The variables in the KCCED County Database will help identify past trends, the current situation, future expectations given current trends continuing, and the county's position relative to the state and other counties in the state. By understanding the factors initiating change, the community or county can better position itself to take action that will build on their strengths and opportunities and minimize their weaknesses and threats.

The "KCCED County Database Manual" is designed to assist users of the KCCED County Database and help them create a better understanding of their county. This manual discusses the economic and social data in the order they appear in the database; that order is: Agriculture, Business, Education, Employment, Family, Health, Income and Earnings, and Population. Data sources are cited in a footnote in each section; this citation can serve as a reference for further analysis. A brief discussion or explanation of most of the variables follows. Examples of graphic capabilities using the database, Lotus™, and WordPerfect™ can be found throughout the manual.¹ (Appendix A is included for the user who wants more technical guidance on how to make a graph using Lotus™ and WordPerfect™.) This information should allow the user to turn data into intelligence.

The Seven Foundations as the Basis for Analysis. Data analysis can not be conducted in a vacuum. Ideally the analysis should incorporate knowledge about the values, vision, location and other characteristics of the community. In order to interpret the data in a meaningful fashion, a basis for the interpretation and use of the data needs to be in place. The seven foundations of economic development can be used as the building blocks of analysis

¹Lotus™ was developed by the Lotus Development Corporation. WordPerfect™ is a trademark of the WordPerfect Corporation.

strategy and formation. These foundations are:

- ▶ Human Capital (education, work force training/retraining programs...);
- ▶ Infrastructure Capital (roads, utilities, industrial parks...);
- ▶ Financial Capital (access to money at all stages of development);
- ▶ Innovation/Technology Capital (development, coordination, application and transfer);
- ▶ Commitment/Capacity Capital (business support and assistance, agencies, organizations...);
- ▶ Business Environment (taxes, grant programs, incentives...); and
- ▶ Quality of Life (culture, arts, recreation, environment, education, history...).

Appendix B contains further definition of these foundations for economic development. Because these foundations are inter-related, the data needed to analyze one area is also needed for another. For example, the distribution, size and composition of the population as well as the education and skill level of the population directly affects the strength of the area's human capital. They are also indicative of aspects of the area's quality of life, such as the strength of the educational system and the ability to retain new entrants to the work force.

The seven foundations also emphasize the need for information to be gathered at the community level. For example, the condition and availability of industrial parks, utilities and roads must be determined at this level. The commitment of local-elected, civic and business leaders as well as the commitment of the whole community can only be determined at the community level. The KCCED County Database does not provide this information. This information must be gathered through community surveys, interviews and other mechanisms for gathering community-specific information.

The community's or county's strengths and weaknesses in these seven foundations must also be looked at in terms of how they affect business development. The three basic forms of business development are: creation of new business, retention and expansion of existing business, and attraction of business into the community. By using the seven foundations as a structure to encourage business development, a community can identify the areas in which investment is necessary and the areas in which investment is strong. It is then possible to create strategies that will strengthen and balance all seven areas.

AGRICULTURE

The agriculture data provided in the KCCED County Database includes variables on the number of farms, the value of field crops, the value of livestock and poultry, and debt/asset ratio.² This data will help determine whether or not the overall economic importance of agriculture in the county has been increasing or decreasing over the last 10 years, and how this compares to the state and other counties in Kansas. Such trends will help determine initiatives needed for agriculture. Some agricultural strategies are: 1) reducing imports in agricultural products for the area by growing for local consumers ("pick-your-own" farms or local farmers' markets); 2) adding value to existing products such as milling products in the area (corn tortilla food processing plant); and 3) exploring new alternative products and new markets such as developing products for niche markets (organic foods industry). Again it is crucial to examine the data within the context of the other aspects of the economy as well as how it affects the seven foundations.

Debt/Asset Ratio. The debt/asset ratio measures the total farm loans over total farm assets for the county. A healthy ratio would be below 40 percent. If the debt/asset ratio is increasing, it implies that farmers are increasing their borrowing to stay in business and/or their asset values are decreasing. If the ratio has been decreasing over time, it means that the value of farm assets are increasing and/or farmers are paying off their debt.

Other Agricultural Data. Additional agricultural variables can be found in other sections of the database. Establishment data for agricultural service industries can be found in the "Business" section. The "Employment" section provides data for the number of farm employees and data for employment in the agricultural service industry. Total annual payroll for agricultural services is contained in the "Income and Earnings" section of the database.

BUSINESS

The variables found in the Business section are: the number of establishments by

²Data Source List: 1) Value of Field Crops, Number of Farms, and Value of Livestock and Poultry: Kansas State Board of Agriculture, *Farm Facts*, collected by KCCED/KCRI/KSU; and 2) Debt/Asset Ratio: Farm Management Association Reports, Larry Langmeier, Kansas State University, collected by KCCED/KCRI/KSU.

industry and pull-factors.³ The industries are listed in the database at the single digit SIC (Standard Industrial Code) level.⁴ The industrial categories are broken down into the following: total; agricultural services; mining; construction; manufacturing; transportation; wholesale trade; retail trade; finance, insurance and real estate (F.I.R.E.); services; and unclassified.

Establishments: Total and by Industry. The total number of establishments and the number of establishments by industry were compiled from *County Business Patterns*. This data indicates the relative strengths and weaknesses of particular industries and of the county as a whole. By looking at specific industries, the strengths and needs of the county can be identified. This will, in turn, impact strategies for import substitution and value added⁵ as well as those regarding the availability of financial and human capital. Some things to examine are: 1) the change in the number of establishments to indicate net business growth or decline; 2) the trends for business growth/decline over the last 10 years; and, 3) how the county compares with the state and other counties. Net business formation can be calculated by subtracting the number of establishments of a previous time period from the current time period (e.g., Net Business Formation 1980 to 1988 = Number of Establishments 1988 - Number of Establishments 1980).

Sectors such as agriculture, mining, manufacturing, wholesale trade, and some services are often referred to as export industries. The products of these industries are exported to meet external demands.⁶ Since one of the primary goals of economic development is to increase the levels of employment and income of the locality, one strategy is to strengthen export industries.

³**Data Source List:** 1) Establishments - Total and by Industry: U.S. Bureau of the Census, *County Business Patterns*, various issues, collected by KCCED/IPPBR/KU; and, 2) Pull Factor: David Darling, Cooperative Extension Service, Department of Agricultural Economic, Kansas State University, collected by KCCED/KCRI/KSU.

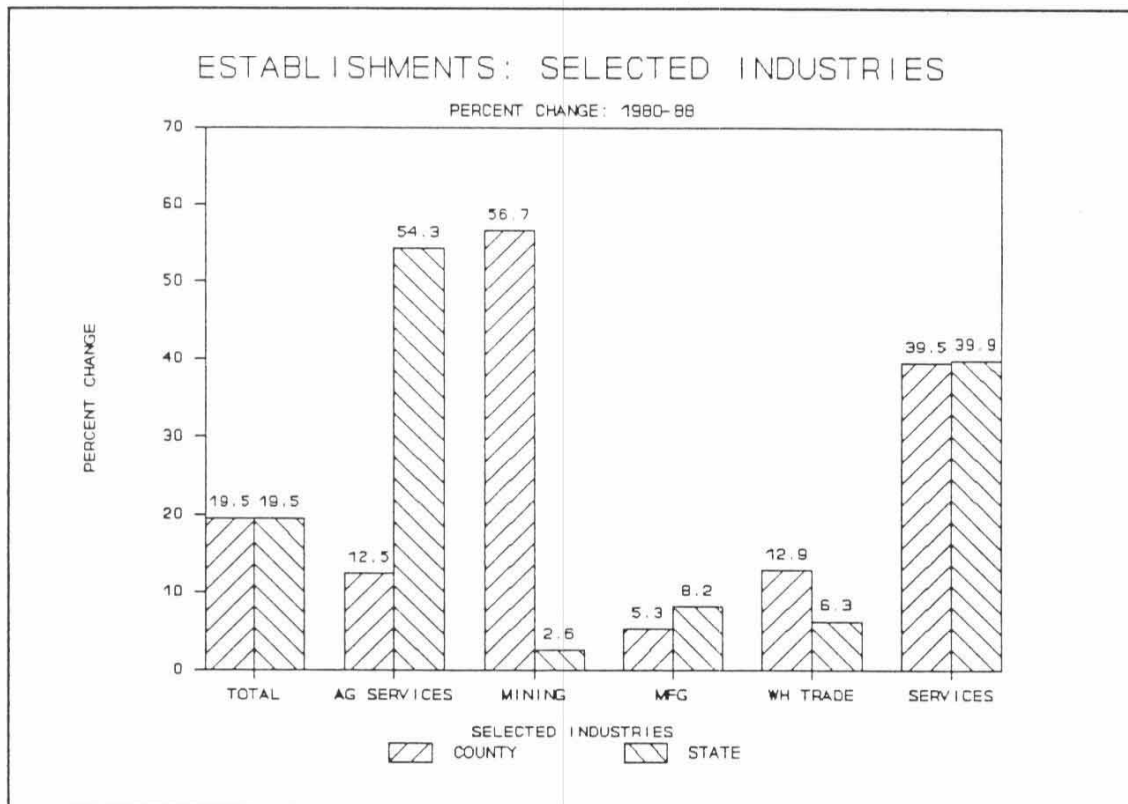
⁴More detailed data is available, particularly from *County Business Patterns*. The single digit SIC, however, is sufficient to indicate industry growth or decline as well as which industries are the predominate industries for the area.

⁵Import substitution is an economic strategy that decreases the local imports. By producing or buying goods locally that were previously purchased outside the community, a community can retain income. Value added is taking raw material and processing it locally (add value) before exporting the product out of the community.

⁶Export base theory contends that local employment and income are determined by the external demand for the products of these export industries. The income generated by these industries is said to generate local demand, employment and income in the other sectors. Thus, theoretically, an area that has a strong export base should have higher levels of employment and income.

This can be done by expanding and retaining existing industries, recruiting new industries, or by encouraging the start-up of new industries. An additional strategy is to examine ways in which the community can add value to local products. For example, one strategy may be to become involved in food processing in order to add value to agricultural products. Another strategy may be to promote tourism.

Graph 1



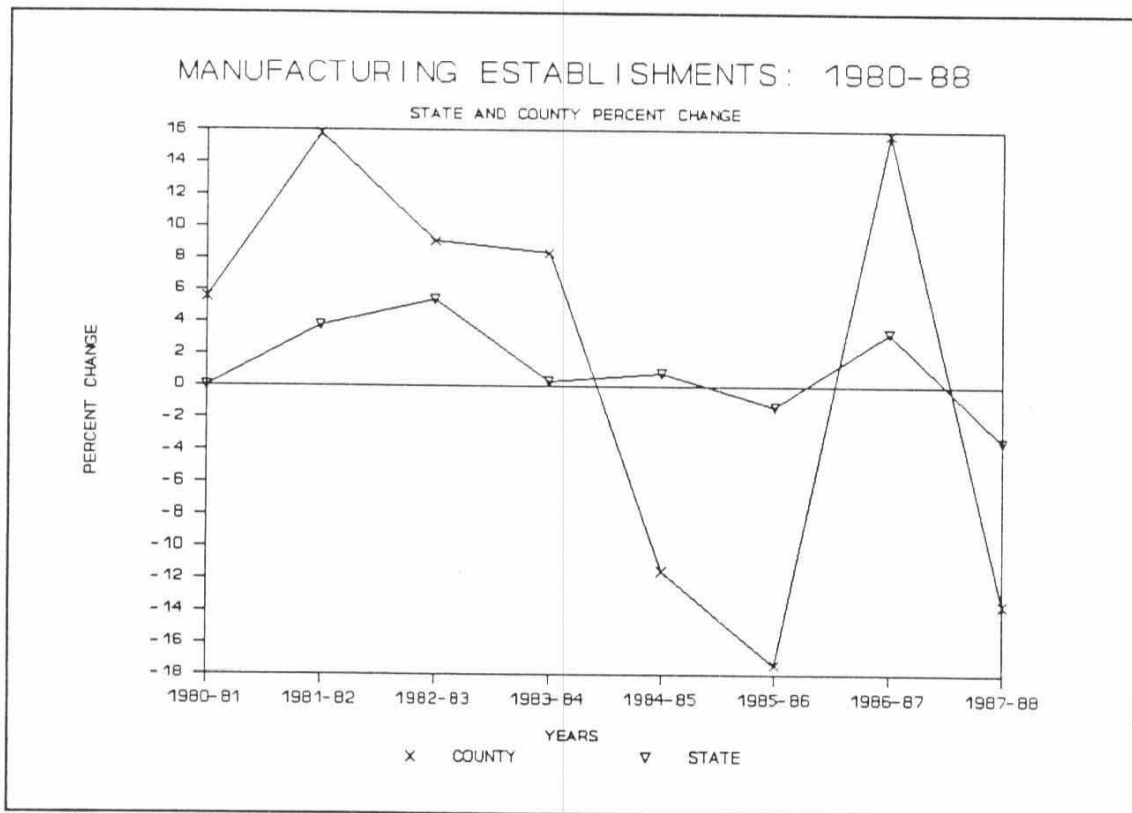
Source: KCCED/IPPBR, University of Kansas, 1991.

While export base theory is useful in identifying strategies for development, the importance of the other sectors to economic growth should not be minimized. Retail trade, services, and construction all have a definite impact on the local economy. Furthermore, changes in technology and the skill level and productivity of the labor force must be considered. The structure of the county's industrial base and the strengths and weaknesses a county has in

terms of the seven foundations will impact the strategies developed.⁷

Graph 1 illustrates the percent change in the number of establishments for selected industries from 1980 to 1988. This type of graph allows the user to quickly see if any sector or sectors stand out for the county. In Graph 1 it appears that the county has an advantage over the state in establishment growth for mining and wholesale trade. While the county experienced a positive percent change in the number of manufacturing establishments, the growth was not

Graph 2



Source: KCCED/IPPBR, University of Kansas, 1991.

If a community has a small or unskilled labor force, then a human capital investment in the training or retention of the labor force is a strategy that would help strengthen the labor force as well as increase the competitiveness of existing industries. The availability of financing for industry expansion or modernization is also critical in strengthening an area's industrial base. A balanced approach must be taken that involves looking at all the foundations for economic development as well as looking at all three forms of business development.

as great as the state's from 1980 to 1988. Graph 2 illustrates how the data user can take a particular sector, in this case manufacturing, and display the change in that sector in more detail. Graph 2 shows that the annual percent change in manufacturing establishment growth was more dramatic for the county from 1980 to 1988 than it was for the state.

Pull-Factors. Pull-Factors can be used to measure the strength of a county's retail sector and consumer trends. The pull-factors were calculated by dividing the county's per capita sales tax collection by the state's per capita sales tax collection. This provides a ratio that indicates the amount of retail trade a county has captured. A pull-factor of less than 1 indicates that individuals are going outside the county to spend a portion of their earnings. A pull-factor equal to 1 indicates that the county is capturing the available retail dollars in that county. A pull-factor greater than 1 indicates that the county is attracting dollars from elsewhere and is a regional trade center.

It should be noted that pull-factors of less than 1 are not necessarily bad. For example, it is necessary to have a relatively large population in the trade area to be able to support trade in particular goods such as furniture and specialty goods. Additionally, some agricultural products are exempt from sales tax, so trade in these products are not reflected in the pull-factor.

The pull-factors in the database will help to identify trends over time. Pull-factors that are declining over time indicate that the county's economy is declining compared to the state's. Pull-factors that are steady over time indicate that the county's economy is doing as well as the state's. Pull-factors that are increasing over time indicate that the county's economy is out-performing the state's.⁸

EDUCATION

Education variables found in the database include: total public school enrollment, high school dropouts, high school graduates, pupil/teacher ratios, and years of school completed by

⁸James Vassar and David Darling, "Kansas's County Pull-Factor Analysis: 1982-1987", *Kansas Business Review*, Vol. 11, No. 1, Fall 1987, pp. 17-20.

male and females 25 years and over.⁹ This data is helpful in developing human capital and quality of life strategies. Additional information about education and training needs can be obtained by surveying local businesses about the needs and challenges they are facing. This would assist in developing these strategies that create a competitive labor force and meet the needs of the county.

Dropout and Graduation Rates. It is important to look at dropout rates in comparison with graduation rates. This will have a significant impact on the skill levels and competitiveness of the future labor force. This in turn will impact the types of business that will remain, locate or expand in the community. The quality of life of the community and the levels of public assistance will also be impacted.

Pupil/Teacher Ratio. By comparing this ratio for the county with the state's ratio and the county's rank, an indication of the quality of education can be determined for the county. If the ratio is below the state average, for example, the county can use this as an asset indicating the county's quality education. However, it can also be argued that a pupil/teacher ratio that is considerably lower than the state average may indicate that consideration needs to be given to school consolidation. Therefore, further information may be needed to determine which direction the community needs to be going.

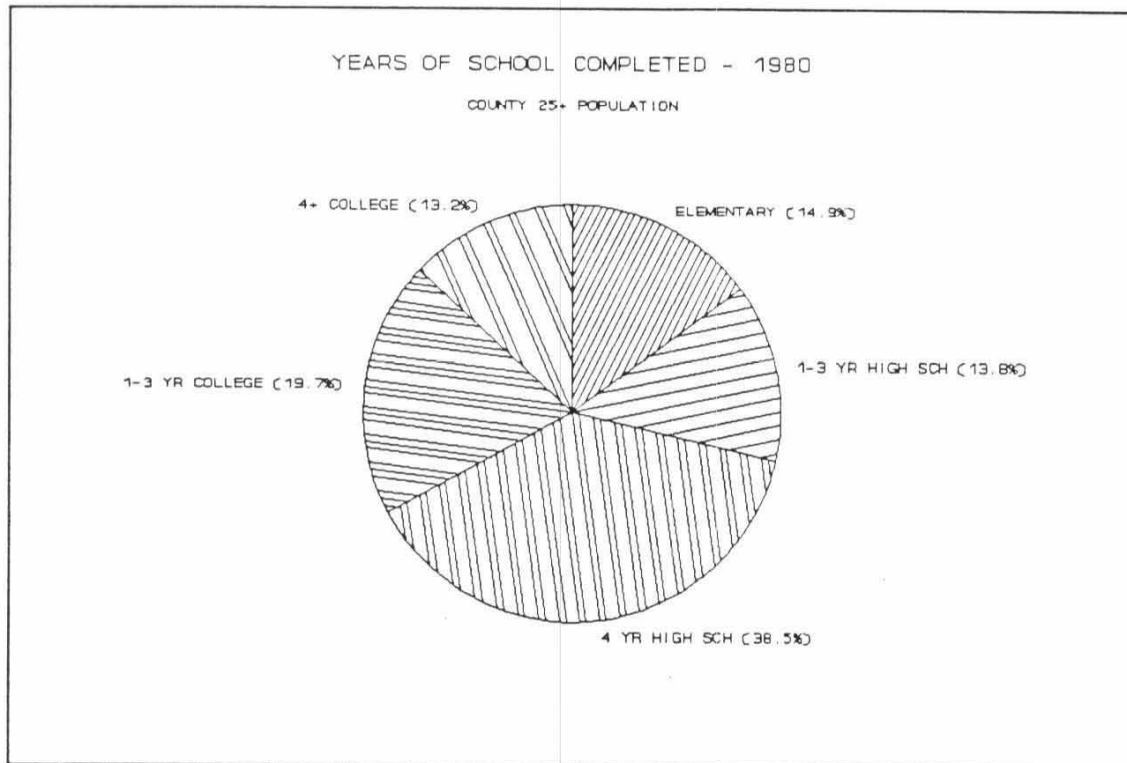
Education Level of the Population. The educational attainment (1980) of males and females over 25 years old (elementary school, high school, college) gives an indication of the skill level and professional capabilities of the county's population. These variables provide some indication of the training level and needs of the local work force. For example, if a high percentage of a county's population has attained a high school and/or less than high school level of education, then training programs might be appropriate in order to attract high-skill, high-paying jobs to the county. A high proportion of the population with 1-3 years college would indicate that many residents have completed some type of post-secondary technical training and

⁹**Data Source List:** 1) Public School Enrollment, High School Graduates, and High School Dropouts: *Kansas Statistical Abstract*, IPPBR/University of Kansas, various issues, Kansas Department of Education, *Headcount Enrollment, Kansas Public Schools, and Secondary School Dropouts*, collected by KCCED/IPPBR/KU; 2) Pupil/Teacher Ratio: Kansas State Board of Education, collected by KCCED/KCRI/KSU; and, 3) Years of School Complete, Female/Male 25+: U.S. Bureau of the Census, 1980 Census, collected by KCCED/IPPBR/KU.

that the county would be in a position to meet the needs of a high-skill firm.

Graph 3 is a pie chart illustration of the years of school completed by the county's 25 year and over population. From the chart, the user can quickly see that well over half of the county's over 25 population (approximately 77 percent) has only high school or less education. This has implications for training and retraining programs particularly if this work force is needed to fill high-skill, technology-oriented jobs.

Graph 3



Source: KCCED/IPPBR, University of Kansas, 1991.

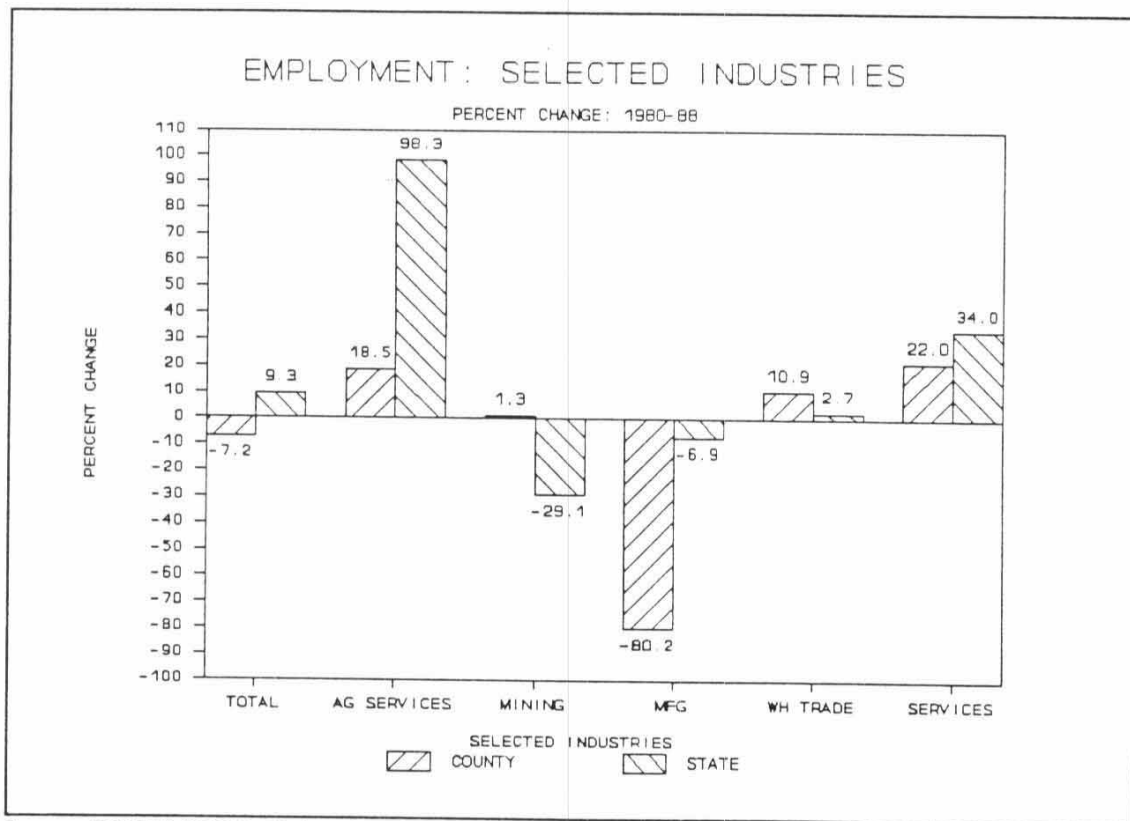
EMPLOYMENT

Employment profiles are used to determine the structure of the area's economy and allows for comparison of county and state employment growth/decline across business sectors. Employment data found in the database consists of BEA (Bureau of Economic Analysis) employment by industry; CBP (County Business Patterns) mid-March employment by industry; and KDHR (Kansas Department of Human Resources) civilian labor force, employment,

unemployment and unemployment rate.¹⁰ Employment by industry is based on the one digit SIC designation (previously discussed in the Business section). Additionally, data in the categories of government and farm/non-farm employment are available from the BEA data.

Employment: Total and by Industry. The employment by industry data has been provided from two sources: *County Business Patterns* and the Bureau of Economic Analysis. The figures represented by these sources vary for several reasons. Both sources identify employment by place of work, count full and part time employment, and identify employment

Graph 4



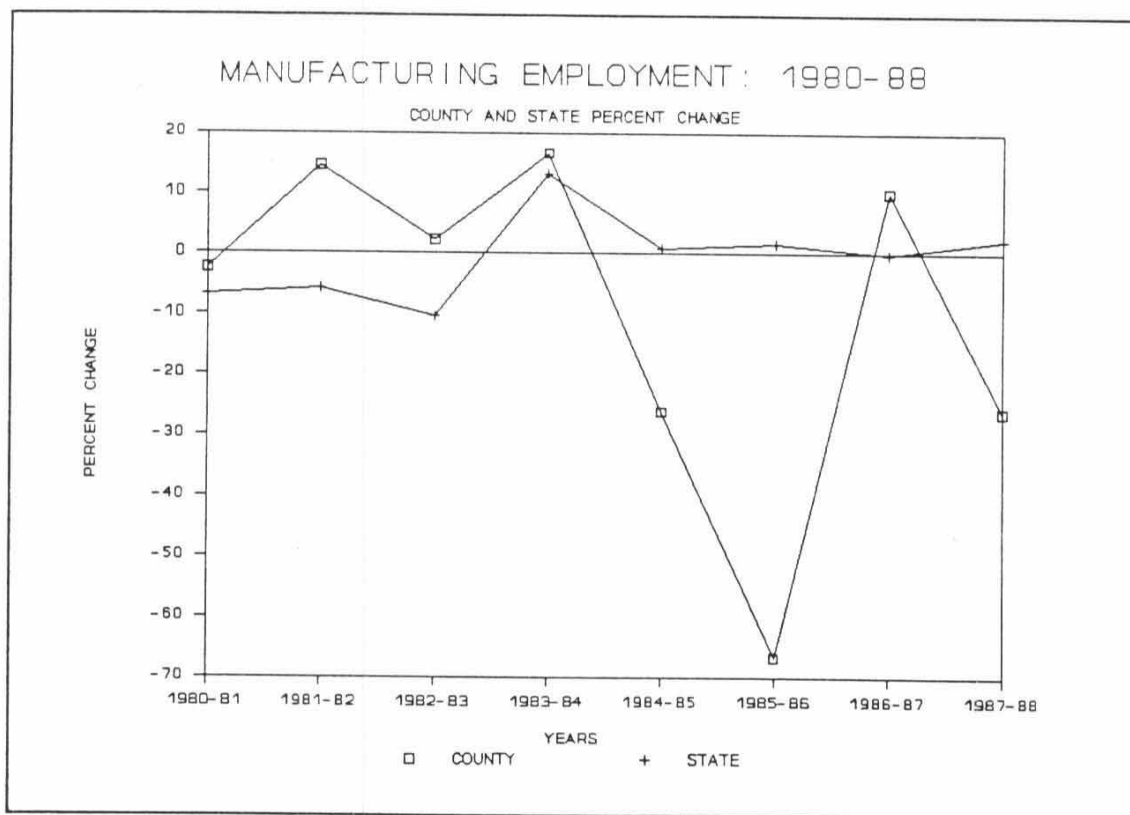
Source: KCCED/IPPBR, University of Kansas, 1991.

¹⁰Data Source List: 1) BEA Employment by Industry: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Information System, CA25, collected by KCCED/IPPBR/KU; 2) CBP Mid-March Employment by Industry: U.S. Bureau of the Census, *County Business Patterns*, various issues, collected by KCCED/IPPBR/KU; and 3) Total Civilian Labor Force, Employment, Unemployed and Employment Rate: Kansas Department of Human Resources, collected by KCCED/IPPBR/KU.

in terms of the number of jobs (i.e., a person could hold two jobs and would be counted twice). However, the ways in which employment are estimated vary. County Business Patterns counts private non-farm employees. Additionally, the BEA estimates include government and railroad workers, farm and non-farm employees and proprietors (rather than just wage earners). Thus, one should use caution when comparing the two sources of figures.

Changes in employment by industry show which areas are creating the greatest number of jobs. Positive change may represent expansion of existing business, attraction of a new business or creation of new firms. Negative growth would illustrate the exodus or decline of existing businesses in the county.

Graph 5



Source: KCCED/IPPBR, University of Kansas, 1991.

The changes in employment for the county and state as well as for selected industries are illustrated in Graph 4. The most striking change is the decrease in manufacturing employment

from 1980 to 1988. Further analysis of manufacturing employment change can be seen in Graph 5. This displays the annual employment percent changes for manufacturing from 1980 to 1988 and shows that the county experienced its most difficult period from 1984 through 1986.

Civilian Labor Force Employment and Unemployment. Employment data indicates the total number of individuals employed or seeking employment. Unemployment is defined as individuals actively seeking work. The rate of unemployment is determined by dividing the number of unemployed by the total civilian labor force. The total civilian labor force, employment and unemployment figures come from the Kansas Department of Human Resources, which estimates employment by place of residence. KDHR employment figures are estimates based on ten variables, including current population survey and unemployment insurance.¹¹

FAMILY

Family data includes information on marriages, divorces and annulments; child care centers (group licensed day care, licensed day care, registered day care, and preschools); and persons receiving food stamps.¹² The data in these categories provide some basis of measuring the quality of life for the county.

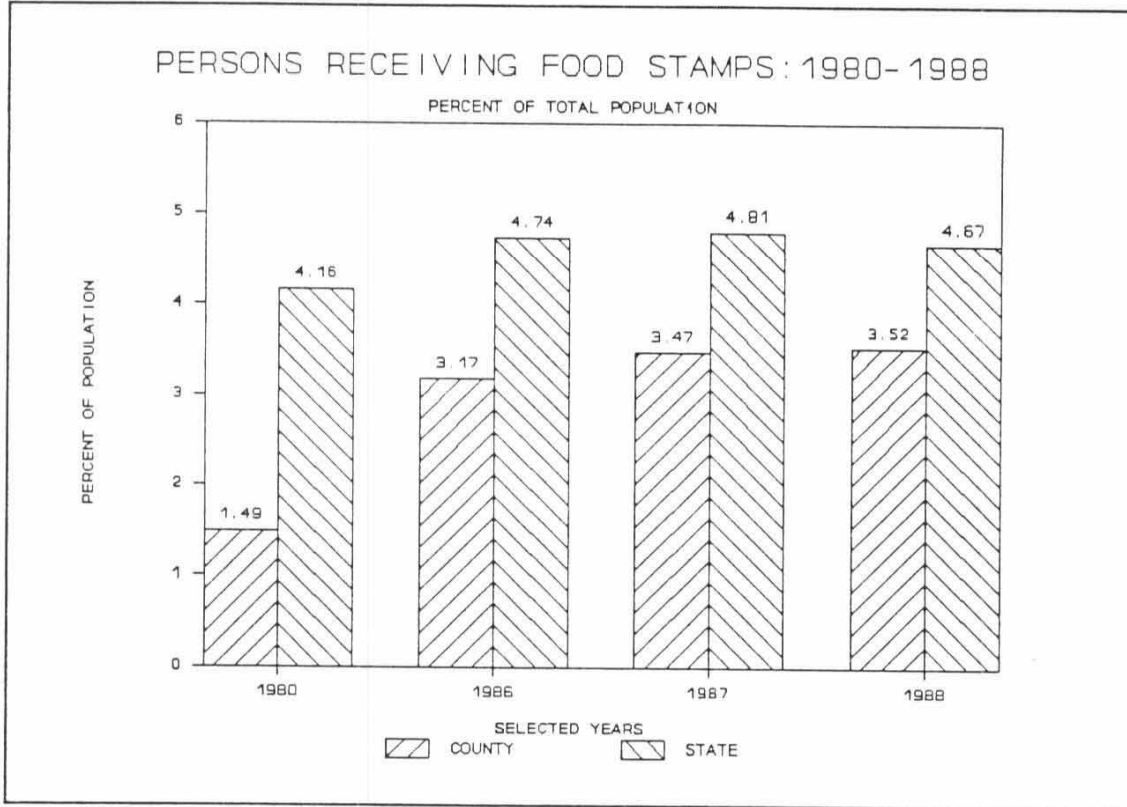
Food Stamp Recipients. The data regarding food stamp recipients provides some indication of the prevalence of poverty in the county; it is an indicator of the distribution of income and opportunity within the county. It is critical to identify where the county ranks, where it stands in comparison to the state and what the trends are indicating. It is also important to examine this variable in terms of educational attainment and employment level. Graph 6 shows that proportionally, the county has fewer persons receiving food stamps than the state for

¹¹CBP, BEA and KDHR employment figures are NOT compatible since different estimating procedures are used to calculate employment. Therefore, it is not possible to take BEA or CBP employment totals (place of work) and subtract KDHR employment totals (place of residence) to determine in-flow or out-flow of workers for the county.

¹²Data Source List: 1) Marriages, Divorces and Annulments: *Kansas Statistical Abstract*, IPPBR/University of Kansas, various issues, U.S. Bureau of the Census, *Statistical Abstract of the United States*, Kansas Department of Health and Environment, *Annual Summary of Vital Statistics*, collected by KCCED/IPPBR/KU; 2) Child Care Centers, all variables: Robert H. Poresky, Department of Human Development and Family Studies, Kansas State University, Kansas Department of Health and Environment, Bureau of Adult and Child Care Facilities, collected by KCCED/KCRI/KSU; and 3) Persons Receiving Food Stamps: U.S. Department of Agriculture, *Food Statistical Summary*, U.S. Bureau of the Census, *County City Databook, 1988*, Public Voice for Food and Health, November, 1989, collected by KCCED/KCRI/KSU.

the selected years, 1980, 1986, 1987 and 1988. However, Graph 6 also shows that the percent of the total population receiving food stamps has risen in the 1980's. This could be an indication of increasing poverty for the county and a decreasing quality of life.

Graph 6



Source: KCCED/IPPBR, University of Kansas, 1991.

Child Care Centers. It is important to be aware of how increased participation of women in the work force influences demands for child care. Therefore, comparisons of female population trends and participation rates with child care facilities available would help determine if the child care needs of working mothers are being met in the county.

HEALTH

The quality of health care services for the county influences the quality of life for the county. Health related statistics in the database include information on: physicians, hospitals

and number of beds, dentists, adult care homes and number of beds, and infant deaths.¹³

Availability of Health Care Services. The number of doctors, dentists and hospitals provide a general idea of the availability of health care in the county. The number of persons per physician can be calculated by dividing the number of physicians in the county by the county's population. This can be used to determine the size of caseloads of local medical doctors in order to assess accessibility to health care. The number of hospital beds serves as a measure of the level of public medical infrastructure available to assist in delivering good medical care.

It is also important to be aware of the influence of population demographics on health care needs. An aging population will require more adult care facilities. Since health care facilities are expensive to maintain, a county may want to consider a regional health care center as population decreases and resources become limited.

INCOME AND EARNINGS

Income and earnings variables in the KCCED Database are: average wage per job, annual payroll by industry, and per capita personal income.¹⁴ One goal of economic development is to increase the income that flows to the community and the individuals within it. This data will help determine if the flow has been increasing or decreasing. These variables also help illustrate the quality level of jobs found in the county when compared with the change in employment levels for the county.

Average Wage Per Job. The average wage per job is a way to measure the income and

¹³**Data Source List:** 1) Number of Physicians and Dentists, Number of Adult Care Homes and Beds: *Kansas Statistical Abstract*, IPPBR/University of Kansas, various issues, Kansas Department of Health and Environment, Office of Information Systems and Computing, collected by KCCED/IPPBR/KU; 2) Number of Hospitals and Beds: *Kansas Statistical Abstract*, IPPBR/University of Kansas, various issues, American Hospital Association, *American Hospital Association Guide to the Health Care Field*, collected by KCCED/IPPBR/KU; and 3) Infant Deaths: Robert H. Poresky, Department of Human Development and Family Studies, Kansas State University, Kansas Department of Health and Environment, Bureau of Adult and Child Care Facilities, collected by KCCED/KCRI/KSU.

¹⁴**Data Source List:** 1) Average Wage per Job: *Kansas Statistical Abstract*, IPPBR/University of Kansas, Bureau of Economic Analysis, Regional Information System CA34, collected by KCCED/IPPBR/KU; 2) Payroll by Industry: U.S. Bureau of Census, *County Business Patterns*, collected by KCCED/IPPBR/KU; and 3) Per Capita Personal Income: *Kansas Statistical Abstract*, IPPBR/University of Kansas, Bureau of Economic Analysis, Regional Information System CA5, collected by KCCED/IPPBR/KU.

competitiveness of an area. If the average wage is lower than that of the state and/or surrounding area, residents may seek employment elsewhere. If the average wage is higher, then residents from other areas are likely to seek employment in the county. Trends must also be considered. If the average wage per job is increasing or declining with respect to that of the state (in rank or as a share of the state's average), then it is important to know why. Several possible explanations could be: the gain/loss of a particular industry, cutbacks in order to make a firm more competitive, or an increase/decrease in overall wages more quickly than the state. The reasons have different strategy implications. The characteristics of the population and the skill levels of the labor force also need to be considered so that a strategy that is consistent with these can be implemented.

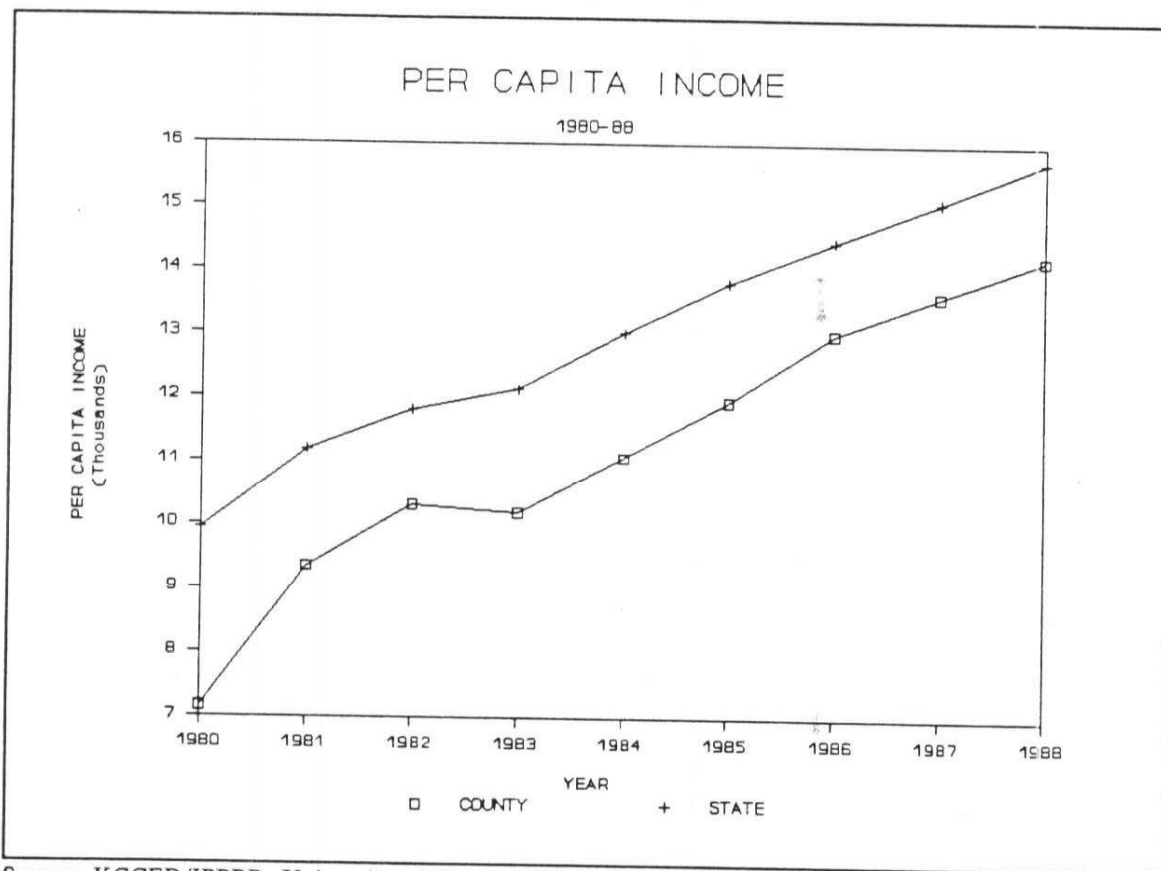
Payroll: Total and by Industry. Total payroll and payroll by industry indicates the level of wage and salary income that exists within the community. As with employment, those industries with the highest level of payroll are generally the leading industries in the area. Payroll growth is considered an indicator of businesses' ability to maintain or increase growth or productivity; as profitability and productivity of firms increase, generally their payroll increases.

Again, the position of the county needs to be examined with respect to the state and other counties in the state. Trends should be examined to determine whether or not particular industries are increasing or decreasing payrolls and how this reflects upon the structure of the county's economy. If some industries are experiencing a decline in payroll while those in the state as a whole are increasing, then further research may be needed to determine why this is happening. If the payrolls of certain industries in the county are increasing more rapidly than the state as a whole, this may indicate that the county has a comparative advantage with respect to that industry. The identification of such trends will influence whether the county develops strategies such as those that assist industries to become more competitive, those that help industries remain competitive, those that ensure adequate financial capital exists, and those that ensure that training and retraining programs are sufficient. The general goal is to increase or at least maintain payroll levels, and thus increase the amount of locally available income and the tax base.

Per Capita Income. Per capita income measures the average income of each individual

in the county. The county's per capita income level needs to be considered in relation to the state and other counties. It is also important to examine the trends - increasing, decreasing or remaining the same - in relation to what is happening in the state. Graph 7 illustrates the county's income trend in relation to the state's trend and shows that both have been increasing, with the state's per capita income higher than the county's.

Graph 7



Source: KCCED/IPPBR, University of Kansas, 1991.

Per capita income should also be compared to employment data. If employment data shows that employment is increasing while per capita income data shows that income is decreasing, it could be concluded that while the county is attracting or creating jobs they are not quality, high-paying jobs. The county may then want to consider what strategies it needs to help

increase its per capita income.¹⁵

POPULATION

Population variables are used to determine the distribution, size and composition of population shifts. The population variables contained in this database are: total population from 1950-1990; estimated population from 1981-1988; population by five year age cohort for 1980, 1982 and 1984; and, net migration for the years 1960-70, 1970-75, 1975-80, and 1980-88.¹⁶

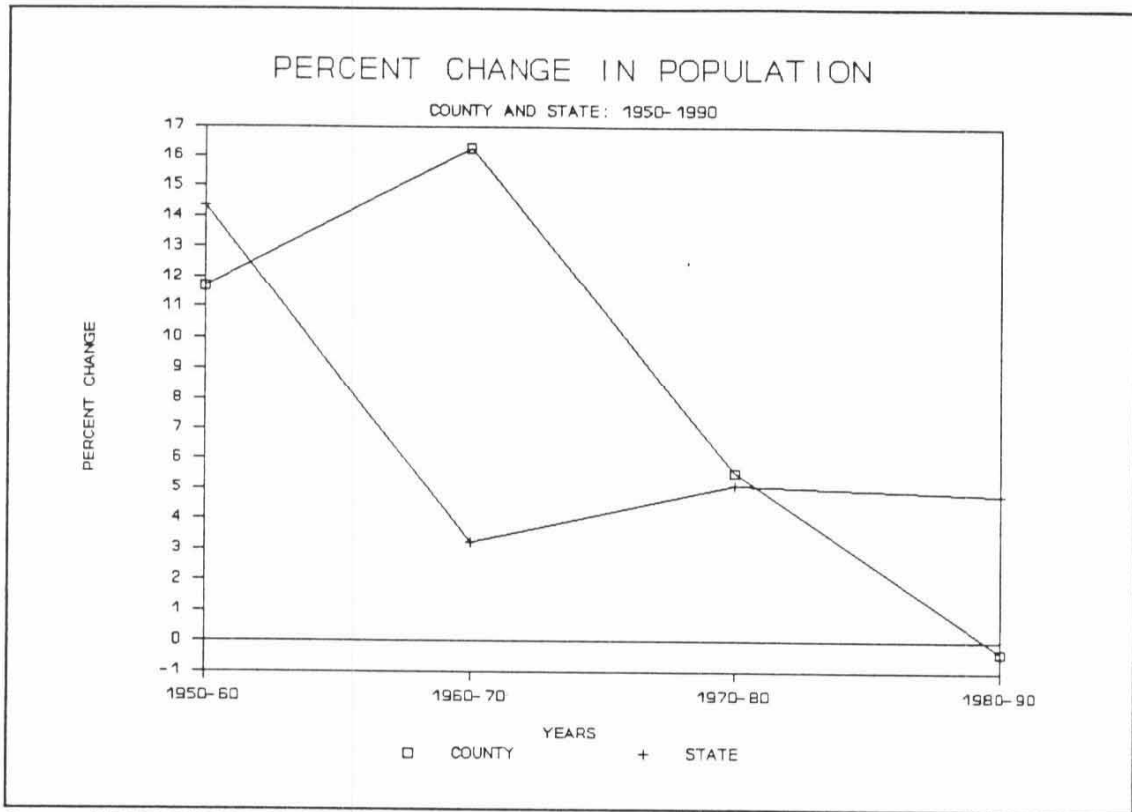
Total Population. Total population should be examined over a time series in order to determine the trends that the county is experiencing. The rate of change in values from 1980 to 1988 are indicative of more immediate trends. It is helpful to express the data for the county and the state graphically so that trends are readily visible. Graph 8 is an example of how to illustrate population trends; it shows the percent change in population from 1950 to 1990 and allows comparisons in population growth between the county and state. Questions to ask regarding population are: 1) is the county's population increasing, decreasing, or stable; 2) how does the county's population trend compare to the state's trend; 3) what is the county's rank and how has this changed; and, 4) if the population is increasing, is it growing at a faster rate, slower rate or leveling out and at what point did this occur?

Population by Age Groups. Population by age group is needed to determine the structure of the population. Ages 0-4 are typically referred to as the "preschool" population;

¹⁵It should be noted that strategies in this area should be carefully considered. If a locality recruits a firm that pays its employees at a rate that is considerably higher than that of existing firms, those existing firms' competitiveness will be affected. The structure of the labor force, existing business and community needs should all be considered when developing an earnings strategy. One county may have a large labor force with relatively low skills. Their strategy may be to increase the number of jobs suited to that labor force, although they may be lower paying. Another county may have a highly skilled labor force that is underemployed. Their strategy may be to increase the number of higher skilled, higher wage positions. Thus, while the general goal is to increase per capita income, the population characteristics and skill levels of the labor force must be kept in mind when formulating goals and strategies.

¹⁶**Data Source List:** 1) Total Population, 1950-1990: *Kansas Statistical Abstract, 1989-90*, IPPBR/University of Kansas, U.S. Bureau of Census, Census of Population, various issues, collected by KCCED/IPPBR/KU; 2) Estimated Population from 1981-1988: *Kansas Statistical Abstract, 1989-90*, IPPBR/University of Kansas, U.S. Bureau of Census, Estimates of the Population of Kansas Counties and Metro Areas, and County Population Estimates, collected by KCCED/IPPBR/KU; 3) Population by Cohorts, 1980, 1982, 1984: National Cancer Institute, collected by KCCED/IPPBR/KU; and 4) Net Migration: *Kansas Statistical Abstract, 1989-90*, IPPBR/University of Kansas, U.S. Bureau of Census, mimeograph sheets, collected by KCCED/IPPBR/KU.

Graph 8



Source: KCCED/IPPBR, University of Kansas, 1991.

this age group has implications for child care needs. The age groups 5-14 are defined as the "school age" population and this group has educational implications for the county. Those in the age group 15-24 are referred to as the "new entrants" into the work force. This is the labor pool for many of the new jobs that may be created. Those in the age groups 25-44 can be classified as the "prime working age" population. In a further breakdown of prime workers, those in the age groups 25-34 are considered to be establishing their careers and families and are more likely to move due to promotions or better job opportunities. The 35-44 age group is becoming more established in their career and their earnings are generally increasing. People 45-64 years could be labeled the "established working group" population. A breakdown of the established work force shows that the 45-54 year olds are in their peak earning years. Those

who are in the 55-64 group are least likely to change jobs, are at their peak earning levels and are beginning to make future plans for retirement. Those over 65 can be considered the "retirement age" population and the trends for this group, as for other groups, has implications for social and health care services.

The needs of each of these age groupings are different. For example, a large preschool population, as previously mentioned, may indicate an increased need for child care. The characteristics of the groups between the ages of 15 and 64 meet different labor force supply needs. A large established working population may indicate needs for adult education and retraining programs. Once the trends for these age groupings have been defined, additional information needs to be considered for a balanced view. For example, some of the variables in this database that impact different age groupings included educational attainment, child care facilities, and the number of nursing homes.

Net Migration. Net migration for the county shows the relative growth or decline for the county for a certain time period. This variable also needs to be analyzed in comparison for the migration of the state and other counties in the state. Out-migration has been a problem for Kansas and other rural states.¹⁷

CONCLUSION

The use of data in community economic development is important for several reasons. First, data assists a community in "taking stock" and understanding its current situation across several different areas of economic performance. It also provides insight into the internal and external trends which affect the community by comparing economic performance to other areas, such as the state or other counties. Finally, by utilizing data in planning, it can

¹⁷Many rural communities consider the retention of youth as a problem for their community. Once cohort information is available for 1990, the KCCED County Database will allow some calculations that will illustrate if this is a problem. Population data by age groups (five year cohorts) can be used by the county to see which age groups are growing, declining or remaining about the same. By comparing the 1980 population count for the 15-19 cohort with the 1990 population count for the 25-29 cohort, the county will be able to see if indeed the youth has left or if they have been able to "keep them home" and even attract other young people to the county.

ensure the long-run success of the strategic planning effort and its eventual outcomes by:

- ▶ Testing Assumptions - data can validate or challenge hypotheses that a community might have about its status quo.
- ▶ Building Consensus - data can foster a common understanding regarding trends and concerns affecting the community and, in turn, move the community toward solving common goals.
- ▶ Establishing the Direction - data can serve as a compass and help determine the next step a community needs to take on the road to healthy community economic development. For example, a community may decide that it does not have the data it needs to answer its questions and may wish to spend more time collecting additional data.
- ▶ Identifying Key Issues - data analysis can identify important issues, in terms of relative strengths and weaknesses, which the community may wish to address.

It is important to remember that raw data on its own does not lead to an understanding of the community. Data must be analyzed, taking into account the intuition of the community about the overall trends. In other words, data serves as the foundation for an analysis which concludes: 1) what is happening in the community, relative to other regions and over time, and 2) what does the data suggest, in terms of potential impact or consequences. From this point, the community can then address possible strategies and solutions.

APPENDIX A

HOW TO MAKE A GRAPH

An understanding of Lotus™ allows the KCCED County Database user to manipulate the data in many ways: calculate new variables; develop tables; or develop graphs.¹⁸ The following is the step-by-step process used to create "Graph 1. Establishments: Selected Industries" (see p. 6 or p. 24). It is hoped that through this example, the user will have an understanding of the process involved and will be able to create graphs relevant to their county.

Step 1. Manipulation of the Database

The database contains the percent change from 1980 to 1988 for establishments at both the county and state levels. Therefore, in order to develop Graph 1, little manipulation of the database is necessary. For convenience, a table is created that brings together all the information necessary to develop the graph (see Table 1). Table 1 consists of percent change for the county and state from 1980 to 1988 for the following parameters: total number of establishments, agricultural services, mining, manufacturing, wholesale trade and services. Once this information is together, the graph can be created.

U	V	W
	Table 1	
1	Establishments: Selected Industries	
2	Percent Change 1980-88	
3		
4	County	State
5	<u>1980-88</u>	<u>1980-88</u>
6		
7	TOTAL	19.5
8	AG SERVICES	12.5
9	MINING	57.6
10	MFG	5.3
11	WH TRADE	8.2
12	SERVICES	12.9
		39.9

¹⁸The Institute for Public Policy and Business Research at the University of Kansas employs the use of Lotus™ and WordPerfect™. Therefore, the KCCED County Database is available on diskette in Lotus™ spreadsheets and the steps on how to make a graph using the database are given with reference to these two computer programming products.

Appendix A

Step 2. Create, Name and Save Graph

To create a graph in Lotus™, the "Graph" command is used. This is accessed by typing: "/G" (for Graph). Under "Graph" the following secondary commands exist: Type, X, A, B, C, D, E, F, Reset, View, Save, Options, Name, and Quit. The following secondary commands are used to develop Graph 1:

Type: Bar

X: The X-range is used to label the x axis of the graph. In this example, the x-range will consist of the industry names: Total, Ag Services, Mining, Mfg, Wh Trade, and Services; i.e., the range is: U7..U12.

A: A is used to designate the first data range. The first data range for Graph 1 is the percent change for the county; i.e., the range is: V7..V12.

B: B is used to designate the second data range. The second data range is percent change for the county; i.e., the range is: W7..W12.

C, D, E, F: These data ranges are not used for Graph 1.

Reset: This allows the user to cancel graph settings and is not used unless changes, or resetting, needs to be made.

View: Once data ranges have been specified, this function can be used to view the graph that has been created. This helps determine if the graph shows the desired information.

Options: The following functions under "Options" are used to created Graph 1:

Legend: A Range: type in COUNTY
B Range: type in STATE

	U	V	W
	Table 1		
1	Establishments: Selected Industries		
2	Percent Change 1980-88		
3			
4		County	State
5		<u>1980-88</u>	<u>1980-88</u>
6			
7	TOTAL	19.5	19.5
8	AG SERVICES	12.5	54.3
9	MINING	57.6	2.6
10	MFG	5.3	8.2
11	WH TRADE	12.9	6.3
12	SERVICES	39.5	39.9

Appendix A

Titles: First: type in ESTABLISHMENTS: SELECTED INDUSTRIES
Second: type in PERCENT CHANGE: 1980-88
X-Axis: type in SELECTED INDUSTRIES
Y-Axis: type in PERCENT CHANGE

Scale¹⁹: Y-Scale: type in "0" for Lower; "70" for Upper
Format: set it at "Fixed" with "0" decimal places

Data-Labels²⁰: A: type in the same range as initially indicated for the A range
B: type in the same range as initially indicated for the B range

Quit: Use "Quit" when done with "Options"

Name: Once a graph is developed in the desired format, it must be named. The "Name" command is used in the following manner:

Create: Enter a relevant name for the graph, such as: ESTAB1

Save: After a graph is created and named, it needs to be saved in order to be printed out. The "Save" command asks the user to enter a file name; in this case, ESTAB1 (to correspond to the graph name) is entered. Lotus then saves the graph in a separate "PIC" file; in this case, the file is called ESTAB1.PIC.

Quit: When all graphs have been created, or if further manipulation of the data is needed to create a graph, the "Quit" command is used to return to the spreadsheet.

In order to retain all the new information that has been created (data manipulation, named graphs, etc.), the worksheet must be saved before exiting Lotus™. This is done by typing: /FS (for File, Save). This will replace the previous worksheet. The "Quit" command is then used to exit Lotus™ and end the session.

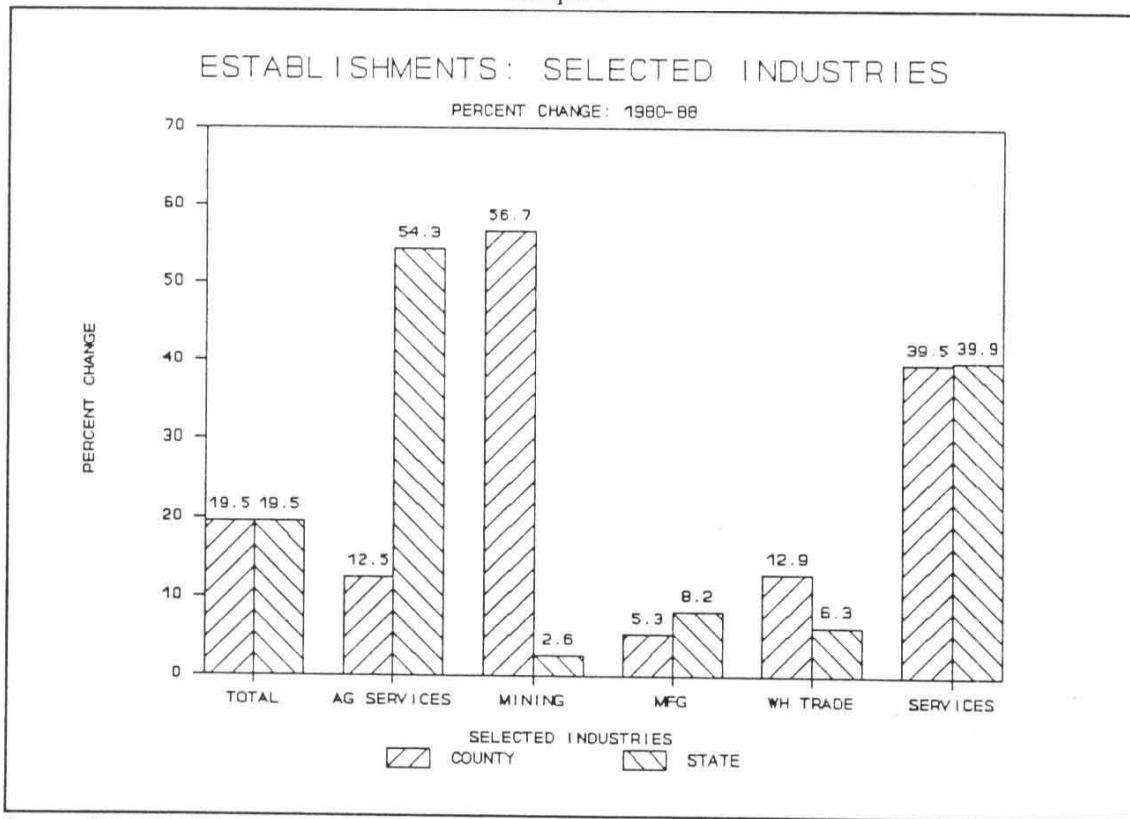
¹⁹Scale options are usually set after viewing the graph. In this case, the upper and lower limits automatically established by the computer did not allow for the printing of the data labels. Therefore, the upper limit was changed. The format was also changed after viewing the graph. With a range of 0 - 70, it was not necessary to have the two-decimal point detail automatically set by the computer program.

²⁰After viewing the graph, it was determined that labels would be helpful. The data-labels option prints the data value above the bars in the graph. For a graph with many ranges and data values, the use of labels would make the graph too congested. In this case, however, the data values helped clarify the graph.

Step 3. Retrieve Graph into a WordPerfect™ Document and Print²¹

To print the graph using WordPerfect™ and/or retrieve the graph into a WordPerfect™ document, the "Graphics" function is used. This is accessed by simultaneously holding down the "ALT" and "F9" keys. Then, the "Figure" (type 1 or F) option is used followed by "Create" (type 1 or C).

Graph 1



Source: KCCED/IPPBR, University of Kansas, 1991.

²¹It is assumed that the computer being used has graphic print capabilities. Please consult the printer's manual for your printer. It should also be noted that the graph can be printed directly from Lotus™. This is done by using Lotus™ PrintGraph. Please consult a Lotus™ manual as well as the printer's manual for this method.

Appendix A

Under "Create", the following options are used to create Graph 1²²:

1 Filename: Type in the PIC file, for example: A:\ESTAB1.PIC.

3 Caption: WordPerfect™ automatically captions with "Figure 1"; however, this can be erased and a different caption typed in. In Graph 1, the following caption was typed in: "Source: KCCED/IPPBR, University of Kansas, 1991."

7 Size: This is used to change the size of the graph. The size of Graph 1 is: width=6.5" and height=4.5".

9 Edit: Edit allows for the viewing of the graph.

Press F7 Exit to leave "Graphics".

If changes are needed to the graph, use "Graphics" with the "2 Edit" option under "Figure".²³ The graph is now part of the WordPerfect™ document and can be printed using the "Print" function.

²²Please consult a WordPerfect™ manual for detail on all options.

²³As previously mentioned, consult the WordPerfect™ manual for full Graphics options and capabilities.

APPENDIX B

WORKING DEFINITIONS FOR THE SEVEN FOUNDATIONS

HUMAN CAPITAL

The development of labor resources: state and local programs that assist in the long-term investment in and development of labor resources. Central to this are programs that are efficient and responsive in the training, retraining, and general education of the labor force. This area includes programs that target and assist new, expanding or existing businesses in the areas of training, or utilizing new processes and technologies. Programs may offer training/retraining to adults who may be unemployed or have skill deficiencies. Business and education linkages should be provided and encouraged.

INFRASTRUCTURE CAPITAL

The development and maintenance of public infrastructure systems including roads, utilities, and business/industrial sites/parks.

FINANCIAL CAPITAL

The availability of capital to provide adequate capital to businesses in different stages of growth and development. Capital is necessary for a variety of needs such as: purchasing facilities and equipment, general operations, working capital, development of a prototype, or start-up needs. Capital may be made available to target specific programs such as small business development, export assistance, or high technology. Types of capital include venture capital, seed capital, mezzanine capital and revolving loan funds.

INNOVATION/TECHNOLOGY CAPITAL

Programs that stimulate technology development, coordination, application and transfer. The goals should be to improve the competitiveness and efficiency of existing manufacturing and service industries, as well as to diversify and build on the economic base. Examples of programs include those that foster industry/education linkages with a focus on improving the research and development of new products and technologies; and technology centers or offices to assist small businesses and entrepreneurs in the development, production and utilization of new/higher levels of technology.

COMMITMENT/CAPACITY CAPITAL

The commitment to economic development expressed through agencies and organizations that provide assistance and support for businesses and economic development.

BUSINESS ENVIRONMENT

Programs that are focused or targeted to create businesses, create business opportunities or to improve business competitiveness. This category includes such programs as industrial recruitment, business retention or expansion, tourism promotion, and support for major industries.

QUALITY OF LIFE

Programs that seek to development and maintain a positive cultural milieu. Such programs may increase the availability and diversity of cultural, artistic, recreational, environmental, educational and historical activities in order to improve the quality of life and economic potential.

Source: IPPBR/University of Kansas, 1990.